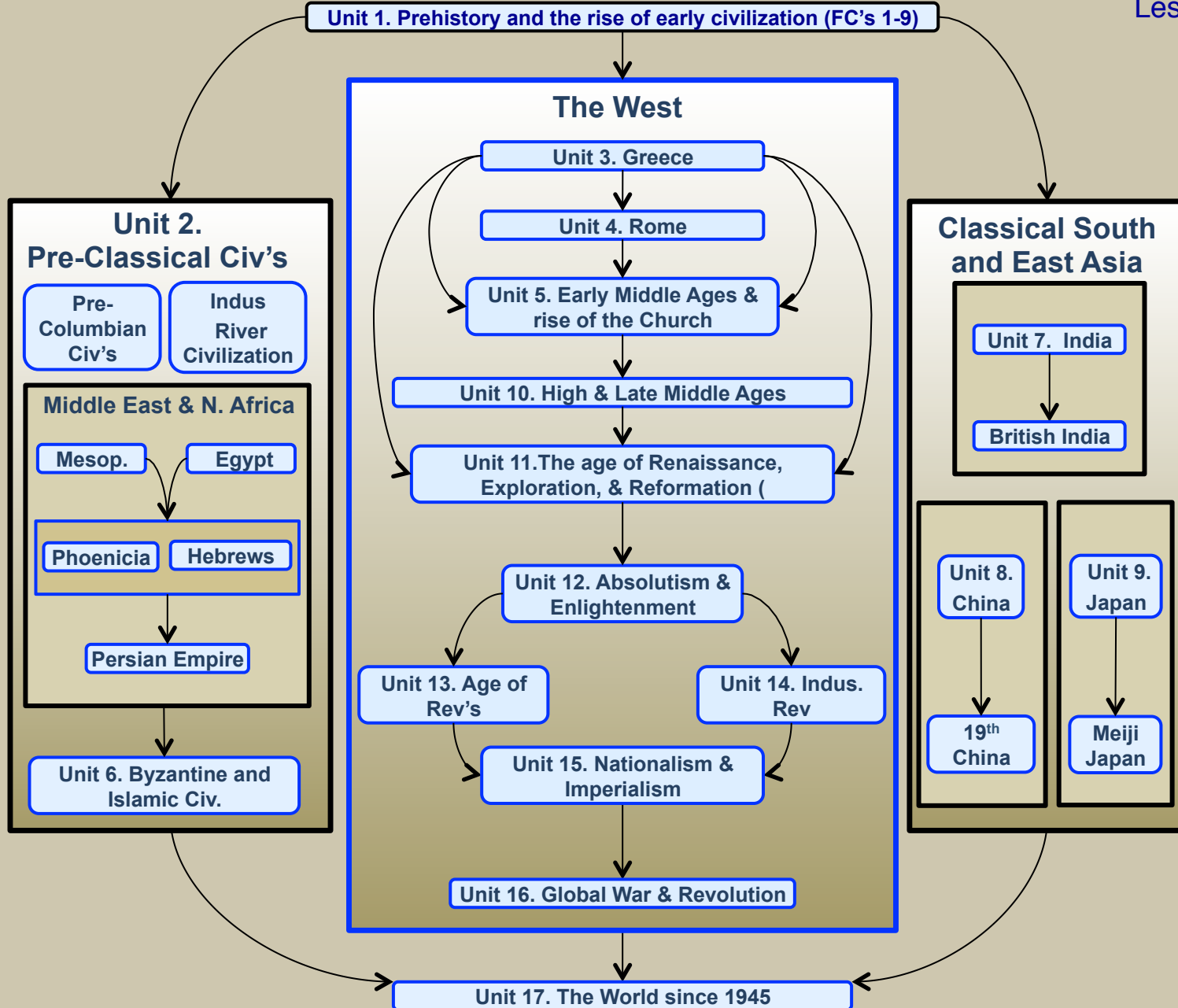
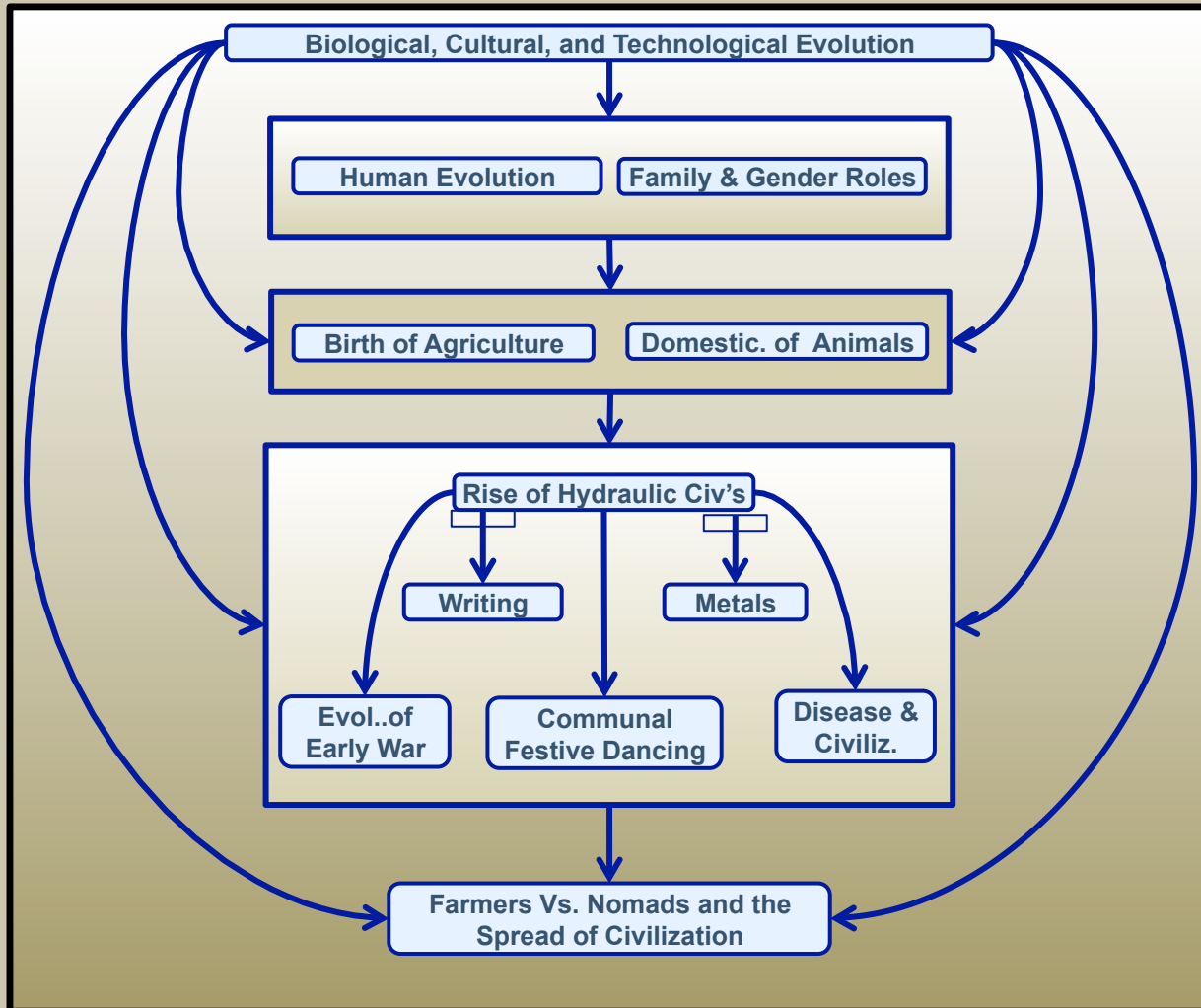


Master Flowchart

Introduction &
Essay on 15
Lessons of History



Unit 1. Prehistory & the rise of early civilization



1.1 BIOLOGICAL, CULTURAL & TECHNOLOGICAL EVOLUTION IN HISTORY

Color Key:
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c.300,000		Stone tools
c.300,000-50,000	 	Likely controlled use of fire Earliest Religion
c.100,000		Homo Sapiens
c.30,000		Art
c.12,000		End of last Ice Age
c.8000	 	Agriculture Domest. of sheep
c.8000		Domest. of Pigs
c.7000		Domest. of Cattle
c.6500		Irrigation
c.5800		Smelting Copper
c.4000-3500		Cities in Mesopotamia
c.3500		Pictographic writing
c.3000-2500	 	1st Hydraulic Civ's Warfare
c.3000		Ideographic writing
c.3000		Bronze tech.
c.3000		Domest. of horses
c.2900		Ziggurats, 1st monumental architecture
c.2800		Great Pyramid
c.2100		Rebus writing
c.2000		1st written literature, <i>Epic of Gilgamesh</i>
c.1000		Phonetic Alphabet
c.1050		Iron tech.

BIOLOGICAL EVOLUTION
 Where nature very slowly adapts us to changing environment

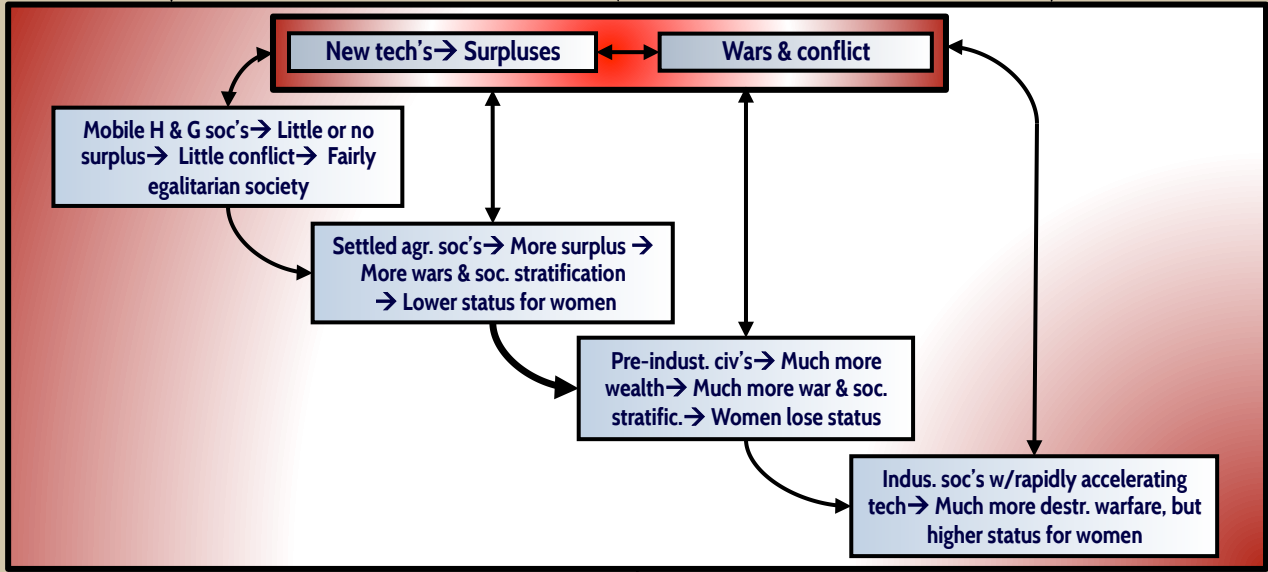
Humans distinguished by 5 major biological features:

Binocular & color vision	Upright posture → frees hands	Hands with opposable thumbs	Large well organized brain	Speech → share ideas
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CULTURAL EVOLUTION
 People adapt behavior to envir. → Much faster than biol. evol.

"RUBBER BAND" THEORY
 If 1 part of a culture changes → it affects the rest of the culture

TECHNOLOGICAL EVOLUTION
 People adapt envir. to their needs → progressively the fastest evol.



Biol. & cult. evol. can't keep up with spiraling tech. growth

Much more wealth, but also major problems:

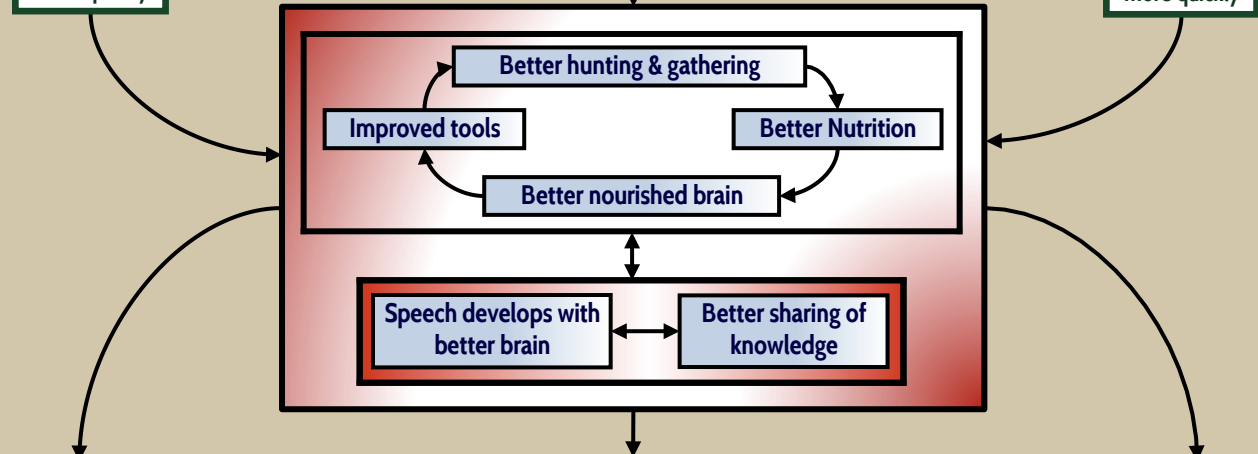
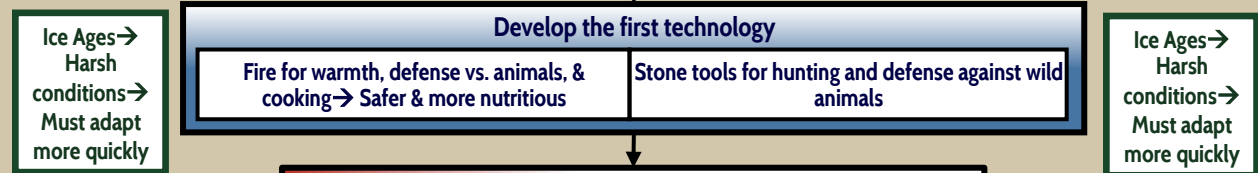
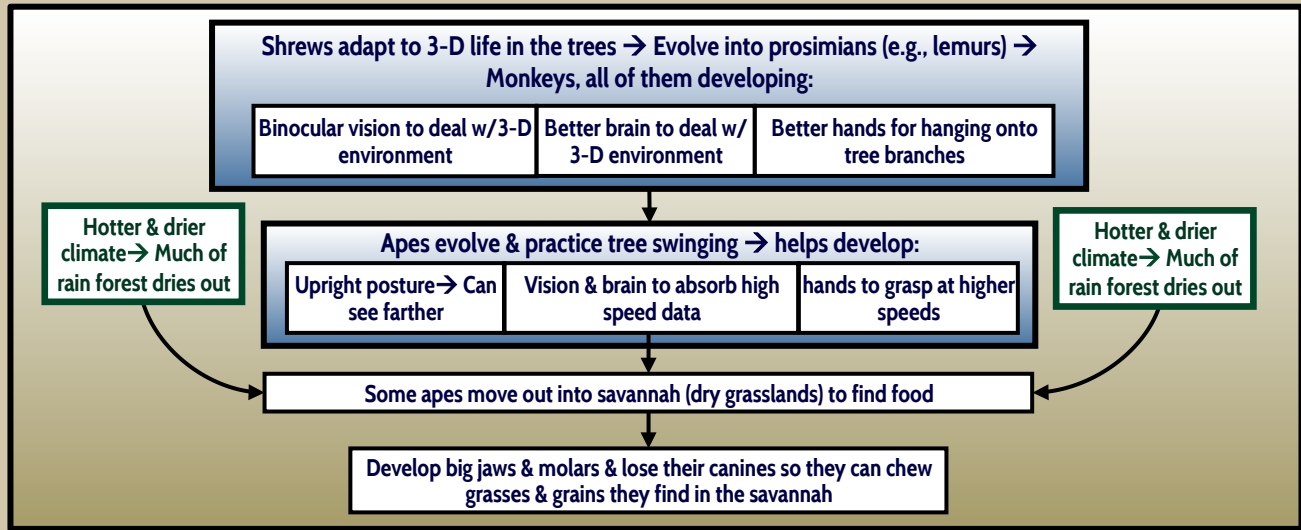
Society & culture can't change as quickly	Tech. of destruction grows even faster than tech. of production → Total war is obsolete	Environment can't support unlt'd. growth
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1.2 A POSSIBLE SCENARIO FOR HUMAN EVOLUTION

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c.100,000		Earliest Religion
c.30,000		Homo Sapiens
c.12,000		Art
c.8000		End of last Ice Age
c.8000		Agriculture
c.8000		Domest. of sheep
c.7000		Domest. of Pigs
c.7000		Domest. of Cattle
c.6500		Irrigation
c.5800		Smelting Copper
c.4000		Cities in Mesopotamia
c.4000-3500		Pictographic writing
c.3500		Hydraulic Civ's
c.3000-2500		Warfare
c.3000		Ideographic writing
c.3000		Bronze tech.
c.3000		Domest. of horses
c.2900		Ziggurats, 1st monumental architecture
c.2800		Great Pyramid
c.2100		Rebus writing
c.2000		1st written literature, <i>Epic of Gilgamesh</i>
c.1000		Phonetic Alphabet
c.1050		Iron tech.



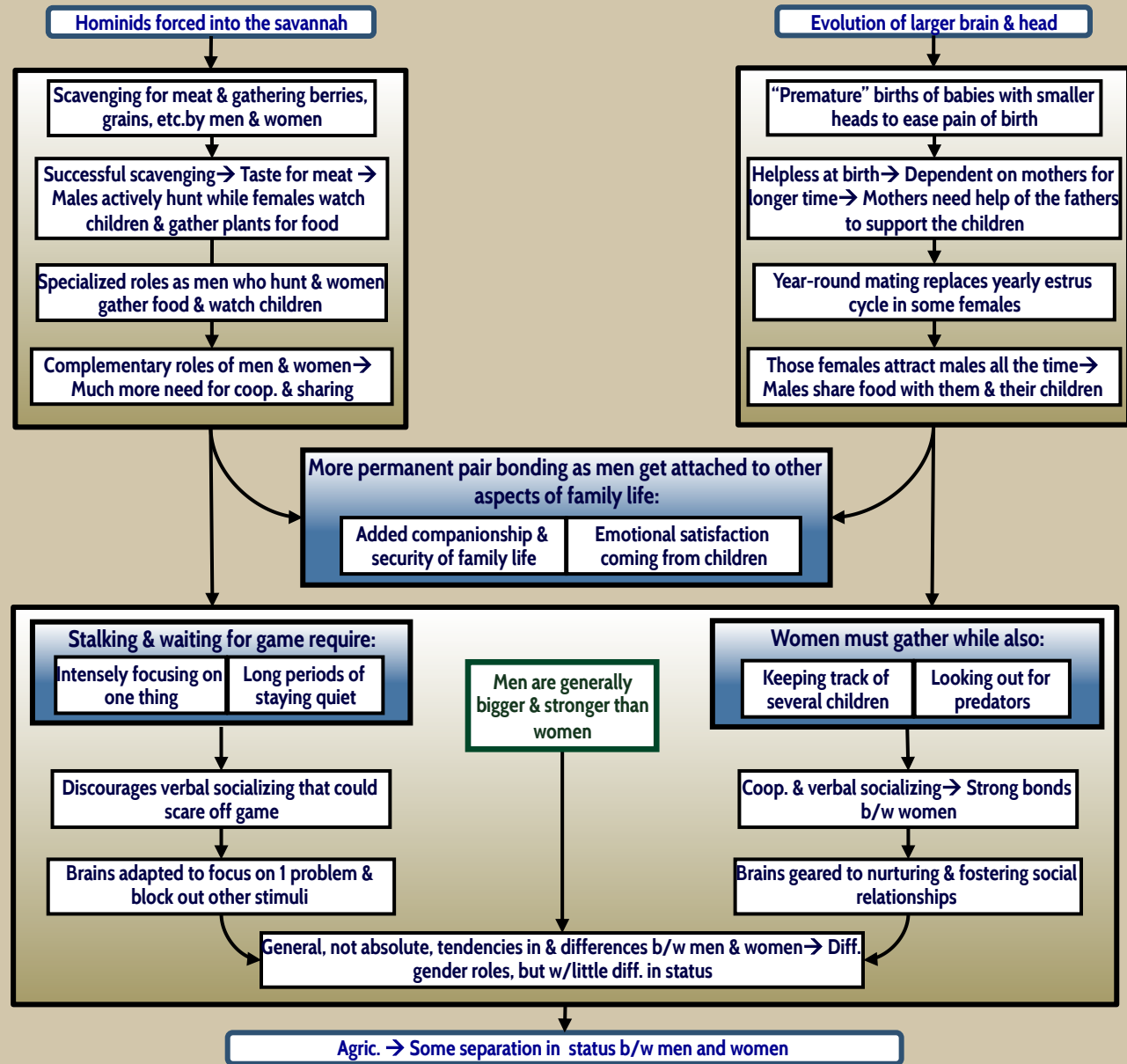
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c.3000-2500		Warfare
c.3000		Ideographic writing
c.3000		Bronze tech.
c.3000		Domest. of horses
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c.2800		Great Pyramid
c.2100		Rebus writing
c.2000		1st written literature, <i>Epic of Gilgamesh</i>
c.1000		Phonetic Alphabet
c.1050		Iron tech.

1.3 A POSSIBLE SCENARIO FOR THE EVOLUTION OF THE FAMILY & GENDER ROLES

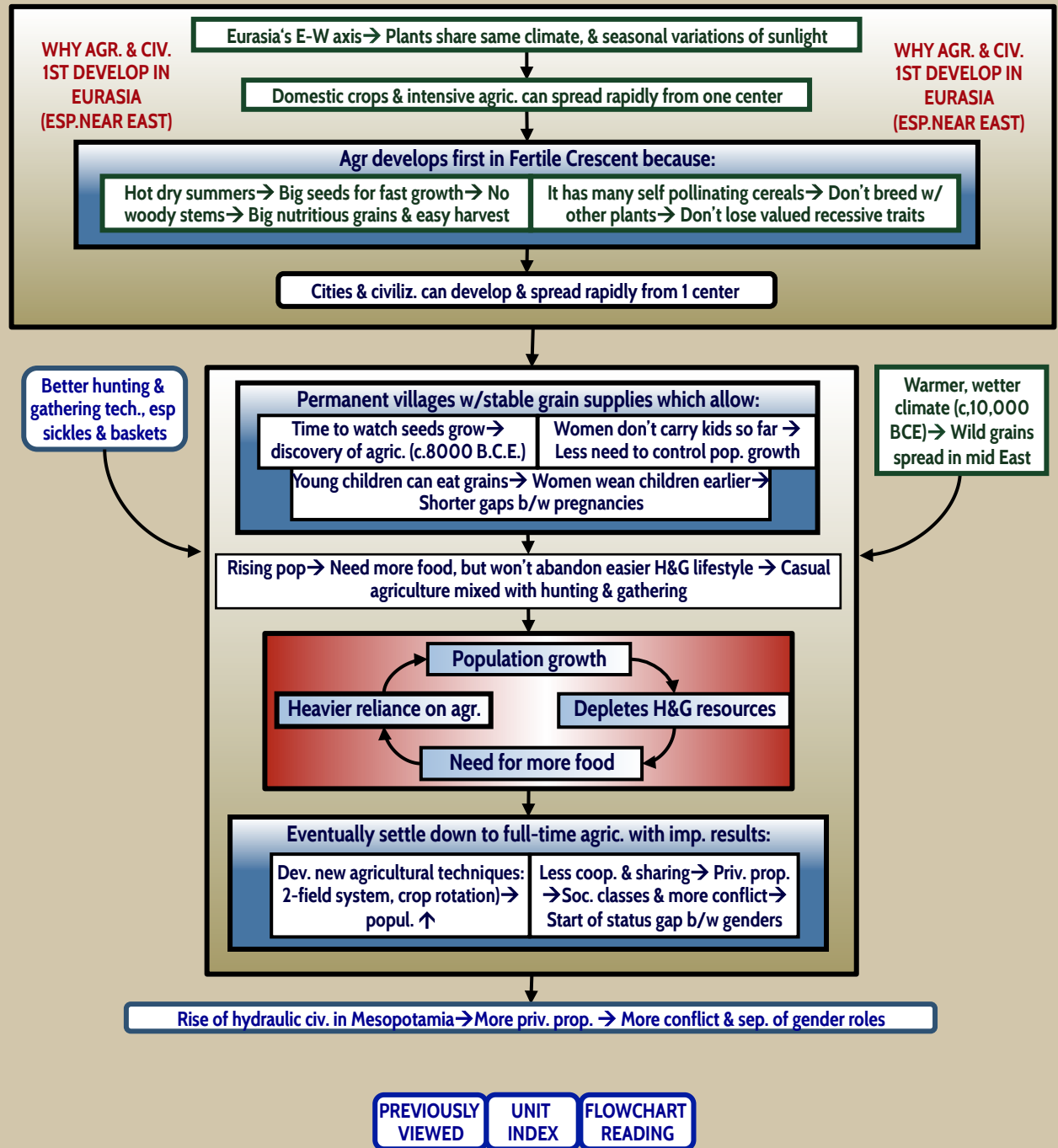


1.4 THE BIRTH OF AGRICULTURE & ITS EFFECTS

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c.8000		Agriculture
c.8000		Domest. of sheep
c.7000		Domest. of Pigs
c.7000		Domest. of Cattle
c.6500		Irrigation
c.5800		Smelting Copper
c.4000		Cities in Mesopotamia
c.4000-3500		Pictographic writing
c.3500		Hydraulic Civ's
c.3000-2500		Warfare
c.3000		Ideographic writing
c.3000		Bronze tech.
c.3000		Domest. of horses
c.3000		Ziggurats, 1st monumental architecture
c.2900		Great Pyramid
c.2800		Rebus writing
c.2100		1st written literature, <i>Epic of Gilgamesh</i>
c.2000		Phonetic Alphabet
c.1050		Iron tech.



1.5 ANIMAL DOMESTICATION AND ITS EFFECTS

Better hunting & gathering → More settled lifestyle

Ability to keep & domesticate animals that are:

Herbivorous & fast growing → Need less food	Live in herds w/strict soc. hierarchy that humans can take over	Tame & willing to breed in captivity
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Most animals suitable for domestication were found exclusively in Eurasia & esp. the Fertile Crescent

Sheep & goats (c.8000 B.C.E.) that are easily tamed →

Meat & milk for food	Digest cellulose → Hilly land useful	Wool for clothing
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Pigs (c.7000 B.C.E.) that scavenge → :

Reduce waste	Need less supervision	Cheap to keep
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Cows (c.6500 B.C.E.) - hard to tame but can:

Digest cellulose	Pull plows → Farm more land	Give meat, milk & hides
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Horses (c.3000 B.C.E.) when tamed & bred up in size →

New energy source	Faster comm's → Bigger emp's	More mobile armies
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








Chronic clashes throughout history b/w nomads grazing their herds in dry grasslands & settled farmers in well watered areas

Herd animals' diseases often infect humans → Eurasian civ's adapt → Advantage vs. cultures not previously exposed

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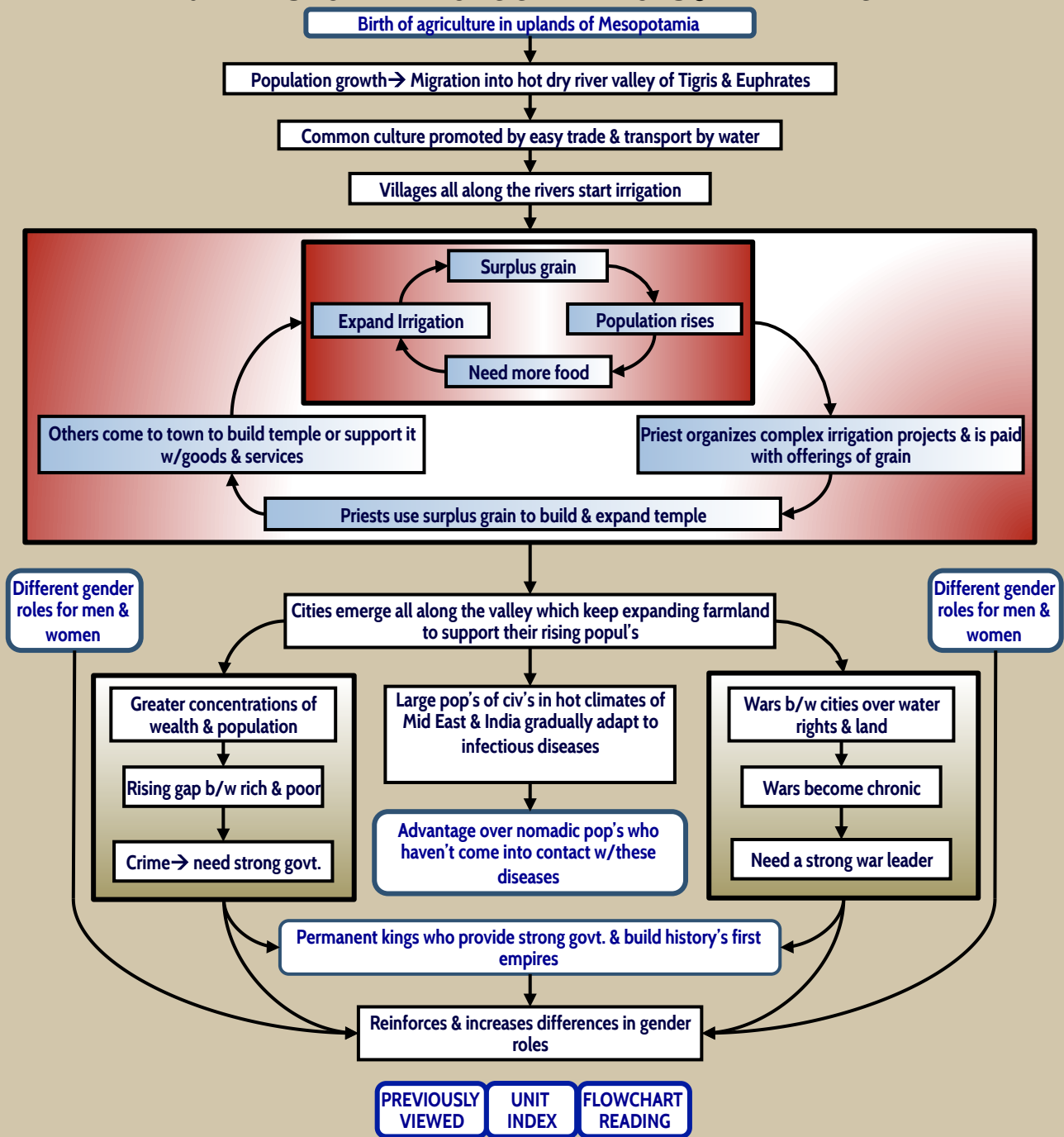
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c.4000-3500		Cities in Mesopotamia
c.3500		Pictographic writing
c.3000-2500		1st Hydraulic Civ's
c.3000		Warfare
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c.2900		Ziggurats, 1st monumental architecture
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c.2000		1st written literature, <i>Epic of Gilgamesh</i>
c.1000		Phonetic Alphabet
c.1050		Iron tech.

1.6 THE RISE OF HYDRAULIC CIVILIZATIONS & THEIR IMPACT

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c.7000		Domest. of Cattle
c.6500		Irrigation
c.5800		Smelting Copper
c.4000-3500		Cities in Mesopotamia
c.3500		Pictographic writing
c.3000-2500		Hydraulic Civ's
c.3000		Warfare
c.3000		Ideographic writing
c.3000		Bronze tech.
c.3000		Domest. of horses
c.2900		Ziggurats, 1st monumental architecture
c.2800		Great Pyramid
c.2100		Rebus writing
c.2000		1st written literature, <i>Epic of Gilgamesh</i>
c.1000		Phonetic Alphabet
c.1050		Iron tech.

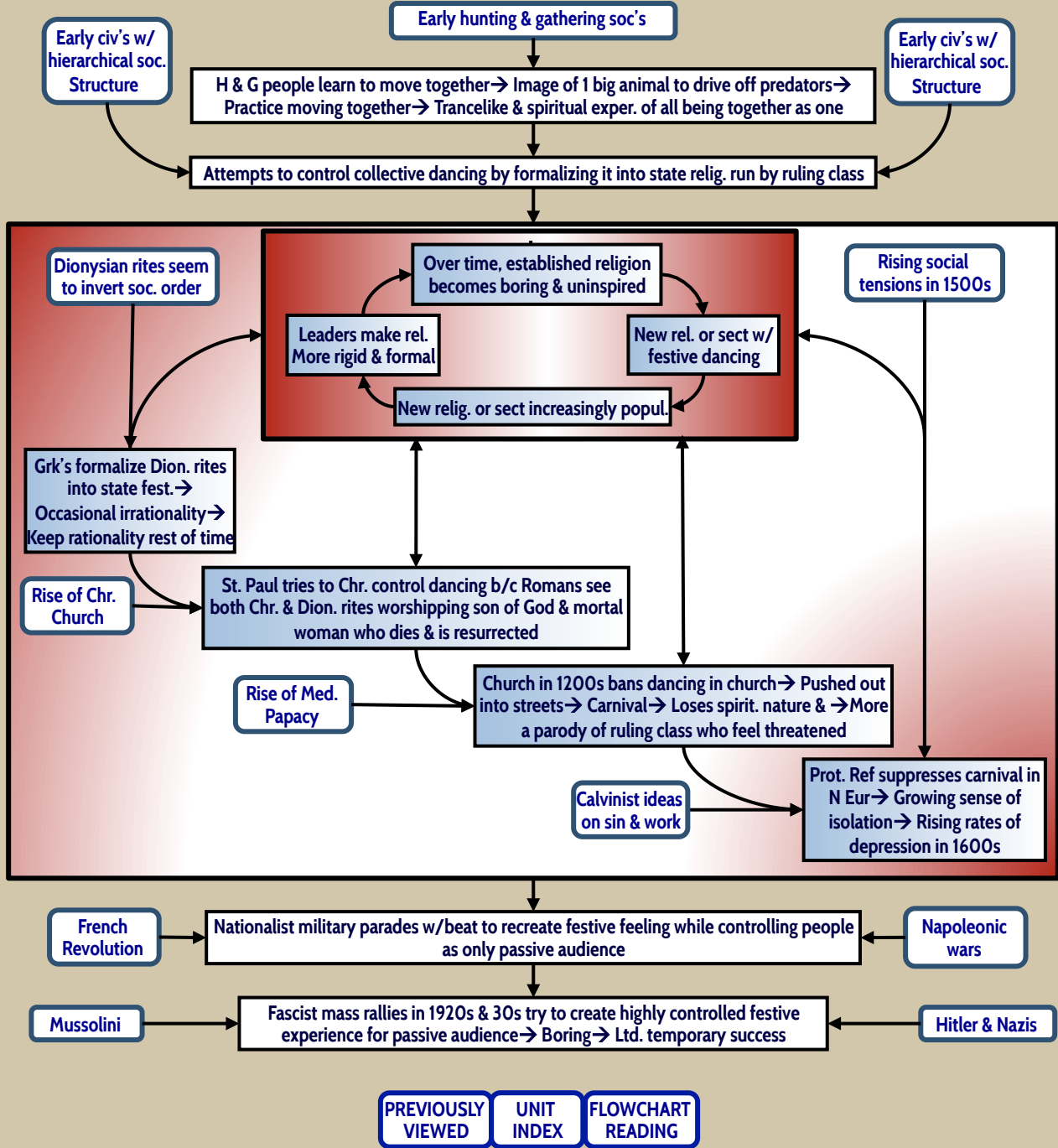


1.6A FESTIVE DANCING AND ITS IMPORTANCE IN HISTORY

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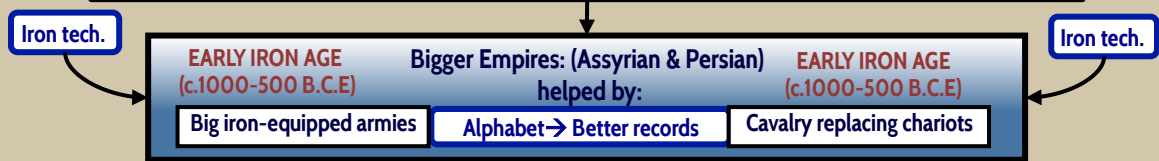
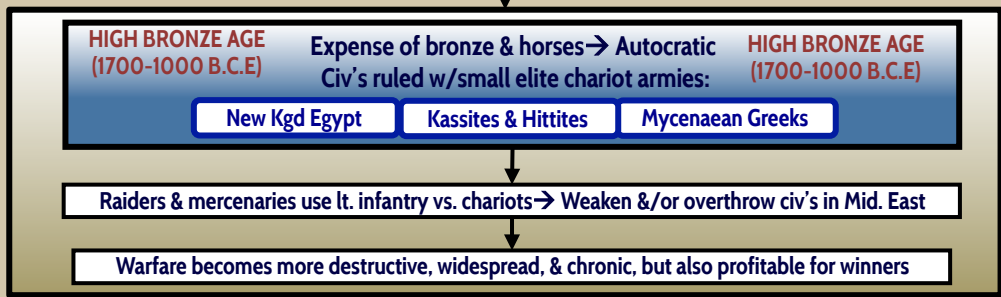
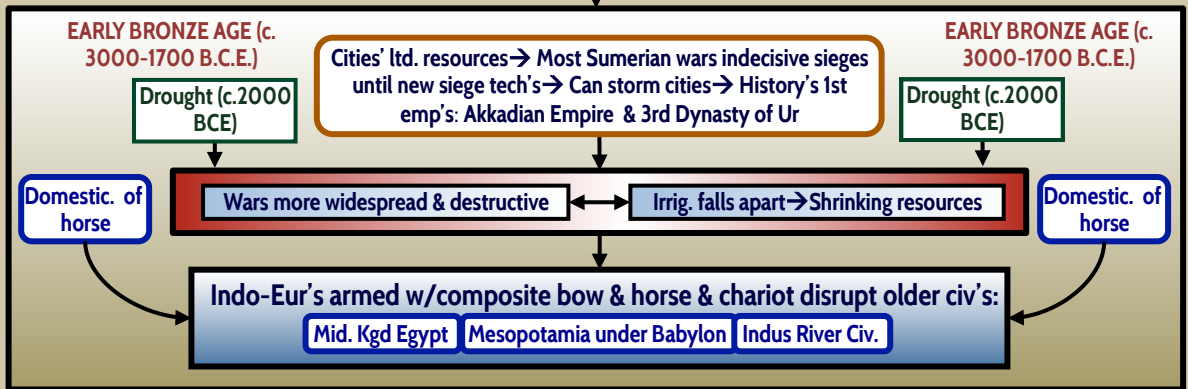
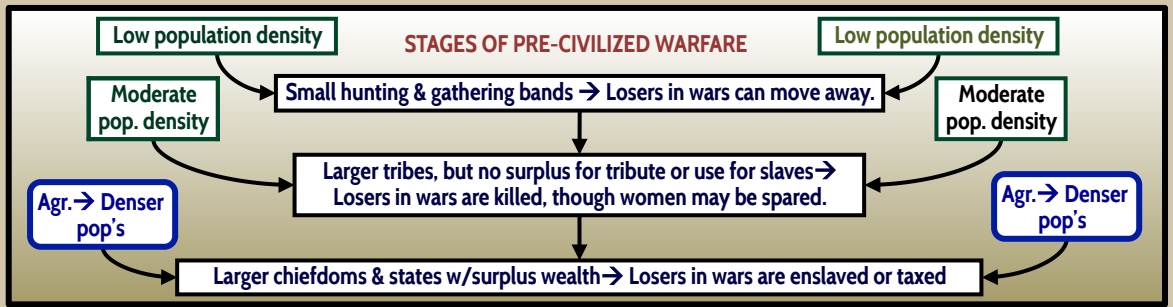
1.6B THE EVOLUTION OF EARLY WARFARE TO c.500 B.C.E.

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Timeline of Key Events:

- c.300,000: Stone tools
- c.300,000-50,000: Likely controlled use of fire; Earliest Religion
- c.100,000: Homo Sapiens Sapiens
- c.30,000: Art
- c.12,000: End of last Ice Age
- c.8000: Agriculture; Domest. of sheep
- c.7000: Domest. of Pigs; Domest. of Cattle
- c.6500: Irrigation
- c.5800: Smelting Copper
- c.4000-3500: Pictographic writing; Cities in Mesopotamia
- c.3000-2500: 1st Hydraulic Civ's; Warfare
- c.3000: Ideographic writing
- c.3000: Bronze tech.
- c.3000-2900: Domest. of horses; Ziggurats, 1st monumental architecture
- c.2800: Great Pyramid
- c.2100: Rebus writing
- c.2000: 1st written literature, *Epic of Gilgamesh*
- c.1050: Phonetic Alphabet; Iron tech.



Iron-equipped Greek phalanxes help → Democ.

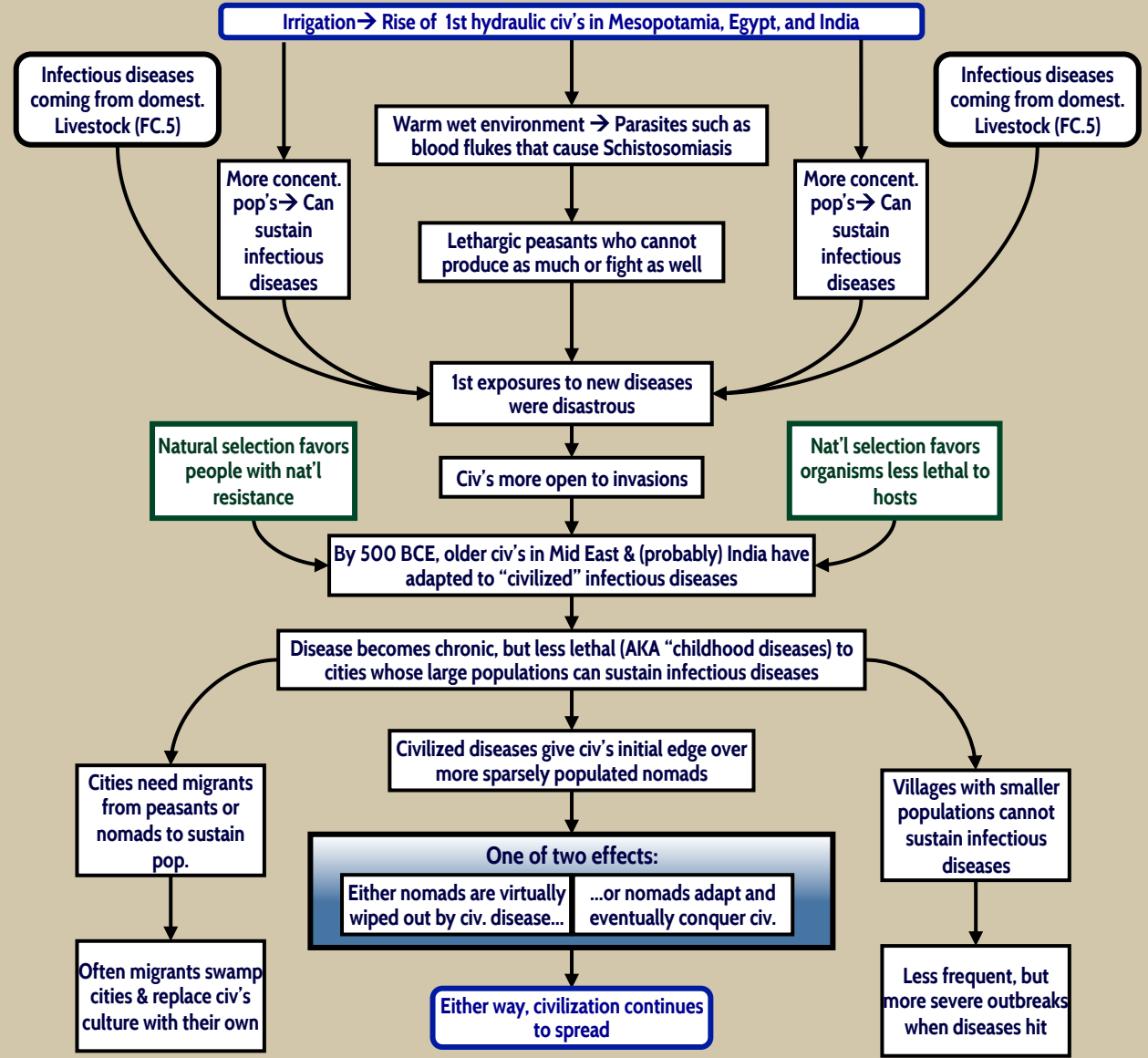
1.6C THE IMPACT OF DISEASE ON EARLY CIVILIZATIONS

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Timeline of Key Developments:

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- c.100,000: Homo Sapiens; Sapiens
- c.30,000: Art
- c.12,000: End of last Ice Age
- c.8000: Agriculture; Domest. of sheep
- c.7000: Domest. of Pigs; Domest. of Cattle
- c.6500: Irrigation
- c.5800: Smelting Copper
- c.4000-3500: Pictographic writing; Cities in Mesopotamia
- c.3000-2500: Warfare; 1st Hydraulic Civ's
- c.3000: Ideographic writing
- c.3000: Bronze tech.
- c.3000: Domest. of horses; Ziggurats, 1st monumental architecture
- c.2900: Great Pyramid; Rebus writing
- c.2800: Rebus writing
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- c.2000: 1st written literature, *Epic of Gilgamesh*
- c.1000: Phonetic Alphabet
- c.1050: Iron tech.



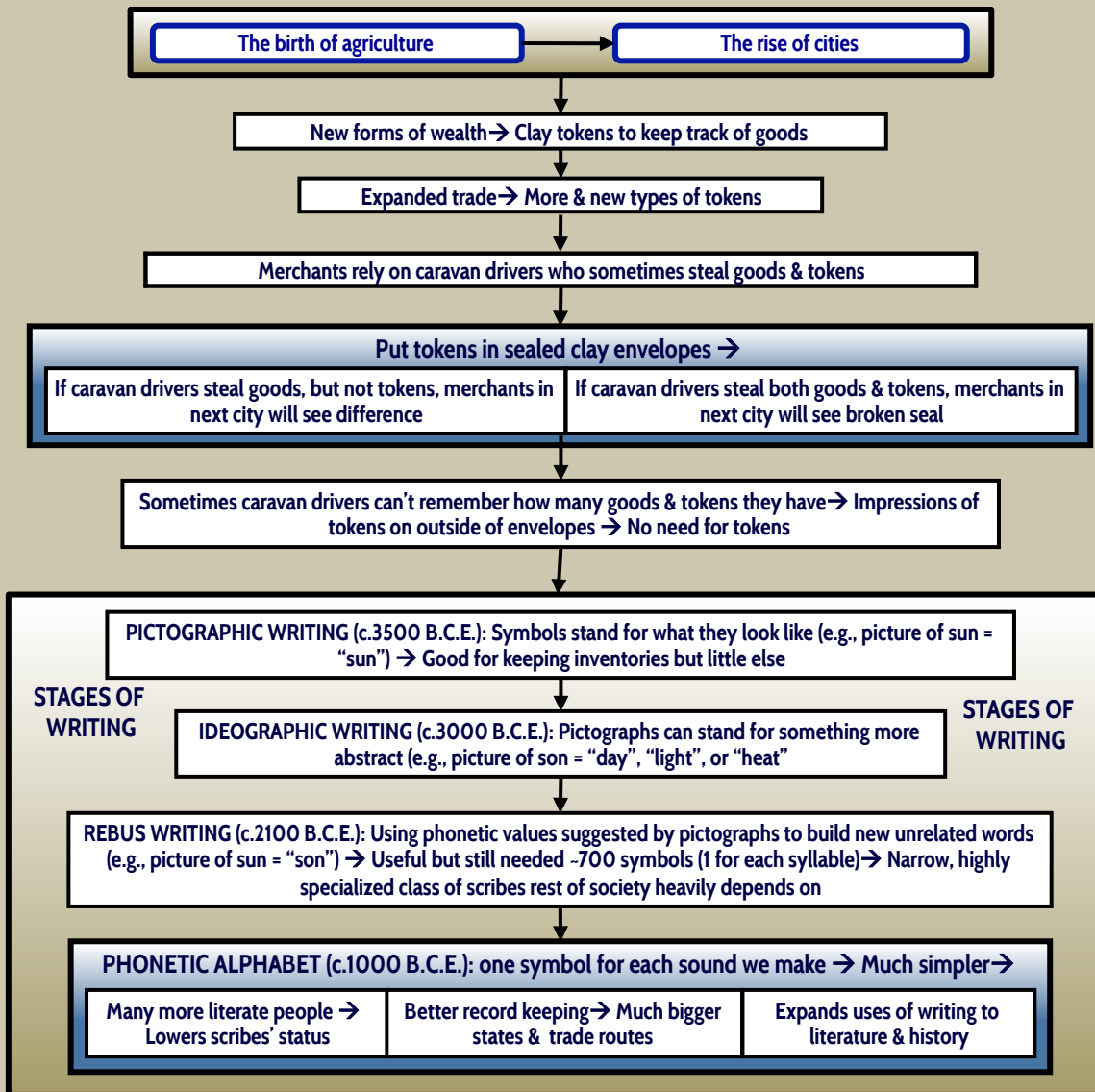
1.7 THE BIRTH OF WRITING AND ITS IMPACT

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Timeline of Key Events:


























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- c.30,000: End of last Ice Age
- c.12,000: Agriculture; Domest. of sheep
- c.8000: Domest. of Pigs; Domest. of Cattle
- c.7000: Irrigation
- c.6500: Smelting Copper
- c.5800: Pictographic writing; Cities in Mesopotamia
- c.4000-3500: Warfare; 1st Hydraulic Civ's
- c.3000: Ideographic writing
- c.3000: Bronze tech.
- c.3000: Domest. of horses; Ziggurats, 1st monumental architecture
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- c.2800: 1st written literature, *Epic of Gilgamesh*
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- c.2000: 1st written literature, *Epic of Gilgamesh*
- c.1000: Phonetic Alphabet
- c.1050: Iron tech.

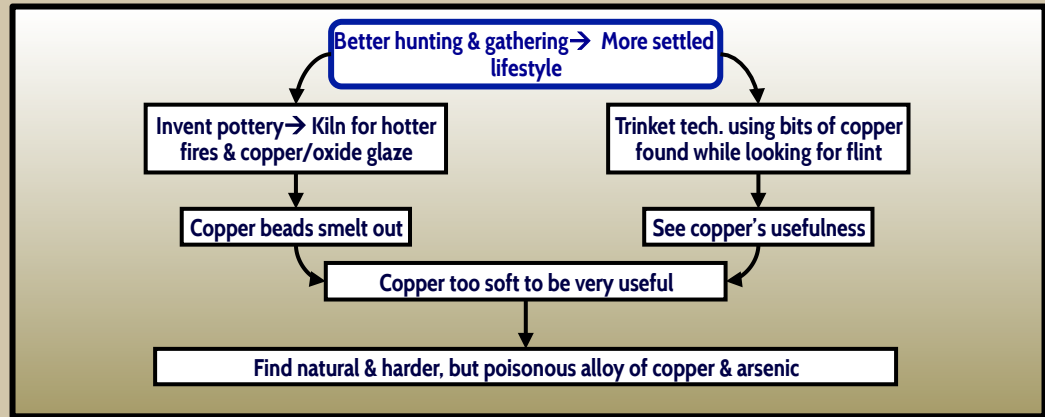


1.8 THE RISE OF METALLURGY & ITS IMPACT

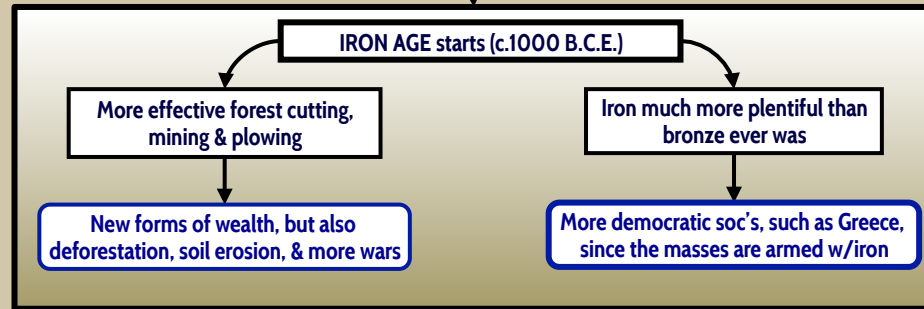
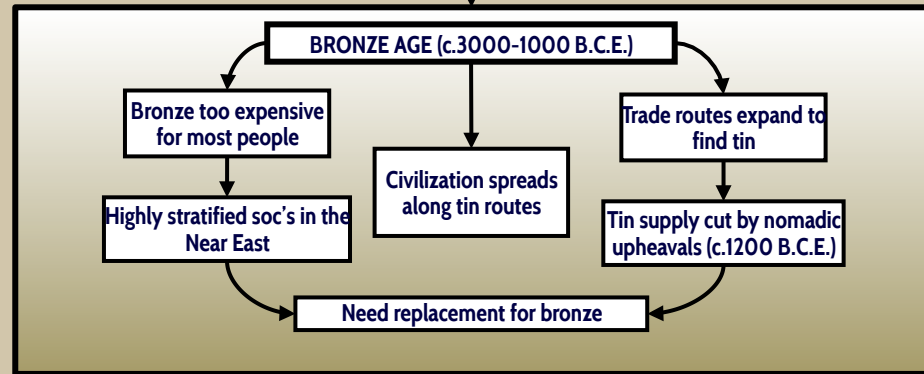
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c.3500		Pictographic writing
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c.1000		Phonetic Alphabet
c.1050		Iron tech.



Search for & find safer alloy of copper & tin

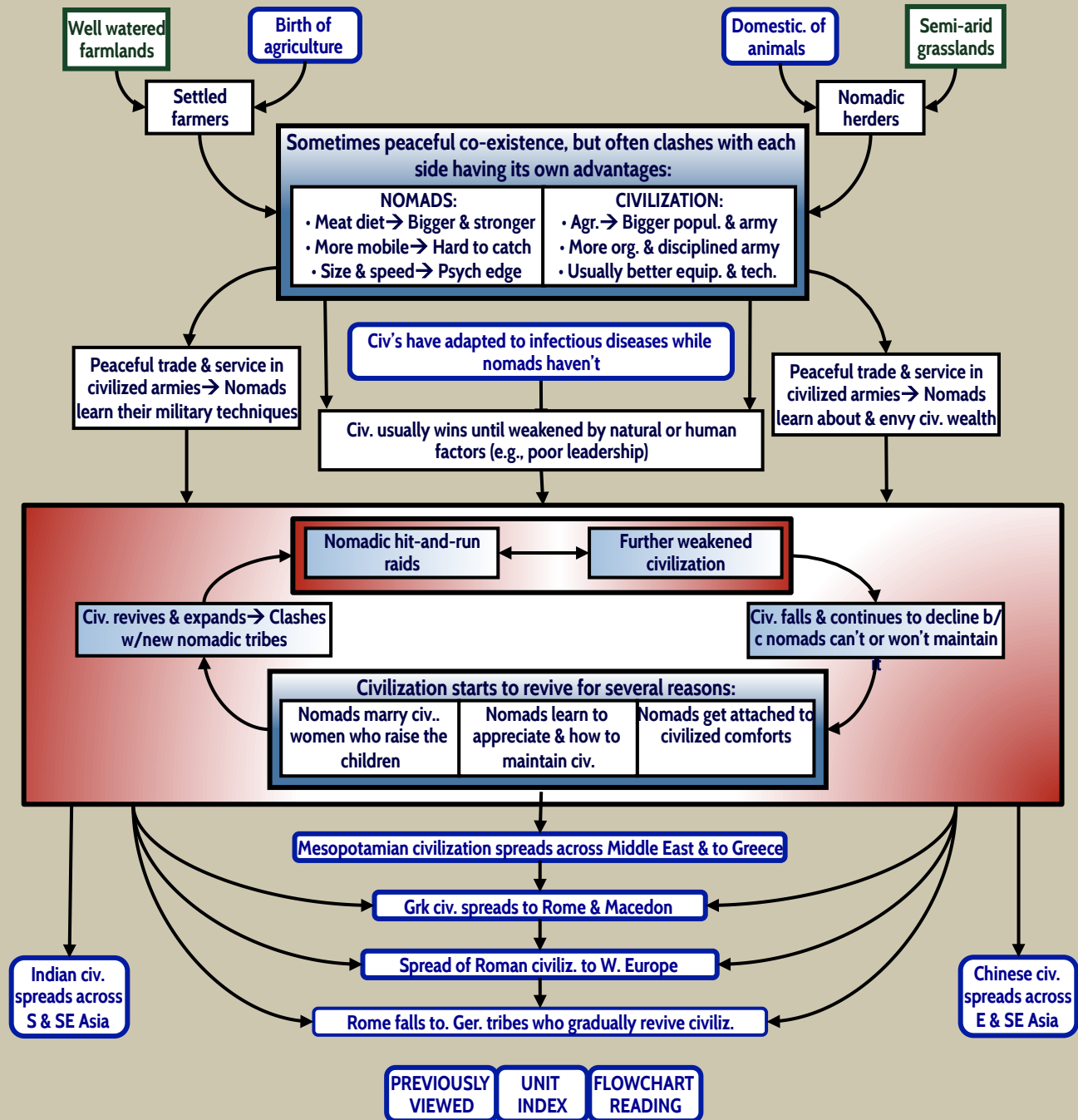


1.9 FARMERS, NOMADS, AND THE SPREAD OF CIVILIZATION

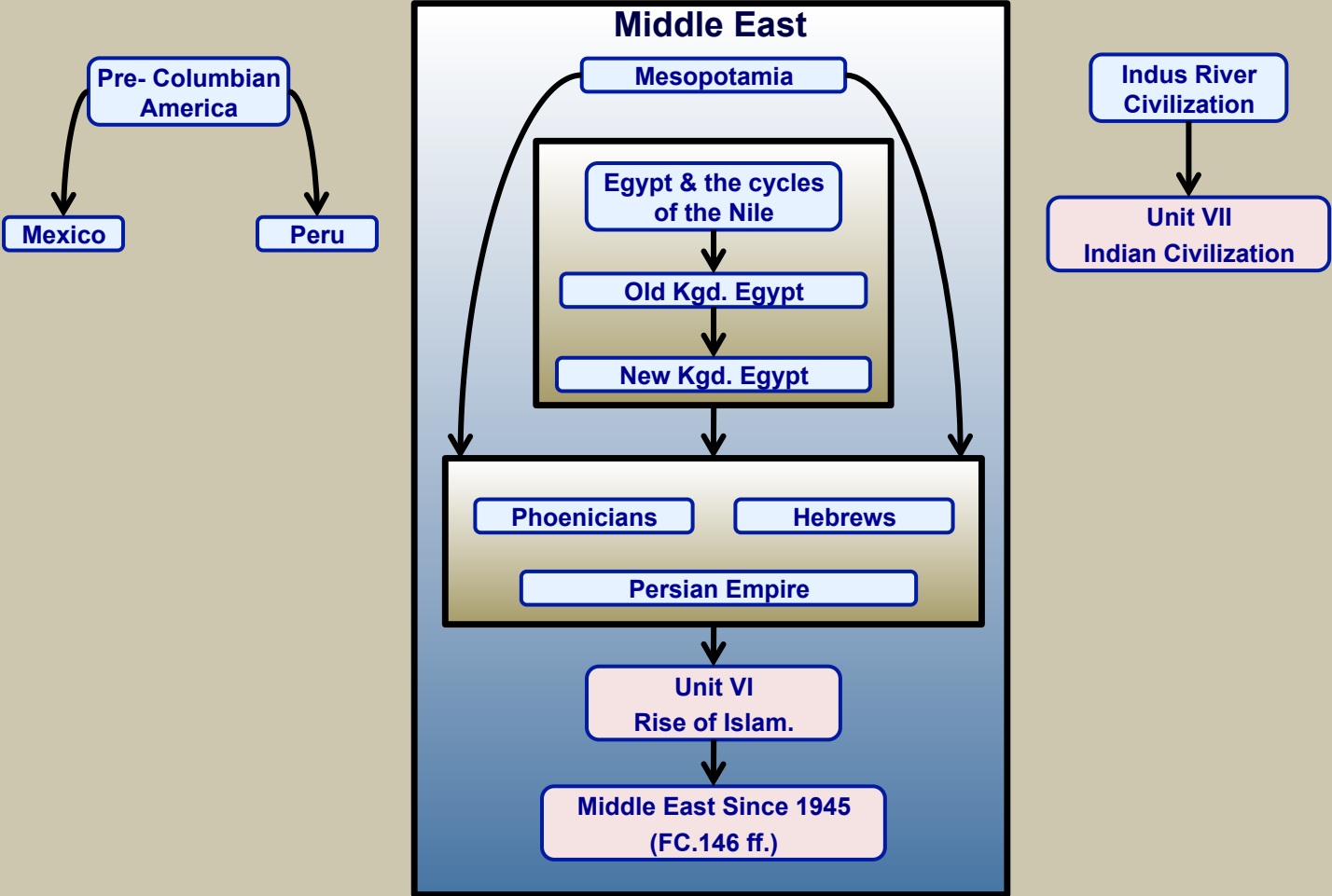
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c.8000		End of last Ice Age
c.8000		Agriculture
c.8000		Domest. of sheep
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c.7000		Domest. of Cattle
c.6500		Irrigation
c.5800		Smelting Copper
c.4000-3500		Cities in Mesopotamia
c.3500		Pictographic writing
c.3000-2500		Hydraulic Civ's
c.3000		Warfare
c.3000		Ideographic writing
c.3000		Bronze tech.
c.3000		Domest. of horses
c.2900		Ziggurats, 1st monumental architecture
c.2800		Great Pyramid
c.2100		Rebus writing
c.2000		1st written literature, <i>Epic of Gilgamesh</i> ,
c.1000		Phonetic Alphabet
c.1050		Iron tech.



Unit 2. Early Pre-Classical Civilization

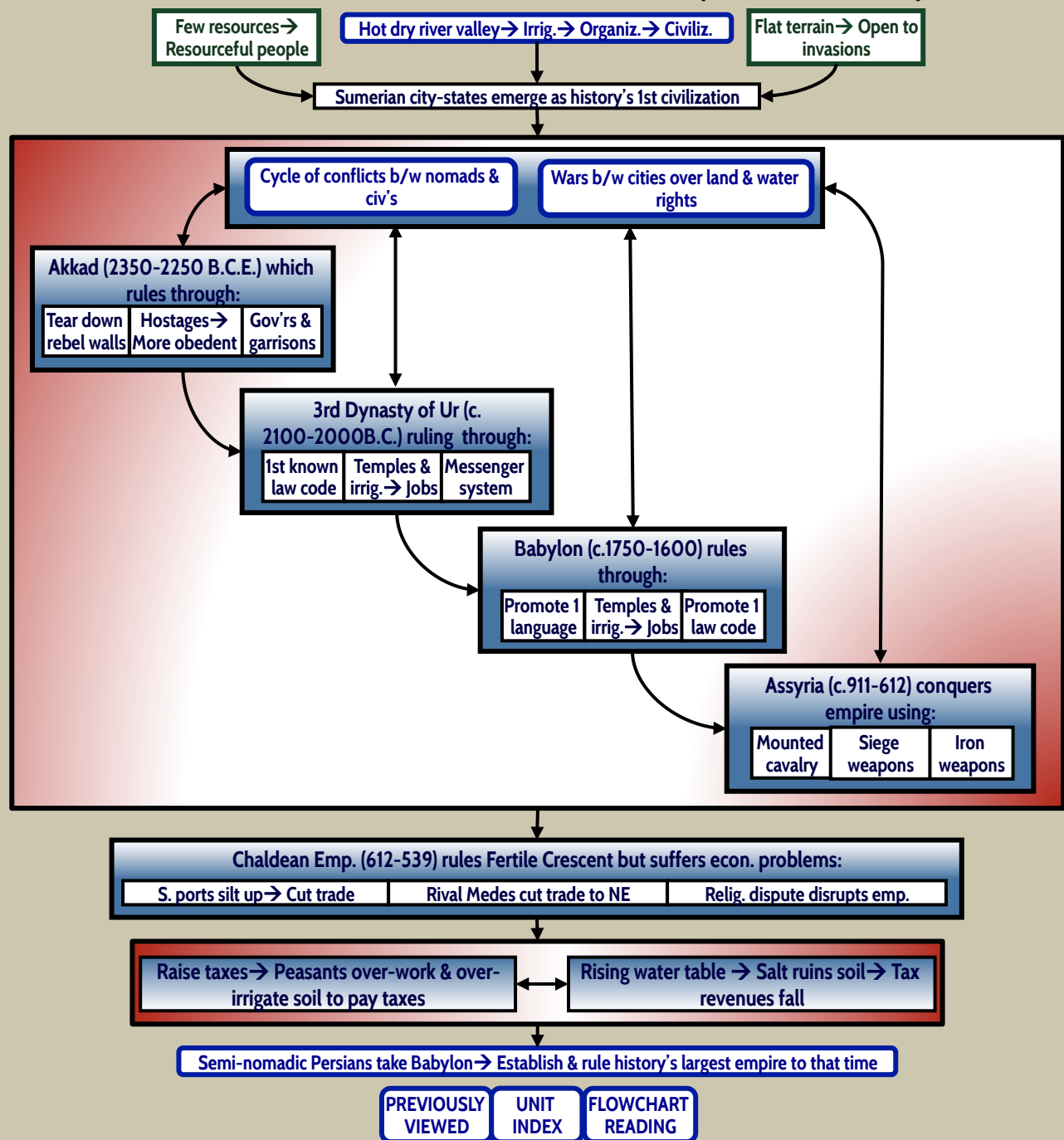


 = Related link outside the unit

Timeline of World History (c.3000-2350 B.C.E. to c.1100-1536 C.E.)

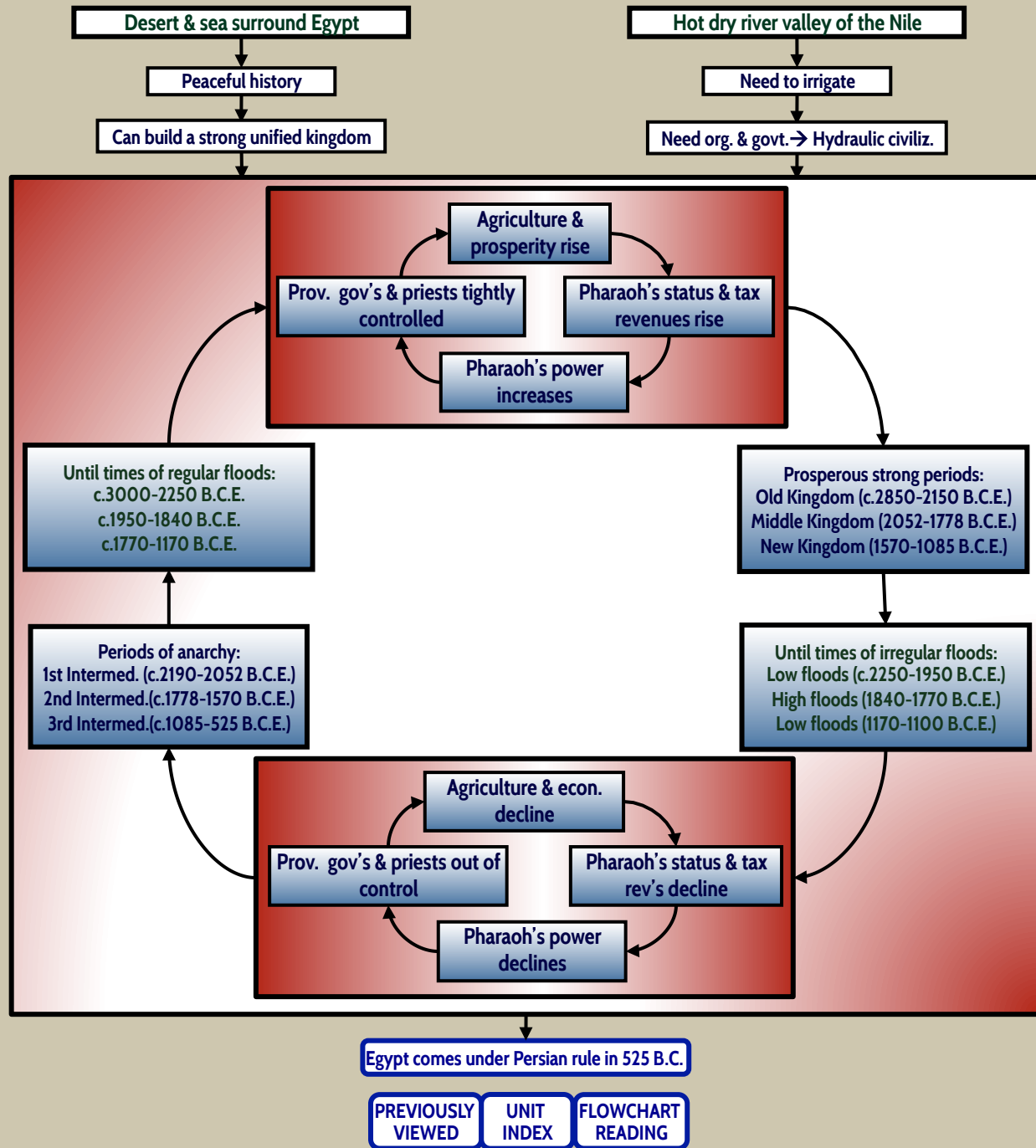
- c.3000-2350: Sumerian city-states
- c.2850-2150: Old Kgd Egypt, Indus River Civ.
- c.2500-1700: 3rd Dyn. of Ur, Akkadian Emp.
- c.2350-2250: Middle Kgd Egypt
- c.2100-2000: New Kgd. Egypt, Babyl. Emp.
- c.1531-1155: Aryans enter India, Kassite Emp.
- c.1500: Height of Hittite Empire
- c.1430-1180: Traditional rabbinic date for Exodus
- c.1313: Sea Peoples -> Period of turmoil -> End of Bronze Age
- c.1200: Spread of iron tech., Phoenicians
- c.1200-539: Egypt's final decline
- c.1085-525: Phoenician alphabet
- c.1050: Kingdom of Israel
- 1030-931: Assyrian Emp.
- 911-612: Assyrians conquer N. Kgd of Israel
- c.814: Phoenicians found Carthage.
- 722: Chaldean Emp.
- 612-539: Phoenicians circumnavigate Africa, Sack of Jerusalem
- c.600: Pre-classical Maya, Persian Empire
- 586: Sack of Jerusalem
- c.550-330: Classical Maya, Post-classical Meso-America
- c.250: Aztecs, Inca civ. In Peru
- BC (BCE) to AD (CE) c.250-900
- c.900-1521: Aztecs, Inca civ. In Peru
- 1428-1521: Aztecs, Inca civ. In Peru
- c.1100-1536: Aztecs, Inca civ. In Peru

2.1 THE SWEEP OF MESOPOTAMIA'S HISTORY (c.3000-539 B.C.E.)



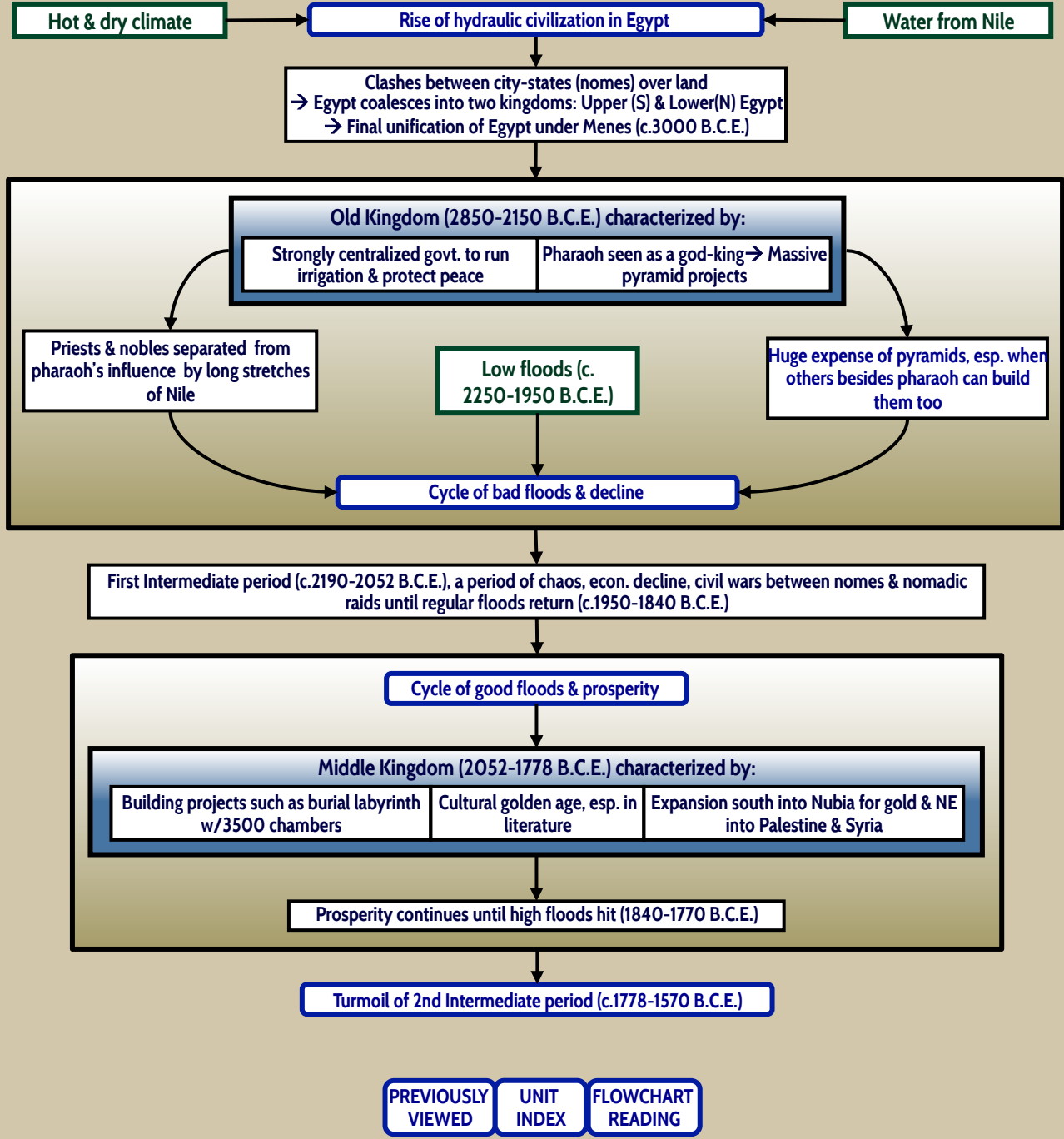
c.3000-2350		Sumerian city-states
c.2850-2150		Old Kgd Egypt
c.2500-1700		Indus River Civ.
c.2350-2250		3rd Dyn. of Ur
c.2100-2000		Akkadian Emp.
c.2850-2150		Middle Kgd Egypt
c.1750-1600		Babyl. Emp.
c.1570-1085		New Kgd. Egypt
c.1531-1155		Kassite Emp.
c.1500		Aryans enter India
c.1430-1180		Height of Hittite Empire
c.1313		Traditional rabbinic date for Exodus
c.1200		Sea Peoples -> Period of turmoil -> End of Bronze Age
c.1200		Phoenicians
c.1200-539		Egypt's final decline
c.1085-525		Phoenician alphabet
c.1050		Kingdom of Israel
1030-931		Assyrian Emp.
911-612		Assyrians conquer N. Kgd of Israel
c.814		Phoenicians found Carthage.
722		Chaldean Emp.
612-539		Phoenicians circumnavigate Africa
c.600		Sack of Jerusalem
586		Persian Empire
c.550-330		Pre-classical Maya
c.250		Classical Maya
BC (BCE)		Post-classical Meso-America
c.250-900		Aztecs
c.900-1521		Inca civ. In Peru
1428-1521		Aztecs
c.1100-1536		Inca civ. In Peru

2.2 THE CYCLES OF THE NILE & EGYPTIAN HISTORY



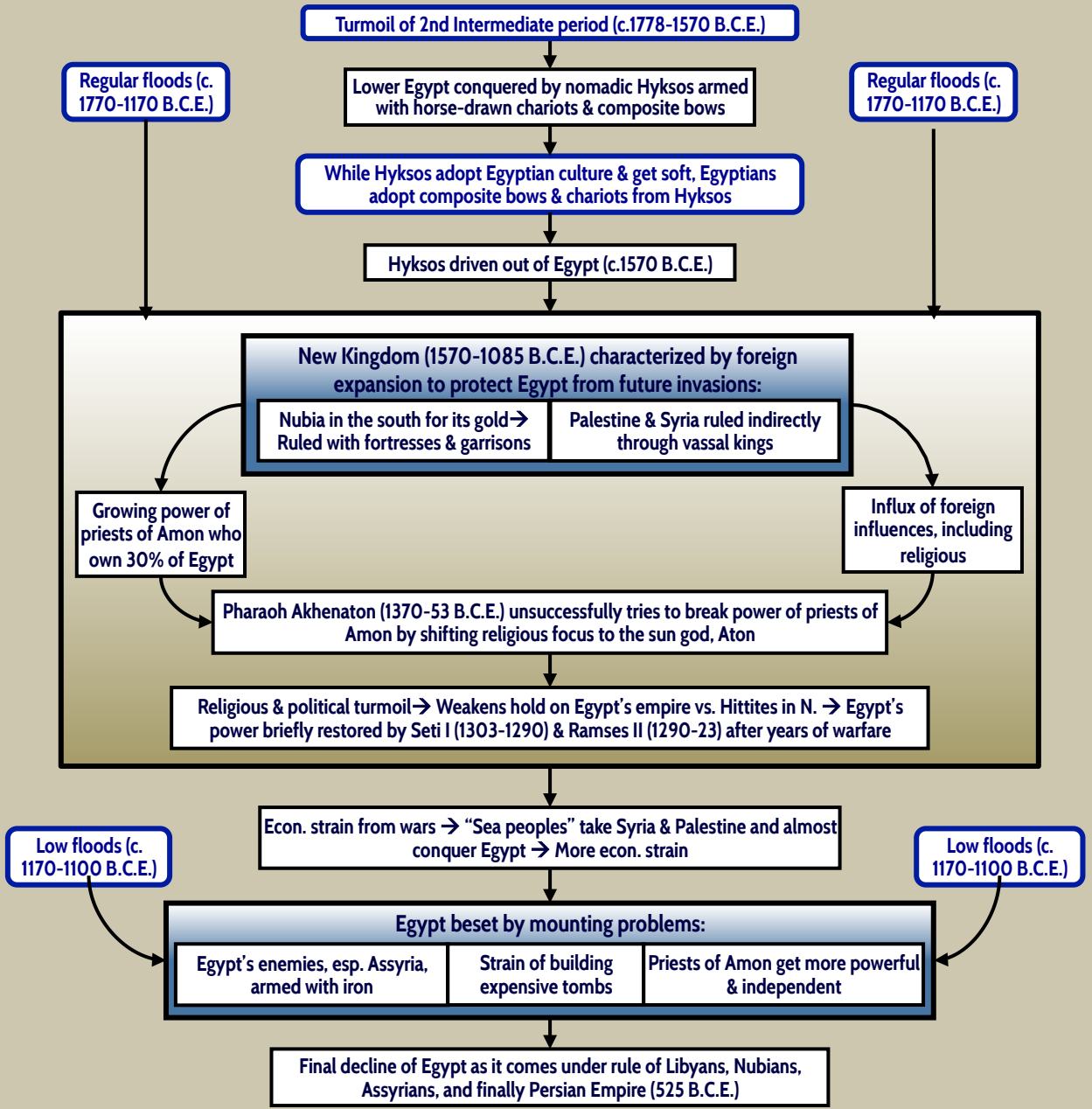
c.3000-2350		Sumerian city-states
c.2850-2150		Old Kgd Egypt
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c.1500		Aryans enter India
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c.1313		Traditional rabbinic date for Exodus
c.1200		Sea Peoples -> Period of turmoil -> End of Bronze Age
c.1200		Spread of iron tech.
c.1200-539		Phoenicians
c.1085-525		Egypt's final decline
c.1050		Phoenician alphabet
1030-931		Kingdom of Israel
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c.814		Assyrians conquer N. Kgd of Israel
722		Phoenicians found Carthage.
612-539		Chaldean Emp.
c.600		Phoenicians circumnavigate Africa
586		Sack of Jerusalem
c.550-330		Pre-classical Maya
c.250		Persian Empire
BC (BCE)		
AD (CE)		
c.250-900		Classical Maya
c.900-1521		Post-classical Meso-America
1428-1521		Aztecs
c.1100-1536		Inca civ. In Peru

2.2A EGYPT'S OLD AND MIDDLE KINGDOMS (c.3000-1778 B.C.E.)



c.3000-2350		Sumerian city-states
c.2850-2150		Old Kgd Egypt
c.2500-1700		Indus River Civ.
c.2350-2250		3rd Dyn. of Ur
c.2100-2000		Middle Kgd Egypt
c.2850-2150		Akkadian Emp.
c.1750-1600		Babyl. Emp.
c.1570-1085		New Kgd. Egypt
c.1531-1155		Kassite Emp.
c.1500		Aryans enter India
c.1430-1180		Height of Hittite Empire
c.1313		Traditional rabbinic date for Exodus
c.1200		Sea Peoples -> Period of turmoil -> End of Bronze Age
c.1200		Spread of iron tech.
c.1200-539		Phoenicians
c.1085-525		Egypt's final decline
c.1050		Phoenician alphabet
1030-931		Kingdom of Israel
911-612		Assyrian Emp.
c.814		Phoenicians found Carthage.
722		Assyrians conquer N. Kgd of Israel
612-539		Chaldean Emp.
c.600		Phoenicians circumnavigate Africa
c.586		Sack of Jerusalem
c.550-330		Pre-classical Maya
c.250		Persian Empire
BC (BCE)		
AD (CE)		
c.250-900		Classical Maya
c.900-1521		Post-classical Meso-America
1428-1521		Aztecs
c.1100-1536		Inca civ. In Peru

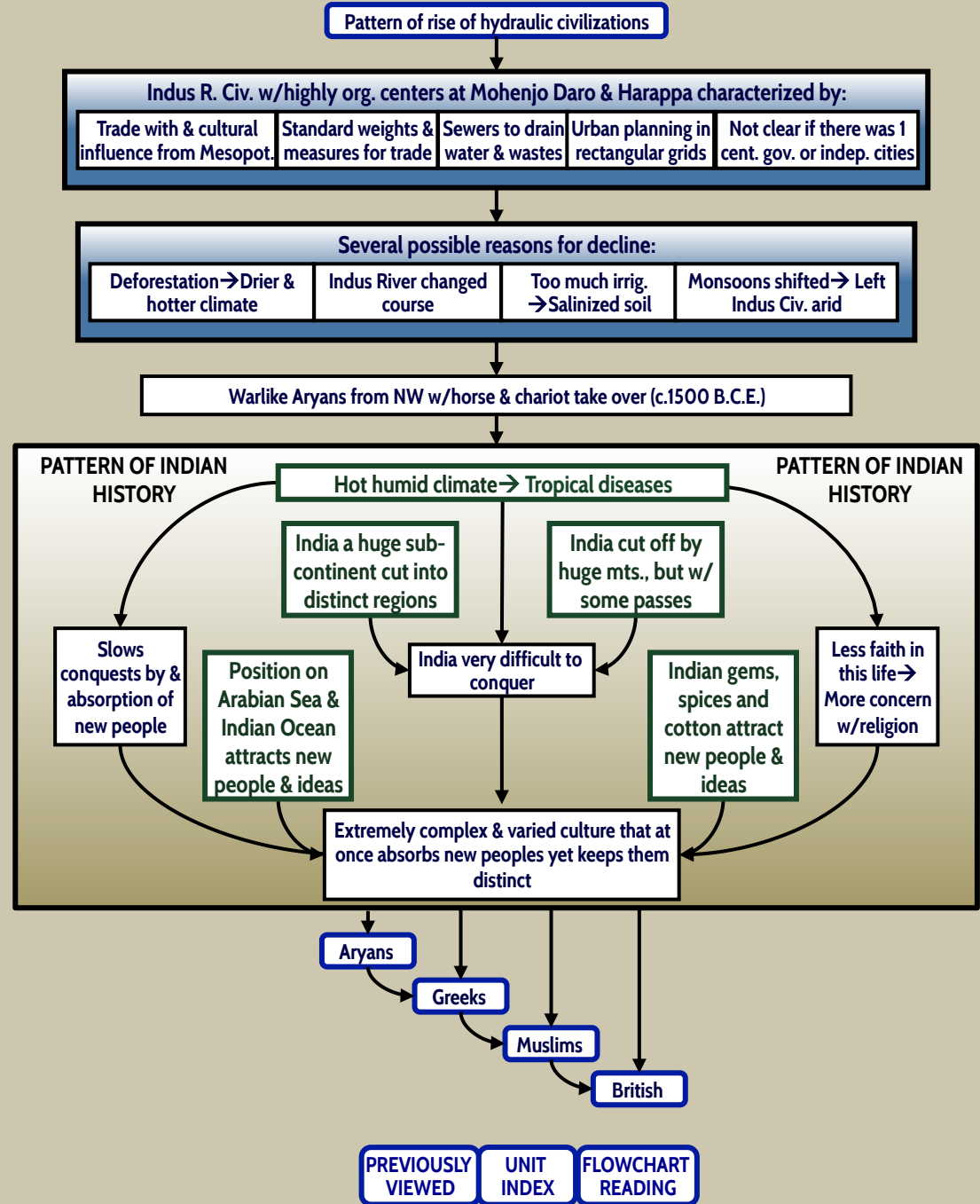
2.2B EGYPT'S NEW KINGDOM & FINAL DECLINE (1778-525 B.C.E.)



Timeline of ancient civilizations:

- c.3000-2350: Sumerian city-states
- c.2850-2150: Old Kgd Egypt
- c.2500-1700: Indus River Civ.
- c.2350-2250: 3rd Dyn. of Ur
- c.2100-2000: Akkadian Emp.
- c.2850-2150: Middle Kgd Egypt
- c.1750-1600: New Kgd. Egypt
- c.1570-1085: Babyl. Emp.
- c.1531-1155: Kassite Emp.
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- c.1430-1180: Height of Hittite Empire
- c.1313: Traditional rabbinic date for Exodus
- c.1200: Sea Peoples → Period of turmoil → End of Bronze Age
- c.1200: Spread of iron tech.
- c.1200-539: Phoenicians
- c.1085-525: Egypt's final decline
- c.1050: Phoenician alphabet (aleph, beth, gimel)
- 1030-931: Kingdom of Israel
- 911-612: Assyrian Emp.
- c.814: Phoenicians found Carthage.
- 722: Assyrians conquer N. Kgd of Israel
- 612-539: Chaldean Emp.
- 612-539: Phoenicians circumnavigate Africa
- c.600: Sack of Jerusalem
- 586: Sack of Jerusalem
- c.550-330: Pre-classical Maya
- c.250: Persian Empire
- BC (BCE): Classical Maya
- AD (CE): Post-classical Meso-America
- c.250-900: Classical Maya
- c.900-1521: Aztecs
- 1428-1521: Inca civ. In Peru
- c.1100-1536: Inca civ. In Peru

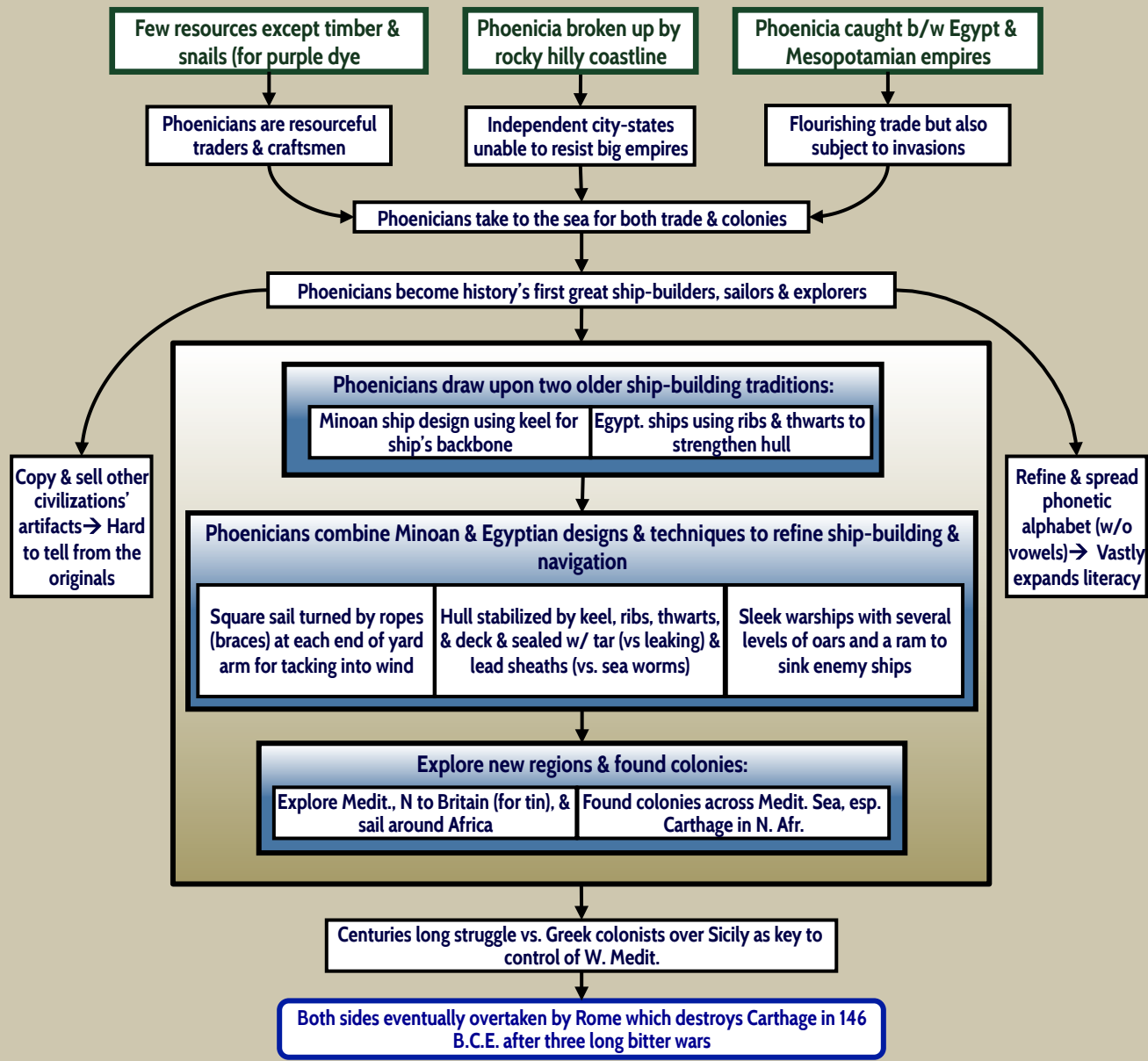
2.3 THE INDUS RIVER CIVILIZATION & PATTERN OF INDIAN HISTORY



Timeline of World Civilizations:

- c.3000-2350: Sumerian city-states
- c.2850-2150: Old Kgd Egypt, Indus River Civ.
- c.2500-1700: 3rd Dyn. of Ur, Akkadian Emp.
- c.2350-2250: Middle Kgd Egypt
- c.2100-2000: New Kgd. Egypt, Babyl. Emp.
- c.2850-2150: Kassite Emp.
- c.1750-1600: Aryans enter India, Height of Hittite Empire
- c.1570-1085: Traditional rabbinic date for Exodus
- c.1531-1155: Sea Peoples → Period of turmoil → End of Bronze Age
- c.1500: Spread of iron tech., Phoenicians
- c.1430-1180: Egypt's final decline
- c.1313: Kingdom of Israel
- c.1200: Assyrian Emp.
- c.1200-539: Phoenicians found Carthage, Assyrians conquer N. Kgd of Israel
- c.1085-525: Phoenician alphabet (aleph, beth, gimel)
- c.1050: Chaldean Emp.
- 1030-931: Phoenicians circumnavigate Africa
- 911-612: Sack of Jerusalem
- c.814: Pre-classical Maya, Persian Empire
- 722: Classical Maya, Post-classical Meso-America
- 612-539: Aztecs, Inca civ. In Peru
- c.600: Sack of Jerusalem
- 586: Persian Empire
- c.550-330: Pre-classical Maya, Persian Empire
- c.250: Classical Maya, Post-classical Meso-America
- BC (BCE): Aztecs, Inca civ. In Peru
- AD (CE): Aztecs, Inca civ. In Peru
- c.250-900: Classical Maya, Post-classical Meso-America
- c.900-1521: Aztecs, Inca civ. In Peru
- 1428-1521: Aztecs, Inca civ. In Peru
- c.1100-1536: Aztecs, Inca civ. In Peru

2.4 THE PHOENICIANS AND THE ART OF SEAFARING

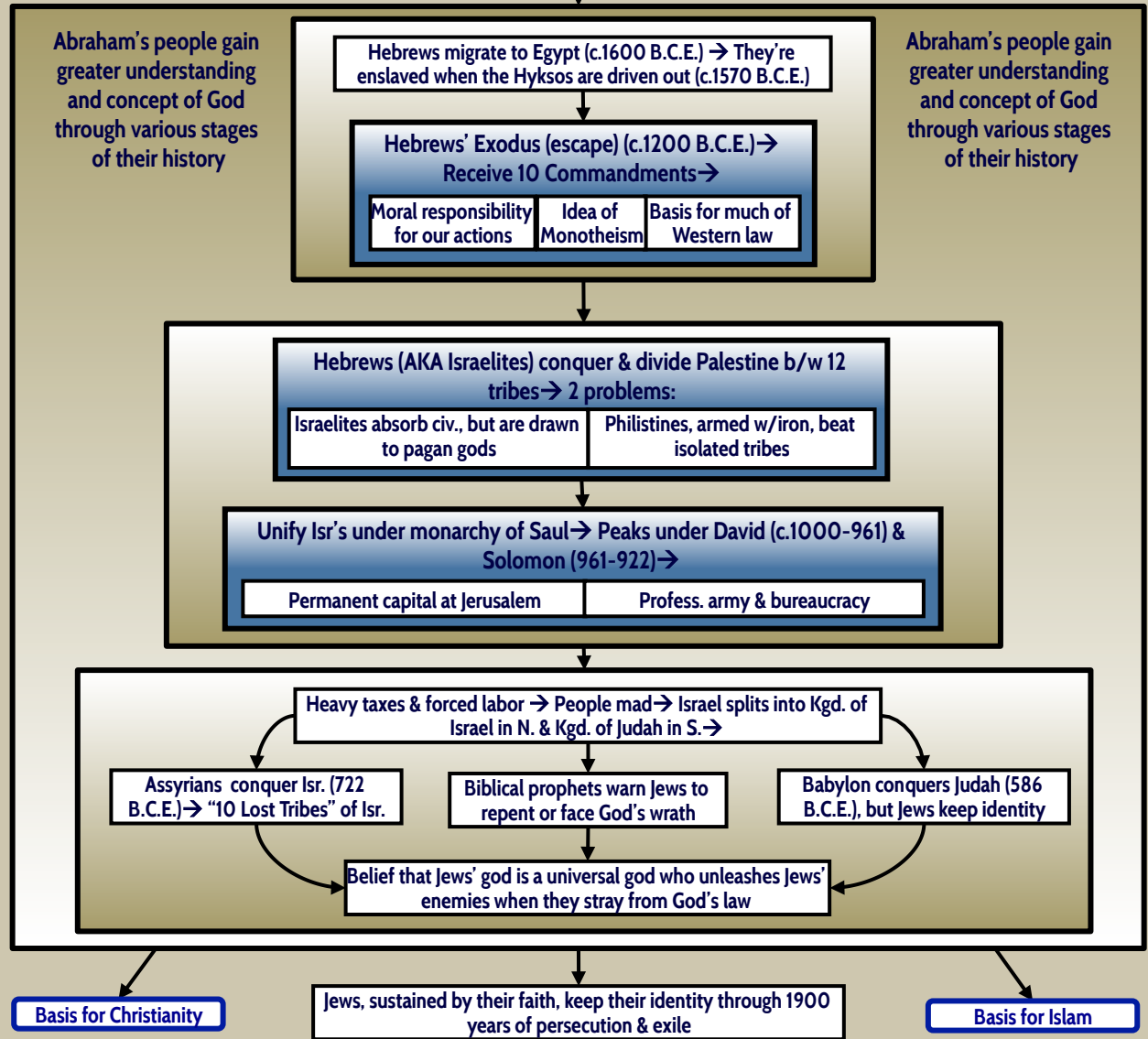


Timeline of ancient civilizations:

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- c.2850-2150: Old Kgd Egypt, Indus River Civ.
- c.2500-1700: 3rd Dyn. of Ur, Akkadian Emp.
- c.2350-2250: Middle Kgd Egypt
- c.2100-2000: New Kgd. Egypt, Babyl. Emp.
- c.2850-2150: Kassite Emp.
- c.1750-1600: Aryans enter India, Height of Hittite Empire
- c.1570-1085: Traditional rabbinic date for Exodus
- c.1531-1155: Sea Peoples -> Period of turmoil -> End of Bronze Age
- c.1500: Spread of iron tech., Phoenicians
- c.1430-1180: Egypt's final decline
- c.1313: Phoenician alphabet (aleph, beth, gimel)
- c.1200: Kingdom of Israel
- c.1200-539: Assyrian Emp., Assyrians conquer N. Kgd of Israel
- c.1085-525: Phoenicians found Carthage.
- c.1050: Chaldean Emp.
- 1030-931: Phoenicians circumnavigate Africa
- 911-612: Sack of Jerusalem
- c.814: Assyrians conquer N. Kgd of Israel
- 722: Assyrians conquer Isr. (722 B.C.E.) -> "10 Lost Tribes" of Isr.
- 612-539: Phoenicians circumnavigate Africa
- 600: Sack of Jerusalem
- 586: Sack of Jerusalem
- 550-330: Pre-classical Maya, Persian Empire
- c.250: Persians conquer N. Kgd of Israel
- BC (BCE) AD (CE): Classical Maya, Post-classical Meso-America
- c.250-900: Aztecs, Inca civ. In Peru
- c.900-1521: Aztecs, Inca civ. In Peru
- 1428-1521: Aztecs, Inca civ. In Peru
- c.1100-1536: Aztecs, Inca civ. In Peru

2.5 THE ISRAELITES AND THE BIRTH OF MONOTHEISM

Hebrews live near Mesopotamia as seen in shared stories (e.g., Great Flood) until one group under Abraham (c.1800 B.C.E.) migrate to Canaan (Palestine) -> Abraham's personal covenant to worship only his god



Timeline of Ancient Civilizations:

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- c.2350-2250: 3rd Dyn. of Ur
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- 586: Sack of Jerusalem
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- c.250: Persian Empire
- BC (BCE): Classical Maya
- c.250-900: Post-classical Meso-America
- c.900-1521: Aztecs
- 1428-1521: Inca civ. In Peru
- c.1100-1536: Inca civ. In Peru

2.6 THE PERSIAN EMPIRE (c.550-330 B.C.E.)

Closely related Indo-European speaking Persians & Aryans split (c. 2000 B.C.E.), the Persians going west and the Aryans SE into India

Persian king, Cyrus the Great, frees Persians from Medes, takes Babylon (539 B.C.E) and establishes history's greatest empire up to that time

Cambyses, Cyrus' successor, further extends Persian Empire by conquering Egypt in 525 B.C.E.

Darius I "The Great" (522-486 B.C.E.) helps establish stable & peaceful empire through tolerant rule & several other measures:

Ensures news and communications by an empire-wide system of roads & relay riders	Creates 20 large & powerful provinces (satrapies) whose governors could resist invasions, but also rebel vs. king	Local garrisons, officials, & royal spies ("King's Ears") answer directly to king to help prevent revolts
--	---	---

Still requires strong ruler to keep peace & order

Weak kings succeed Xerxes I after 464 B.C.E.

Internal Struggles:

- Civil wars, revolts (esp. in Egypt), & powerful independent satraps
- Kings raise taxes while hoarding gold & silver -> Less \$ in circulation
- Hurts kings & economy

Persia falls to Macedonian king, Alexander the Great in 330 B.C.E.

Persians revive under Sassanid Dynasty (c.220-650 C.E.) which preserves Mesopotamian culture and passes it on through Arab Muslims

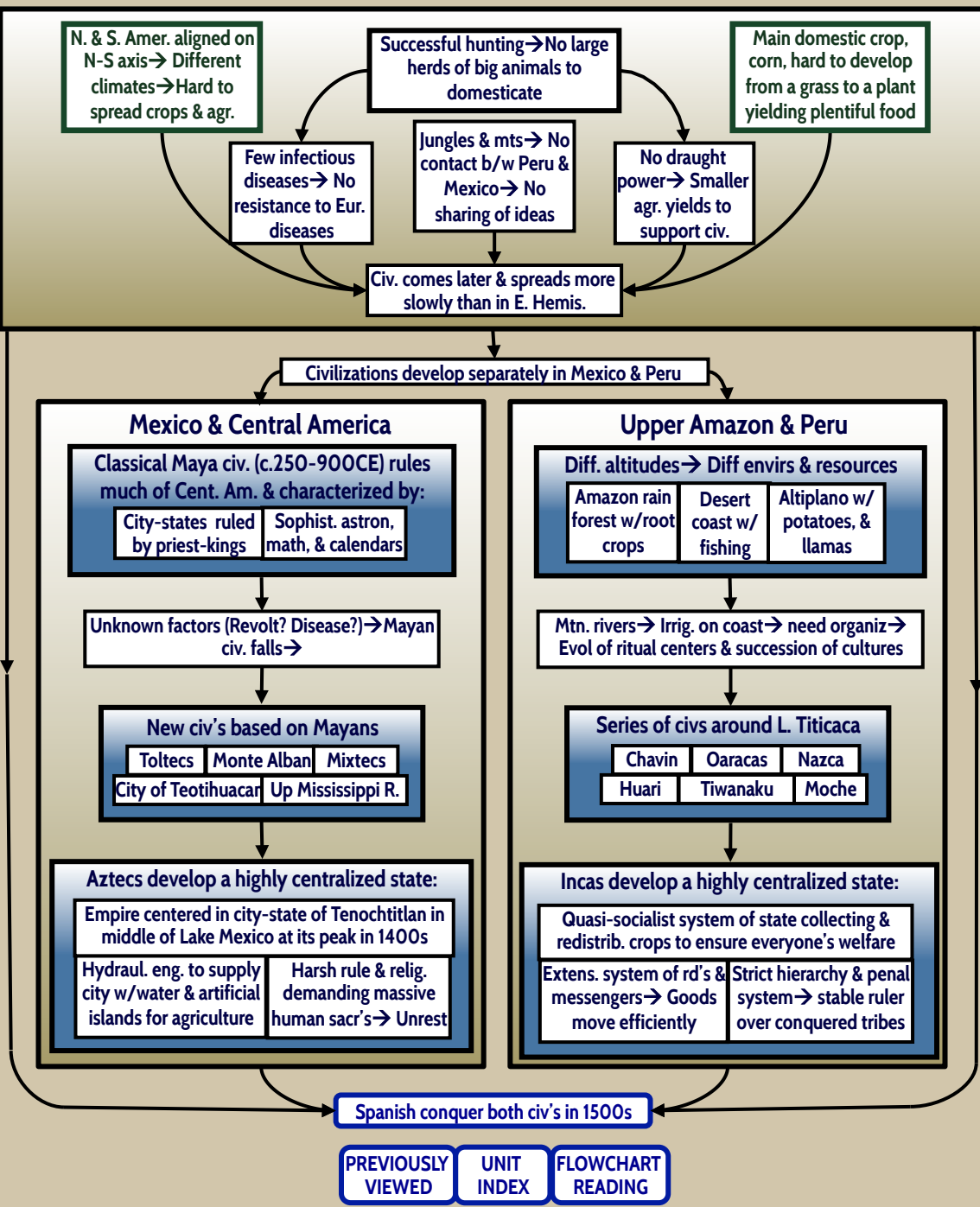
Another resurgence of Persian power & culture under Safavid Dynasty (1502-1736)

Persians re-emerge in 20th century as modern nation of Iran

Timeline of World Civilizations:

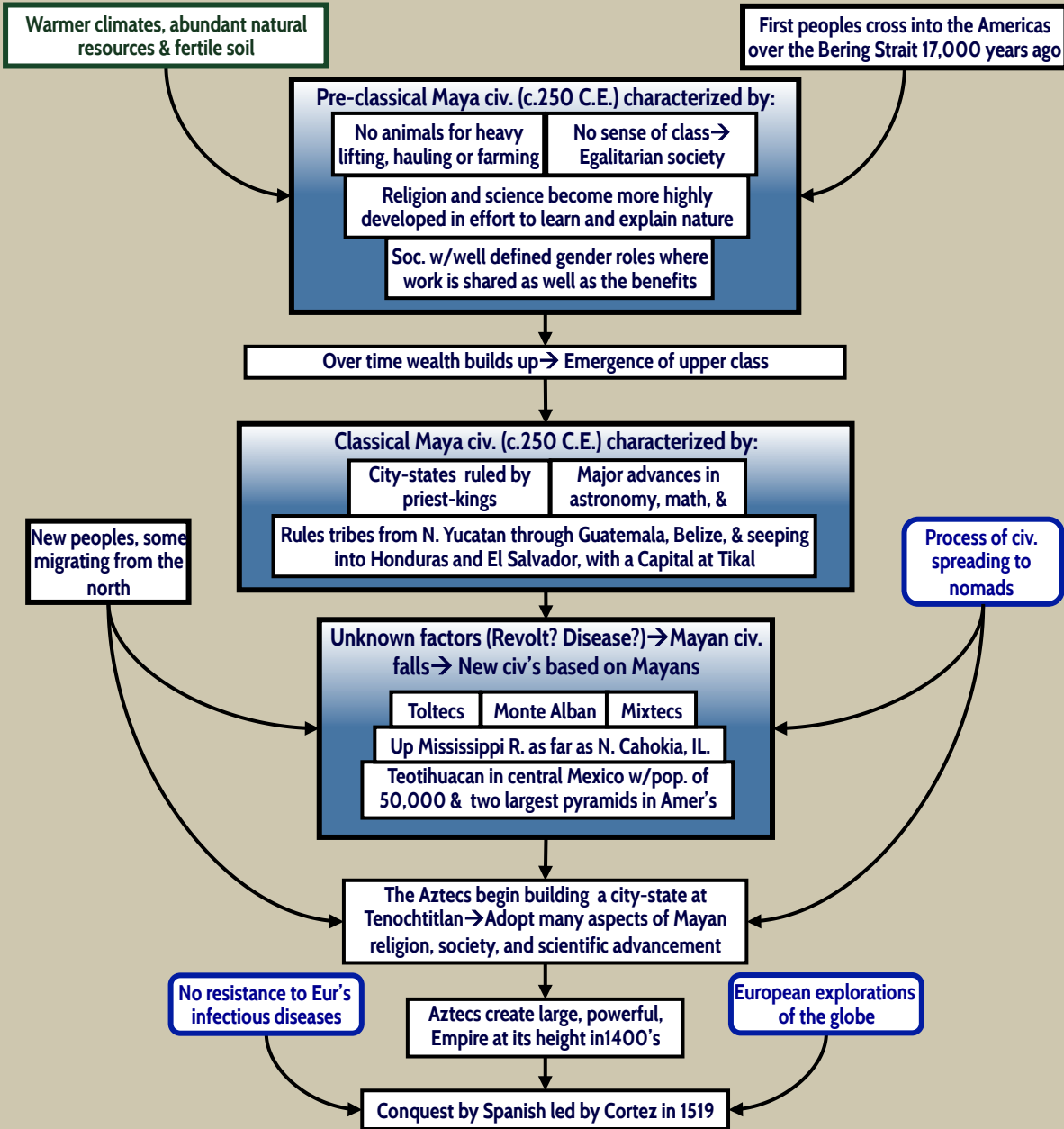
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- c.2850-2150: Old Kgd Egypt
- c.2500-1700: Indus River Civ.
- c.2350-2250: 3rd Dyn. of Ur
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- c.1500: Aryans enter India
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- c.1313: Traditional rabbinic date for Exodus
- c.1200: Sea Peoples → Period of turmoil → End of Bronze Age
- c.1200: Spread of iron tech.
- c.1200-539: Phoenicians
- c.1085-525: Egypt's final decline
- c.1050: Phoenician alphabet (aleph, beth, gimel)
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- 911-612: Assyrian Emp.
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- 722: Assyrians conquer N. Kgd of Israel
- 612-539: Chaldean Emp.
- 612-539: Phoenicians circumnavigate Africa
- c.600: Sack of Jerusalem
- c.550-330: Pre-classical Maya
- c.250: Persian Empire
- BC (BCE) AD (CE)
- c.250-900: Classical Maya
- c.250-900: Post-classical Meso-America
- c.900-1521: Aztecs
- 1428-1521: Inca civ. In Peru
- c.1100-1536: Inca civ. In Peru

2.7 THE CIVILIZATIONS OF PRE-COLUMBIAN AMERICA TO c.1500 C.E.



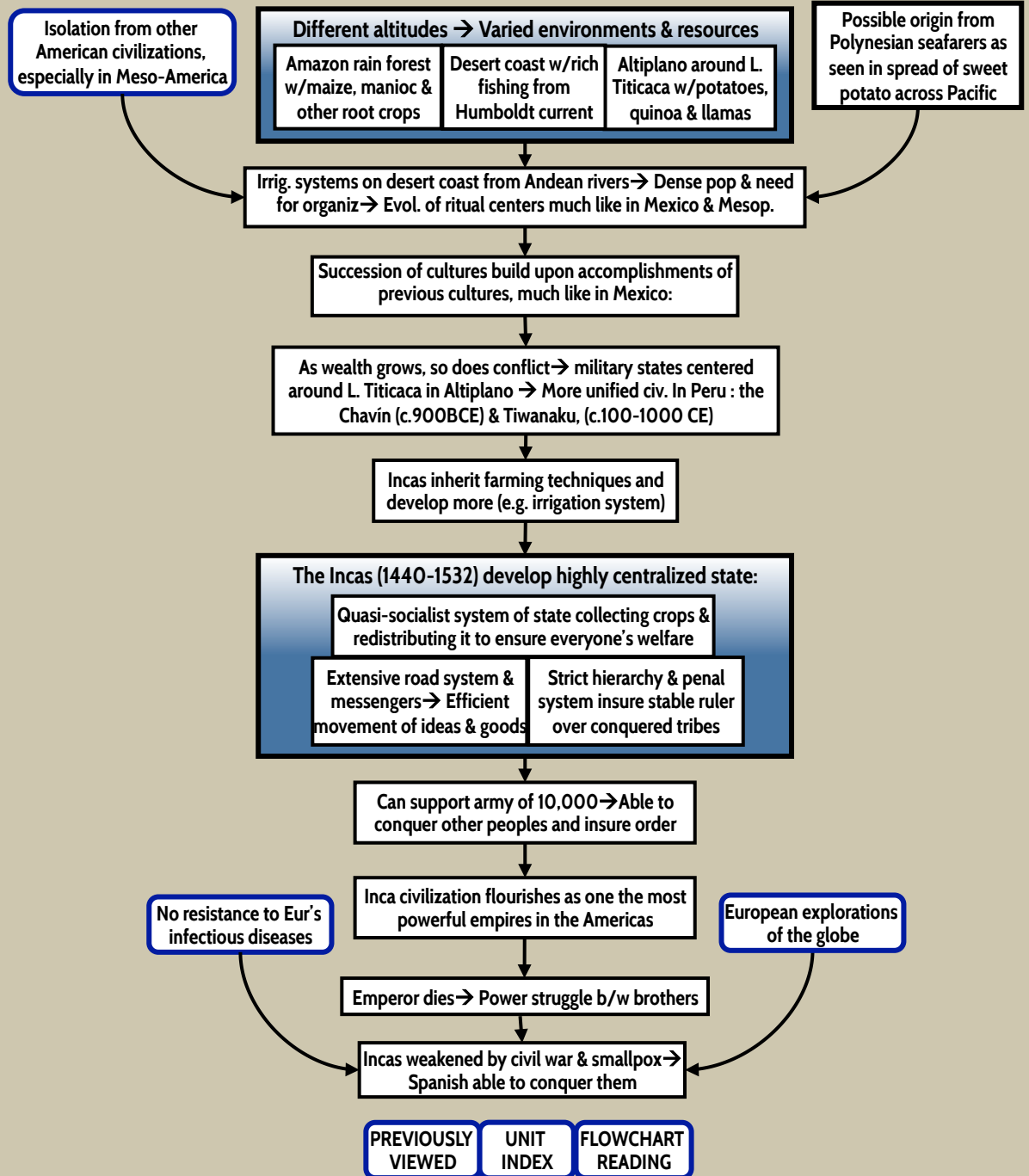
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c.1430-1180		Height of Hittite Empire
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722		Assyrians conquer N. Kgd of Israel
612-539		Chaldean Emp.
c.600		Phoenicians circumnavigate Africa
586		Sack of Jerusalem
c.550-330		Pre-classical Maya
c.250		Persian Empire
BC (BCE)		
AD (CE)		
c.250-900		Classical Maya
c.900-1521		Post-classical Meso-America
1428-1521		Aztecs
c.1100-1536		Inca civ. In Peru

2.7A THE CIVILIZATIONS OF PRE-COLUMBIAN MESO-AMERICA

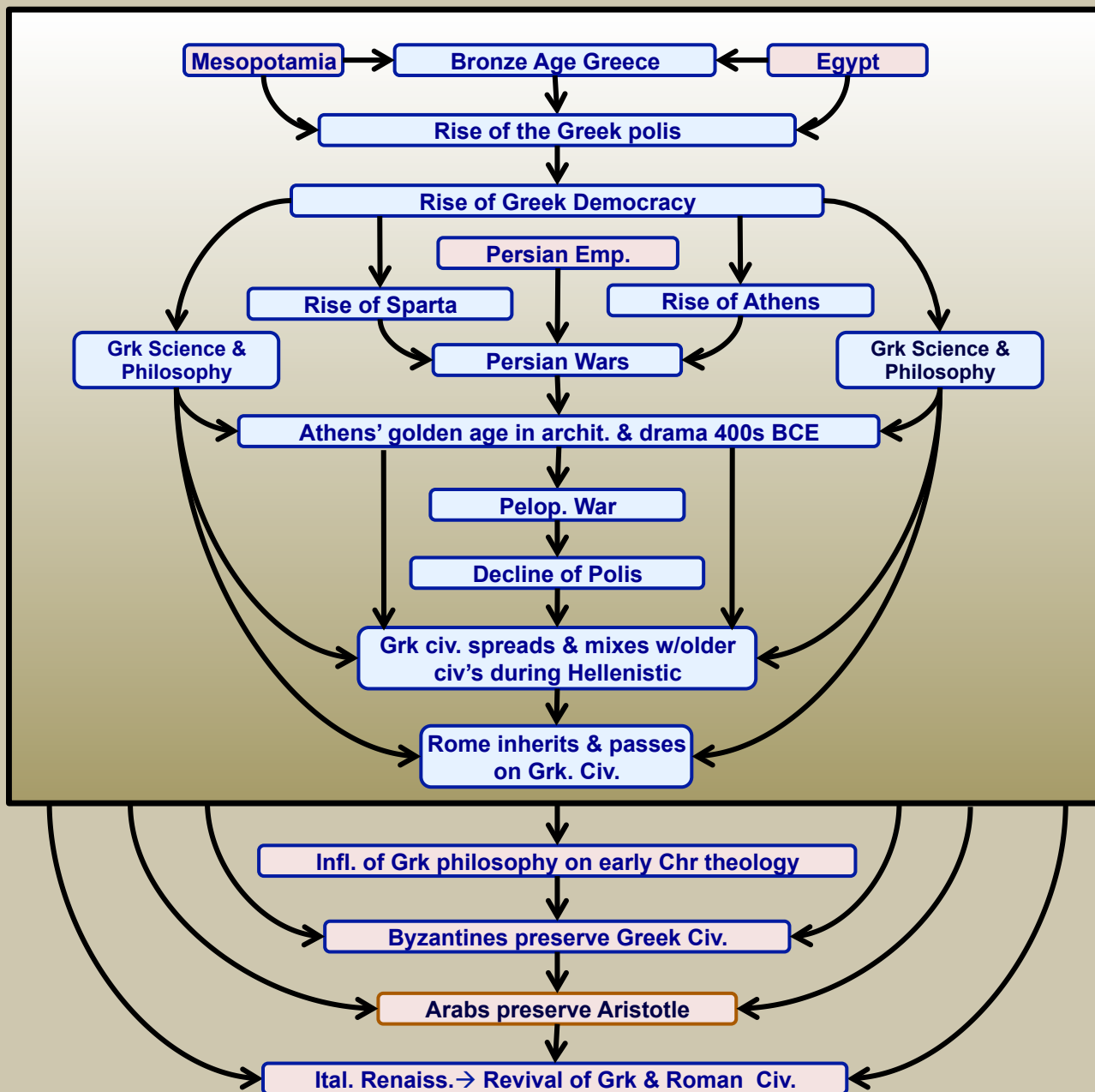




c.3000-2350		Sumerian city-states
c.2850-2150		Old Kgd Egypt
c.2500-1700		Indus River Civ.
c.2350-2250		Akkadian Emp.
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c.600		Phoenicians circumnavigate Africa
586		Sack of Jerusalem
c.550-330		Pre-classical Maya
c.250		Persian Empire
BC (BCE)		
AD (CE)		
c.250-900		Classical Maya
c.900-1521		Post-classical Meso-America
1428-1521		Aztecs
c.1100-1536		Inca civ. In Peru




2.7B THE CIVILIZATIONS OF THE PRE-COLUMBIAN ANDES







Unit 3. The Greeks







c.1900-1425 **MINOAN CIV.**  **MYCENAEAN CIV** 



c.1600-1100 **DARK AGE**  **ARCHAIC AGE**  **"Fall of Troy"** 


c.1100-800 **Age of colonization**  **Homer** 


c.750-550 **Thales of Miletus**  **Age of tyrants** 



c.700 **Hoplite Phalanx**  **Age of tyrants** 


c.624-546 **Coinage**  **Lycurgan reforms in Sparta** 


c.650-500 **Cleisthenes' democ. Reforms at Athens**  **Persian Wars** 




c.600 **CLASSICAL ERA** 


c.600 **Delian League -> Ath. Emp.** 


508 **Pericles & Athens' Golden Age**  **Socrates** 



510-478 **Plato** 


c.500-323 **Aristotle** 


478-465 **Parthenon**  **Aeschylus**  **Sophocles** 



460-430 **Euripides** 


470-399 **Aristophanes** 



428-347 **Peloponnesian War**  **"King's Peace"** 



384-322 **Aristophanes** 



447-432 **Philip of Macedon conquers Greece** 


525-456 **Alexander the Great**  **Alexandria** 


496-406 **HELLENISTIC ERA** 

480-406 **Menander & New Comedy**  **Wars of Alexander's successors** 

448-380 **Epicurus**  **Eratosthenes** 

431-404 **Stoicism**  **Rome annexes Greece** 

387 **Rome annexes Egypt** 

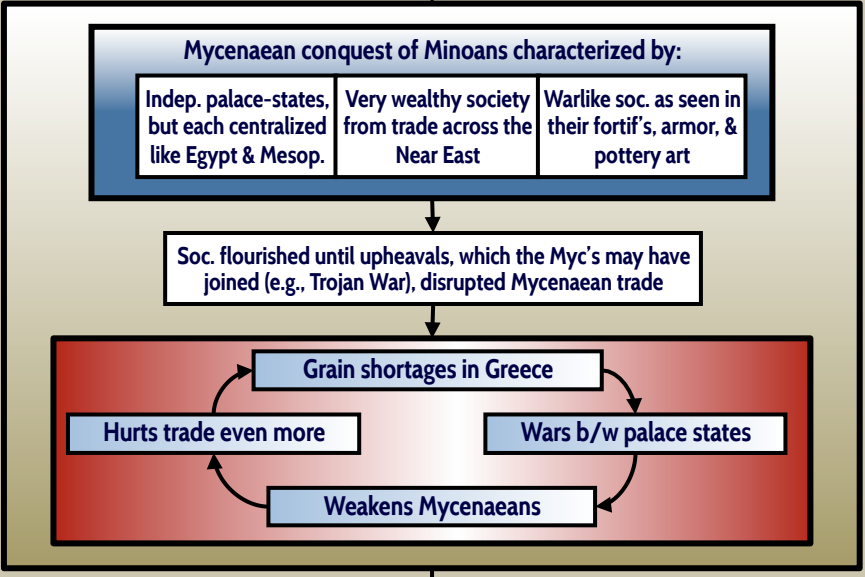
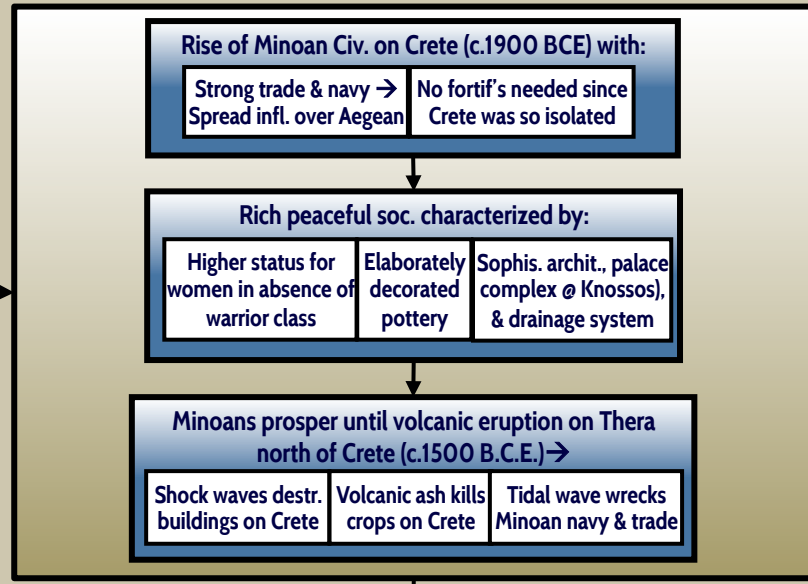
338 **Rome annexes Greece** 

336-323 **330** **323-31** **323-c.275** **276-194** **146** **31**



3.1 BRONZE AGE GREECE: THE MINOANS & MYCENAEANS




Influence of Mesop. via Syria & Cycladic Islands



Egyptian infl. in archit. (columns) & art (profiles)








Myc's fall → Greek Dark Age



c.1900-1425 **MINOAN CIV.**   **MYCENAEAN CIV**



c.1600-1100 **1184** **DARK AGE**  **ARCHAIC AGE**  **"Fall of Troy"** 



c.1100-800 **c. 800-500** **Age of colonization**  **Homer** 


c.750-550 **c.700** **c.624-546**  **Thales of Miletus**  **Age of tyrants** 



c.650 **Hoplite Phalanx** **c.650-500** **Coinage**  **Lycurgan reforms in Sparta** 


c.600 **c.600** **508** **Cleisthenes' democ. Reforms at Athens**  **Persian Wars** 


510-478 **c.500-323** **478-465** **CLASSICAL ERA**  **Delian League -> Ath. Emp.** 


460-430 **Pericles & Athens' Golden Age** **Socrates**  **Plato** 


470-399 **428-347** **384-322** **Aristotle** 


447-432 **Parthenon** **Aeschylus**  **Sophocles** 


525-456 **496-406** **480-406** **448-380** **Aristophanes** 


431-404 **Peloponnesian War** **"King's Peace"** 



387 **338** **Philip of Macedon conquers Greece** 

336-323 **Alexander the Great** **Alexandria** 

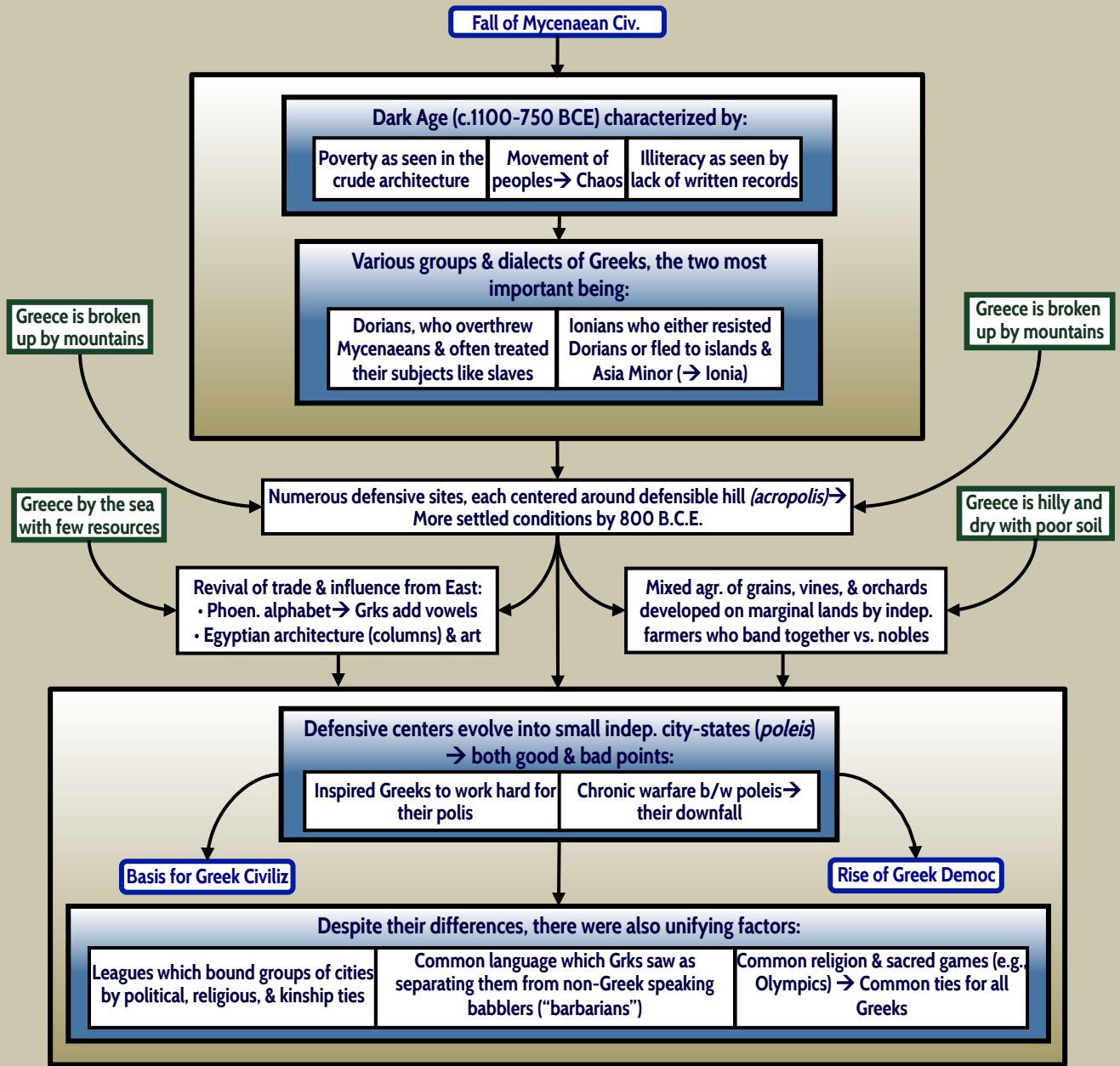
330 **HELLENISTIC ERA** **Wars of Alexander's successors** 

323-31 **323-c.275** **Menander & New Comedy** **Epicurus** 

342-291 **341-270** **334-262** **Stoicism** **Eratosthenes** 

276-194 **146** **31** **Rome annexes Egypt**  **Rome annexes Greece** 

3.2 DARK AGE GREECE & THE RISE OF THE POLIS (c.1100-750 B.C.E.)



c.1900-1425 MINOAN CIV. MYCENAEAN CIV

c.1600-1100 1184 DARK AGE "Fall of Troy"

c.1100-800 ARCHAIC AGE

c. 800-500 Age of colonization Homer

c.750-550 Thales of Miletus

c.700 Hoplite Phalanx Age of tyrants

c.624-546 Coinage Lycurgan reforms in Sparta

c.650 Cleisthenes' democ. Reforms at Athens Persian Wars

c.650-500 508 510-478

c.500-323 478-465 CLASSICAL ERA Delian League -> Ath. Emp.

460-430 Pericles & Athens' Golden Age Socrates

470-399 Plato

428-347 Aristotle

384-322 Parthenon Aeschylus Sophocles Euripides

447-432 Aristophanes

425-406 Peloponnesian War "King's Peace"

480-406 Philip of Macedon conquers Greece

448-380 431-404 Alexander the Great Alexandria

387 338

336-323 HELLENISTIC ERA

330 Menander & New Comedy Wars of Alexander's successors

323-31 Epicurus

323-c.275 Stoicism Eratosthenes

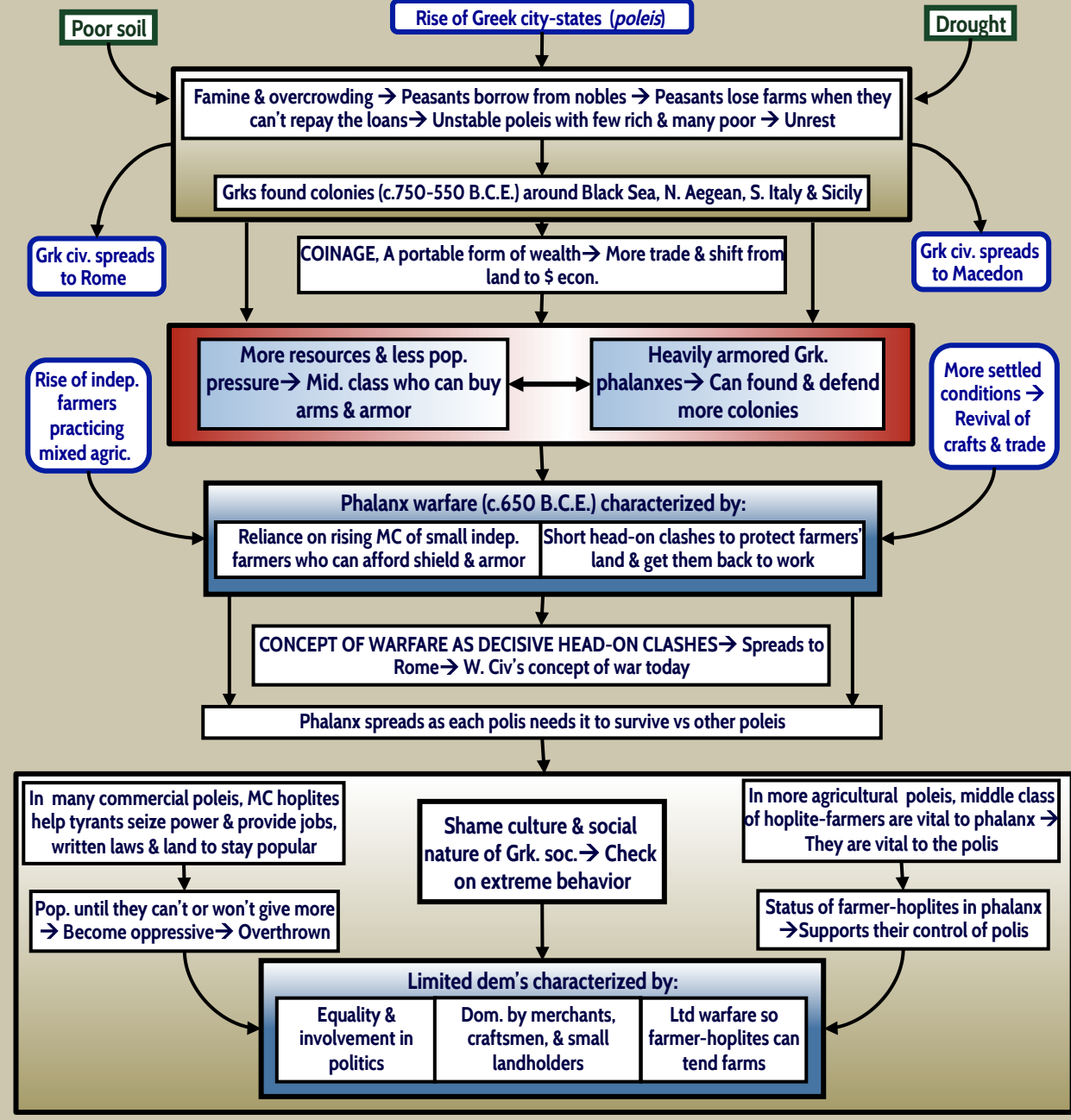
342-291 341-270



334-262 Rome annexes Egypt Rome annexes Greece




276-194 146



31




3.3 THE RISE OF GREEK DEMOCRACY (c.1100-750 B.C.E.)







c.1900-1425 MINOAN CIV.  MYCENAEAN CIV 






c.1600-1100 1184 **DARK AGE**  "Fall of Troy"  **ARCHAIC AGE** 













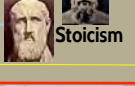



c.1100-800 **c. 800-500**  Age of colonization  Homer

c.750-550 **c.700** **c.624-546**  Thales of Miletus **c.650**  Hoplite Phalanx **Age of tyrants** 

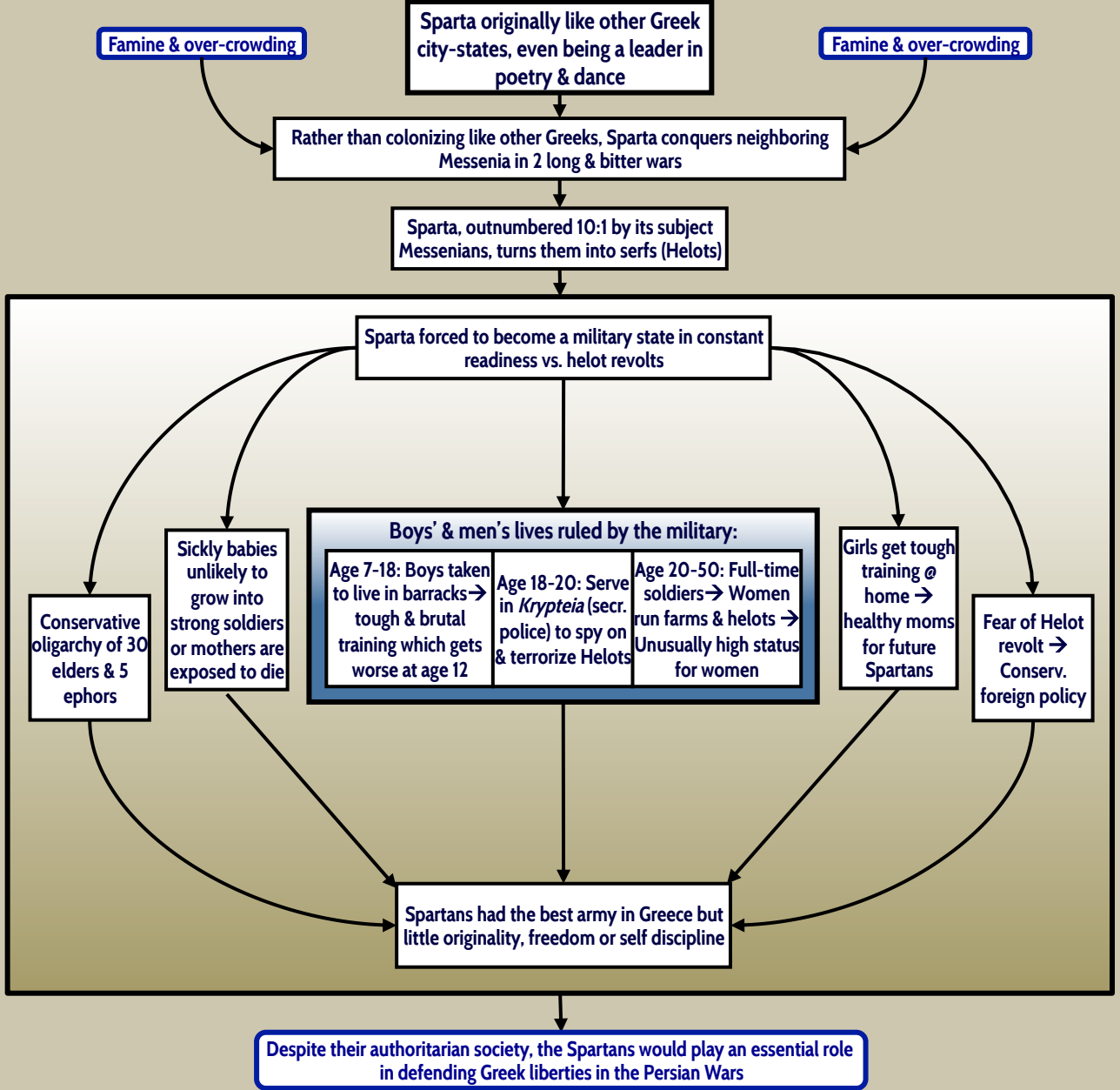
c.650-500 **c.600**  Coinage **Lycurgan reforms in Sparta** 

c.600 **508**  Cleisthenes' democ. Reforms at Athens **Persian Wars** 



510-478 **c.500-323** **478-465** **CLASSICAL ERA**  Delian League-> Ath. Emp. **460-430** **470-399** **428-347** **384-322**  Pericles & Athens' Golden Age **Socrates**  Socrates **Plato**  Plato **Aristotle**  Aristotle




447-432 **525-456** **496-406** **480-406** **448-380** **431-404** **387** **338** **336-323** **330** **323-31** **323-c.275** **342-291** **341-270** **334-262** **276-194** **146** **31**  Parthenon **Aeschylus**  Aeschylus **Sophocles**  Sophocles **Euripides**  Euripides **Aristophanes**  Aristophanes **Peloponnesian War**  Peloponnesian War **"King's Peace"**  "King's Peace" **Philip of Macedon conquers Greece**  Philip of Macedon **Alexander the Great**  Alexander the Great **Alexandria**  Alexandria **HELLENISTIC ERA** **Menander & New Comedy**  Menander & New Comedy **Wars of Alexander's successors** **Epicurus**  Epicurus **Stoicism**  Stoicism **Eratosthenes**  Eratosthenes **Rome annexes Egypt**  Rome annexes Egypt **Rome annexes Greece**  Rome annexes Greece



3.4 THE RISE OF SPARTA TO 500 B.C.E.








3.5 THE RISE OF ATHENS TO 500 B.C.E.



c.1900-1425 MINOAN CIV.  MYCENAEAN CIV 


c.1600-1100 1184 **DARK AGE**  **ARCHAIC AGE**  "Fall of Troy" 





c.1100-800 **c. 800-500**  Age of colonization  Homer






c.750-550 **c.700** **c.624-546**  Thales of Miletus  Hoplite Phalanx  Age of tyrants




c.650-500 **c.600** **c.600**  Coinage  Lycurgan reforms in Sparta




508  Cleisthenes' democ. Reforms at Athens  Persian Wars





510-478 **c.500-323** **478-465** **CLASSICAL ERA**  Delian League -> Ath. Emp.



460-430 **470-399** **428-347** **384-322**  Pericles & Athens' Golden Age  Socrates  Plato  Aristotle

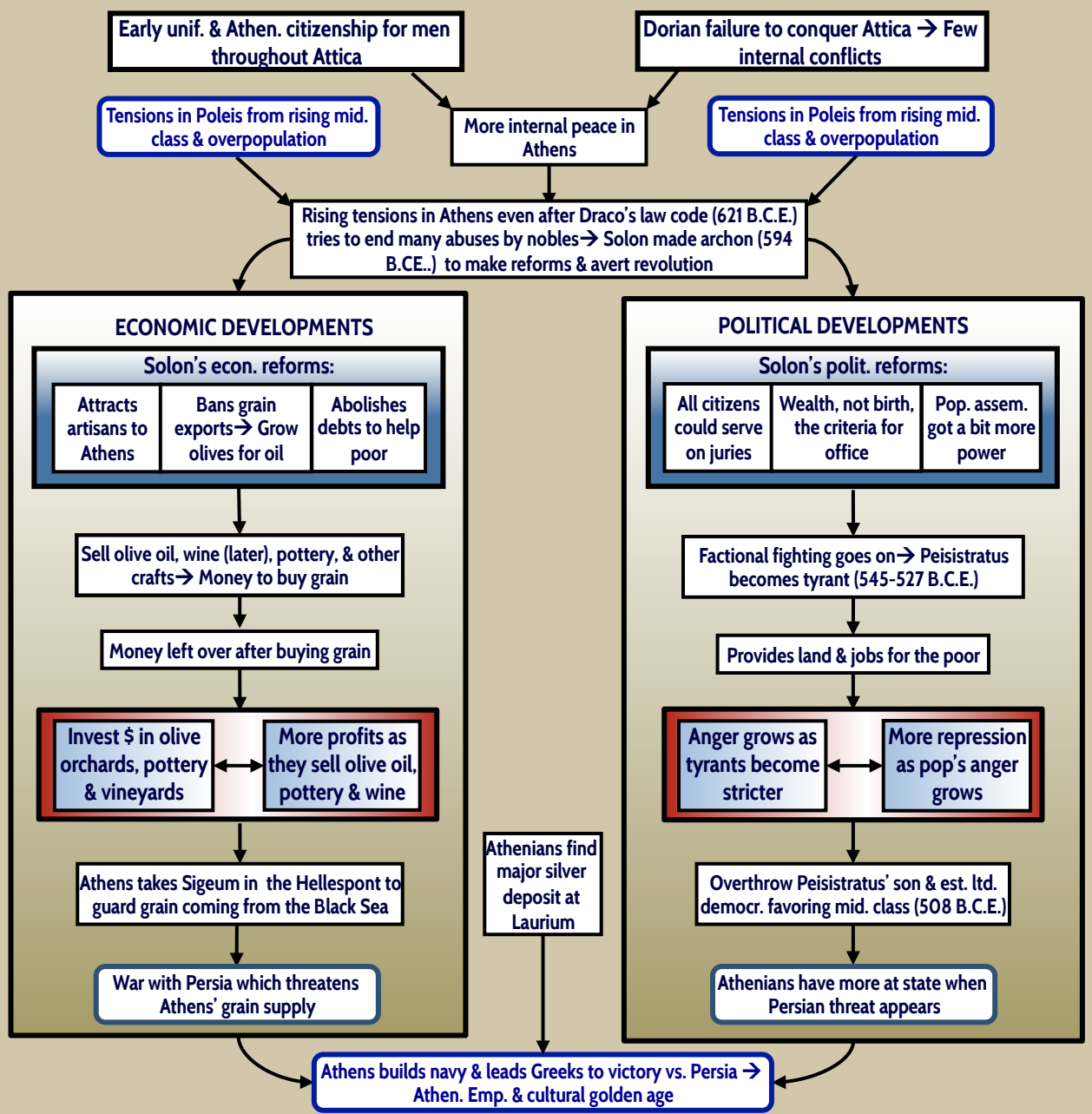
447-432 **525-456** **496-406** **480-406** **448-380** **431-404**  Parthenon  Aeschylus  Sophocles  Euripides  Aristophanes



431-404 **387** **338**  Peloponnesian War  "King's Peace"  Philip of Macedon conquers Greece




336-323 **330** **323-31** **323-c.275** **HELLENISTIC ERA**  Alexander the Great  Alexandria  Wars of Alexander's successors



342-291 **341-270** **334-262**  Menander & New Comedy  Epicurus  Stoicism  Eratosthenes



276-194 **146** **31**  Rome annexes Egypt  Rome annexes Greece








c.1900-1425 MINOAN CIV.  MYCENAEAN CIV 



c.1600-1100 1184  DARK AGE  ARCHAIC AGE  "Fall of Troy"

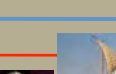

c.1100-800  Age of colonization  Homer


c.800-500  Thales of Miletus  Age of tyrants




c.750-550  Hoplite Phalanx  Coinage  Lycurgan reforms in Sparta


c.700  Cleisthenes' democ. Reforms at Athens  Persian Wars


c.624-546  Socrates  Delian League -> Ath. Emp.




c.650  Pericles & Athens' Golden Age  Plato

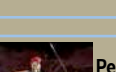

c.650-500  Aristotle


c.600  Parthenon  Aeschylus  Sophocles


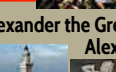
c.600  Euripides


508  Aristophanes



510-478  Peloponnesian War  "King's Peace"  Philip of Macedon conquers Greece



c.500-323  Alexander the Great  Alexandria


478-465  Hellenistic Era

460-430  Menander & New Comedy  Wars of Alexander's successors

447-432  Epicurus

428-347  Stoicism  Eratosthenes

384-322  Rome annexes Egypt  Rome annexes Greece

336-323  Rome annexes Greece

330

323-31

323-c.275

342-291

341-270

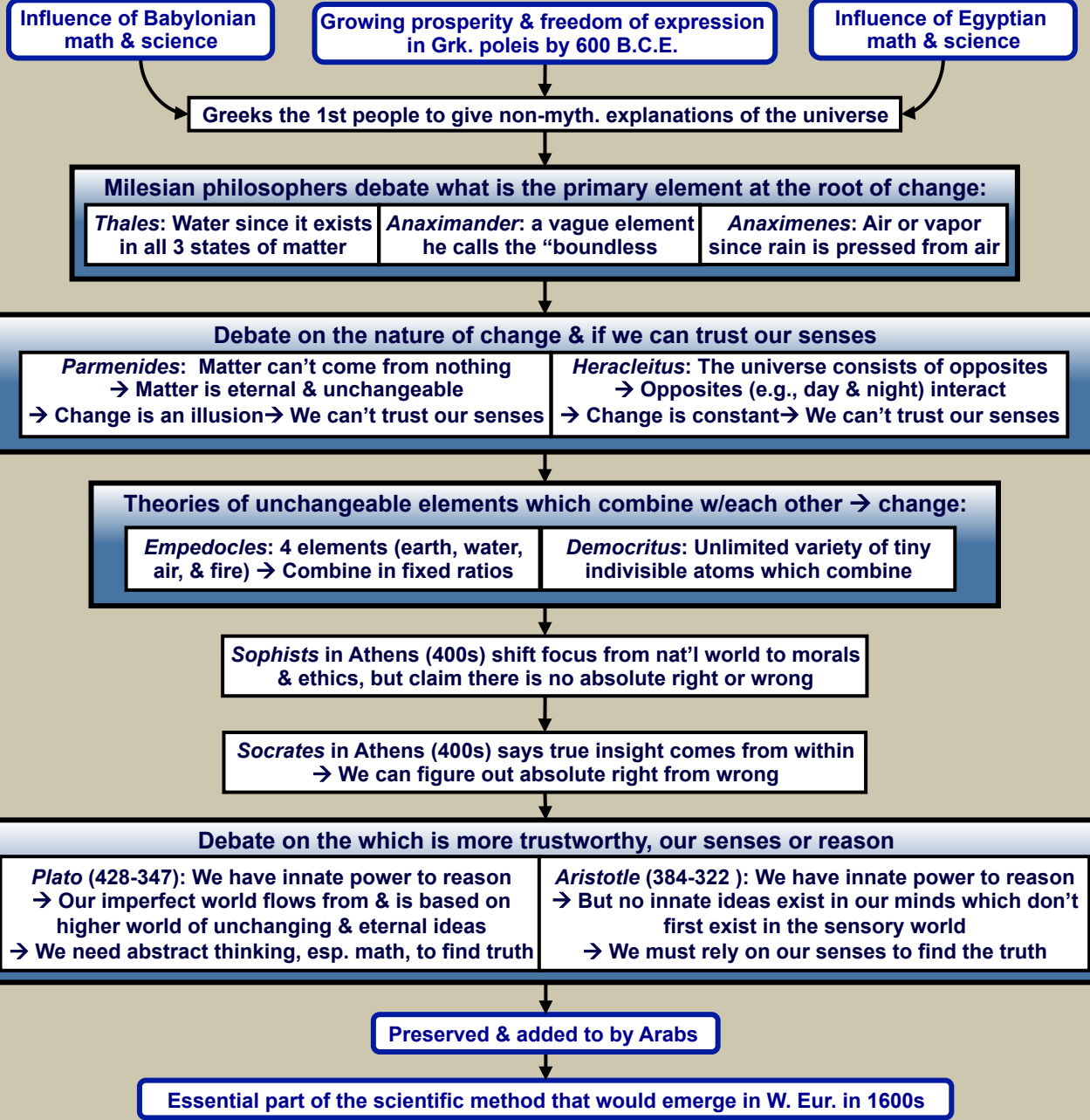
334-262







































276-194

146

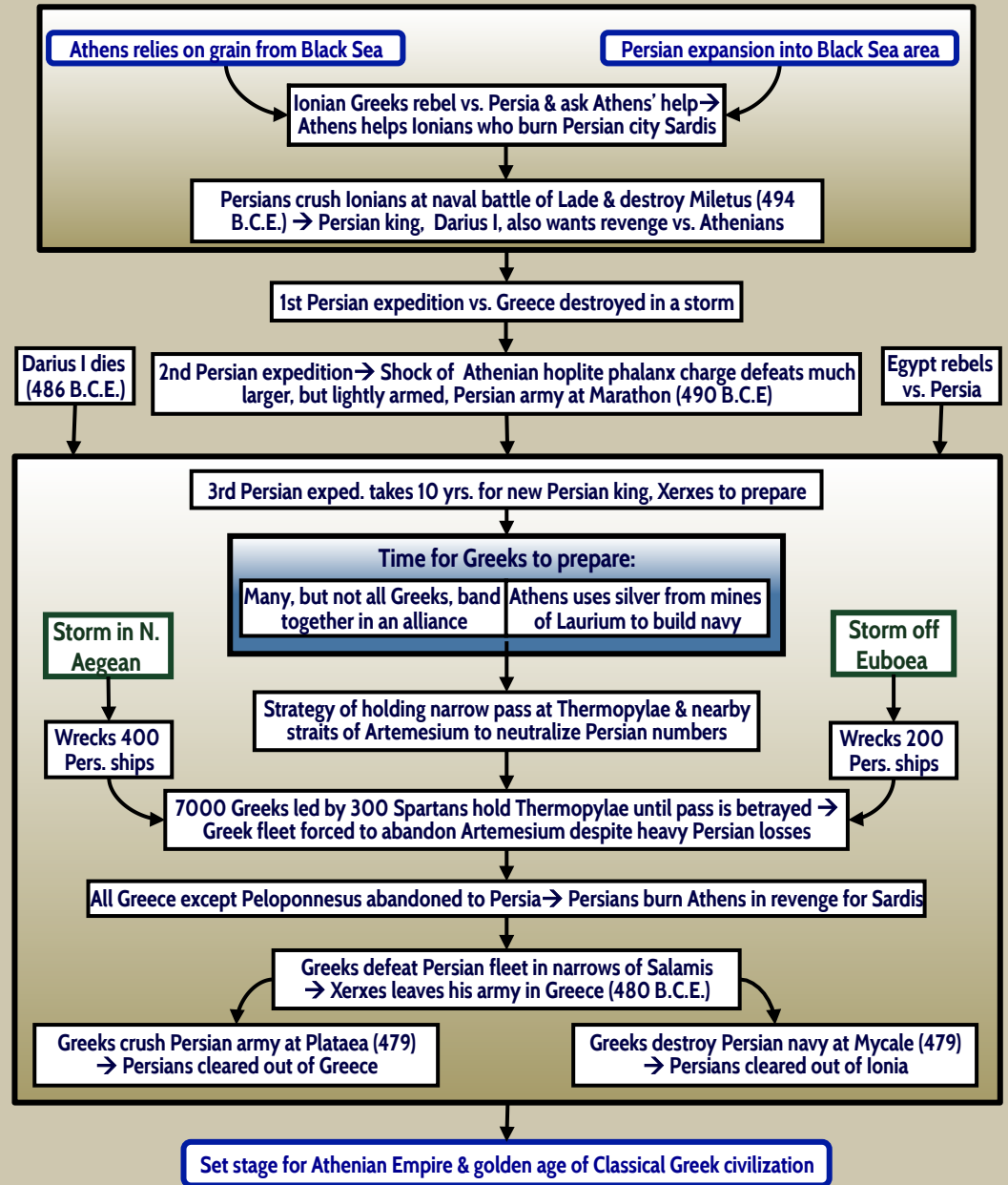
31



3.6 THE BIRTH OF WESTERN PHILOSOPHY & SCIENCE.








c.1900-1425		MINOAN CIV.		MYCENAEAN CIV
c.1600-1100		DARK AGE		ARCHAIC AGE
c.1100-800		"Fall of Troy"		
c. 800-500		Age of colonization		Homer
c.750-550				
c.700				
c.624-546		Thales of Miletus		Age of tyrants
c.650		Hoplite Phalanx		
c.650-500				
c.600		Coinage		Lycurgan reforms in Sparta
c.600				
508		Cleisthenes' democ. Reforms at Athens		Persian Wars
510-478				
c.500-323		CLASSICAL ERA		
478-465		Delian League-> Ath. Emp.		
460-430		Pericles & Athens' Golden Age		Socrates
470-399				Plato
428-347				Aristotle
384-322		Parthenon		Aeschylus
447-432				Sophocles
525-456				Euripides
496-406				Aristophanes
480-406				
448-380		Peloponnesian War		"King's Peace"
431-404				Philip of Macedon conquers Greece
387				
338		Alexander the Great		Alexandria
336-323				HELLENISTIC ERA
330				
323-31				
323-c.275		Menander & New Comedy		Wars of Alexander's successors
342-291		Epicurus		
341-270		Stoicism		Eratosthenes
334-262				
276-194		Rome annexes Egypt		Rome annexes Greece
146				
31				



3.7 THE PERSIAN WARS (c.500-478 B.C.E.)







c.1900-1425 MINOAN CIV.  MYCENAEAN CIV 



c.1600-1100 1184 **DARK AGE**  "Fall of Troy"  **ARCHAIC AGE** 


c.1100-800 **Age of colonization**  **Homer** 


c.800-500 **Age of tyrants**  **Thales of Miletus** 


c.750-550 **Hoplite Phalanx**  **Age of tyrants** 



c.700 **Coinage**  **Lycurgan reforms in Sparta** 


c.624-546 **Cleisthenes' democ. Reforms at Athens**  **Persian Wars** 


c.650 **Age of tyrants** 




c.650-500 **CLASSICAL ERA** 


c.600 **Delian League -> Ath. Emp.** 


c.600 **Pericles & Athens' Golden Age**  **Socrates** 



508 **Plato** 


510-478 **Aristotle** 



c.500-323 **Parthenon**  **Aeschylus**  **Sophocles** 


478-465 **Euripides** 



460-430 **Aristophanes** 



470-399 **Peloponnesian War**  **"King's Peace"** 

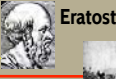
428-347 **Philip of Macedon conquers Greece** 



384-322 **Alexander the Great**  **Alexandria** 

447-432 **HELLENISTIC ERA** 

525-456 **Menander & New Comedy**  **Wars of Alexander's successors** 

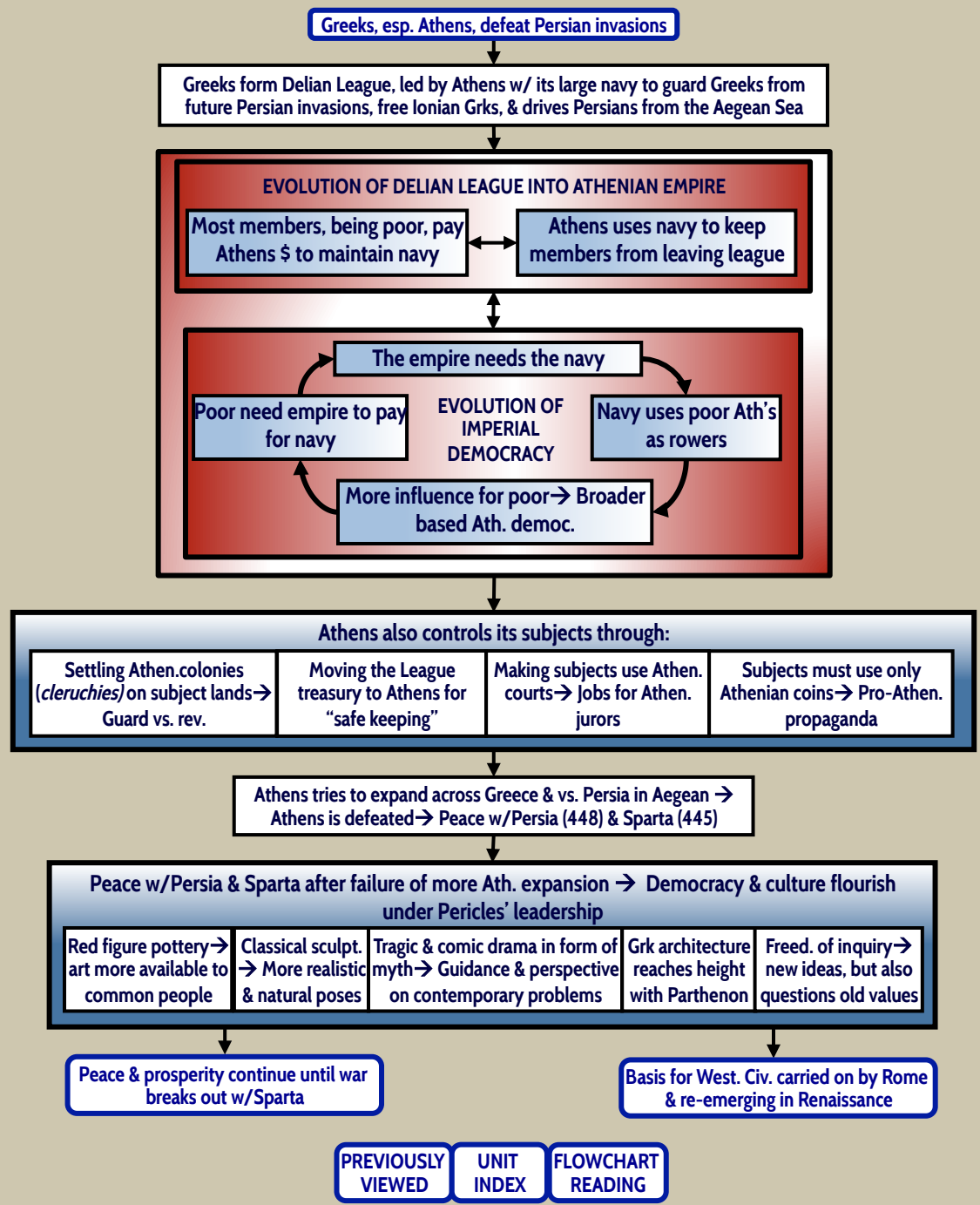
496-406 **Epicurus**  **Stoicism** 



480-406 **Erastosthenes** 




448-380 **Rome annexes Egypt**  **Rome annexes Greece** 



431-404 **387** **338** **336-323** **330** **323-31** **323-c.275** **342-291** **341-270** **334-262** **276-194** **146** **31**




3.8 THE DELIAN LEAGUE & ATHENIAN EMPIRE (c.500-431 B.C.E.)





c.1900-1425 MINOAN CIV.  MYCENAEAN CIV 



c.1600-1100 1184  DARK AGE  ARCHAIC AGE  "Fall of Troy"

c.1100-800  Age of colonization  Homer

c.800-500  Hoplite Phalanx  Thales of Miletus  Age of tyrants

c.750-550  Coinage  Lycurgan reforms in Sparta

c.700

c.624-546  Cleisthenes' democ. Reforms at Athens  Persian Wars

c.650



c.650-500



c.600

c.600




508

510-478


c.500-323  Delian League -> Ath. Emp.  Socrates

478-465  Pericles & Athens' Golden Age  Plato


460-430

447-432  Parthenon  Aeschylus  Sophocles


470-399

428-347  Aristotle




384-322

525-456  Euripides

496-406



480-406  Aristophanes

448-380


431-404  Peloponnesian War  "King's Peace"  Philip of Macedon conquers Greece



387


338

336-323  Alexander the Great  Alexandria



330

323-31  HELLENISTIC ERA



323-c.275  Menander & New Comedy  Wars of Alexander's successors

342-291  Epicurus

341-270

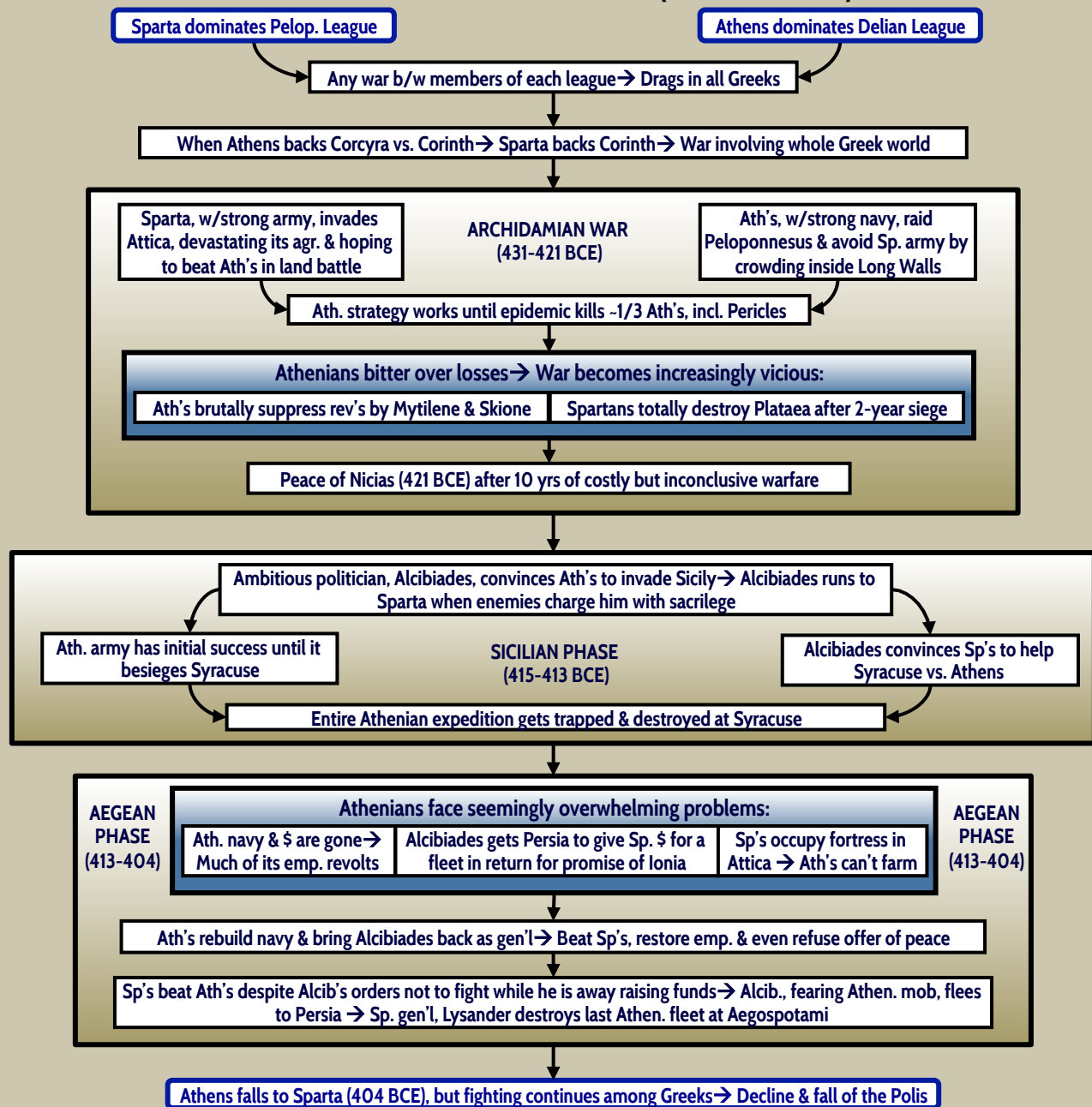
334-262  Stoicism  Eratosthenes



276-194




146  Rome annexes Egypt  Rome annexes Greece



31



3.9A THE PELOPONNESIAN WAR (431-404 B.C.E.)







1900-1425 MINOAN CIV.  MYCENAEAN CIV. 



1600-1100 1184 **DARK AGE**  **ARCHAIC AGE**  "Fall of Troy" 

1100-800 **Age of colonization**  **Homer** 

800-500 **Age of tyrants**  **Thales of Miletus** 

750-550 **Hoplite Phalanx**  **Age of tyrants** 

700 **Coinage**  **Lycurgan reforms in Sparta** 

624-546 **Cleisthenes' democ. Reforms at Athens**  **Persian Wars** 

650 **War b/w members of opposing leagues → Most Grks dragged in**




650-500 **Greeks gang up vs. biggest power** ↔ **New polis emerges as big power**


600 **Sparta destroys Ath. Emp. in Pelopon. War (431-404)**


600 **Thebes leads other Greeks vs. Sparta**




508 **Athens & Sparta join forces to stop Theban dominance**


510-478 **CLASSICAL ERA**


500-323 **Delian League → Ath. Emp.**  **Pericles & Athens' Golden Age**  **Socrates** 


478-465 **Plato** 


460-430 **Aristotle** 



430-406 **Parthenon**  **Aeschylus**  **Sophocles** 

428-347 **Euripides** 



384-322 **Aristophanes** 


447-432 **Peloponnesian War "King's Peace"** 



525-456 **Philip of Macedon conquers Greece** 



496-406 **Alexander the Great**  **Alexandria** 

480-406 **HELLENISTIC ERA**

448-380 **Menander & New Comedy**  **Wars of Alexander's successors** 

431-404 **Epicurus** 

387 **Stoicism**  **Eratosthenes** 

338 **Rome annexes Egypt**  **Rome annexes Greece** 

336-323

330

323-31

323-c.275

342-291

341-270

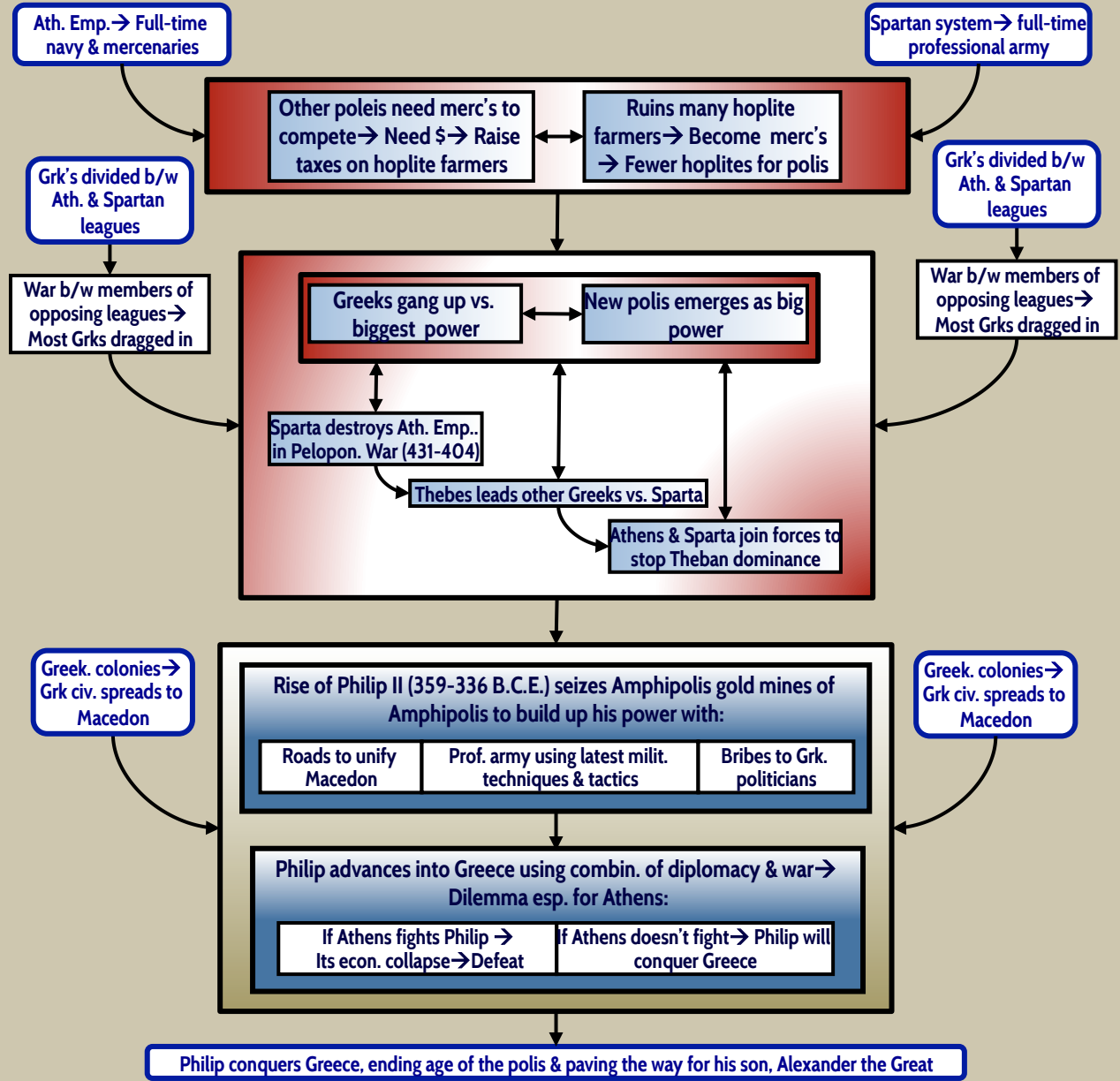
334-262



276-194




146



31




3.9 THE DECLINE & FALL OF THE GREEK POLIS (431-338 B.C.E.)







c.1900-1425 MINOAN CIV.  MYCENAEAN CIV 






c.1600-1100 1184 **DARK AGE**  **ARCHAIC AGE**  "Fall of Troy" 






c.1100-800 **c. 800-500**  Age of colonization  Homer

c.750-550 **c.700** **c.624-546**  Thales of Miletus  Hoplite Phalanx  Age of tyrants








c.650 **c.650-500** **c.600** **c.600**  Coinage  Lycurgan reforms in Sparta

508 **510-478**  Cleisthenes' democ. Reforms at Athens  Persian Wars

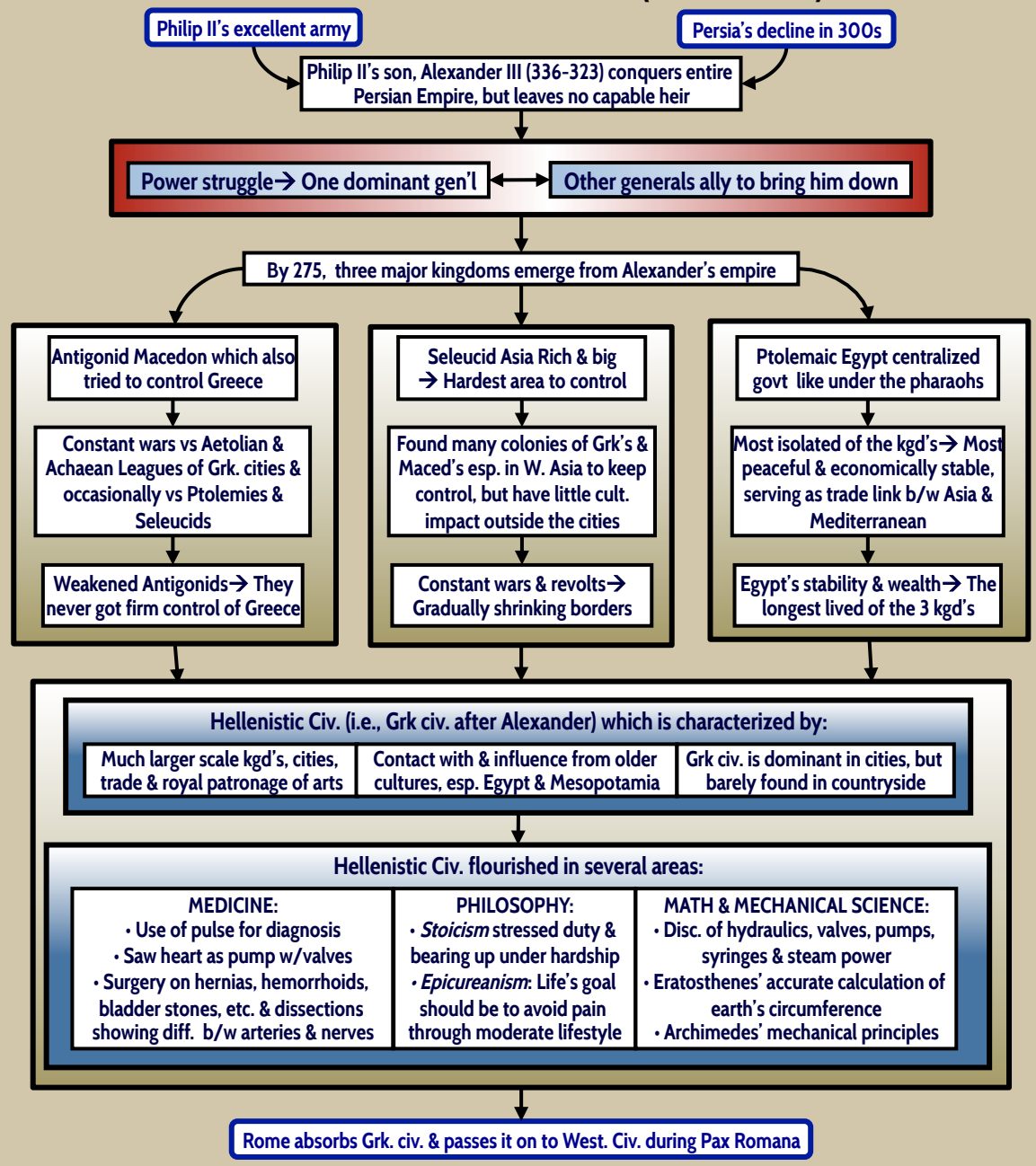
c.500-323 **478-465** **CLASSICAL ERA**  Delian League -> Ath. Emp.  Pericles & Athens' Golden Age  Socrates  Plato  Aristotle

460-430 **470-399** **428-347** **384-322**  Parthenon  Aeschylus  Sophocles  Euripides  Aristophanes

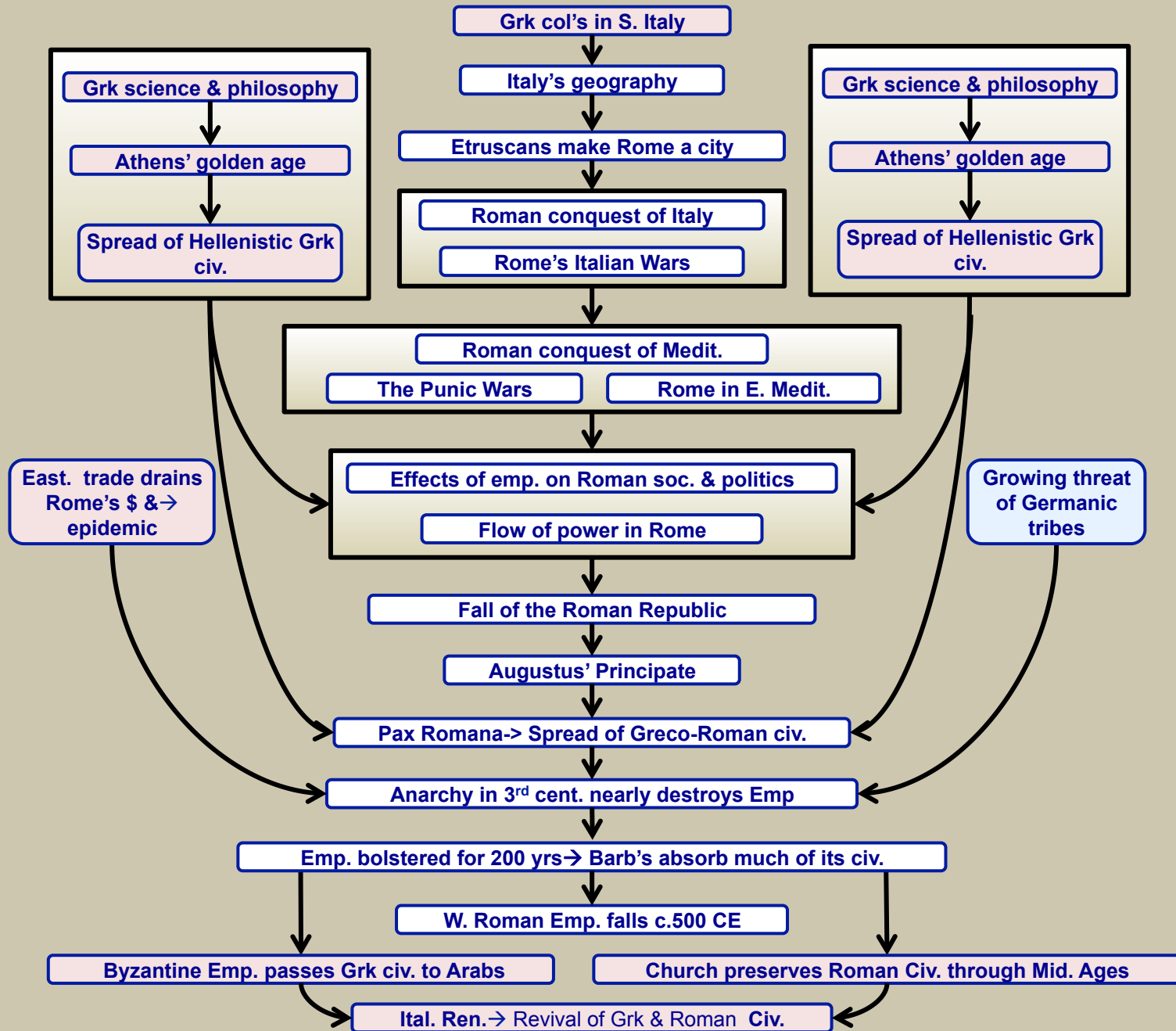
447-432 **525-456** **496-406** **480-406** **448-380** **431-404** **387** **338** **336-323** **330** **323-31** **323-c.275** **342-291** **341-270** **334-262** **276-194** **146** **31**

HELLENISTIC ERA  Menander & New Comedy  Epicurus  Wars of Alexander's successors  Stoicism  Eratosthenes  Rome annexes Egypt  Rome annexes Greece

3.10 THE HELLENISTIC AGE (338-31 B.C.E.)

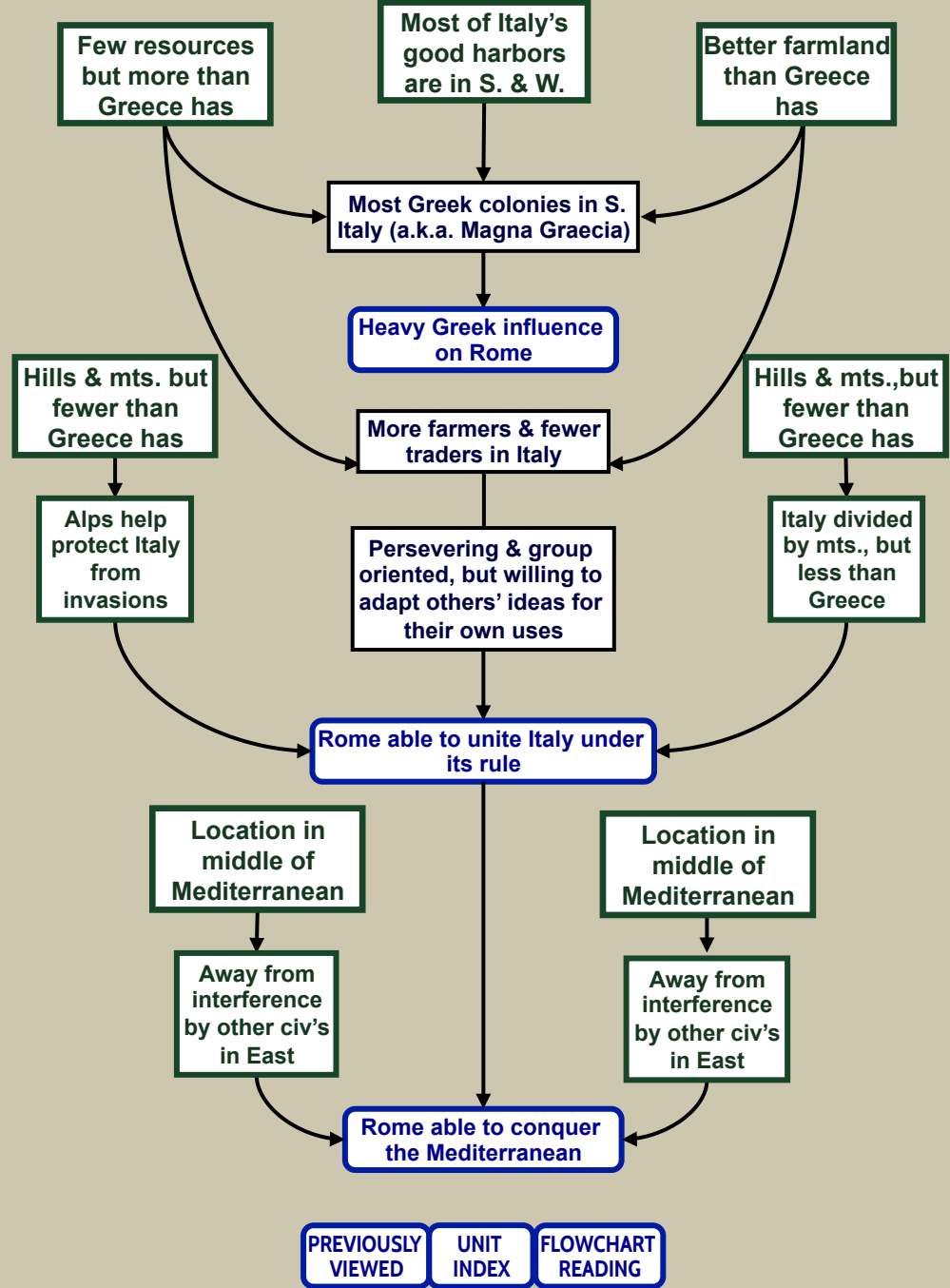


Unit 4. Rome



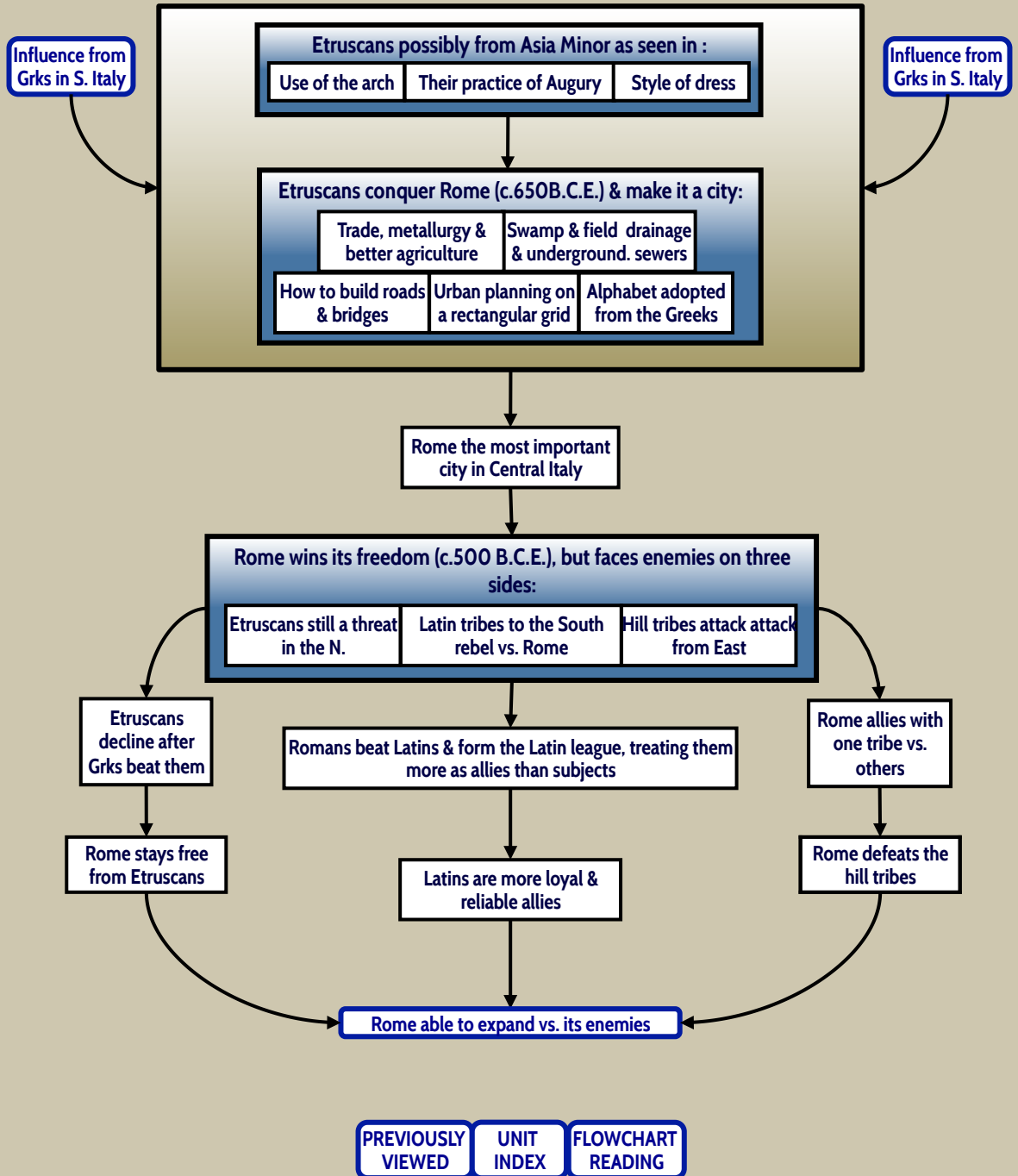
4.1 THE GEOGRAPHY OF ITALY & ITS IMPACT ON THE RISE OF ROME

753		Rome founded
c.650		Etruscans rule Rome
"509"		Rome free of Etruscans
396		Romans conquer Veii
387		Gauls sack Rome
343-290		Samnite Wars
c.315		Manipular reform of army
c.312		Appian Way & 1st Roman aqueduct
280-275		Pyrrhic War & final domination of Italy
264-200		Punic Wars -> Rome dominates W. Medit.
c.240		Roman Theater
200-133		Rome rules E. Med.
200-133		Influx of Greek culture
133-121		Gracchi reforms -> era of turmoil
107		Marius' milit. Reforms
106-43		Cicero
105		Gladiatorial games
91-88		Soc. War -> It's gain citizenship
83-82		Sulla wins 1st Roman civil war
83-82		Spartacus' slave revolt
73-71		Caesar conquers Gaul
58-50		Caesar wins 2nd Roman civil War
49-45		Caesar killed -> 3rd Civil War
44		Octavian wins 4th civil war vs. Ant. & Cleop.
31		Augustus est. Pax Romana
27		Augustus est. Pax Romana
19		Vergil's Aeneid
BCE		
CE		
117		Empire reaches greatest extent under Trajan
126		Pantheon
160s		Epidemic & invasions end Pax Rom.
212		All freemen given Citizenship
235-84		Diocletian restores order -> empire survives 200 yrs
285-305		Constantine legalizes Christianity
313		Constantine legalizes Christianity
378		Battle of Adrianople
410		Goths sack Rome
410		Attila dies -> Unleashes former subjects vs. Rome
453		Julius Nepos, last emp. of West, dies in exile
480		Julius Nepos, last emp. of West, dies in exile



4.2 ROME'S EARLY ROOTS: THE ETRUSCANS (c.650-400B.C.E.)

753	c.650	Rome founded
"509"	396	Etruscans rule Rome Rome free of Etruscans Romans conquer Veii
387	343-290	Gauls sack Rome Samnite Wars Manipular reform of army
c.315	c.312	Appian Way & 1st Roman aqueduct
280-275	264-200	Pyrrhic War & final domination of Italy Punic Wars -> Rome dominates W. Medit.
c.240	200-133	Roman Theater Rome rules E. Med.
200-133	133-121	Influx of Greek culture Gracchi reforms -> era of turmoil Marius' milit. Reforms
107	106-43	Cicero Soc. War -> It's gain citizenship
105	91-88	Gladiatorial games Spartacus' slave revolt
83-82	73-71	Sulla wins 1st Roman civil war Caesar conquers Gaul
58-50	49-45	Caesar wins 2nd Roman civil War Caesar killed -> 3rd Civil War
44	31	Augustus est. Pax Romana
27	19	Octavian wins 4th civil war vs. Ant. & Cleop. Vergil's <i>Aeneid</i>
BCE	117	Empire reaches greatest extent under Trajan
CE	126	Pantheon
160s	212	Epidemic & invasions end Pax Rom. All freemen given Citizenship
235-84	285-305	Anarchy nearly destroys emp. Diocletian restores order -> empire survives 200 yrs
313	378	Constantine legalizes Christianity Battle of Adrianople
410	453	Goths sack Rome Attila dies -> Unleashes former subjects vs. Rome
480		Julius Nepos, last emp. of West, dies in exile



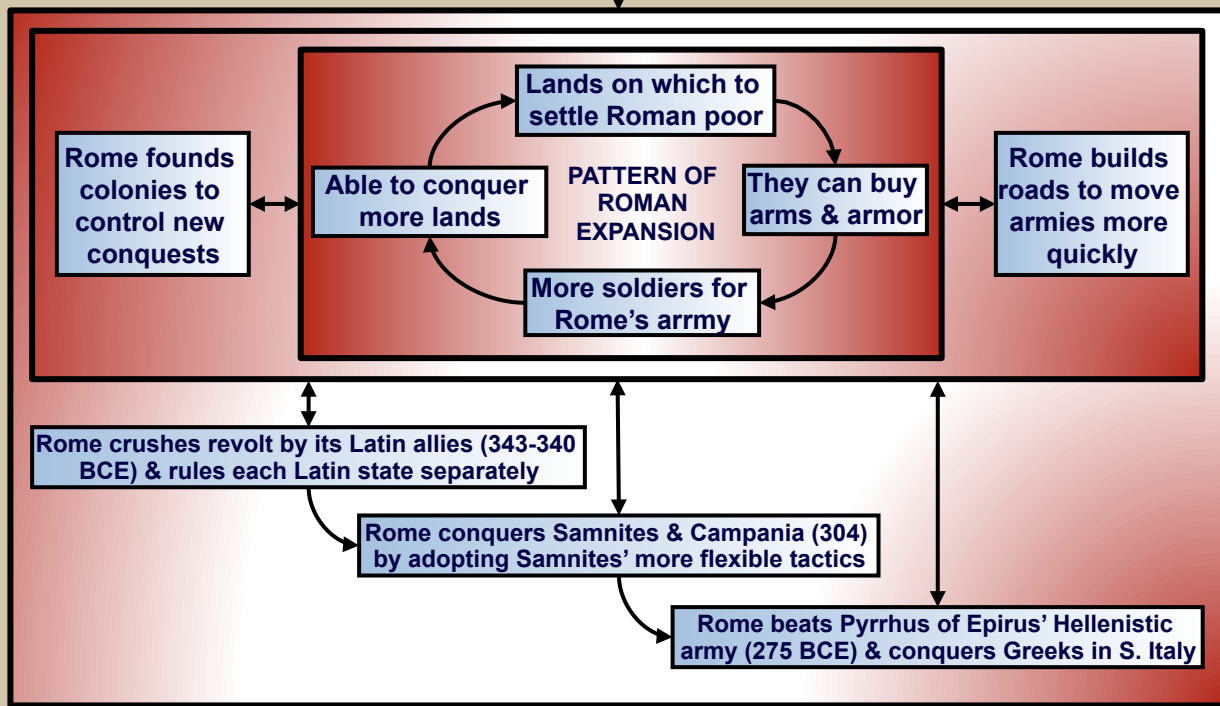
4.3 ROME'S CONQUEST OF ITALY (c.500-265 B.C.E.)

Rome establishes its indep. from Etruscans & neighboring hill tribes

Rome conquers Etruscan Veii w/o any help from Latins → Rome dominates central Italy

Gauls sack Rome (387 BCE), but then return to N. Italy → Temporary setback for Rome, but Romans have deep fear of N. barbarians

Rome recovers from Gallic disaster & resumes expansion



Romans rule Italy through:

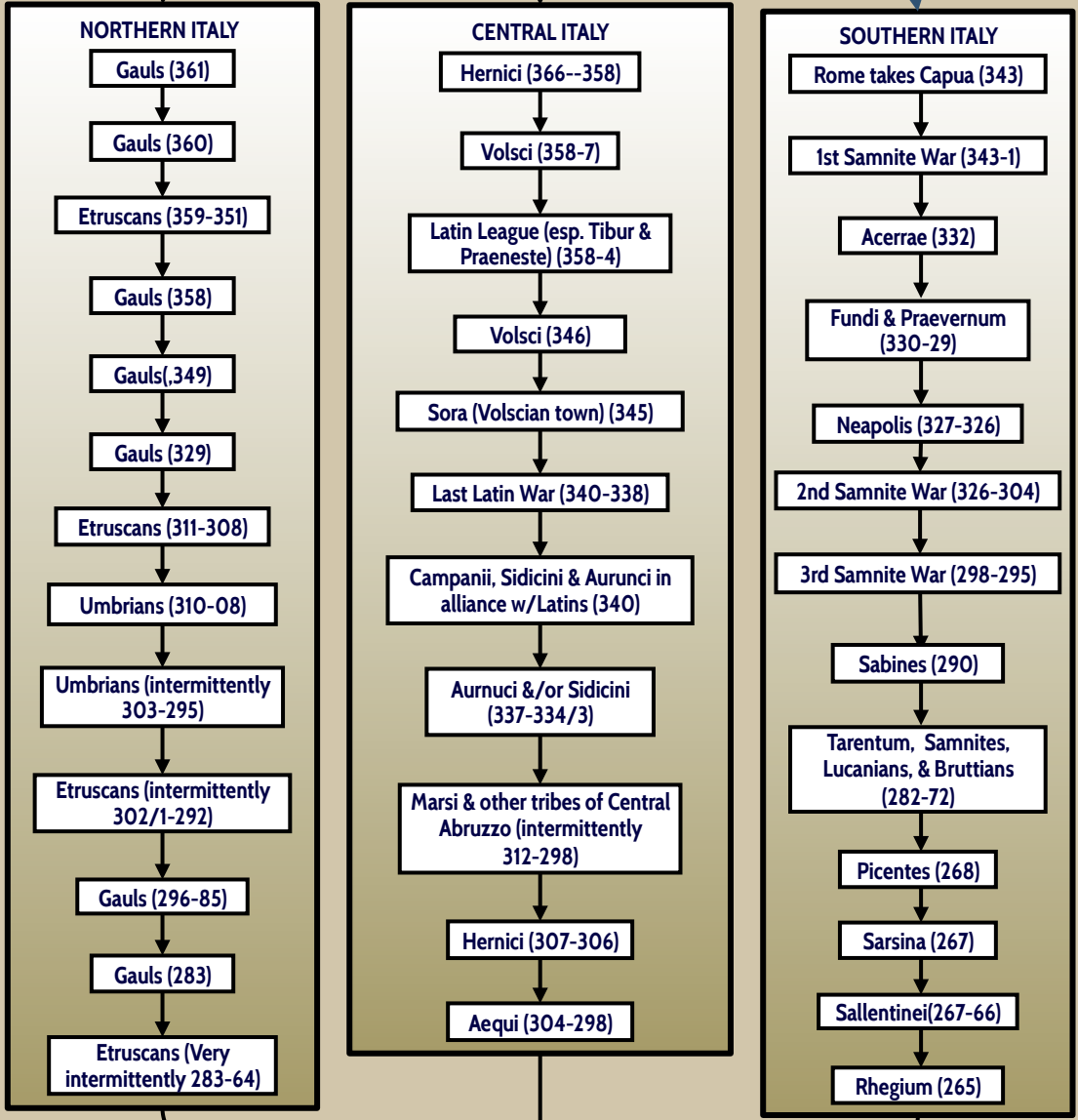
Colonies → guard vs. revolt & reward loyalty w/citizenship	Rewarding subjects with various grades of citizenship as they show loyalty to Rome	Roads that promote trade & prosperity during peace
--	--	--

Rome ready to expand into the Mediterranean

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c.650		Etruscans rule Rome
"509"		Rome free of Etruscans Romans conquer Veii
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c.240		Influx of Greek culture
200-133		Gracchi reforms → era of turmoil Marius' milit. Reforms
133-121		Cicero
107		Soc. War → It's gain citizenship
106-43		Gladiatorial games
105		Sulla wins 1st Roman civil war
91-88		Spartacus' slave revolt
83-82		Caesar conquers Gaul
73-71		Caesar wins 2nd Roman civil War
58-50		Caesar killed → 3rd Civil War
49-45		Augustus est. Pax Romana
44		Octavian wins 4th civil war vs. Ant. & Cleop.
31		Vergil's Aeneid
27		
19		
BCE		
CE		
117		Empire reaches greatest extent under Trajan
126		Pantheon
160s		Epidemic & invasions end Pax Rom. All freemen given Citizenship
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235-84		Diocletian restores order → empire survives 200 yrs
285-305		Constantine legalizes Christianity
313		Battle of Adrianople
378		Goths sack Rome
410		Attila dies → Unleashes former subjects vs. Rome
453		
480		Julius Nepos, last emp. of West, dies in exile

4.3A ROME'S WARS OF CONQUEST IN ITALY (366-265 B.C.E.)

After Gallic disaster Rome recovers & resumes expansion

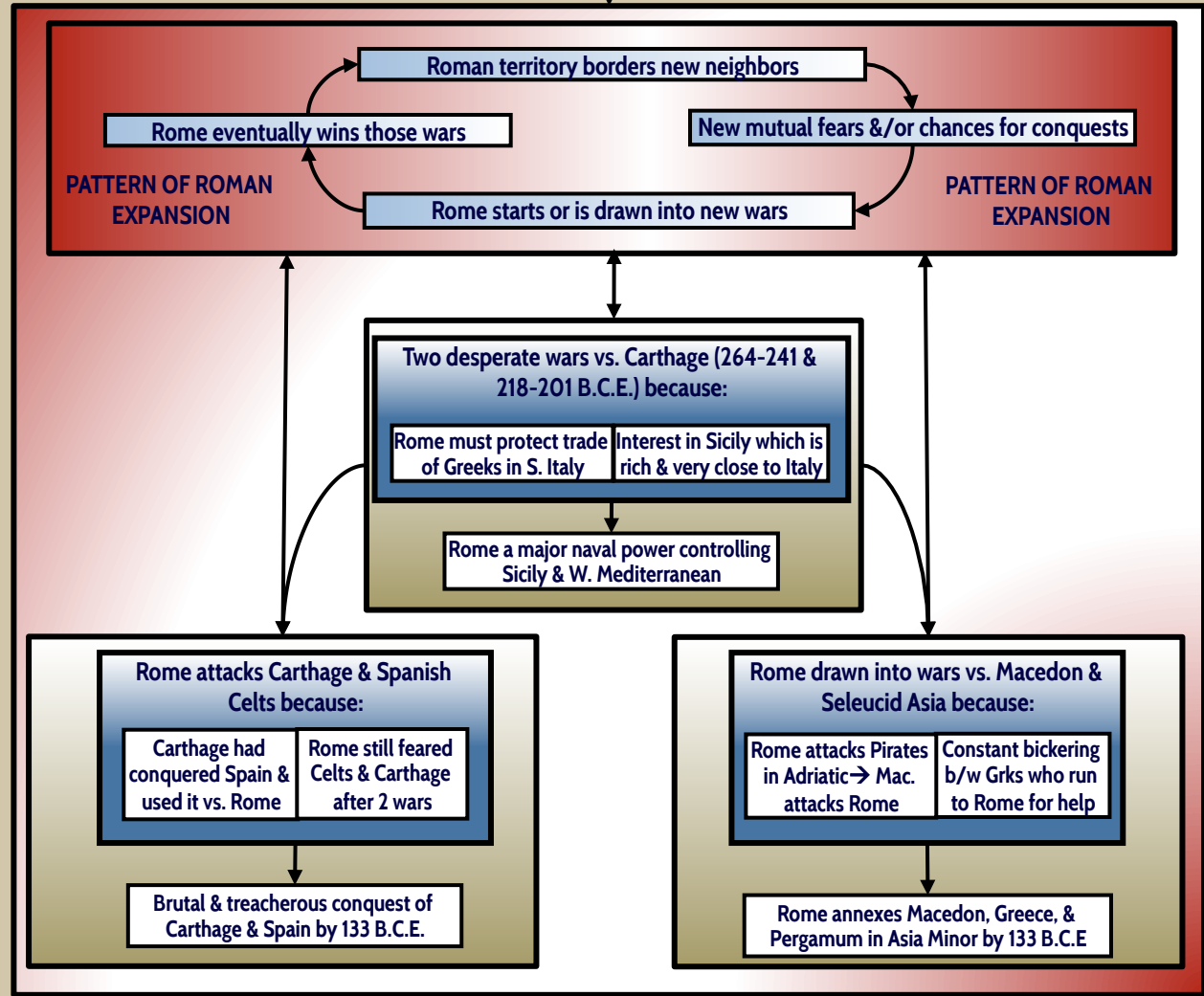


Rome ready to expand into the Mediterranean

753		Rome founded
c.650		Etruscans rule Rome
"509"		Rome free of Etruscans Romans conquer Veii
396		
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107		
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31		Octavian wins 4th civil war vs. Ant. & Cleop.
27		Augustus est. Pax Romana
19		Vergil's Aeneid
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313		Constantine legalizes Christianity
378		Battle of Adrianople
410		Goths sack Rome
453		Attila dies -> Unleashes former subjects vs. Rome
480		Julius Nepos, last emp. of West, dies in exile

4.4 ROMAN DOMINANCE OF THE MEDITERRANEAN (264-133 B.C.E.)

Strong Roman state ruling Italy

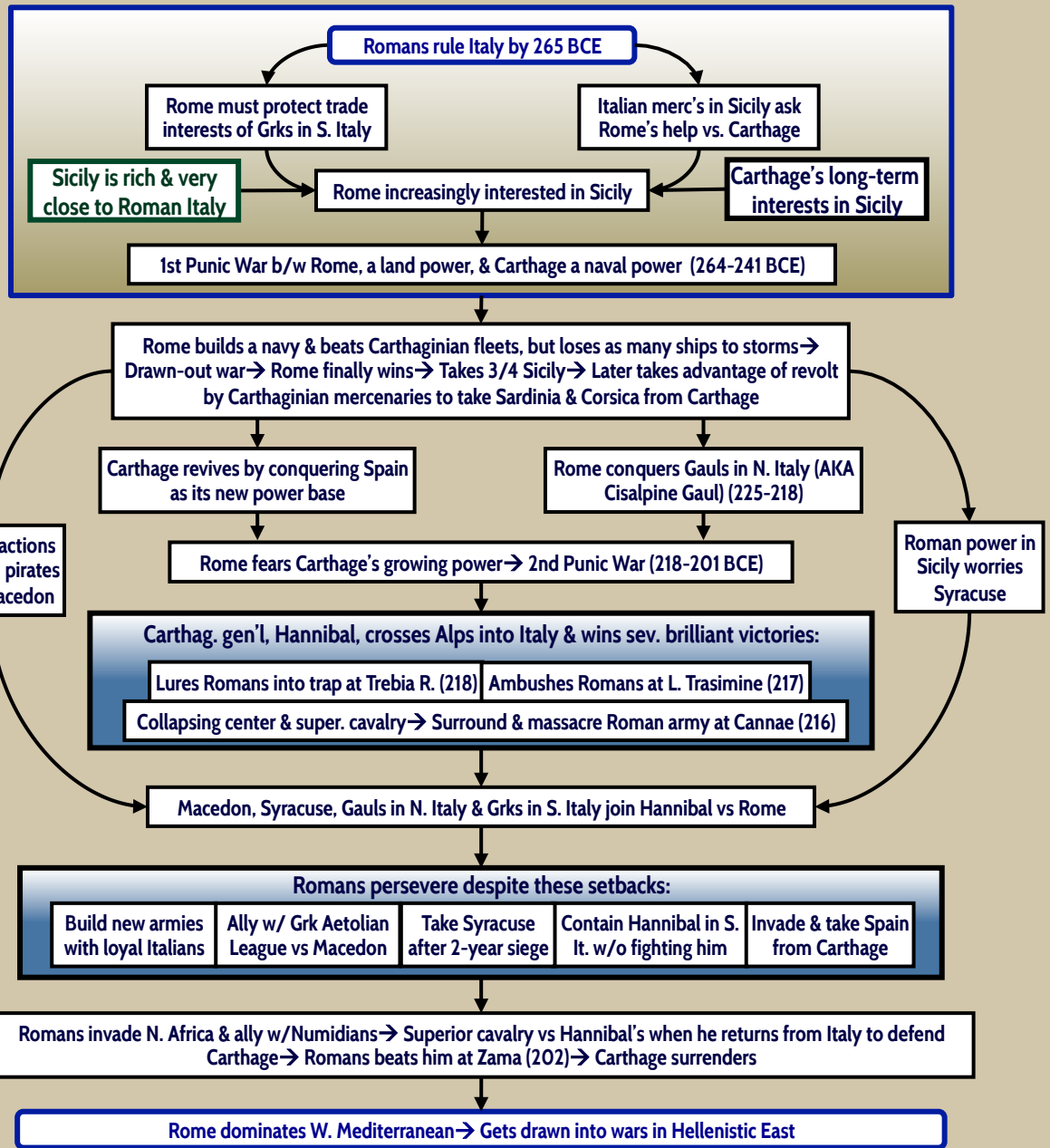


Empire → Serious problems

Ambitious gen'l's (e.g., Caesar in Gaul & Pompey in Asia) conquer rest of the Mediterranean

753		Rome founded
c.650		Etruscans rule Rome
"509"		Rome free of Etruscans
396		Romans conquer Veii
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44		Caesar killed → 3rd Civil War
31		Octavian wins 4th civil war vs. Ant. & Cleop.
27		Augustus est. Pax Romana
19		Vergil's Aeneid
BCE		
CE		
117		Empire reaches greatest extent under Trajan
126		Pantheon
160s		Epidemic & invasions end Pax Rom.
212		All freemen given Citizenship
235-84		Anarchy nearly destroys emp.
285-305		Diocletian restores order → empire survives 200 yrs
313		Constantine legalizes Christianity
378		Battle of Adrianople
410		Goths sack Rome
453		Attila dies → Unleashes former subjects vs. Rome
480		Julius Nepos, last emp. of West, dies in exile

4.4A ROME VS CARTHAGE (264-201 BCE)

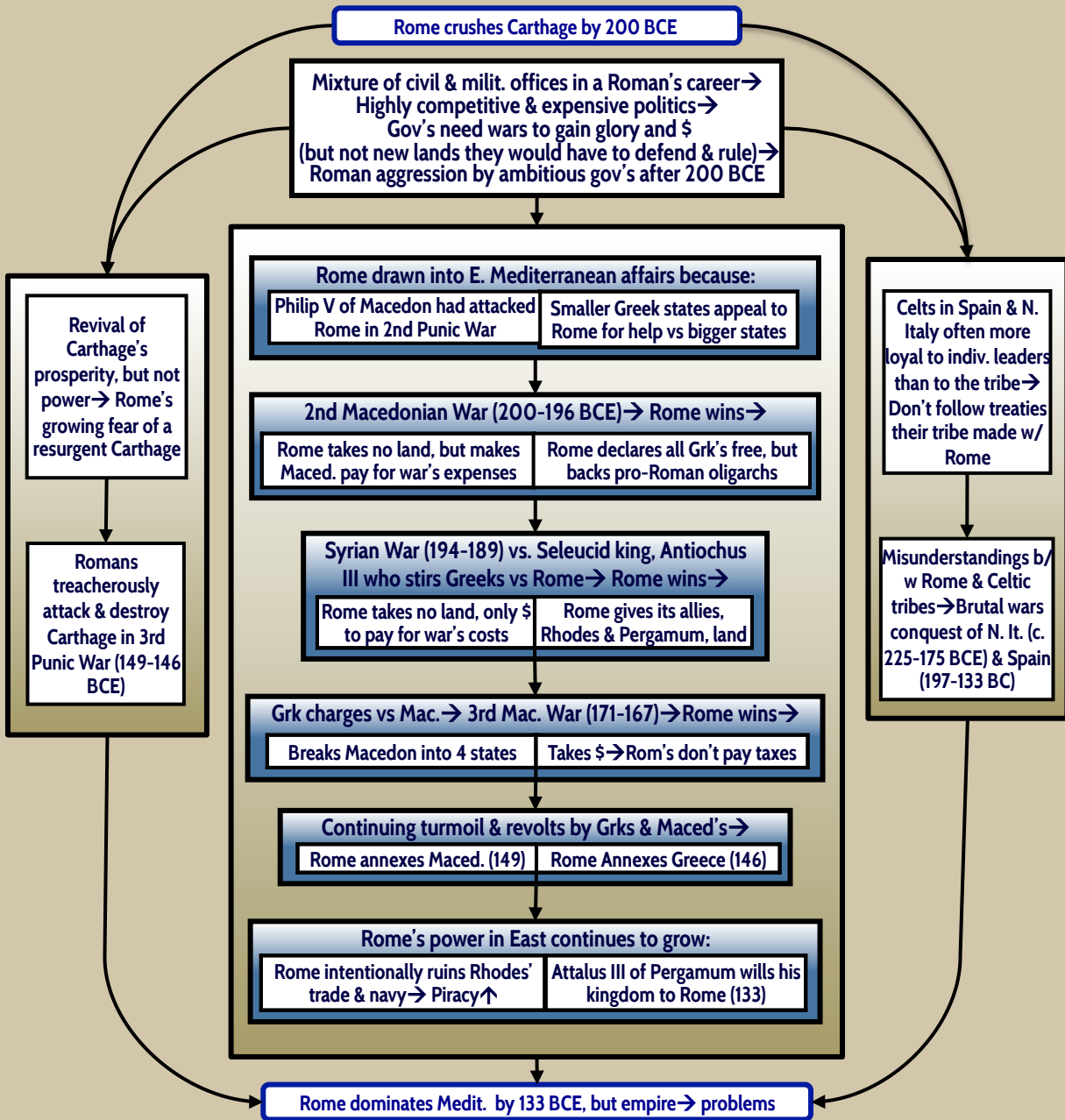


Timeline of Roman history:

- 753 c.650: Rome founded
- 509: Etruscans rule Rome; Rome free of Etruscans; Romans conquer Veii
- 396: Gauls sack Rome
- 387: Samnite Wars
- 343-290: Manipular reform of army
- c.315: Appian Way & 1st Roman aqueduct
- c.312: Pyrrhic War & final domination of Italy
- 280-275: Punic Wars -> Rome dominates W. Medit.
- 264-200: Rome rules E. Med.
- c.240: Roman Theater
- 200-133: Influx of Greek culture
- 133-121: Gracchi reforms -> era of turmoil; Marius' milit. Reforms
- 107: Cicero
- 106-43: Gladiatorial games; Soc. War -> It's gain citizenship
- 105: Sulla wins 1st Roman civil war
- 83-82: Spartacus' slave revolt; Caesar conquers Gaul
- 73-71: Caesar wins 2nd Roman civil War
- 58-50: Caesar killed -> 3rd Civil War
- 49-45: Augustus est. Pax Romana
- 44: Octavian wins 4th civil war vs. Ant. & Cleop.
- 31: Vergil's *Aeneid*
- 27 BCE: Empire reaches greatest extent under Trajan
- 117: Pantheon
- 126: Epidemic & invasions end Pax Rom.
- 160s: All freemen given Citizenship
- 212: Anarchy nearly destroys emp.
- 235-84: Diocletian restores order -> empire survives 200 yrs
- 285-305: Constantine legalizes Christianity
- 313: Battle of Adrianople
- 378: Goths sack Rome
- 410: Attila dies -> Unleashes former subjects vs. Rome
- 453: Julius Nepos, last emp. of West, dies in exile
- 480

4.4B ROME DOMINATES THE MEDITERRANEAN (200-133 BCE)

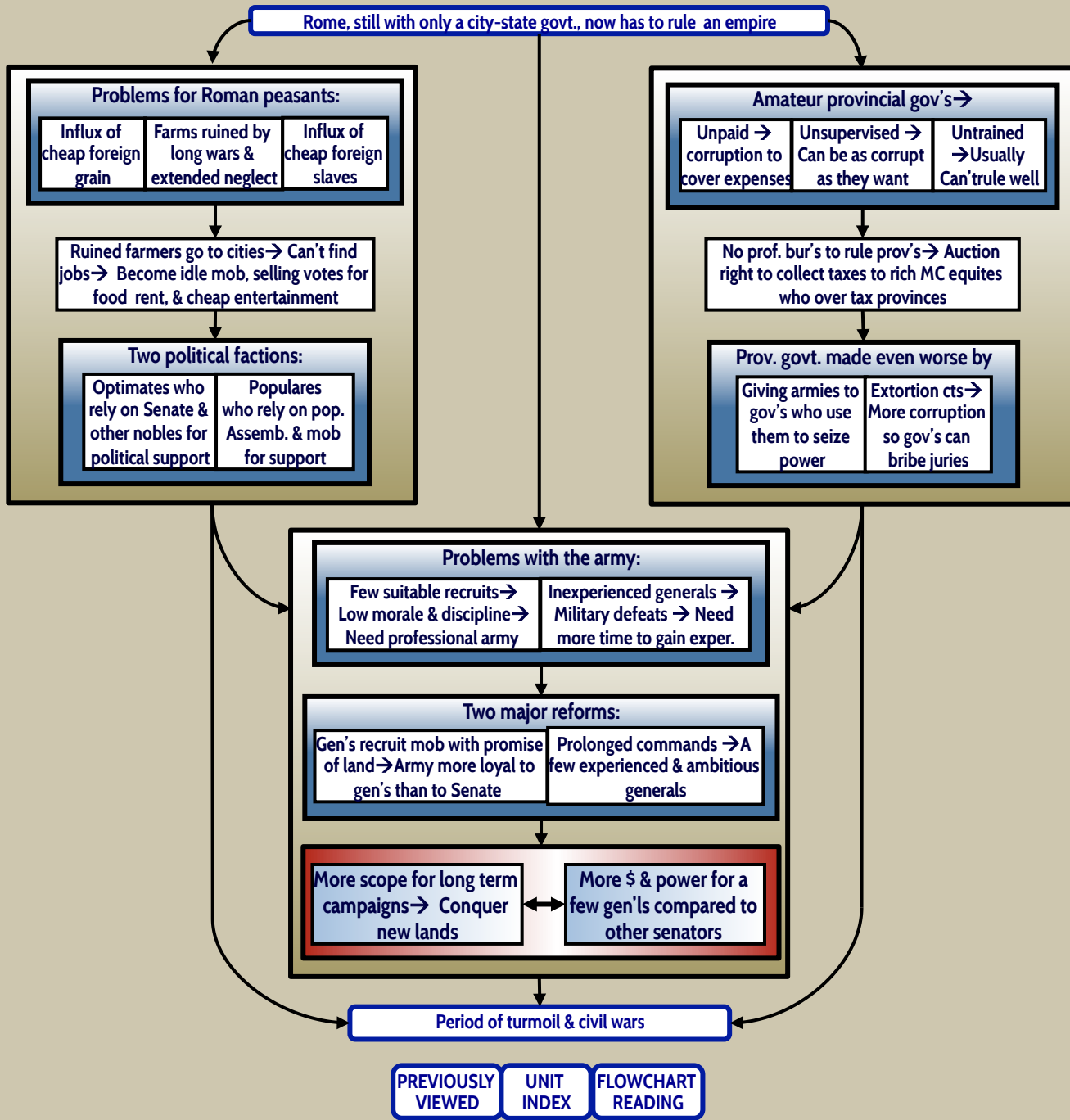
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343-290		Samnite Wars
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c.312		Appian Way & 1st Roman aqueduct
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106-43		Cicero
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378		Battle of Adrianople
410		Goths sack Rome
453		Attila dies -> Unleashes former subjects vs. Rome
480		Julius Nepos, last emp. of West, dies in exile



4.5 THE BITTER FRUITS OF ROME'S EMPIRE

Timeline of Roman history from 753 BCE to 480 CE:

- 753 c.650: Rome founded
- 509: Etruscans rule Rome; Rome free of Etruscans; Romans conquer Veii
- 396: Gauls sack Rome
- 387: Samnite Wars
- 343-290: Manipular reform of army
- c.315: Appian Way & 1st Roman aqueduct
- c.312: Pyrrhic War & final domination of Italy
- 280-275: Punic Wars -> Rome dominates W. Medit.
- 264-200: Rome rules E. Med.
- c.240: Roman Theater
- 200-133: Influx of Greek culture
- 133-121: Gracchi reforms -> era of turmoil; Marius' milit. Reforms
- 107: Cicero
- 106-43: Gladiatorial games; Soc. War -> It's gain citizenship
- 91-88: Sulla wins 1st Roman civil war
- 83-82: Spartacus' slave revolt
- 73-71: Caesar conquers Gaul
- 58-50: Caesar wins 2nd Roman civil War
- 49-45: Caesar killed -> 3rd Civil War
- 44: Augustus est. Pax Romana
- 31: Octavian wins 4th civil war vs. Ant. & Cleop.
- 27: Vergil's *Aeneid*
- 19: Empire reaches greatest extent under Trajan
- 117: Pantheon
- 126: Epidemic & invasions end Pax Rom.
- 160s: All freemen given Citizenship
- 212: Anarchy nearly destroys emp.
- 235-84: Diocletian restores order -> empire survives 200 yrs
- 285-305: Constantine legalizes Christianity
- 313: Battle of Adrianople
- 378: Goths sack Rome
- 410: Attila dies -> Unleashes former subjects vs. Rome
- 453: Julius Nepos, last emp. of West, dies in exile
- 480



4.5A THE FLOW OF POWER IN THE ROMAN REPUBLIC

Problems of ruling an empire w/city-state govt. & army of short-term amateur officials & militia

SENATE: Advisory body of 300 ex-office holders whose decrees (*senatus consulta*) are not technically laws but have virtual force of law to:

Rule on technical legality of treaties & laws	Assign magistrates' tasks (e.g., which proconsul rules which province & for how long)	Assign budgets to governors & officials
---	---	---

Senate's works to maintain its power as a body w/o any of its individual members getting too much power

Senate controls popular assemblies through:

COMITIA TRIBUTA Votes on laws that only officials (who are also senators) can propose • Open ballots → Control votes of their clientes (poor dependants)	COMITIA CENTURIATA • Votes on war & peace • Weighted bloc voting to favor those who bear the brunt of the fighting (which used to be the rich)
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Senate controls officials who return to Senate after 1-yr terms:

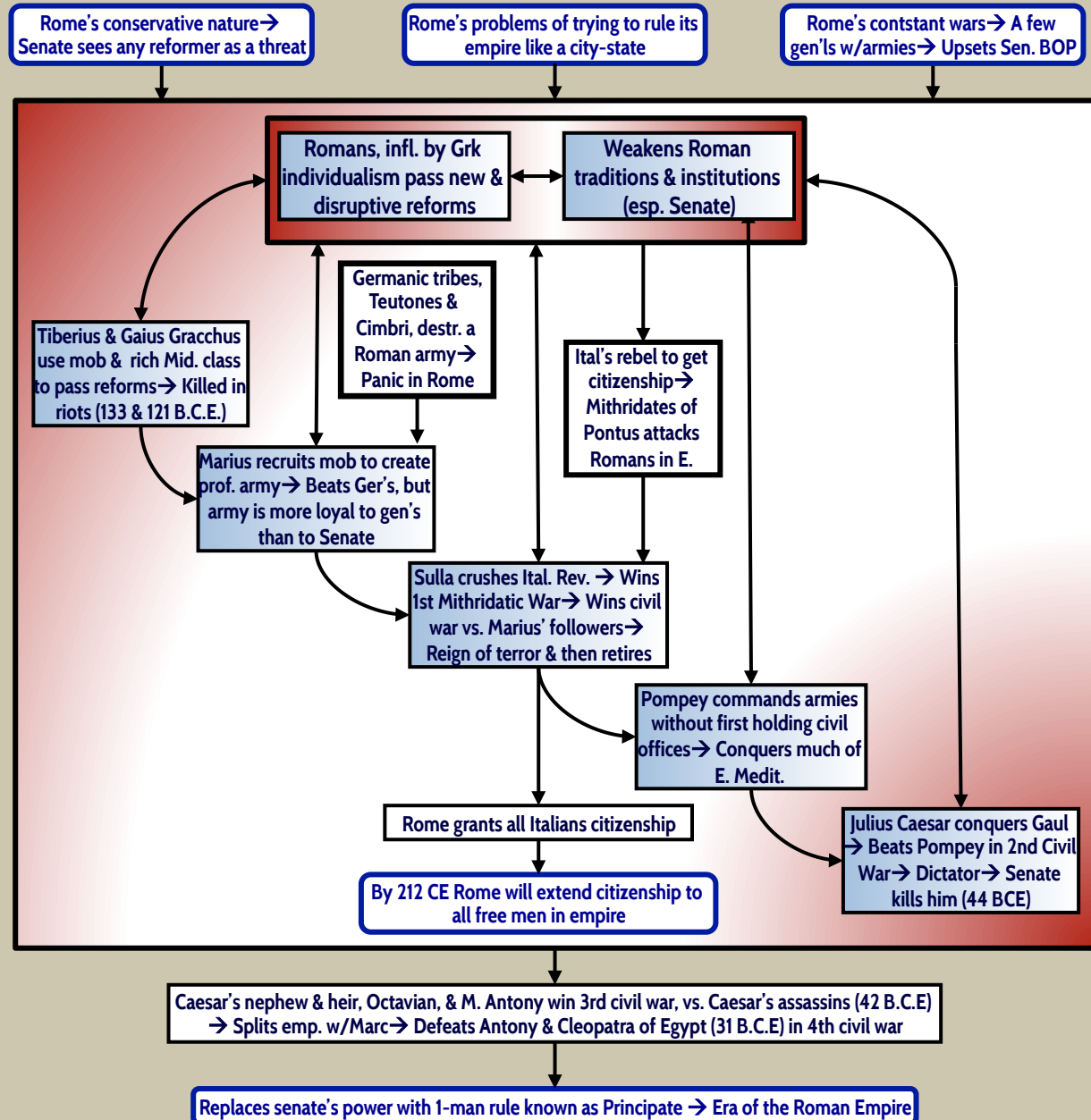
CONSULS & PRAETORS (who are also members of Senate) • Control what laws are proposed to the assemblies, their text, & who can discuss them	TRIBUNES (who are also members of Senate) • Supposedly protect the poor, can propose laws & veto any act of state they or the senate want
---	--

Senate controls various traditional and religious procedures:

PRIESTS (who are also senators) that can declare bad omens & postpone govt. business for that day	CURSUS HONORUM: The minimum age, number of times, & order one can hold offices: Military tribune → quaestor → aedile or tribune → praetor → consul	CENSORS: 2 officials elected every 5 yrs to choose worthy men to fill the Senate to 300 & expel unworthy senators
--	---	--

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c.650	Etruscans rule Rome
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396	Romans conquer Veii
387	Gauls sack Rome
343-290	Samnite Wars
c.315	Manipular reform of army
c.312	Appian Way & 1st Roman aqueduct
280-275	Pyrrhic War & final domination of Italy
264-200	Punic Wars → Rome dominates W. Medit.
c.240	Roman Theater
200-133	Rome rules E. Med.
200-133	Influx of Greek culture
133-121	Gracchi reforms → era of turmoil
107	Marius' milit. Reforms
106-43	Cicero
105	Gladiatorial games
91-88	Soc. War → It's gain citizenship
83-82	Spartacus' slave revolt
73-71	Sulla wins 1st Roman civil war
58-50	Caesar conquers Gaul
49-45	Caesar wins 2nd Roman civil War
44	Caesar killed → 3rd Civil War
31	Augustus est. Pax Romana
27	Octavian wins 4th civil war vs. Ant. & Cleop.
19	Vergil's <i>Aeneid</i>
BCE	
CE	
117	Empire reaches greatest extent under Trajan
126	Pantheon
160s	Epidemic & invasions end Pax Rom.
212	All freemen given Citizenship
235-84	Anarchy nearly destroys emp.
285-305	Diocletian restores order → empire survives 200 yrs
313	Constantine legalizes Christianity
378	Battle of Adrianople
410	Goths sack Rome
453	Attila dies → Unleashes former subjects vs. Rome
480	Julius Nepos, last emp. of West, dies in exile

4.6 FALL OF THE ROMAN REPUBLIC (133-31 B.C.E.)



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280-275		Pyrrhic War & final domination of Italy
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480		Julius Nepos, last emp. of West, dies in exile

4.7 THE AUGUSTAN PRINCIPATE & PAX ROMANA (31 B.C.E.-180 C.E.)

Civil wars & turmoil of the late republic Romans' traditional & conservative nature

Octavian must create a strong one-man rule while making it look like good old days of the Republic

Augustan Principate where Octavian (aka Augustus) kept only harmless sounding republican powers that still gave him control of armies & making laws:

- Tribune's powers to propose & veto laws while posing as the champion of the common people
- Proconsul's powers to control milit. prov's & army while leaving non-milit. provs to the Senate

Succession ensured by giving chosen successor tribunician & proconsular powers before Augustus died

Still need reliable army, governors, & bureaucrats for provinces

Bureaucr. reforms

- Regularly paid & trained officials
- Equites trained for mid-level jobs

Honest, efficient, & stable government in the provinces

Works to get more reliable provincial governors through:

- Regular pay → No need for corruption
- Procurators, Augustus' agents who watch gov's
- Using old Rep's offices to train them

Efficient, loyal & honest provincial gov's

Military reforms

- Aug. gave army its pay & pensions
- Cut army from 60 to 28 legions

Cheap, but highly trained & loyal army guarding frontiers

Few outside threats for 200 yrs.

Medit's centr. position → fast comm's

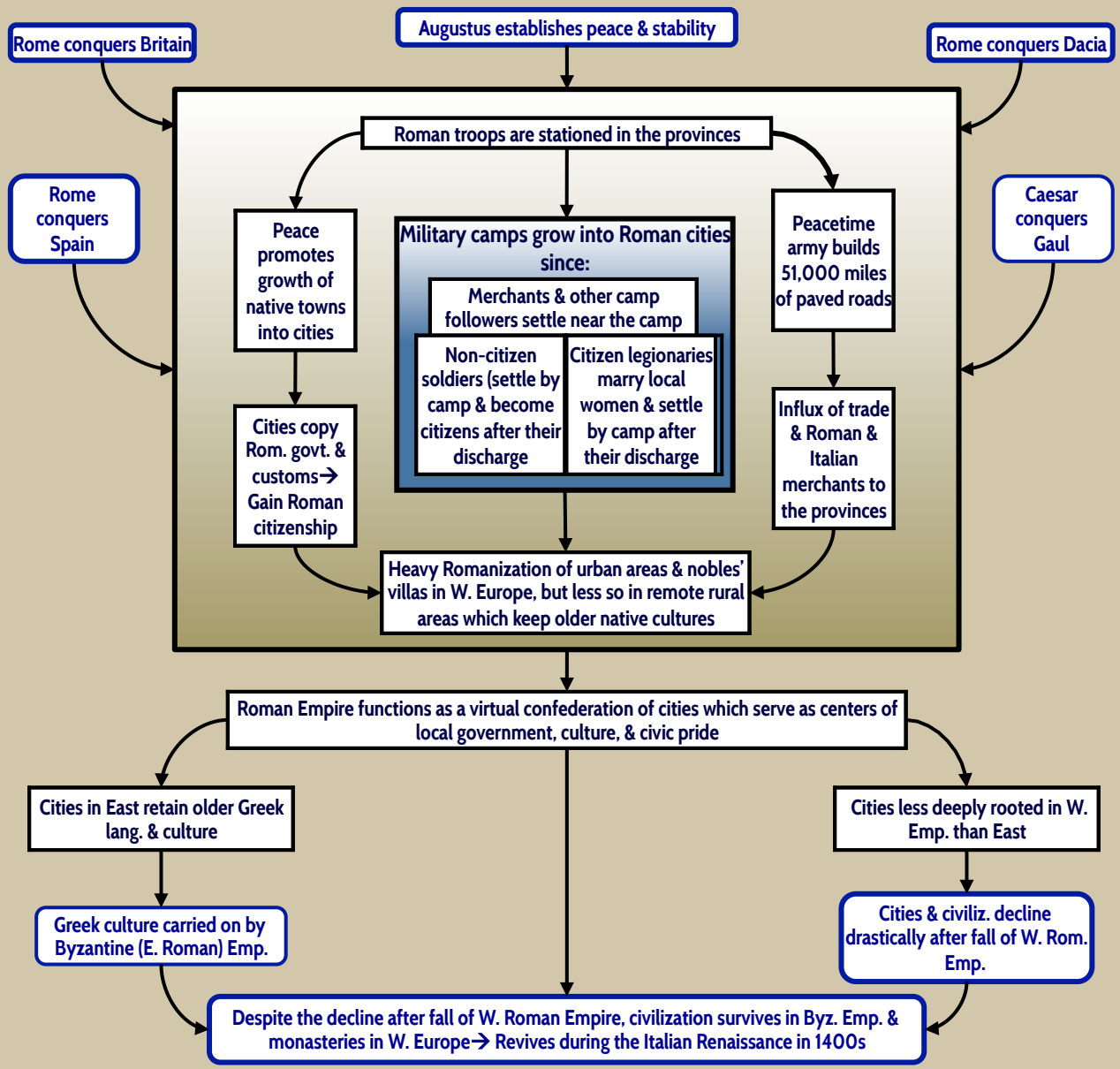
Pax Romana: Except for conquering Britain & Dacia, 200 years of nearly unbroken peace & prosperity throughout the Mediterranean, with trade routes extending to China & India

Timeline of Roman history from 753 B.C.E. to 480 C.E. with key events and images:

- 753 B.C.E.: Rome founded
- 509 B.C.E.: Etruscans rule Rome; Rome free of Etruscans; Romans conquer Veii
- 396 B.C.E.: Gauls sack Rome
- 387 B.C.E.: Samnite Wars
- 343-290 B.C.E.: Manipular reform of army
- c.315 B.C.E.: Appian Way & 1st Roman aqueduct
- c.312 B.C.E.: Pyrrhic War & final domination of Italy
- 280-275 B.C.E.: Punic Wars → Rome dominates W. Medit.
- 264-200 B.C.E.: Roman Theater; Rome rules E. Med.
- c.240 B.C.E.: Influx of Greek culture
- 200-133 B.C.E.: Gracchi reforms → era of turmoil; Marius' milit. Reforms
- 107-106 B.C.E.: Cicero; Gladiatorial games; Soc. War → It's gain citizenship
- 91-88 B.C.E.: Sulla wins 1st Roman civil war; Spartacus' slave revolt; Caesar conquers Gaul
- 83-82 B.C.E.: Caesar wins 2nd Roman civil War; Caesar killed → 3rd Civil War
- 73-71 B.C.E.: Caesar killed → 3rd Civil War
- 58-50 B.C.E.: Octavian wins 4th civil war vs. Ant. & Cleop.; Augustus est. Pax Romana
- 49-45 B.C.E.: Vergil's Aeneid
- 44 B.C.E.: Augustus est. Pax Romana
- 31 B.C.E.: Augustus est. Pax Romana
- 27 B.C.E.: Augustus est. Pax Romana
- 19 B.C.E.: Augustus est. Pax Romana
- 117 C.E.: Empire reaches greatest extent under Trajan; Pantheon
- 126 C.E.: Epidemic & invasions end Pax Rom.; All freemen given Citizenship
- 160s C.E.: Anarchy nearly destroys emp.; Diocletian restores order → empire survives 200 yrs
- 212 C.E.: Diocletian restores order → empire survives 200 yrs
- 235-84 C.E.: Anarchy nearly destroys emp.; Diocletian restores order → empire survives 200 yrs
- 285-305 C.E.: Constantine legalizes Christianity; Battle of Adrianople
- 313 C.E.: Constantine legalizes Christianity; Battle of Adrianople
- 378 C.E.: Battle of Adrianople
- 410 C.E.: Goths sack Rome; Attila dies → Unleashes former subjects vs. Rome
- 453 C.E.: Attila dies → Unleashes former subjects vs. Rome
- 480 C.E.: Julius Nepos, last emp. of West, dies in exile

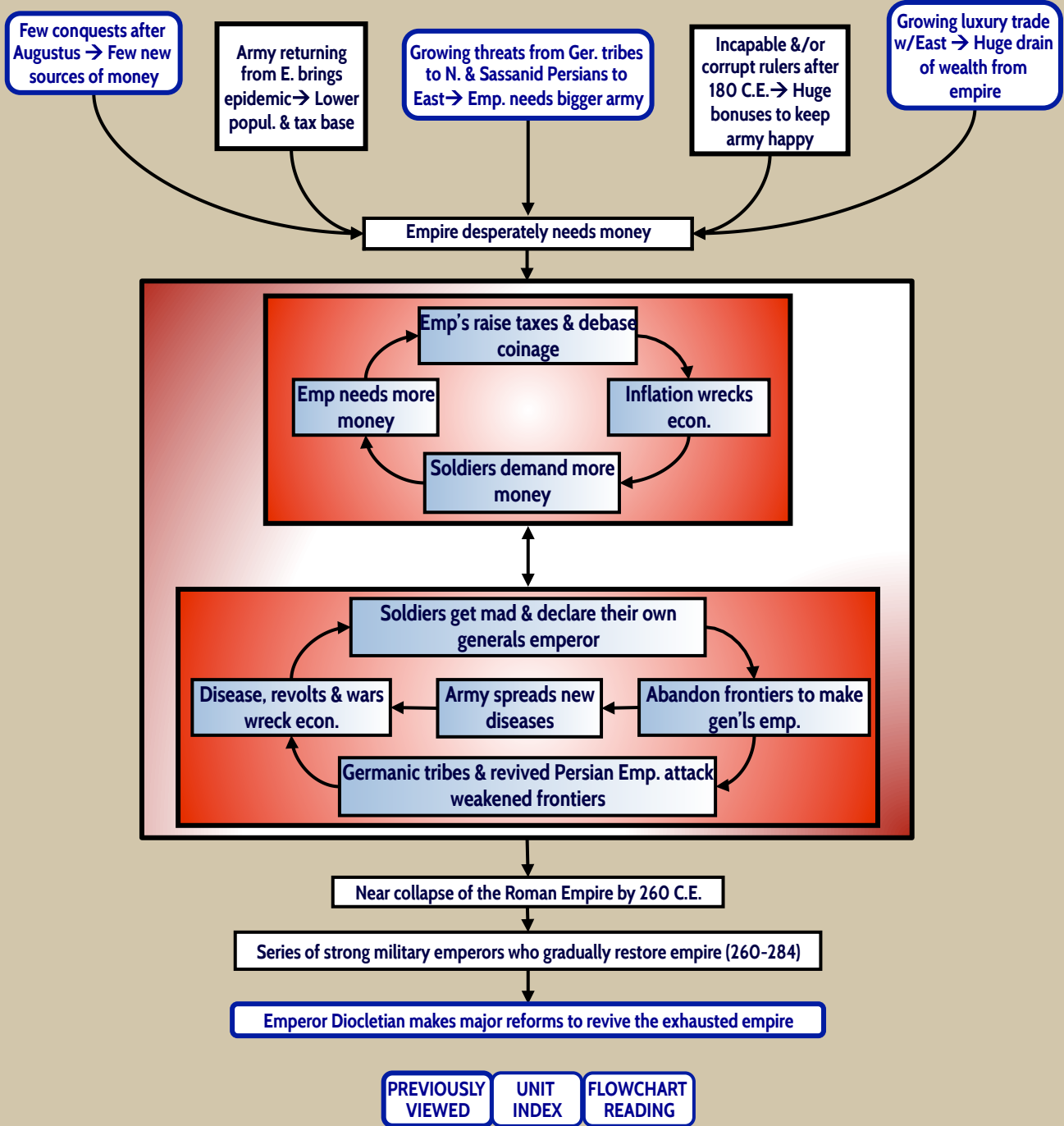
4.8 THE SPREAD OF ROMAN CIVILIZATION IN WESTERN EUROPE DURING THE PAX ROMANA (31 B.C.E.-180 C.E.)

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285-305		Julius Nepos, last emp. of West, dies in exile
313		
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4.9 DECLINE & NEAR COLLAPSE OF THE ROMAN EMPIRE (160-284 C.E.)

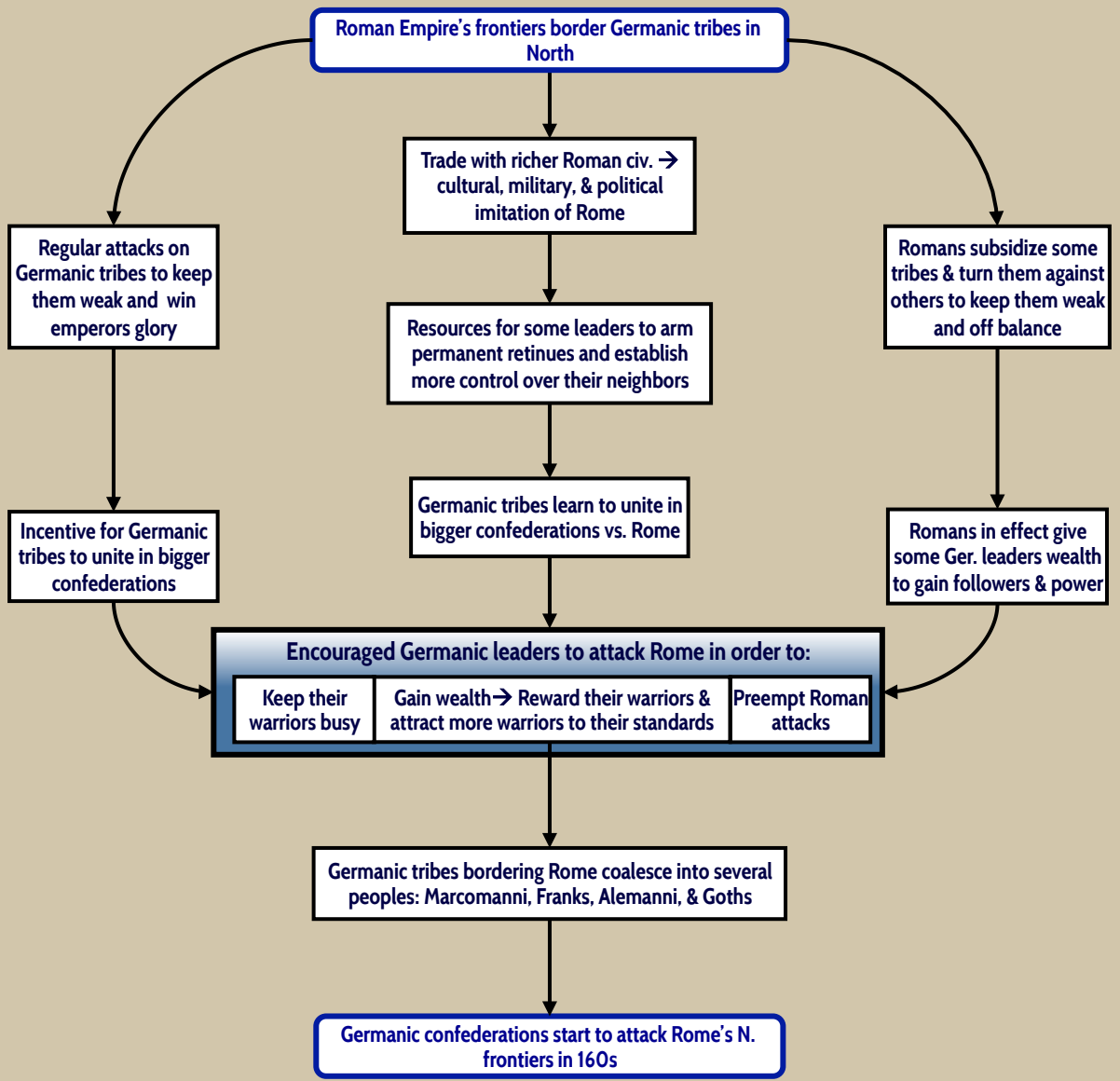
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4.9A THE CONSOLIDATION OF THE GERMANIC THREAT (c.100-300 C.E.)

Timeline of Roman history from 753 BCE to 480 CE:

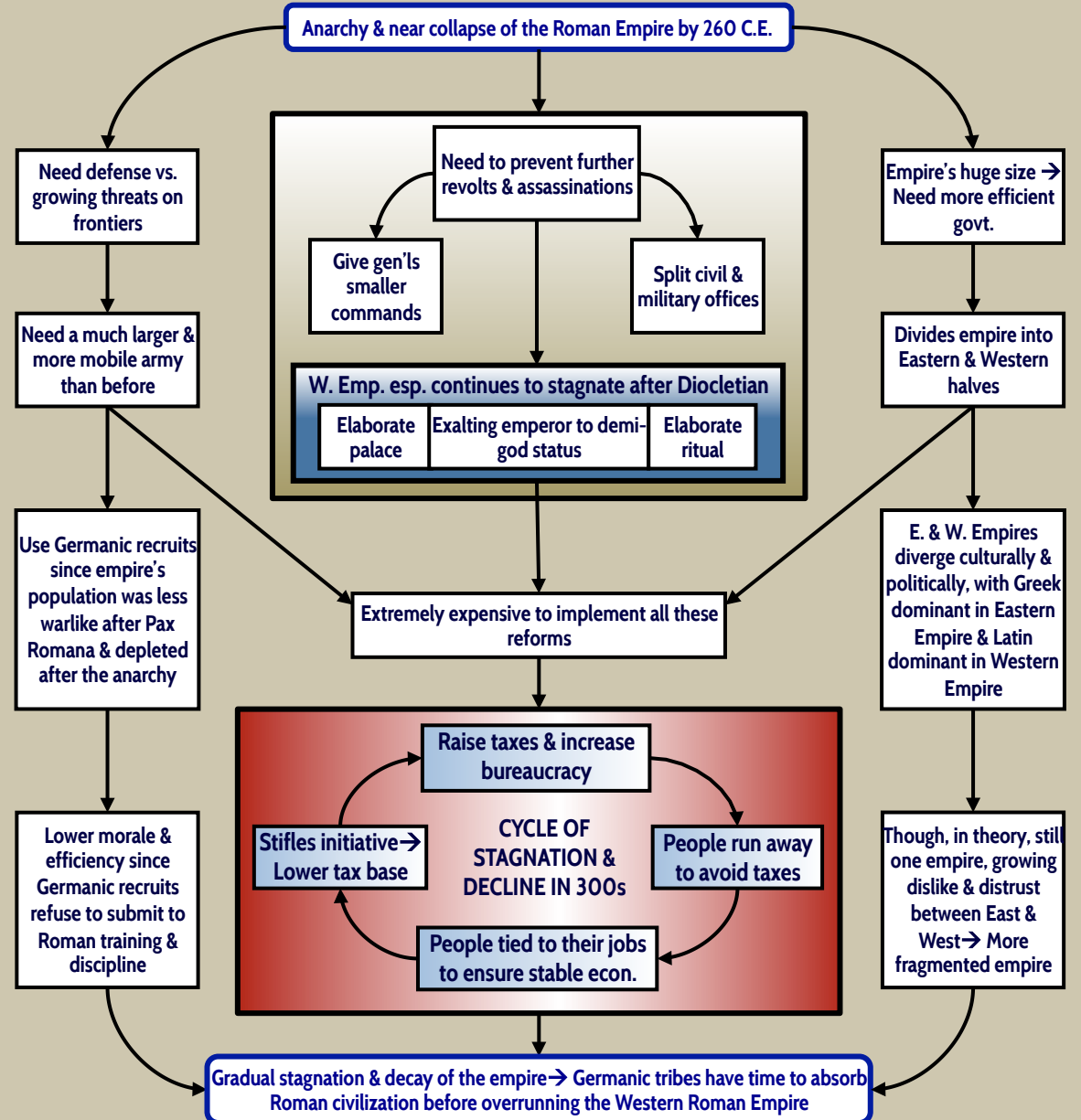
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- 19: Constantine legalizes Christianity; Battle of Adrianople
- BCE 117: Goths sack Rome
- CE 126: Attila dies -> Unleashes former subjects vs. Rome
- 160s: Julius Nepos, last emp. of West, dies in exile
- 212: 453: 480:



4.10 DIOCLETIAN'S REFORMS & ROME'S CONTINUING DECLINE (284-c.400 C.E.)

Timeline of Roman history from 753 BCE to 480 CE:

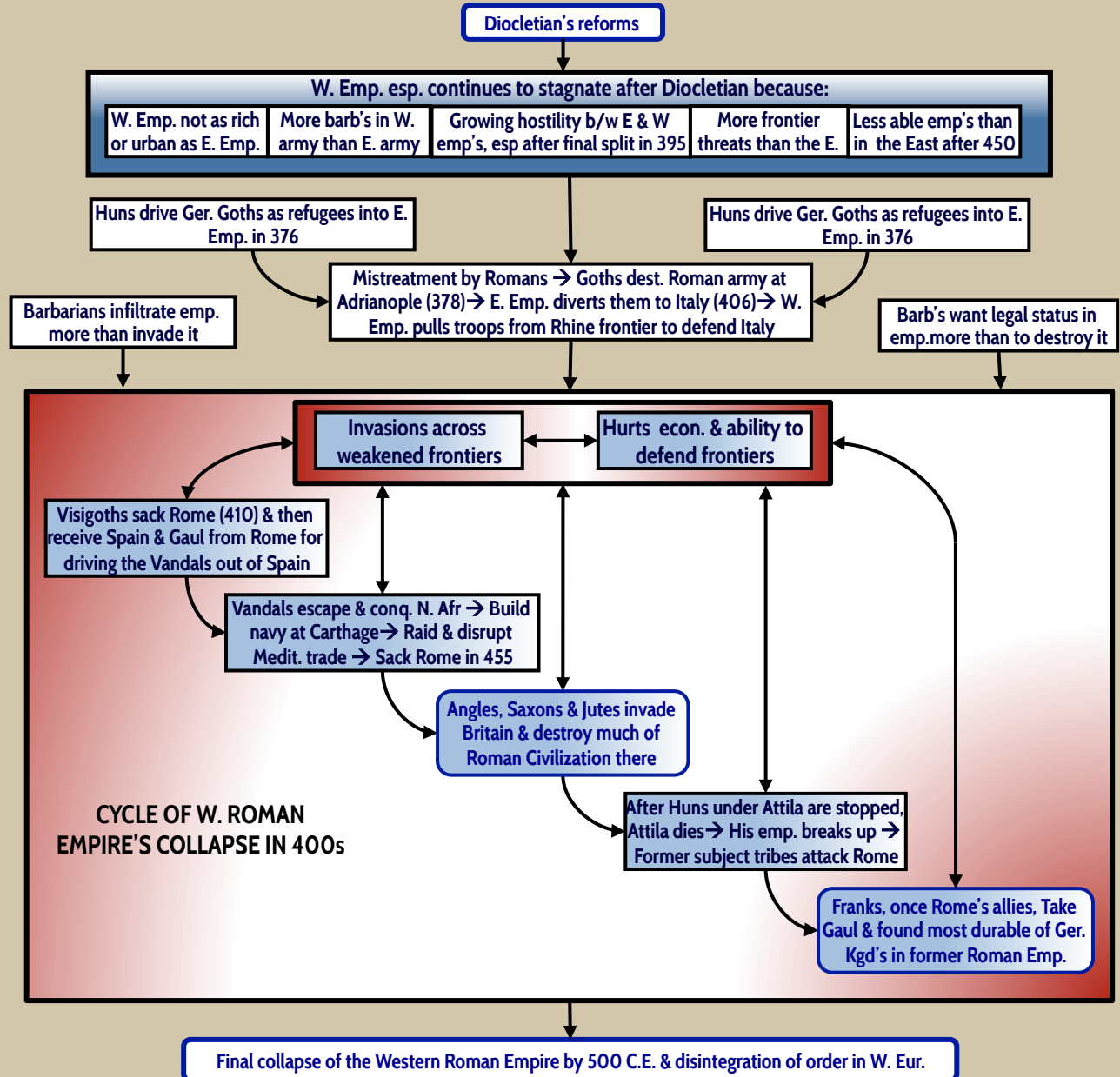
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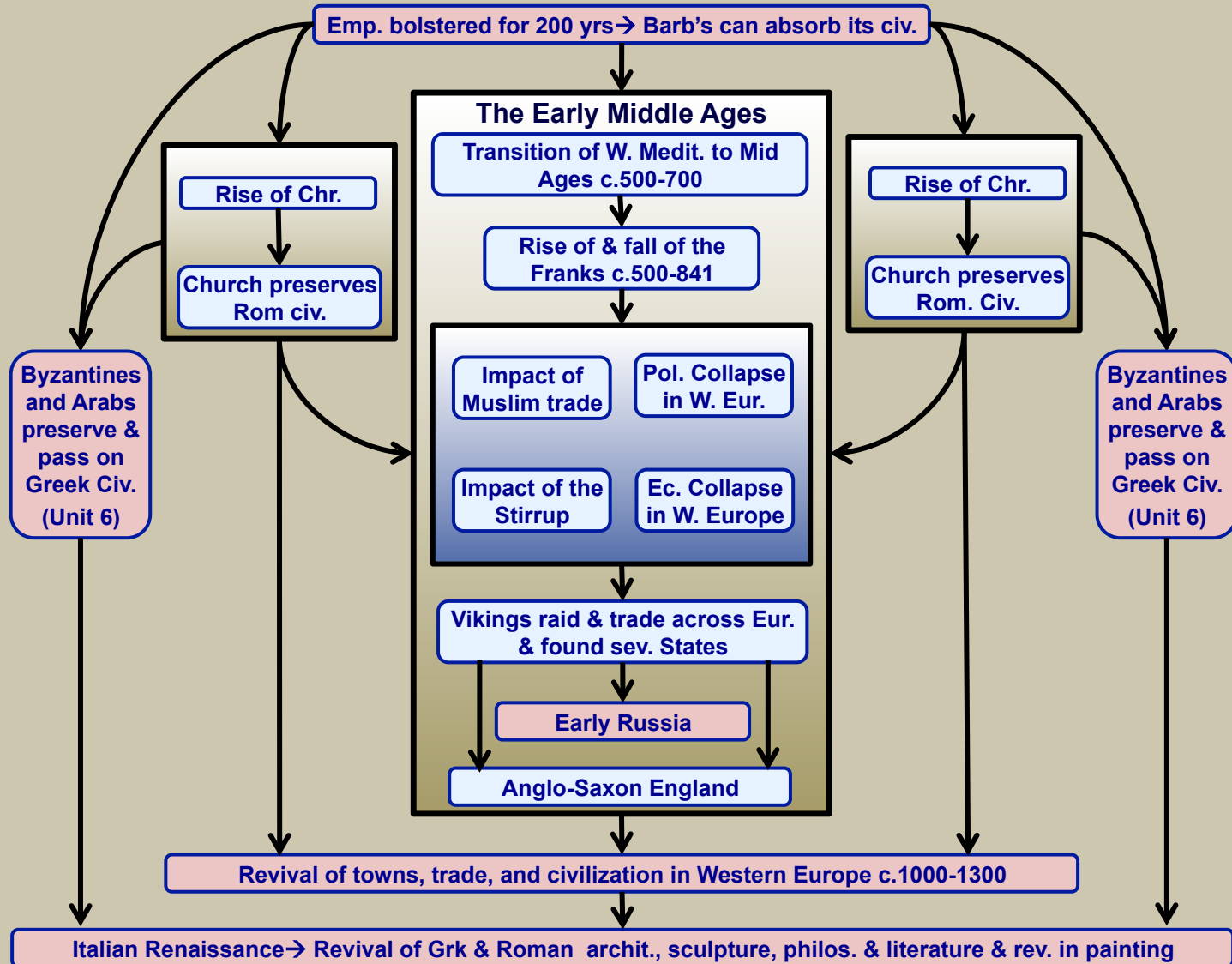
4.11 THE COLLAPSE OF THE WESTERN ROMAN EMPIRE (395-c.500)

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- 453: Julius Nepos, last emp. of West, dies in exile
- 480



Unit 5. Early Middle Ages & rise of Christianity



5.1 THE RISE OF THE CHRISTIAN CHURCH (c.30-330 C.E.)

c.35-67 St. Paul's ministry

303-13 The Great persecutions

313 Council of Nicaea

325 Constantine's edict of toleration

c.310-83 Ulfilas converts Goths to Arian Chr.

380 Chr. the Emp's official religion

410 Goths sack Rome

413-26 St. Augustine writes *City of God*

432 St. Patrick's mission to Ireland

496 Clovis & Franks convert to Catholic Chr. Odovacer deposes Romulus Augustulus

476 Clovis expands Frankish kgd.

482-511 Ostrogoths conquer Italy

490-3 St. Benedict founds Monte Cassino

c.529 Justinian's conquest of Italy.

535-554 Lombards invade Italy -> not reunified until 1871

568 Aethelbert of Kent converts to Chr.

601 Stirrup introd. in W. Eur.

600s St. Boniface's mission to Central Eur.

718 Battle of Tours

733 Papal States created

756 Charlemagne's conq. & forced conversion of Saxony

772-804 Vikings sack Mon. of Lindisfarne

793 Book of Kells & Carolingian Ren

c.800 Charlemagne crowned emperor

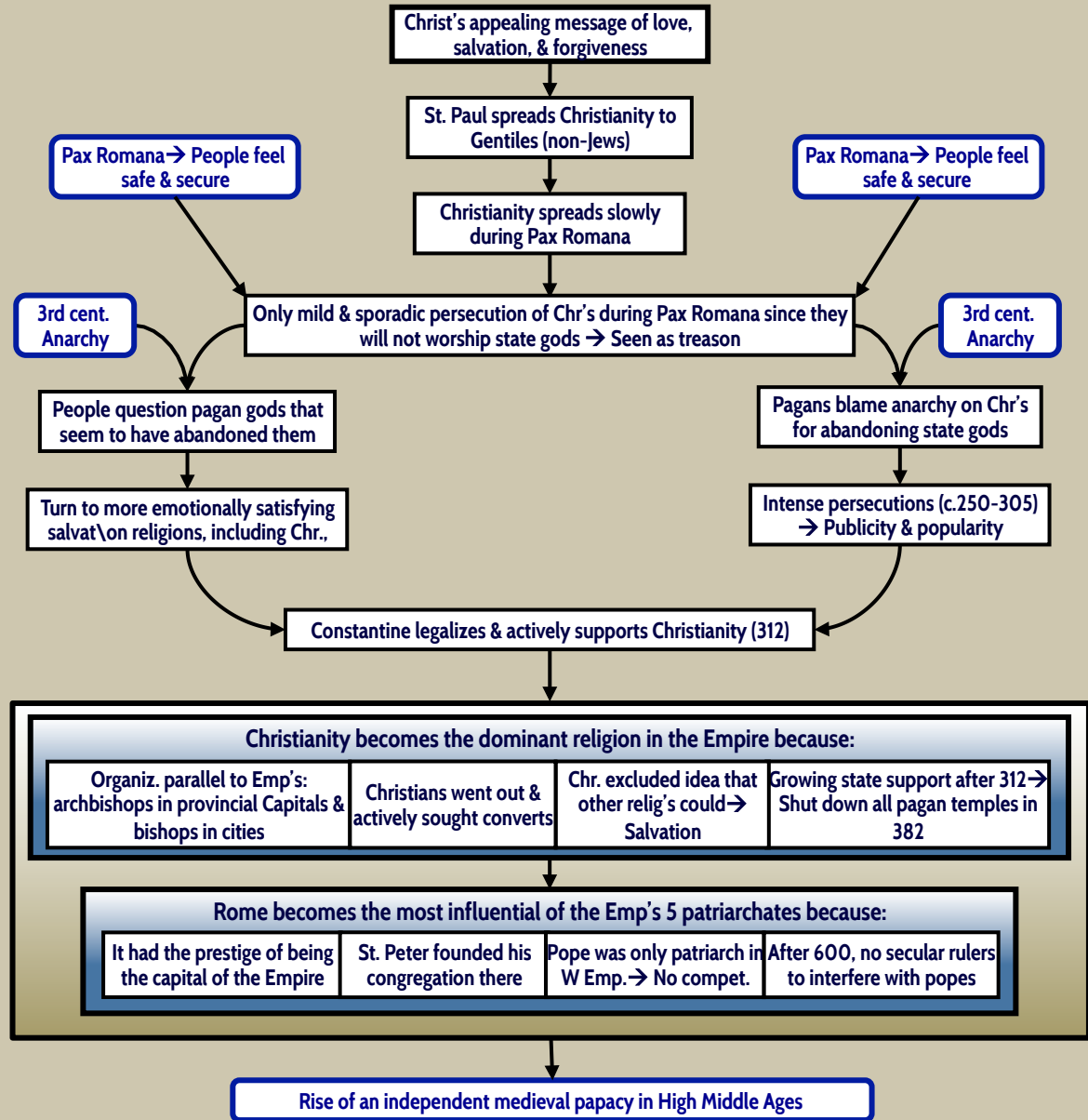
800 Tr. of Verdun splits Frank. Emp -> Fr. & Ger.

843 Anarchy & invasions across W. Eur. -> Rise of feudalism

c.800-1000 Monast. of Cluny starts reform movement

911 Otto I of Ger. crowned Holy Roman Emp.

961



5.2 THE IMPACT OF CHRISTIANITY'S TRIUMPH (c.330-500)

c.35-67 St. Paul's ministry

303-13 The Great persecutions

313 Constantine's edict of toleration

325 Council of Nicaea

c.310-83 Ulfilas converts Goths to Arian Chr.

380

410 Goths sack Rome

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793 Vikings sack Mon. of Lindisfarne

c.800 Book of Kells & Carolingian Ren

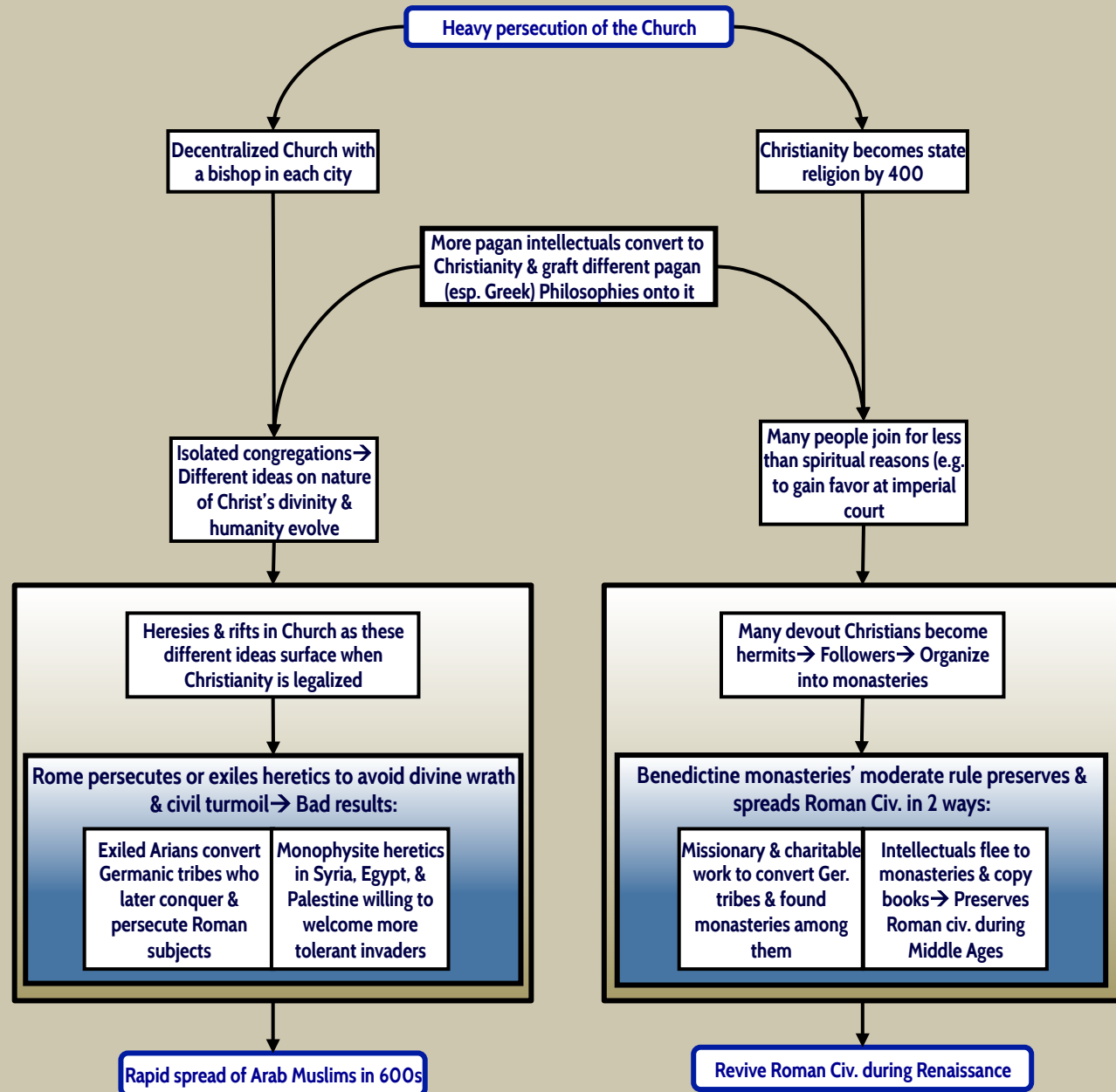
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911 Monast. of Cluny starts reform movement

961 Otto I of Ger. crowned Holy Roman Emp.



5.3 TRANSITION TO THE MIDDLE AGES IN THE W. MEDITERRANEAN (500-700)

c.35-67 St. Paul's ministry

303-13 The Great persecutions

313 Council of Nicaea

325 Constantine's edict of toleration

c.310-83 Ulfilas converts Goths to Arian Chr.

380 Goths sack Rome

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601 Stirrup introd. in W. Eur.

600s St. Boniface's mission to Central Eur.

718 Battle of Tours

733 Papal States created

756 Charlemagne's conq. & forced conversion of Saxony

772-804 Vikings sack Mon. of Lindisfarne

793 Book of Kells & Carolingian Ren

c.800 Tr. of Verdun splits Frank. Emp -> Fr. & Ger.

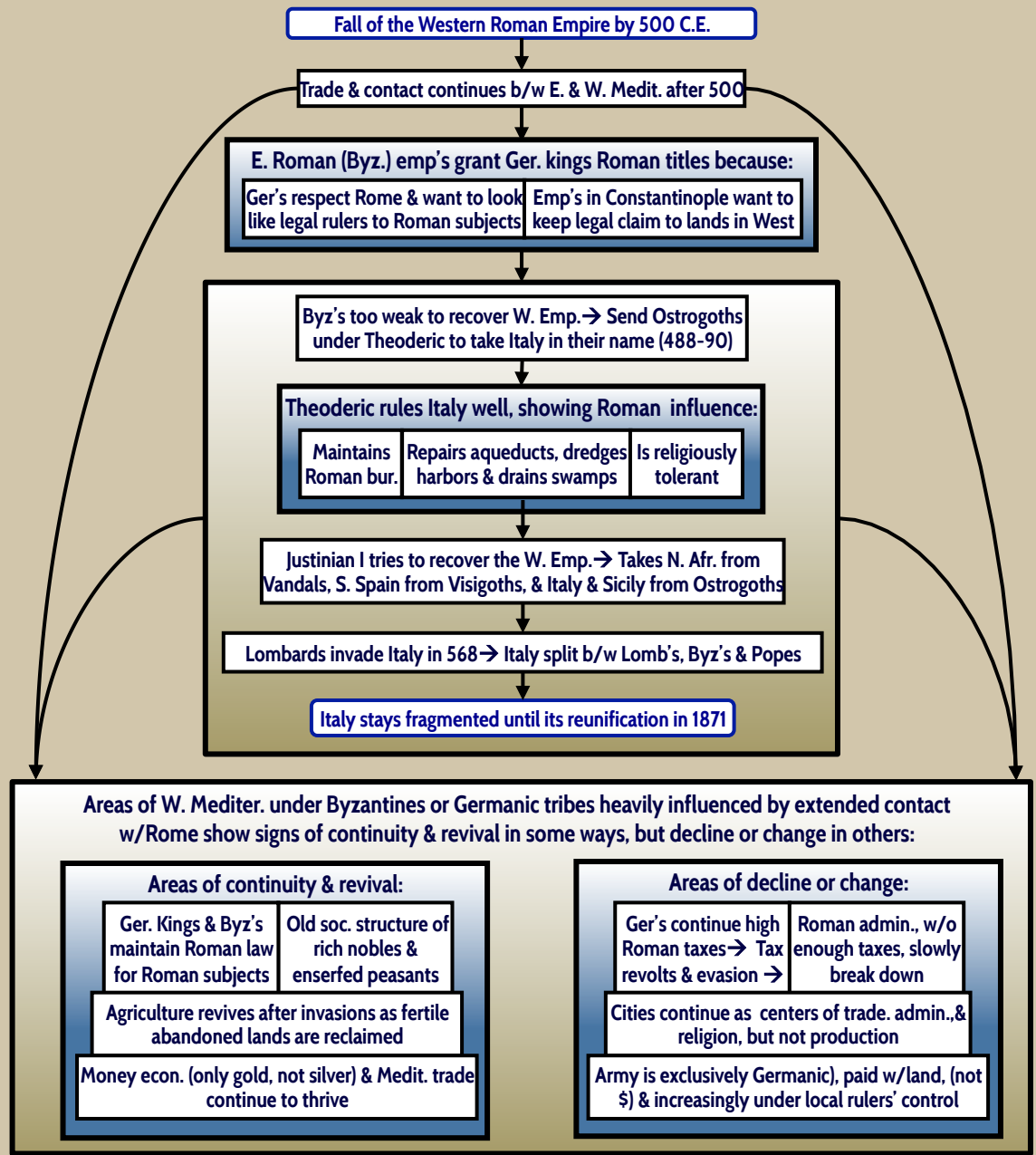
800 Charlemagne crowned emperor

843 Anarchy & invasions across W. Eur. -> Rise of feudalism

c.800-1000 Monast. of Cluny starts reform movement

911 Otto I of Ger. crowned Holy Roman Emp.

961



5.4 THE RISE AND IMPACT OF THE FRANKS (c.500-1000)

c.35-67 St. Paul's ministry

303-13 The Great persecutions

313 Constantine's edict of toleration

325 Council of Nicaea

c.310-83 Ulfilas converts Goths to Arian Chr.

380 Goths sack Rome

413-26 St. Augustine writes *City of God*

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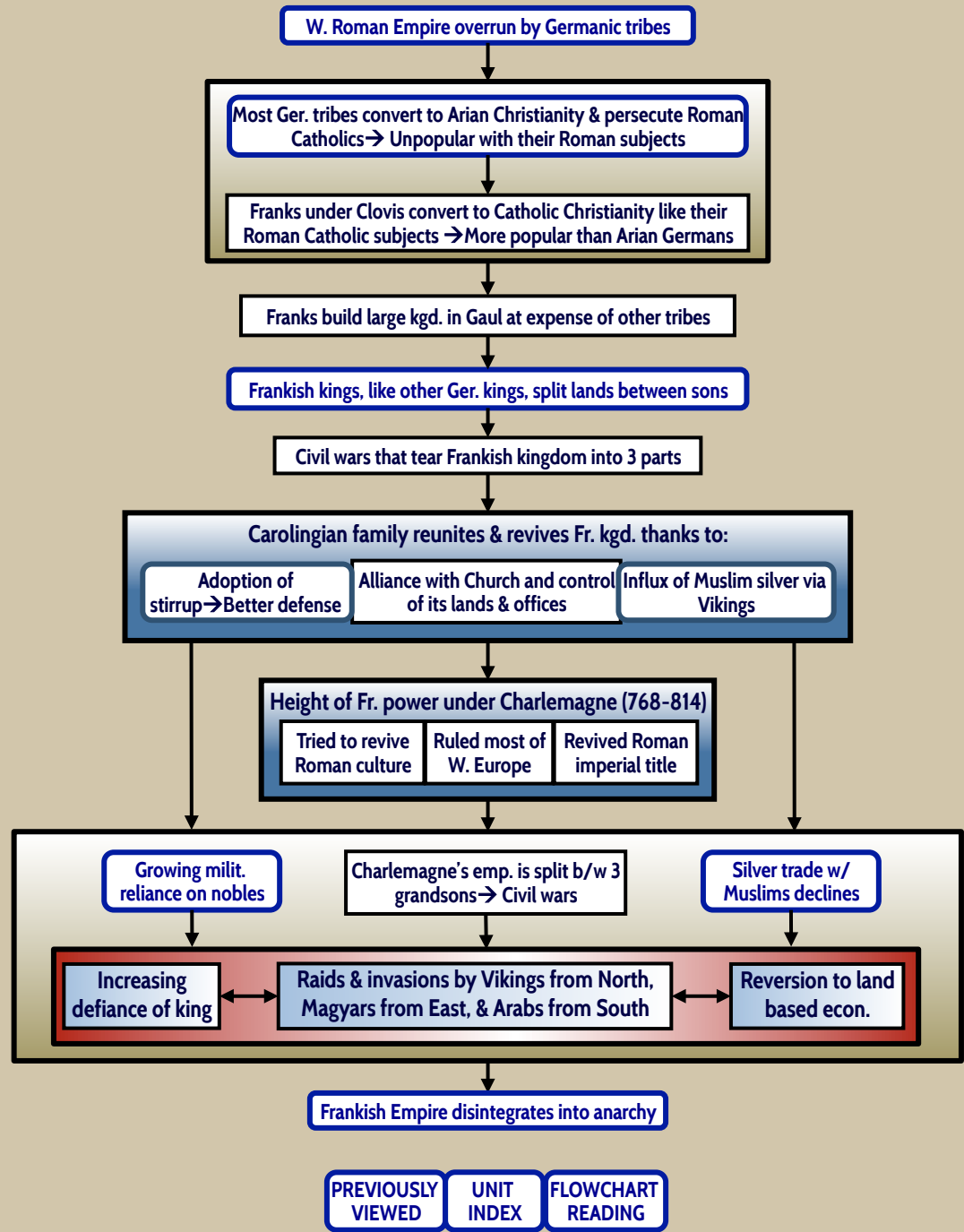
800 Charlemagne crowned emperor

843 Tr. of Verdun splits Frank. Emp -> Fr. & Ger.

c.800-1000 Anarchy & invasions across W. Eur. -> Rise of feudalism

911 Monast. of Cluny starts reform movement

961 Otto I of Ger. crowned Holy Roman Emp.



5.4A MUSLIM TRADE LINKS AND THE RISE & FALL OF THE CAROLINGIAN EMPIRE (C. 800-1000)

c.35-67 St. Paul's ministry

303-13 The Great persecutions

313 Council of Nicaea

325 Constantine's edict of toleration

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380 Goths sack Rome

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c.529 Justinian's conquest of Italy.

535-554 Lombards invade Italy -> not reunified until 1871

568 Aethelbert of Kent converts to Chr.

601 Stirrup introd. in W. Eur.

600s St. Boniface's mission to Central Eur.

718 Battle of Tours

733 Papal States created

756 Charlemagne's conq. & forced conversion of Saxony

772-804 Vikings sack Mon. of Lindisfarne

793 Book of Kells & Carolingian Ren

c.800 Charlemagne crowned emperor

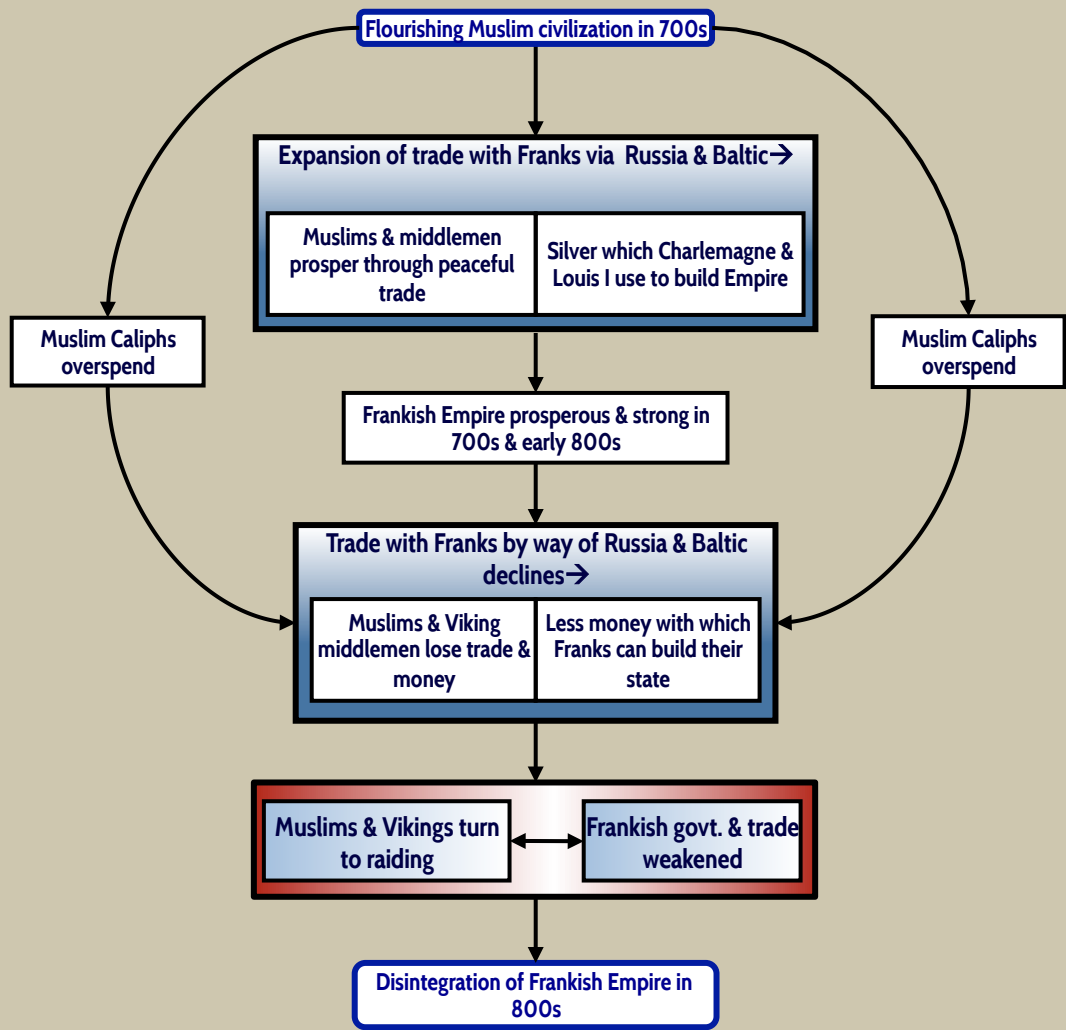
800 Tr. of Verdun splits Frank. Emp -> Fr. & Ger.

843 Anarchy & invasions across W. Eur. -> Rise of feudalism

c.800-1000 Monast. of Cluny starts reform movement


911 Otto I of Ger. crowned Holy Roman Emp.

961



5.5 THE COLLAPSE OF ROME'S "GLOBAL" ECONOMY (c.400-700)

c.35-67  St. Paul's ministry

303-13  The Great persecutions

313  Constantine's edict of toleration

325  Council of Nicaea

c.310-83  Ulphilas converts Goths to Arian Chr.

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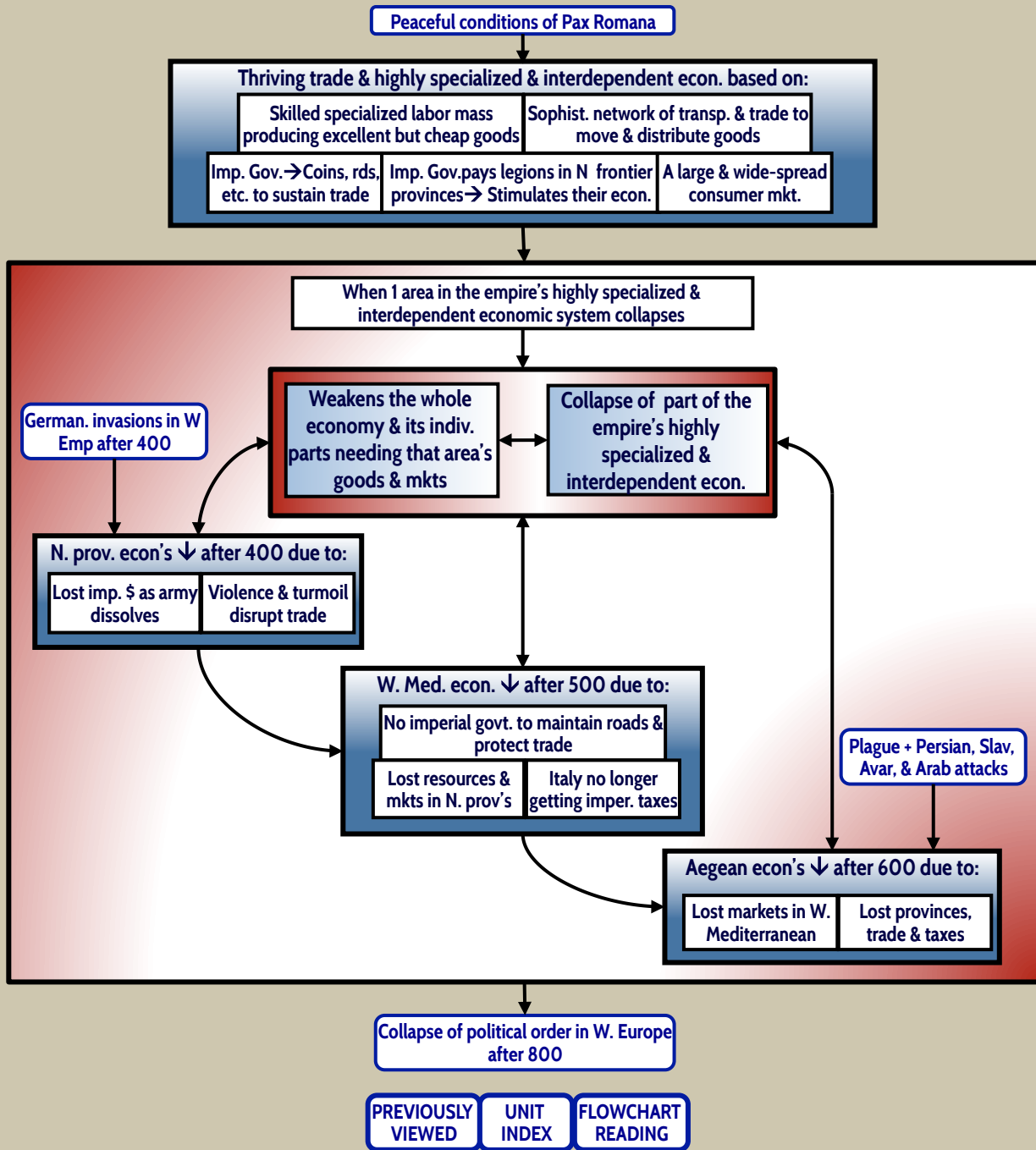
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c.800-1000  Monast. of Cluny starts reform movement

911  Otto I of Ger. crowned Holy Roman Emp.

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5.6 THE COLLAPSE OF POLITICAL ORDER IN W. EUROPE (c.800-1000)

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313 Constantine's edict of toleration

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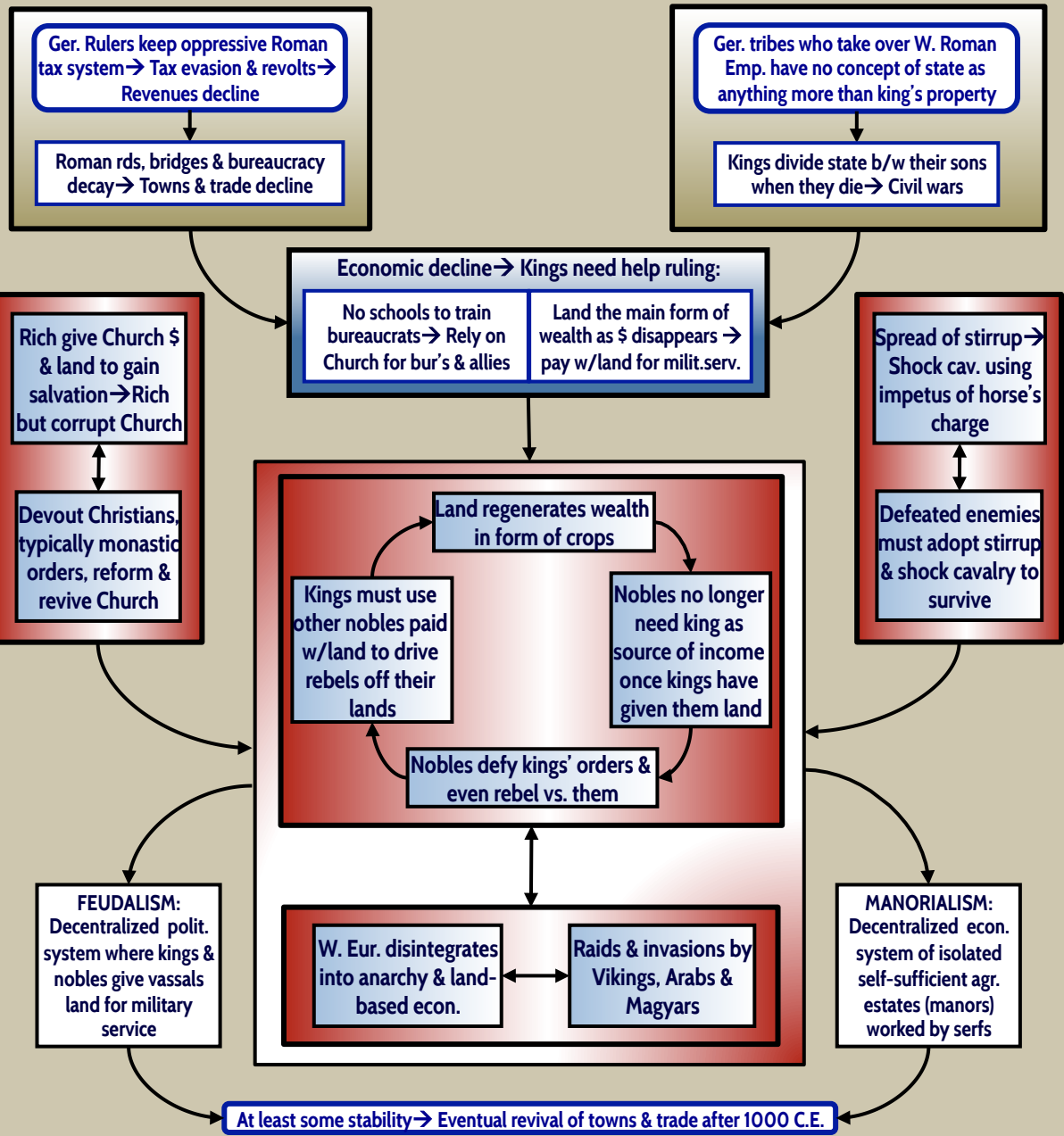
c.800 Anarchy & invasions across W. Eur. -> Rise of feudalism

800 Monast. of Cluny starts reform movement

843 Otto I of Ger. crowned Holy Roman Emp.

911

961



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Stirrups introd. in W. Eur.
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St. Boniface's mission to Central Eur.

Battle of Tours
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Charlemagne's conq. & forced conversion of Saxony
772-804

Vikings sack Mon. of Lindisfarne
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Book of Kells & Carolingian Ren
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Charlemagne crowned emperor
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911

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961

5.6A THE STIRRUP AND ITS EFFECT

Invention & spread of the stirrup westward to Europe

Shock cavalry where a warrior, bracing himself with the stirrup, uses the impetus of the horse's charge to drive home a lance couched under his arm

Shock cavalry using stirrup gives its users edge in battle

Opponents adapt the use of stirrup in order to survive

More effective warfare requiring:

Warriors who can afford to train full-time

War horses bred large enough for this new type of warfare

Helmet, armor, & shield to withstand shock of impact in battle

Collapse of economy → land the only practical form of wealth left

Collapse of Frankish Emp. → Viking, Arab, and Magyar attacks

Adopting this type of warfare is expensive but necessary

Give nobles land for military service

Have to tie peasants to the land in service to nobles free them as full-time warriors

Stratified social structure divided into 3 main classes:
1) Those who pray (clergy)
2) Those who fight (nobles)
3) Those who work (peasants)

Feudalism the dominant political order until the revival of towns and trade in the High Middle Ages

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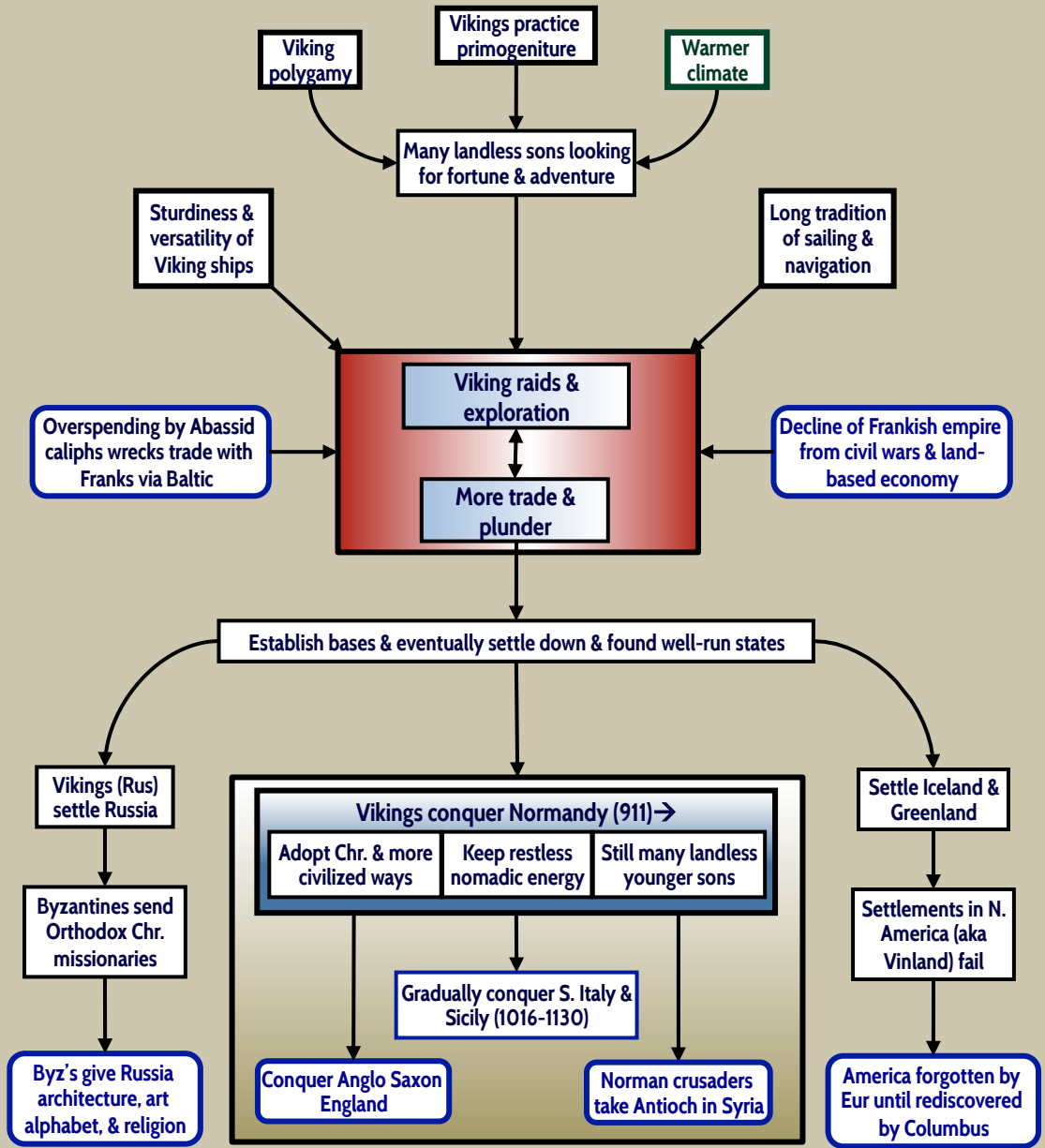
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5.7 THE VIKINGS AND THEIR IMPACT (c.800-1000)



5.8 ANGLO-SAXON ENGLAND (c.500-1066 C.E).

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303-13 The Great persecutions

313 Council of Nicaea

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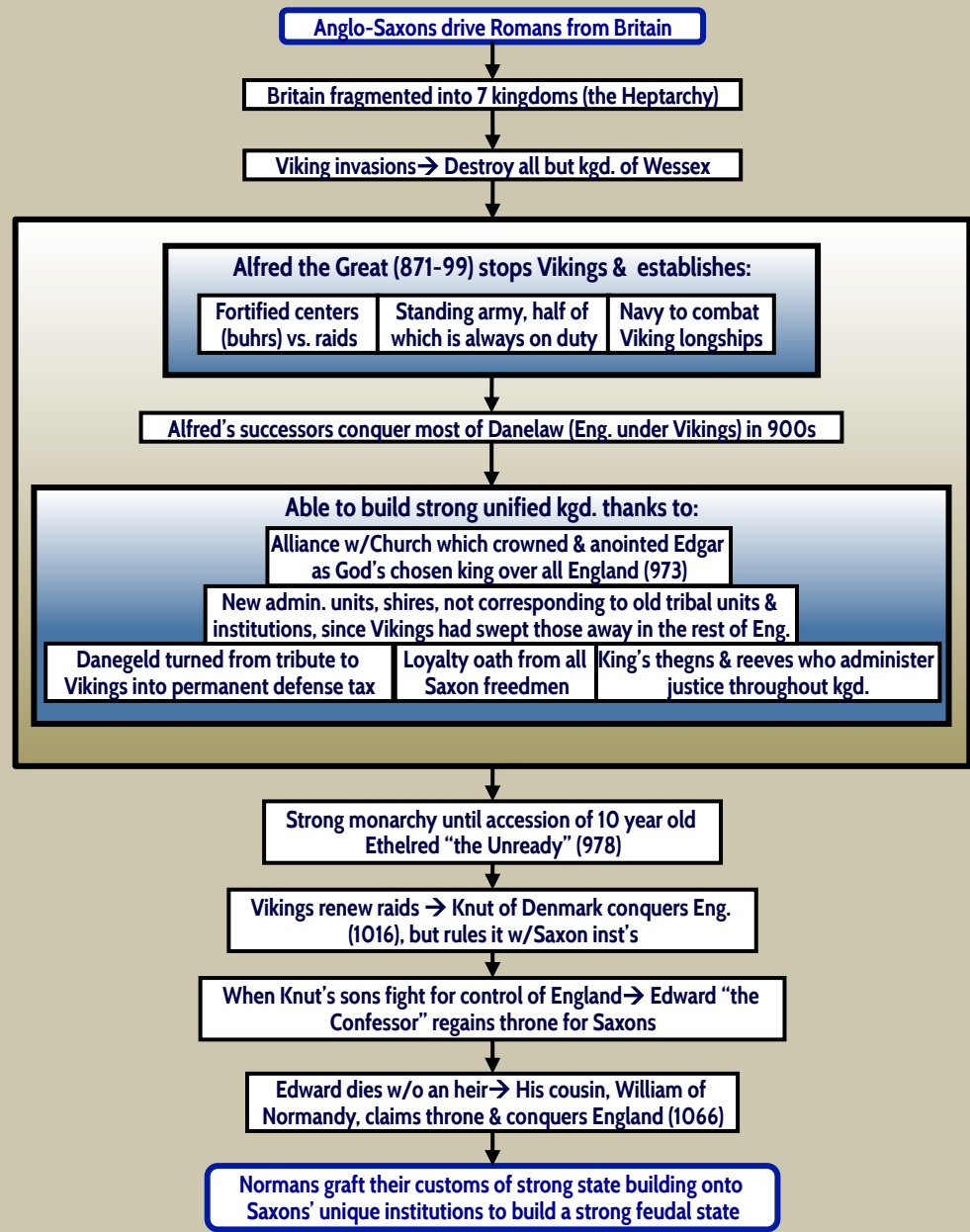
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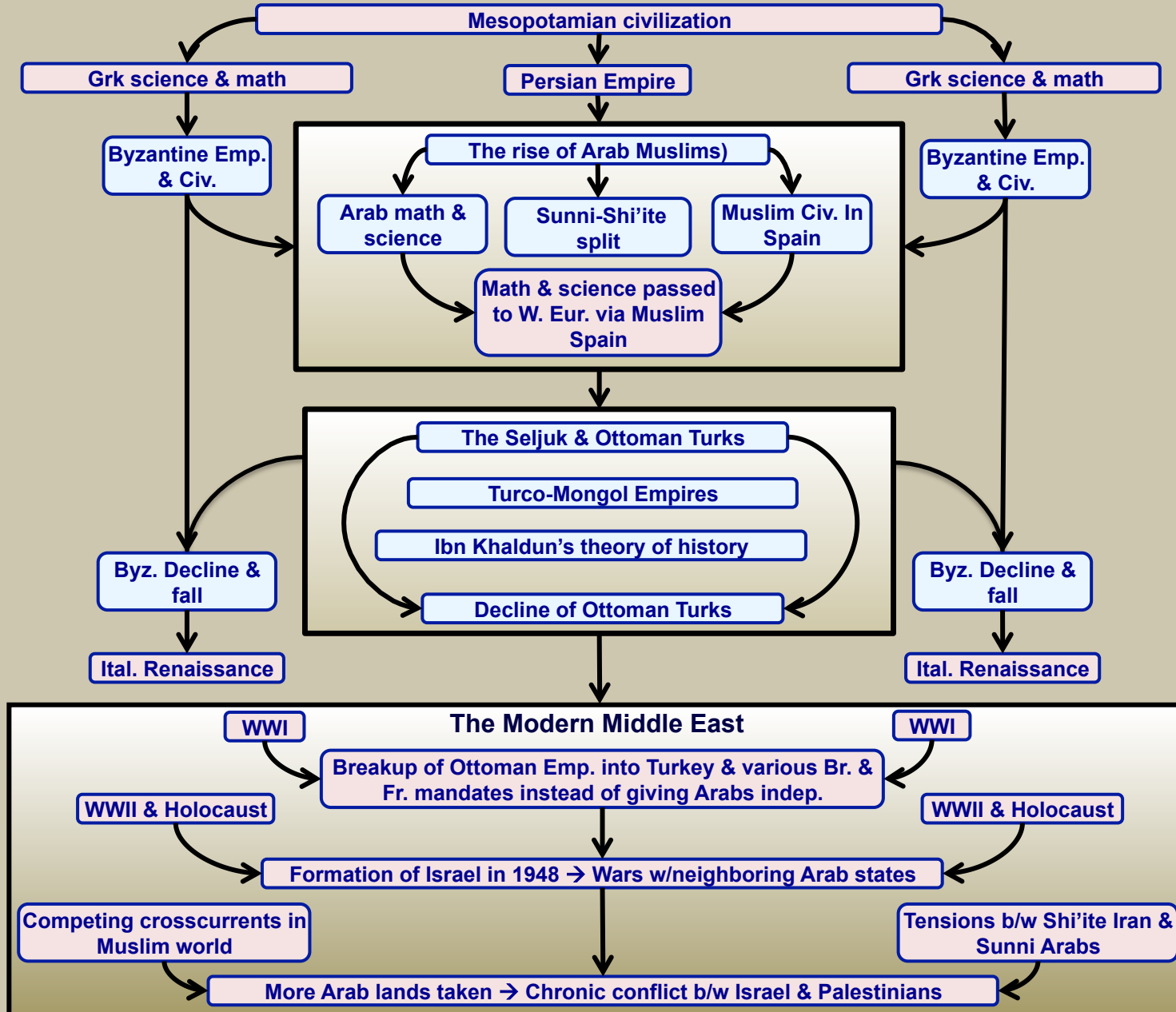
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Unit 6. Byzantium & Islam



6.1 THE EASTERN ROMAN (BYZANTINE) EMPIRE (c.500-1000 C.E.)

33 Constantinople founded

527-65 Justinian's reign

532 Hagia Sophia

542 Bubonic Plague

542 Life of Mohammed

570-632 Hegira

622

650 Definitive written version of Quran

650 4 Orthodox Caliphs

632-61 Arab conquests

632-c.800

661-750 Sunni-Shi'ite split

680 Umayyad Dynasty

727-842 Iconoclasm

750

756 Umayyad Dyn. in Spain

756 Abbasid Dynasty Baghdad founded

762

863 Bulgars convert to Chr.

863 Macedonian Dyn. → Height of Byz. Emp..

865-923 al-Rhazi, Arab physician

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867-1025 Russia converts to Chr.

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988 Ibn Sina, Arab physician

980-1037 Schism b/w Roman & Grk Churches

1054 Battle of Manzikert → Byz. decline & rise of Seljuk Turks

1071

1048-1131 Omar Khayyam

1048-1131 Ibn Rushd, philosopher

1126-98 Crusaders sack Const.

1204

1237 Mongols dest. Kiev

1237 Mongols crush Seljuks → Rise of Ottomans

1243

1332-1406 Ibn Khaldun, philosopher & historian

1345 Ottomans expand into Europe

1390 Ivan III drives Mongols from Muscovy

1453 Ottomans take Constantinople

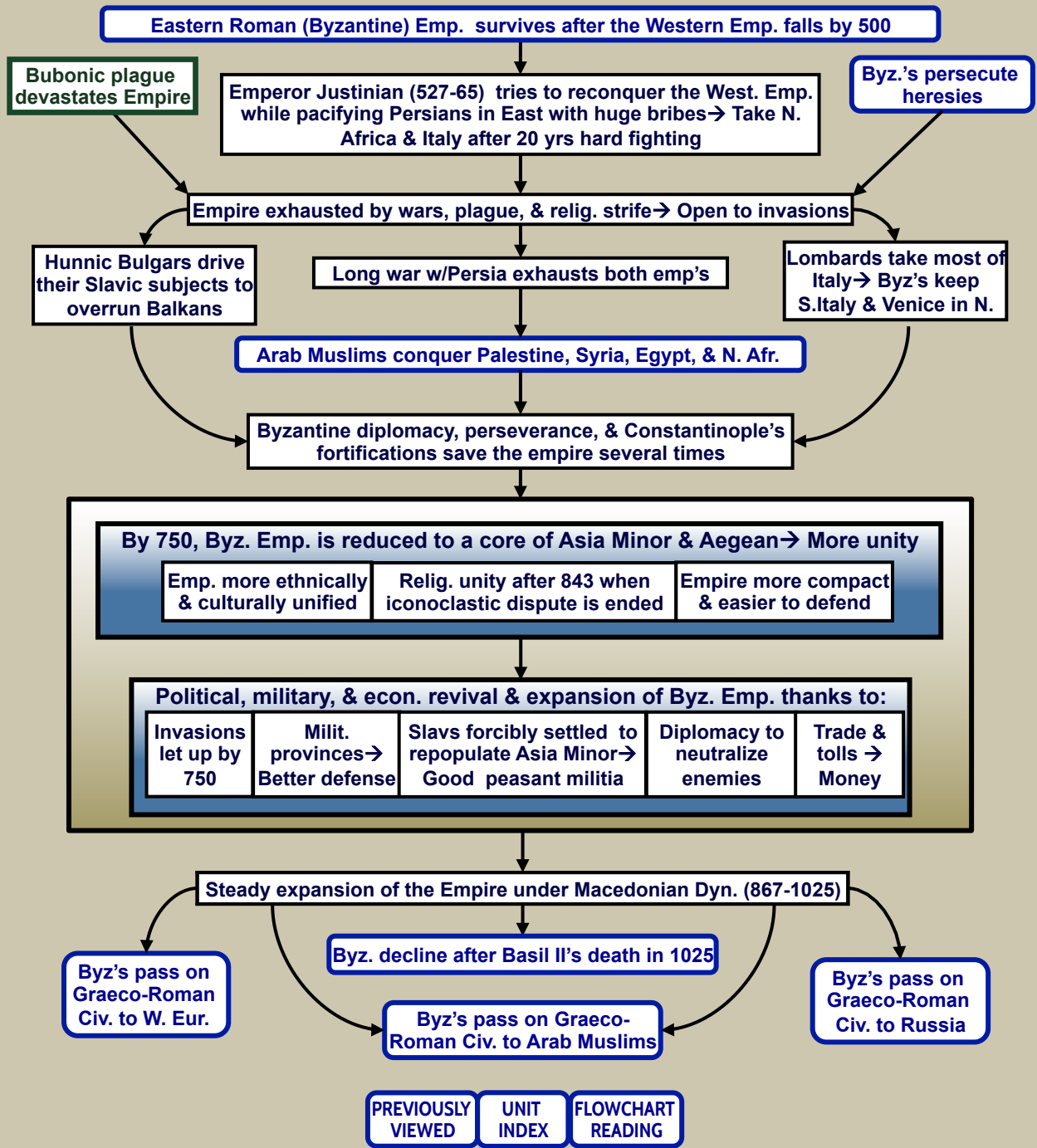
1492 Moors driven from Spain

1492 Ottomans conquer Hungary

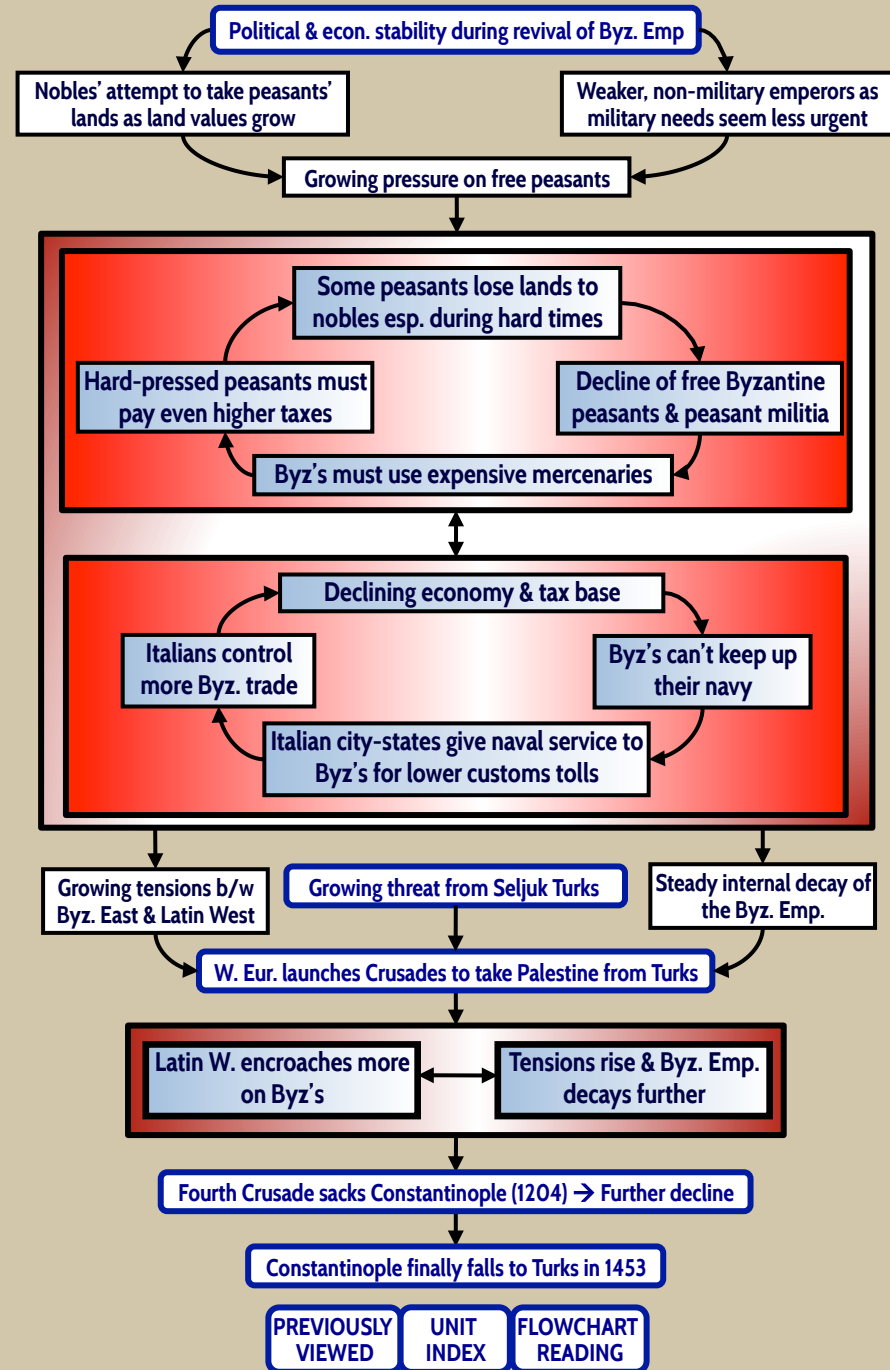
1526 Ivan IV of Russia

1533-84 Battle of Zenta → Ottoman decline

1697



6.2 DECLINE AND FALL OF THE BYZANTINE EMPIRE (c.1000-1453 C.E.)



33		Constantinople founded
527-65		Justinian's reign
532		Hagia Sophia
542		Bubonic Plague
570-632		Life of Mohammed
622		Hegira
650		Definitive written version of Quran
632-61		4 Orthodox Caliphs
632-c.800		Arab conquests
661-750		Umayyad Dynasty
680		Sunni-Shi'ite split
727-842		Iconoclasm
756		Umayyad Dyn. in Spain
756		Abbasid Dynasty Baghdad founded
762		Bulgars convert to Chr.
863		al-Rhazi, Arab physician
865-923		Macedonian Dyn -> Height of Byz. Emp.
867-1025		Russia converts to Chr.
988		Ibn Sina, Arab physician
980-1037		Schism b/w Roman & Grk Churches
1054		Battle of Manzikert -> Byz. decline & rise of Seljuk Turks
1071		Omar Khayyam
1048-1131		Ibn Rushd, philosopher
1126-98		Mongols dest. Kiev
1204		Mongols crush Seljuks -> Rise of Ottomans
1237		Ibn Khaldun, philosopher & historian
1332-1406		Ottomans expand into Europe
1345		Ivan III drives Mongols from Muscovy
1390		Ottomans take Constantinople
1453		Moors driven from Spain
1492		Ottomans conquer Hungary
1526		Ivan IV of Russia
1533-84		Battle of Zenta -> Ottoman decline
1697		

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6.3 THE RISE OF THE ARAB MUSLIMS & THEIR IMPACT (632-c.1000)

33 Constantinoe founded

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532 Bubonic Plague

542 Hagia Sophia

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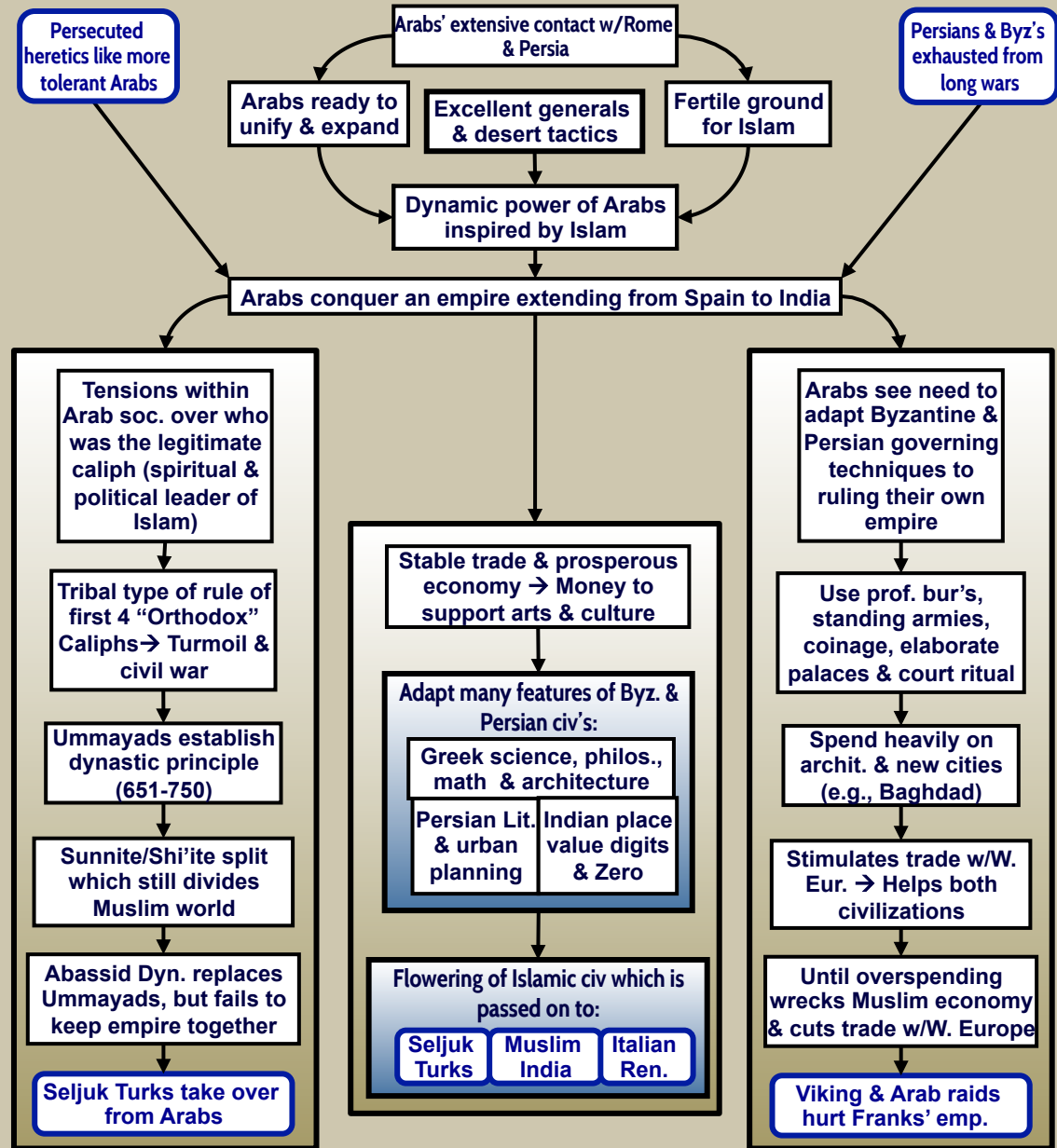
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1697



6.4 THE SUNNI-SHI'ITE SPLIT IN ISLAM

Islam's theocratic nature Islam combining religion & politics

Conquest of emp for Islam. → Riches & power

Split over who should succeed Moh. as Kalifa (deputy) b/w followers of:
 Abu Bakr, 1 of Moh's 1st converts Ali, Moh's cousin & son-in-law

Conquest of emp for Islam → Contact w/ other civ's

Corruption & injustice → Suppress lower status Arabs & non-Arab converts to Islam

Abu Bakr (632-4), Umar, (634-44), & Uthmann (644-56) all chosen over Ali

Contact with & infl. of Zoroastrianism, Chr., & Judaism, all w/ beliefs in a future messiah

Followers of Ali (Shi'atu Ali → Shi'ites) see these events as sacrilege

Sunni-Shi'ite split in Islam, which is given more religious edge by 2 events:

680- rev. by Husayn, son of Ali & Fatima (Moh's daughter) → 70 members of Ali's family massacred at Karbala → Only 1 son of Husayn, Ali, survives	685-7- Unsucc. Rev. in favor of another son of Ali, Mohammed, as Imam, Islam's true & rightful leader → Belief he's still alive & hidden by God
---	---

Theme of suffering & expiation makes Shi'a even more of a religious movement

He will return as *Mahdi* ("rightfully guided one") to restore just rule → Messianic theme in Shi'a Islam

Long pattern of relig rev's centered around Imam, sometimes called *Mahdi*, & *da'i*, who preaches & sometimes fashions imam's message & leads followers to victory or martyrdom

More radical groups' beliefs often far removed from mainstream Islam's beliefs:

Fuse w/ local rel's → Beliefs such as reincarnation	Belief in imam's miraculous powers → Deification	Rejection of all laws → Justifies murder & assass.
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The Assassins in 12th & 13th centuries who targeted Sunni Muslims more than Christian Crusaders

Hezbollah in present day Lebanon who carry out attacks on Israel, but also provide soc. Services to Lebanese Shi'ites

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527-65 Justinian's reign

532 Hagia Sophia

542 Bubonic Plague

570-632 Hegira

622

650 Definitive written version of Quran

632-61 4 Orthodox Caliphs

632-c.800 Arab conquests

661-750 Umayyad Dynasty

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6.5 MUSLIM RULE IN SPAIN AND ITS IMPACT (711-1492)

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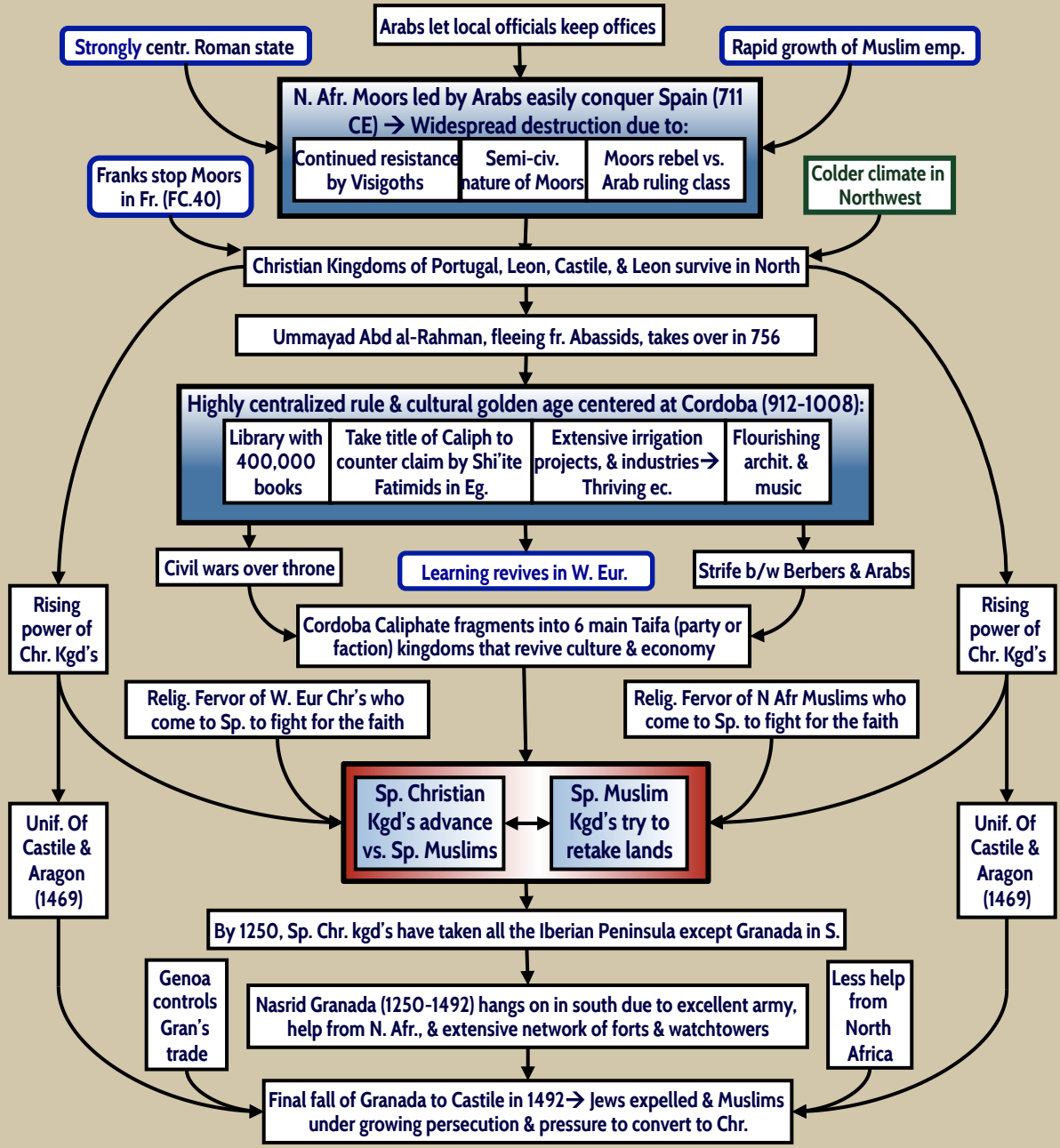
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6.6 ARAB SCIENCE AND ITS LEGACY (c.750-1000 C.E.)

Islamic belief there is no conflict between reason & faith

Contact with Byz. & Persian civiliz's

Arabs willing & able to provide accurate versions of ancient texts thanks to:

Excellent translators since new converts must read *Koran* in the orig. Arabic

Extensive funding through religious foundations (*waqfs*) & caliph's "House of Wisdom"

Get copies of Greek works through conquests, raids, or negotiations w/Byz's

Arabs take Greek math & science & do their own original work

Physics & optics:
 • Calculated earth's size
 • Proved light goes fr. object to eye
 • Formulae for specific & absolute weights

Math:
 • Fused Indian place value digits w/Grk math → Algebra & trigonometry w/sine, cosine, & cotangent functions

Medicine:
 • Advanced w/o microscope
 • Suturing w/animal gut
 • Mercury ointments for eye & skin diseases

Peak of Muslim science, civilization and empire (c.1000 C.E.)

Ulama: conserv. Sunni scholars

Arabs soft & open to attack

Sufis: charismatic Sunni mystics

Invasions by Seljuk Turks

Mongol invasions devastate Muslim world

Invasions by Crusaders

Arabs become resistant to new & foreign ideas → Arab science stagnates

Arab science passed on to W. Eur. via Muslim Spain

Basis for birth of modern science in Europe during Enlightenment

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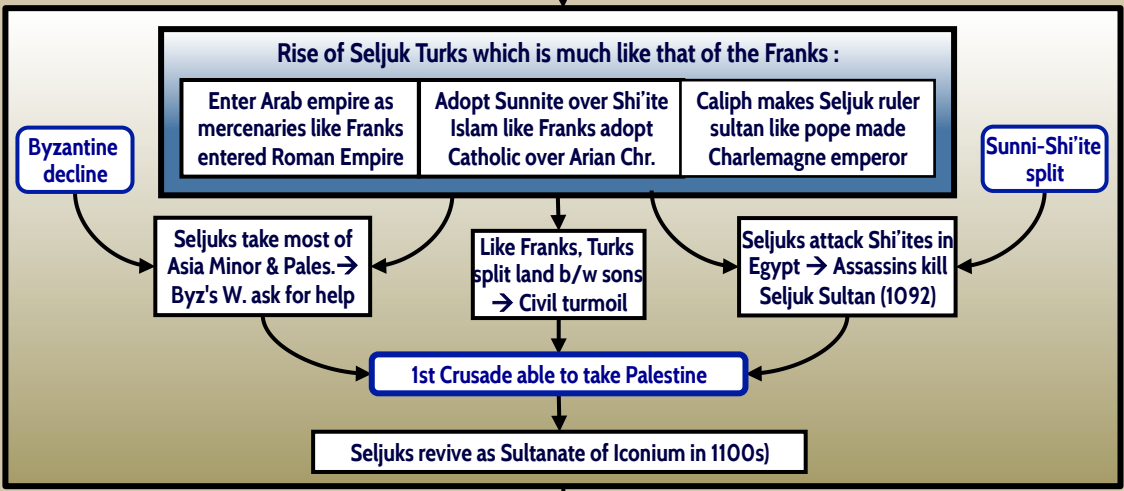
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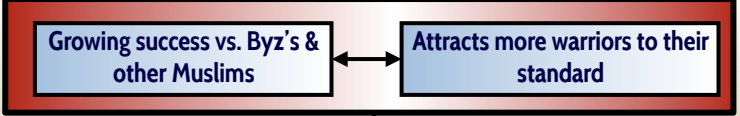
6.7 THE SELJUK AND OTTOMAN TURKS (c.1000-1565 C.E.)

Arabs settle down & become more civilized, but also less warlike



Until Mongol invasion (1245) unleashes wild Turkish *ghazis* (holy warriors) → Raid both Byz. & Seljuk lands

RISE OF OTTOMAN STATE IN ASIA MINOR UNDER GHAZI LEADER, OSMAN (1326-1565)



Ottoman Emp. controls Middle East, N. Africa, Balkans, & Constantinople (Modern Istanbul)

Long decline after Suleiman the Magnificent's death in 1565

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6.8 THE TURCO MONGOL EMPIRES (c.1500-1800 C.E.)

Turk. Tribes recover & revive after devastation of Mongols & Timur

Uzbek Emp. In Cent. Asia of loosely ruled tribes & caravan cities

Ibn Khaldun's theory on the rise & decline of Muslim empires

Turks from Afghan establish Mughal Empire in India

OTTOMAN TURKS

Osman I (1281-1324) & his descendant unite & lead Turkish tribes in Anatolia a ghazis (holy warriors)

Invasion by Timur the Lame (1402) temporarily interrupts expansion

Ottomans start relying on slave soldiers (Janissaries) and bur's (ghulams or devshirme) to expand and stabilize their rule

Ottomans resume advance & take Anatolia, Balkans, Syria, Palestine, Egypt, Arabia, much of N. Africa

Suleiman I (1520-65) takes emp. to its height but starts shifting emphasis of power from relig. to bur.

Persecutes more rad. Sufis

Conserv. Qadis handle most bur. duties

Confines potential heirs to harem → Poor rulers

Ottomans fail to keep up w/West in milit. Tech. → series of milit. defeats & revolts

Long slow decline until Ottomans fall after WWI

SAFAVID IRAN

Ismail I (1501-24) orig. a quasi messianic Sunni Sufi who veers to Shiism in 1400s, takes Iran & founds Safavid Dyn. at Tabriz in 1501

Mixture of Shiite & Sufi elements appeals to diff. tribes

Ismail begins imposing Shiism on predominantly Sunni Iran → Persian scholars emigrate to India & influence Mughal civ.

Ottomans defeat Ismail at Chaldiran (1514) → Hurt Ismail's relig. Prestige among tribes → Safavid decline

Abbas I (1587-1629) takes emp. to its height but starts shifting emphasis of power from relig. to bur

Uses slave soldiers & bur's

Replaces mystic role w/trad. Iranian govt.

Confines potential heirs to harem → Poor rulers

Rift w/Shiite leaders who say only descendants of Ali can know Koran & be imams

Safavids fall to Afghan tribes (1722) → Era of instability

330 Constantinople founded

527-65 Justinian's reign

532 Bubonic Plague

542 Hagia Sophia

570-632 Hegira

622

650 Definitive written version of Quran

650 4 Orthodox Caliphs

632-61 Arab conquests

661-750 Umayyad Dynasty

680 Sunni-Shi'ite split

727-842 Umayyad Dyn. in Spain

750 Abbasid Dynasty Baghdad founded

762 Bulgars convert to Chr.

863 al-Rhazi, Arab physician

865-923 Macedonian Dyn. → Height of Byz. Emp..

867-1025 Russia converts to Chr.

988 Ibn Sina, Arab physician

980-1037 Schism b/w Roman & Grk Churches

1054 Battle of Manzikert → Byz. decline & rise of Seljuk Turks

1071

1048-1131 Omar Khayyam

1126-98 Ibn Rushd, philosopher

1204 Crusaders sack Const.

1237 Mongols dest. Kiev

1243 Mongols crush Seljuks → Rise of Ottomans

1332-1406 Ibn Khaldun, philosopher & historian

1345 Ottomans expand into Europe

1390 Ivan III drives Mongols from Muscovy

1453 Ottomans take Constantinople

1492 Moors driven from Spain

1526 Ottomans conquer Hungary

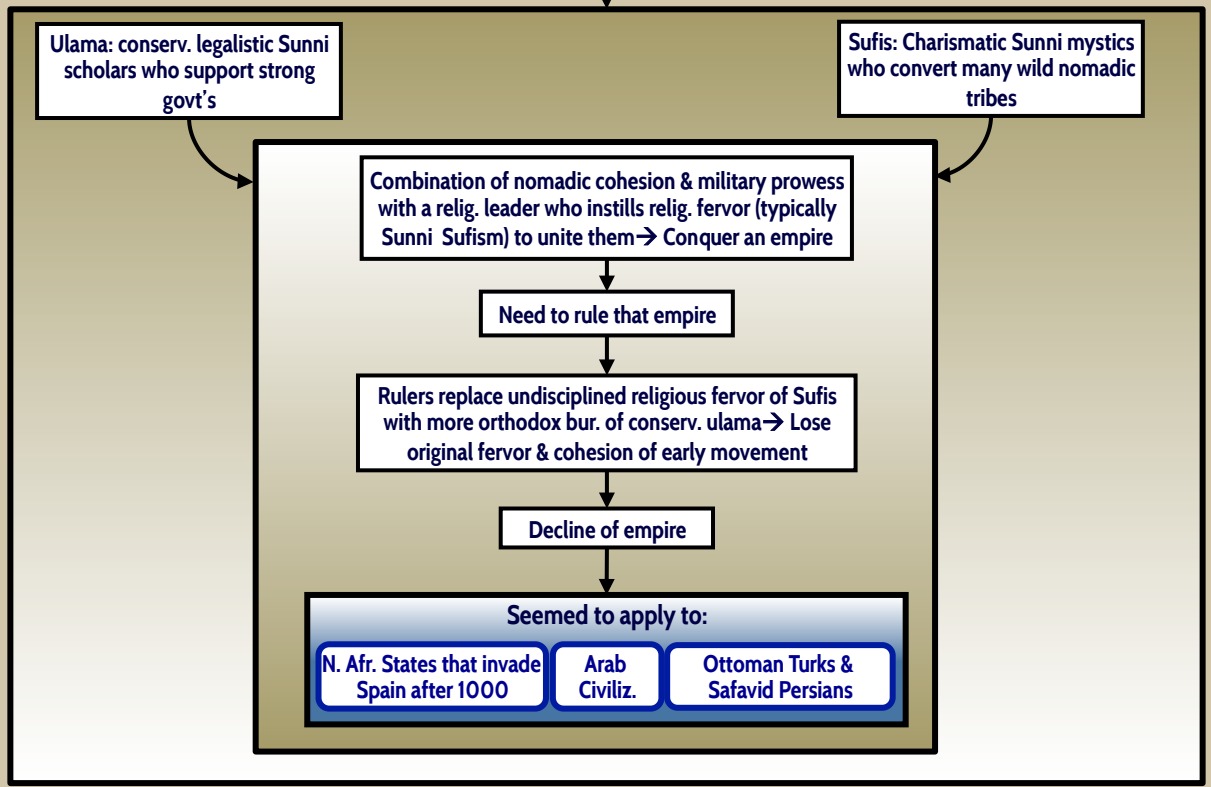
Ivan IV of Russia

1533-84 Battle of Zenta → Ottoman decline

1697

6.8A IBN KHALDUN'S THEORY ON THE CYCLE OF OF THE RISE AND DECLINE OF MUSLIM STATES

Arabs settle down & become more civilized, but also less warlike



33 Constantinople founded

527-65 Justinian's reign

532 Hagia Sophia

542 Bubonic Plague

570-632 Hegira

622 Definitive written version of Quran

650 4 Orthodox Caliphs

632-c.800 Arab conquests

661-750 Sunni-Shi'ite split

680 Umayyad Dynasty

727-842 Umayyad Dyn. in Spain

750 Abbasid Dynasty Baghdad founded

762 Bulgars convert to Chr.

863 al-Rhazi, Arab physician

865-923 Macedonian Dyn -> Height of Byz. Emp..

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1453 Moors driven from Spain

1492 Ottomans conquer Hungary

1526 Ivan IV of Russia

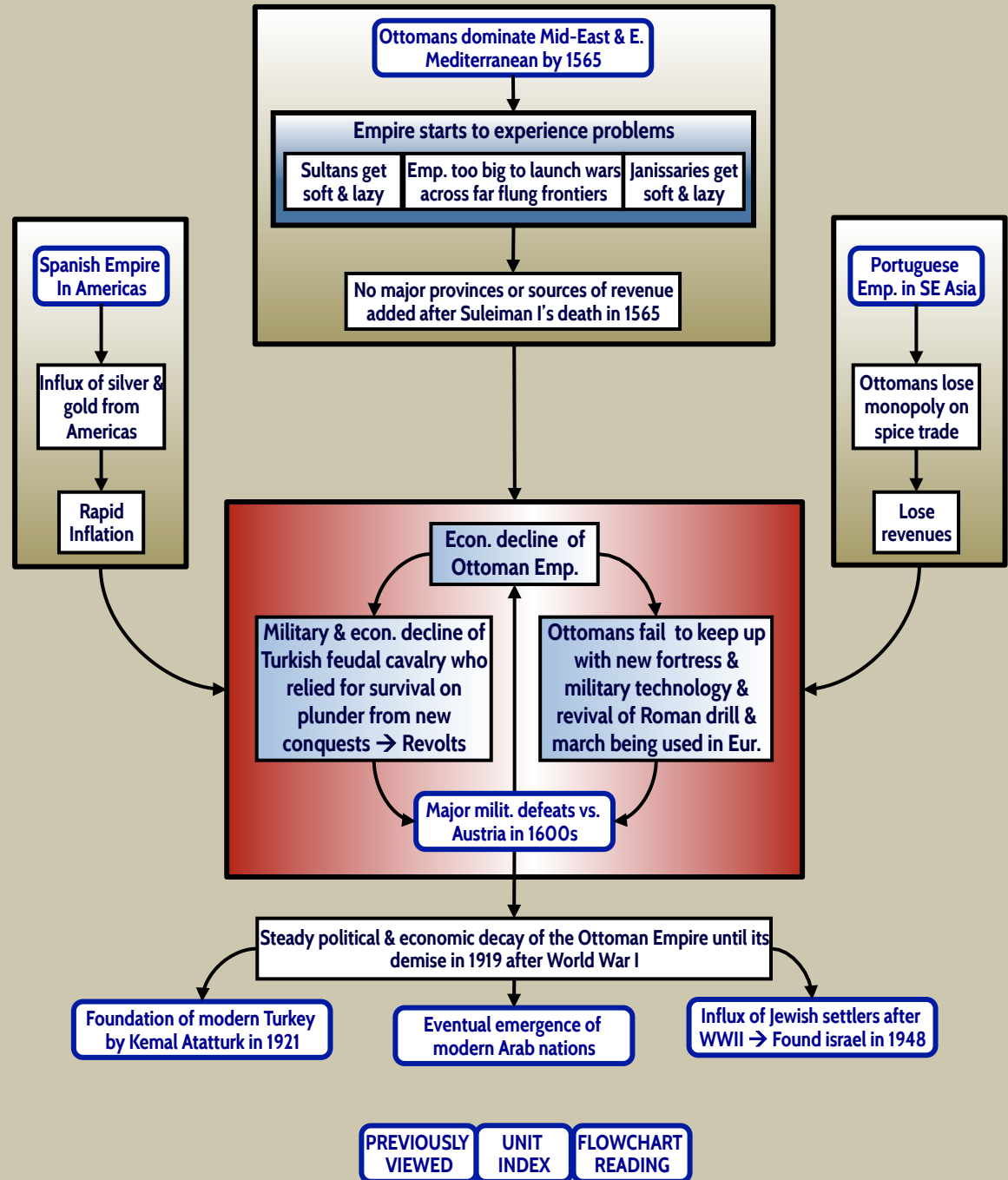
1533-84 Battle of Zenta -> Ottoman decline

1697

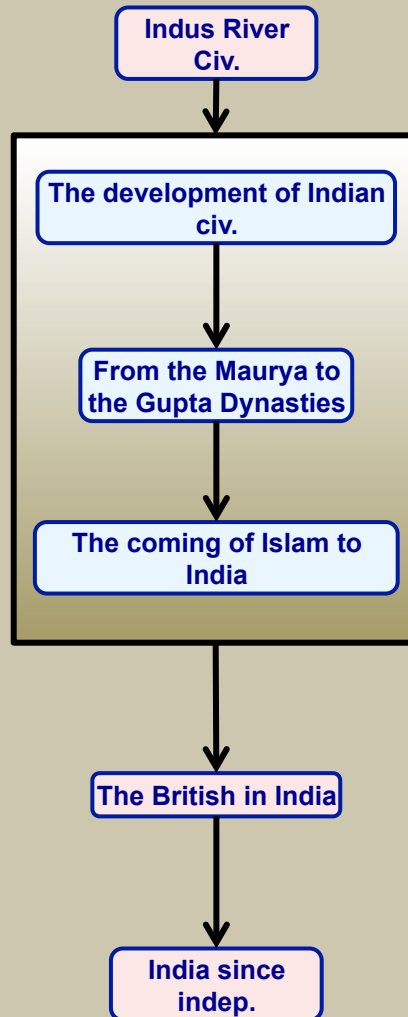
6.9 THE DECLINE OF THE OTTOMAN EMPIRE (c.1565-1918)

Timeline of key events from 33 to 1697:

- 33: Constantinople founded
- 527-65: Justinian's reign
- 532: Hagia Sophia
- 542: Bubonic Plague
- 570-632: Hegira
- 622: Definitive written version of Quran
- 650: 4 Orthodox Caliphs
- 632-61: Arab conquests
- 632-c.800: Umayyad Dynasty
- 661-750: Sunni-Shi'ite split
- 680: Umayyad Dyn. in Spain
- 727-842: Abbasid Dynasty Baghdad founded
- 750: Bulgars convert to Chr.
- 762: Macedonian Dyn. → Height of Byz. Emp..
- 863: al-Rhazi, Arab physician
- 865-923: Russia converts to Chr.
- 867-1025: Ibn Sina, Arab physician
- 988: Schism b/w Roman & Grk Churches
- 980-1037: Battle of Manzikert → Byz. decline & rise of Seljuk Turks
- 1054: Omar Khayyam
- 1071: Crusaders sack Const.
- 1048-1131: Ibn Rushd, philosopher
- 1126-98: Mongols dest. Kiev
- 1204: Mongols crush Seljuks → Rise of Ottomans
- 1237: Ibn Khaldun, philosopher & historian
- 1243: Ottomans expand into Europe
- 1332-1406: Ivan III drives Mongols from Muscovy
- 1345: Ottomans take Constantinople
- 1390: Moors driven from Spain
- 1453: Ottomans conquer Hungary
- 1492: Ivan IV of Russia
- 1526: Battle of Zenta → Ottoman decline
- 1533-84: Ottoman decline
- 1697: Ottoman decline



Unit 7. Classical India



 = Related link outside the unit

7.1 THE DEVELOPMENT OF INDIAN CIVILIZATION (c.1500-500B.C.E.)

c.1500 -1200
Vedic era

c.1200-500
Upanishads

c.1000
Rice agr. & iron tech

c.700-300
Era of 16 Great Realms

c.559-527
Mahavira & Jainism
Gautama Buddha

c.563-483
Theravada-Mahayana split in Buddhism

c.500-400
Alexander of Mac. invades India

c.300
327
321-184
Alexander of Mac. invades India
Ramayana & Mahabharata

c.300BC-1279 CE
Mauryan Emp.
Chola Emp. In S. India

180 BC-10 CE
Indo-Grk Kgd.

c.100
Gandharan art

c.120 BC-50 CE
Indo-Scythians

AD (CE)
319-500
Gupta Emp.
Bhagavad Gita & Rise of Vaishnavite Hinduism

c.300
Zero & Place value digits

c.400
Rajput kgd's

500-1200
711

1206-c.1500
Sultanate of Delhi
Arabs enter India

1526-c.1700
Mughal Emp.
Taj Mahal

1632-53
1601

1757
B. of Plassey
Br. E. Indies Comp. enters India

1778
1st Gov. General, Warren Hastings

1779
HICKY'S BENGAL GAZETTE; India's 1st newspaper

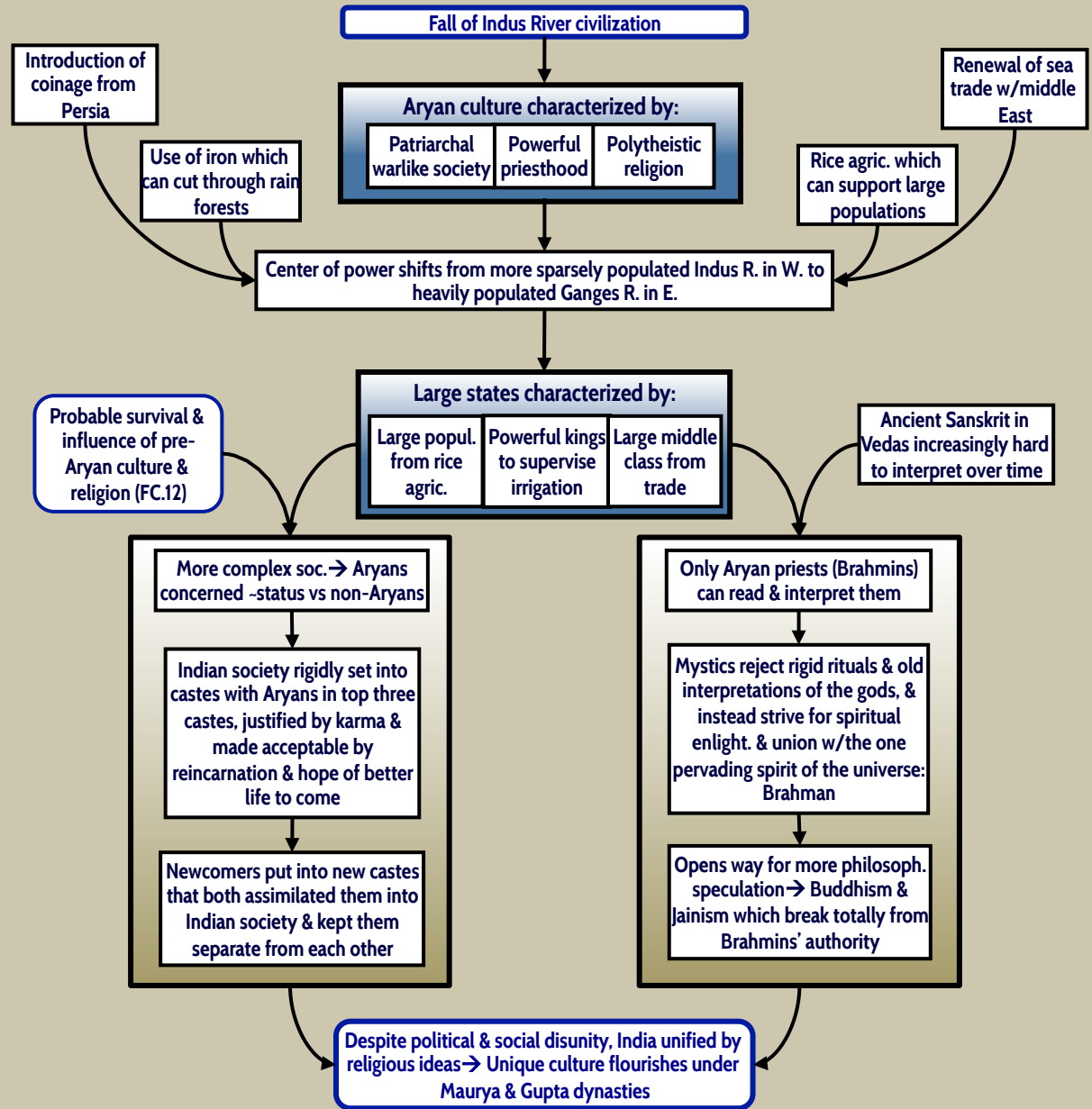
1853

1857
1st passenger train in India
Great India Mutiny -> Br. Takes control from BEIC

1907

1920s
Gandhi leads ind. movement
Tata Iron & Steel Co.

1947
Indian indep; India-Pakistan split -> 1st Kashmir war



7.2 INDIA FROM THE MAURYS TO THE GUPTAS (C.325 B.C.E.-711 C.E.)

c.1500 -1200
Vedic era

c.1200-500
Upanishads

c.1000
Rice agr. & iron tech

c.700-300
Era of 16 Great Realms

c.559-527
Mahavira & Jainism
Gautama Buddha

c.563-483
Theravada-Mahayana split in Buddhism

c.500-400
Alexander of Mac. invades India

c.300
Mauryan Emp.
Ramayana & Mahabharata

321-184
Chola Emp. In S. India

c.300BC-1279 CE
Indo-Grk Kgd.
Gandharan art

180 BC-10 CE
Indo-Scythians

c.100
Gupta Emp.

c.120 BC-50 CE
Bhagavad Gita & Rise of Vaishnavite Hinduism

AD (CE)
319-500
Zero & Place value digits
Rajput kgd's

c.300
Sultanate of Delhi

c.400
Mughal Emp.
Taj Mahal

500-1200
711
B. of Plassey
Br. E. Indies Comp. enters India

1206-c.1500
1st Gov. General, Warren Hastings

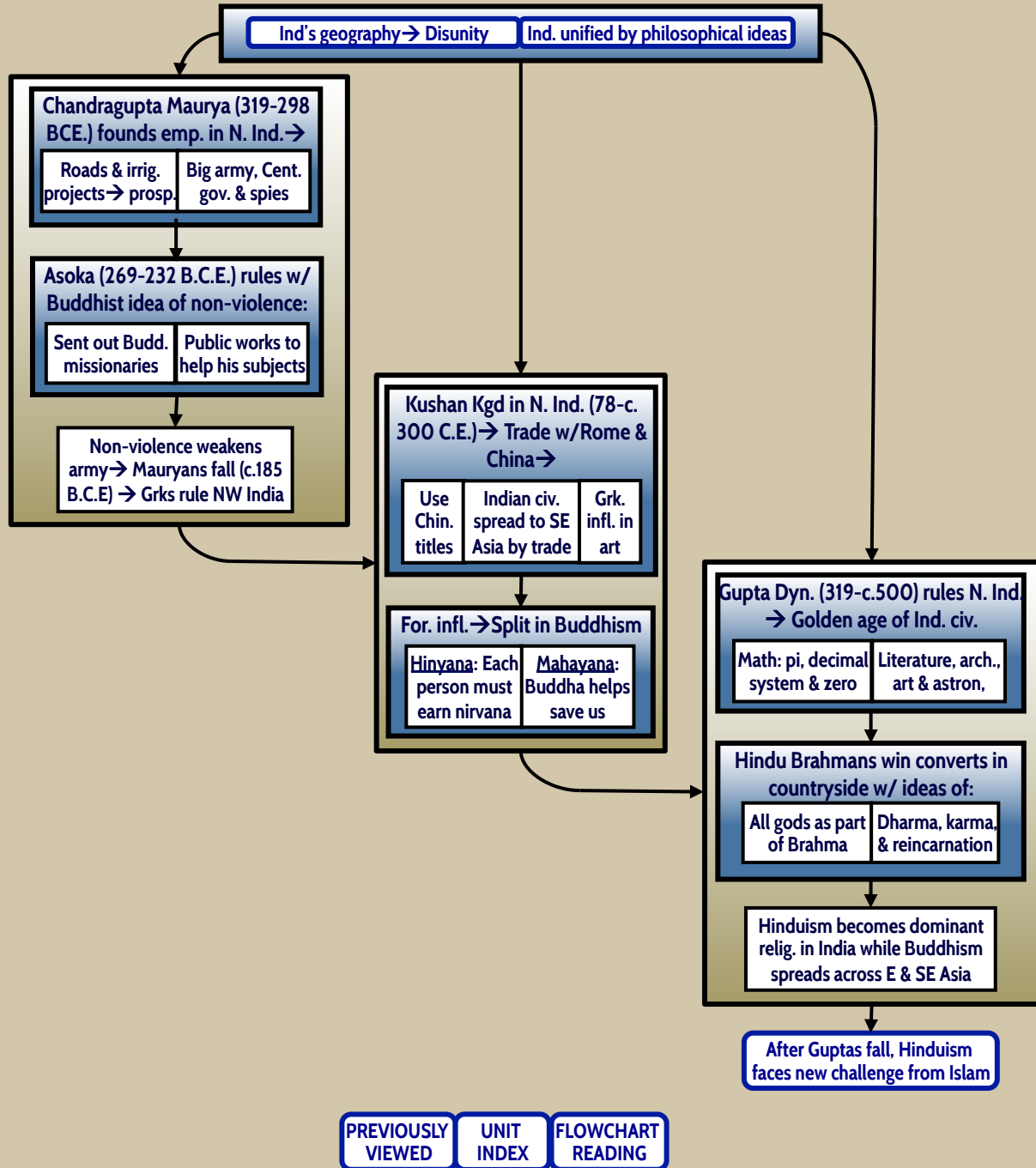
1526-c.1700
1779
HICKY's BENGAL GAZETTE: India's 1st newspaper

1632-53
1601
1757
1778
1779
1853
1857
1907
1920s
1947

Great India Mutiny -> Br. Takes control from BEIC

Gandhi leads ind. movement
Tata Iron & Steel Co.

Indian indep; India-Pakistan split -> 1st Kashmir war



7.3 THE COMING OF ISLAM TO INDIA (711-c.1700 C.E.)

c.1500 -1200
Vedic era
 Upanishads
 Rice agr. & iron tech

c.1200-500
 Era of 16 Great Realms
 Mahavira & Jainism
 Gautama Buddha
 Theravada-Mahayana split in Buddhism

c.1000
 Alexander of Mac. invades India
 Ramayana & Mahabharata

c.700-300
 Mauryan Emp.
 Indo-Grk Kgd.
 Chola Emp. In S. India

c.559-527
 Gandharan art

c.563-483
 Indo-Scythians

c.500-400
 Gupta Emp.
 Bhagavad Gita & Rise of Vaishnavite Hinduism

c.300
 Zero & Place value digits
 Rajput kgd's

c.321-184
 Sultanate of Delhi

c.300BC-1279 CE
 Mughal Emp.
 Taj Mahal

180 BC-10 CE
 B. of Plassey
 Br. E. Indies Comp. enters India

c.100
 1st Gov. General, Warren Hastings

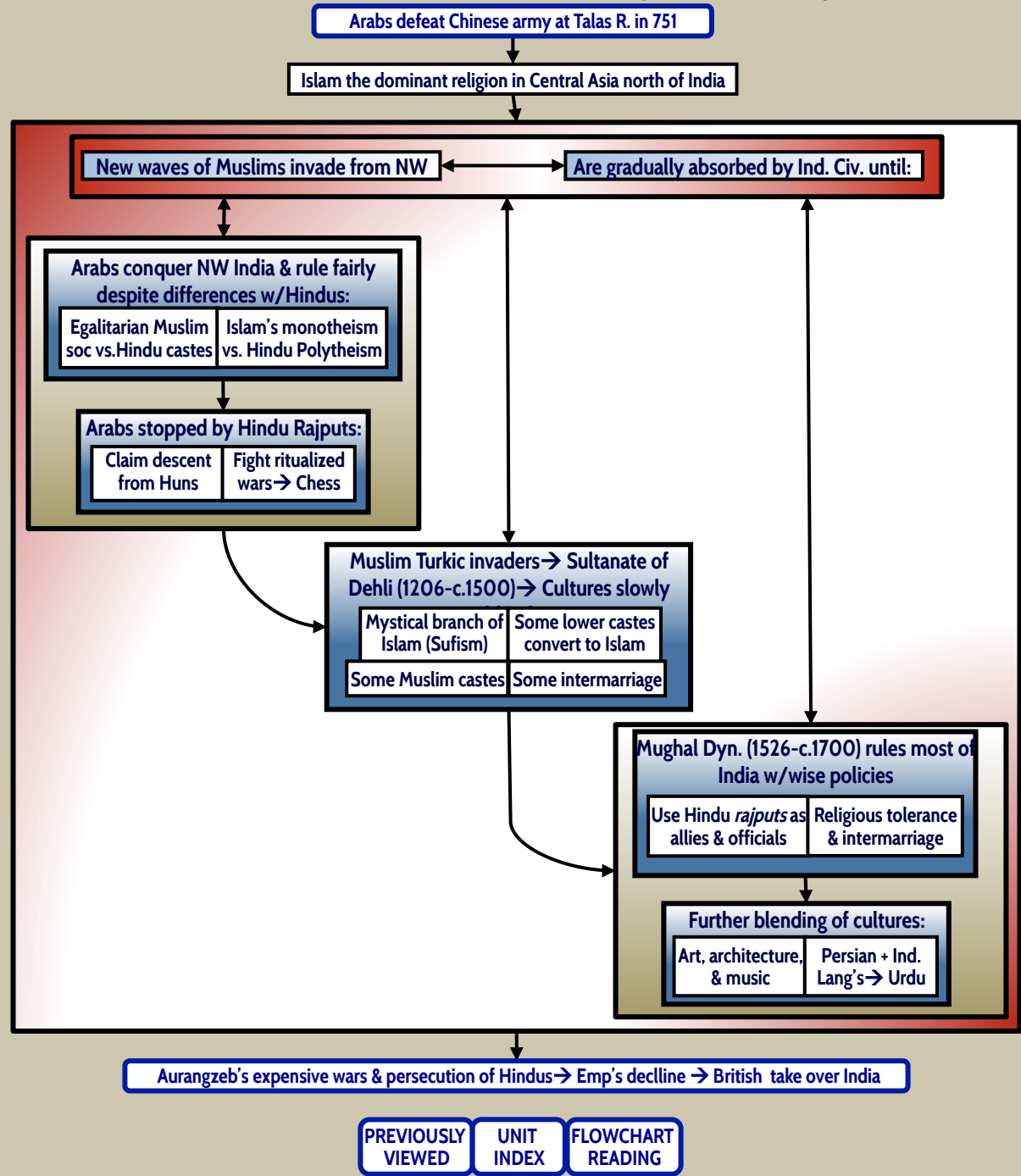
c.120 BC-50 CE
 HICKY's BENGAL GAZETTE; India's 1st newspaper

BC (BCE)
 Great India Mutiny -> Br. Takes control from BEIC

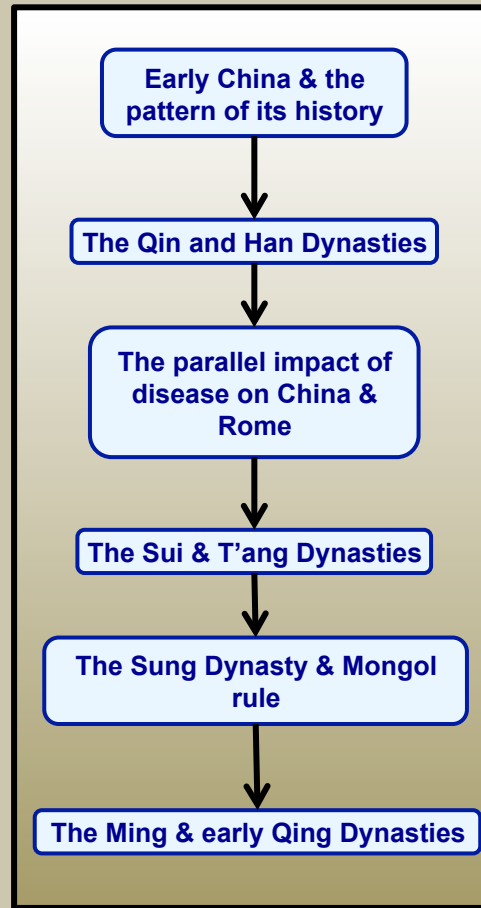
AD (CE)
 1907
 Gandhi leads ind. movement
 Tata Iron & Steel Co.

319-500
 1920s
 Indian indep; India-Pakistan split -> 1st Kashmir war

300
 1947



Unit 8. Classical China














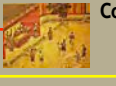







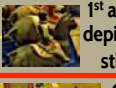









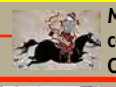






19th century China

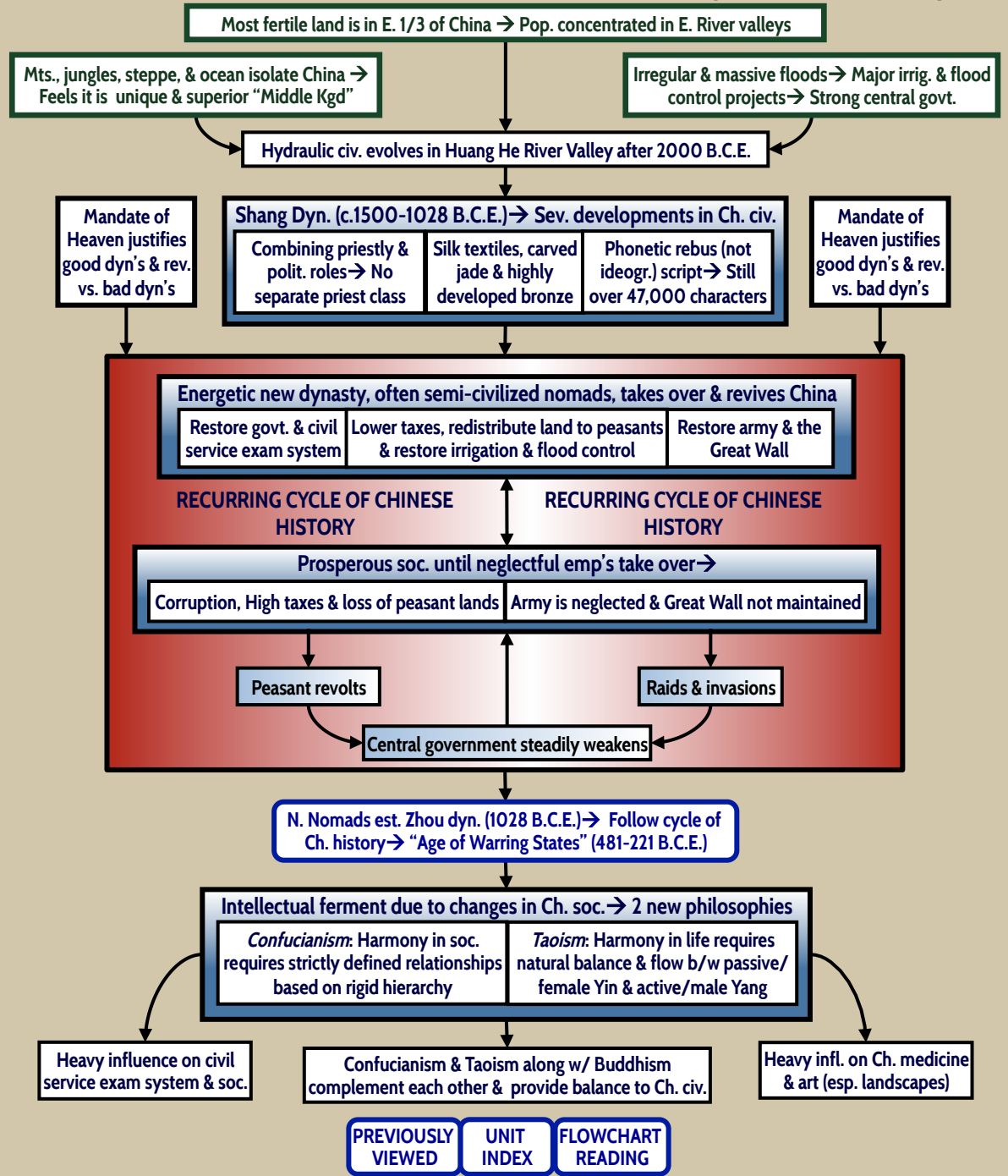
The Chinese Revol.






































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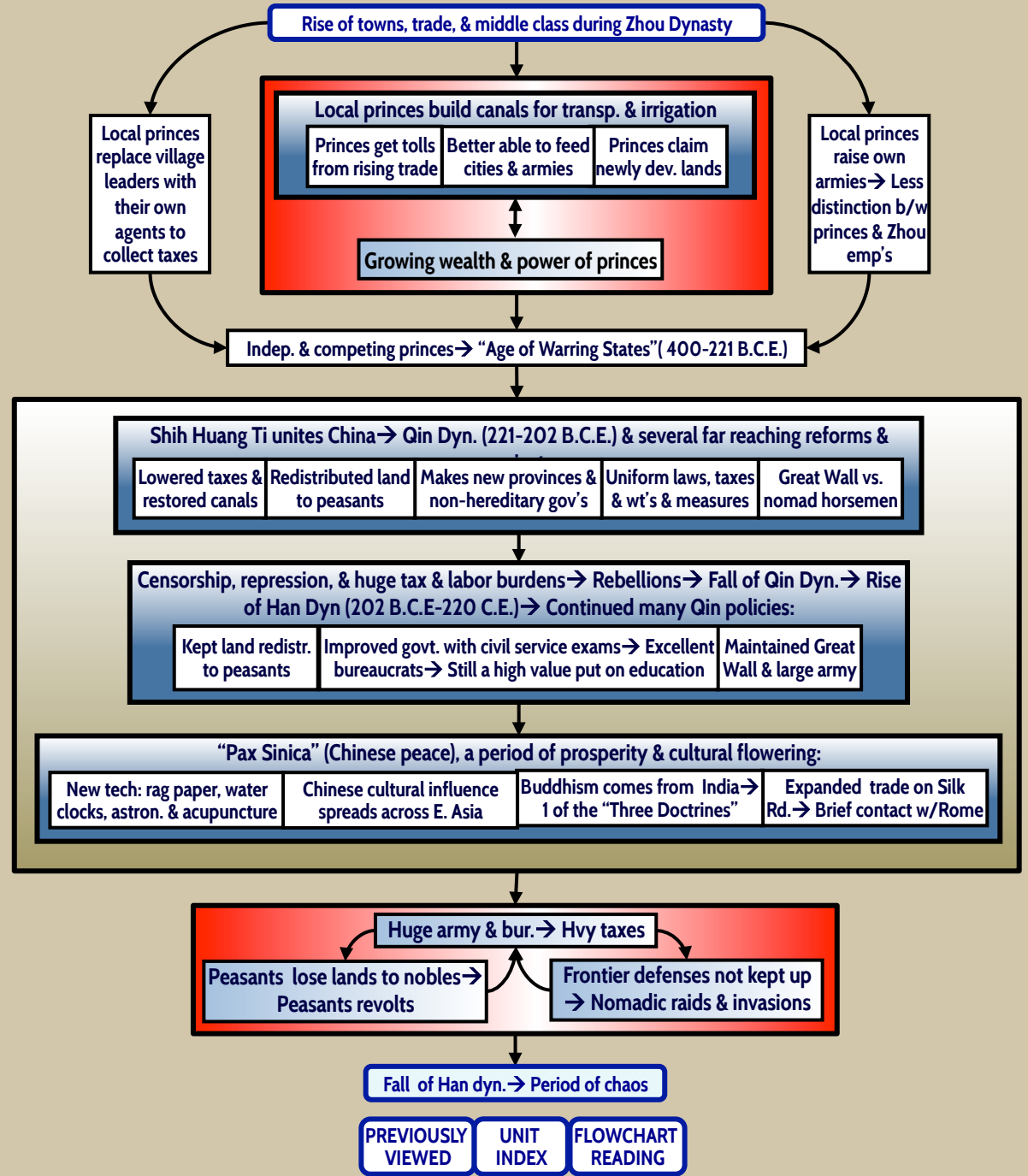
8.1 EARLY CHINA AND THE PATTERN OF ITS HISTORY (c.1500-500 B.C.E.)

c.2200	 Bronze tech	 SHANG DYNASTY
1500-1028	 Oracle bone script	 ZHOU DYN.
c.1200		
1028-256	 Lao Tze	 Confucius
b.604?		
551-479	 Iron plow	 Age of Warring States
c.500		
481-221		
221-206	 Great Wall	 QIN DYN.
220	 Burning of the Classics	
213		
206-220 CE	 Confucianism adopted at court	 HAN DYN.
140	 Wheelbarrow	
c.30 BC (BCE)		
AD (CE)		
68	 1st Buddhist temple in China	
c.100		
c.105	 Paper	 Stern rudder
184	 Yellow Turban Rev	
265-420		 JIN DYNASTY
322	 1st accurate depiction of stirrups	
581-618	 Civil service exams	 SUI DYN.
605	 Grand Canal	
609		
618-907	 TANG DYN.	
c.850	 Gunpowder invented	
960-1279		 SONG DYN.
c.1000	 Navig. compass	
1041	 Bi Sheng's movable type	 Su Song's Mech. clock tower
1094		
1233-79	 Mongols conquer China	 YUAN DYNASTY
1279-1368	 Red Turban Rebellion	
1351-68		 MING DYNASTY
1368-1644	 Zheng He's voyages	
1405-34	 1st contact w/ Portuguese	 QING DYNASTY
1516		
1644-1911		



8.2 IMPERIAL CHINA: THE QIN & HAN DYNASTIES (500 B.C.E.-220 C.E.)

c.2200	 Bronze tech	 SHANG DYNASTY
1500-1028	 Oracle bone script	
c.1200		 ZHOU DYN.
1028-256	 Lao Tze	 Confucius
b.604?		
551-479	 Iron plow	 Age of Warring States
c.500		
481-221		
221-206	 Great Wall	 BURNING OF THE CLASSICS
220		
213		
206-220 CE	 Confucianism adopted at court	 WHEELBARROW
140		 HAN DYN.
c.30 BC (BCE)		
AD (CE)		
68	 1 st Buddhist temple in China	
c.100		
c.105	 Paper	
184	 Stern rudder	
	 Yellow Turban Rev	
265-420		 JIN DYNASTY
322	 1 st accurate depiction of stirrups	
581-618	 Civil service exams	 SUI DYN.
605		 GRAND CANAL
609		
618-907	 TANG DYN.	
c.850	 Gunpowder invented	
960-1279		 SONG DYN.
c.1000	 Navig. compass	
1041	 Bi Sheng's movable type	 Su Song's Mech. clock tower
1094		
1233-79	 Mongols conquer China	
1279-1368		 YUAN DYNASTY
1351-68	 Red Turban Rebellion	
1368-1644		 MING DYNASTY
1405-34	 Zheng He's voyages	
1516	 1 st contact w/ Portuguese	 QING DYNASTY
1644-1911		



8.2A THE PARALLEL IMPACTS OF DISEASE ON CHINA AND ROME

By 500 BCE, older civilizations in Mid East & (probably) India have adapted to "civilized" infectious diseases

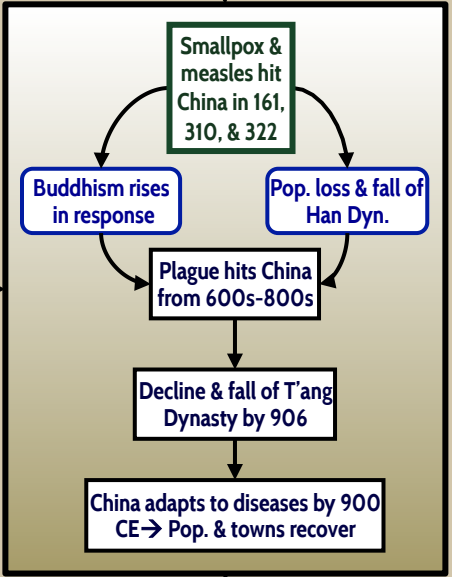
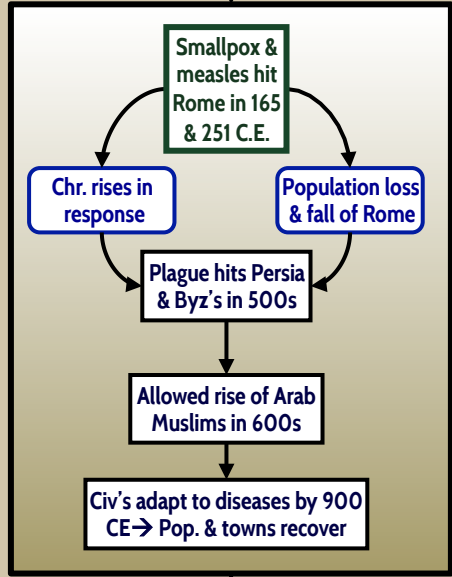
Spread of civiliz. to Mediterranean

Spread of civiliz. to China

"Relatively free of disease because:
 Wheat & barley → Little biological disruption
 Cooler & drier climate
 Little irrigation → No parasitic diseases

In 2nd cent C.E. Rome & China establish trade links across Eurasia & encounter diseases of older civ's

Civ. diseases of Mid-East & India spread to fringe of Eurasia



Bubonic Plague originating in India or Africa

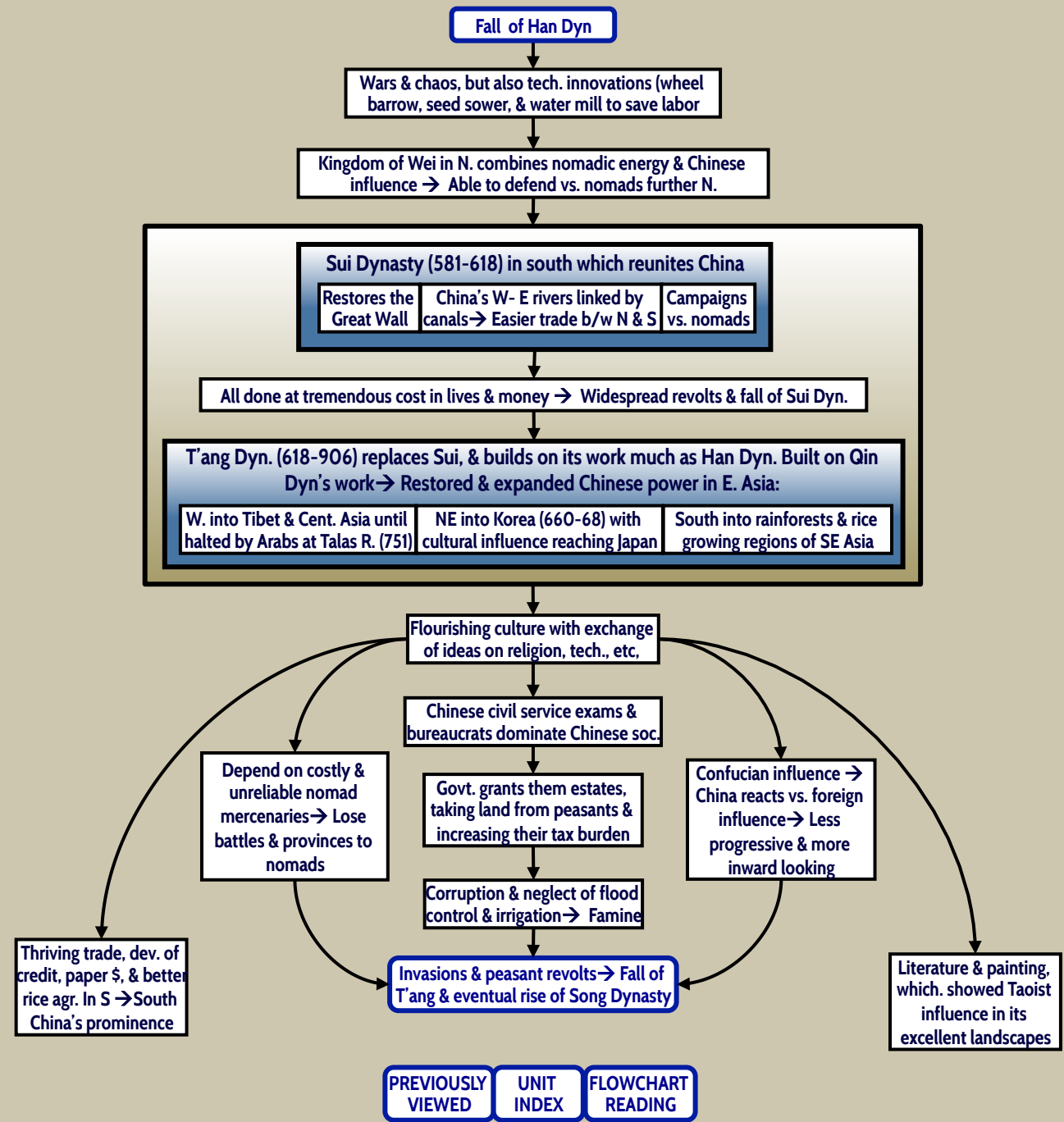
Revived civ's vulnerable to return of plague in 1300s

PREVIOUSLY VIEWED UNIT INDEX FLOWCHART READING

c.2200		BRONZE TECH		SHANG DYN.
1500-1028		ORACLE BONE SCRIPT		ZHOU DYN.
c.1200		LAO TZE		CONFUCIUS
1028-256		IRON PLOW		AGE OF WARRING STATES
b.604?		GREAT WALL		BURNING OF THE CLASSICS
551-479		QIN DYN.		HAN DYN.
c.500		CONFUCIANISM ADOPTED AT COURT		WHEELBARROW
481-221		1ST BUDDHIST TEMPLE IN CHINA		
221-206		PAPER		
220		STERN RUDDER		
213		YELLOW TURBAN REV		
206-220 CE		1ST ACCURATE DEPICTION OF STIRRUPS		JIN DYNASTY
140		CIVIL SERVICE EXAMS		SUI DYN.
c.30		GRAND CANAL		TANG DYN.
BC (BCE)		GUNPOWDER INVENTED		
AD (CE)		SONG DYN.		
68		NAVIG. COMPASS		
c.100		BI SHENG'S MOVABLE TYPE		SU SONG'S MECH. CLOCK TOWER
c.105		MONGOLS CONQUER CHINA		YUAN DYNASTY
184		RED TURBAN REBELLION		MING DYNASTY
265-420		ZHENG HE'S VOYAGES		
322		1ST CONTACT W/ PORTUGUESE		QING DYNASTY
581-618				
605				
609				
618-907				
609				
c.850				
960-1279				
c.1000				
1041				
1094				
1233-79				
1279-1368				
1351-68				
1368-1644				
1405-34				
1516				
1644-1911				

8.3 CHINA AT ITS HEIGHT: THE SUI & T'ANG DYNASTIES (220-906)

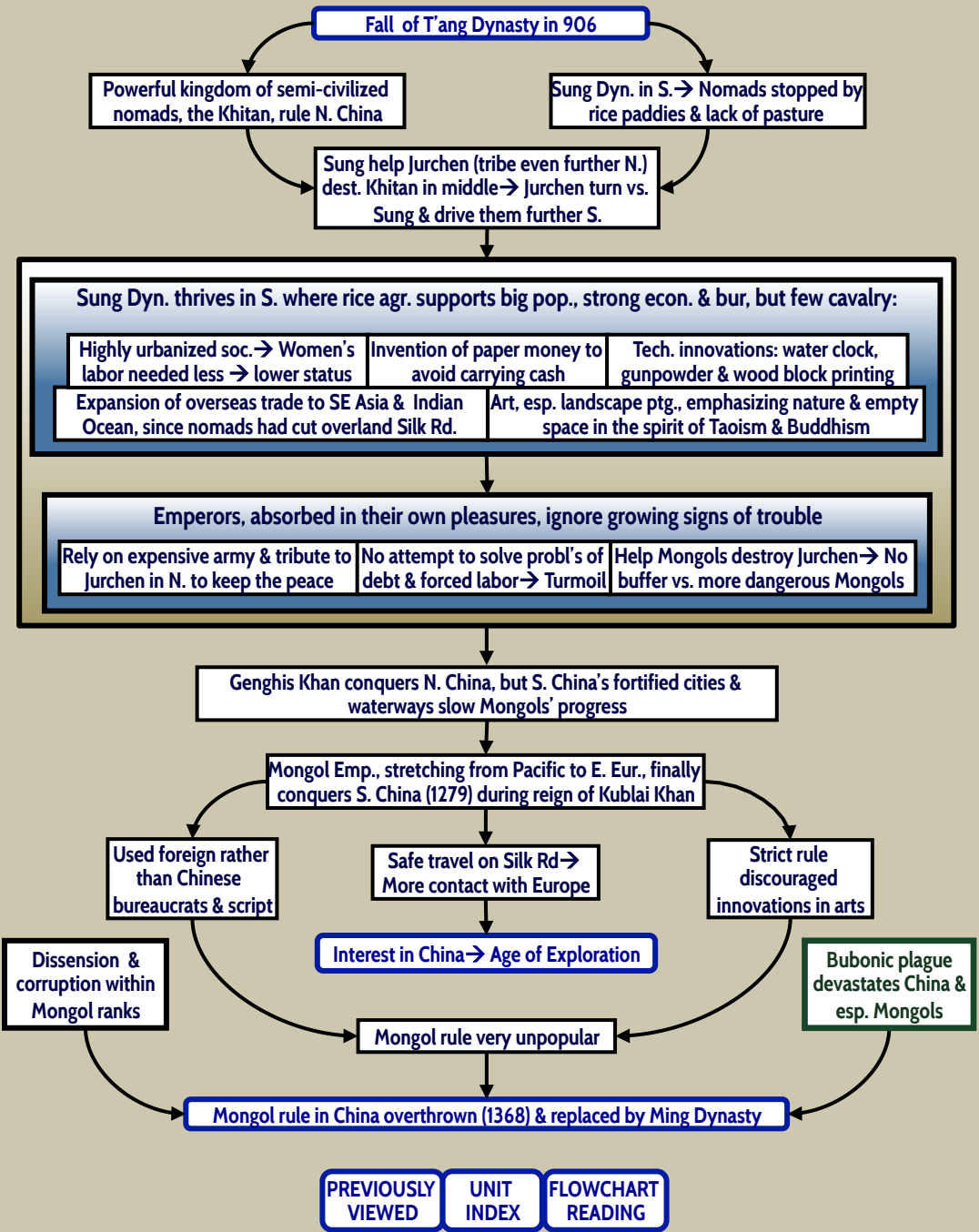
c.2200	Bronze tech	SHANG DYNASTY
1500-1028	Oracle bone script	ZHOU DYN.
c.1200	Lao Tze	
1028-256	Confucius	
b.604?		
551-479	Age of Warring States	
c.500	Iron plow	
481-221		
221-206	Great Wall	QIN DYN.
220	Burning of the Classics	
213		
206-220 CE	Confucianism adopted at court	HAN DYN.
140	Wheelbarrow	
c.30 BC (BCE)		
AD (CE)		
68	1st Buddhist temple in China	
c.100		
c.105	Paper	
184	Yellow Turban Rev	
265-420	1st accurate depiction of stirrups	JIN DYNASTY
322		
581-618	Civil service exams	SUI DYN.
605	Grand Canal	
609		
618-907	Gunpowder invented	TANG DYN.
c.850		
960-1279	Navig. compass	SONG DYN.
c.1000		
1041	Bi Sheng's movable type	
1094	Su Song's Mech. clock tower	
1233-79	Mongols conquer China	
1279-1368	Red Turban Rebellion	YUAN DYNASTY
1351-68		
1368-1644	Zheng He's voyages	MING DYNASTY
1405-34		
1516	1st contact w/ Portuguese	
1644-1911		QING DYNASTY



8.4 THE SUNG DYNASTY (960-1279) & MONGOL RULE (1279-1368)

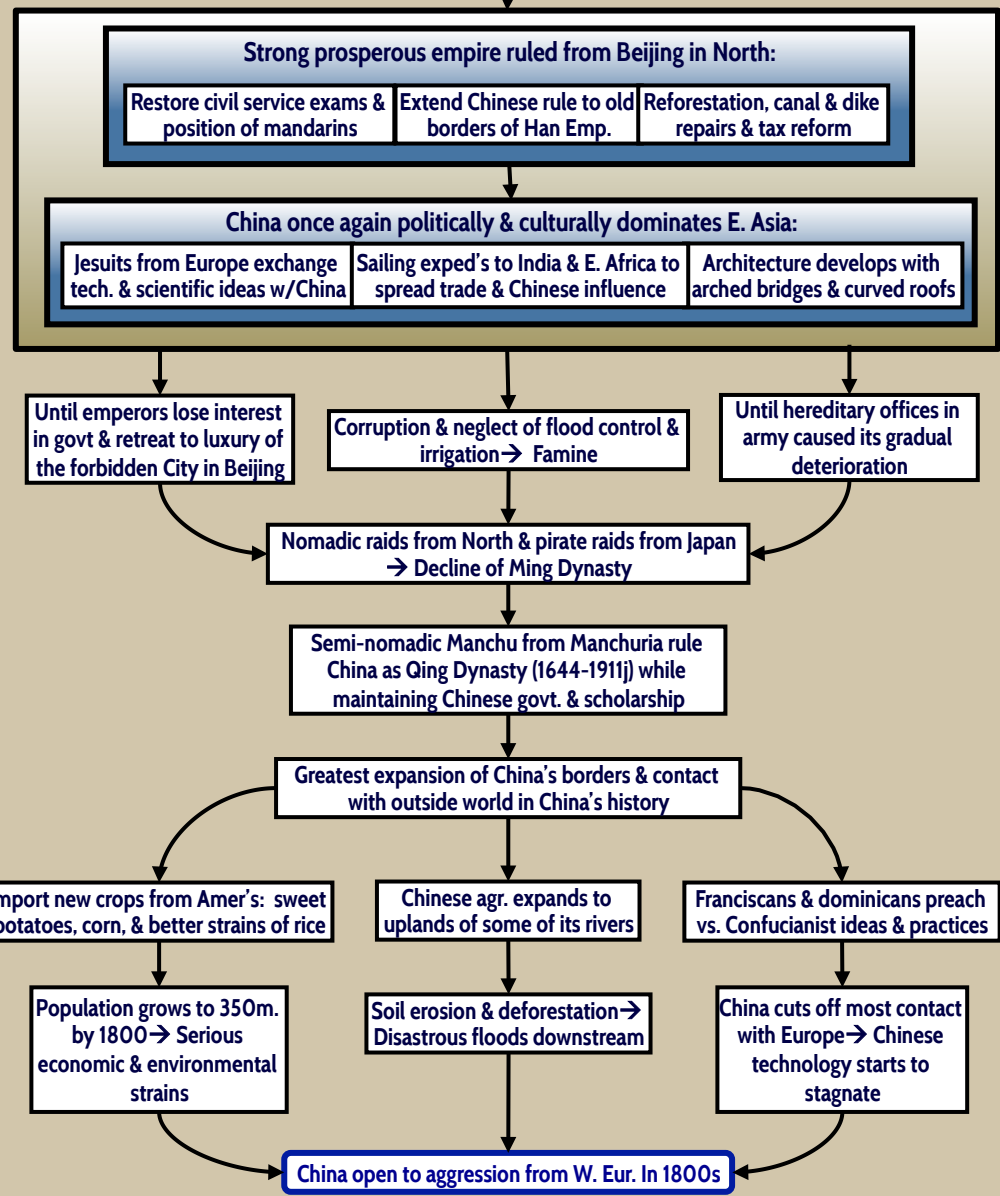
Timeline of Chinese History:

- SHANG DYNASTY (1500-1028):** c.2200 Bronze tech; c.1200 Oracle bone script.
- ZHOU DYN. (1028-256):** b.604? Lao Tze; Confucius.
- Age of Warring States (551-479):** c.500 Iron plow.
- QIN DYN. (481-221):** 221-206 Great Wall; 220 Burning of the Classics.
- HAN DYN. (206-220 CE):** 140 Confucianism adopted at court; c.30 Wheelbarrow.
- AD (CE):** 68 1st Buddhist temple in China.
- JIN DYNASTY (265-420):** c.100 Paper; c.105 Stern rudder; 184 Yellow Turban Rev.
- SUI DYN. (581-618):** 322 1st accurate depiction of stirrups; 605 Civil service exams; 609 Grand Canal.
- TANG DYN. (618-907):** c.850 Gunpowder invented.
- SONG DYN. (960-1279):** c.1000 Navig. compass; 1041 Bi Sheng's movable type; Su Song's Mech. clock tower.
- YUAN DYNASTY (1279-1368):** 1233-79 Mongols conquer China; 1351-68 Red Turban Rebellion.
- MING DYNASTY (1368-1644):** 1405-34 Zheng He's voyages; 1516 1st contact w/ Portuguese.
- QING DYNASTY (1644-1911):**



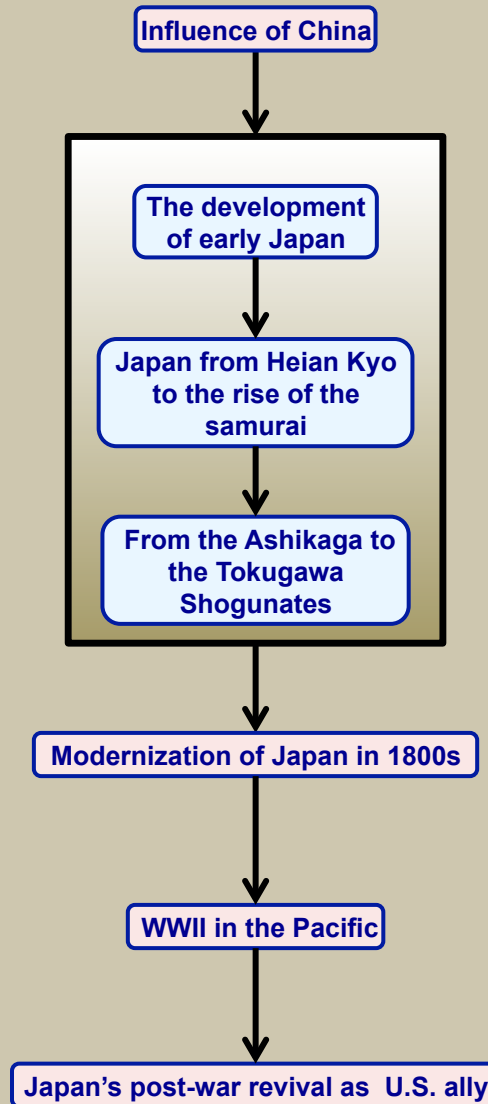
8.5 THE MING & EARLY QING DYNASTIES (1368-c.1800)

Mongols overthrown & replaced by Ming Dyn.




c.2200	Bronze tech	SHANG DYNASTY
1500-1028	Oracle bone script	ZHOU DYN.
c.1200	Lao Tze	
1028-256	Confucius	
b.604?		
551-479	Age of Warring States	
c.500	Iron plow	
481-221		
221-206	Great Wall	QIN DYN.
220	Burning of the Classics	
213		
206-220 CE	Confucianism adopted at court	HAN DYN.
140	Wheelbarrow	
c.30		
BC (BCE)		
AD (CE)		
68	1st Buddhist temple in China	
c.100		
c.105	Paper	
184	Yellow Turban Rev	
265-420	1st accurate depiction of stirrups	JIN DYNASTY
322		
581-618	Civil service exams	SUI DYN.
605	Grand Canal	
609		
618-907	Gunpowder invented	TANG DYN.
c.850		
960-1279	Navig. compass	SONG DYN.
c.1000		
1041	Bi Sheng's movable type	
1094	Su Song's Mech. clock tower	
1233-79	Mongols conquer China	
1279-1368	Red Turban Rebellion	YUAN DYNASTY
1351-68		
1368-1644	Zheng He's voyages	MING DYNASTY
1405-34		
1516	1st contact w/ Portuguese	
1644-1911		QING DYNASTY

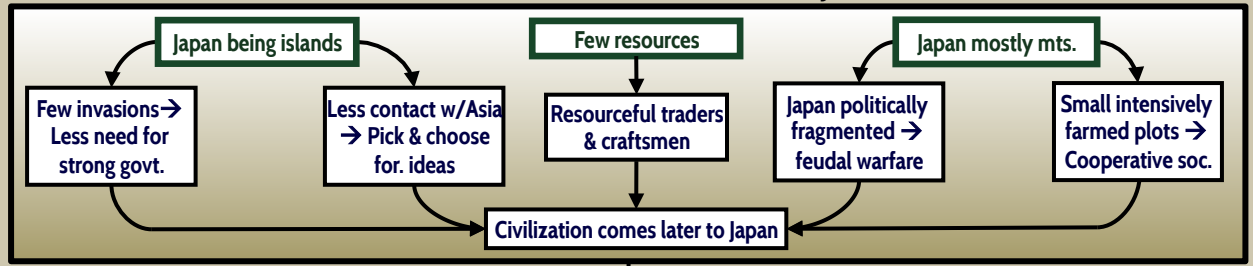
Unit 9. Classical Japan



The Godzilla
History
of Japan

 = Related link outside the unit

9.1 THE DEVELOPMENT OF EARLY JAPAN



Yayoi Culture (c.300 B.C.E.) importing tech. from Asia

Yamato Culture (c.300 C.E.) from Asia with horses & better iron tech.:
Shintoism which reveres cleanliness, nature, & head of Yamato clan as its religious leader | Clans (Uji) who gradually absorb each other through marriage, relig. ties & diplomacy as well as war

Yamato Clan unifies Most of Japan by 400 C.E. -> Japan more open to Chinese influence:
 Confucianism -> Respect authority & strict hierarchy | Buddh. scriptures -> Use writing to keep govt. records

Growing centralization of the state despite resistance

Taika Reforms (645 C.E.) to adapt Chinese govt. techniques to Japan:

Permanent capital at Kyoto	Turn hereditary nobles into appointed officials	Census & redistribution of land to peasants	Systematic taxation
----------------------------	---	---	---------------------

Taiho Law Code (702), based on Chinese code, organized govt. w/strong emphasis on court ceremony & ritual rather than military strength

Increased power of emperor & court, but with Japanese modifications:

Omission of Mandate of Heaven	Officials & monasteries tax exempt	Birth still basis for promotion
-------------------------------	------------------------------------	---------------------------------

Even bad emp's ran little risk of revolution | Narrower tax base & greater burden on the poor | Hereditary nobles kept status in Japan

Still a step forward in the development of Japanese state

PREVIOUSLY VIEWED | UNIT INDEX | FLOWCHART READING

660-585 BC (BCE) Yayoi Culture -> Rice agr, iron, weaving Trad. dates for reign of Jimmu Tenno. Japan's 1st emp.,

250 BC-300 CE Yamato Culture -> Horseback riding Buddhism introduced from Korea

c.300-710 AD (CE) Emperor Kotoku's Taika reforms to centralize Japan like China

552 Nara serves as Japan's 1st perm. capital

645 HEIAN ERA

710-94 Tale of Genji Genpei War Tea introduced to Japan

794-1185 815 c.1000

1180-85 KAMAKURA SHOGUNATE

1185-1333 Zen introduced to Japan Mongol invasions Emperor Go-Daigo's revolt

1191 1274 & 1281

1333-36 ASHIKAGA SHOGUNATE

1338-1573 Warring States (Sengoku) Period Ikebana (Japanese flower arranging)

1465-1573 Mid 1400s

1522-1591 Sen no Rikyū, developer of Tea Ceremony

1573-1582 Oda Nobunaga starts unification

1582-98 Hideyoshi Toyotomi unifies rest of Japan

1598-1603 Tokugawa Ieyasu establishes stable shogunate

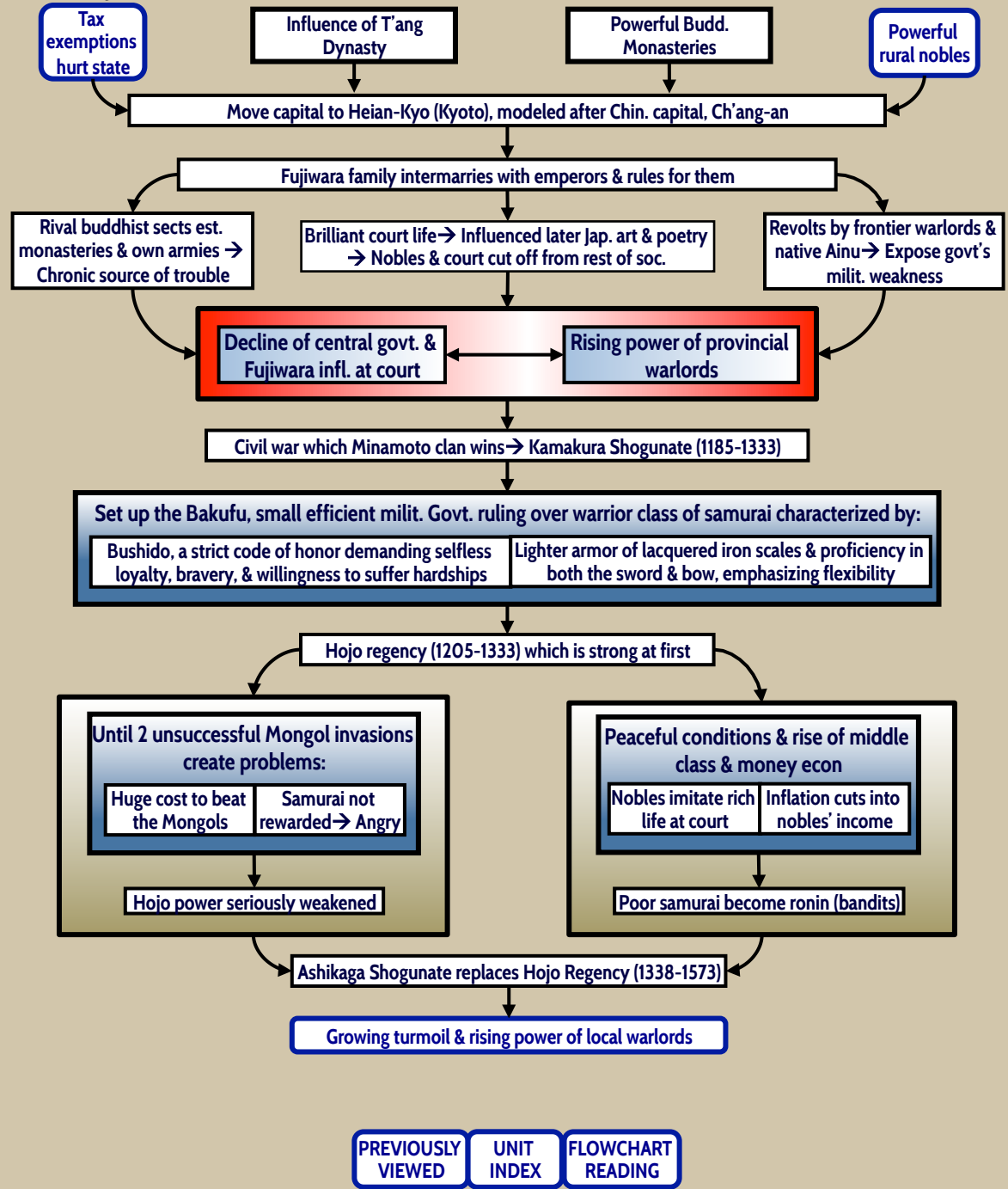
1603-1868 TOKUGAWA SHOGUNATE Hokusai

1760-1849 Japan forced to open to the world

1854 MEIJI PERIOD OF MODERNIZATION

1868-1912

9.2 JAPAN FROM THE HEIANKYO PERIOD TO THE RISE OF THE SAMURAI



660-585
250 BC-300 CE
BC (BCE)
AD (CE)
c.300-710
552
645
710-94
794-1185
815
c.1000
1180-85
1185-1333
1191
1274 & 1281
1333-36
1338-1573
1465-1573
Mid 1400s
1522-1591
1573-1582
1582-98
1598-1603
1603-1868
1760-1849
1854
1868-1912

Yayoi Culture -> Rice agr, iron, weaving

Trad. dates for reign of Jimmu Tenno. Japan's 1st emp.,

Yamato Culture -> Horseback riding

Buddhism introduced from Korea

Emperor Kotoku's Taika reforms to centralize Japan like China

Nara serves as Japan's 1st perm. capital

HEIAN ERA

Tale of Genji

Genpei War

Tea introduced to Japan

KAMAKURA SHOGUNATE

Mongol invasions

Emperor Go-Daigo's revolt

ASHIKAGA SHOGUNATE

Warring States (Sengoku) Period

Sen no Rikyū, developer of Tea Ceremony

Oda Nobunaga starts unification

Hideyoshi Toyotomi unifies rest of Japan

Tokugawa Ieyasu establishes stable shogunate

TOKUGAWA SHOGUNATE

Hokusai

Japan forced to open to the world

MEIJI PERIOD OF MODERNIZATION

9.3 JAPAN FROM THE ASHIKAGA TO TOKUGAWA SHOGUNATES (1338-1639)

660-585
250 BC-300 CE
BC (BCE)
AD (CE)
c.300-710
552
645
710-94
794-1185
815
c.1000
1180-85
1185-1333
1191
1274 & 1281
1333-36
1338-1573
1465-1573
Mid 1400s
1522-1591
1573-1582
1582-98
1598-1603
1603-1868
1760-1849
1854
1868-1912

Yayoi Culture -> Rice agr, iron, weaving
Trad. dates for reign of Jimmu Tenno. Japan's 1st emp.,

Yamato Culture -> Horseback riding
Buddhism introduced from Korea

Emperor Kotoku's Taika reforms to centralize Japan like China
Nara serves as Japan's 1st perm. capital

HEIAN ERA
Tale of Genji
Genpei War
Tea introduced to Japan

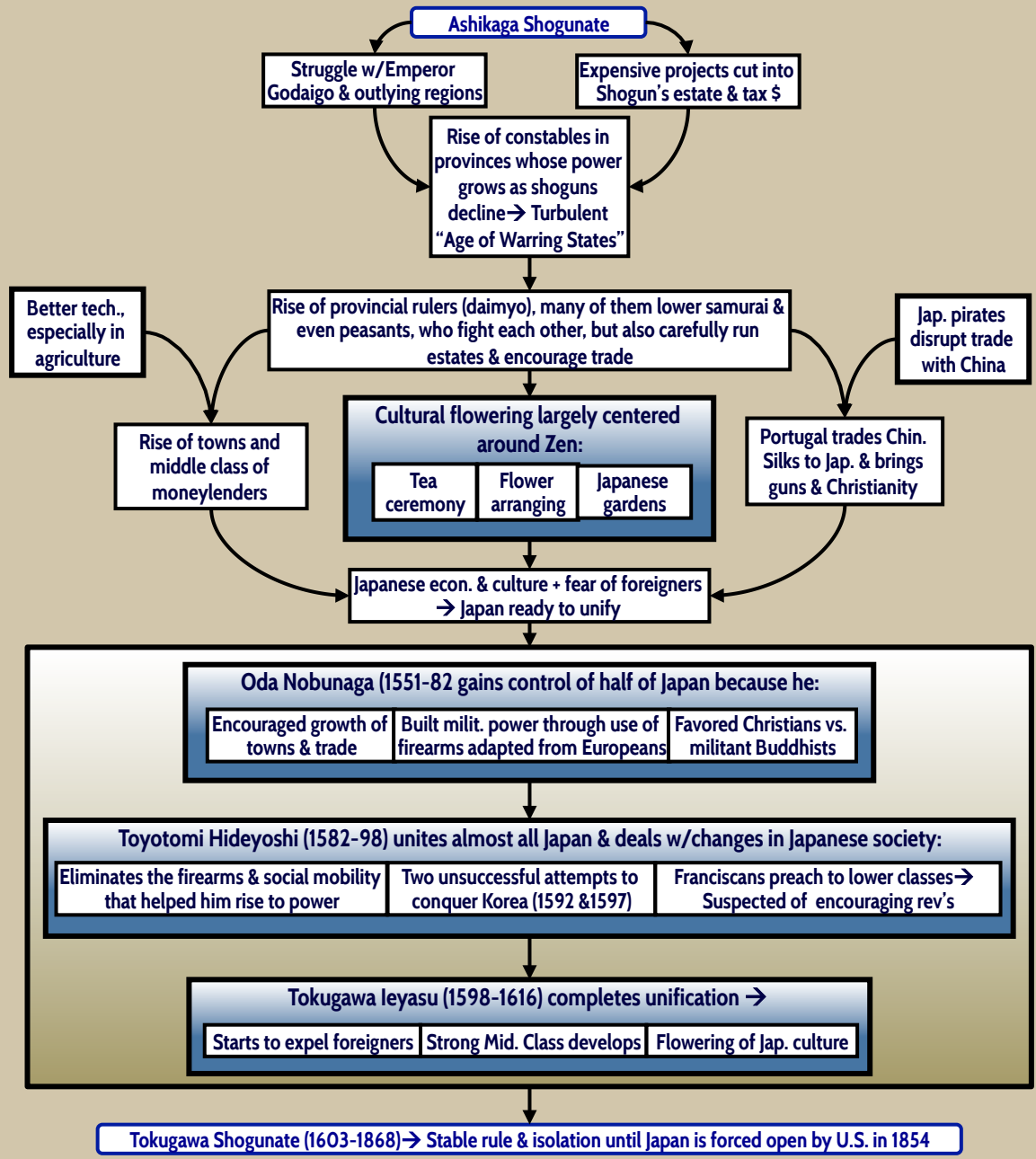
KAMAKURA SHOGUNATE
Mongol invasions
Emperor Go-Daigo's revolt

ASHIKAGA SHOGUNATE
Warring States (Sengoku) Period
Ikebana (Japanese flower arranging)
Sen no Rikyū, developer of Tea Ceremony

Oda Nobunaga starts unification
Hideyoshi Toyotomi unifies rest of Japan
Tokugawa Ieyasu establishes stable shogunate

TOKUGAWA SHOGUNATE
Hokusai
Japan forced to open to the world

MEIJI PERIOD OF MODERNIZATION



9.4 The Secret History of Monsters (4200 BCE-Present)

660-585 BC (BCE) Yayoi Culture -> Rice agr, iron, weaving. Trad. dates for reign of Jimmu Tenno, Japan's 1st emp.,

250 BC-300 CE Yayoi Culture -> Rice agr, iron, weaving.

AD (CE) Yamato Culture -> Horseback riding. Buddhism introduced from Korea.

c.300-710 Yamato Culture -> Horseback riding.

552 Buddhism introduced from Korea.

645 Emperor Kotoku's Taika reforms to centralize Japan like China.

710-94 Nara serves as Japan's 1st perm. capital.

794-1185 HEIAN ERA.

815 Tale of Genji. Tea introduced to Japan.

c.1000 Tale of Genji. Tea introduced to Japan.

1180-85 Genpei War.

1185-1333 KAMAKURA SHOGUNATE.

1191 Kamakura.

1274 & 1281 Mongol invasions. Emperor Go-Daigo's revolt.

1333-36 Mongol invasions.

1338-1573 Warring States (Sengoku) Period. ASHIKAGA SHOGUNATE.

1465-1573 Ikebana (Japanese flower arranging).

Mid 1400s Ikebana (Japanese flower arranging).

1522-1591 Sen no Rikyū, developer of Tea Ceremony.

1573-1582 Oda Nobunaga starts unification.

1582-98 Hideyoshi Toyotomi unifies rest of Japan.

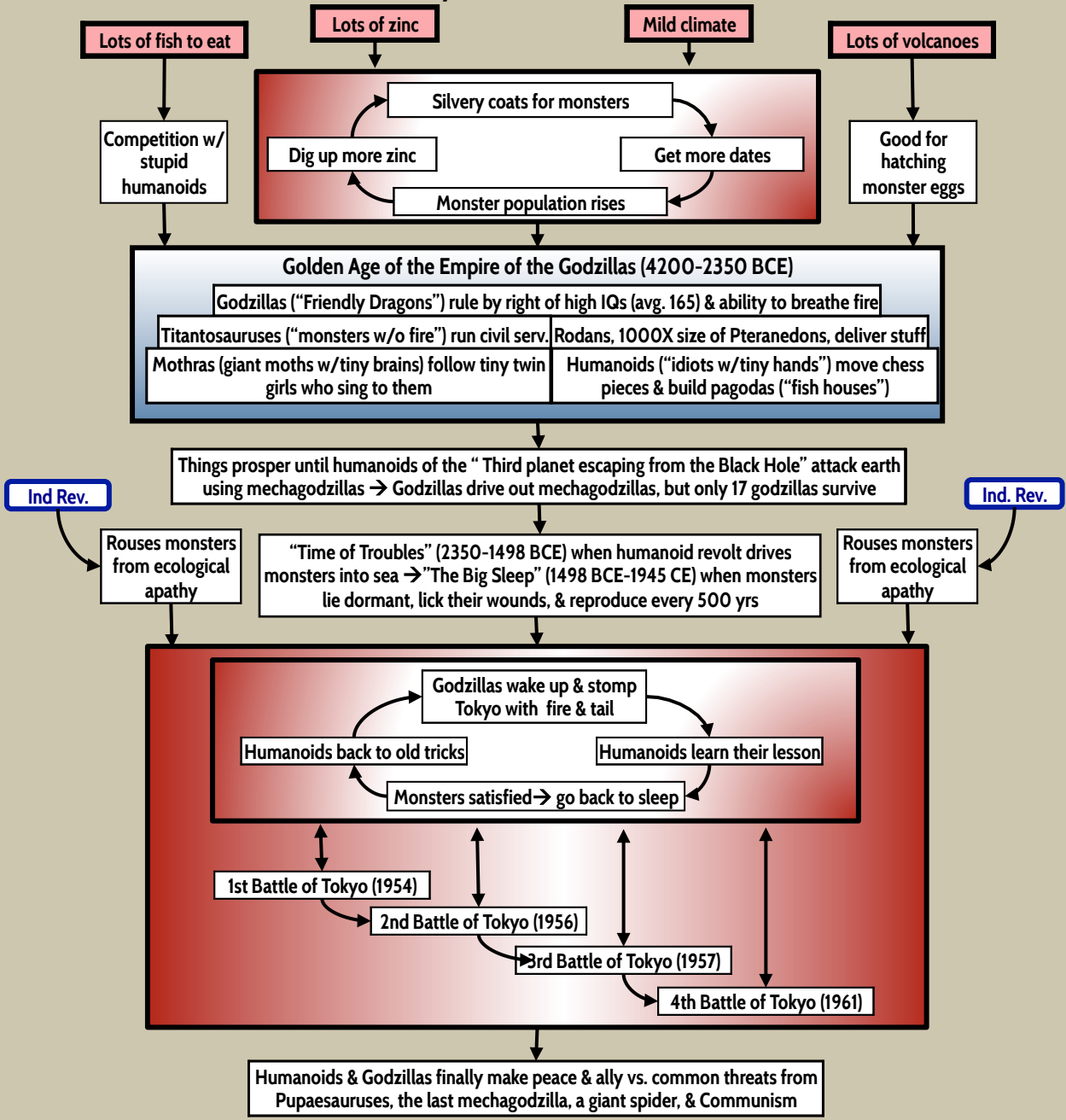
1598-1603 Tokugawa Ieyasu establishes stable shogunate.

1603-1868 TOKUGAWA SHOGUNATE. Hokusai.

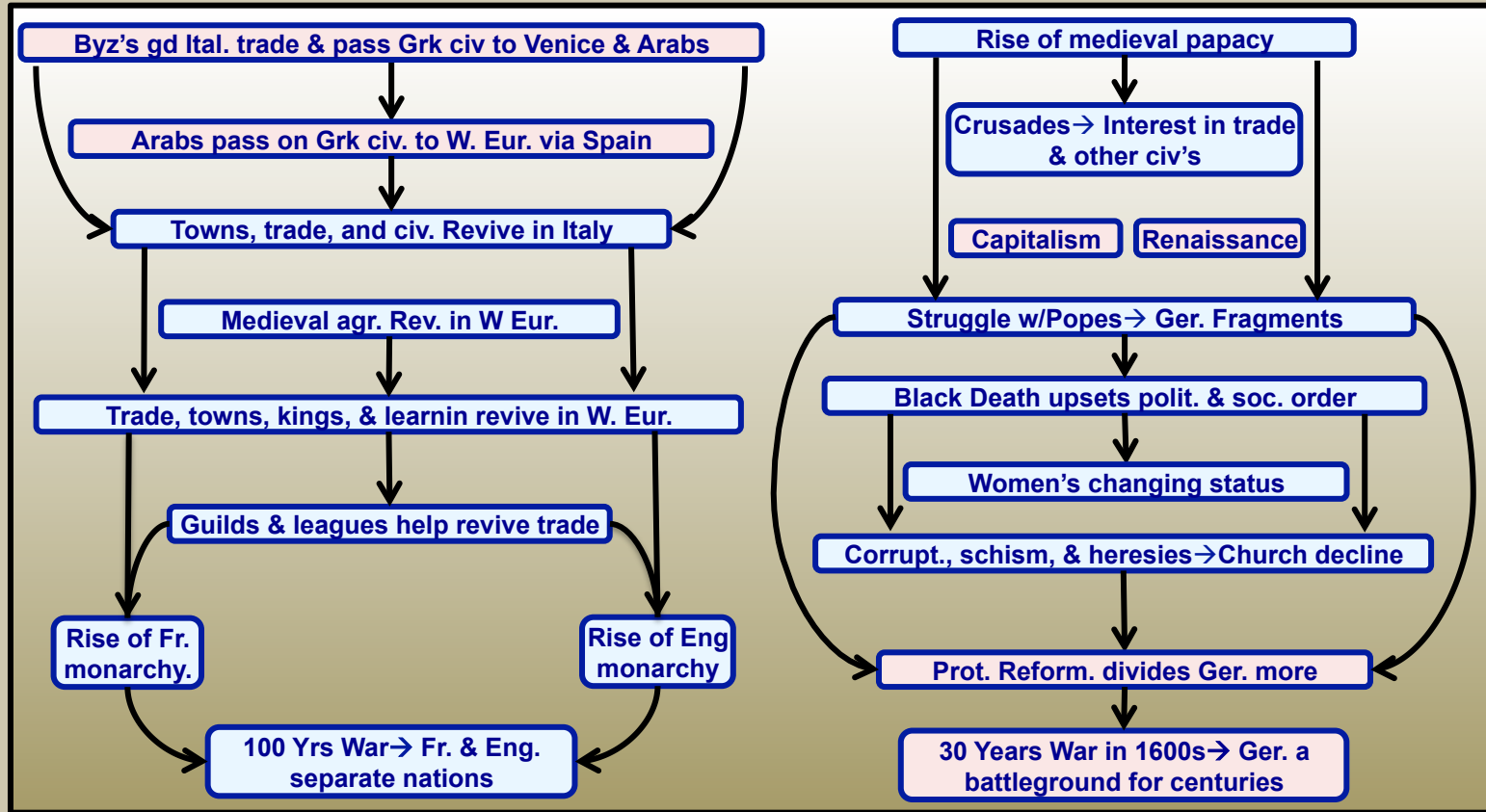
1760-1849 Hokusai.

1854 Japan forced to open to the world.

1868-1912 MEIJI PERIOD OF MODERNIZATION.



Unit 10. The High & Later Middle Ages



= Related link outside the unit

MEDIEVAL WARM PERIOD

c.950-1250

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr.

1079-1142 Peter Abelard

1075-1122 Investiture struggle

c.1100 Crusades

1095-1270 Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities

1130 Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch.

1176 Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1198-1216 Innocent III -> Height of Church power

1214 Battle of Bouvines

1215 Magna Charta

1181-1226 St. Francis of Assisi St. Thomas Aquinas

1225-74

1202 Hindu Arabic numerals introd. into Eur. Struggle b/w popes & Ger. Emp. Frederick II

1228-50

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308=21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

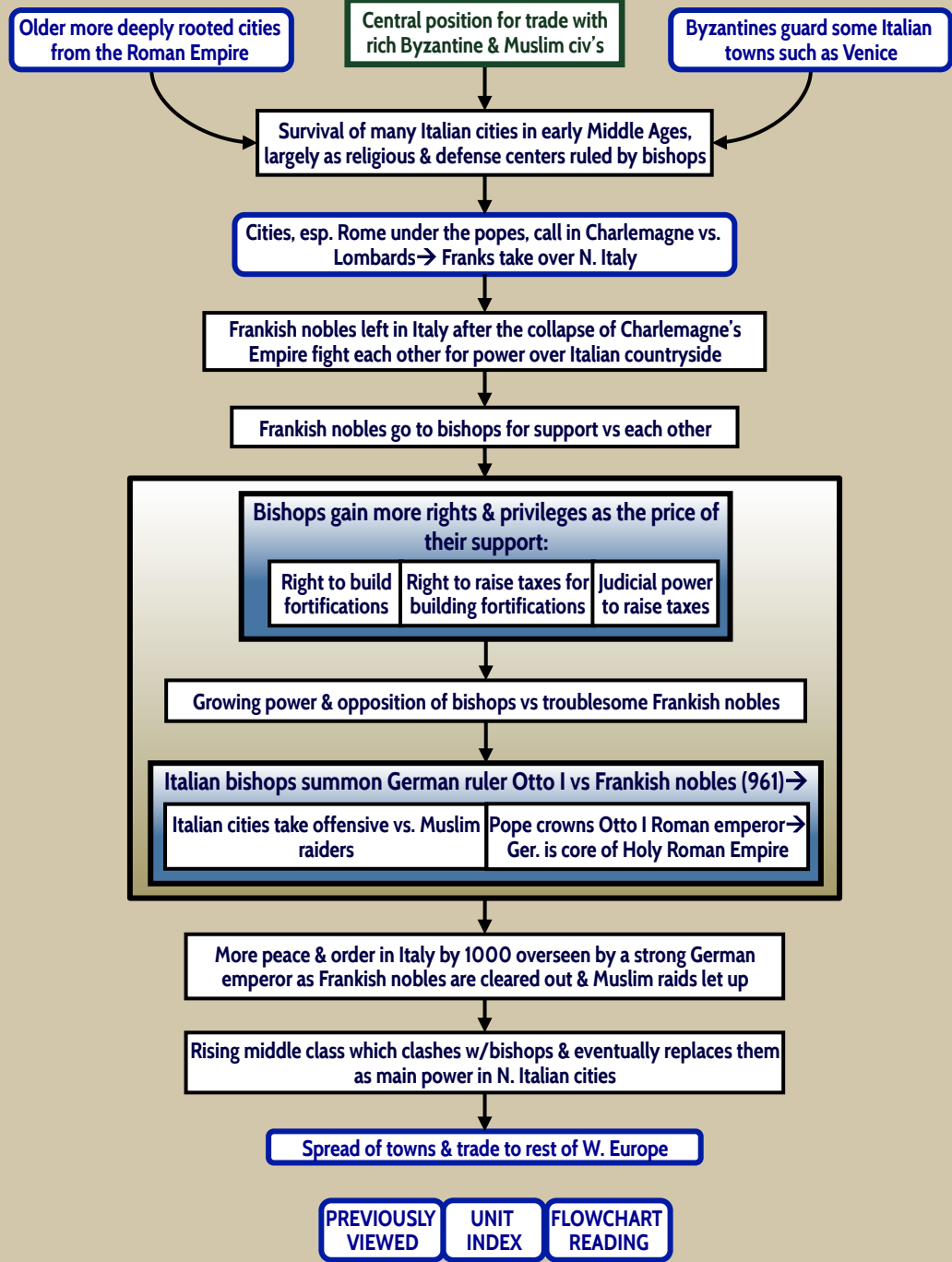
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.1 THE RISE OF THE ITALIAN CITY-STATES (c.800-1100)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100 Crusades

1095-1270 Courtly love movement

c.1104 Venice Arsenal -> Assembly. line prod. of ships

1100s Rise of universities

1130 Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power

1214 Battle of Bouvines

1215 Magna Charta

1181-1226 St. Thomas Aquinas

1225-74 St. Francis of Assisi

1202 Hindu ० १ २ ३ ४ ५ ६ ७ ८ ९ Arabic numerals introd. into Eur. Medieval ० १ २ ३ ४ ५ ६ ७ ८ ९

1228-50 Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308=21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

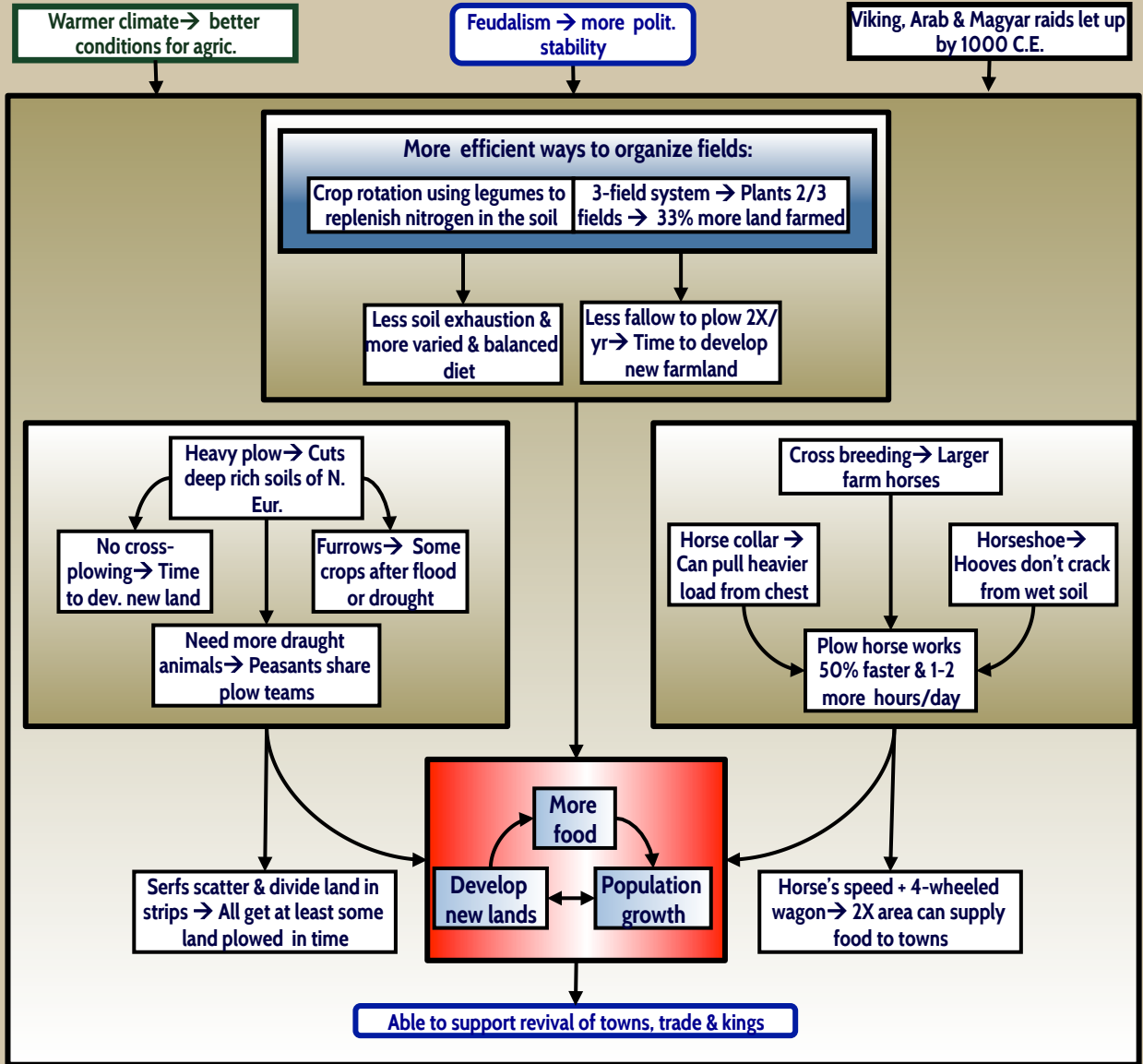
1378-1415 Hussite Wars

1419-34 Great Schism

1429 Joan of Arc

1461-83 Louis XI

10.2 THE MEDIEVAL AGRICULTURAL REVOLUTION AND ITS IMPACT



10.3 THE RISE OF TOWNS IN WESTERN EUROPE (c.1100-1300)

MEDIEVAL WARM PERIOD

c.950-1250

1054 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1059 College of Cardinals

1066 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr.

1079-1142 Peter Abelard

1075-1122 Investiture struggle

c.1100 Crusades

1095-1270 Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities

1130 Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch.

1176 Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1198-1216 Innocent III -> Height of Church power

1214 Battle of Bouvines

1215 Magna Charta

1181-1226 St. Thomas Aquinas

1225-74 St. Francis of Assisi

1202 Hindu 0 1 2 3 4 5 6 7 8 9 Arabic numerals introd. into Eur. Medieval 0 1 2 3 4 5 6 7 8 9

1228-50 Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7 Great Famine

1309-76 Babylonian Captivity of Church

1302-1526 Dante's Divine Comedy

1308=21 Peasant & urban revolts

1337-1453 Hundred Years War

1347-50 Black Death

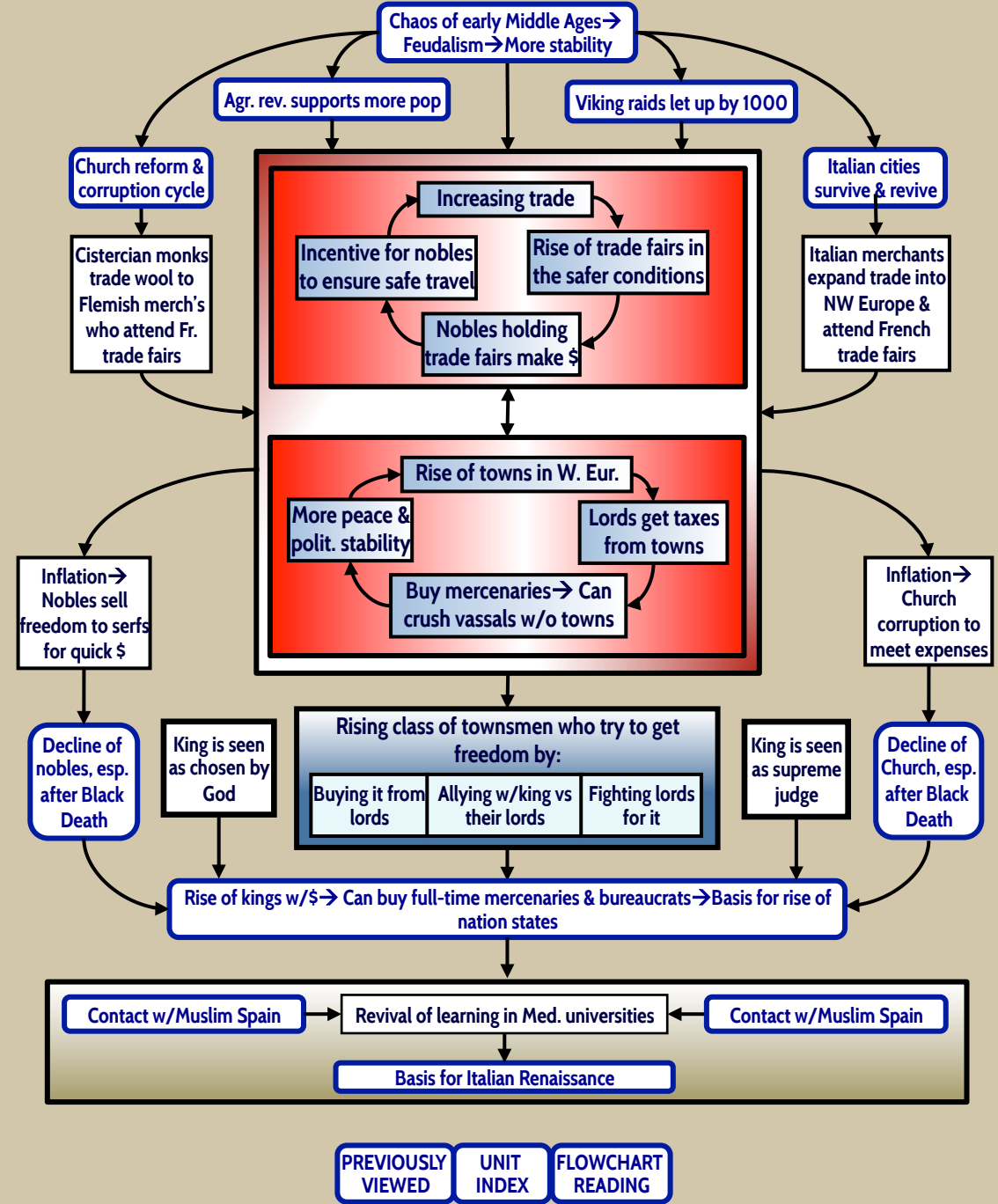
1356 Golden Bull -> Elective mon. in Ger.

1378-1415 Hussite Wars

1419-34 Joan of Arc

1429 Great Schism

1461-83 Louis XI



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059 College of Cardinals

1066 Normans conquer Eng. Start adapting waterwheel to other indus. uses

c.1080

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100

1095-1270 Crusades Courtly love movement

c.1104

1100s Venice Arsenal -> Assembly. line prod. of ships

1130 Rise of universities Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power Battle of Bouvines

1214

1215 Magna Charta St. Thomas Aquinas

1181-1226 St. Francis of Assisi

1225-74

1202 Hindu ० १ २ ३ ४ ५ ६ ७ ८ ९ Arabic numerals introd. into Eur. Medieval ० १ २ ३ ४ ५ ६ ७ ८ ९

1228-50 Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526

1308=21 Dante's Divine Comedy Peasant & urban revolts

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

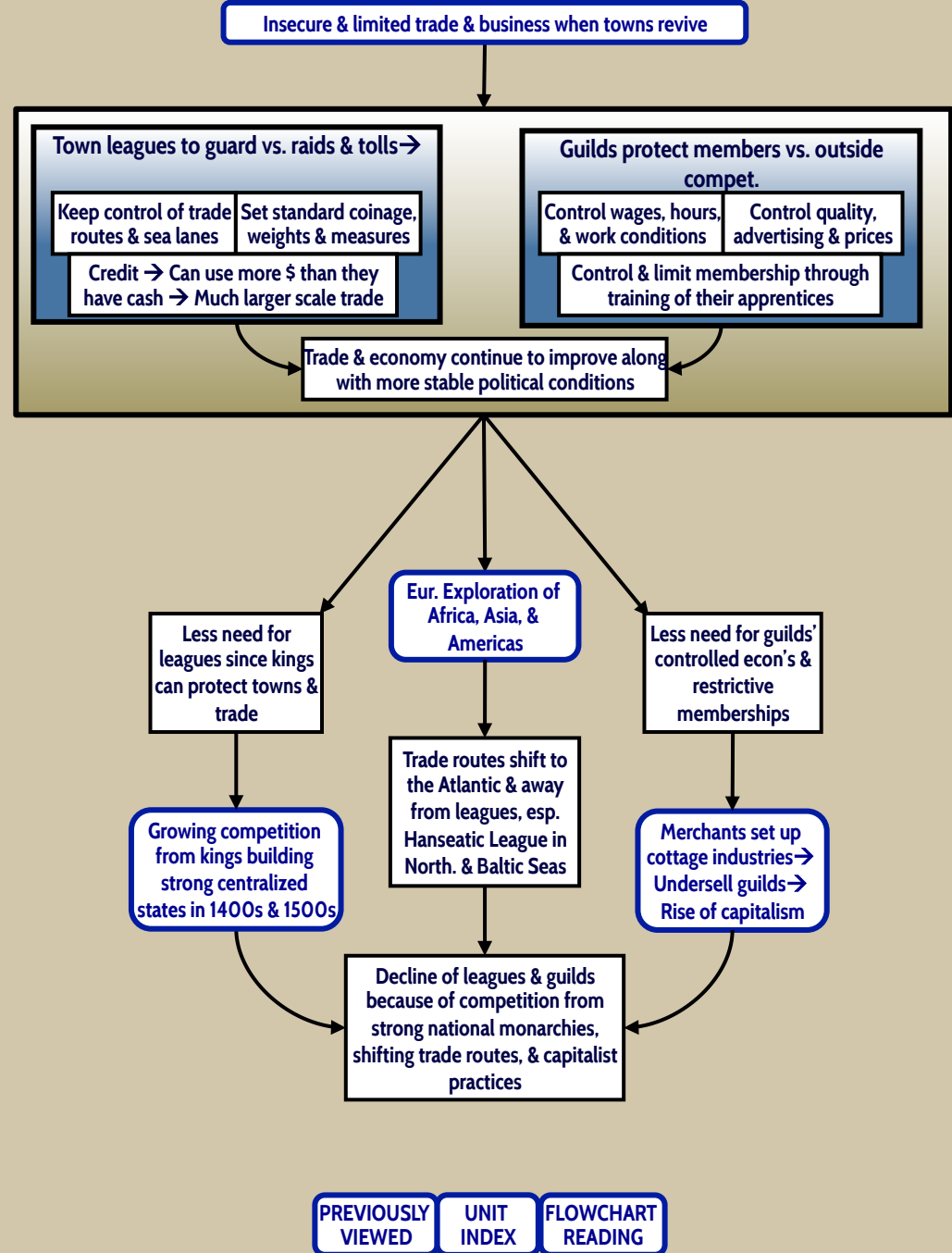
1378-1415 Hussite Wars Great Schism

1419-34

1429 Joan of Arc Louis XI

1461-83

10.4 THE RISE OF GUILDS AND LEAGUES



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr.

1079-1142 Peter Abelard

1075-1122 Investiture struggle

c.1100 Crusades

1095-1270 Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities

1130 Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch.

1176 Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1198-1216 Innocent III -> Height of Church power

1214 Battle of Bouvines

1215 Magna Charta

1181-1226 St. Francis of Assisi St. Thomas Aquinas

1225-74

1202 Hindu Arabic Medieval

1228-50 Arabic numerals introd. into Eur. Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308=21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

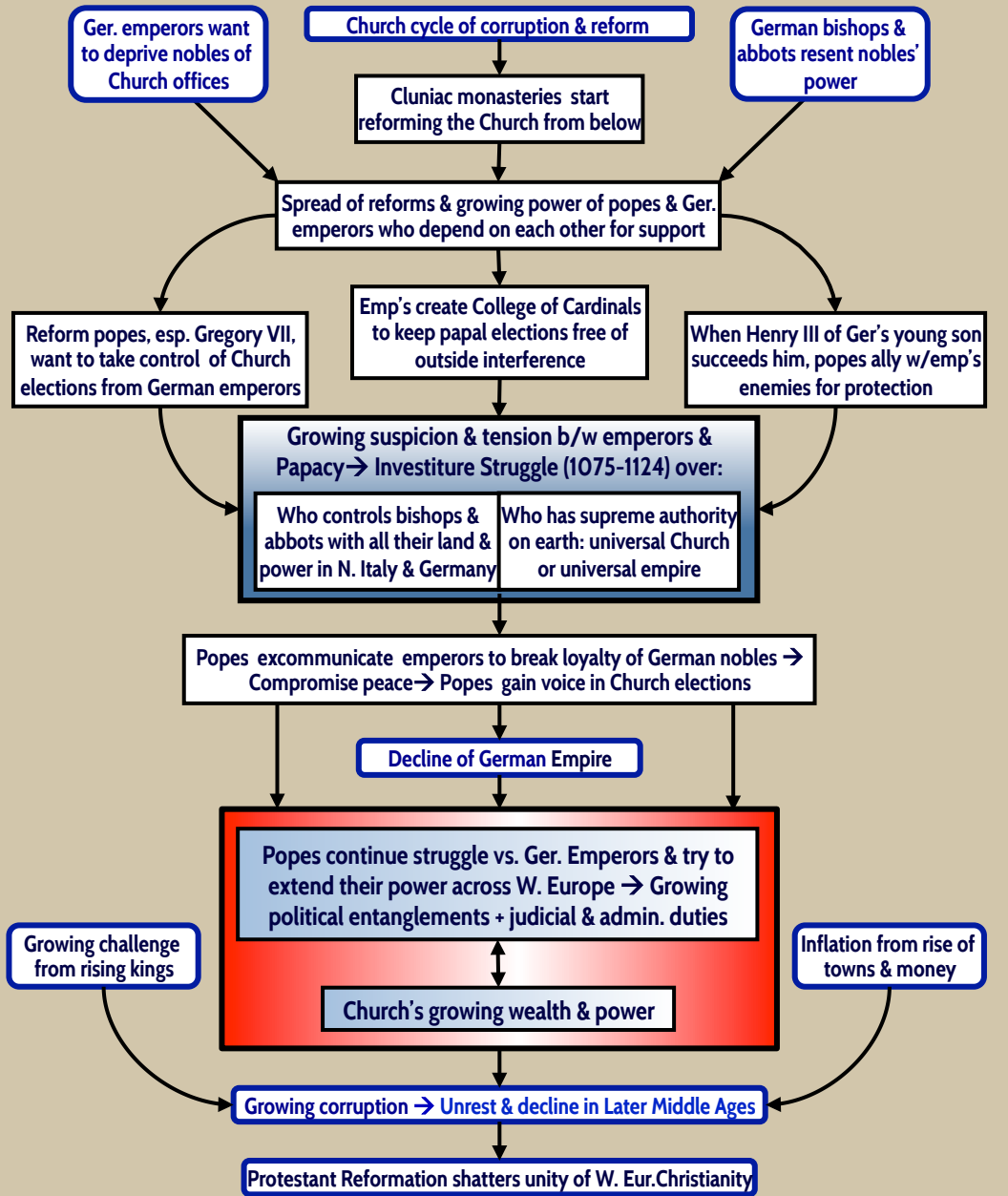
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.5 THE RISE OF THE PAPACY IN THE HIGH MIDDLE AGES (c.900-1300)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100

1095-1270 Crusades

c.1104 Venice Arsenal -> Assembly, line prod. of ships

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1130 Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power

1214 Battle of Bouvines

1215

1181-1226 Magna Charta St. Thomas Aquinas

1225-74 St. Francis of Assisi

1202 Hindu ० १ २ ३ ४ ५ ६ ७ ८ ९ Arabic numerals introd. into Eur. Medieval 0 1 2 3 4 5 6 7 8 9

1228-50 Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308=21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

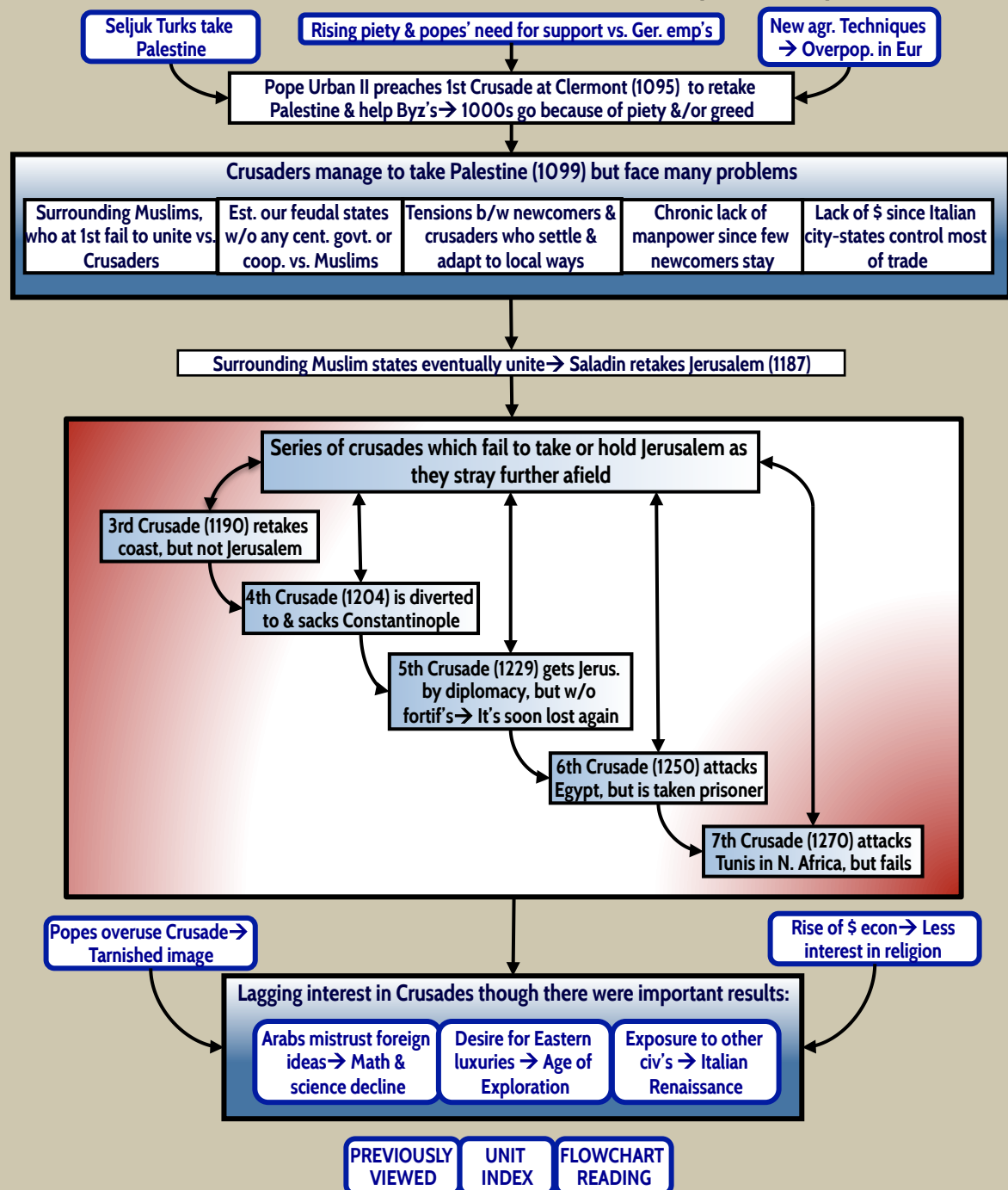
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.6 THE CRUSADES AND THEIR IMPACT (1095-1291)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059 College of Cardinals

1066 Normans conquer Eng. Start adapting waterwheel to other indus. uses

c.1080

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142 Investiture struggle

1075-1122 Crusades

c.1100 Venice Arsenal -> Assembly. line prod. of ships

1095-1270 Courtly love movement

c.1104 Rise of universities

1100s Norman ruler Roger II crowned King of Sicily

1130 Start of Gothic arch.

1135 Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176 Innocent III -> Height of Church power

1198-1216 Battle of Bouvines

1214 Magna Charta

1215 St. Francis of Assisi

1181-1226 St. Thomas Aquinas

1225-74 Hindu 0 1 2 3 4 5 6 7 8 9 Arabic numerals introd. into Eur.

1202 Medieval 0 1 2 3 4 5 6 7 8 9

1228-50 Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7 Babylonian Captivity of Church

1309-76 Great Famine

1302-1526 Dante's Divine Comedy

1308-21 Peasant & urban revolts

1337-1453 Hundred Years War

1347-50 Black Death

Golden Bull -> Elective mon. in Ger.

1356

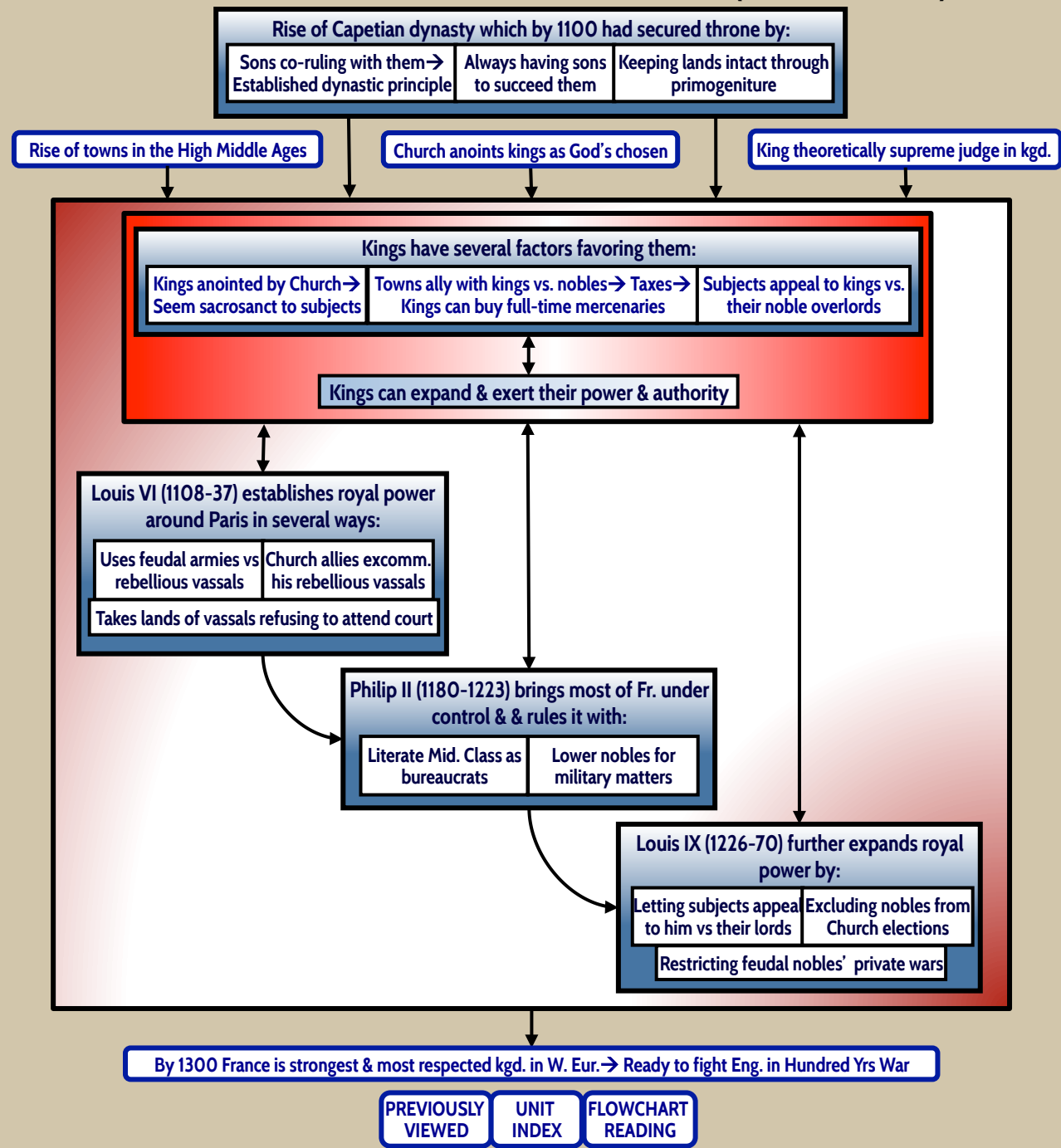
1378-1415 Hussite Wars

1419-34 Joan of Arc

1429 Great Schism

1461-83 Louis XI

10.7 THE RISE OF THE FRENCH FEUDAL MONARCHY (c.1100-1300 C.E.)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100

1095-1270 Crusades Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities Norman ruler Roger II crowned King of Sicily

1130

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power Battle of Bouvines

1214

1215 Magna Charta St. Thomas Aquinas

1181-1226 St. Francis of Assisi

1225-74

1202 Hindu Arabic Medieval Arabic numerals introd. into Eur. Struggle b/w popes & Ger. Emp. Frederick II

1228-50

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526

1308-21 Dante's Divine Comedy Peasant & urban revolts

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

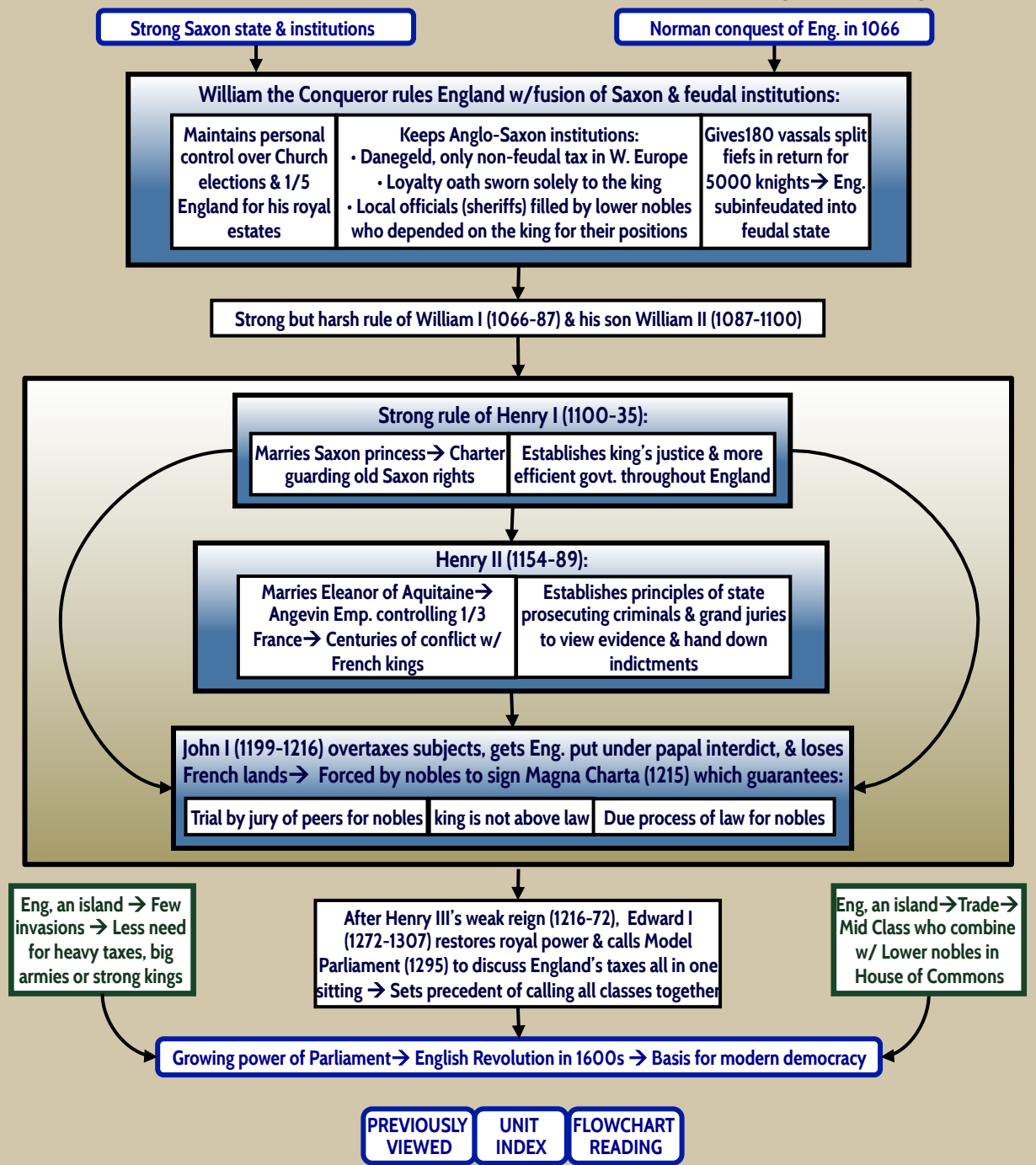
1378-1415 Hussite Wars

1419-34 Joan of Arc Louis XI Great Schism

1429

1461-83

10.8 ENGLAND & THE ROOTS OF ENGLISH DEMOCRACY (1066-1300)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100

1095-1270 Crusades Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities Norman ruler Roger II crowned King of Sicily

1130

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power Battle of Bouvines

1214

1215 Magna Charta St. Thomas Aquinas

1181-1226 St. Francis of Assisi

1225-74

1202 Hindu Arabic Medieval Arabic numerals introd. into Eur. Struggle b/w popes & Ger. Emp. Frederick II

1228-50

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308-21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

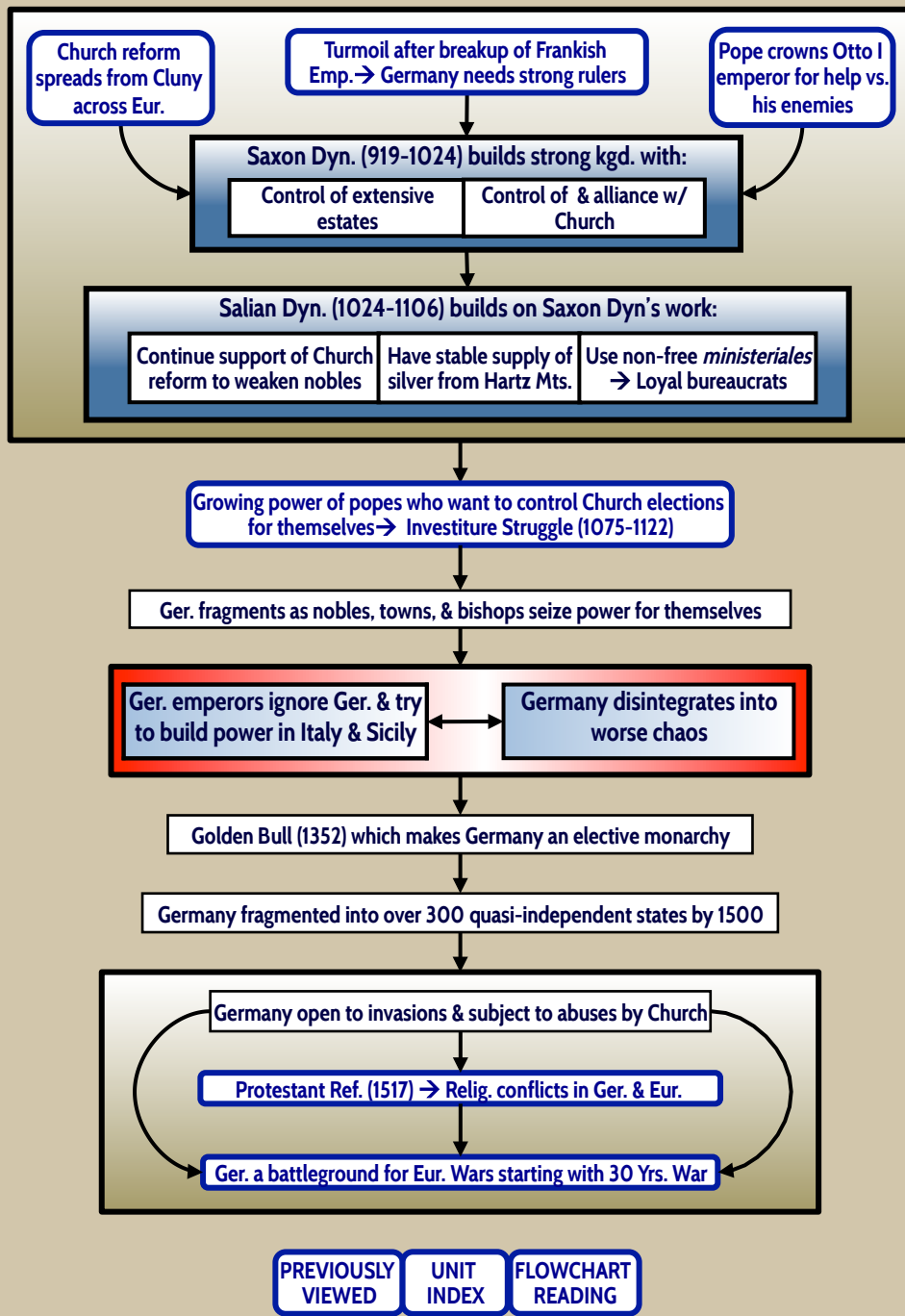
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.9 THE THE HOLY ROMAN EMPIRE OF GERMANY (c.900-1500)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059 College of Cardinals

1066 Normans conquer Eng. Start adapting waterwheel to other indus. uses

c.1080

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142 Investiture struggle

1075-1122 c.1100 Crusades

1095-1270 Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities

1130 Norman ruler Roger II crowned King of Sicily

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power

1214 Battle of Bouvines

1215

1181-1226 Magna Charta St. Thomas Aquinas

1225-74 St. Francis of Assisi

1202 Hindu Arabic Medieval numerals introd. into Eur.

1228-50 Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308-21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

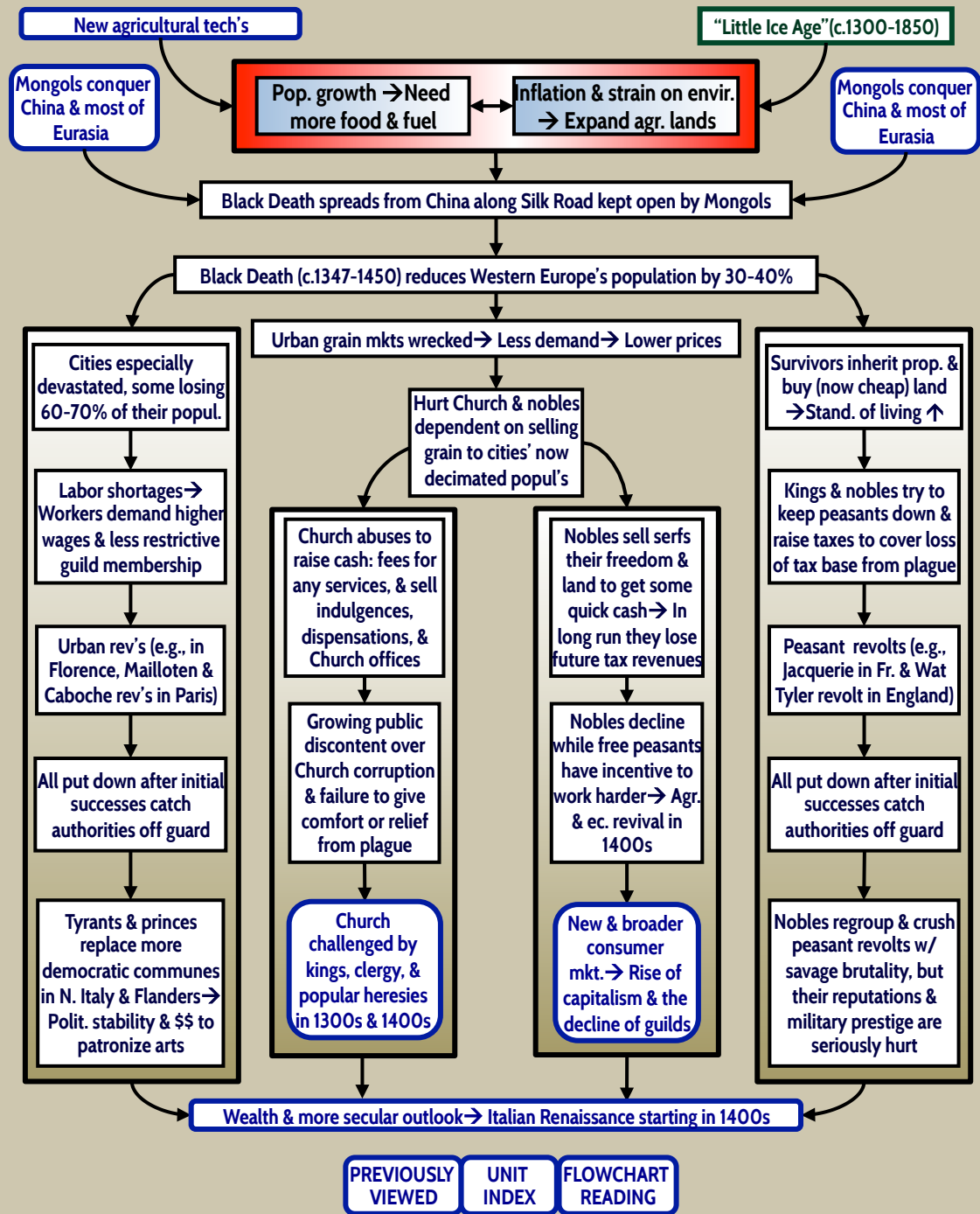
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.10 THE BLACK DEATH AND ITS IMPACT



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087

1079-1142 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1075-1122 c.1100 Investiture struggle

1095-1270 Crusades Courtly love movement

c.1104 Venice Arsenal -> Assembly. line prod. of ships

1100s Rise of universities Norman ruler Roger II crowned King of Sicily

1130

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power Battle of Bouvines

1214

1215 Magna Charta St. Thomas Aquinas

1181-1226 St. Francis of Assisi

1225-74 Hindu Arabic Medieval Struggle b/w popes & Ger. Emp. Frederick II

1202

1228-50

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526 Dante's Divine Comedy Peasant & urban revolts

1308=21

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

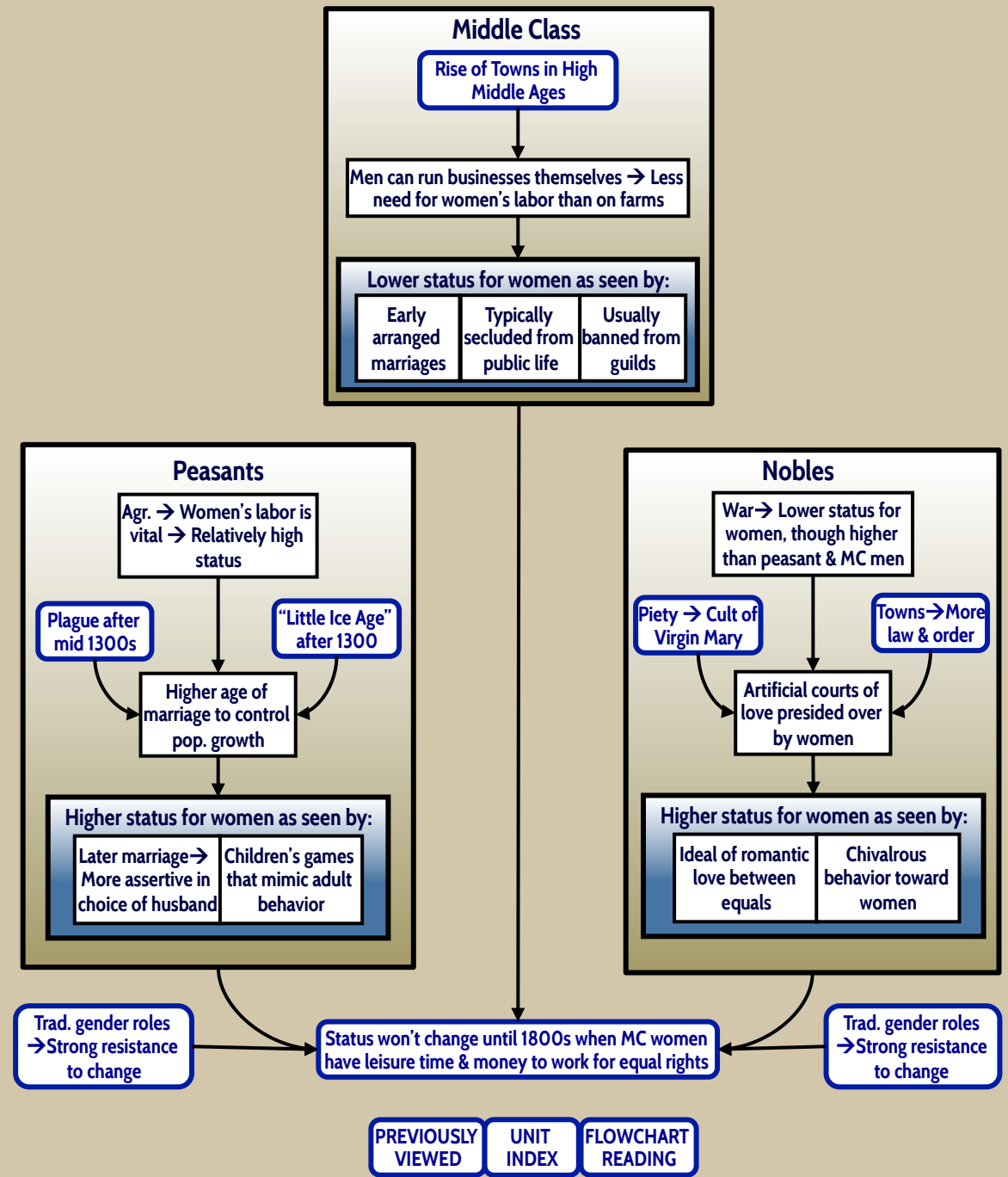
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.11 WOMEN'S CHANGING STATUS IN LATE MEDIEVAL EUROPE



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100

1095-1270 Crusades Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities Norman ruler Roger II crowned King of Sicily

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1135

1176

1198-1216 Innocent III -> Height of Church power Battle of Bouvines

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1228-50

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526

1308-21 Dante's Divine Comedy Peasant & urban revolts

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

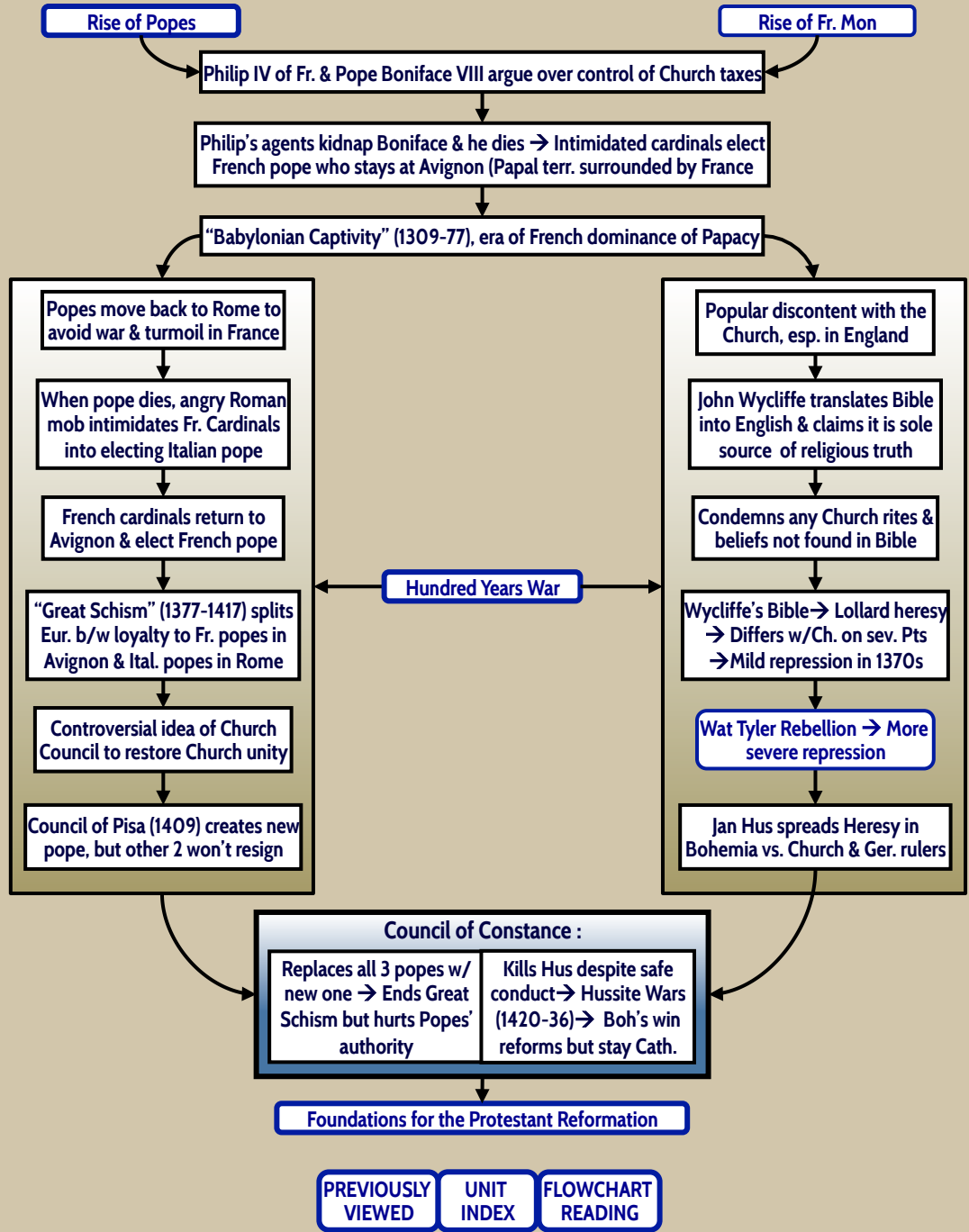
1378-1415 Hussite Wars

1419-34 Joan of Arc Great Schism

1429

1461-83 Louis XI

10.12 THE DECLINE OF THE MEDIEVAL CHURCH (c.1300-1436)



MEDIEVAL WARM PERIOD

c.800-1000 Med. Agr. Rev. Schism b/w Greed & Latin Churches

1054

1059

1066 College of Cardinals

c.1080 Normans conquer Eng. Start adapting waterwheel to other indus. uses

1087 Genoa & Pisa crush piracy in N. Afr. Peter Abelard

1079-1142

1075-1122 Investiture struggle

c.1100

1095-1270 Crusades Courtly love movement

c.1104 Venice Arsenal -> Assembly, line prod. of ships

1100s Rise of universities Norman ruler Roger II crowned King of Sicily

1130

1135 Start of Gothic arch. Ital. city-states defeat Ger. Emp. Frederick I at Legnano

1176

1198-1216 Innocent III -> Height of Church power Battle of Bouvines

1214

1215 Magna Charta St. Thomas Aquinas

1181-1226 St. Francis of Assisi

1225-74

1202 Hindu Arabic Medieval

1228-50 Arabic numerals introd. into Eur. Struggle b/w popes & Ger. Emp. Frederick II

c.1250-1850 LITTLE ICE AGE

1315-7

1309-76 Babylonian Captivity of Church Great Famine

1302-1526

1308-21 Dante's Divine Comedy Peasant & urban revolts

1337-1453 Hundred Years War

1347-50 Black Death Golden Bull -> Elective mon. in Ger.

1356

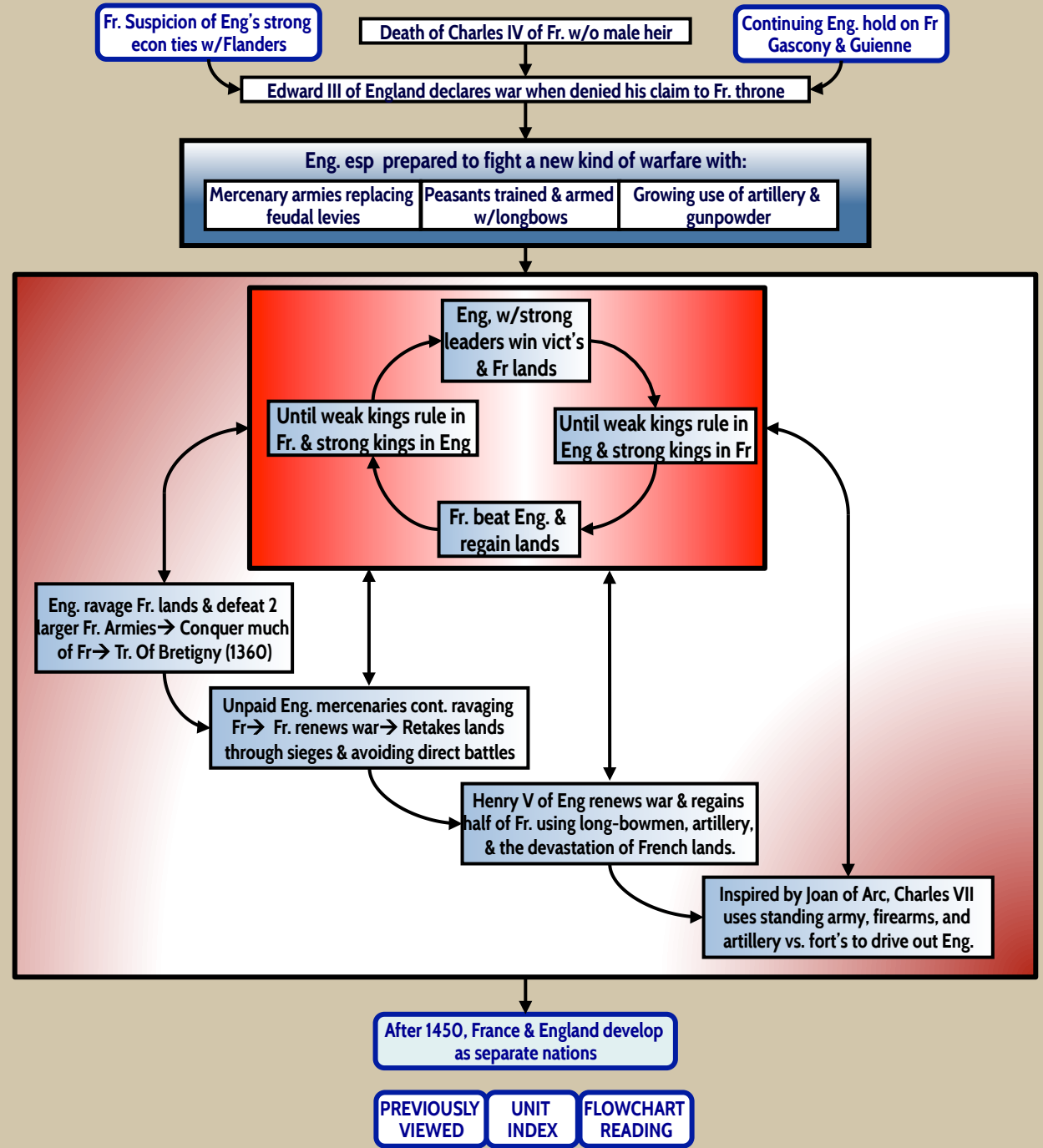
1378-1415 Hussite Wars

1419-34

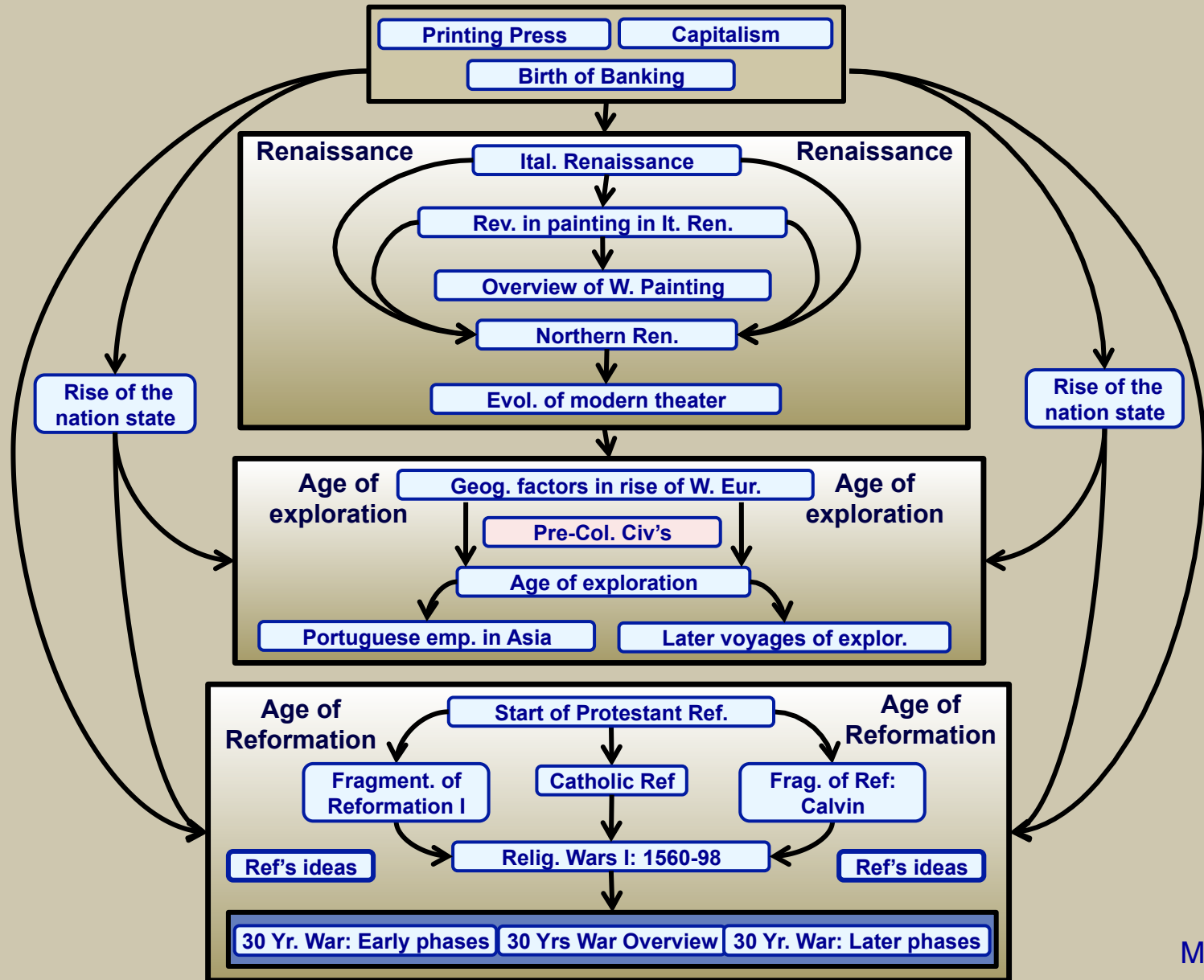
1429 Joan of Arc Great Schism

1461-83 Louis XI

10.13 THE HUNDRED YEARS WAR (1337-1453)



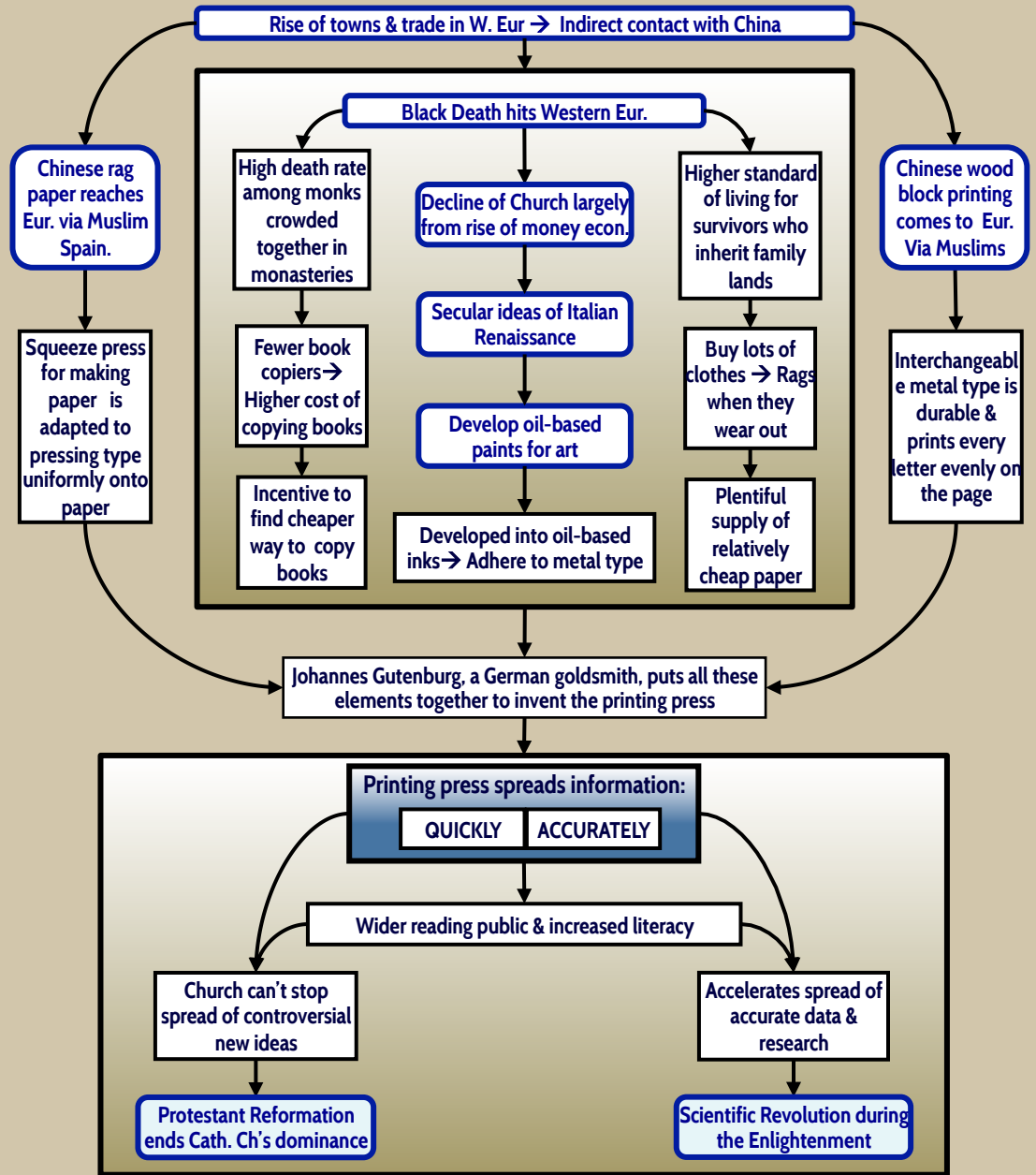
11. Renaissance, Exploration, & Reformation



Timeline of events from 1267-1337 to 1564-1616:

- 1267-1337: Petrarch, Giotto
- 1304-74: 100 Yrs War
- 1337-1453: Black Death
- 1347-50: Jan van Eyck
- 1390-1441: Perspective, Sta. Maria del Fiore
- c.1425: Lorenzo de Medici
- 1436: Hieronymus Bosch
- 1449-92: Printing Press
- 1450-1516: Leonardo da Vinci, Fall of Constantinople
- 1451: Wars of the Roses
- 1452-1519: Erasmus of Rotterdam
- 1453: Oil-based paints reach Italy
- 1455-85: Michelangelo
- 1466-1536: Unification of Spain, French invade Italy
- 1475-1564: The Last Supper
- 1492: Marriage alliance of Spain & Austria → Hapsburg Emp.
- 1494: 1st pocketbook
- 1496: Mona Lisa
- 1501: Sistine Chapel
- 1503-06: Machiavelli's *The Prince*
- 1508-12: Pieter Brueghel the Elder
- 1513: El Greco
- 1525-69: End of the Italian Wars
- 1541-1614: William Shakespeare
- 1559: William Shakespeare
- 1564-1616: William Shakespeare

11.1 THE INVENTION OF THE PRINTING PRESS (c.1450) & ITS IMPACT



11.2 THE ECONOMIC RECOVERY OF EUROPE (c.1450-1600)

1267-1337 Giotto

1304-74 Petrarch

1337-1453 100 Yrs War

1347-50 Black Death

1390-1441 Jan van Eyck

c.1425 Perspective

1436 Sta. Maria del Fiore

1449-92 Lorenzo de Medici

1450-1516 Hieronymus Bosch

1451 Printing Press

1452-1519 Leonardo da Vinci

1453 Fall of Constantinople

1455-85 Wars of the Roses

1466-1536 Erasmus of Rotterdam

c.1475 Oil-based paints reach Italy

1475-1564 Michelangelo

1492 Unification of Spain

1494 French invade Italy

1495-8 The Last Supper

1496 Marriage alliance of Spain & Austria → Hapsburg Emp.

1501 1st pocketbook

1503-06 Mona Lisa

1508-12 Sistine Chapel

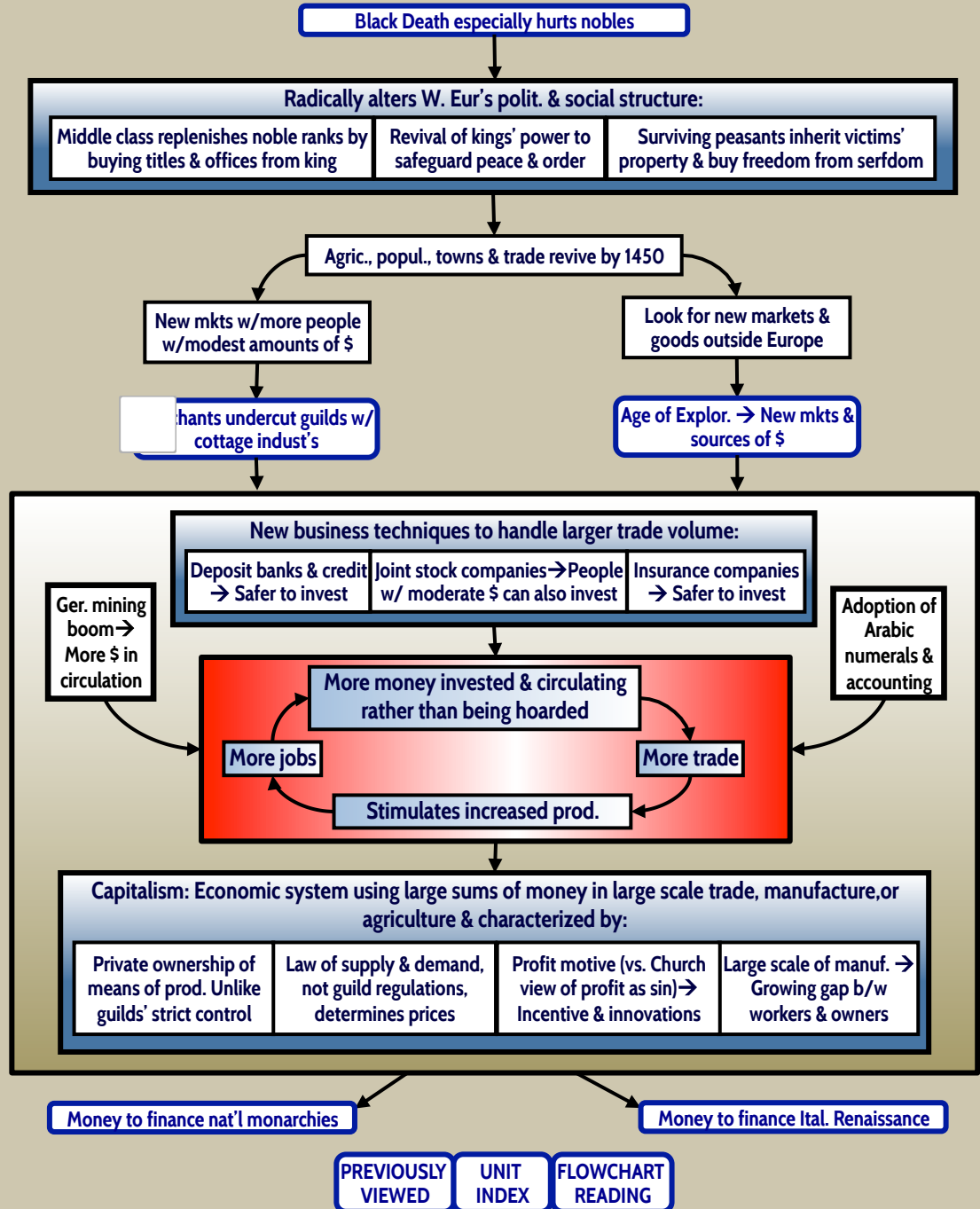
1513 Machiavelli's *The Prince*

1525-69 Pieter Brueghel the Elder

1541-1614 El Greco

1559 End of the Italian Wars

1564-1616 William Shakespeare



PREVIOUSLY VIEWED

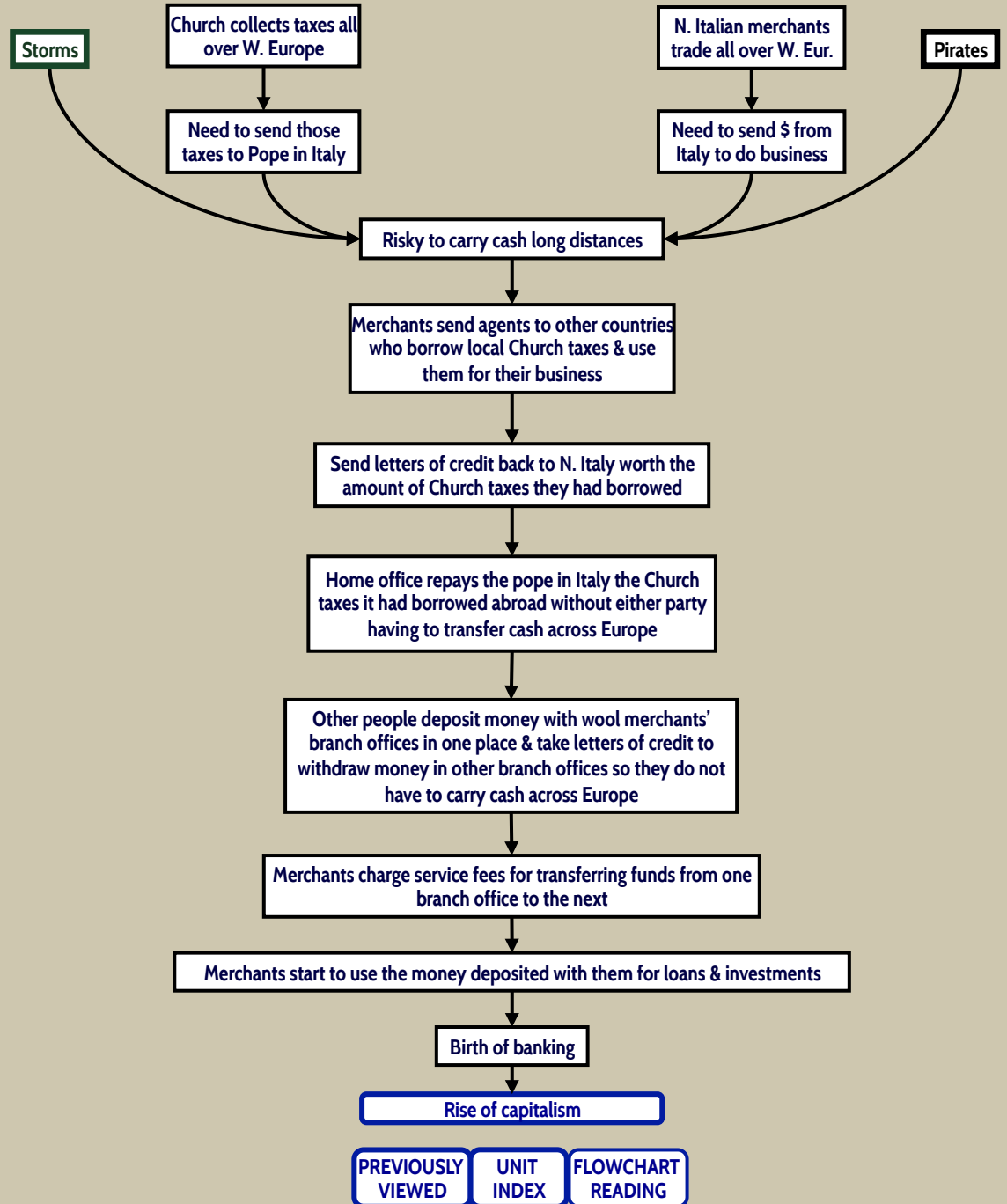
UNIT INDEX

FLOWCHART READING

Timeline of events from 1267-1337 to 1564-1616:

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- 1347-50: Jan van Eyck
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- 1513: Pieter Brueghel the Elder
- 1525-69: El Greco
- 1541-1614: End of the Italian Wars
- 1559: William Shakespeare
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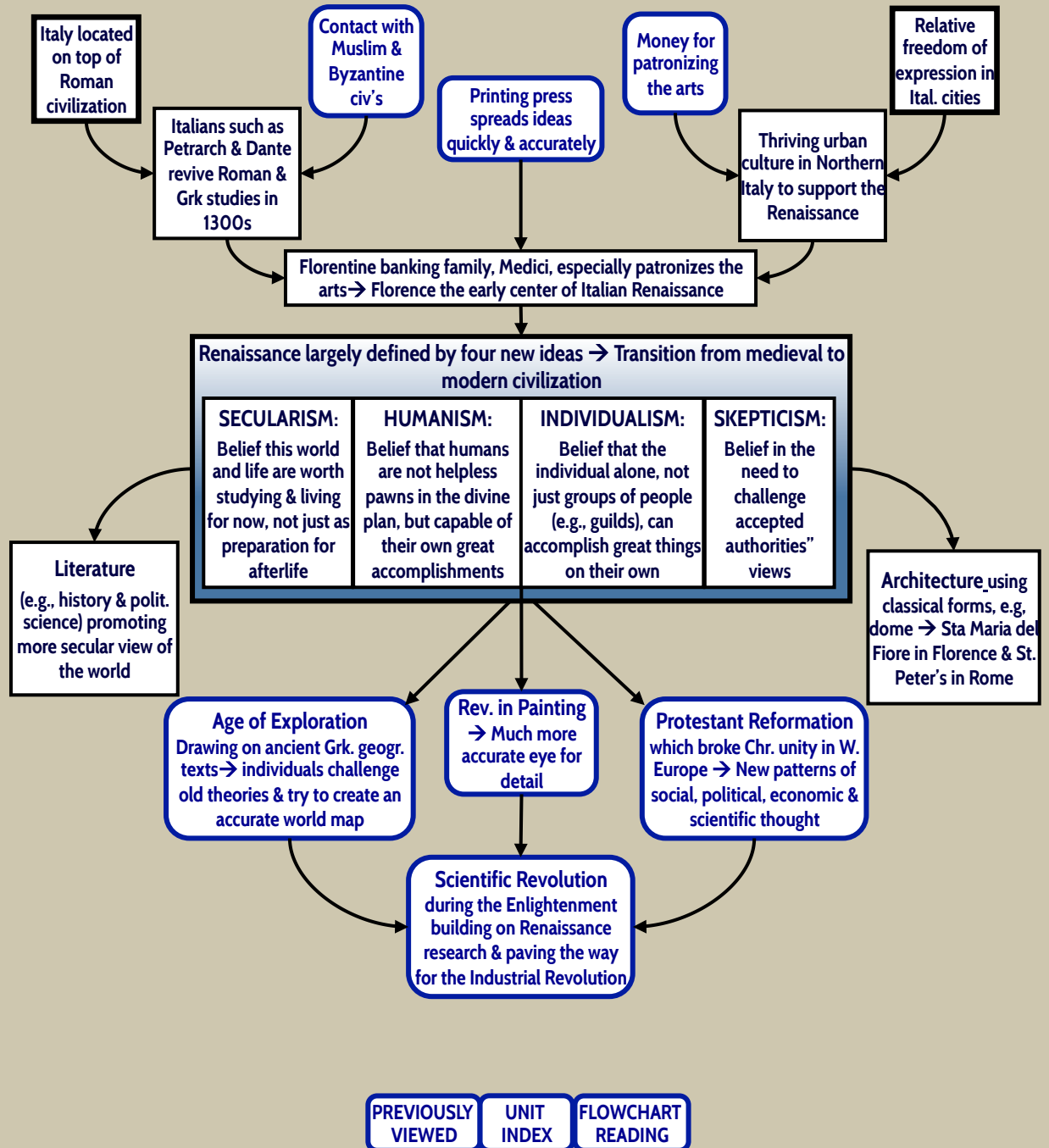
11.2A THE BIRTH OF BANKING



Timeline of key events and figures from 1267 to 1616:

- 1267-1337: Petrarch, Giotto
- 1304-74: 100 Yrs War
- 1337-1453: Black Death, Jan van Eyck
- 1347-50: Black Death
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- c.1425: Perspective
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- 1513: Pieter Brueghel the Elder, El Greco
- 1525-69: Pieter Brueghel the Elder, El Greco
- 1541-1614: End of the Italian Wars, William Shakespeare
- 1559: William Shakespeare
- 1564-1616: William Shakespeare

11.3 THE ITALIAN RENAISSANCE AND ITS IMPACT (c.1400-1600)



1304-74 Petrarch

1337-1453 100 Yrs War

1347-50 Black Death

1390-1441 Jan van Eyck

c.1425 Perspective

1436 Sta. Maria del Fiore

1449-92 Lorenzo de Medici

1450-1516 Hieronymus Bosch

1451 Printing Press

1452-1519 Leonardo da Vinci

1453 Fall of Constantinople

1455-85 Wars of the Roses

1466-1536 Erasmus of Rotterdam

c.1475 Oil-based paints reach Italy

1475-1564 Michelangelo

1492 Unification of Spain

1494 French invade Italy

1495-8 The Last Supper

1496 Marriage alliance of Spain & Austria → Hapsburg Emp.

1501 1st pocketbook

1503-06 Mona Lisa

1508-12 Sistine Chapel

1513 Machiavelli's The Prince

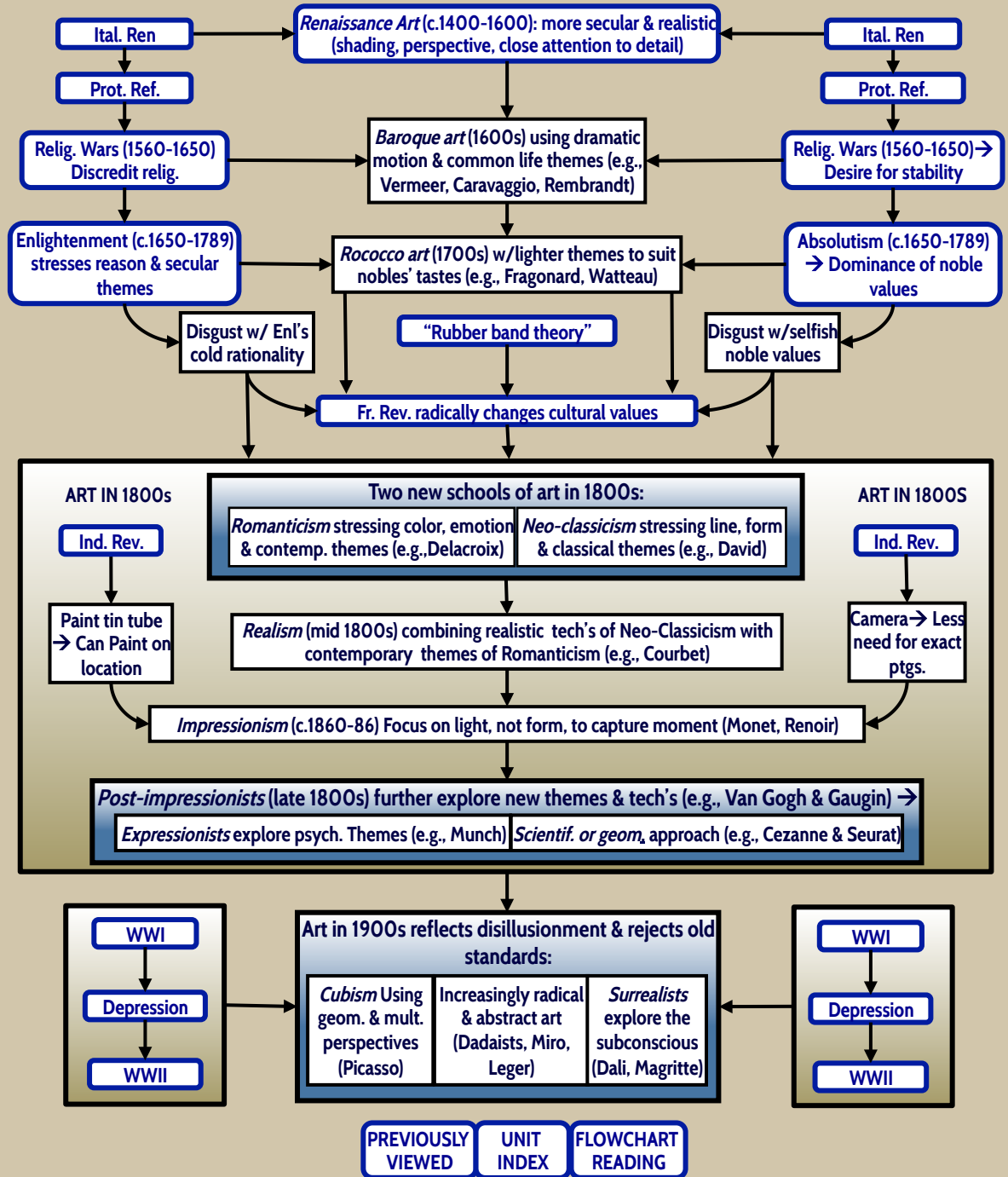
1525-69 Pieter Brueghel the Elder

1541-1614 El Greco

1559 End of the Italian Wars

1564-1616 William Shakespeare

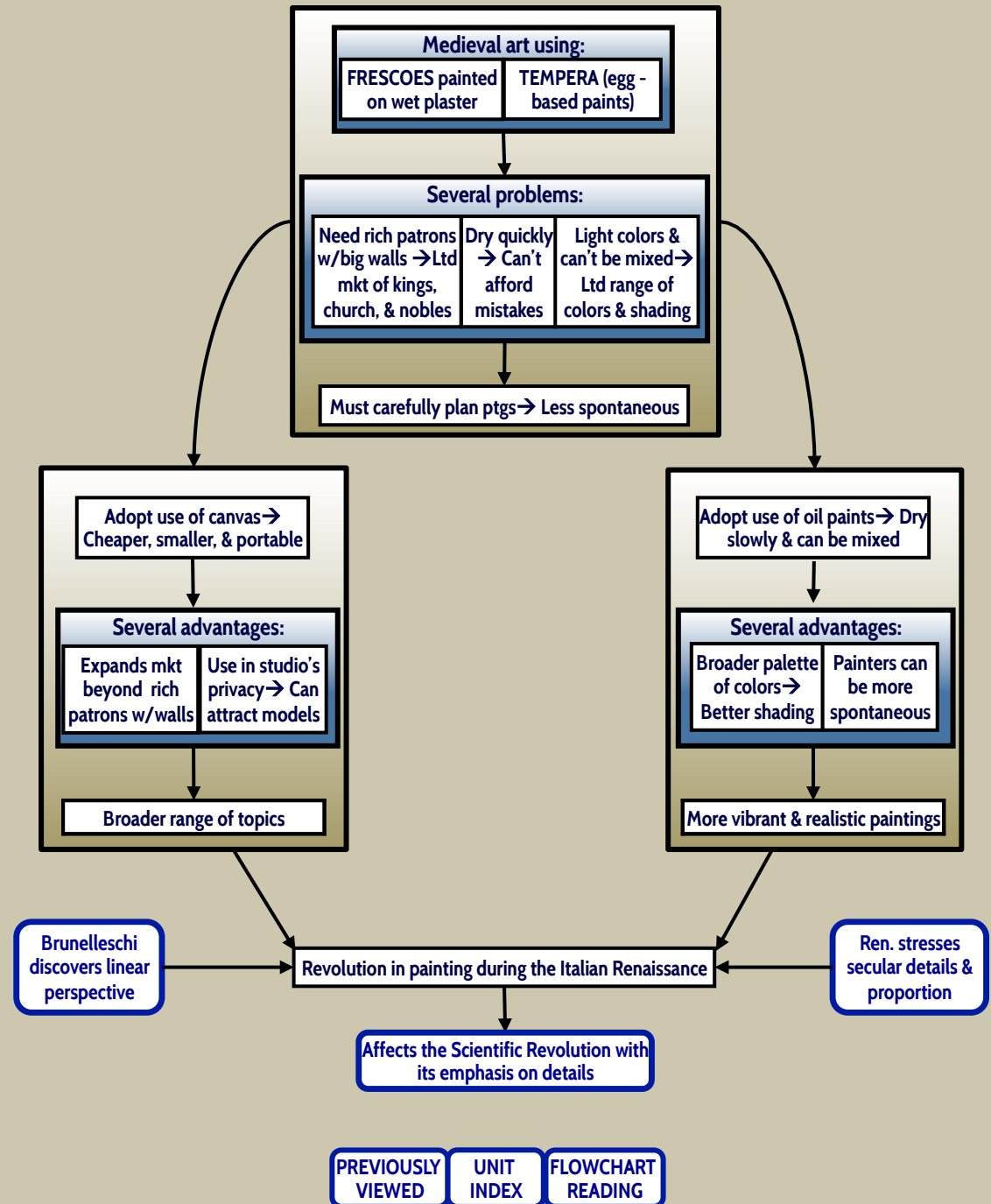
11.4AN OVERVIEW OF WESTERN PAINTING (c.1400-1950)



1267-1337
1304-74
1337-1453
1347-50
1390-1441
c.1425
1436
1449-92
1450-1516
1451
1452-1519
1453
1455-85
1466-1536
c.1475
1475-1564
1492
1494
1495-8
1496
1501
1503-06
1508-12
1513
1525-69
1541-1614
1559
1564-1616

Giotto
Petraarch
100 Yrs War
Black Death
Jan van Eyck
Perspective
Sta. Maria del Fiore
Lorenzo de Medici
Hieronymus Bosch
Printing Press
Leonardo da Vinci
Fall of Constantinople
Wars of the Roses
Erasmus of Rotterdam
Oil-based paints reach Italy
Michelangelo
Unification of Spain
French invade Italy
The Last Supper
Marriage alliance of Spain & Austria → Hapsburg Emp.
1st pocketbook
Sistine Chapel
Mona Lisa
Machiavelli's *The Prince*
Pieter Brueghel the Elder
El Greco
End of the Italian Wars
William Shakespeare

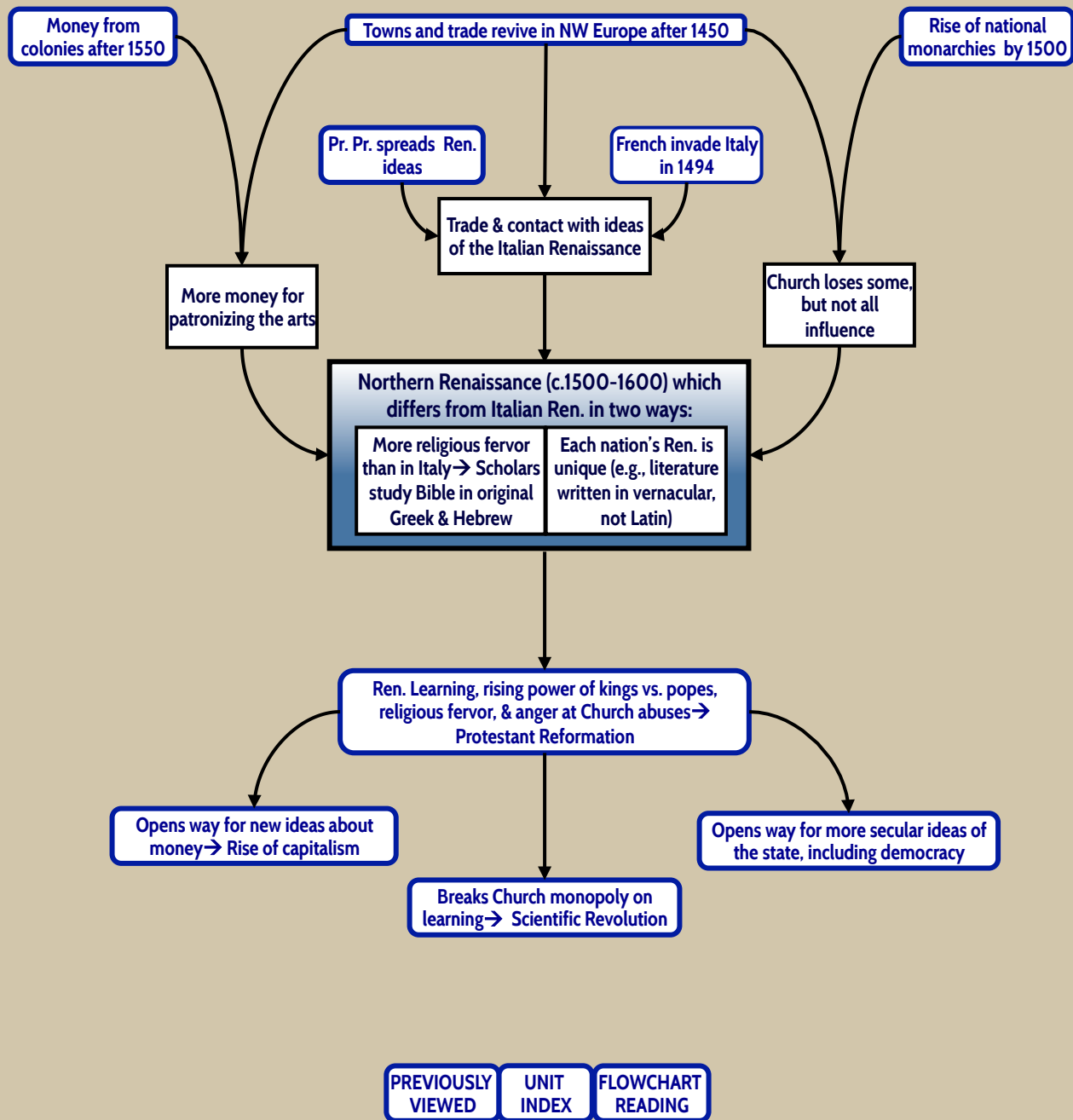
11.4A THE REVOLUTION IN RENAISSANCE PAINTING (c.1400-1500)



Timeline of the Renaissance (1300-1600):

- 1267-1337: Petrarch, Giotto
- 1304-74: 100 Yrs War
- 1337-1453: Black Death, Jan van Eyck
- 1347-50: Black Death
- 1390-1441: Perspective, Sta. Maria del Fiore
- c.1425: Perspective
- 1436: Lorenzo de Medici
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- 1450-1516: Printing Press
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- 1513: Machiavelli's *The Prince*
- 1525-69: Pieter Brueghel the Elder, El Greco
- 1541-1614: End of the Italian Wars, El Greco
- 1559: William Shakespeare
- 1564-1616: William Shakespeare

11.5 THE NORTHERN RENAISSANCE AND ITS IMPACT (c.1500-1600)



1267-1337 Giotto

1304-74 Petrarch 100 Yrs War

1337-1453 Black Death

1347-50 Jan van Eyck

c.1425 Perspective Sta. Maria del Fiore

1436 Lorenzo de Medici

1449-92 Hieronymus Bosch

1450-1516 Printing Press

1451 Leonardo da Vinci Fall of Constantinople

1452-1519 Wars of the Roses

1453 Erasmus of Rotterdam

c.1475 Oil-based paints reach Italy

1475-1564 Michelangelo

1492 Unification of Spain

1494 French invade Italy

1495-8 The Last Supper

1496 Marriage alliance of Spain & Austria → Hapsburg Emp.

1501 1st pocketbook

1503-06 Mona Lisa

1508-12 Sistine Chapel

1513 Machiavelli's *The Prince*

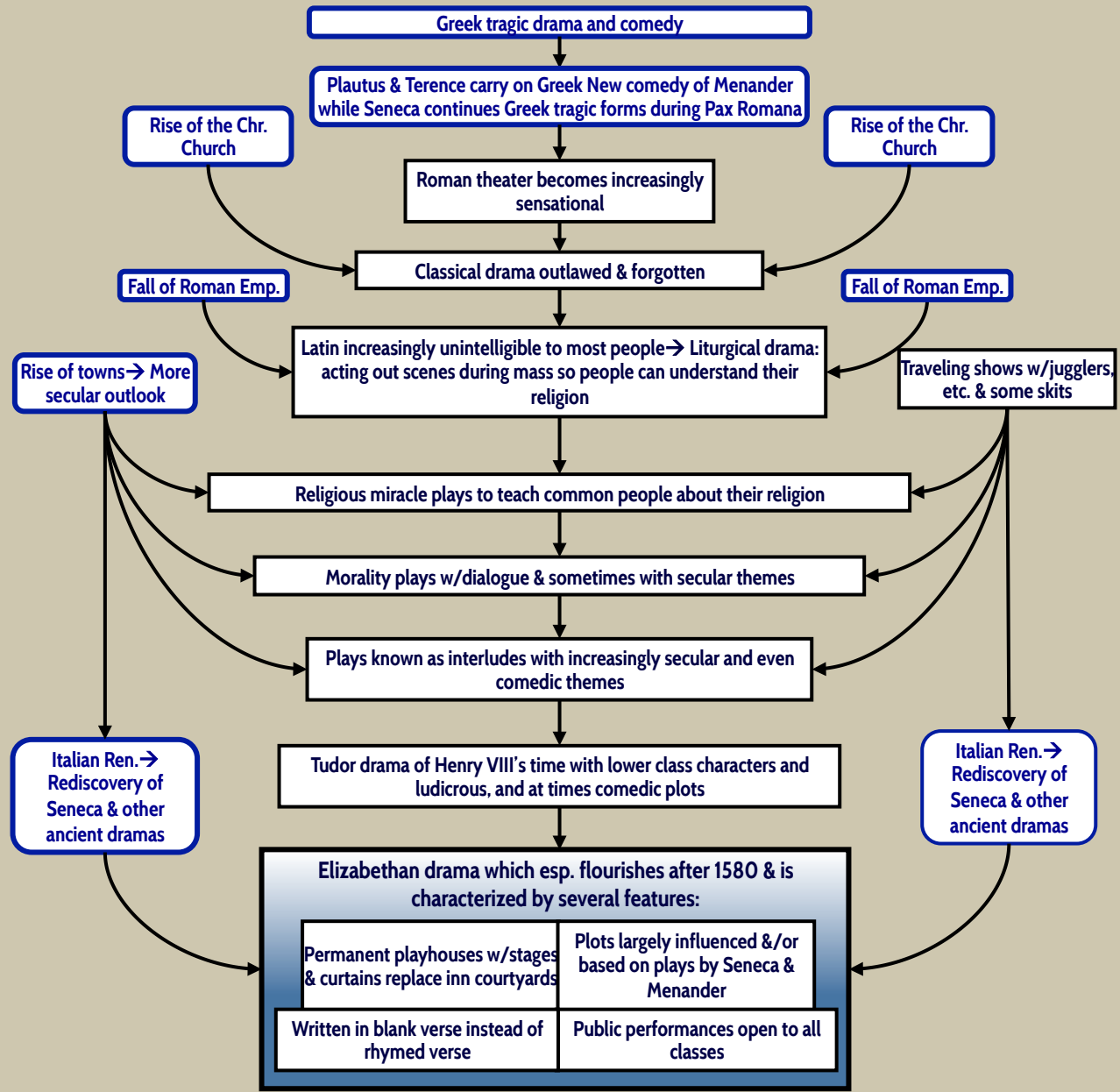
1525-69 Pieter Brueghel the Elder

1541-1614 El Greco

1559 End of the Italian Wars

1564-1616 William Shakespeare

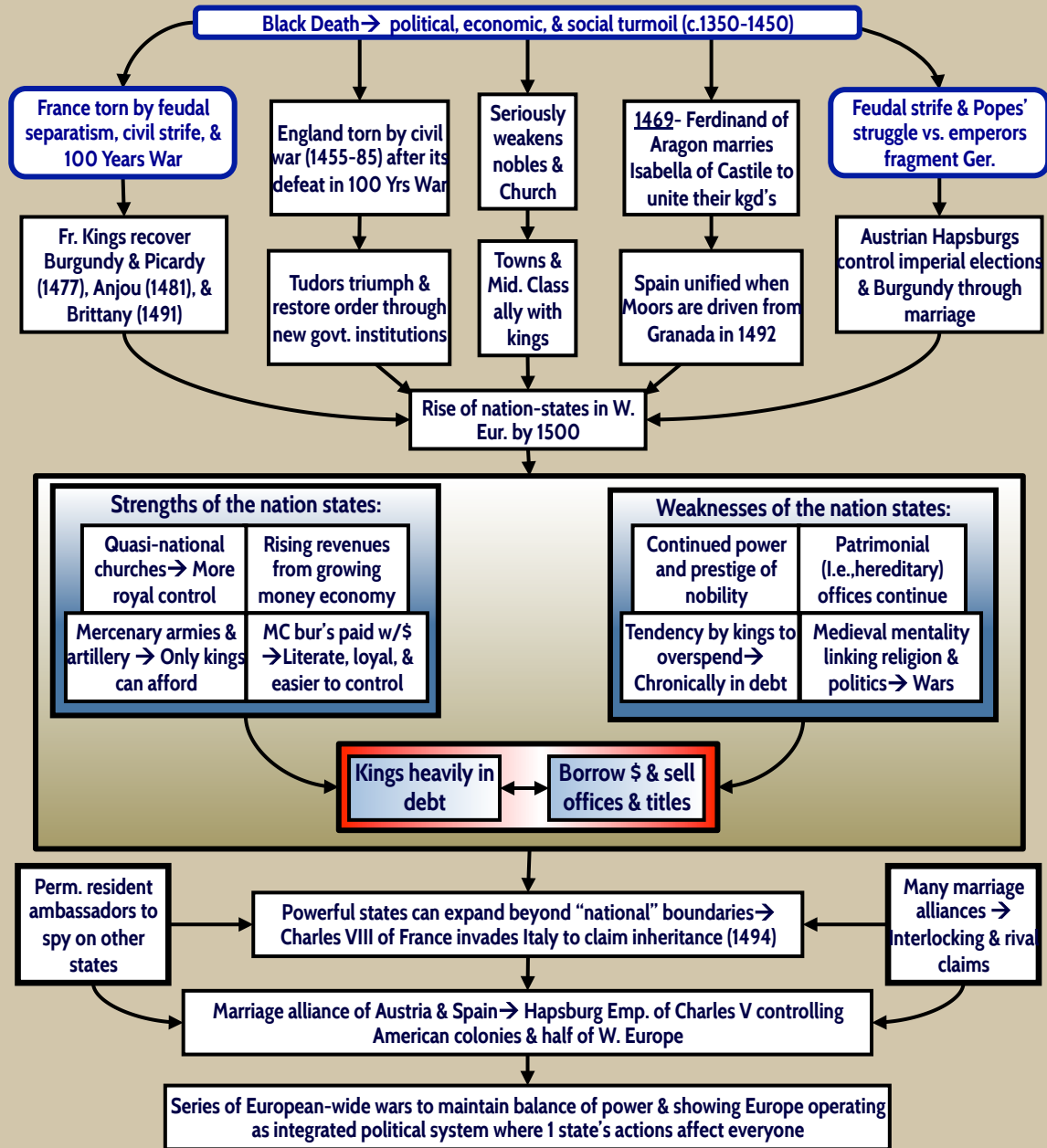
11.5A THE EVOLUTION OF MODERN THEATER



167-1337
1304-74
337-1453
1347-50
1390-1441
c.1425
1436
1449-92
1450-1516
1451
1452-1519
1453
1455-85
1466-1536
c.1475
1475-1564
1492
1494
1495-8
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Mona Lisa
Sistine Chapel
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Pieter Brueghel the Elder
El Greco
End of the Italian Wars
William Shakespeare

11.6 THE RISE OF THE NATION STATE (c.1450-1500)




c.600 BC  Phoenicians circumnavigate Africa, but thanks to Herodotus, no one believes them

c.240 BC  Greek mathematician, Eratosthenes correctly calculates earth's circumference. Luckily, no one believes it could be that big.

c.150 CE  Ptolemy's Geography introduces latitudinal & longitudinal coordinates

c.1000  Chinese navigational compass

c.1400  Ptolemy's Geog. reaches Eur.

c.1430  Prince Henry of Portugal starts sending exped's down Afr. Coast.

1434  Gil Eanes finally sails past Cape Bojador ("Gates of Hell").-> other Portug. explorers dare to continue exploring Afr's coast.

1484  Diego Cao explores 1500 miles of Afr's coast

1488  Diaz rounds Cape of Good Hope

1492  Columbus reaches America

1494  Tr. of Tordesillas divides world b/w Sp. & Port.

1498  Da Gama sails round Africa to India

1513  Balboa & Serrao discover Pacific from opposite ends & call it the "Pacific Sea" since the planet can't be big enough to hold an entire ocean.


1519-21  Cortez conquers the Aztecs

1519-22  Magellan's expedition accidentally circles globe thinking the Pacific Sea a faster way to Asia than going around Africa. They're wrong, so people assume no one will ever try *THAT* again.

1532-34  Pizarro conquers the Incas

1497-1610  Various Eng. & Fr. Explorers seek NW Passage to Asia, but N. America won't get out of their way.

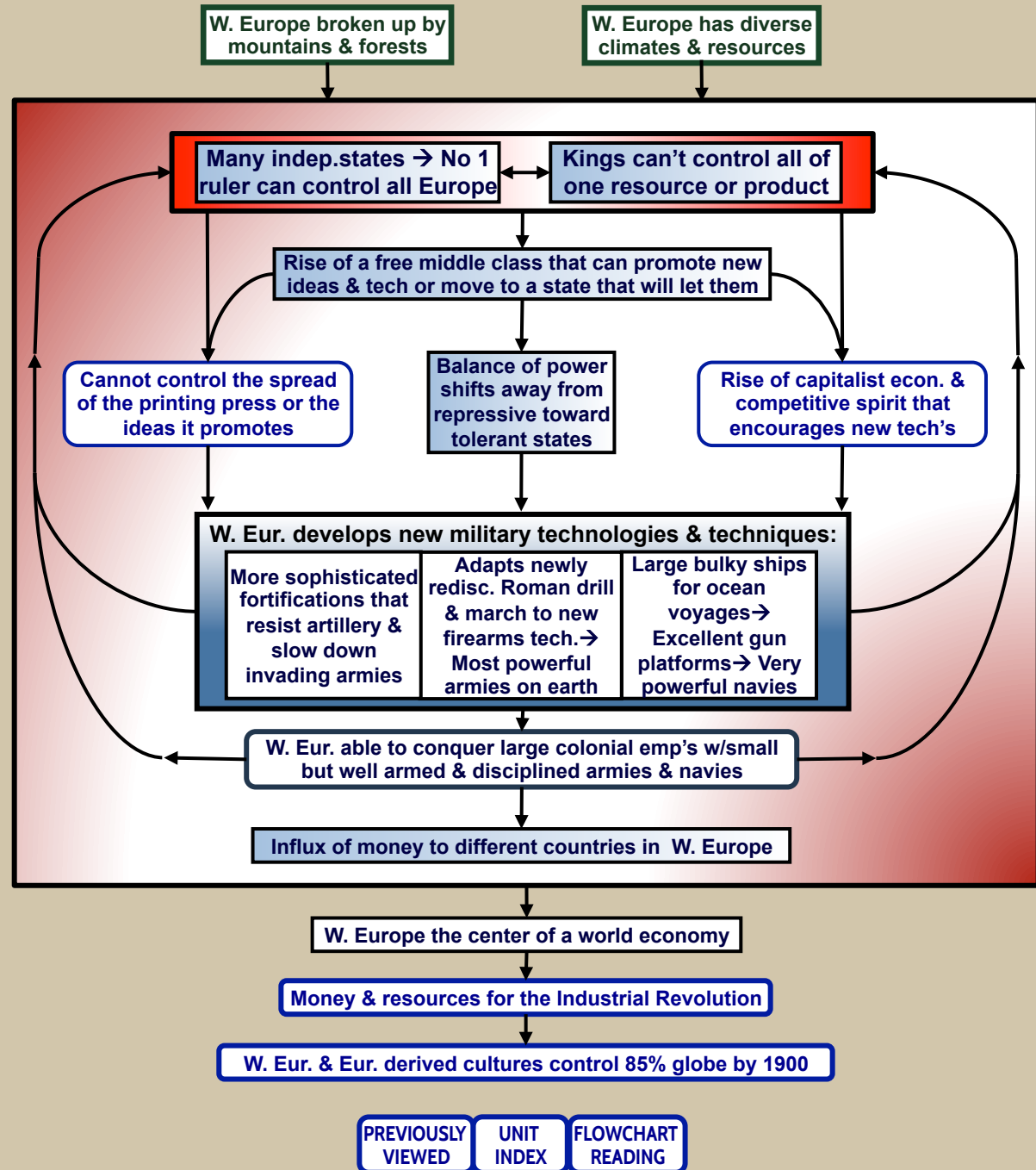
1577-80  Drake is the 2nd to circle the globe, but only b/c the Sp. navy is chasing him & he has no way back.

1599-1601  Drake is the 2nd to circle the globe, but only b/c the Sp. navy is chasing him & he has no way back.

1606  Dutch discover Australia, but decide it's not worth colonizing

1824  Nathaniel Palmer reaches Antarctica


11.7 GEOPOLITICAL FACTORS IN THE RISE OF W. EUROPE (c.1500-1900)



11.8 THE AGE OF EXPLORATION (c.1400-1550)

c.600 BC  Phoenicians circumnavigate Africa, but thanks to Herodotus, no one believes them

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
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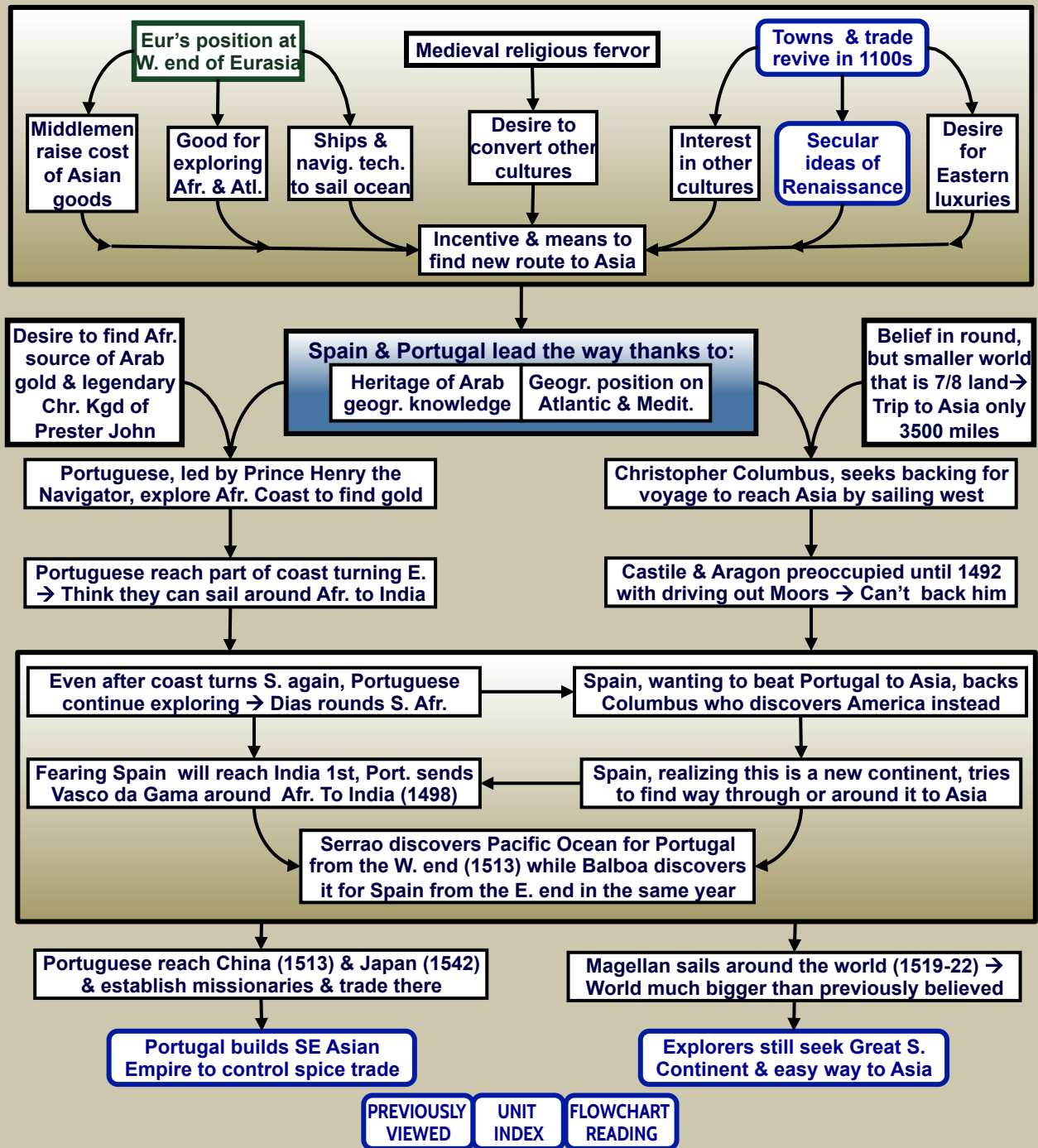
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1577-80  Dutch discover Australia, but decide it's not worth colonizing


1599-1601  Nathaniel Palmer reaches Antarctica

1606

1824





11.9 THE PORTUGUESE EMPIRE IN EAST ASIA (1498-c.1600)

c.600 BC  Phoenicians circumnavigate Africa, but thanks to Herodotus, no one believes them

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c.1000  Chinese navigational compass

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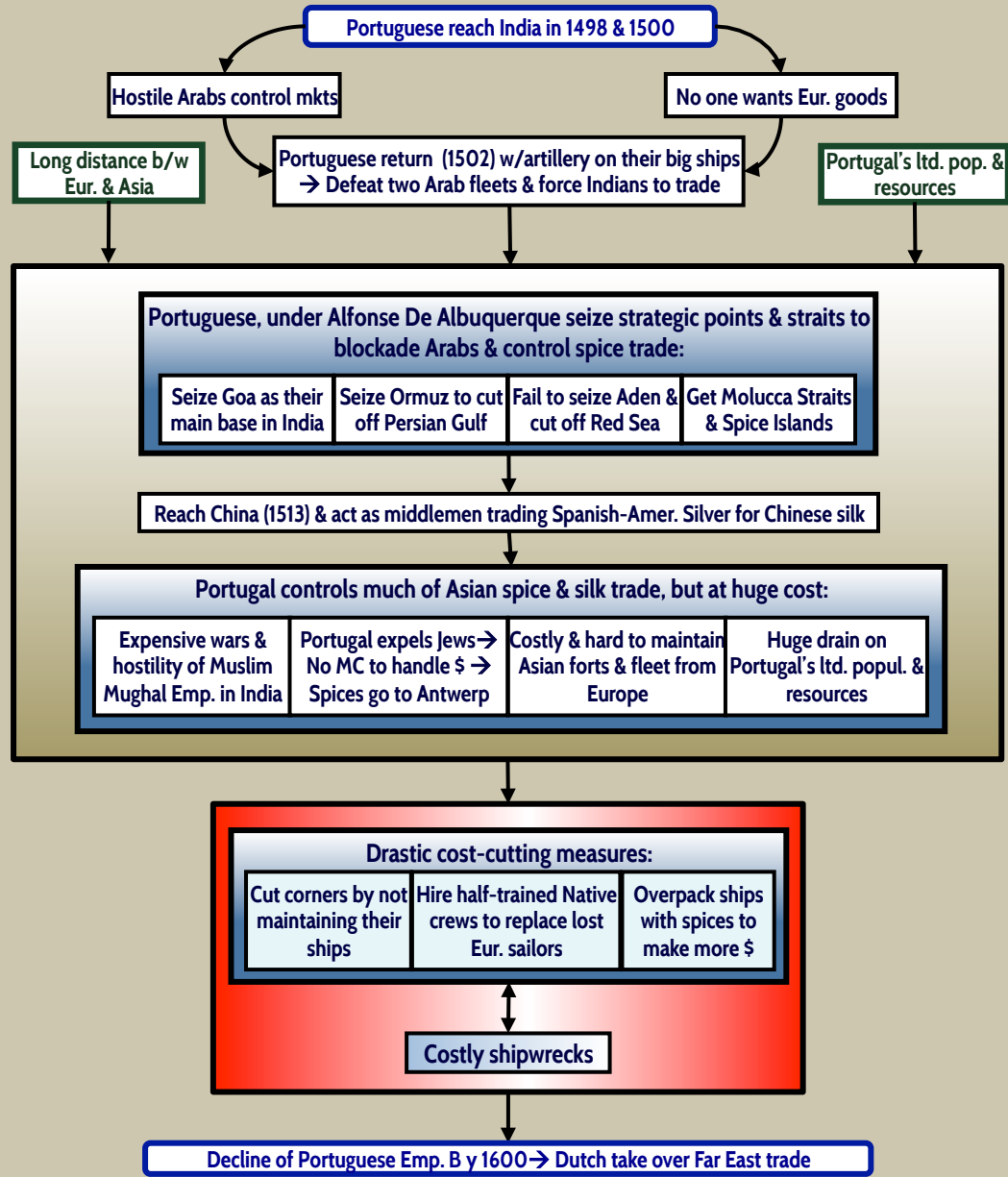
1497-1610  Various Eng. & Fr. Explorers seek NW Passage to Asia, but N. America won't get out of their way.

1577-80  Drake is the 2nd to circle the globe, but only b/c the Sp. navy is chasing him & he has no way back.


1599-1601  Dutch explorer, Oliver van Noort performs the first intentional circumnavigation of globe

1606  Dutch discover Australia, but decide it's not worth colonizing

1824  Nathaniel Palmer reaches Antarctica




11.10 FILLING IN THE GAPS: VOYAGES OF LATER EXPLORATION (c.1550-1900)

c.600 BC  Phoenicians circumnavigate Africa, but thanks to Herodotus, no one believes them

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c.150 CE  Ptolemy's Geography introduces latitudinal & longitudinal coordinates

c.1000  Chinese navigational compass

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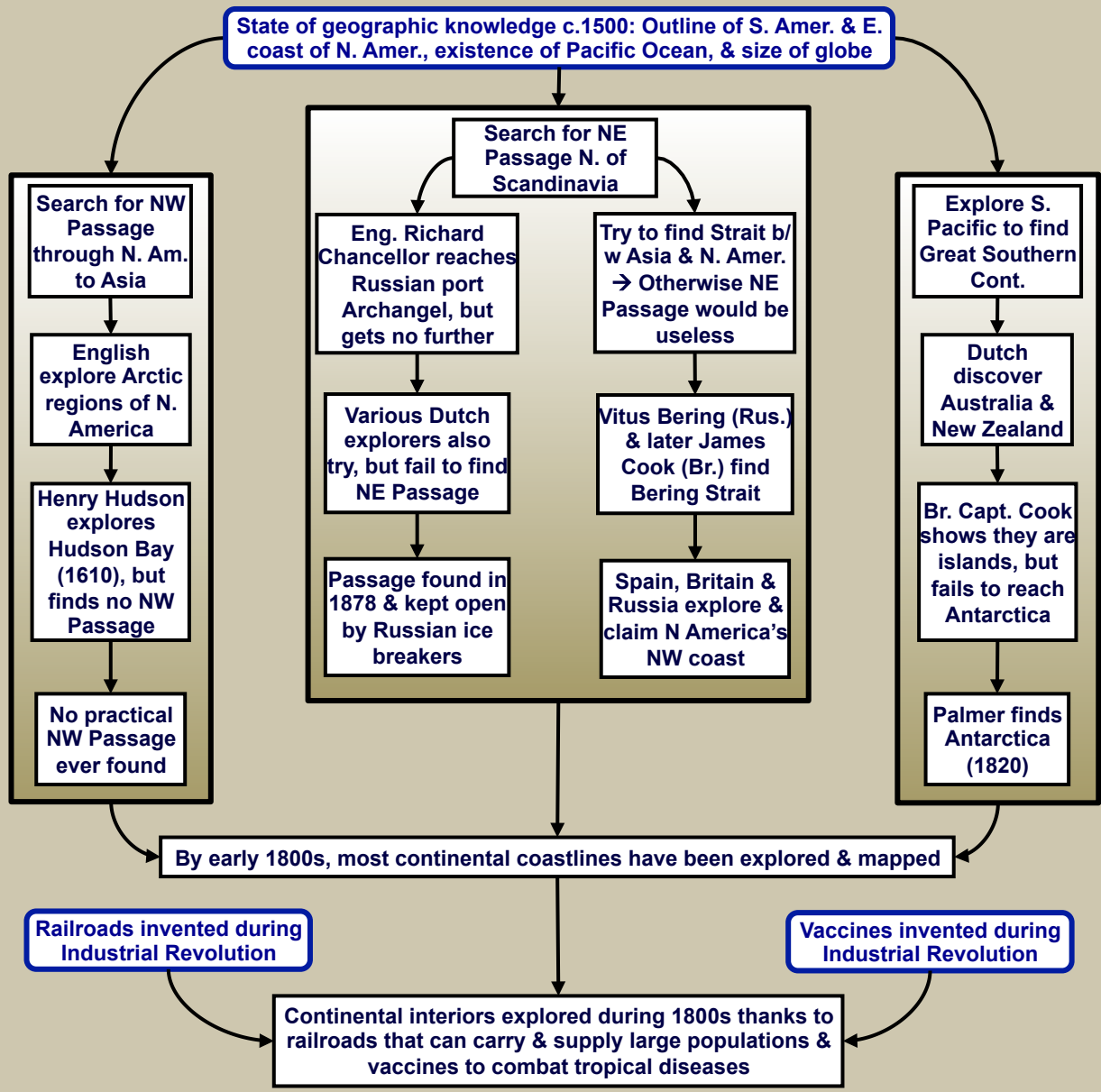
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1606  Dutch discover Australia, but decide it's not worth colonizing

1824  Nathaniel Palmer reaches Antarctica



11.11 THE ROOTS AND BIRTH OF THE PROTESTANT REFORMATION

1517 Zwingli starts Swiss Ref. Luther posts the 95 Theses

1518 Diet of Worms

1521 Luther's translation of New Testament Into German

1523 German Peasants' Revolt

1524-5 Henry VIII's final break with Rome

1534 Anabaptist rising in Munster

1540 Society of Jesus (Jesuits) ordained

1545-63 Council of Trent

1555-6 Peace of Augsburg: Haps. Emp. split b/w Span. & Austr. branches

1562-98 French Wars of Religion

1566-1648 Dutch revolt vs. Spain

1588 England defeats Spanish Armada

1598 Henry IV's Edict of Nantes grants religious toleration in France

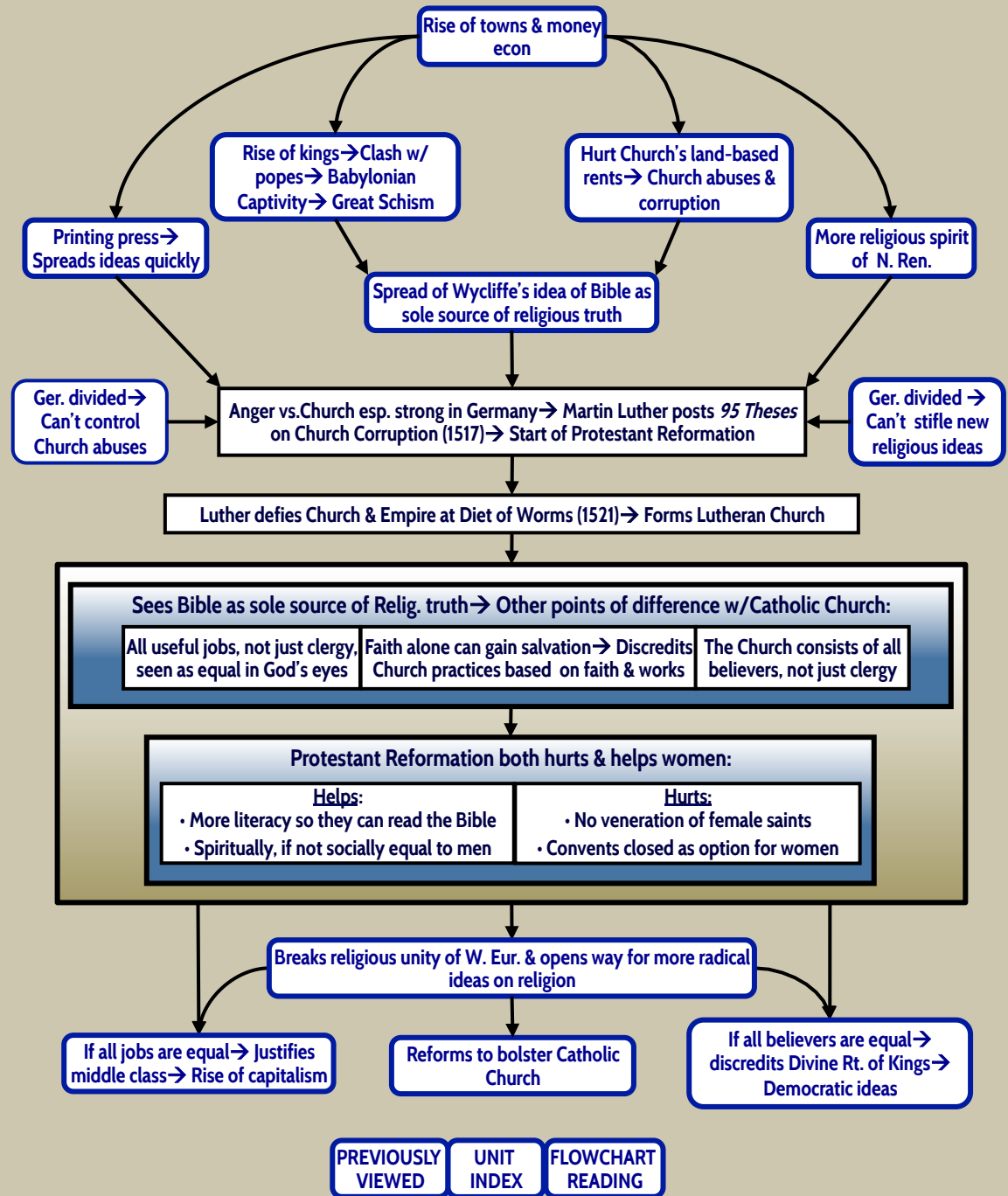
1618-48 30 Years War

1642-48 English Civil Wars

1648 Treaty of Westphalia ending 30 Yrs. War & Treaty of Munster granting Dutch indep.

1649 Charles I of England beheaded

1652-58 Oliver Cromwell's dictatorship



11.12A THE FRAGMENTATION OF THE REFORMATION (1519-60)

1517 Zwingli starts Swiss Ref. Luther posts the 95 Theses

1518 Diet of Worms

1521 Luther's translation of New Testament Into German

1523 German Peasants' Revolt

1524-5 Henry VIII's final break with Rome

1534 Anabaptist rising in Munster

1534 Society of Jesus (Jesuits) ordained

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1598 30 Years War

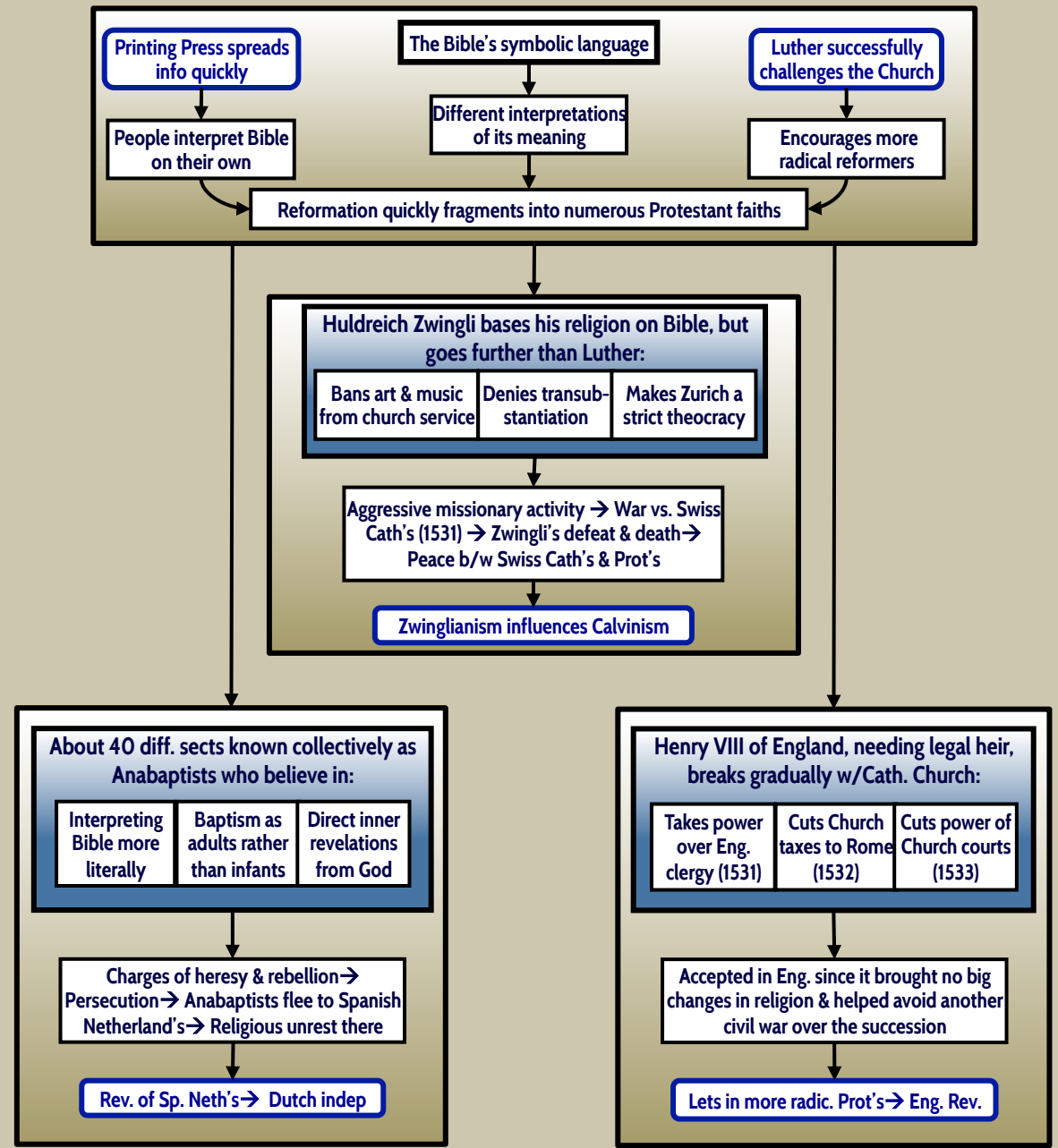
1618-48 English Civil Wars

1642-48 Treaty of Westphalia ending 30 Yrs. War & Treaty of Munster granting Dutch indep.

1648 Charles I of England beheaded

1649 Oliver Cromwell's dictatorship

1652-58



11.12B THE FRAGMENTATION OF THE REFORMATION: CALVINISM

Fragmentation of the Reformation

John Calvin's religion which believed in *predestination*, the idea that god is so all powerful that he has predetermined whether we will be saved or not

This raised several questions:

<p>IS THERE FREE WILL IF GOD IS OMNIPOTENT? Not if we have been predestined since before creation</p>	<p>CAN WE KNOW WE ARE SAVED? No, but there are signs we <i>might</i> be: 1) Living an upright life 2) Profession of faith 3) Participation in the sacraments</p>	<p>WHY DOES AN ALL POWERFUL GOD ALLOW EVIL? That is a mystery of god beyond our understanding</p>
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Calvin makes Geneva, Switzerland a model community where all members must exhibit behavior needed to be saved:

Must attend church 3-4X/week	Banned gambling, dancing, swearing, heavy drinking etc.	No fancy clothing, jewelry, hair, etc.
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Idea that Calvinist merchants are predestined to pursue profits for the good of the religious community

Decentralized Calvinist Church → Can't crush by attacking just 1 leader or city

God's abs. power + equality of all believers discredits Div. Rt. of Kings → Justifies rev. on relig. grounds

Later some feel justified in pursuing profits for themselves

Calvinism spreads across W. Eur.

Justifies polit. rev. since religion & politics are so intertwined

Rise of capit. MC in Eng.





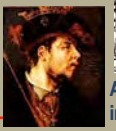







Religious wars (1560-1648) → People sick of anarchy

English Rev. in 1600's

John Locke's *Two Treatises on Government* defines king's obligations to his subjects much as in a MC business contract

Justifies revolution by the people on political grounds if the king breaks the contract

French Revolution (1789) starts the age of political revolutions

1517		Zwingli starts Swiss Ref.		Luther posts the 95 Theses
1518				Diet of Worms
1521		Luther's translation of New Testament Into German		German Peasants' Revolt
1524-5				
1534		Henry VIII's final break with Rome		Anabaptist rising in Munster
1534				
1540		Society of Jesus (Jesuits) ordained		Council of Trent
1545-63				
1555-6		Peace of Augsburg: Haps. Emp. split b/w Span. & Austr. branches		
1562-98		French Wars of Religion		Dutch revolt vs. Spain
1566-1648				England defeats Spanish Armada
1588		Henry IV's Edict of Nantes grants religious toleration in France		
1598				
1618-48		30 Years War		English Civil Wars
1642-48				
1648		Treaty of Westphalia ending 30 Yrs. War & Treaty of Munster granting Dutch indep.		
1649		Charles I of England beheaded		Oliver Cromwell's dictatorship
1652-58				

11.13 THE REFORMATION'S IMPACT ON POLITICAL & ECONOMIC IDEAS

Italian Renaissance largely defined by four new ideas

Secularism: Belief this world & life are worth studying & living for now, not just as preparation for afterlife	Humanism: Belief that humans are not helpless pawns in the divine plan, but capable of their own great accomplishments	Individualism: Belief that the individual alone, not just groups of people, can accomplish great things on their own	Skepticism: Belief we should challenge authorities views, not blindly accept them
---	--	--	---

N. Ren. combines Ital. Ren's secular ideas with its own greater Religious fervor

Luther starts Protestant Reformation

God sees all useful jobs as equal | God sees all believers as equal

Women seen as spiritually, if not socially, equal to men

Calvinist idea that merchants are predestined to pursue profits for the good of relig. Commun.

Later generations feel justified pursuing profits for themselves

Suffrage movement in late 1800s and early 1900s gains women more equality

Equality of all believers discredits Div. Rt. of Kings → Justifies rev. on relig. grounds

Justifies polit. rev. since religion & politics are so intertwined

Rise of capit. MC in Eng.

Eng. Rev. in 1600's

Concern over both anarchy from religious turmoil & tyranny of absolute monarchy → John Locke's *Two Treatises on Government* advocating constitutional monarchy which defines king's obligations to his subjects much as in a MC business contract

Justifies rev. on polit. grounds if king breaks contract

French Revolution (1789) starts the age of political revolutions

PREVIOUSLY VIEWED

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11.14 THE CATHOLIC REFORMATION

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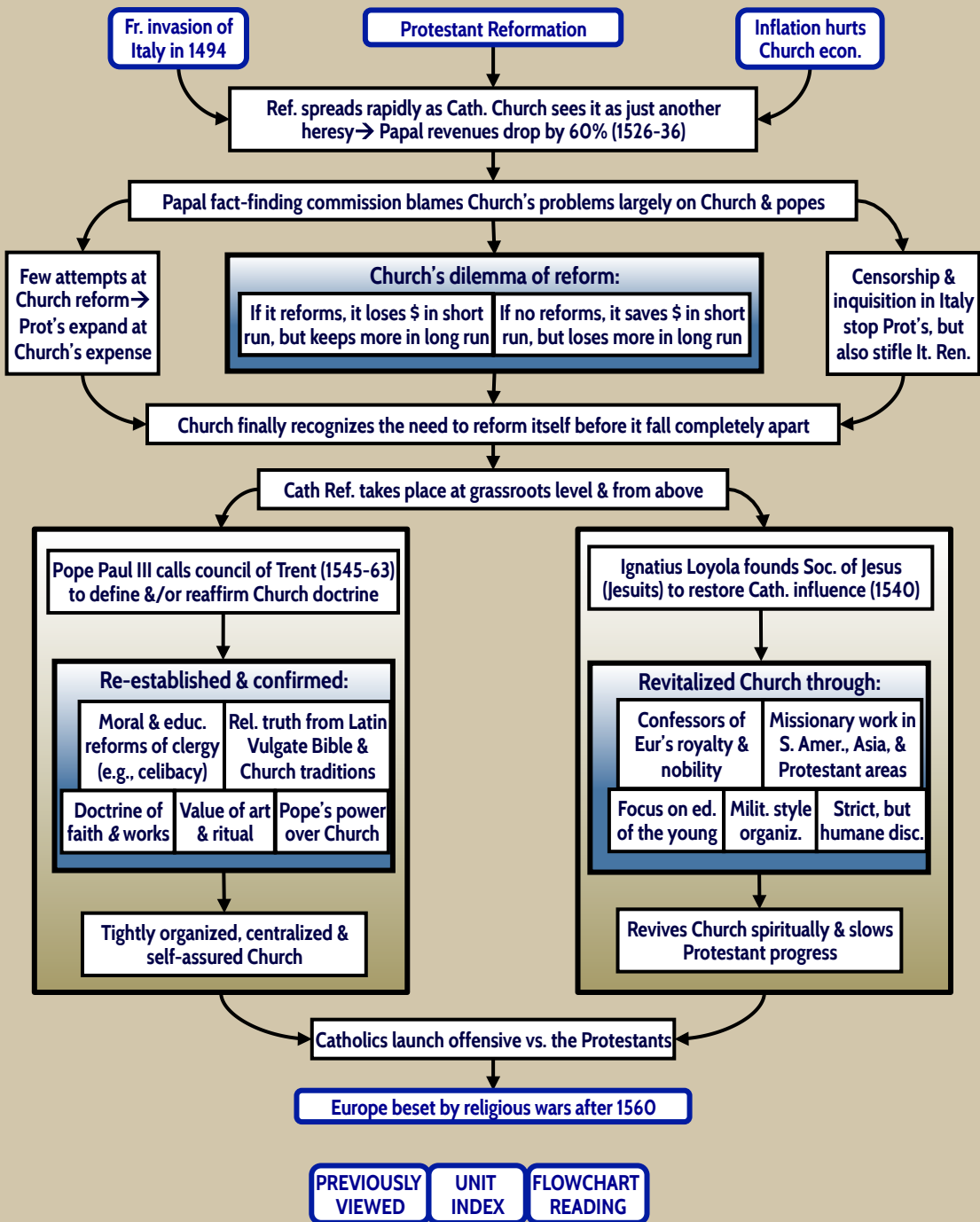
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1652-58



11.15 THE AGE OF RELIGIOUS WARS (1560-1598)

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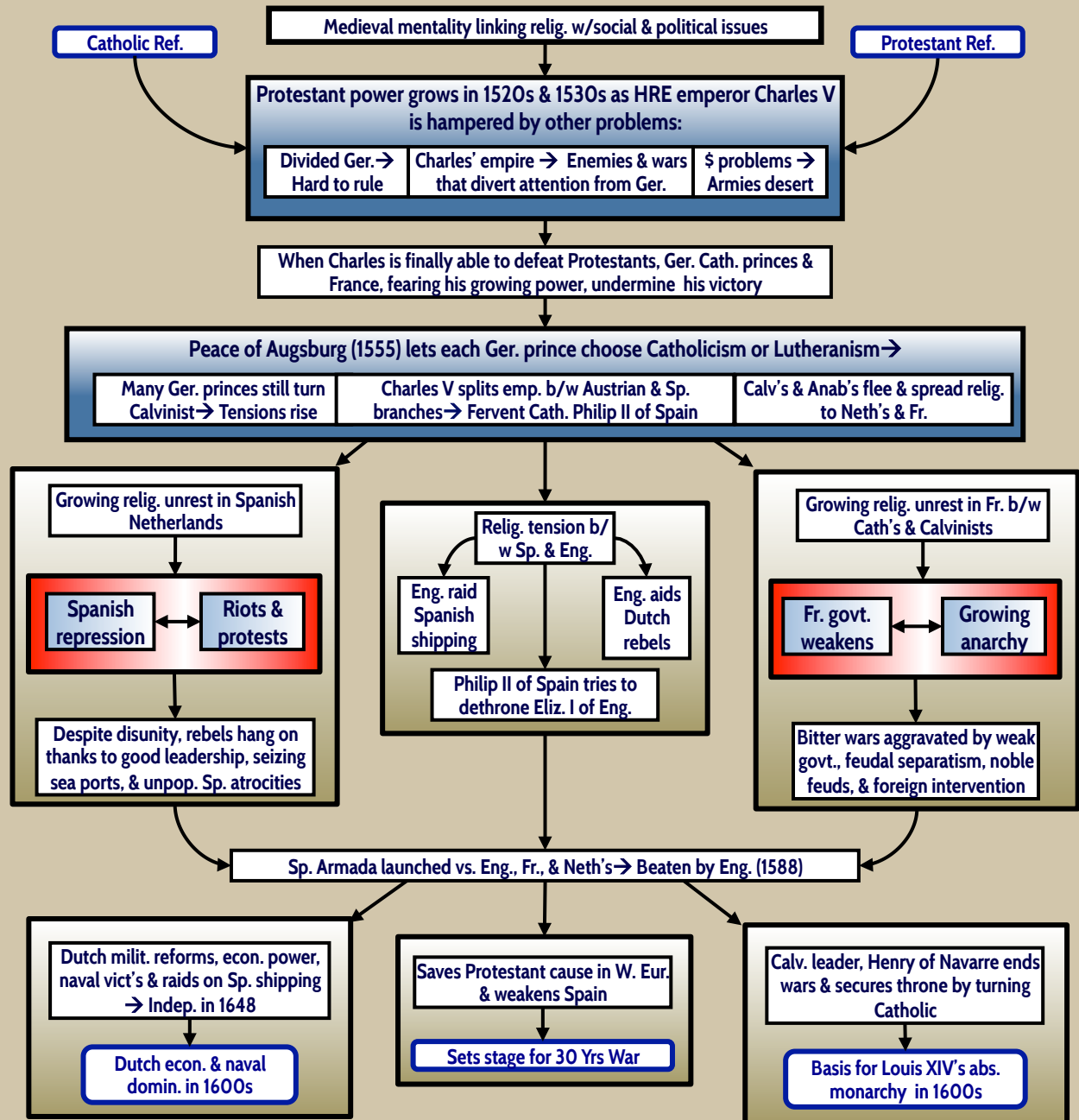
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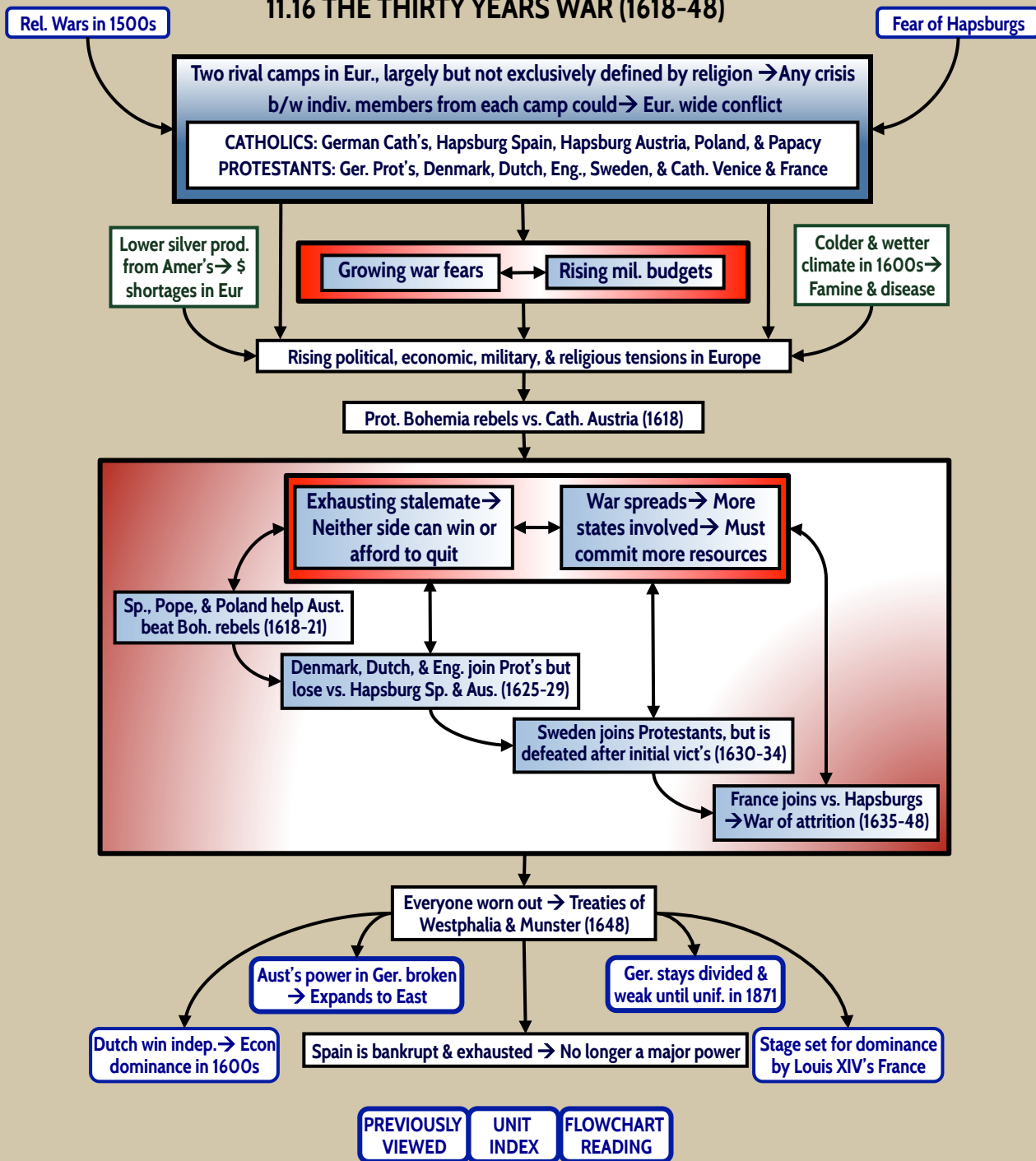
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11.16 THE THIRTY YEARS WAR (1618-48)



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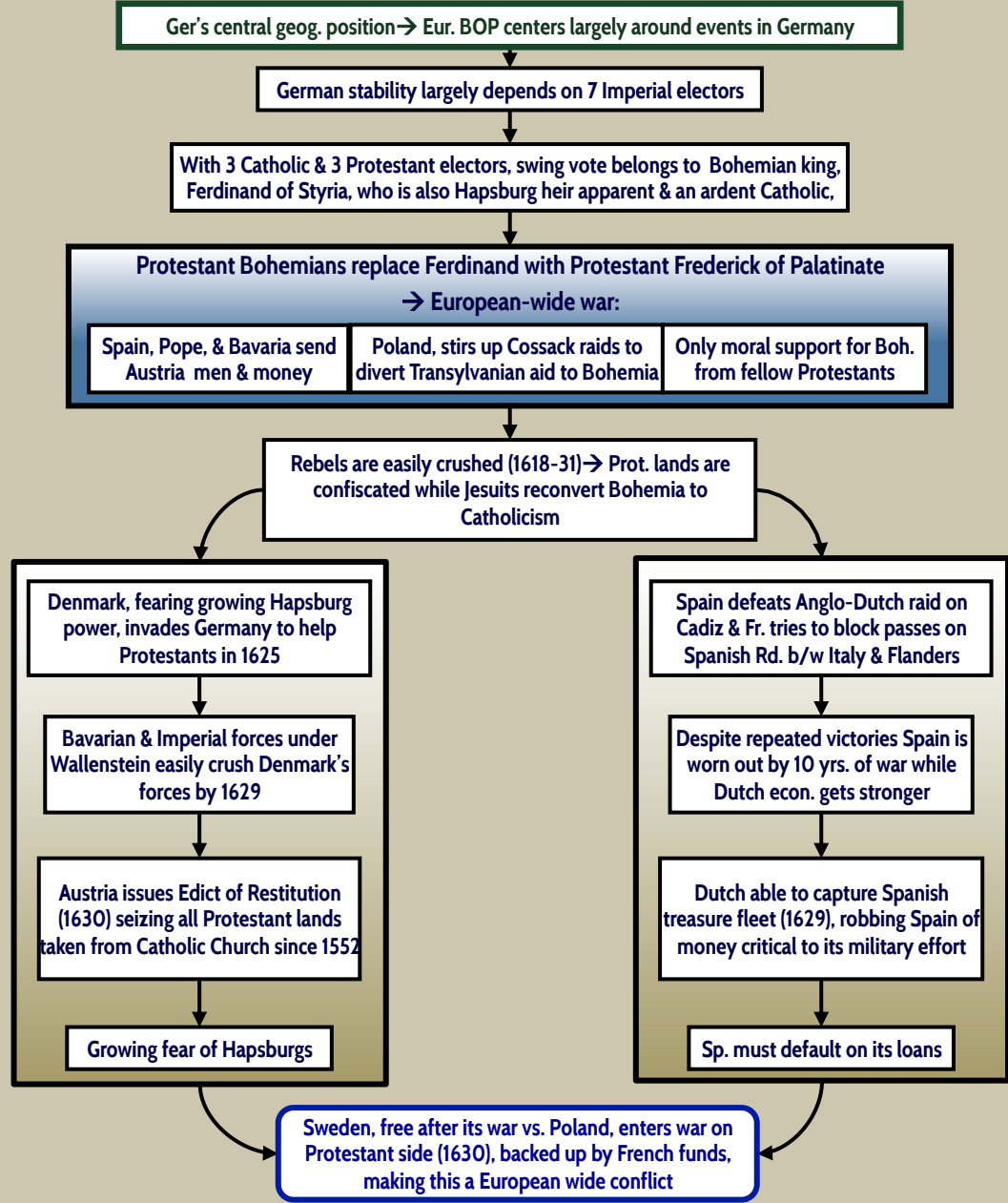
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11.16A THE START OF THE THIRTY YEARS WAR (1618-30)



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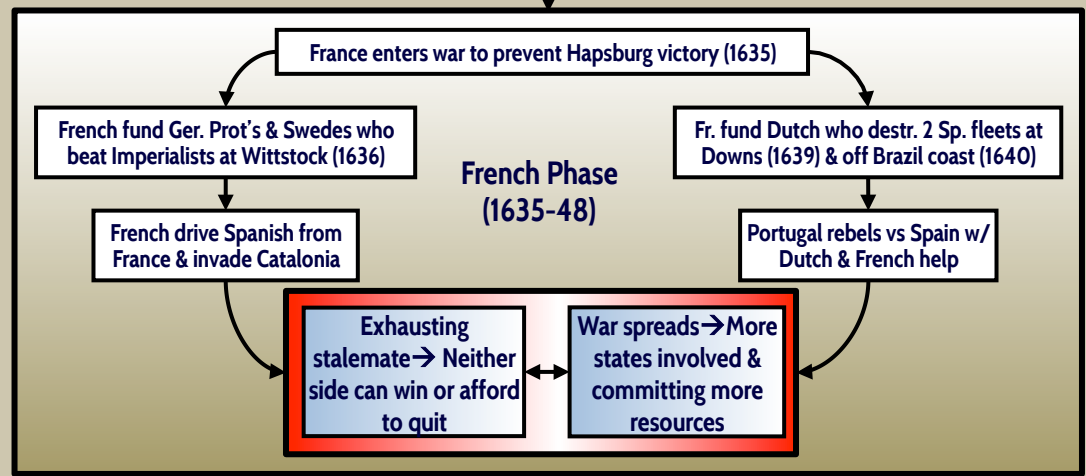
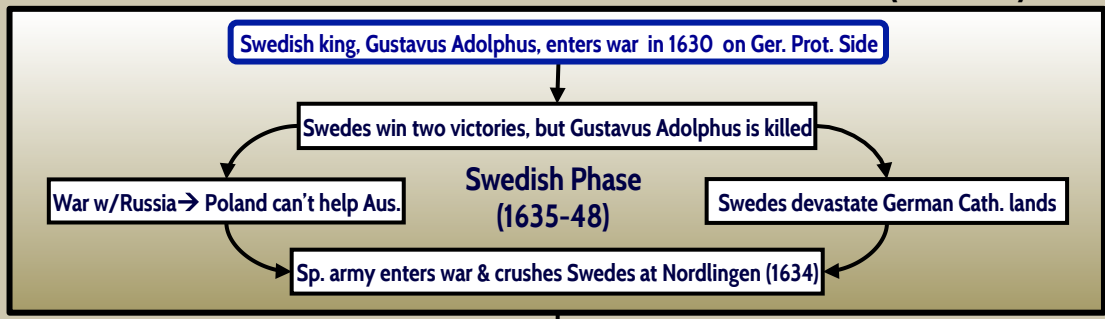
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1648 Charles I of England beheaded

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1652-58

11.16B THE THIRTY YEARS WAR: THE WAR OF ATTRITION (1630-48)

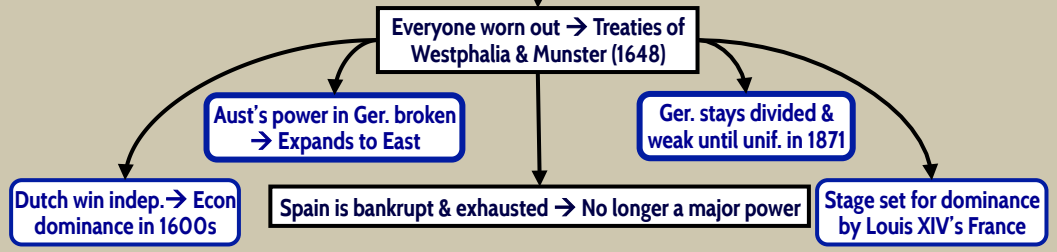


Everyone exhausted → Peace talks begin at Westphalia & Munster (1645) but drag on because:

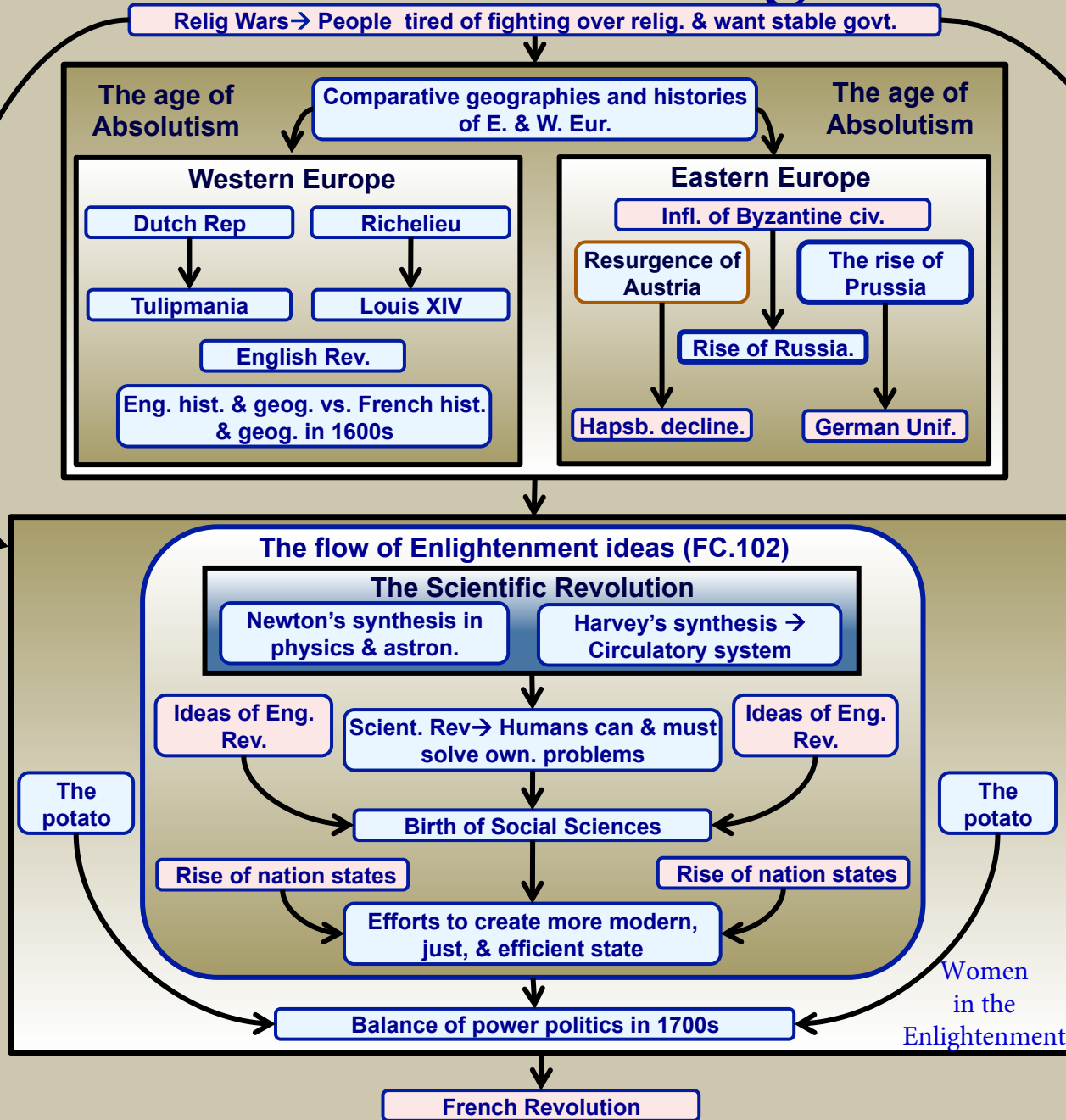
France & Sweden insist on tough demands

Using Germany as a battleground to wear down Austria suits France & Sweden

Austria, desperate to save what it can, refuses to admit defeat



12. Absolutism & Enlightenment



12.1. COMPARATIVE GEOGRAPHIES & HISTORIES OF EASTERN & WESTERN EUROPE

1598-1613 "Time of Troubles" in Russia Bernini

1598-1680 Frederick-William the Great Elector of Prussia's reign

1640-88 English Civil Wars Caravaggio

1642-48 Cardinal Mazarin's regency for Louis XIV

1643-61 Dutch indep. & end of 30 Yrs. War

1648 Fronde vs. Mazarin's rule Charles I of England beheaded

1649 Rembrandt Cromwell's dictatorship

1652-58 1st Anglo-Dutch Naval War

1652-4 N. War b/w Sweden, Poland, & Prussia

1655-60 Jan Vermeer

1632-75 Louis XIV begins active rule & Stuart monarchy restored in Eng.

1661 Plague hits London

1665 Great London Fire

1666 2nd Anglo-Dutch Naval War

1665-7 3rd Anglo-Dutch Naval War (ends 1674) & Dutch War w/Louis XIV

1672-8 William III of Holland marries Mary Stuart

1674 Louis XIV makes Versailles his official residence

1682 Turks besiege Vienna -> War of Holy League

1683 Louis XIV revokes Edict of Nantes

1685 Glorious Rev. in Britain

1688 Nine Years War

1688-97 Peter I's Great Embassy to the West

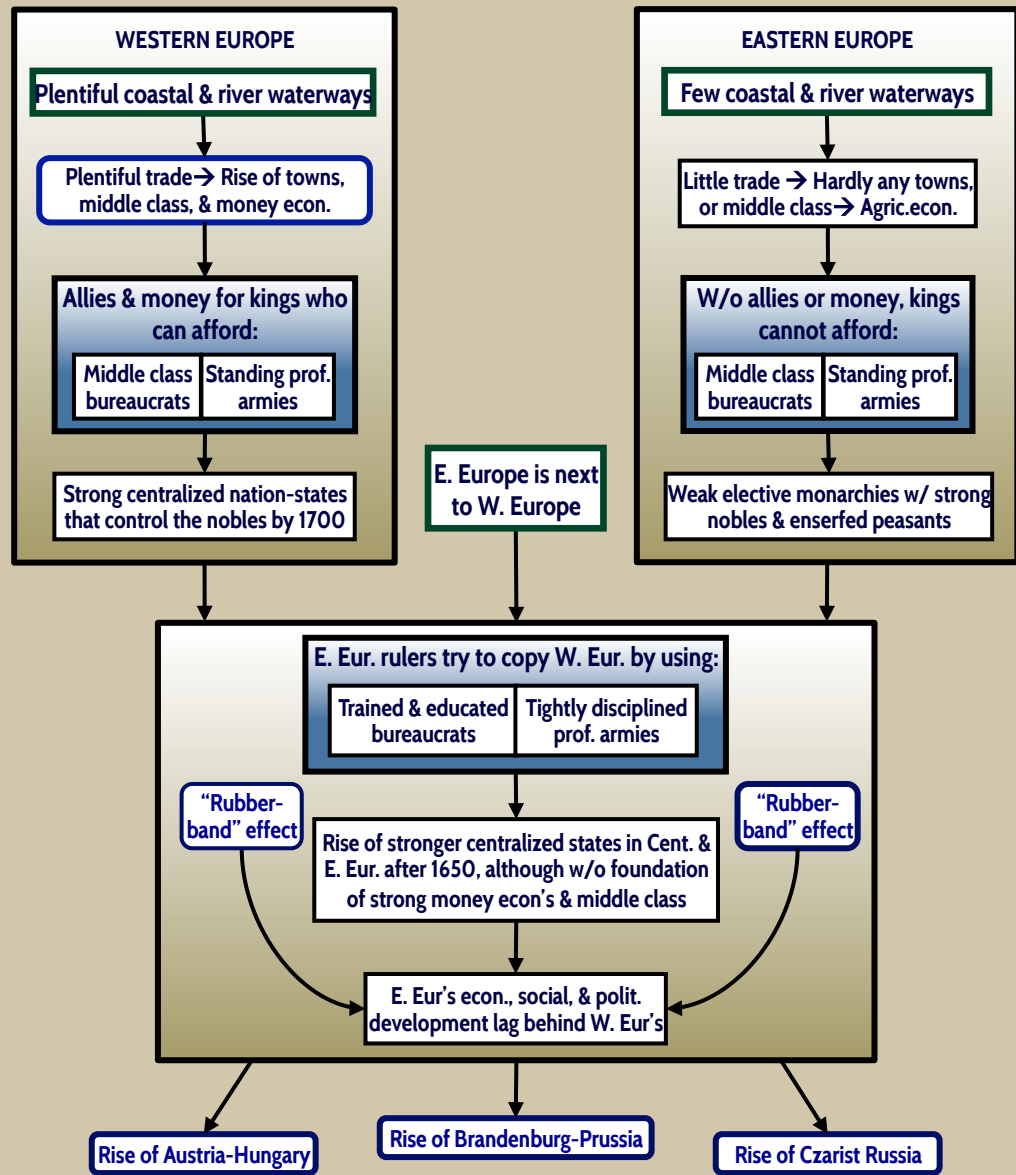
1697 War of the Spanish Succession

1700-13 Great N. War b/w Russia & Sweden

1700-21 Death of Louis XIV

1715 Peter the Great dies

1725



12.2 THE RESURGENCE OF HAPSBURG AUSTRIA (c.1650-1800)

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1598-1680 Frederick-William the Great Elector of Prussia's reign

1640-88 English Civil Wars Caravaggio

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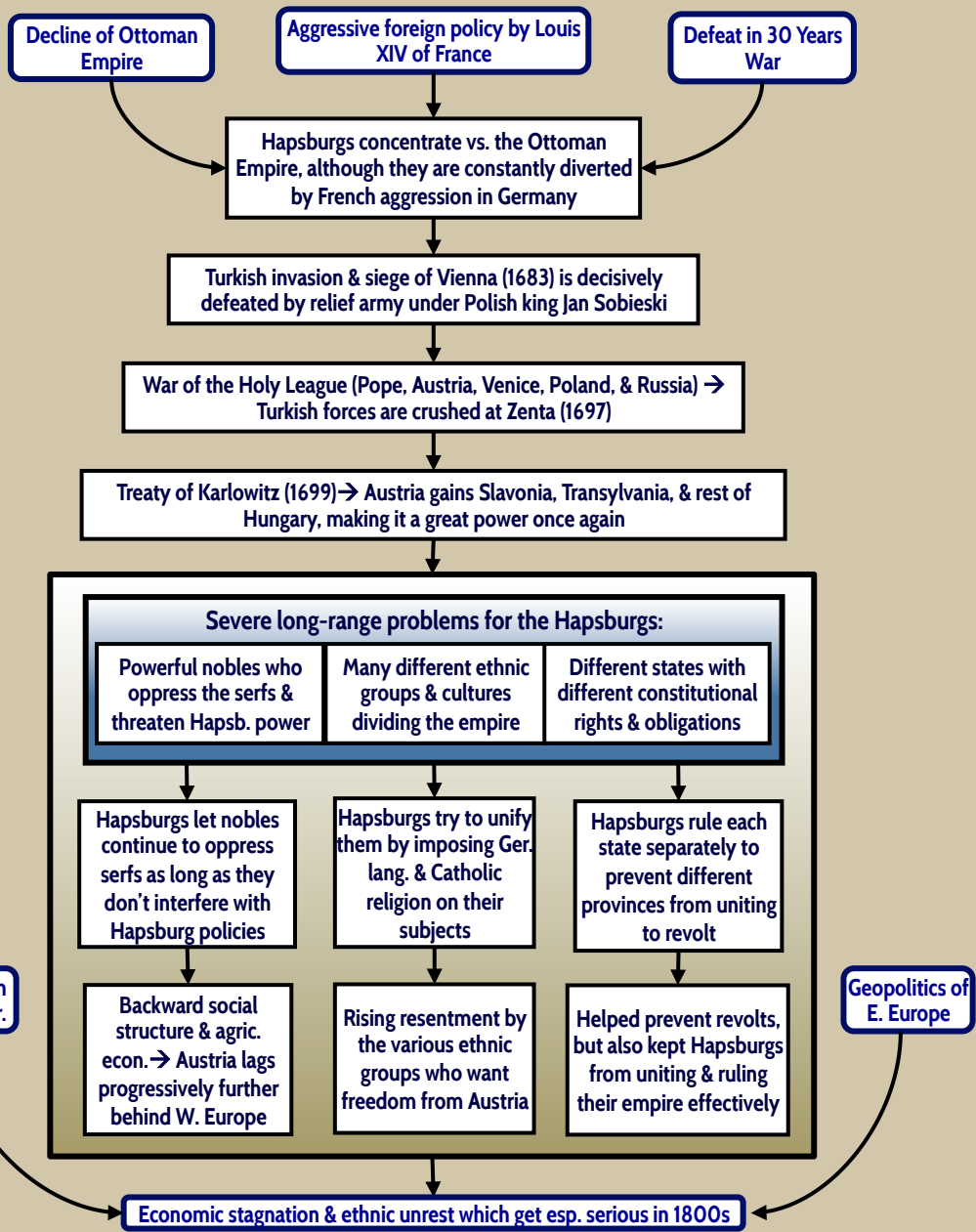
1697 War of the Spanish Succession

1700-13 Great N. War b/w Russia & Sweden

1700-21 Death of Louis XIV

1715 Peter the Great dies

1725



12.3 THE RISE OF BRANDENBURG-PRUSSIA (1640-88)

1598-1613 "Time of Troubles" in Russia Bernini

1598-1680 Frederick-William the Great Elector of Prussia's reign

1640-88 English Civil Wars Caravaggio

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1700-21 Death of Louis XIV

1715 Peter the Great dies

1725

Thirty Years War devastates Ger., esp. Brandenburg-Prussia which lost up to 60% of its population

Frederick-William Hohenzollern, "The Great Elector" (1640-88) faces many problems:

Brand. & Pruss. separated by Polish territory	Destruction from Thirty Years War	Strong neighbors using Brand-Pr as a battleground	Unruly & powerful nobles & army	Poor soil & few natural resources
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Fr-Wm concentrates on building his army using:

Nobles as officers & bur's, giving them pay, status, & power over serfs	Mercenaries, but also peasant recruits -> Cheap & loyal trained reserve
---	---

Tradition of efficient milit. & govt. run by nobles w/strong civic spirit

Br-Pr the only Eur. state to ally w/its nobles & use them in service to state

Use bureaucracy & army to enforce its will

State demands taxes to increase mil. & bureauc.

Measures to unify & defend Br-Pr:

Postal system to connect his lands & make \$	Opportunistic foreign policy of switching sides
--	---

By 1688 Br-Pr has preserved & even expanded its borders

Foundations of absolutism in Br-Prussia

Measures to build Br-Pr's econ.

Peacetime army builds roads, canals, etc.	Encourages new crops, ag. tech's & immigration.
---	---

By 1688 Br-Pr's pop. has recovered & its tax rev has grown 25X

Basis for Prussia's eventual unification of Germany

1598-1613 "Time of Troubles" in Russia

1598-1680 Bernini

1640-88 Frederick-William the Great Elector of Prussia's reign

1642-48 English Civil Wars

1571-1610 Caravaggio

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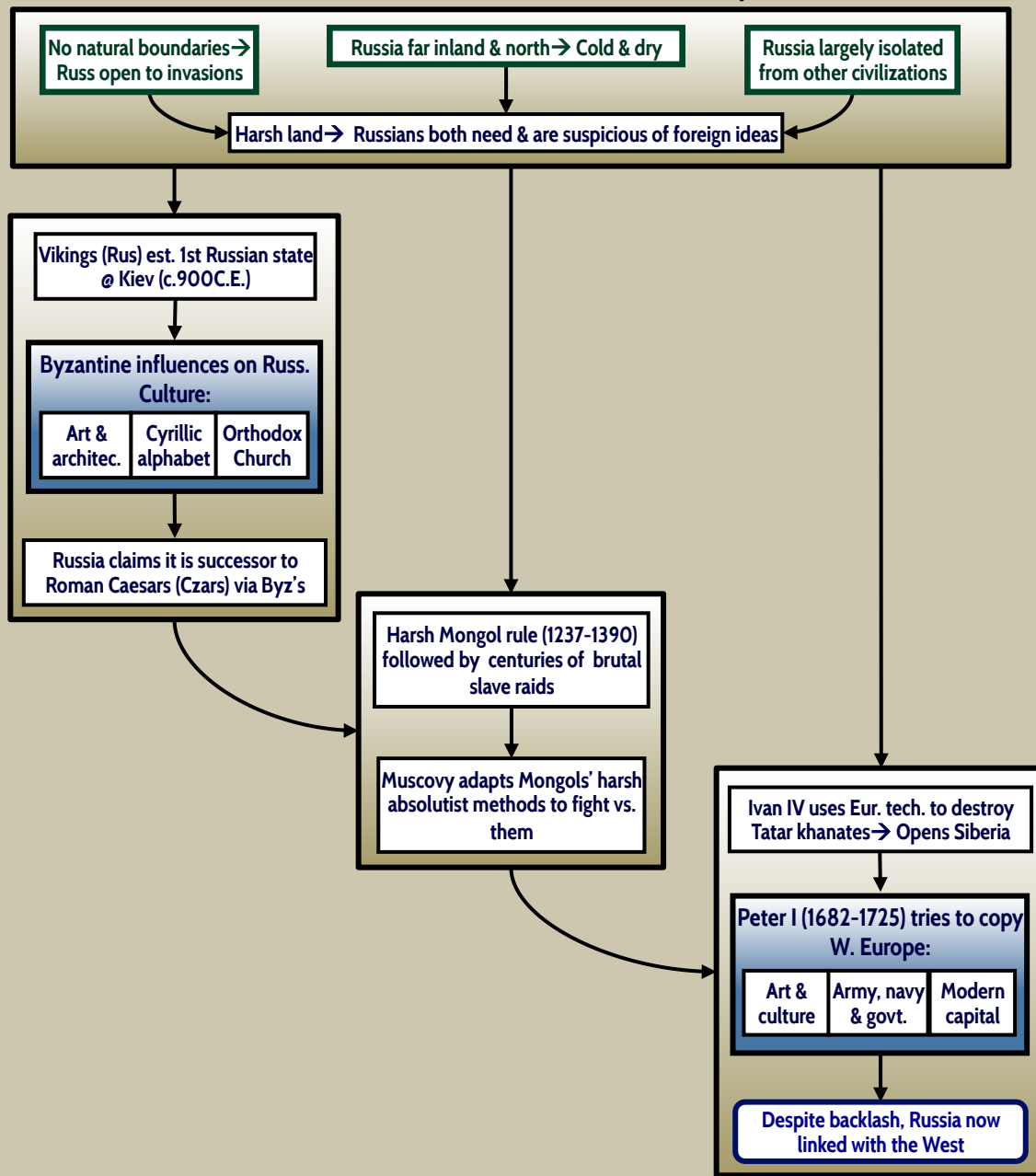
1700-13 War of the Spanish Succession

1700-21 Great N. War b/w Russia & Sweden

1715 Death of Louis XV

1725 Peter the Great dies

12.4 THE THE RISE OF RUSSIA TO 1725)



12.4A THE RISE OF RUSSIA (c.900-1725)

Russia's harsh geog → Harsh history

Vikings (Rus) conquer Slavic settlers & est. 1st Russian state at Kiev (c.900) → Launch raids vs. Byz's

Vikings (Rus) conquer Slavic settlers & est. 1st Rus. state at Kiev (c.900) → Raids vs. Byz's → Byz. missionaries follow them back & influence Rus. Civ.:

Cyrillic alphabet	Greek (later Russian) Orthodox Church	Art & architecture
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Rus. civiliz. thrives until Mongols conquer Kiev (1237) & instill harsh absolutist strain in Russian govt.:

Regular censuses & taxation	Use of secret police & terror
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Rise of Muscovy which adopts Mongols' absolutist practices to drive out Mongols (1390) & exert control over Russia

Claims it is the "3rd Rome" & its rulers are Tsars (Caesars) after Constantinople falls (1453) & head of Rus. Orth. Church moves to Moscow

Reign of Ivan IV "The Terrible" (1533-84) → Rising infl. from W. both helps & stresses Rus. soc.:

Uses W. artillery to dest. 2 Tatar (Mongol) khanates → Opens Siberia for settlement	Growing fear of encroachment by Cath. Church backed by Eur. scholarship	Tries to replace boyars (Rus. nobles) w/new nobility of service (<i>dvoriane</i>) paid w/land
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Peasants run away to Siberia to avoid serving nobles → State enserfs peasants → Time of Troubles (1598-1613) marked by rebellions, plague, & Polish invasions

Orthodox Church thwarts efforts of Romanov Dyn. & other reformers to modernize (i.e., Westernize) Russia until Peter I "The Great" (1682-1725) who devotes reign to

Eur. style capital & "Window to West" at St. Petersburg (1703)	Eur. style army, navy, & merchant marine	Eur. style econ: mining, textiles, shoes, etc.	Eur. Style govt. but no educ. MC to provide bur's	Eur. style schools, art, arch., music, theater, libraries, fashions, etc
--	--	--	---	--

Despite backlash, Peter's efforts permanently link Russia with the West

1598-1613	 "Time of Troubles" in Russia	 Bernini
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1685	 Glorious Rev. in Britain	 Nine Years War
1688		
1688-97	 Peter I's Great Embassy to the West	
1697		 War of the Spanish Succession
1700-13	 Great N. War b/w Russia & Sweden	
1700-21		
1715	 Death of Louis XV	 Peter the Great dies
1725		

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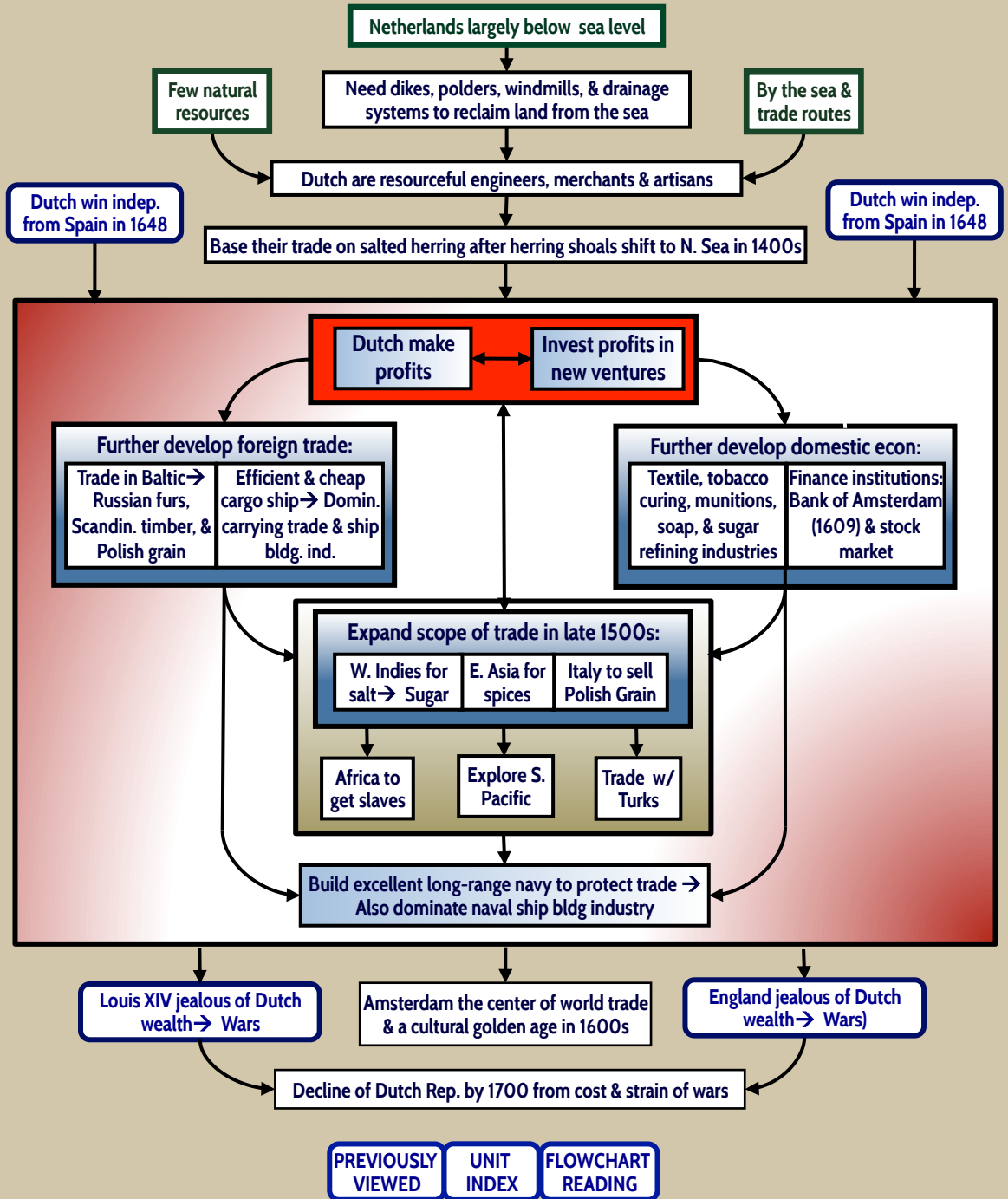
1700-13 Great N. War b/w Russia & Sweden

1700-21 Death of Louis XIV

1715 Peter the Great dies

1725

12.5 THE DUTCH REPUBLIC IN THE 1600S



12.5A "TULIPMANIA": THE FIRST MODERN SPECULATIVE BOOM (1636-37)

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1685-1688 Glorious Rev. in Britain Nine Years War

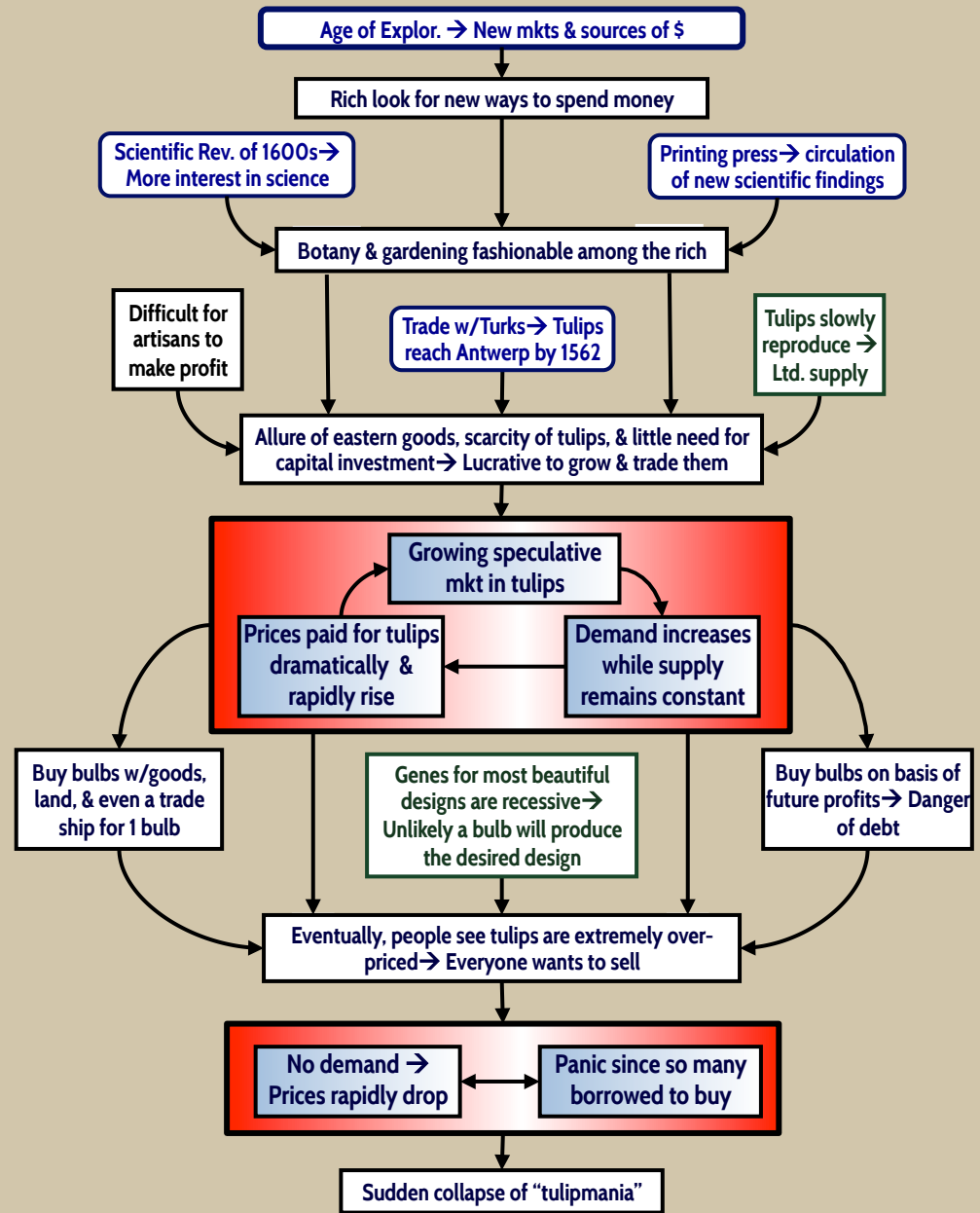
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1697-1700-13 War of the Spanish Succession

1700-21 Great N. War b/w Russia & Sweden

1715 Death of Louis XV Peter the Great dies

1725



12.6 THE FOUNDATIONS OF ABSOLUTISM IN FRANCE (1598-1661)

Monarchy cannot stop chaos of relig. wars in Fr. → People want strong king to ensure the peace

Sully and Richelieu (ministers for Henry IV and Louis XIII) expand royal power at expense of nobles:

- | | |
|--|-------------------------------------|
| Repudiate or pay loans at lower interest | Paulette: tax on hereditary offices |
| Ban duels | Exclude nobles from royal councils |
| Crush any plots & conspiracies | Burn castles |

MERCANTILISM: Econ policy & theory that sees gold & silver as sole measures of wealth → State develops & supports ind's, roads, merch. marine, colonies, etc. to cut imports & raise exports

Mercantilism is both good news & bad news:

- | | |
|--|---|
| GOOD b/c kings are showing interest in state's economy by developing roads, industries, etc. | BAD b/c kings are showing <i>too much</i> interest in state's econ. W/ heavy handed absolutist rule that stifles initiative |
|--|---|

France feels strong enough to enter Thirty Years War → Pay for it by selling "tax farms"

Create royal *intendants* (1633) who report corruption & ensure tax farmers get their \$

Law suits → Go to royal, not local courts, b/c intendants are royal officials w/ no precedent of going anywhere but royal ct's → Intendants (& king) always win

Gradually increase duties & powers of intendants & create parallel structure of non-feudal provinces (*generalites*) overlapping old feudal prov's

Royal intendants take over many of old feudal officials' duties & powers w/o actually replacing them → Further decline of nobles

Intendants become the most reliable element in royal gov't until French Revolution

Basis for Louis XIV's abs. monarchy

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1598-1680		English Civil Wars		Frederick-William the Great
1640-88				Caravaggio
1642-48				
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1649		Rembrandt		Cromwell's dictatorship
1606-69				
1652-58		N. War b/w Sweden, Poland, & Prussia		1st Anglo-Dutch Naval War
1652-4				
1655-60				Jan Vermeer
1632-75		Louis XIV begins active rule & Stuart monarchy restored in Eng.		
1661				Plague hits London
1665		Great London Fire		
1666				2nd Anglo-Dutch Naval War
1665-7				
1672-8		3rd Anglo-Dutch Naval War (ends 1674) & Dutch War w/Louis XIV		
1674				Louis XIV makes Versailles his official residence
1682		Turks besiege Vienna → War of Holy League		
1683				Louis XIV revokes Edict of Nantes
1685		Glorious Rev. in Britain		Nine Years War
1688-97				
1697		Peter I's Great Embassy to the West		
1700-13		War of the Spanish Succession		
1700-21				Great N. War b/w Russia & Sweden
1715		Death of Louis XIV		Peter the Great dies
1725				

1598-1613 "Time of Troubles" in Russia Bernini

1598-1680 Frederick-William the Great Elector of Prussia's reign

1640-88 English Civil Wars Caravaggio

1642-48 Cardinal Mazarin's regency for Louis XIV

1643-61 Dutch indep. & end of 30 Yrs. War

1648 Fronde vs. Mazarin's rule

1648-53 Charles I of England beheaded

1649 Rembrandt Cromwell's dictatorship

1606-69 Jan Vermeer

1652-58 1st Anglo-Dutch Naval War

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1672-8 Louis XIV makes Versailles his official residence

1674 Turks besiege Vienna -> War of Holy League

1682 Louis XIV revokes Edict of Nantes

1683 Louis XIV revokes Edict of Nantes

1685 Glorious Rev. in Britain

1688-97 Nine Years War

1697 Peter I's Great Embassy to the West

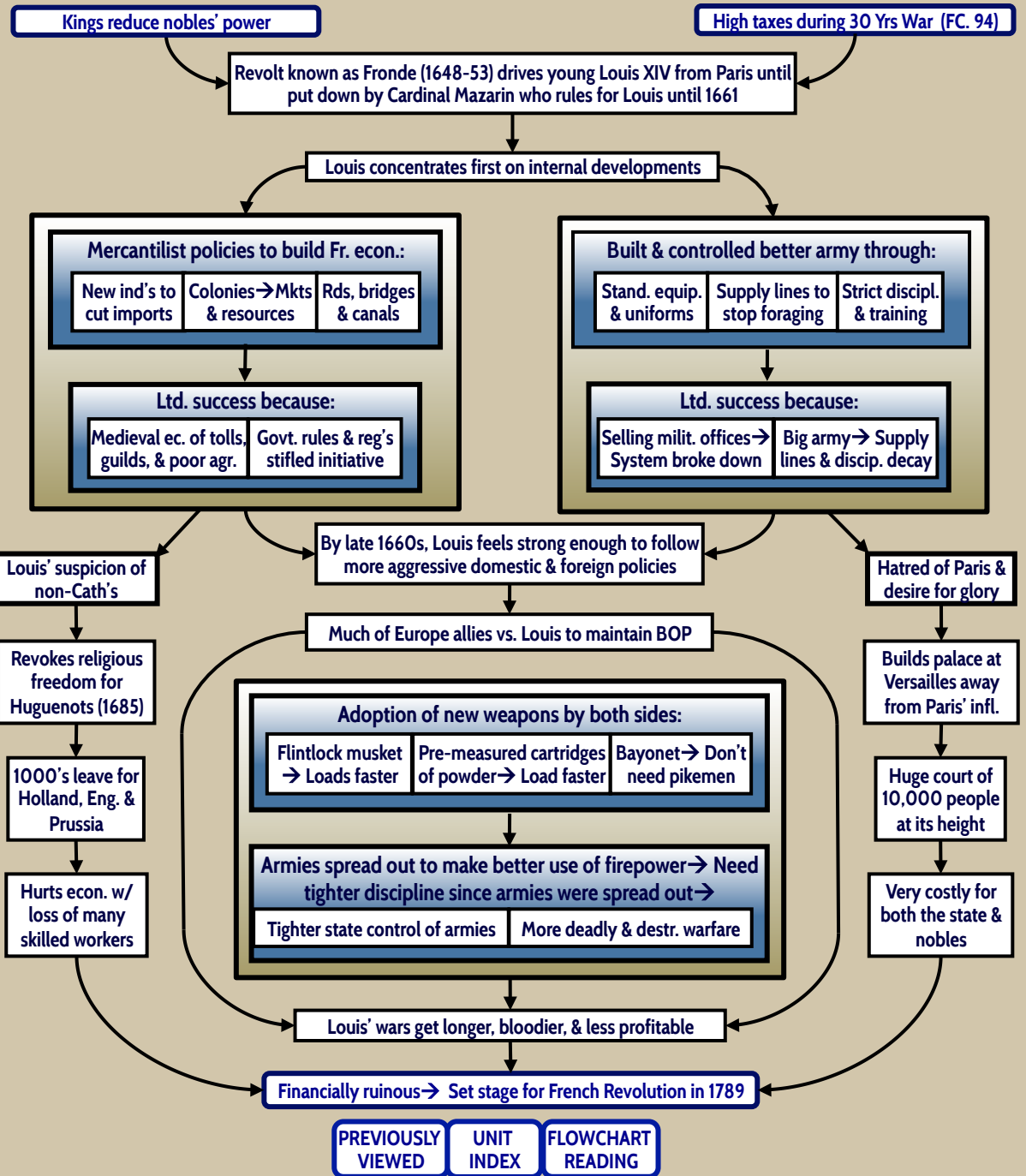
1700-13 War of the Spanish Succession

1700-21 Great N. War b/w Russia & Sweden

1715 Death of Louis XIV

1725 Peter the Great dies

12.7 LOUIS XIV'S FRANCE (1661-1715)



1598-1613 "Time of Troubles" in Russia
Bernini

1598-1680 Frederick-William the Great Elector of Prussia's reign

1640-88 English Civil Wars
Caravaggio

1642-48 Cardinal Mazarin's regency for Louis XIV

1643-61 Dutch indep. & end of 30 Yrs. War

1648 Fronde vs. Mazarin's rule

1648-53 Charles I of England beheaded

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1672-8 Louis XIV makes Versailles his official residence

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1683 Glorious Rev. in Britain

1685 Nine Years War

1688-97 Peter I's Great Embassy to the West

1697 War of the Spanish Succession

1700-13 Great N. War b/w Russia & Sweden

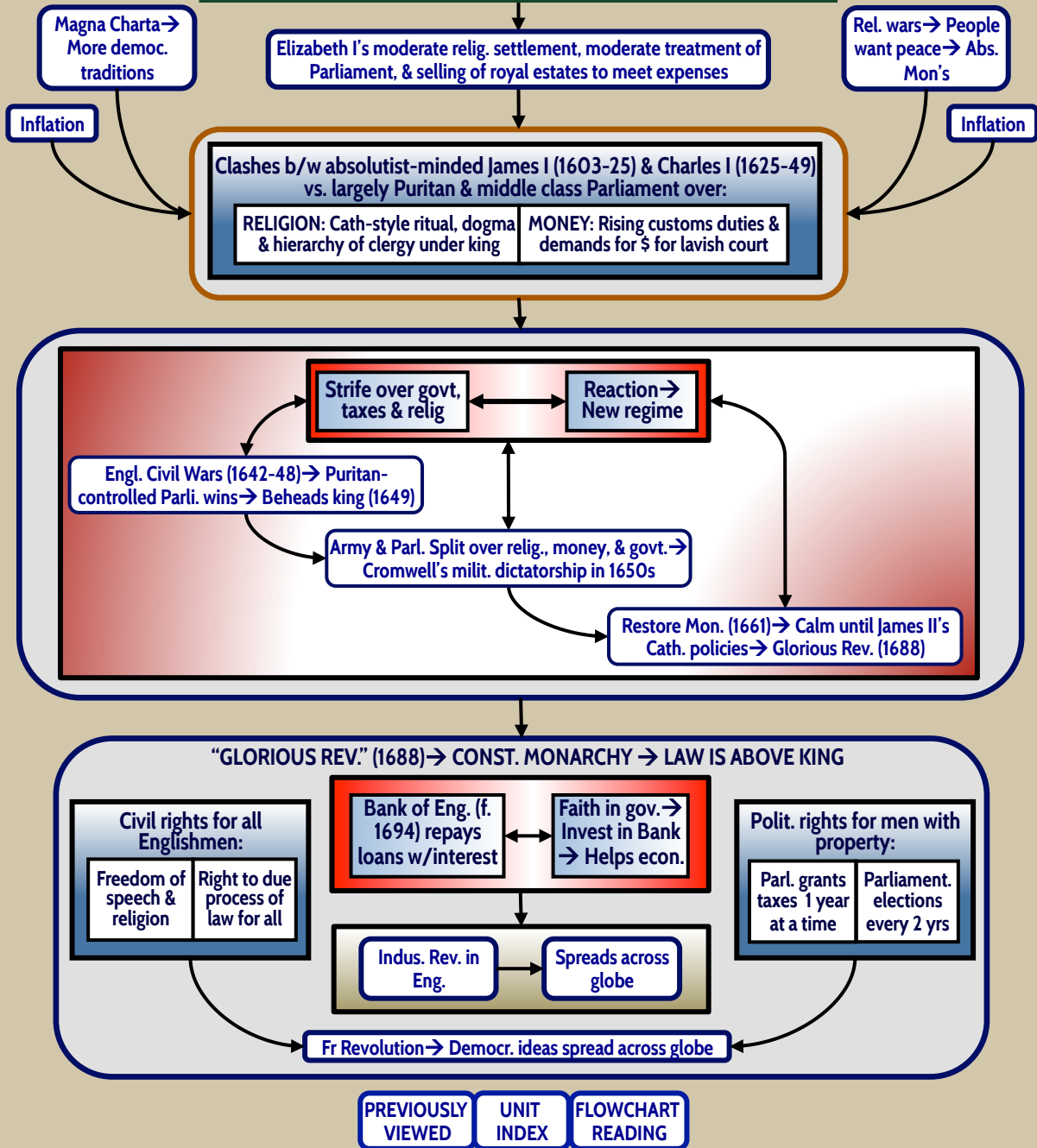
1700-21 Death of Louis XIV

1715 Peter the Great dies

1725

12.8 THE ENGLISH REVOLUTION (1603-1688)

Eng. an island → More trade & few invasions → Strong MC & less need for army



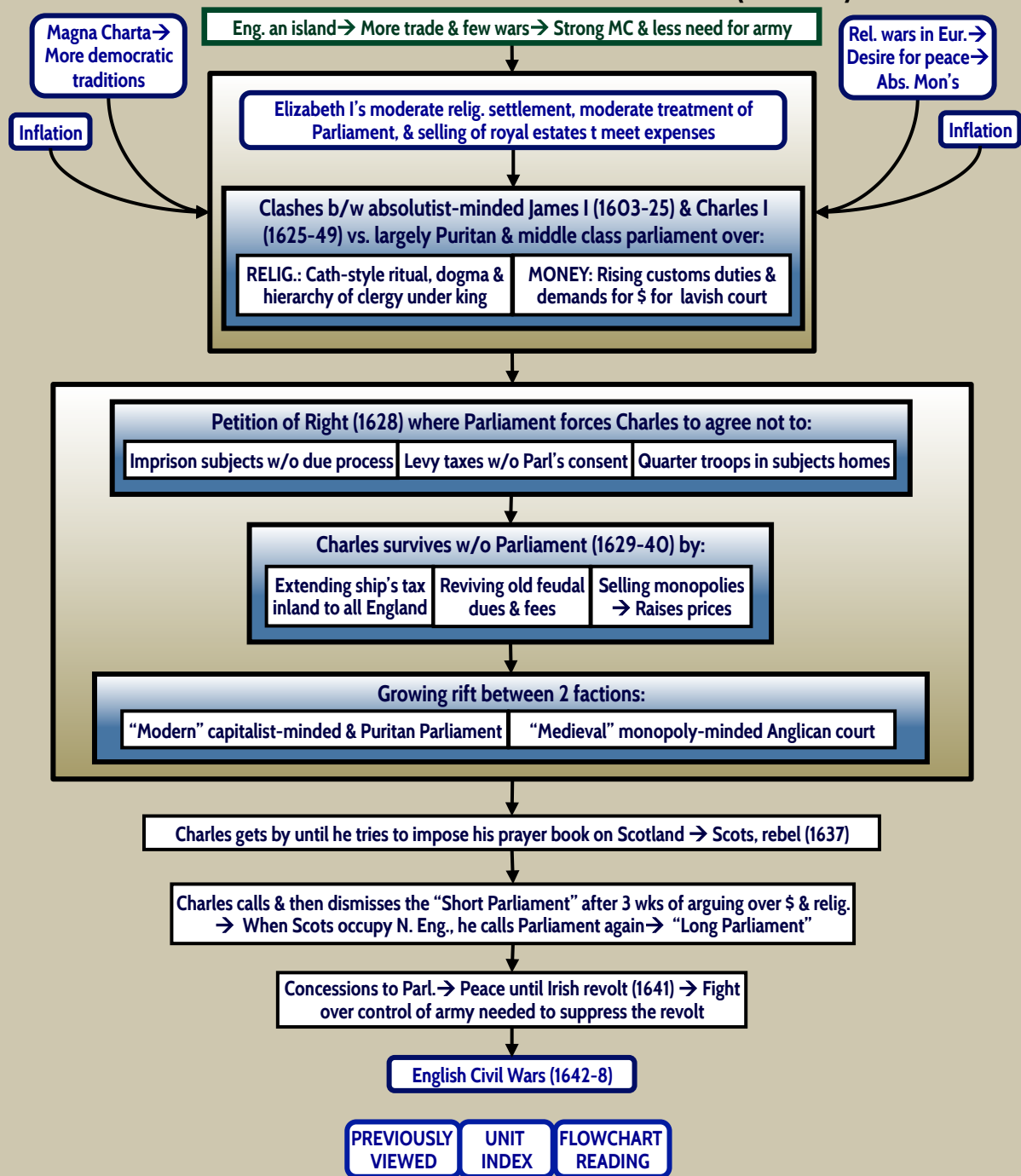
PREVIOUSLY VIEWED

UNIT INDEX

FLOWCHART READING

1598-1613 "Time of Troubles" in Russia
 1598-1680 Bernini
 1640-88 Frederick-William the Great Elector of Prussia's reign
 1642-48 English Civil Wars
 1571-1610 Caravaggio
 1643-61 Cardinal Mazarin's regency for Louis XIV
 1648 Dutch indep. & end of 30 Yrs. War
 1648-53 Fronde vs. Mazarin's rule
 1649 Charles I of England beheaded
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 1652-58 Cromwell's dictatorship
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 1688-97 Nine Years War
 1697 Peter I's Great Embassy to the West
 1700-13 War of the Spanish Succession
 1700-21 Great N. War b/w Russia & Sweden
 1715 Death of Louis XV
 1725 Peter the Great dies

12.8A THE ROAD TO THE ENGLISH CIVIL WAR (1603-42)



1598-1613 "Time of Troubles" in Russia

1598-1680 Bernini

1640-88 Frederick-William the Great Elector of Prussia's reign

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1685 Louis XIV revokes Edict of Nantes

1688 Glorious Rev. in Britain

1688-97 Nine Years War

1697 Peter I's Great Embassy to the West

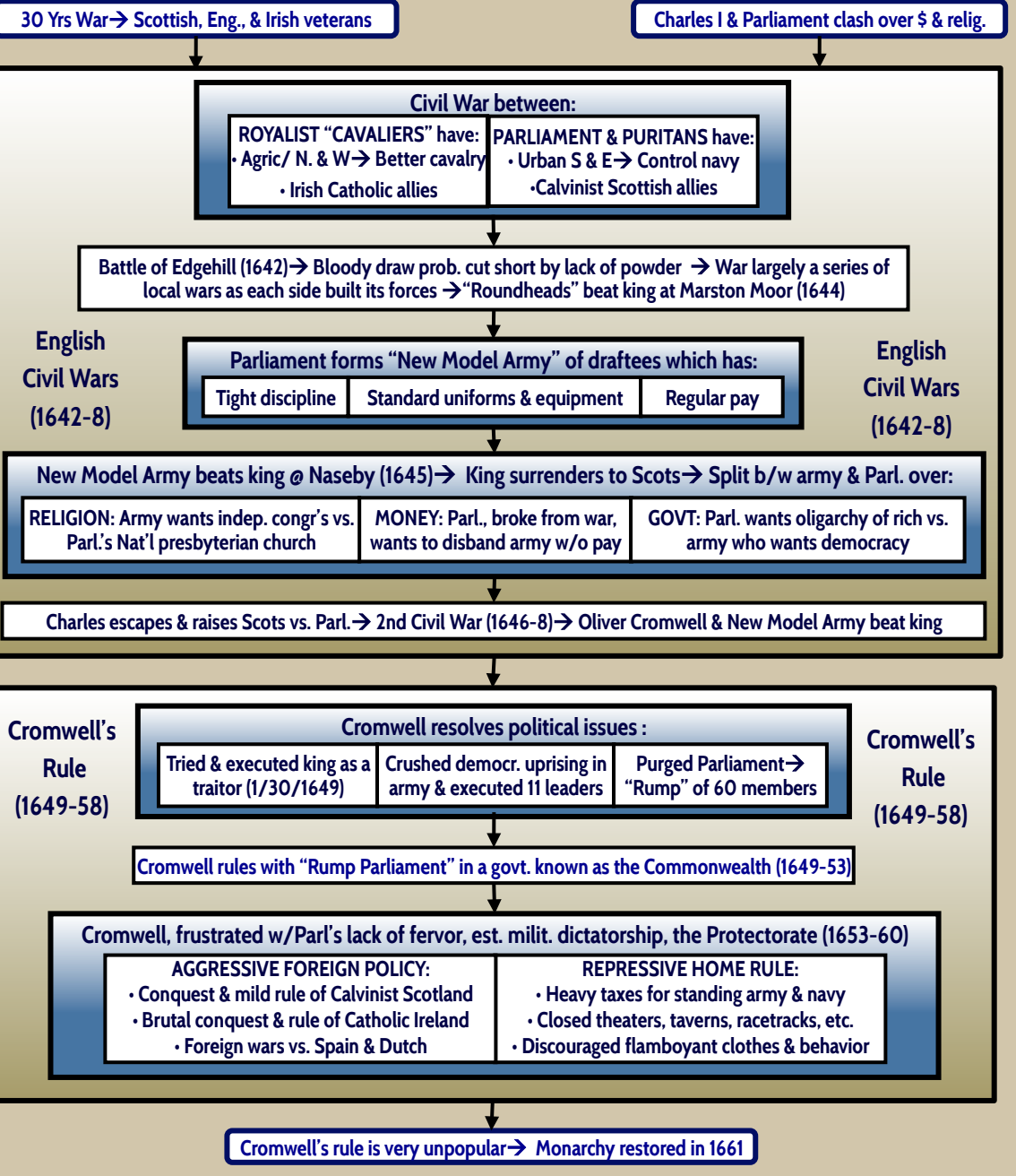
1700-13 War of the Spanish Succession

1700-21 Great N. War b/w Russia & Sweden

1715 Death of Louis XIV

1725 Peter the Great dies

12.8B CIVIL WAR & MILITARY DICTATORSHIP IN ENGLAND (1642-61)



12.8C FROM RESTORATION MONARCHY TO GLORIOUS REVOLUTION

1598-1613 "Time of Troubles" in Russia Bernini

1598-1680 Frederick-William the Great Elector of Prussia's reign

1640-88 English Civil Wars Caravaggio

1642-48 Cardinal Mazarin's regency for Louis XIV

1571-1610 Dutch indep. & end of 30 Yrs. War

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1683 Louis XIV revokes Edict of Nantes

1685 Glorious Rev. in Britain

1688 Nine Years War

1688-97 Peter I's Great Embassy to the West

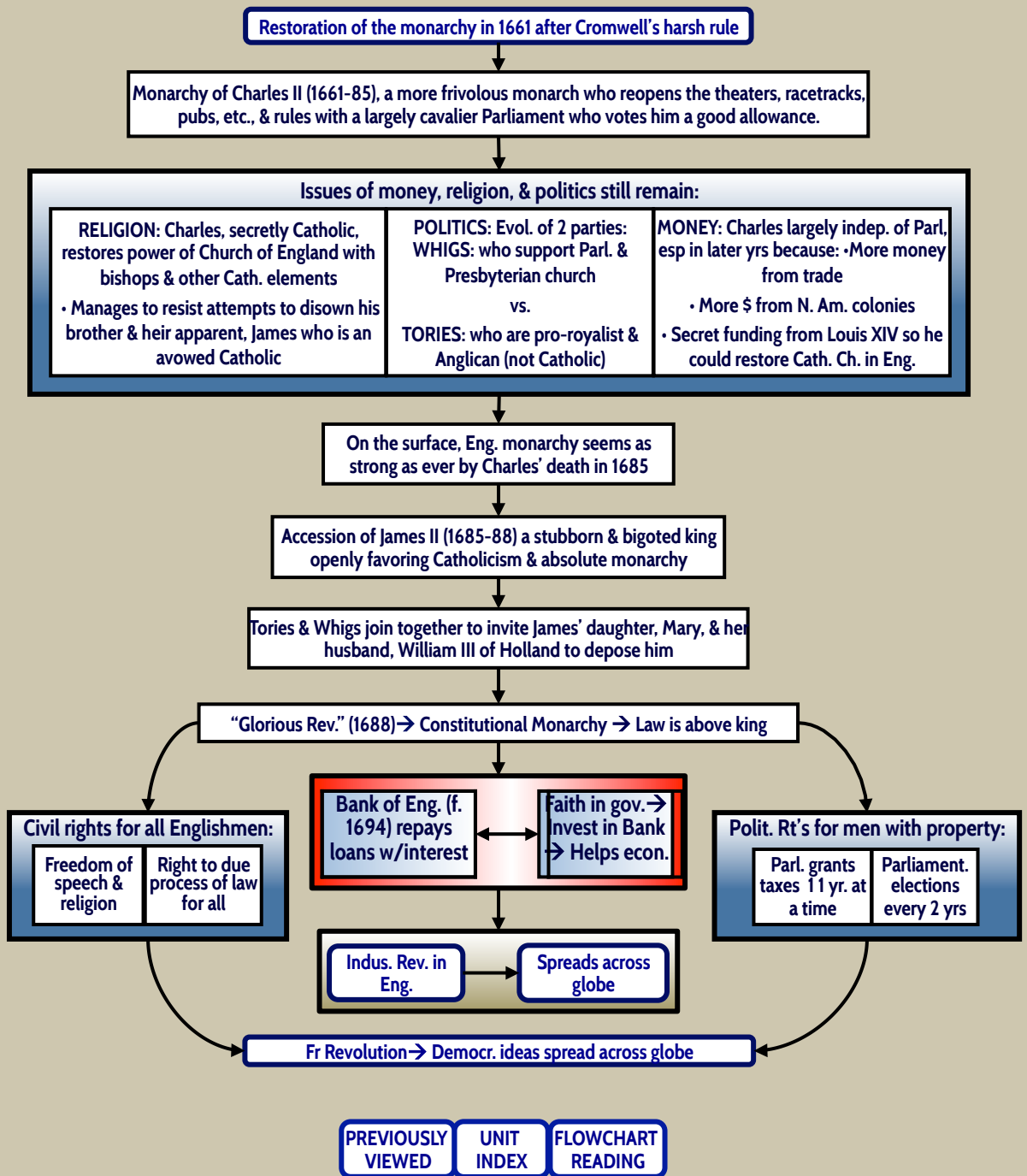
1697 War of the Spanish Succession

1700-13 Great N. War b/w Russia & Sweden

1700-21 Death of Louis XIV

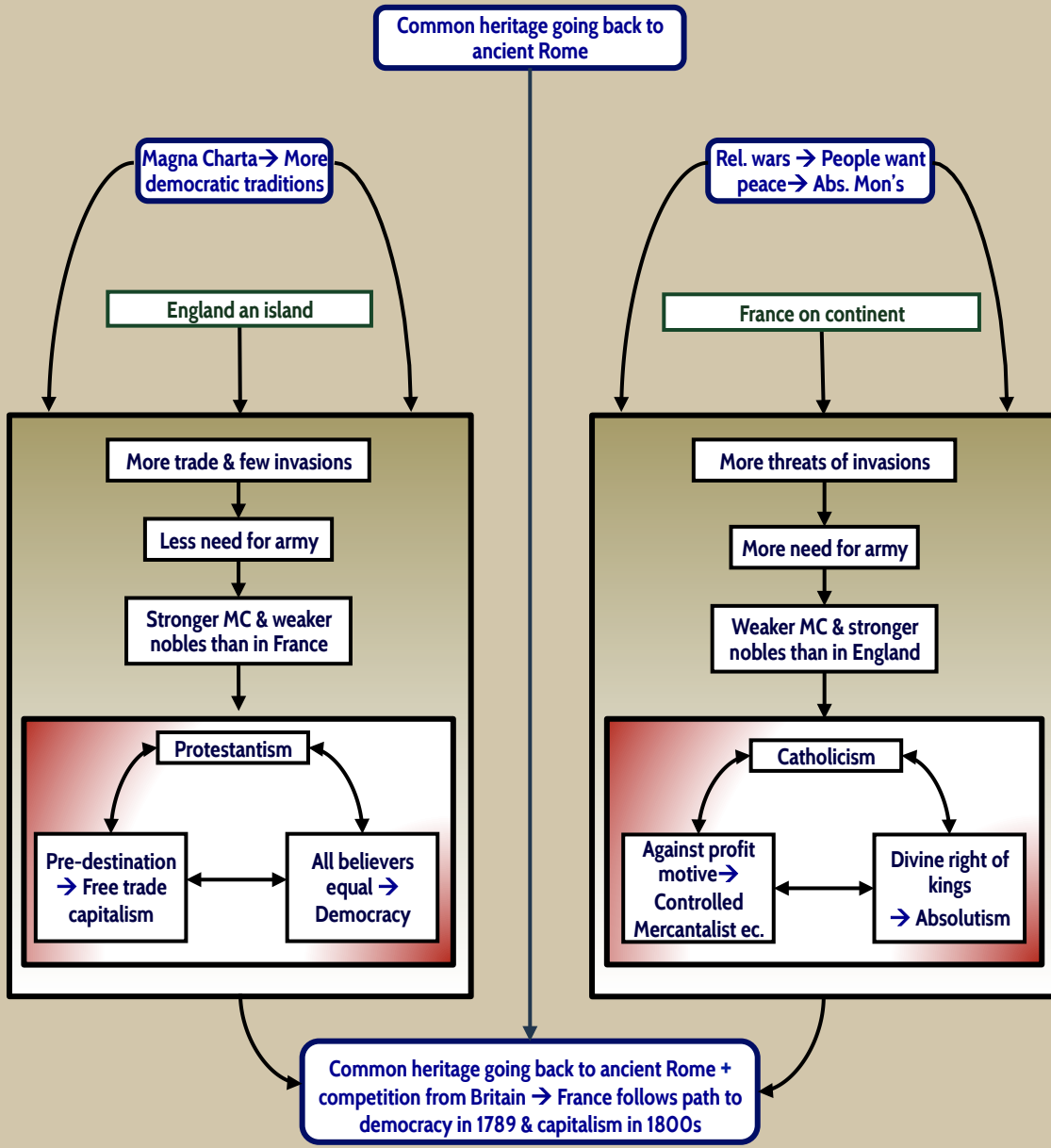
1715 Peter the Great dies

1725



12.8D THE COMPARATIVE GEOGRAPHIES & HISTORIES OF ENGLAND AND FRANCE IN THE 1600s

1598-1613	"Time of Troubles" in Russia	Bernini
1598-1680	Frederick-William the Great	Elector of Prussia's reign
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1652-4	N. War b/w Sweden, Poland, & Prussia	Louis XIV makes Versailles his official residence
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1661	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1665	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1666	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
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1688	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1688-97	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1697	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1700-13	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1700-21	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1715	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes
1725	Louis XIV makes Versailles his official residence	Louis XIV revokes Edict of Nantes



12.9 THE BIRTH OF MODERN PHYSICS AND ASTRONOMY (c.1500-1687)

c.1590 - Invention of microscope

1608 - Galileo's telescope

1622 - Harvey's *De Motu Cordis* on circulatory system

1632 - Galileo's *Dialogue on the Great World Systems*

1651 - John Hobbes' *Leviathan*

1688 - John Locke's *Two Treatises on Government*

1687 - Newton's *Principia Mathematica*

1690 - Frederick the Great of Prussia's reign

1740-88 - War of Austrian Succession

1740-48 - Montesquieu's *Spirit of the Laws*

1751-65 - Diderot's *Encyclopedia*

1756-63 - Seven Years War

1759 - Voltaire publishes *Candide* in reaction to Lisbon earthquake

1762 - Rousseau's *Social Contract* on liberty & *Emile* on education

1762-96 - Catherine the Great's reign

1775-83 - American Revolution

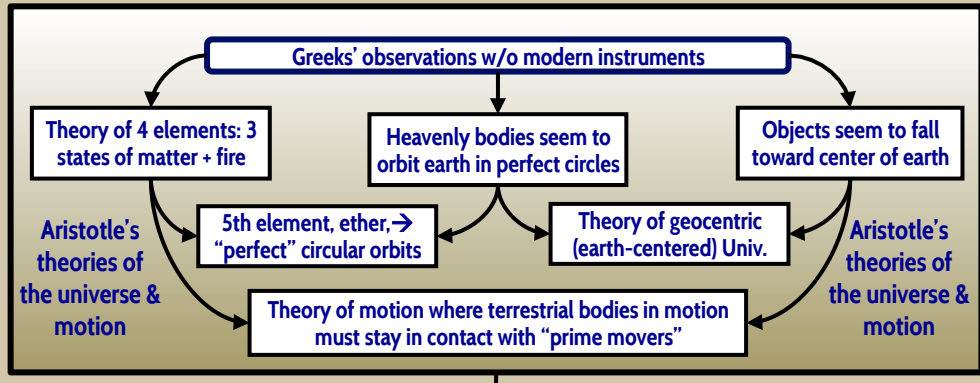
1776 - Adam Smith's *Wealth of Nations*

1773-95 - Partitions of Poland

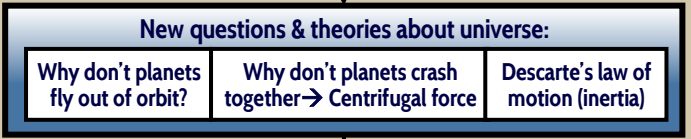
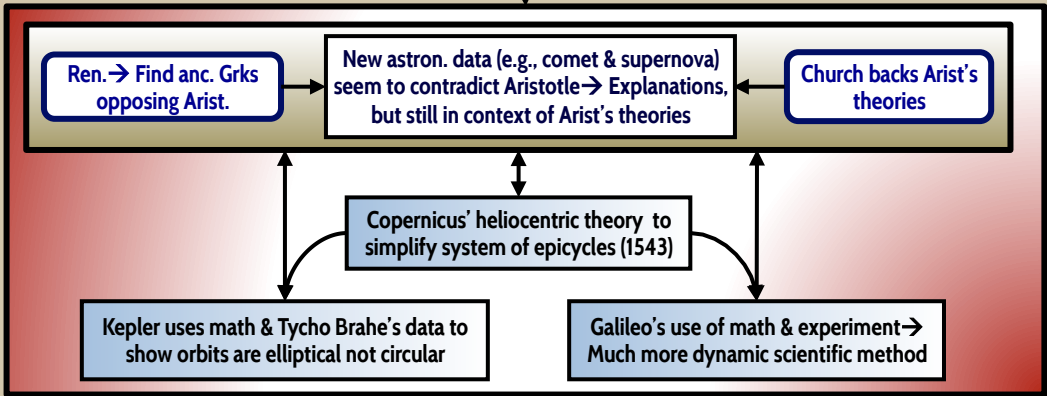
1780-90 - Joseph II of Austria's reign

1784 - David's *Oath of the Horatii* marks start of Neo-Neoclassicism

1789 - French Rev.



Aristotle's interlocking theories → Must attack whole system in order to attack just 1 part



Isaac Newton fuses these ideas w/calculus into theory of universal gravity → Same laws apply on earth as in heavens

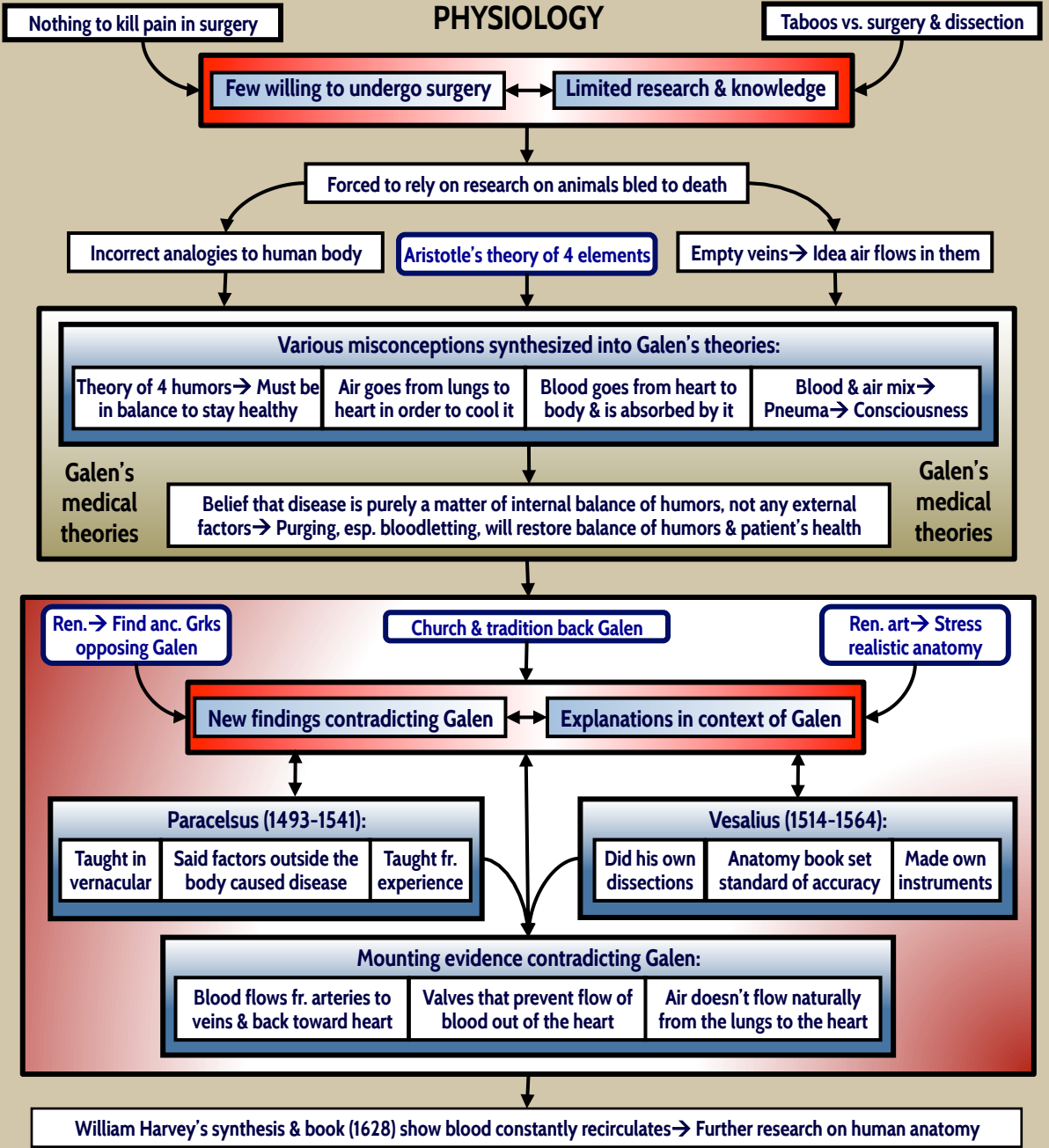
Scientific method fusing math, experiment & Aristotelian logic → Belief we can understand, predict & manipulate laws of nature

Scientific basis for rapid progress of Industrial Rev. in 1800s

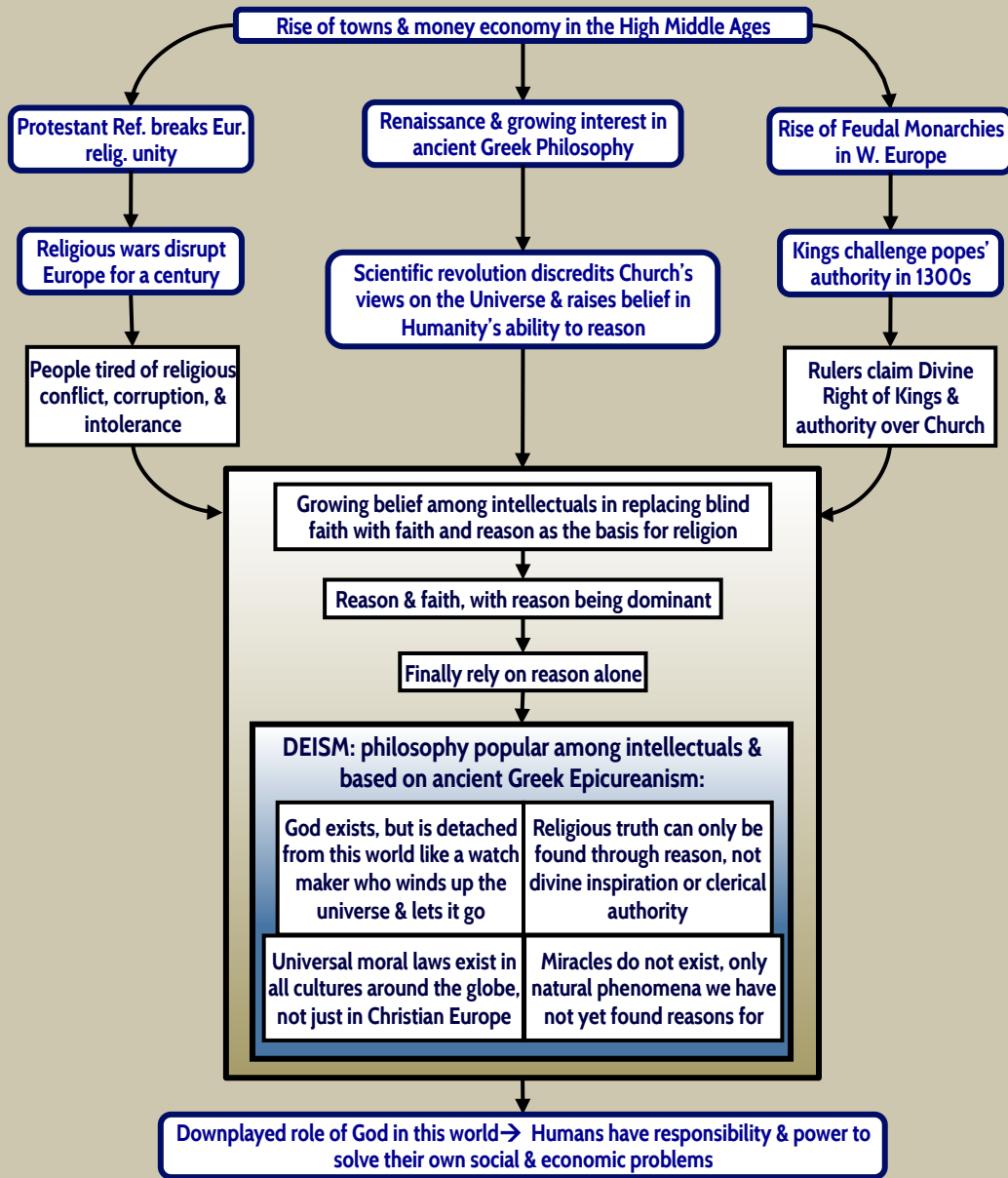
Timeline of Key Historical Events (1590-1789):

- c.1590:** Invention of microscope
- 1608:** Galileo's telescope
- 1622:** Harvey's *De Motu Cordis* on circulatory system
- 1632:** Galileo's *Dialogue on the Great World Systems*
- 1651:** John Hobbes' *Leviathan*
- 1688:** Newton's *Principia Mathematica*
- 1687:** John Locke's *Two Treatises on Government*
- 1690:** Frederick the Great of Prussia's reign
- 1740-88:** War of Austrian Succession
- 1740-48:** Montesquieu's *Spirit of the Laws*
- 1751-65:** Diderot's *Encyclopedia*
- 1756-63:** Seven Years War
- 1759:** Voltaire publishes *Candide* in reaction to Lisbon earthquake
- 1762:** Rousseau's *Social Contract* on liberty & *Emile* on education
- 1762-96:** Catherine the Great's reign
- 1775-83:** American Revolution
- 1776:** Adam Smith's *Wealth of Nations*
- 1773-95:** Partitions of Poland
- 1780-90:** Joseph II of Austria's reign
- 1784:** David's *Oath of the Horatii* marks start of Neo-Classicism
- 1789:** French Rev.

12.10 THE DISCOVERY OF THE CIRCULATORY SYSTEM & BIRTH OF MODERN PHYSIOLOGY



12.11 FROM FAITH TO REASON: DEISM & ENLIGHTENMENT PHILOSOPHY

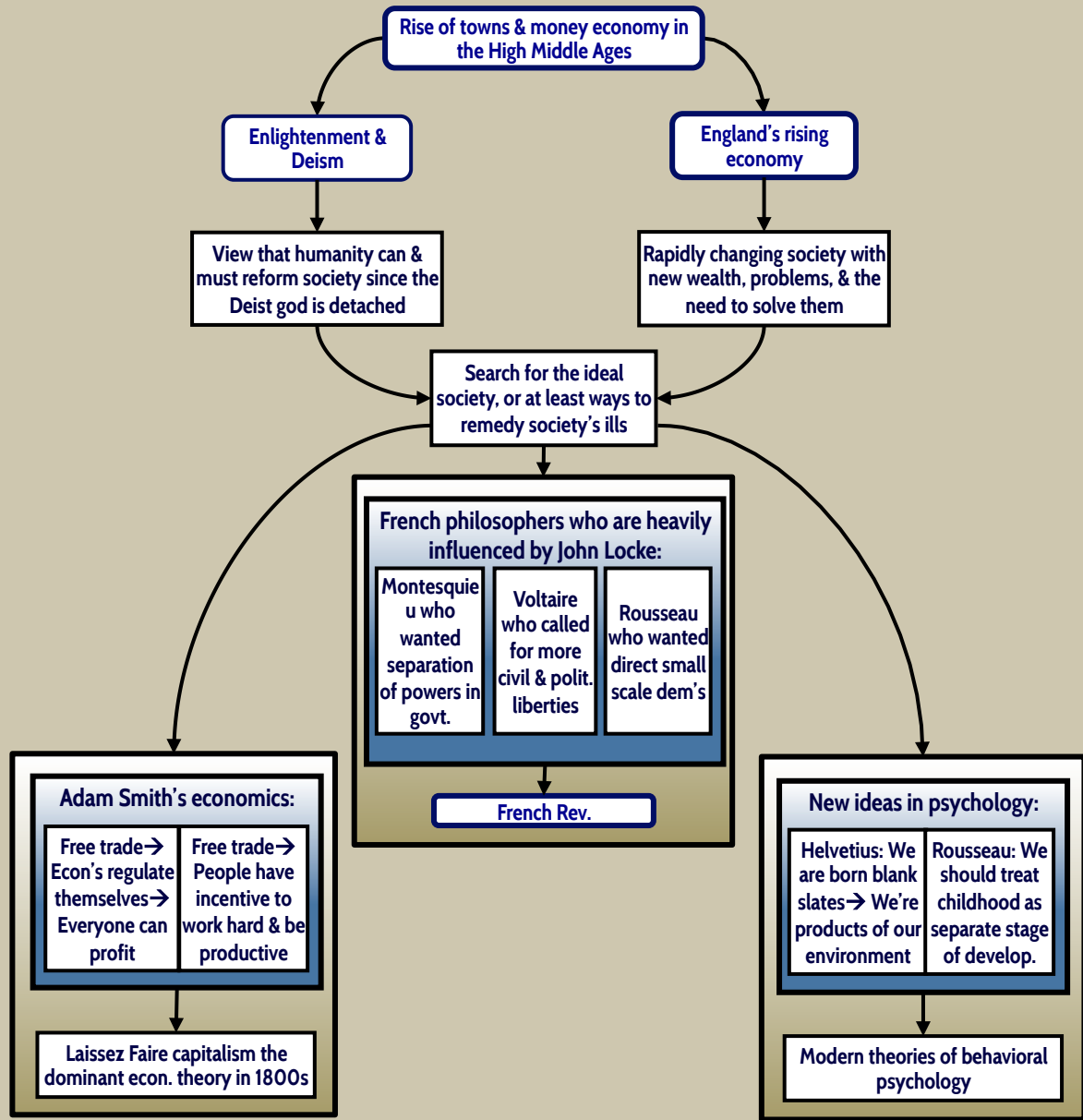


c.1590		Invention of microscope
1608		Galileo's telescope
1622		Harvey's <i>De Motu Cordis</i> on circulatory system
1632		Galileo's <i>Dialogue on the Great World Systems</i>
1651		John Hobbes' <i>Leviathan</i>
1688		Glorious Revolution
1687		Newton's <i>Principia Mathematica</i>
1690		John Locke's <i>Two Treatises on Government</i>
1740-88		Frederick the Great of Prussia's reign
1740-48		War of Austrian Succession
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1775-83		American Revolution
1776		Adam Smith's <i>Wealth of Nations</i>
1773-95		Partitions of Poland
1780-90		Joseph II of Austria's reign
1784		David's <i>Oath of the Horatii</i> marks start of Neo-Neoclassicism
1789		French Rev.

12.12 ENLIGHTENMENT POLITICAL, SOCIAL, & ECONOMIC IDEAS

Timeline of Enlightenment events and figures:

- c.1590 - Invention of microscope
- 1608 - Galileo's telescope
- 1622 - Harvey's *De Motu Cordis* on circulatory system
- 1632 - Galileo's *Dialogue on the Great World Systems*
- 1651 - John Hobbes' *Leviathan*
- 1688 - Glorious Revolution
- 1687 - Newton's *Principia Mathematica*
- 1690 - John Locke's *Two Treatises on Government*
- 1740-88 - Frederick the Great of Prussia's reign
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- 1773-95 - Partitions of Poland
- 1780-90 - Joseph II of Austria's reign
- 1784 - David's *Oath of the Horatii* marks start of Neo-Classicism
- 1789 - French Rev.



12.13 ENLIGHTENMENT, REVOLUTION, & WOMEN'S CHANGING ROLES

c.1590 — Invention of microscope

1608 — Galileo's telescope

1622 — Harvey's *De Motu Cordis* on circulatory system

1632 — Galileo's *Dialogue on the Great World Systems*

1651 — John Hobbes' *Leviathan*

1688 — Newton's *Principia Mathematica*

1687 — John Locke's *Two Treatises on Government*

1690 — Frederick the Great of Prussia's reign

1740-88 — War of Austrian Succession

1740-48 — Montesquieu's *Spirit of the Laws*

1748 — Diderot's *Encyclopedia*

1751-65 — Seven Years War

1756-63 — Voltaire publishes *Candide* in reaction to Lisbon earthquake

1759 — Rousseau's *Social Contract* on liberty & *Emile* on education

1762 — Catherine the Great's reign

1762-96 — American Revolution

1775-83 — Adam Smith's *Wealth of Nations*

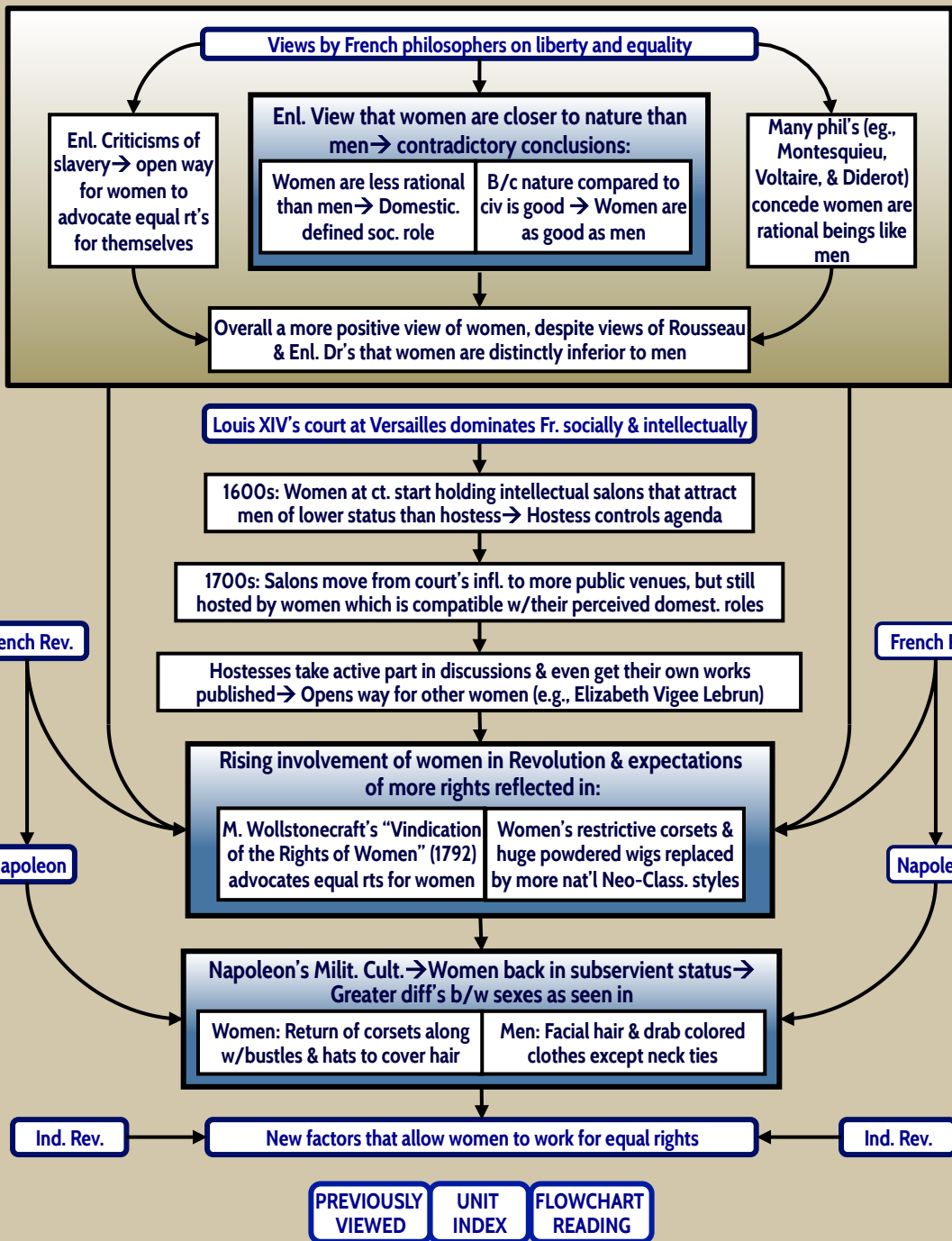
1776 — Partitions of Poland

1773-95 — Joseph II of Austria's reign

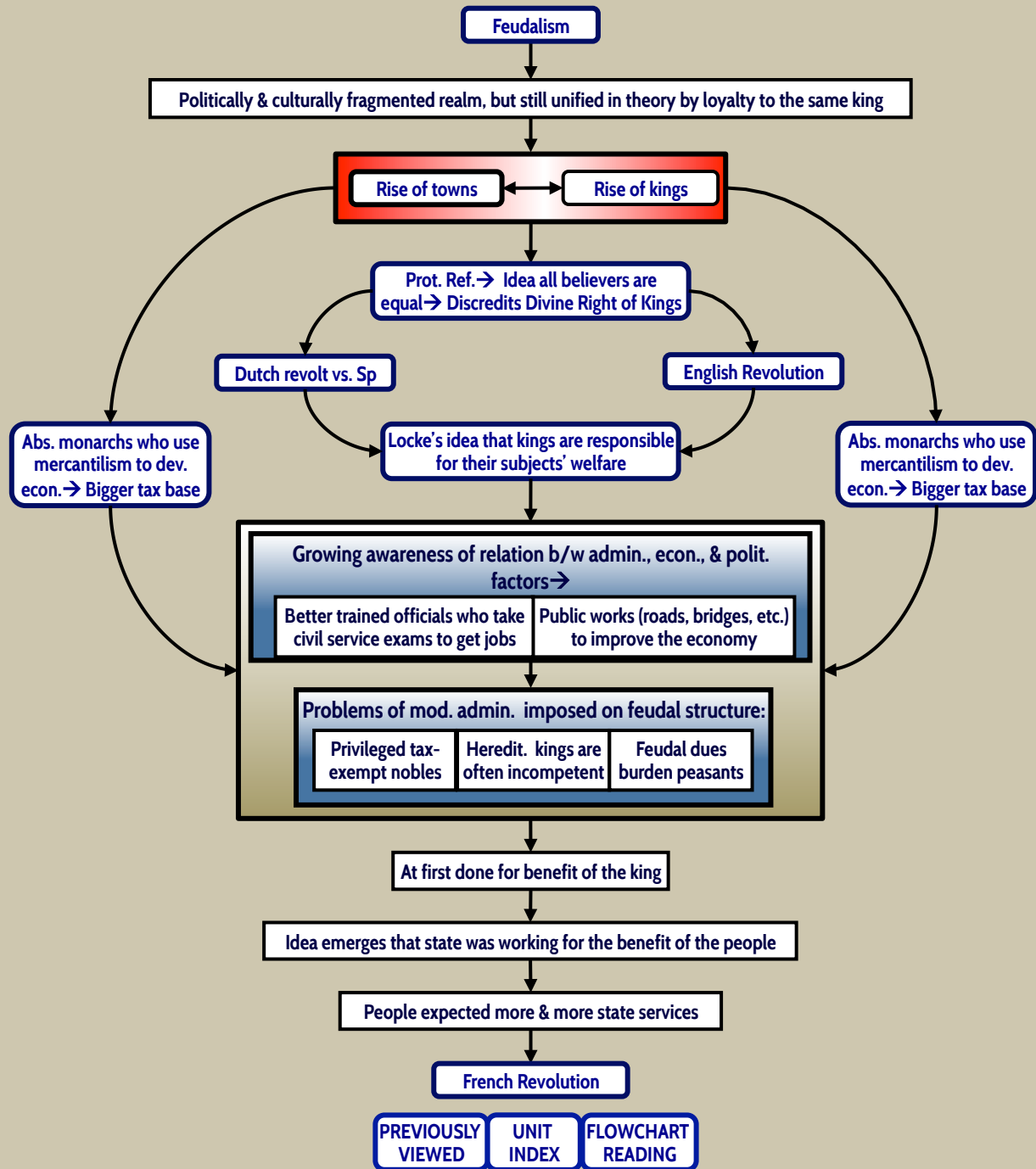
1780-90 — David's *Oath of the Horatii* marks start of Neo-Classicism

1784 — French Rev.

1789 — French Rev.



12.14 THE DEVELOPMENT OF THE ENLIGHTENMENT STATE



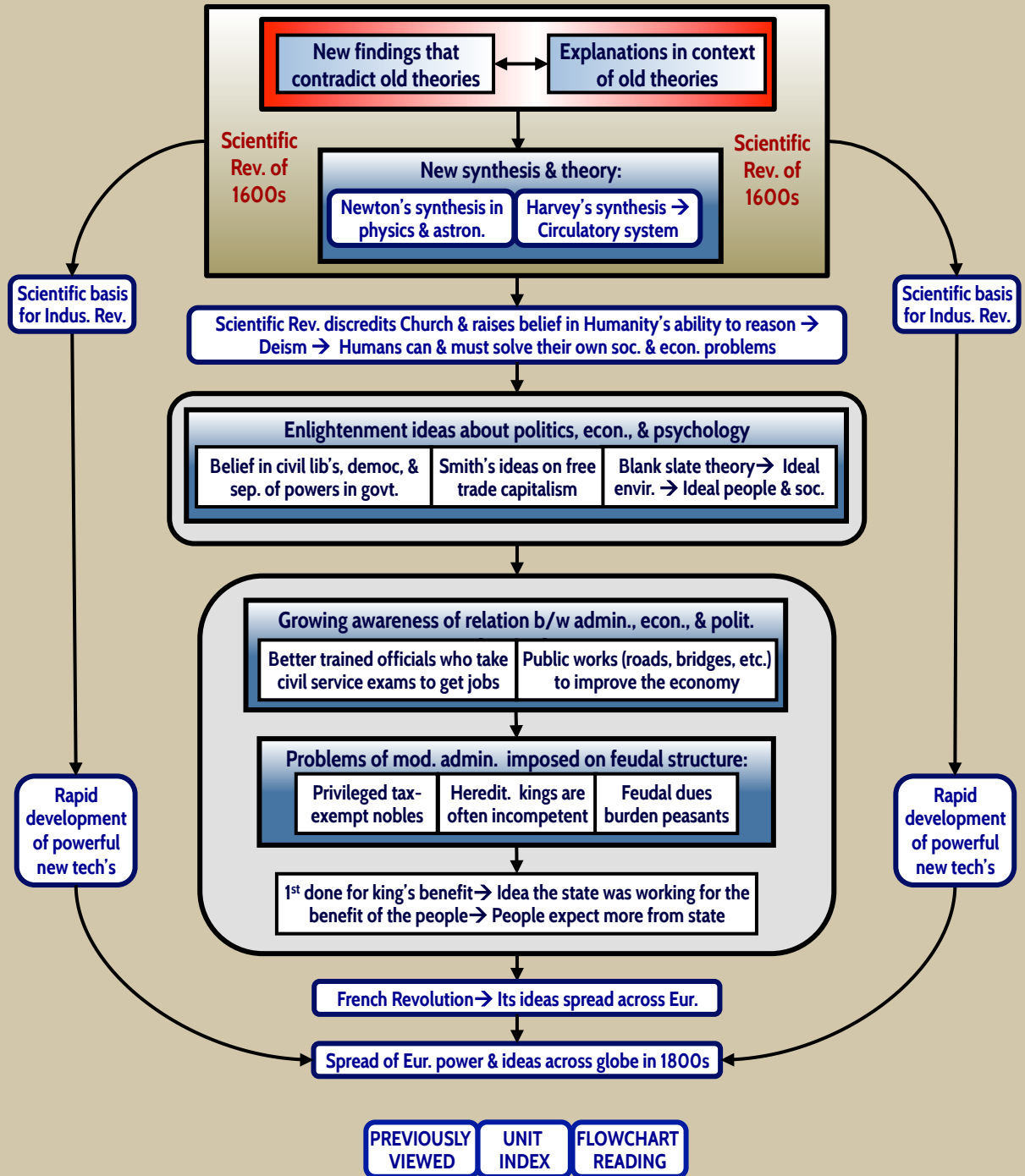
Timeline of Key Events and Works:

- c.1590** - Invention of microscope
- 1608** - Galileo's telescope
- 1622** - Harvey's *De Motu Cordis* on circulatory system
- 1632** - Galileo's *Dialogue on the Great World Systems*
- 1651** - John Hobbes' *Leviathan*
- 1688** - Glorious Revolution
- 1687** - Newton's *Principia Mathematica*
- 1690** - John Locke's *Two Treatises on Government*
- 1740-88** - Frederick the Great of Prussia's reign
- 1740-48** - War of Austrian Succession
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- 1773-95** - Partitions of Poland
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- 1784** - David's *Oath of the Horatii* marks start of Neo-Classicism
- 1789** - French Rev.

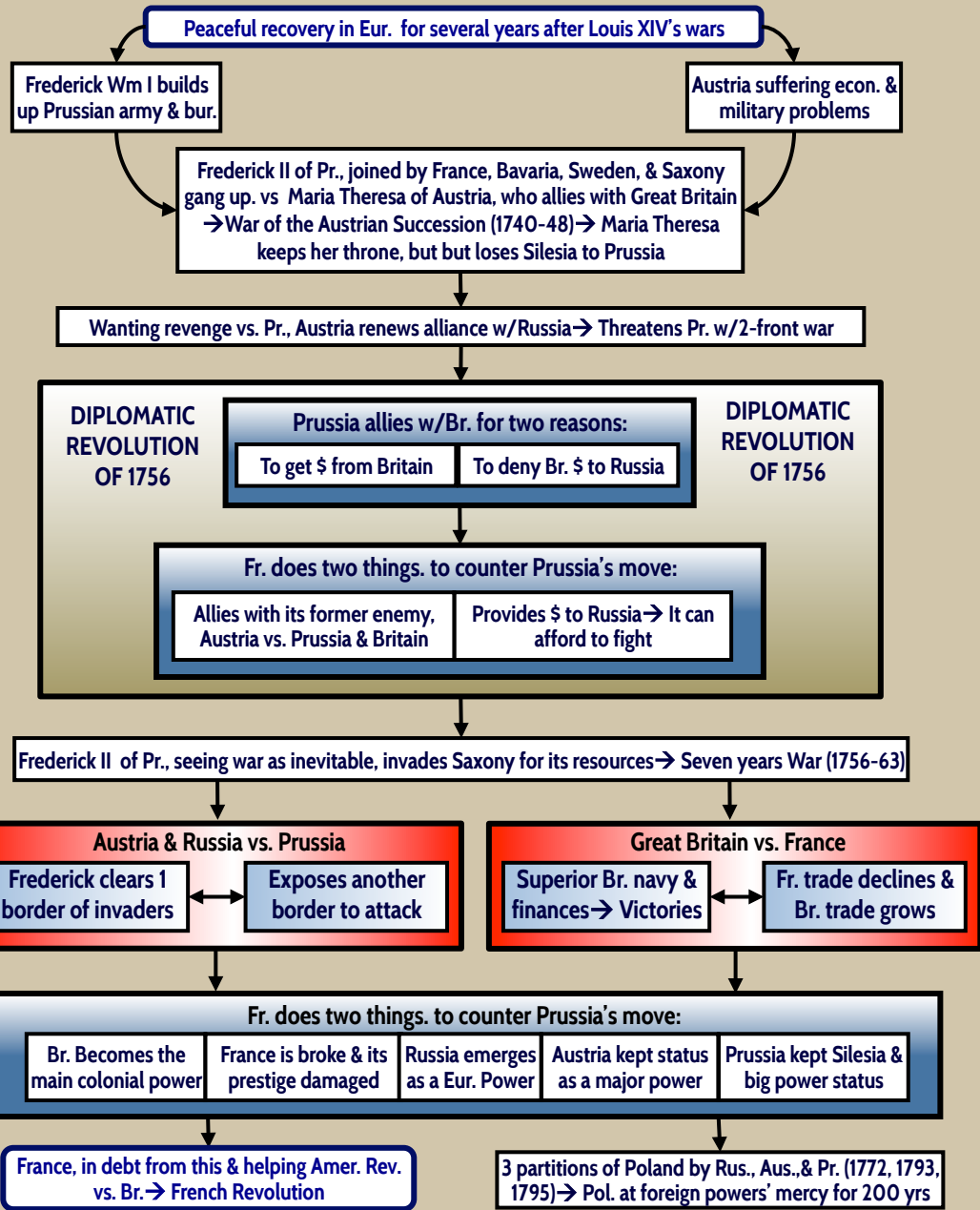
Timeline of Enlightenment and Revolutionary Events:

- c.1590: Invention of microscope
- 1608: Galileo's telescope
- 1622: Harvey's *De Motu Cordis* on circulatory system
- 1632: Galileo's *Dialogue on the Great World Systems*
- 1651: John Hobbes' *Leviathan*
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- 1687: Newton's *Principia Mathematica*
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- 1740-88: Frederick the Great of Prussia's reign
- 1740-48: War of Austrian Succession
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- 1775-83: American Revolution
- 1776: Adam Smith's *Wealth of Nations*
- 1773-95: Partitions of Poland
- 1780-90: Joseph II of Austria's reign
- 1784: David's *Oath of the Horatii* marks start of Neo-Neoclassicism
- 1789: French Rev.

12.14A THE FLOW OF ENLIGHTENMENT IDEAS



12.15 BALANCE OF POWER POLITICS IN EUROPE (1715-89)



c.1590 - Invention of microscope

1608 - Galileo's telescope

1622 - Harvey's *De Motu Cordis* on circulatory system

1632 - Galileo's *Dialogue on the Great World Systems*

1651 - John Hobbes' *Leviathan*

1687 - Newton's *Principia Mathematica*

1688 - Glorious Revolution

1690 - John Locke's *Two Treatises on Government*

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1756-63 - Seven Years War

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1762-96 - Catherine the Great's reign

1775-83 - American Revolution

1776 - Adam Smith's *Wealth of Nations*

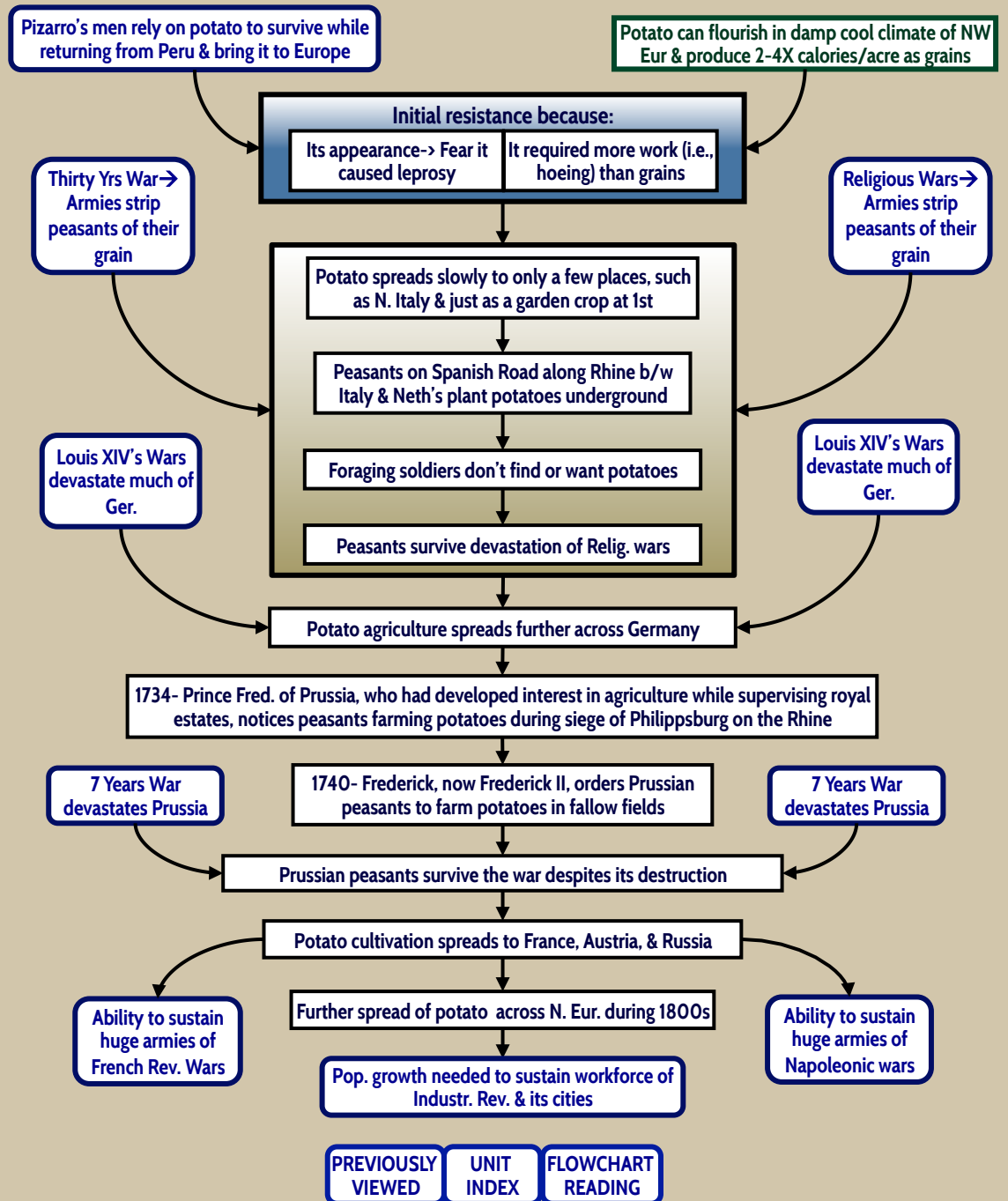
1773-95 - Partitions of Poland

1780-90 - Joseph II of Austria's reign

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1789 - French Rev.

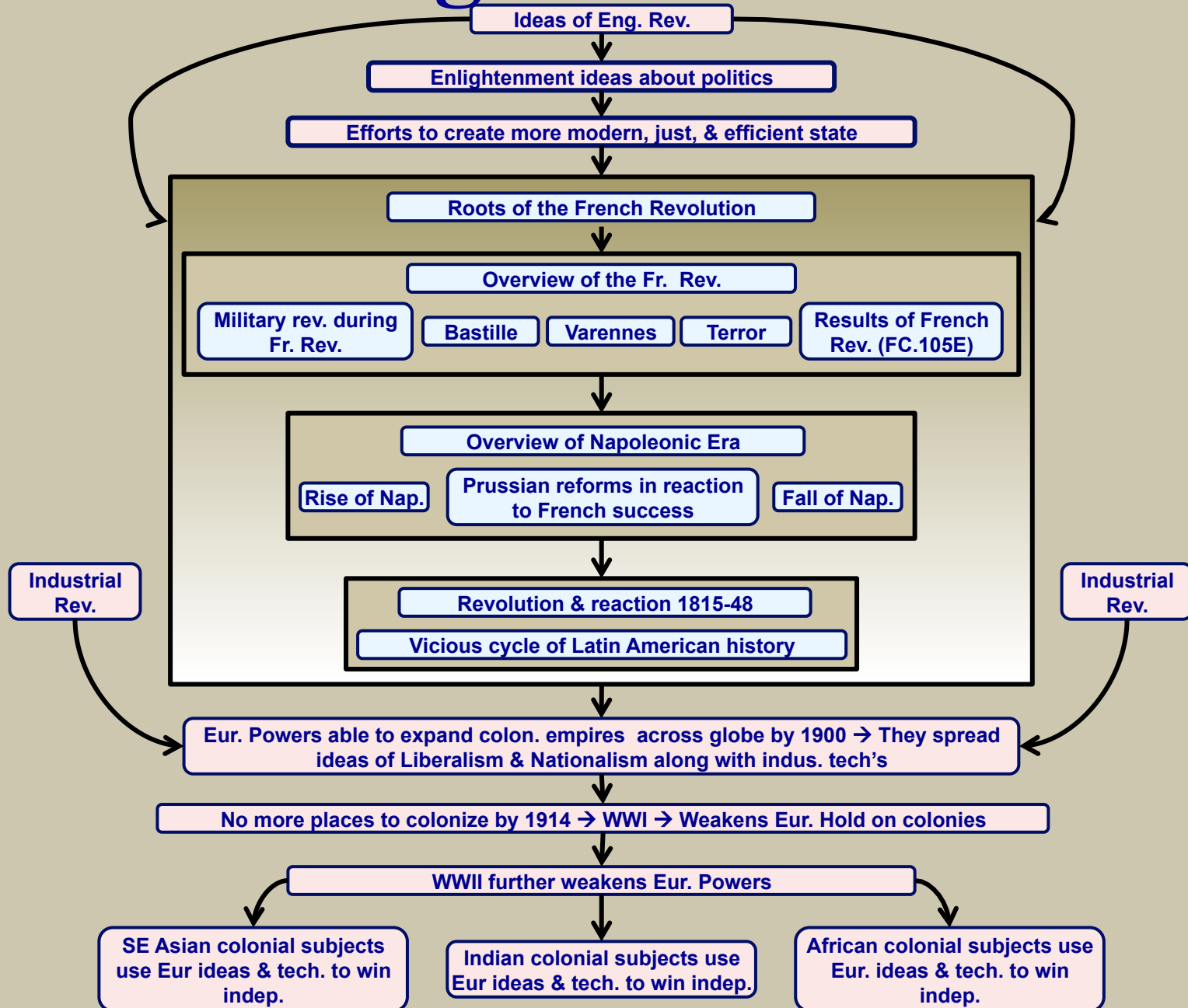
12.16 THE POTATO AND ITS IMPACT



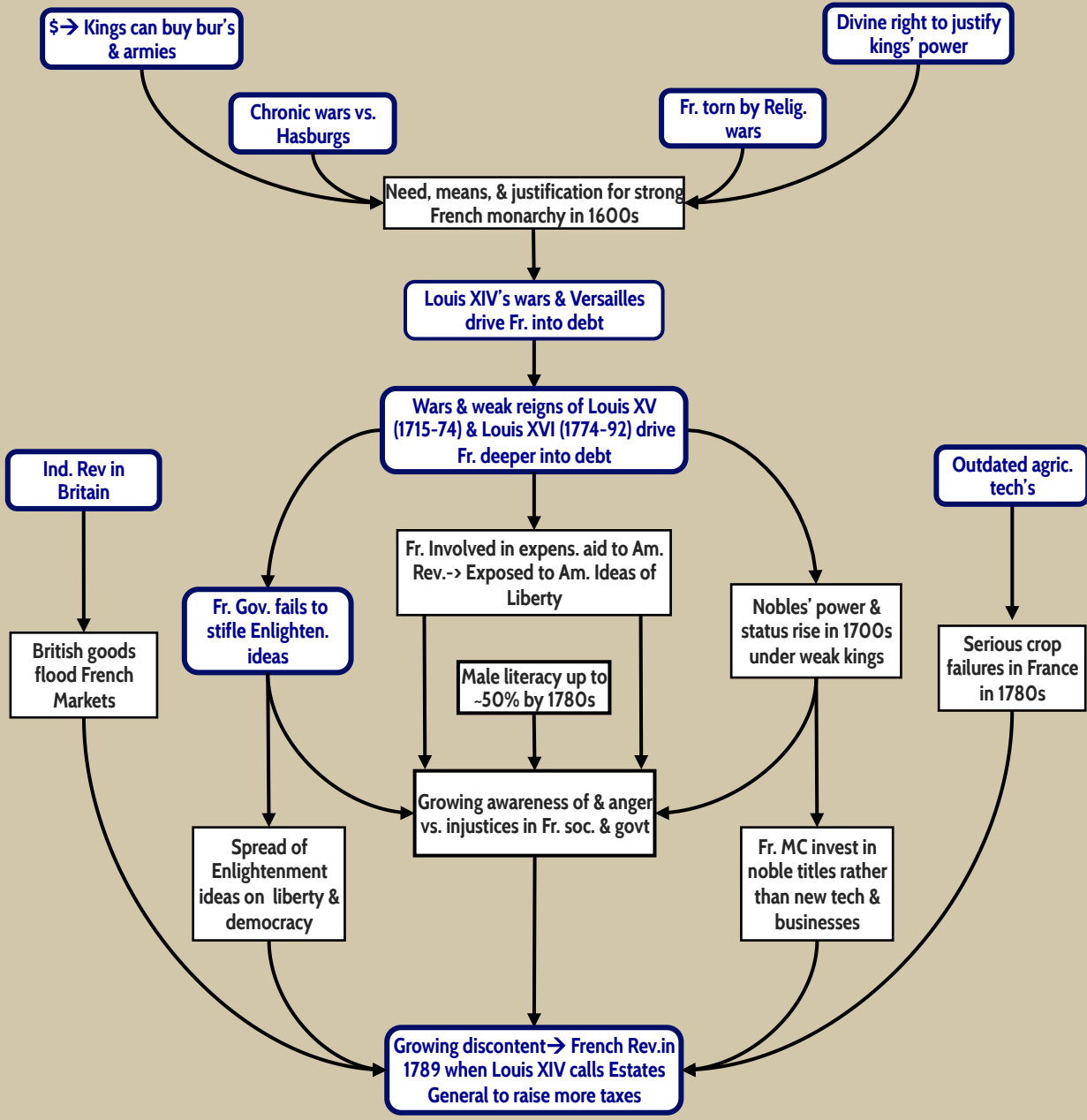
Timeline of Key Events:

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- 1759 - Voltaire publishes *Candide* in reaction to Lisbon earthquake
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- 1762-96 - Catherine the Great's reign
- 1775-83 - American Revolution
- 1776 - Adam Smith's *Wealth of Nations*
- 1773-95 - Partitions of Poland
- 1780-90 - Joseph II of Austria's reign
- 1784 - David's *Oath of the Horatii* marks start of Neo-Neoclassicism
- 1789 - French Rev.

13. The Age of Revolutions





13.1 THE ROOTS OF THE FRENCH REVOLUTION



c.1780		Neoclassical Art		Start of French Rev.
1789		Moderate Const. Monarchy		Internal problems mount
1790		Start of quarter century of wars; Mon. overthrown -> 1st Rep.		
1791		"Whiff of Grapeshot" -> Rise of Nap.		Reign of Terror
1792		Napoleon declares 1st Emp.		Napoleon overthrows 1st Rep.
1793-4		Height of Nap's emp.		
1795		Nap's final defeat -> Cong. of Vienna -> Bourbon Mon. restored		
1799		Rev. in Spain -> Latin Am. Rev's		Romantic art movement
1804		Greek Rev		
1807		July Rev. in Paris		Russ. crushes Polish revolt
1808-15		Belgian Rev. -> Indep.		Reform Bill in Britain
c.1815		Rev's of 1848		Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp.
1815		Realism school of art		
1820		Louis Nap's econ. reforms -> politically conscious Mid. Cl.		
1821		3rd Rep. in Fr. -> Stable Dem.		
1830				
1830				
1830				
1832				
1848				
1851				
c.1850				
1851-70				
1871				

13.2 THE COURSE OF THE FRENCH REVOLUTION (1789-1871)

c.1780 Neoclassical Art  Start of French Rev. 

1789  Moderate Const. Monarchy  Internal problems mount

1790  Start of quarter century of wars; Mon. overthrown → 1st Rep.

1791  "Whiff of Grapeshot" → Rise of Nap.  Reign of Terror


1792  Napoleon declares 1st Emp.  Napoleon overthrows 1st Rep.

1793-4  Height of Nap's emp

1795  Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored

1799  Rev. in Spain → Latin Am. Rev's  Romantic art movement


1804  Greek Rev

1807  July Rev. in Paris 

1808-15  Russ. crushes Polish revolt  Belgian Rev. → Indep.

c.1815  Reform Bill in Britain

1820  Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp.  Rev's of 1848

1821  Realism school of art

1830  Louis Nap's econ. reforms → politically conscious Mid. Cl.

1830  3rd Rep. in Fr. → Stable Dem.

1832

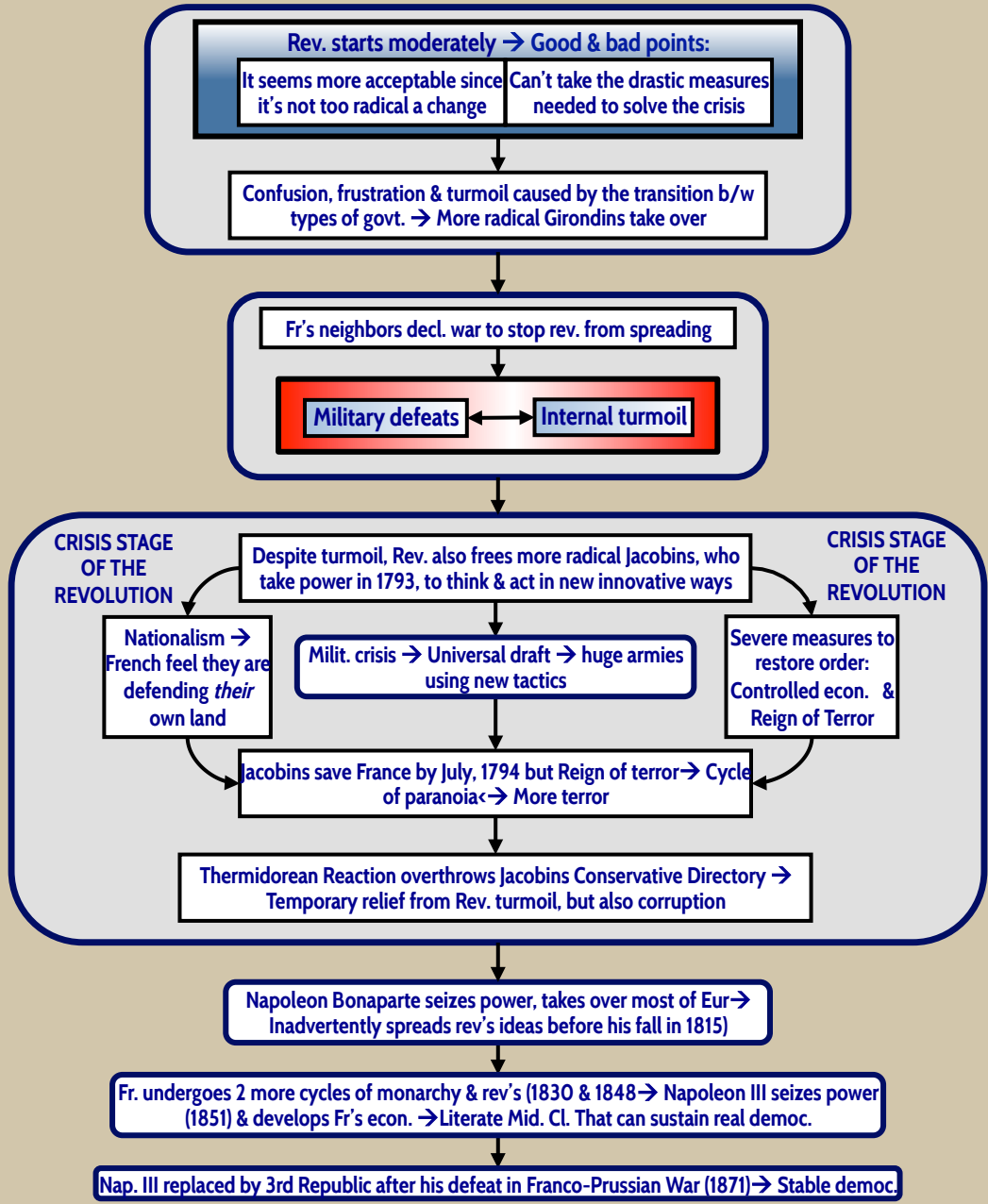
1848

1851

c.1850

1851-70

1871



13.2A THE START OF THE FRENCH REVOLUTION (JULY, 1789-JULY, 1790)

Huge royal debt → Louis XVI calls Estates General in 1789 to get more taxes

Dispute over voting procedure:

Clergy & nobles want 1 bloc vote/estate | 3rd estate wants 1 vote for each delegate

Louis gives in when 3rd estate withdraws & declares itself the National Assembly

Paris Mob storms the Bastille (7/14/1789) when Louis posts troops around Paris

Violence known as "The Great Fear" across France → several results:

Nobles & clergy in Nat'l Assem. give up feudal rights (8/4/1789)	Nervous MC create Nat'l Guard units → 2 competing armies (royal & revol.)	Many nobles leave France & stir foreign fears vs. the Revolution
--	---	--

Paris mob drag Louis & Nat'l Assem. from Versailles back to Paris → Rev. at their mercy

Constitutional monarchy est. (7/1791) w/several reforms:

Jury trials & the abolition of torture	King's power ltd. to a weak veto	Fr. reorg. into 83 non-feudal prov's	Standard metric system across Fr.
--	----------------------------------	--------------------------------------	-----------------------------------

Govt. still needs \$ to pay off royal debt

Govt. paid in assignats rather than gold or silver

Take Church lands to back up bonds (assignats)

Assignats seen as money & used to pay taxes












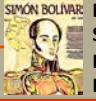











Rampant inflation wrecks econ.

Growing anger & turmoil over econ. & Nat'l Assembly's Church policies


PREVIOUSLY VIEWED



UNIT INDEX

FLOWCHART READING



c.1780		Neoclassical Art		Start of French Rev.
1789		Moderate Const. Monarchy		Internal problems mount
1790				
1791		Start of quarter century of wars; Mon. overthrown → 1 st Rep.		
1792				
1793-4		"Whiff of Grapeshot" → Rise of Nap.		Reign of Terror
1795				
1799		Napoleon declares 1 st Emp.		Napoleon overthrows 1 st Rep.
1804				Height of Nap's emp.
1807		Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored		
1808-15				
c.1815		Rev. in Spain → Latin Am. Rev's		Romantic art movement
1820				Greek Rev
1821		July Rev. in Paris		
1830		Russ. crushes Polish revolt		Belgian Rev. → Indep.
1830				
1830		Reform Bill in Britain		
1832				Rev's of 1848
1848		Louis Napoleon overthrows 2 nd Rep. & declares 2 nd Emp.		
1851				Realism school of art
c.1850				
1851-70		Louis Nap's econ. reforms → politically conscious Mid. Cl.		
				3 rd Rep. in Fr. → Stable Dem.
1871				


13.2B THE REVOLUTION HEATS UP (JULY, 1790-SEPTEMBER, 1792)


c.1780 Neoclassical Art  Start of French Rev. 

1789 Moderate Const. Monarchy  Internal problems mount 

1790 Start of quarter century of wars; Mon. overthrown → 1st Rep. 

1791 "Whiff of Grapeshot" → Rise of Nap.  Reign of Terror 

1795 Napoleon declares 1st Emp.  Napoleon overthrows 1st Rep. 

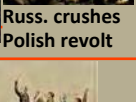

1799 Height of Nap's emp. 


1804 Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored 


1807 Rev. in Spain → Latin Am. Rev's  Romantic art movement 

1808-15 Greek Rev 

c.1815 July Rev. in Paris 


1820 Russ. crushes Polish revolt  Belgian Rev. → Indep. 


1821 Reform Bill in Britain 

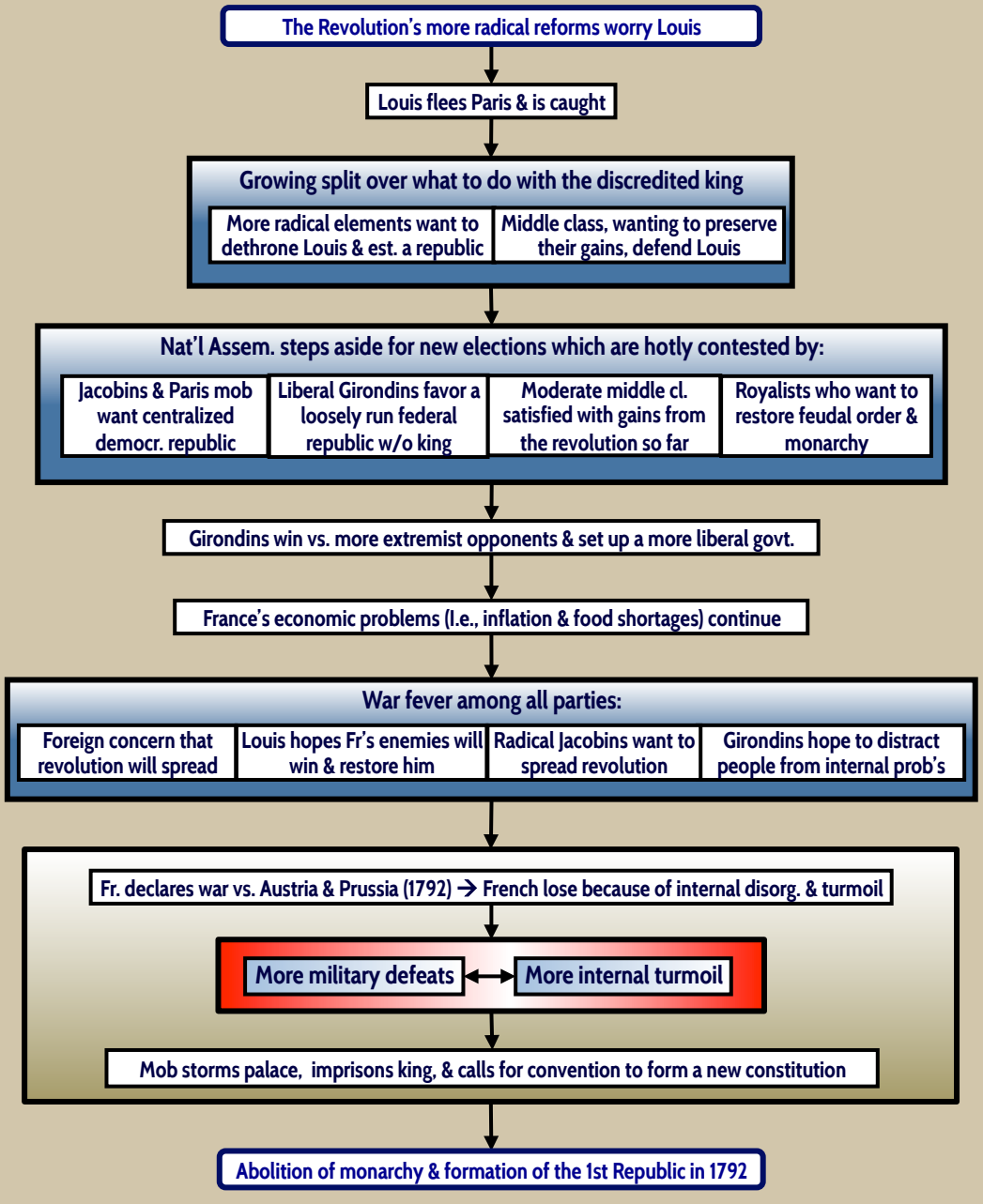
1830 Rev's of 1848 

1830 Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp. 

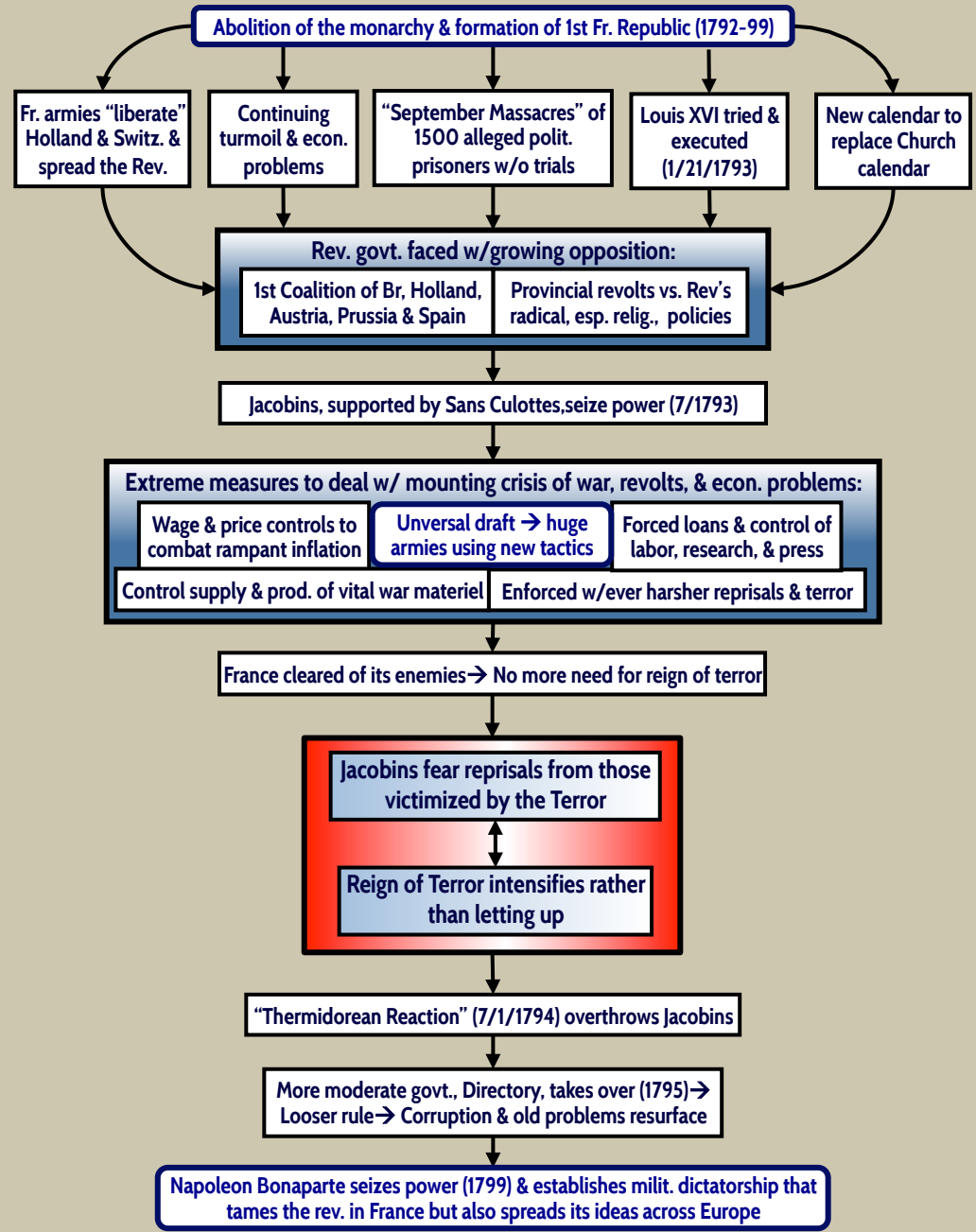
1830 Realism school of art 

c.1850 Louis Nap's econ. reforms → politically conscious Mid. Cl. 

1851-70 3rd Rep. in Fr. → Stable Dem. 




13.2C TERROR & REACTION: THE REVOLUTION FROM 1792-99




c.1780		Neoclassical Art		Start of French Rev.
1789		Moderate Const. Monarchy		Internal problems mount
1790		Start of quarter century of wars; Mon. overthrown -> 1st Rep.		
1791		"Whiff of Grapeshot" -> Rise of Nap.		Reign of Terror
1792		Napoleon declares 1st Emp.		Napoleon overthrows 1st Rep.
1793-4		Height of Nap's emp.		
1795		Nap's final defeat -> Cong. of Vienna -> Bourbon Mon. restored		
1799		Rev. in Spain -> Latin Am. Rev's		Romantic art movement
1804		Greek Rev		
1807		July Rev. in Paris		
1808-15		Russ. crushes Polish revolt		Belgian Rev. -> Indep.
c.1815		Reform Bill in Britain		
1820		Rev's of 1848		
1821		Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp.		Realism school of art
1830		Louis Nap's econ. reforms -> politically conscious Mid. Cl.		
1830		3rd Rep. in Fr. -> Stable Dem.		
1832				
1848				
1851-70				
1871				

13.2D THE FRENCH REVOLUTION'S IMPACT ON MILITARY TACTICS AND THEIR IMPACT ON EUROPE


c.1780 Neoclassical Art  Start of French Rev. 


1789  Moderate Const. Monarchy  Internal problems mount

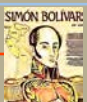
1790  Start of quarter century of wars; Mon. overthrown → 1st Rep.

1791 "Whiff of Grapeshot" → Rise of Nap.  Reign of Terror


1792  Napoleon declares 1st Emp.  Napoleon overthrows 1st Rep.


1793-4  Height of Nap's emp

1795  Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored

1799  Rev. in Spain → Latin Am. Rev's  Romantic art movement

1804  Greek Rev

1807  July Rev. in Paris

1808-15  Russ. crushes Polish revolt  Belgian Rev. → Indep.

c.1815  Reform Bill in Britain

1820  Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp.  Rev's of 1848

1821  Realism school of art

1830  Louis Nap's econ. reforms → politically conscious Mid. Cl.

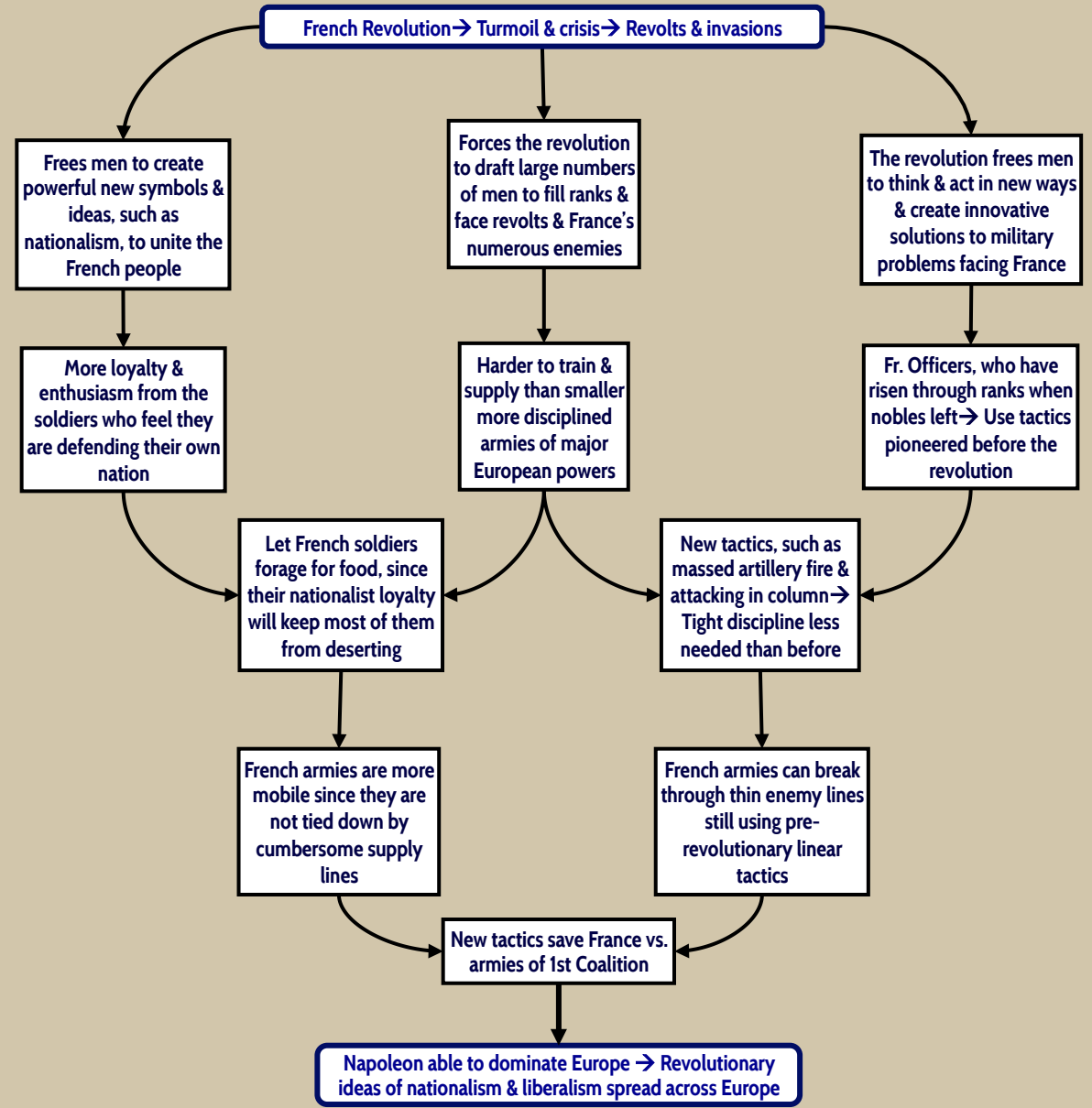
1830  3rd Rep. in Fr. → Stable Dem.

1832












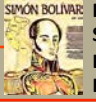










1848

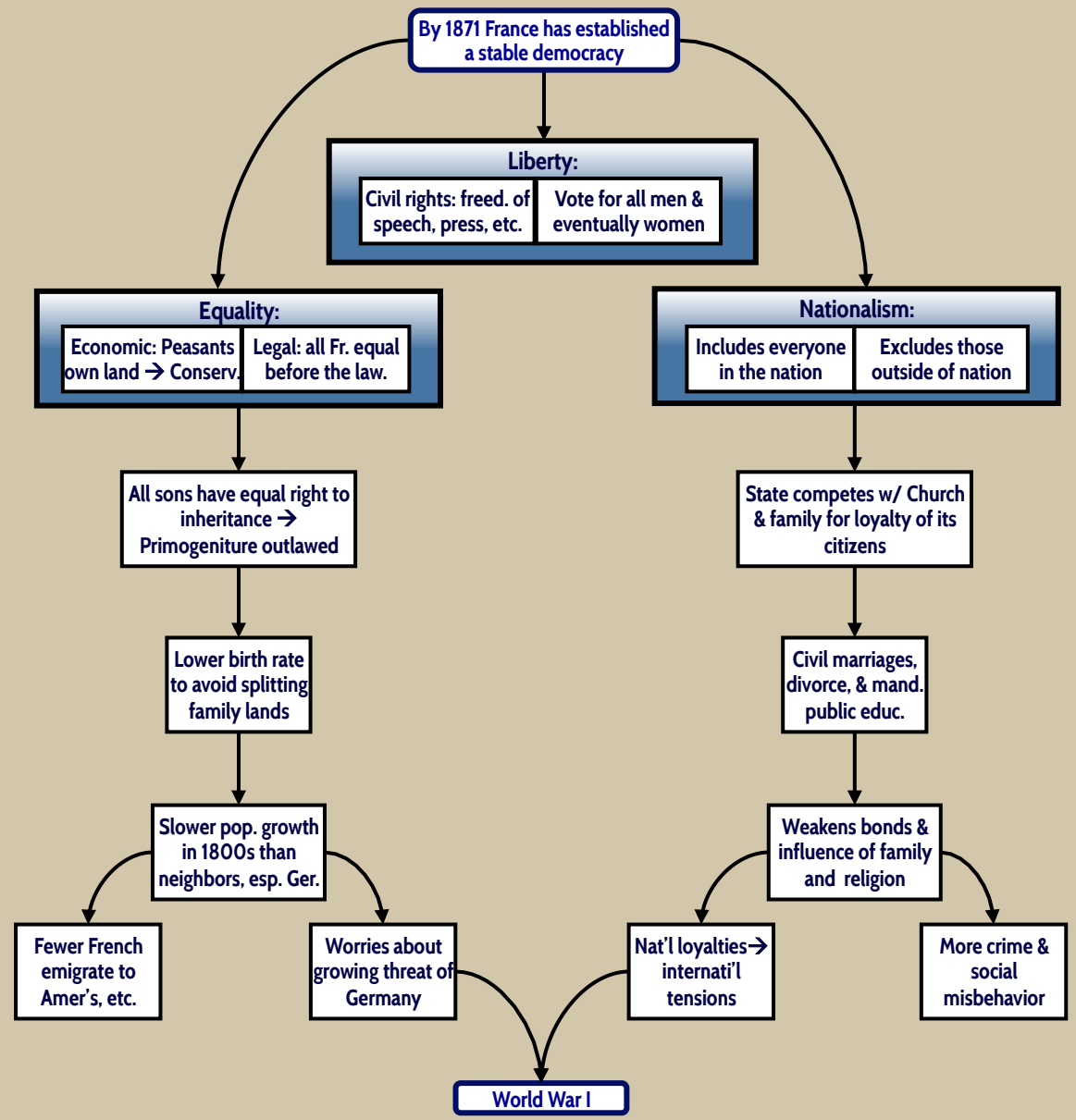
1851-70

1871

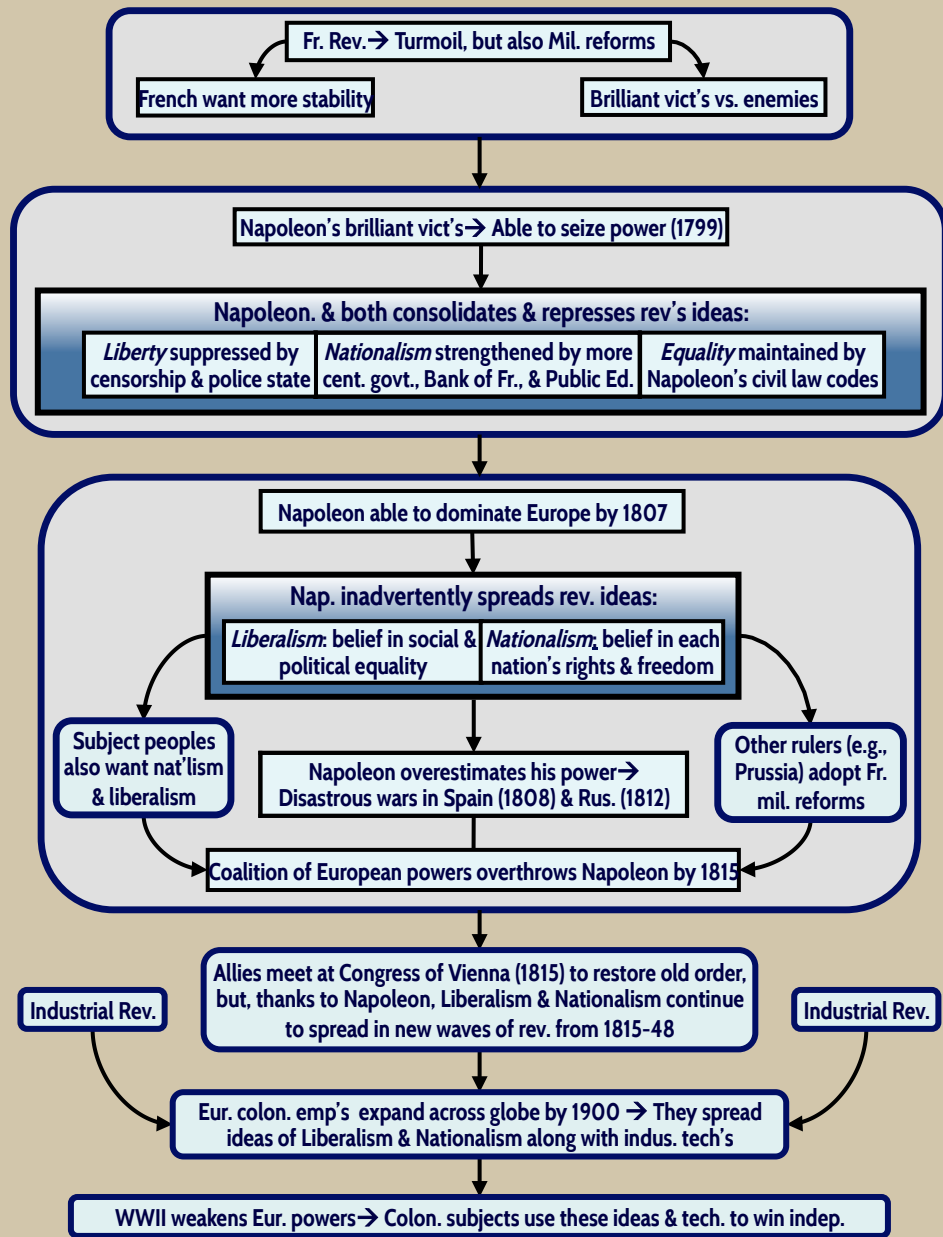


13.2E THE RESULTS OF THE FRENCH REVOLUTION

c.1780		Neoclassical Art		Start of French Rev.
1789				
1790		Moderate Const. Monarchy		Internal problems mount
1791				
1792		Start of quarter century of wars; Mon. overthrown → 1 st Rep.		
1793-4				
1795		"Whiff of Grapeshot" → Rise of Nap.		Reign of Terror
1799				
1804		Napoleon declares 1 st Emp.		Napoleon overthrows 1 st Rep.
1807				Height of Nap's emp.
1808-15		Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored		
c.1815		Rev. in Spain → Latin Am. Rev's		Romantic art movement
1820				
1821		Greek Rev		
1830		July Rev. in Paris		
1830		Russ. crushes Polish revolt		
1830		Belgian Rev. → Indep.		
1832		Reform Bill in Britain		
1848		Louis Napoleon overthrows 2 nd Rep. & declares 2 nd Emp.		Rev's of 1848
1851				Realism school of art
c.1850				
1851-70		Louis Nap's econ. reforms → politically conscious Mid. Cl.		
1871				



13.3 NAPOLEON AND HIS IMPACT



c.1780		Neoclassical Art		Start of French Rev.
1789				
1790		Moderate Const. Monarchy		Internal problems mount
1791				
1792		Start of quarter century of wars; Mon. overthrown → 1 st Rep.		
1793-4				
1795		"Whiff of Grapeshot" → Rise of Nap.		Reign of Terror
1799				
1804		Napoleon declares 1 st Emp.		Napoleon overthrows 1 st Rep.
1807				Height of Nap's emp.
1808-15		Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored		
c.1815				
1820		Rev. in Spain → Latin Am. Rev's		Romantic art movement
1821				Greek Rev
1830		July Rev. in Paris		
1830		Russ. crushes Polish revolt		Belgian Rev. → Indep.
1830				
1832		Reform Bill in Britain		
1848				Rev's of 1848
1851		Louis Napoleon overthrows 2 nd Rep. & declares 2 nd Emp.		
c.1850				Realism school of art
1851-70				
1871		Louis Nap's econ. reforms → politically conscious Mid. Cl.		
		3 rd Rep. in Fr. → Stable Dem.		

13.3A THE RISE OF NAPOLEON TO 1804

Chaos of Fr. Rev. → Forces French to thinking radical new ways

Early life & influences on Napoleon:

Born on Corsica (1769), Ital. island under Fr.	Small stature + isolation at Fr. Milit school → An intensely ambitious loner	Admired history's great conquerors
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Military reforms & New tactics

New officers w/innovative ideas

Series of opportunities for Napoleon:

Retakes Toulon fr. Br. (1793)	Saves Directory vs. royalist rev. (1795)	Defeats Aust's in Italy (1796-7)
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Fr's cont. mil. Vict's → War of 2nd Coalition

Directory's corruption → internal turmoil

Nap. invades Egypt to threaten Br. India (1798)

Br. Navy traps his army there → Nap. deserts his army → Returns to Fr, overthrows govt. (1799) → Consulate, a sham dem. system of meaningless indirect elections

Nap. defeats Austrians in N. Italy (1800) & makes peace w/Br. (1801) → End of war of 2nd Coalition → Nap. eliminates Ger. Cath. States & free cities & gives their lands to Ger. princes → Pop. with Ger. princes

Has himself made emperor of France (1804):

Built up to it w/series of elections to make him consul for 10 yrs, consul for life, then emperor	Ensures election w/fake assassination plot vs. his life & falsifying the vote	Adds to its luster by tricking pope to come & watch & by giving generals & officials noble titles
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The Napoleonic State: Strict police state while trying to maintain illusion of Rev. ideals:

EQUALITY: Nap's civil law codes keep equality of men before the law, but under state (i.e., Nap.)	LIBERTY; Relig. Lib. under "police reg's of State" Other lib's suppressed by censors & police;
--	---

NATIONALISM: Strengthened w/more cent. govt., tax system & Bank of Fr.; Exploited by using public educ. w/clergy as teachers to promote loyalty to Fr. → equates loyalty to himself w/loyalty to France

Other rulers in Eur. refuse to accept Nap. as emperor

PREVIOUSLY VIEWED

UNIT INDEX

FLOWCHART READING

c.1780		Neoclassical Art		Start of French Rev.
1789				
1790		Moderate Const. Monarchy		Internal problems mount
1791				
1792		Start of quarter century of wars; Mon. overthrown → 1 st Rep.		
1793-4				
1795		"Whiff of Grapeshot" → Rise of Nap.		Reign of Terror
1799				
1804		Napoleon declares 1 st Emp.		Napoleon overthrows 1 st Rep.
1807				Height of Nap's emp
1808-15		Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored		
c.1815				
1820		Rev. in Spain → Latin Am. Rev's		Romantic art movement
1821				Greek Rev
1830		July Rev. in Paris		
1830		Russ. crushes Polish revolt		
1830				Belgian Rev. → Indep.
1832		Reform Bill in Britain		
1848				Rev's of 1848
1851		Louis Napoleon overthrows 2 nd Rep. & declares 2 nd Emp.		
c.1850				Realism school of art
1851-70				
		Louis Nap's econ. reforms → politically conscious Mid. Cl.		
1871		3 rd Rep. in Fr. → Stable Dem.		

13.3B THE HEIGHT OF NAPOLEON'S POWER AND HIS FALL (1804-15)

Other rulers won't accept Nap. as emperor esp after he replaces the Italian Republic w/the Kgd of Italy under his brother

War of the Third Coalition (1805-8) consisting of Britain, Austria, & Russia when Napoleon turns Italian Republic into Kingdom of Italy ruled by his brother

Lord Nelson foils Nap's plan to invade Br. By defeating Fr & Sp fleets at Trafalgar (10/1805) →	Nap. crushes combined Austrian & Russian Armies at Austerlitz (12/2/1805) → Aust. surrenders →	Nap. declares HREmp defunct & forms Confed. of Rhine (1806) → Prussia declares war & loses →
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Nap. defeats Russia → Tr. of Tilsit (1807) dividing Eur. b/w Fr. & Rus. Spheres of influence

Napoleon's empire at its height included most of continental Europe west of Russia under varying degrees of control:

States under direct Fr. admin. (Holland & some Ital. States)	States dependant on Fr. (Gr. Duchy of Warsaw, Conf. Of Rhine)	States ruled by Nap's relatives (Naples, Spain, N. Italy)
--	---	---

Allies expected to follow Napoleon in war (Austria & Prussia)

Nap. uses (& spreads) ideas of Fr. Rev. to rule Eur. :

LIBERALISM: belief in social & political equality	NATIONALISM: belief in each nation's rts & freedom
--	---

Other rulers (e.g., Prussia) adopt Fr. & mil. reforms

Subject peoples also want nat'lism & liberalism

Nap. overestimates his power → Tries to impose the Continental System a Eur.-wide embargo on Br. goods to bring Br. to its knees

Portugal won't cooperate → Nap. takes Spain on way to Port. (1808)

Nap. invades Rus. w/ huge army when it resumes trade w/Br. (1812)

Spain rebels → Long costly war (1808-13) → Nap. Driven out

Rus. scorched earth policy → Disastrous Fr. Retreat from Rus.

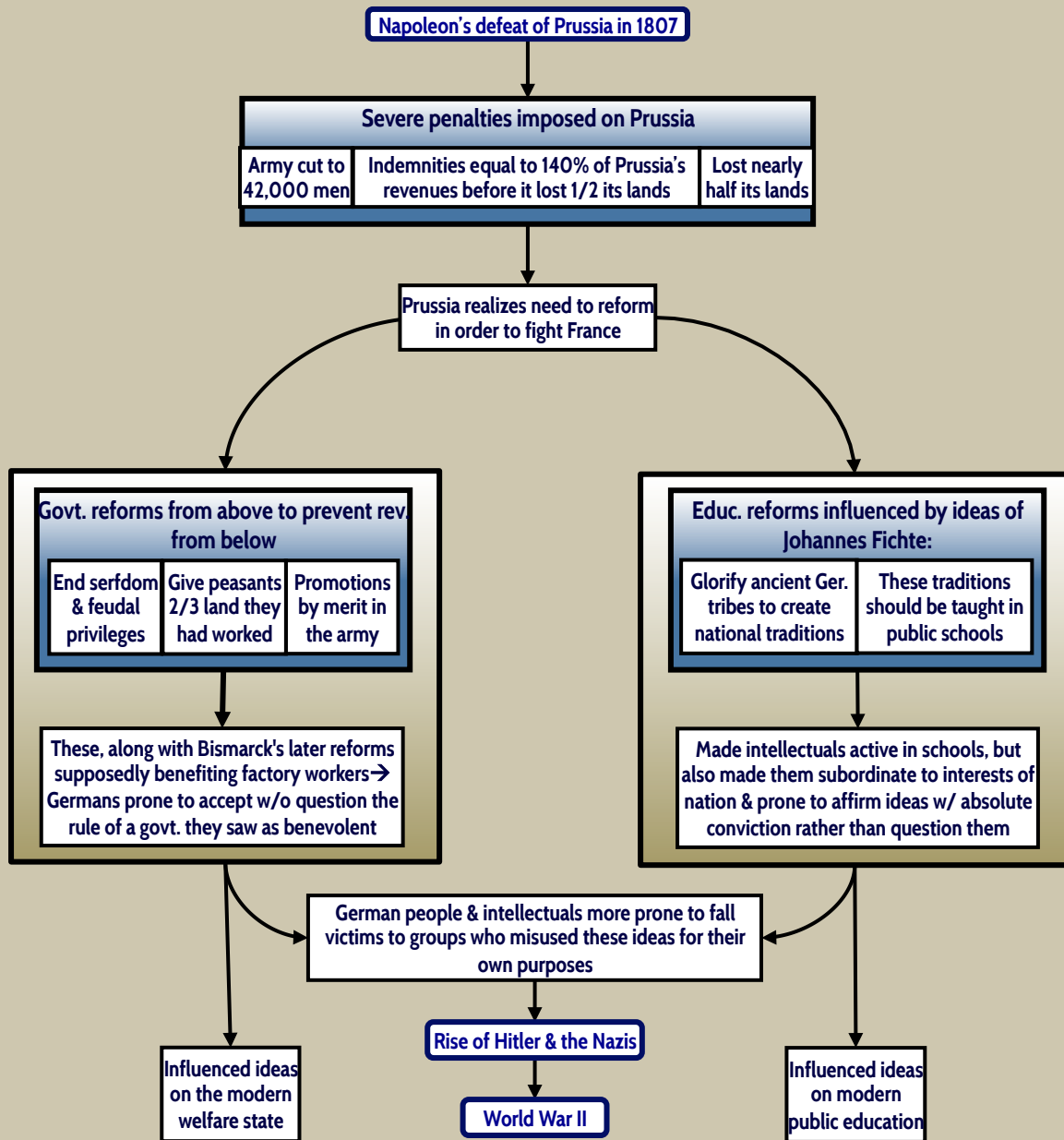
4th Coalition forms vs Nap. → Drives him from Ger. (1813) → Forces his abdication (1814) → He makes a brief comeback to power → His final defeat at Waterloo (1815)

c.1780		Neoclassical Art		Start of French Rev.
1789				
1790		Moderate Const. Monarchy		Internal problems mount
1791				
1792		Start of quarter century of wars; Mon. overthrown → 1 st Rep.		
1793-4				Reign of Terror
1795		"Whiff of Grapeshot" → Rise of Nap.		
1799				Napoleon overthrows 1 st Rep.
1804		Napoleon declares 1 st Emp.		
1807		Height of Nap's emp		
1808-15		Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored		
c.1815				
1820		Rev. in Spain → Latin Am. Rev's		Romantic art movement
1821				Greek Rev
1830		July Rev. in Paris		
1830		Russ. crushes Polish revolt		
1830		Belgian Rev. → Indep.		
1832		Reform Bill in Britain		
1848		Louis Napoleon overthrows 2 nd Rep. & declares 2 nd Emp.		Rev's of 1848
1851				Realism school of art
c.1850				
1851-70		Louis Nap's econ. reforms → politically conscious Mid. Cl.		
1871		3 rd Rep. in Fr. → Stable Dem.		

13.4 PRUSSIAN REFORMS IN THE NAPOLEONIC ERA AND THEIR IMPACT

Timeline of events from 1780 to 1871:

- c.1780: Neoclassical Art
- 1789: Start of French Rev.
- 1790: Moderate Const. Monarchy
- 1791: Internal problems mount
- 1792: Start of quarter century of wars; Mon. overthrown → 1st Rep.
- 1793-4: "Whiff of Grapeshot" → Rise of Nap.
- 1795: Reign of Terror
- 1799: Napoleon overthrows 1st Rep.
- 1804: Napoleon declares 1st Emp.
- 1807: Height of Nap's emp.
- 1808-15: Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored
- c.1815: Rev. in Spain → Latin Am. Rev's
- 1820: Romantic art movement
- 1821: Greek Rev
- 1830: July Rev. in Paris
- 1830: Russ. crushes Polish revolt
- 1830: Belgian Rev. → Indep.
- 1832: Reform Bill in Britain
- 1848: Rev's of 1848
- 1851: Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp.
- c.1850: Realism school of art
- 1851-70: Louis Nap's econ. reforms → politically conscious Mid. Cl.
- 1871: 3rd Rep. in Fr. → Stable Dem.



13.5 REVOLUTION & REACTION IN EUROPE (1815-48)

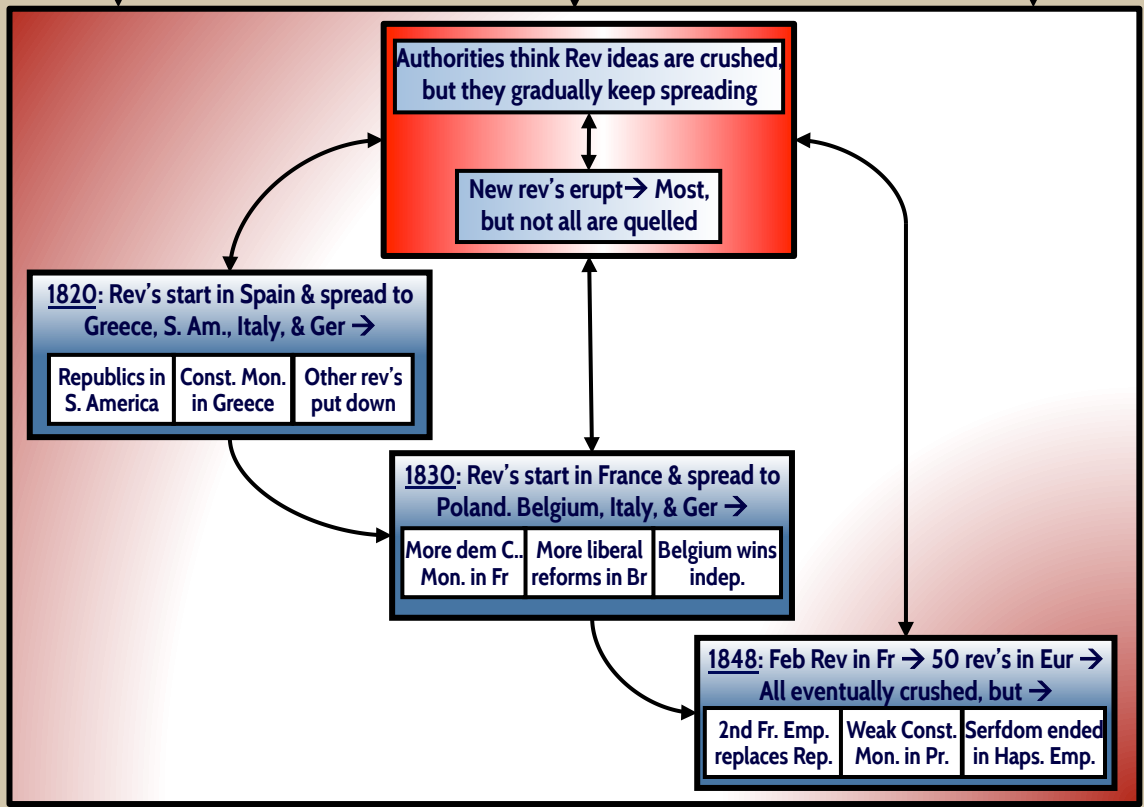
Napoleon finally defeated at Waterloo & sent into exile in 1815

Victorious allies meet at Congress of Vienna in 1815 & try to restore the old order, but there are changes:

Const., not absolute, Mon. est. in France	Polish kgd. revived, but under Russian rule	Dutch take over Aus. Neth's (Belgium)
---	---	---------------------------------------

Spread idea of liberalism, esp. in W & Cent Eur

Spread idea of Nat'lism, esp. in E & Cent Eur.



Some gains despite failure of most rev's:

Some reforms in Britain, Hapsburg Emp & Prussia	Independence & cons. mon's in Greece, Belg., & S. Am.	Reformers set more realistic goals & strategies
---	---	---

Unification of Italy & Germany

c.1780 Neoclassical Art

1789 Start of French Rev.

1790 Moderate Const. Monarchy

1791 Internal problems mount

1792 Start of quarter century of wars; Mon. overthrown → 1st Rep.

1793-4 "Whiff of Grapeshot" → Rise of Nap.

1795 Reign of Terror

1799 Napoleon overthrows 1st Rep.

1804 Napoleon declares 1st Emp.

1807 Height of Nap's emp

1808-15 Nap's final defeat → Cong. of Vienna → Bourbon Mon. restored

c.1815 Rev. in Spain → Latin Am. Rev's

1820 Romantic art movement

1821 Greek Rev

1830 July Rev. in Paris

1830 Russ. crushes Polish revolt

1830 Belgian Rev. → Indep.

1832 Reform Bill in Britain

1848 Rev's of 1848

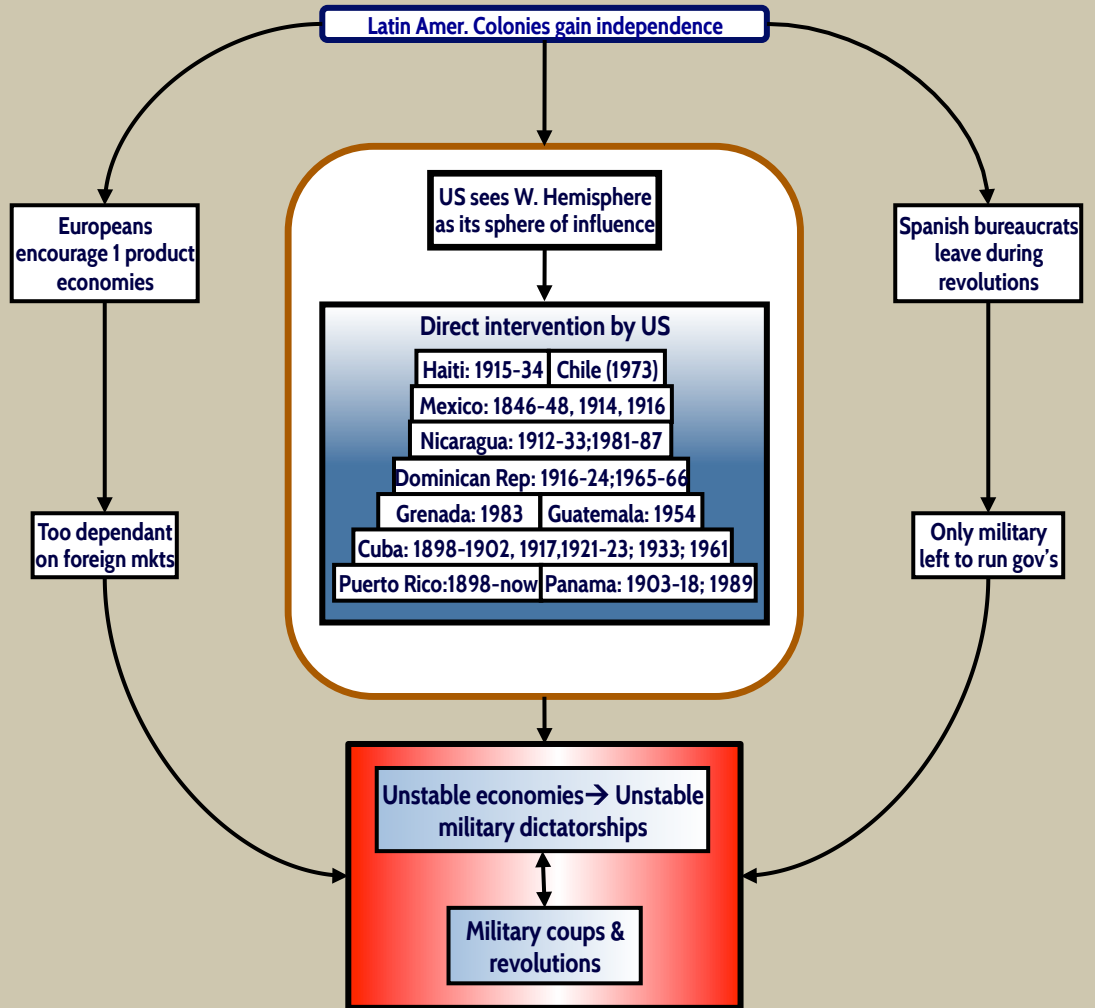
1851 Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp.

c.1850 Realism school of art

1851-70 Louis Nap's econ. reforms → politically conscious Mid. Cl.

1871 3rd Rep. in Fr. → Stable Dem.

13.5A THE VICIOUS CYCLE AFFECTING LATIN AMERICAN NATIONS



c.1780 Neoclassical Art Start of French Rev.

1789 Moderate Const. Monarchy Internal problems mount

1790 Start of quarter century of wars; Mon. overthrown -> 1st Rep.

1791 "Whiff of Grapeshot" -> Rise of Nap. Reign of Terror

1792 Napoleon declares 1st Emp. Napoleon overthrows 1st Rep.

1793-4 Height of Nap's emp

1795 Nap's final defeat -> Cong. of Vienna -> Bourbon Mon. restored

1799 Rev. in Spain -> Latin Am. Rev's Romantic art movement

1804 Greek Rev

1807 July Rev. in Paris

1808-15 Russ. crushes Polish revolt Belgian Rev. -> Indep.

c.1815 Reform Bill in Britain Rev's of 1848

1820 Louis Napoleon overthrows 2nd Rep. & declares 2nd Emp. Realism school of art

1821 Louis Nap's econ. reforms -> politically conscious Mid. Cl.

1830 3rd Rep. in Fr. -> Stable Dem.

1830 3rd Rep. in Fr. -> Stable Dem.

1832 3rd Rep. in Fr. -> Stable Dem.

1848 3rd Rep. in Fr. -> Stable Dem.

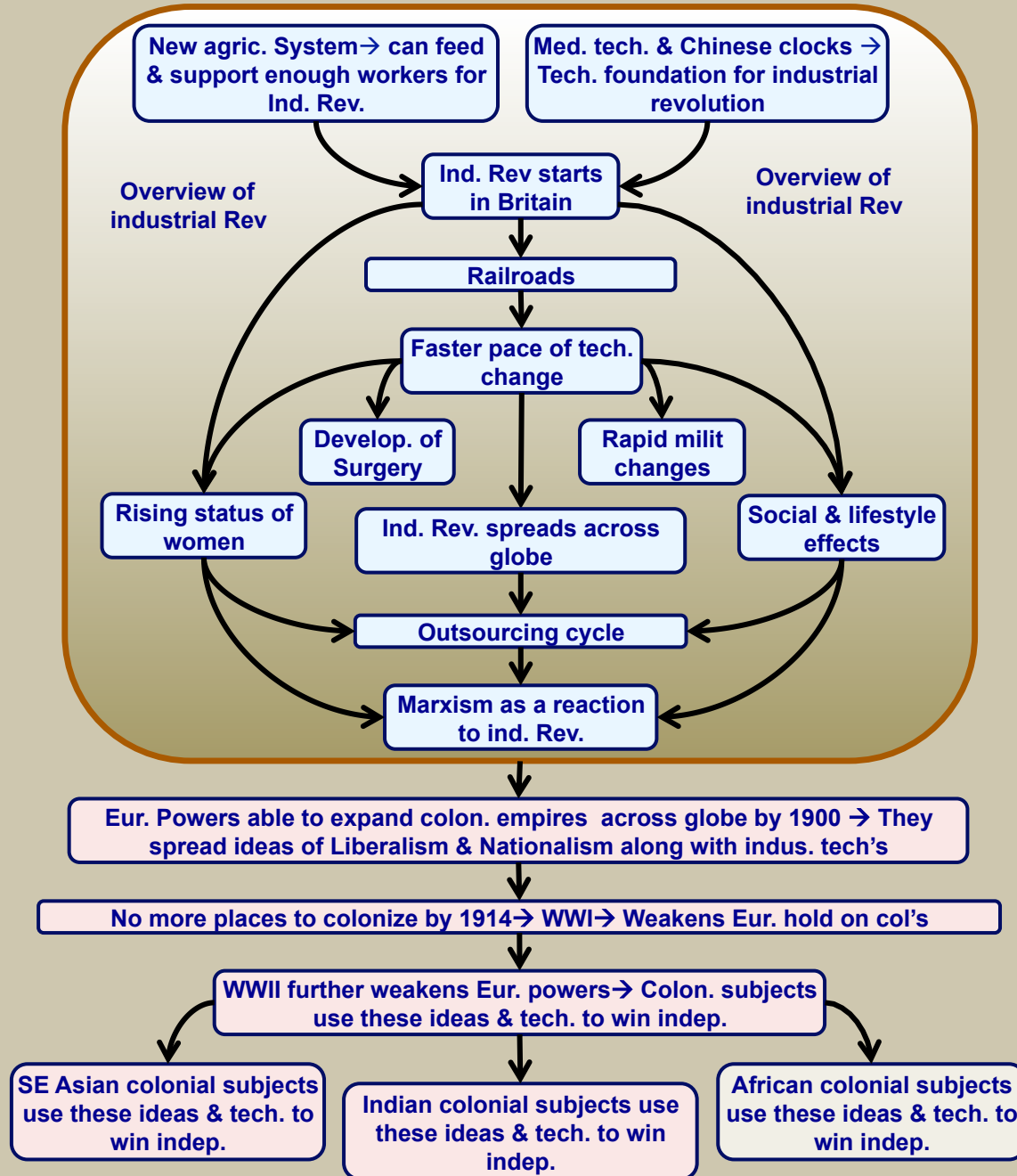
1851 3rd Rep. in Fr. -> Stable Dem.

c.1850 3rd Rep. in Fr. -> Stable Dem.

1851-70 3rd Rep. in Fr. -> Stable Dem.

1871 3rd Rep. in Fr. -> Stable Dem.

14. The Industrial Revolution



14.1 AGRICULTURAL BACKGROUND TO THE INDUSTRIAL REVOLUTION

1709 Abraham Darby smelts iron with coke

1712 Newcomen steam pump

1733 flying shuttle

1765 Spinning jenny

1769 Water frame, 1st water-powered textile machine

1775 Watt's steam engine

1783 Sun & Planet gear

1793 Cotton gin

1793 Jenner's inoculation vs. smallpox

1801 Trevithick's steam locomotive

1807 Fulton's steamboat

1830 Liverpool & Manchester RR

1831 Faraday discovers electro-magnet current

Morse telegraph; 1st commercial use in 1844

1837 1st ocean going steamship

1826 1st photograph

Bessemer process -> Steel

1854 Pasteur postulates germ theory

1864 Trans-Atlantic telegraph cable

1869 Mendeleev's periodic table of elements

1869 Suez Canal & Transcont. RR in US

1870s Lister applies germ theory to surgery

1873 Typewriter

1876 telephone

1877 phonograph

1878 light bulb

1884 1st skyscraper (10 stories)

1885 Rabies vaccine

1885 Movies

1885 Automobile

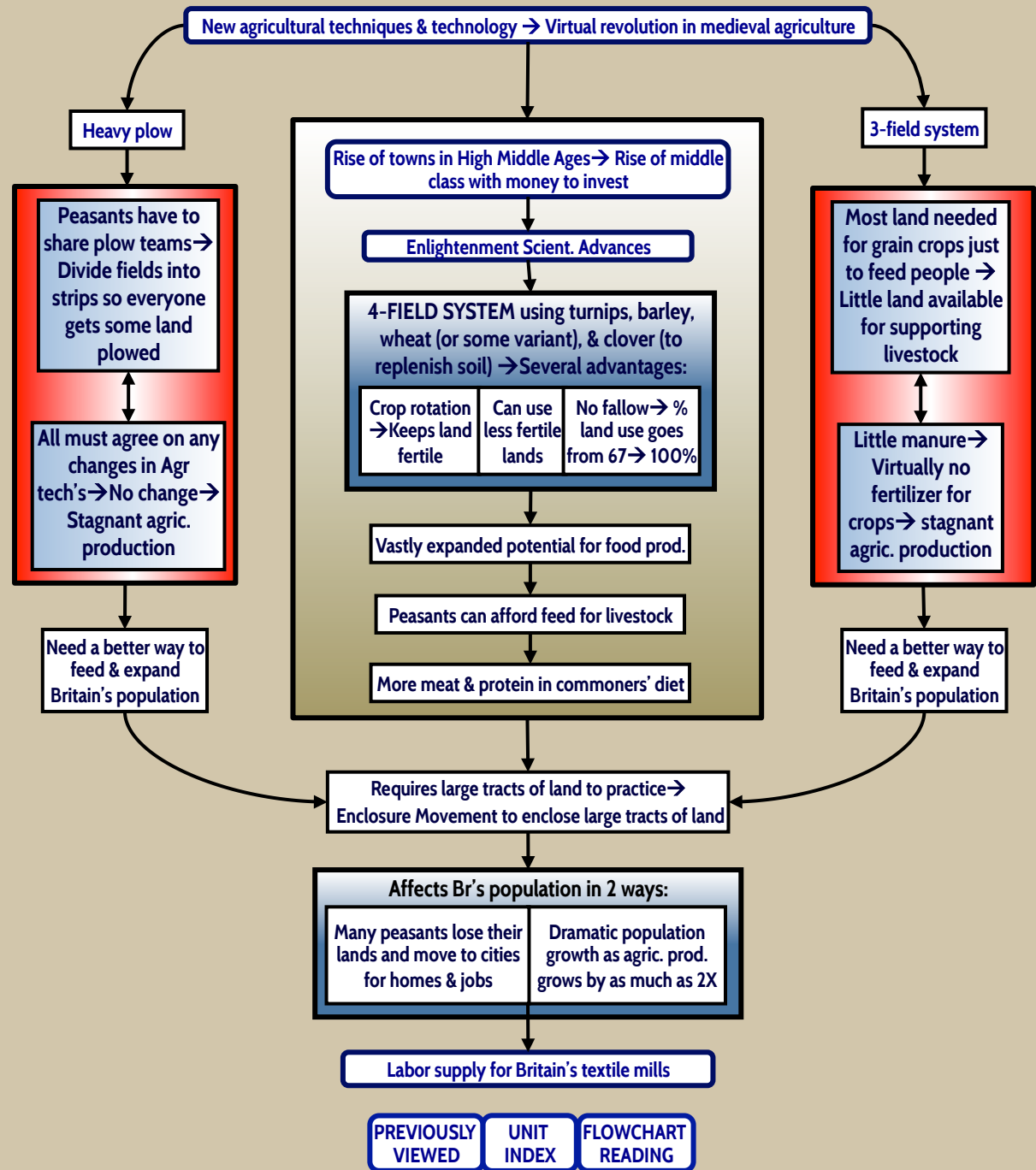
1895 X-rays

1901 1st trans-Atl. radio transmission

1903 Powered flight

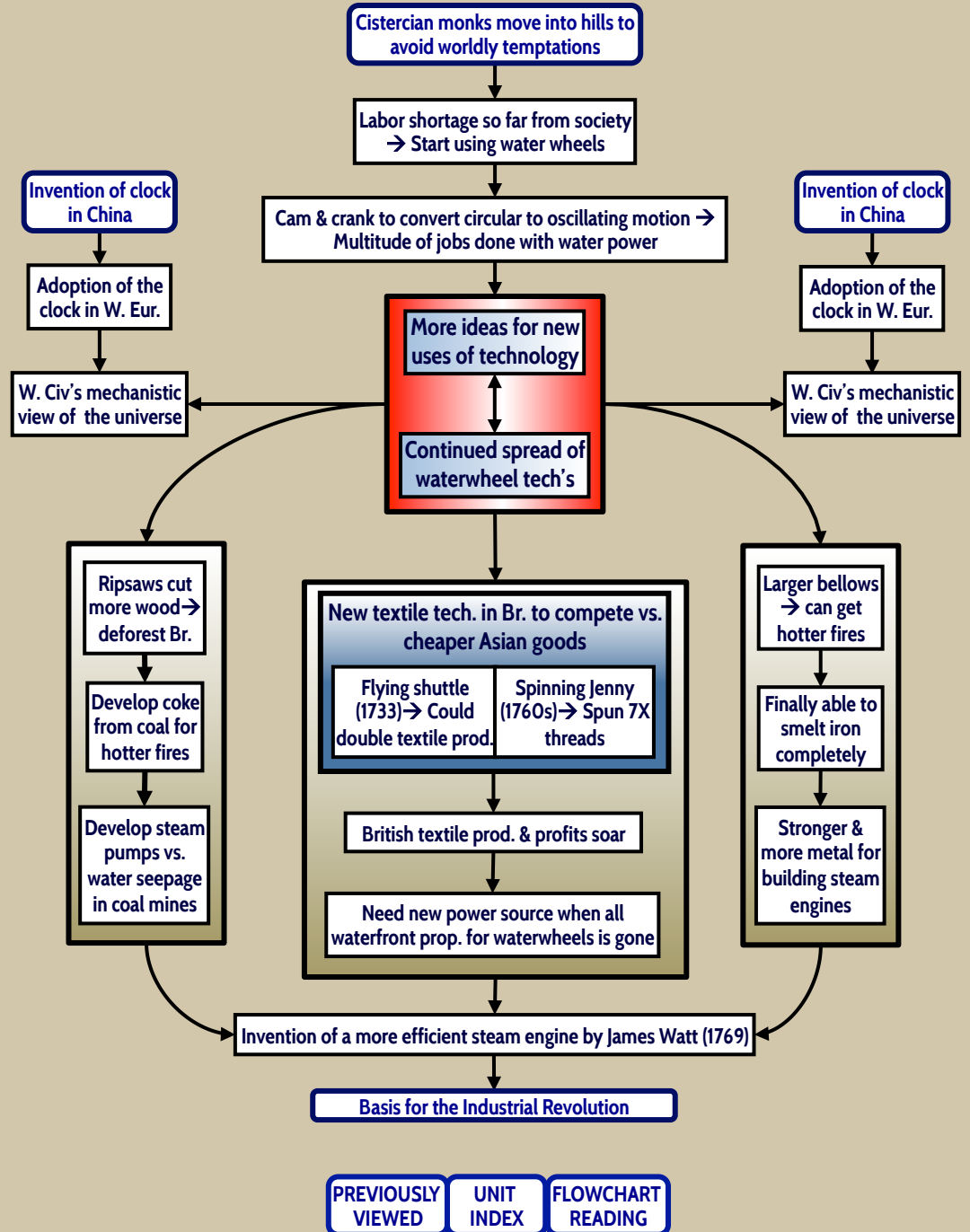
1908 Ford assembly line to mass produce cars

1914 Panama Canal



14.2 THE TECHNOLOGICAL BACKGROUND TO INDUSTRIALIZATION

1709		Abraham Darby smelts iron with coke
1712		Newcomen steam pump
1733		flying shuttle
1765		Spinning jenny
1769		Water frame, 1st water-powered textile machine
1775		Watt's steam engine
1783		Sun & Planet gear
1793		Cotton gin
1793		Jenner's inoculation vs. smallpox
1801		Trevithick's steam locomotive
1807		Fulton's steamboat
1830		Liverpool & Manchester RR
1831		Faraday discovers electro-magnet current
1837		Morse telegraph; 1st commercial use in 1844
1837		1st ocean going steamship
1826		1st photograph
1854		Bessemer process -> Steel
1864		Trans-Atlantic telegraph cable
1869		Mendeleev's periodic table of elements
1869		Suez Canal & Transcont. RR in US
1870s		Lister applies germ theory to surgery
1873		Typewriter
1876		telephone
1876		phonograph
1878		light bulb
1884		1st skyscraper (10 stories)
1885		Rabies vaccine
1885		Movies
1885		Automobile
1895		X-rays
1901		1st trans-Atl. radio transmission
1903		Powered flight
1908		Ford assembly line to mass produce cars
1914		Panama Canal



14.3 THE BIRTH OF THE INDUSTRIAL REVOLUTION IN BRITAIN (c.1750)

1709 Abraham Darby smelts iron with coke

1712 Newcomen steam pump

1733 flying shuttle

1765 Spinning jenny

1769 Water frame, 1st water-powered textile machine

1775 Watt's steam engine

1783 Sun & Planet gear

1793 Cotton gin

1793 Jenner's inoculation vs. smallpox

1801 Trevithick's steam locomotive

1807 Fulton's steamboat

1830 Liverpool & Manchester RR

1831 Faraday discovers electro-magnet current

1837 Morse telegraph; 1st commercial use in 1844

1837 1st ocean going steamship

1826 1st photograph

1854 Bessemer process -> Steel

1864 Pasteur postulates germ theory

1869 Trans-Atlantic telegraph cable

1869 Mendeleev's periodic table of elements

1869 Suez Canal & Transcont. RR in US

1870s Lister applies germ theory to surgery

1873 Typewriter

1876 telephone

1878 phonograph

1878 light bulb

1884 1st skyscraper (10 stories)

1885 Rabies vaccine

1885 Movies

1885 Automobile

1885 X-rays

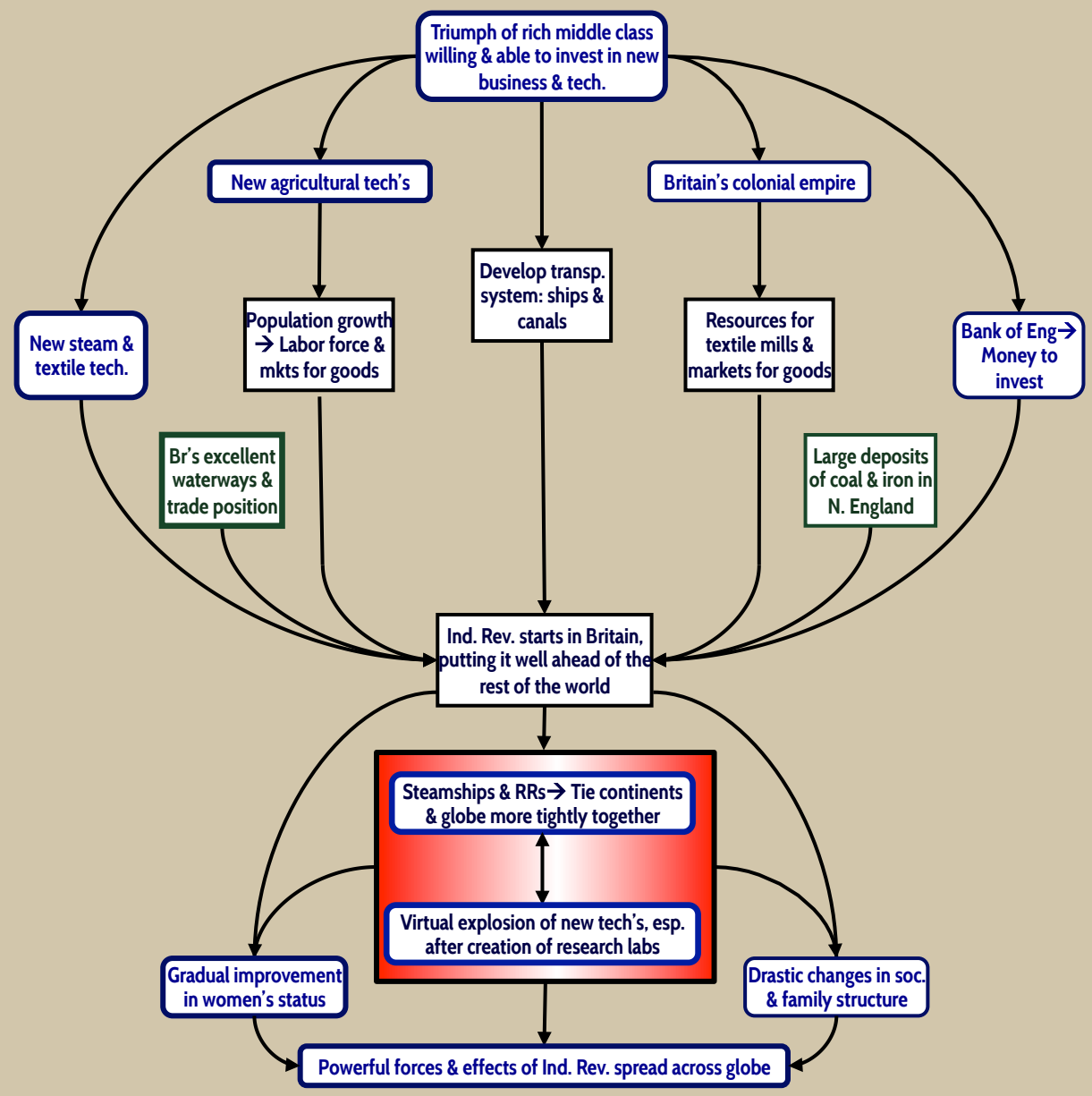
1895 1st trans-Atl. radio transmission

1901 Powered flight

1903 Ford assembly line to mass produce cars

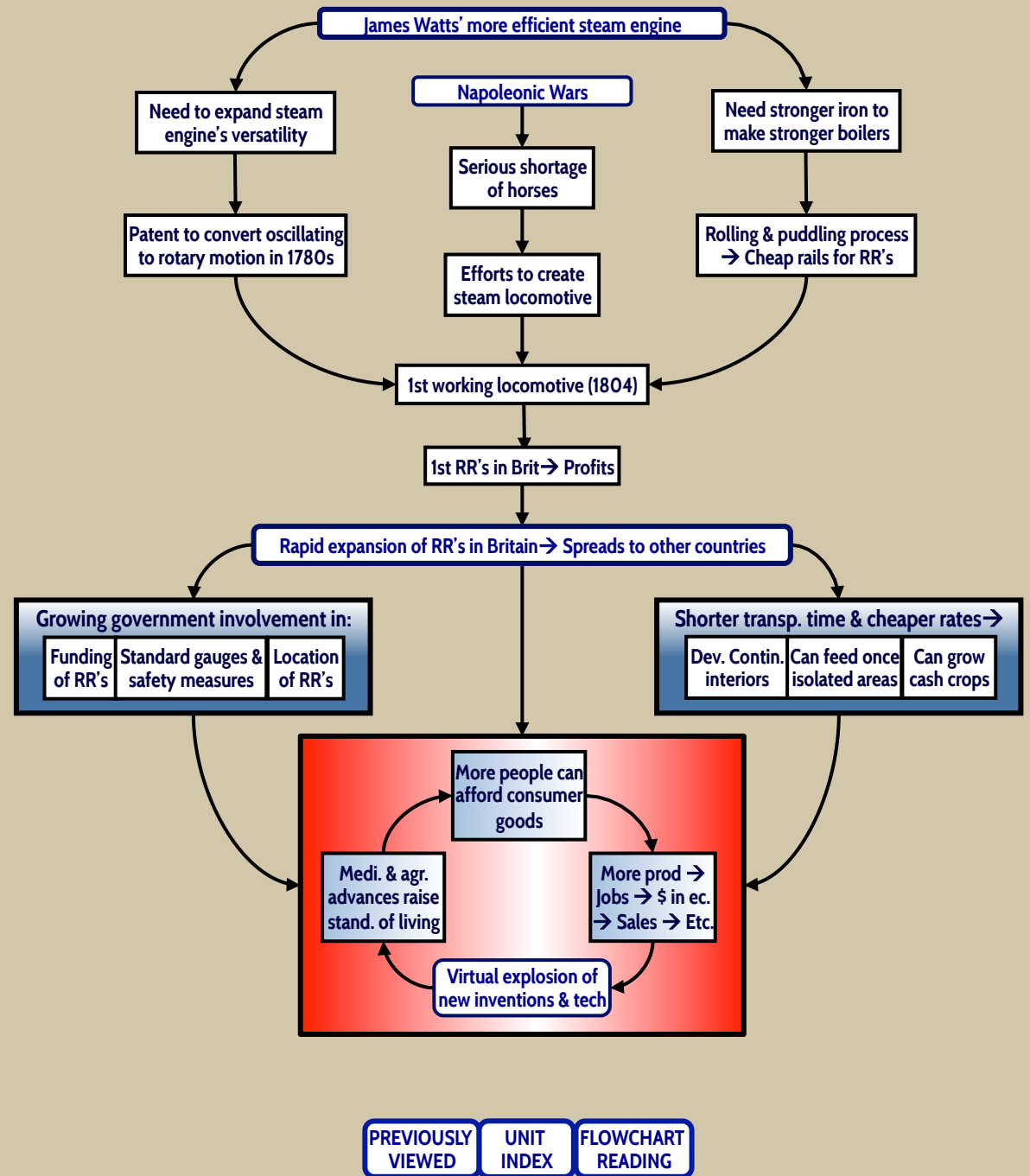
1908 Panama Canal

1914



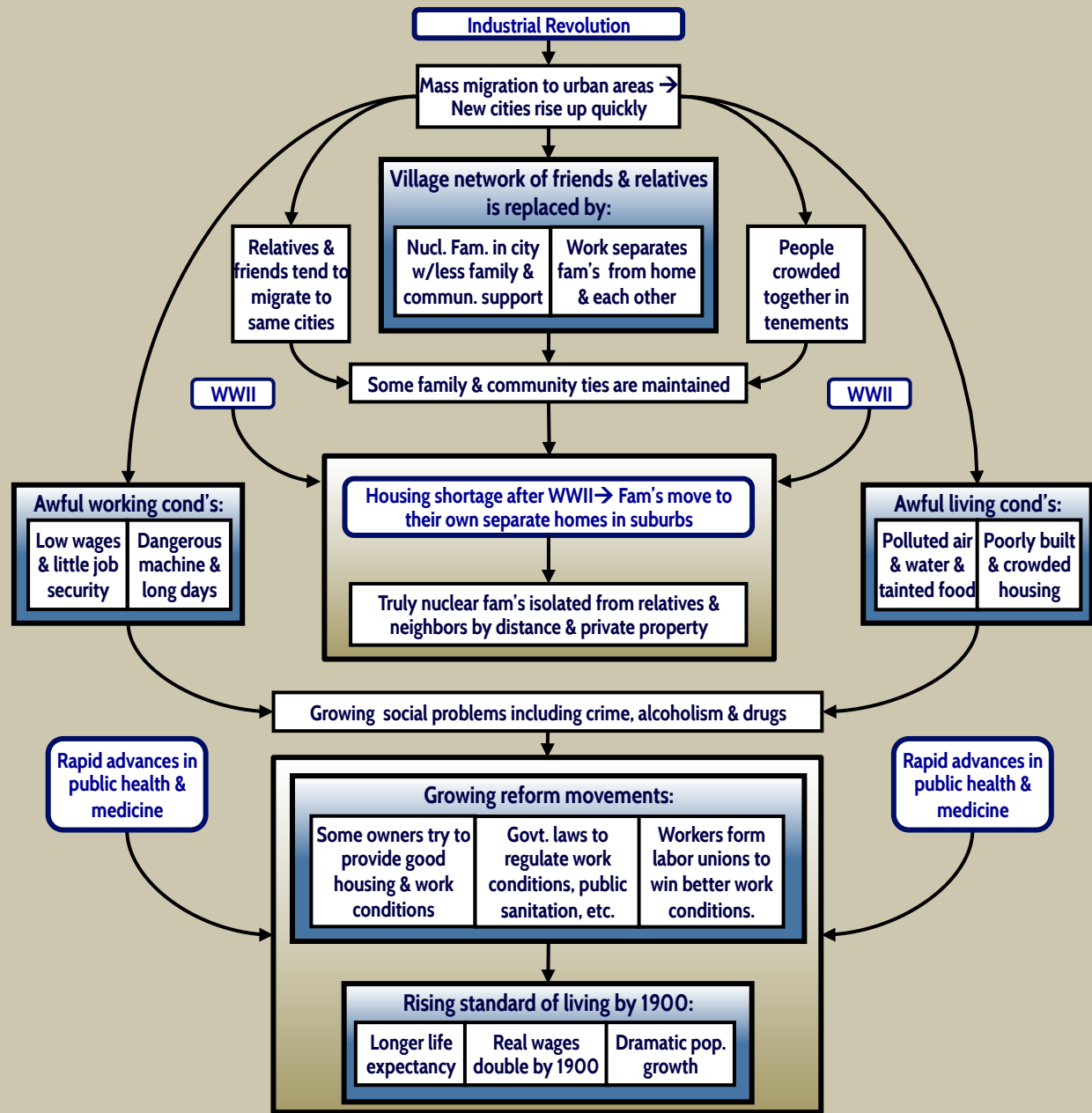
14.4 RAILROADS & THEIR IMPACT (c.1825-1900)

1709		Abraham Darby smelts iron with coke
1712		Newcomen steam pump
1733		flying shuttle
1765		Spinning jenny
1769		Water frame, 1st water-powered textile machine
1775		Watt's steam engine
1783		Sun & Planet gear
1793		Cotton gin
1793		Jenner's inoculation vs. smallpox
1801		Trevithick's steam locomotive
1807		Fulton's steamboat
1830		Liverpool & Manchester RR
1831		Faraday discovers electro-magnet current
1837		Morse telegraph; 1st commercial use in 1844
1837		1st ocean going steamship
1826		1st photograph
1854		Bessemer process -> Steel
1864		Trans-Atlantic telegraph cable
1869		Mendelev's periodic table of elements
1869		Suez Canal & Transcont. RR in US
1870s		Lister applies germ theory to surgery
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1877		phonograph
1878		light bulb
1884		1st skyscraper (10 stories)
1885		Rabies vaccine
1885		Movies
1885		Automobile
1895		X-rays
1901		1st trans-Atl. radio transmission
1903		Powered flight
1908		Ford assembly line to mass produce cars
1914		Panama Canal



14.5 THE SOCIAL IMPACT OF THE INDUSTRIAL REVOLUTION

1709		Abraham Darby smelts iron with coke
1712		Newcomen steam pump
1733		flying shuttle
1765		Spinning jenny
1769		Water frame, 1st water-powered textile machine
1775		Watt's steam engine
1783		Sun & Planet gear
1793		Cotton gin
1793		Jenner's inoculation vs. smallpox
1801		Trevithick's steam locomotive
1807		Fulton's steamboat
1830		Liverpool & Manchester RR
1831		Faraday discovers electro-magnet current
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1869		Mendelev's periodic table of elements
1869		Suez Canal & Transcont. RR in US
1870s		Lister applies germ theory to surgery
1873		Typewriter
1876		telephone
1876		phonograph
1876		light bulb
1877		
1878		
1884		
1885		1st skyscraper (10 stories)
1885		Rabies vaccine
1885		Movies
1885		Automobile
1885		X-rays
1895		1st trans-Atl. radio transmission
1901		Powered flight
1903		Ford assembly line to mass produce cars
1908		Panama Canal
1914		



14.6 THE WOMEN'S MOVEMENT I (c.1800-1920)

1709 Abraham Darby smelts iron with coke

1712 Newcomen steam pump

1733 flying shuttle

1765 Spinning jenny

1769 Water frame, 1st water-powered textile machine

1775 Watt's steam engine

1783 Sun & Planet gear

1793 Cotton gin

1793 Jenner's inoculation vs. smallpox

1801 Trevithick's steam locomotive

1807 Fulton's steamboat

1830 Liverpool & Manchester RR

1831 Faraday discovers electro-magnet current

Morse telegraph; 1st commercial use in 1844

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1864 Pasteur postulates germ theory

1869 Trans-Atlantic telegraph cable

1869 Mendeleev's periodic table of elements

1869 Suez Canal & Transcont. RR in US

1870s Lister applies germ theory to surgery

1873 Typewriter

1876 telephone

1876 phonograph

1876 light bulb

1877

1878

1884 1st skyscraper (10 stories)

1885 Rabies vaccine

1885 Movies

1885 Automobile

1885 X-rays

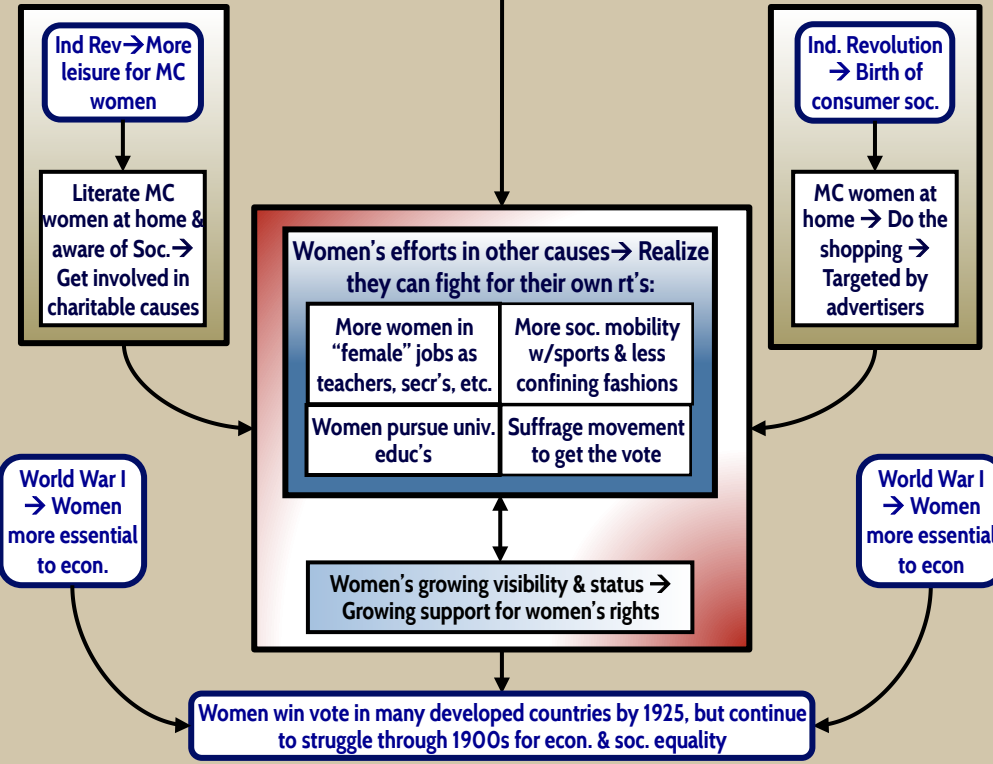
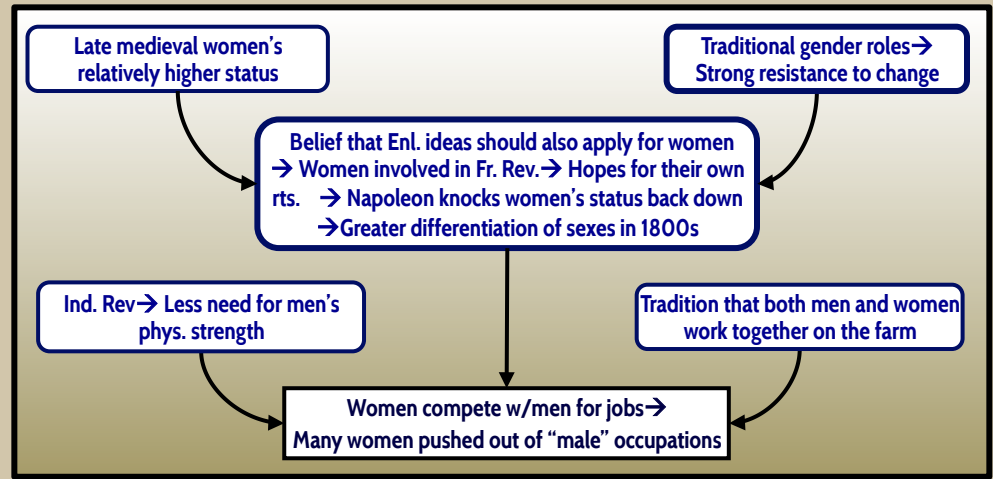
1895 1st trans-Atl. radio transmission

1901 Powered flight

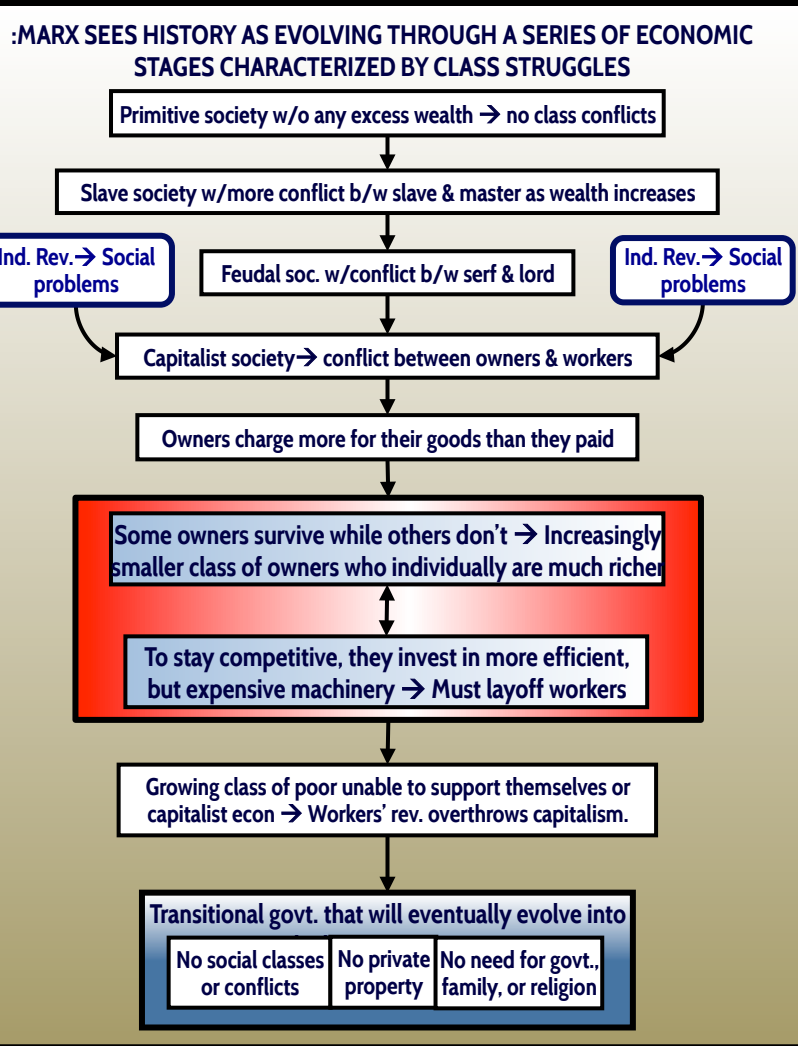
1903 Ford assembly line to mass produce cars

1908 Panama Canal

1914



14.7 THE MARXIST VIEW OF HISTORY & ITS IMPACT



Marxism successful in some ways but not in others:

Indiv. genius, greed, stupidity, etc. not accounted for	Caused many gov't. reforms both for & vs. Marxism	Pointed out the role of economics & class struggle in history	Marxist rev's happened in pre-indus., not ind. soc's
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1712		Newcomen steam pump
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1765		Spinning jenny
1769		Water frame, 1st water-powered textile machine
1775		Watt's steam engine
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1854		Bessemer process -> Steel
1864		Trans-Atlantic telegraph cable
1869		Mendelev's periodic table of elements
1869		Suez Canal & Transcont. RR in US
1869		Lister applies germ theory to surgery
1870s		Typewriter
1873		telephone
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1878		
1884		
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1885		Rabies vaccine
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1885		X-rays
1895		1st trans-Atl. radio transmission
1901		Powered flight
1903		Ford assembly line to mass produce cars
1908		Panama Canal
1914		

14.8 INDUSTRIALIZATION SPREADS BEYOND BRITAIN (1850-1900)

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1733 flying shuttle

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1769 Water frame, 1st water-powered textile machine

1775 Watt's steam engine

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1807 Fulton's steamboat

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1873 Typewriter

1876 telephone

1876 phonograph

1876 light bulb

1877 Rabies vaccine

1878 Movies

1884 1st skyscraper (10 stories)

1885 Automobile

1885 X-rays

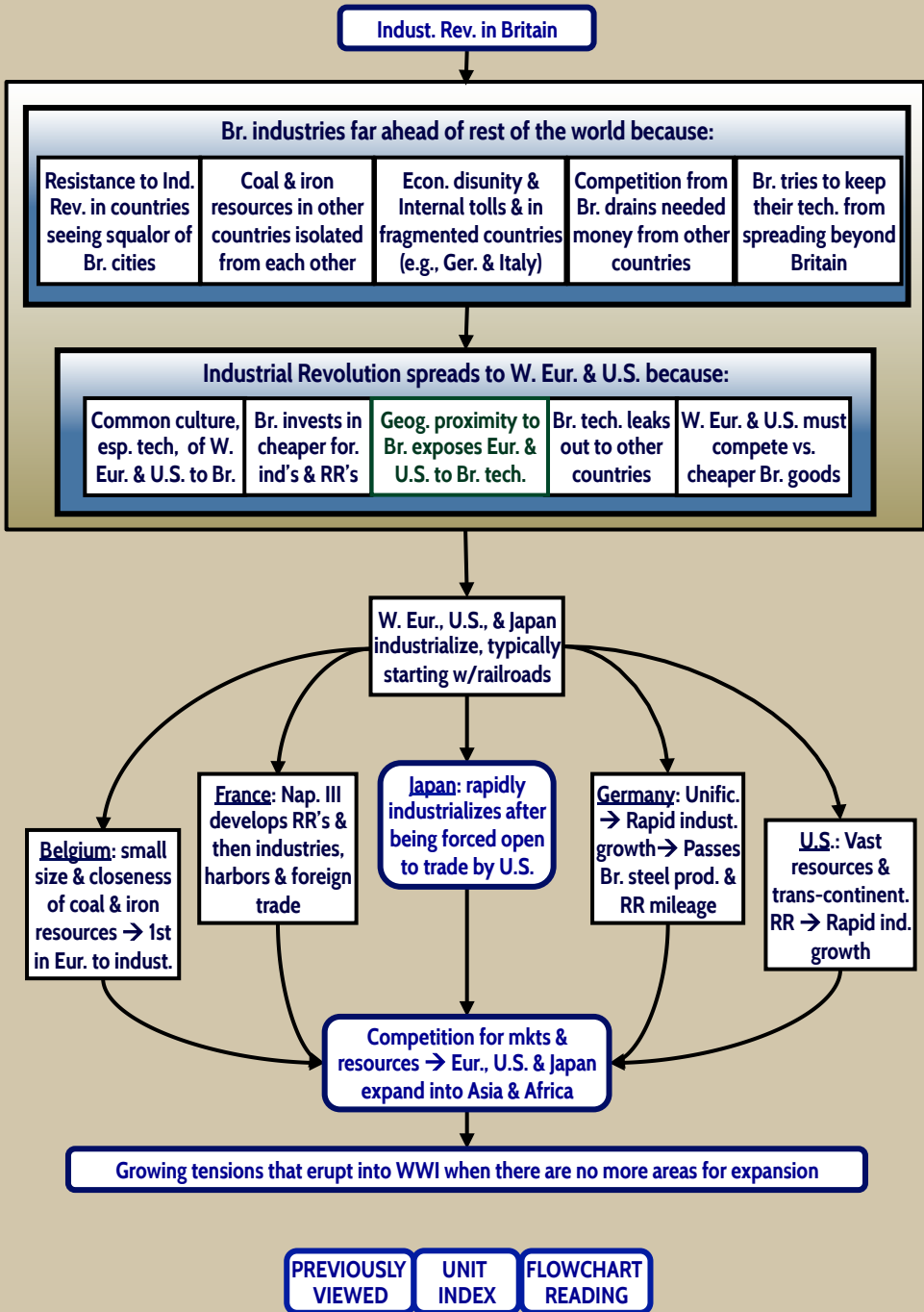
1895 1st trans-Atl. radio transmission

1901 Powered flight

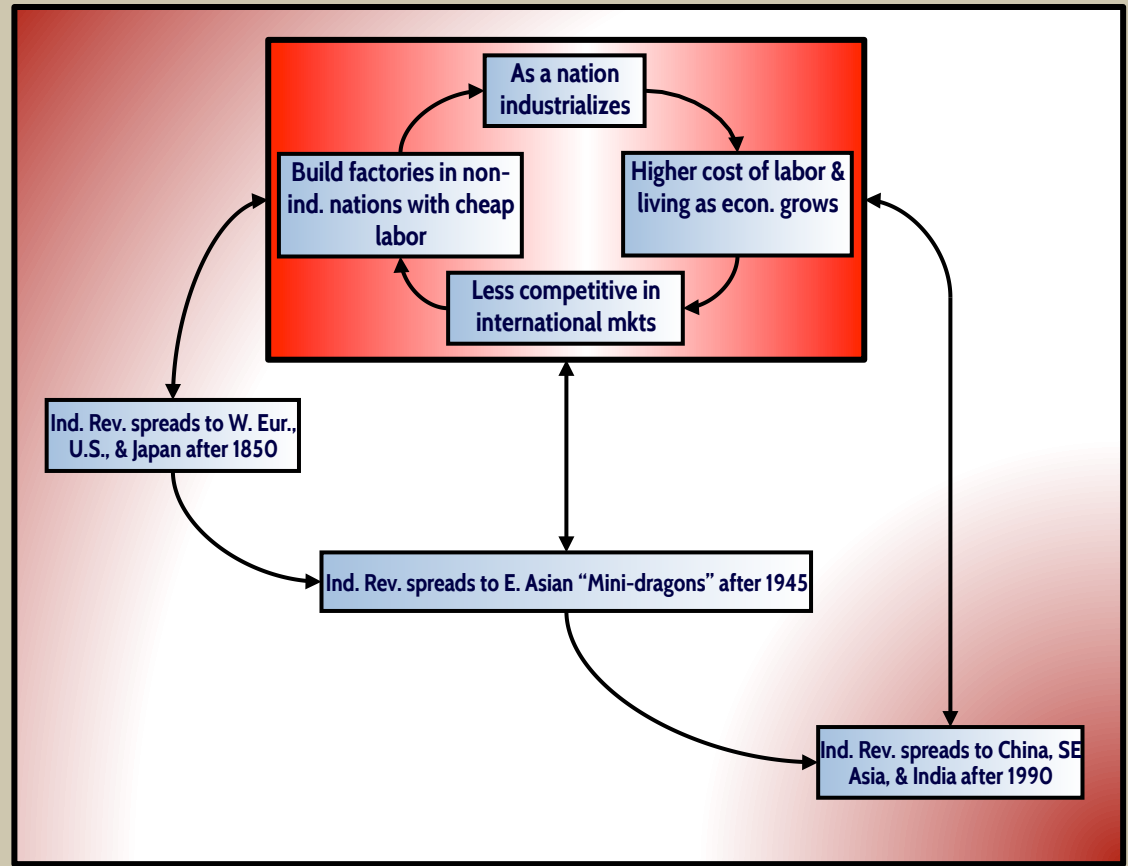
1903 Ford assembly line to mass produce cars

1908 Panama Canal

1914



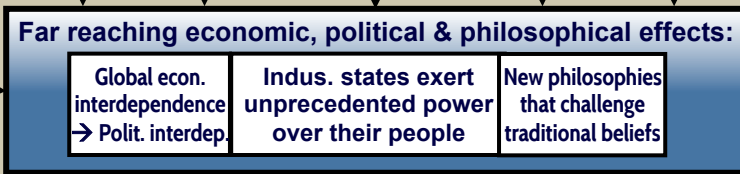
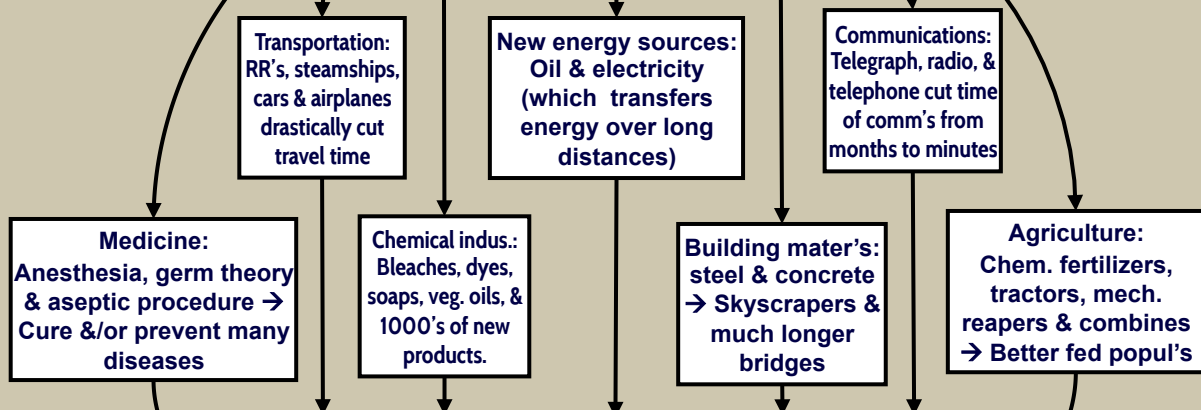
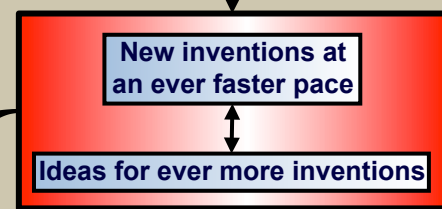
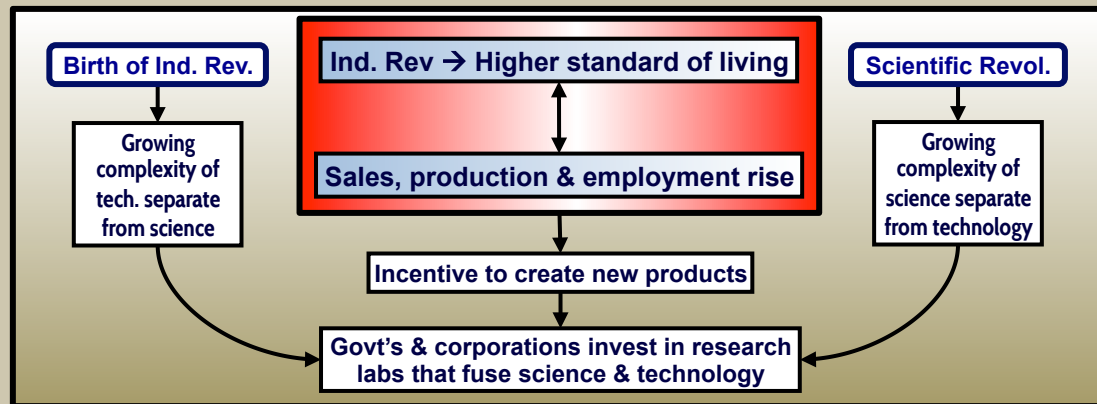
14.8A THE ONGOING CYCLE OF FOREIGN INVESTMENT AND SPREAD OF INDUSTRIALIZATION



Older indust. nations use capital accrued from previous sales to shift from production-oriented capitalism to financial capitalism, relying on "invisible" exports (e.g., banking and insurance) to maintain econ. Power.

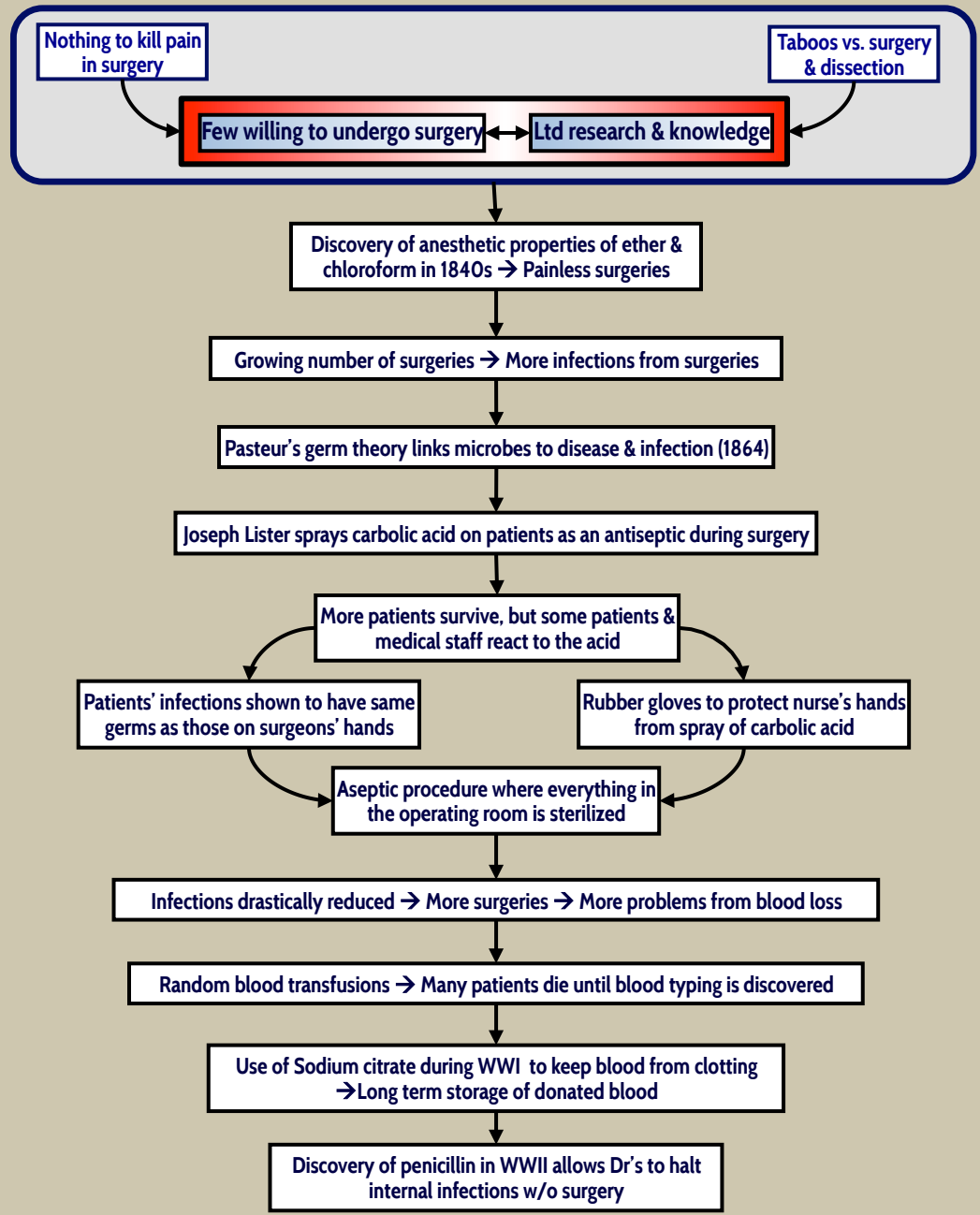
- 1709 Abraham Darby smelts iron with coke
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- 1775 Watt's steam engine
- 1783 Sun & Planet gear
- Cotton gin
- 1793 Jenner's inoculation vs. smallpox
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- 1830 Faraday discovers electro-magnet current
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- Bessemer process -> Steel
- 1854 Pasteur postulates germ theory
- Trans-Atlantic telegraph cable
- 1869 Mendeleev's periodic table of elements
- Suez Canal & Transcont. RR in US
- 1869 Lister applies germ theory to surgery
- 1870s Typewriter
- 1873 telephone
- phonograph
- 1876 light bulb
- 1884 Rabies vaccine
- 1st skyscraper (10 stories)
- 1885 Movies
- Automobile
- 1885 X-rays
- 1895 1st trans-Atl. radio transmission
- Powered flight
- 1901 Ford assembly line to mass produce cars
- Panama Canal
- 1903
- 1908
- 1914

14.9 ACCELERATING TECHNOLOGICAL GROWTH (c.1850-1900)



1709		Abraham Darby smelts iron with coke
1712		Newcomen steam pump
1733		flying shuttle
1765		Spinning jenny
1769		Water frame, 1st water-powered textile machine
1775		Watt's steam engine
1783		Sun & Planet gear
1793		Cotton gin
1793		Jenner's inoculation vs. smallpox
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1873		Typewriter
1876		telephone
1876		phonograph
1876		light bulb
1877		1st skyscraper (10 stories)
1884		Rabies vaccine
1885		Movies
1885		Automobile
1885		X-rays
1895		1st trans-Atl. radio transmission
1901		Powered flight
1903		Ford assembly line to mass produce cars
1908		Panama Canal
1914		Panama Canal

14.9A THE EVOLUTION OF MODERN SURGERY



1709		Abraham Darby smelts iron with coke
1712		Newcomen steam pump
1733		flying shuttle
1765		Spinning jenny
1769		Water frame, 1st water-powered textile machine
1775		Watt's steam engine
1783		Sun & Planet gear
1793		Cotton gin
1793		Jenner's inoculation vs. smallpox
1801		Trevithick's steam locomotive
1807		Fulton's steamboat
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1884		1st skyscraper (10 stories)
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1885		Movies
1885		Automobile
1895		X-rays
1901		1st trans-Atl. radio transmission
1903		Powered flight
1908		Ford assembly line to mass produce cars
1914		Panama Canal

14.9B THE ACCELERATING CYCLE OF MILITARY DEVELOPMENT SINCE 1850

1709 Abraham Darby smelts iron with coke

1712 Newcomen steam pump

1733 flying shuttle

1765 Spinning jenny

1769 Water frame, 1st water-powered textile machine

1775 Watt's steam engine

1783 Sun & Planet gear

1793 Cotton gin

1793 Jenner's inoculation vs. smallpox

1801 Trevithick's steam locomotive

1807 Fulton's steamboat

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1873 Typewriter

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1878

1884

1885 Rabies vaccine

1885 Movies

1885 Automobile

1885 X-rays

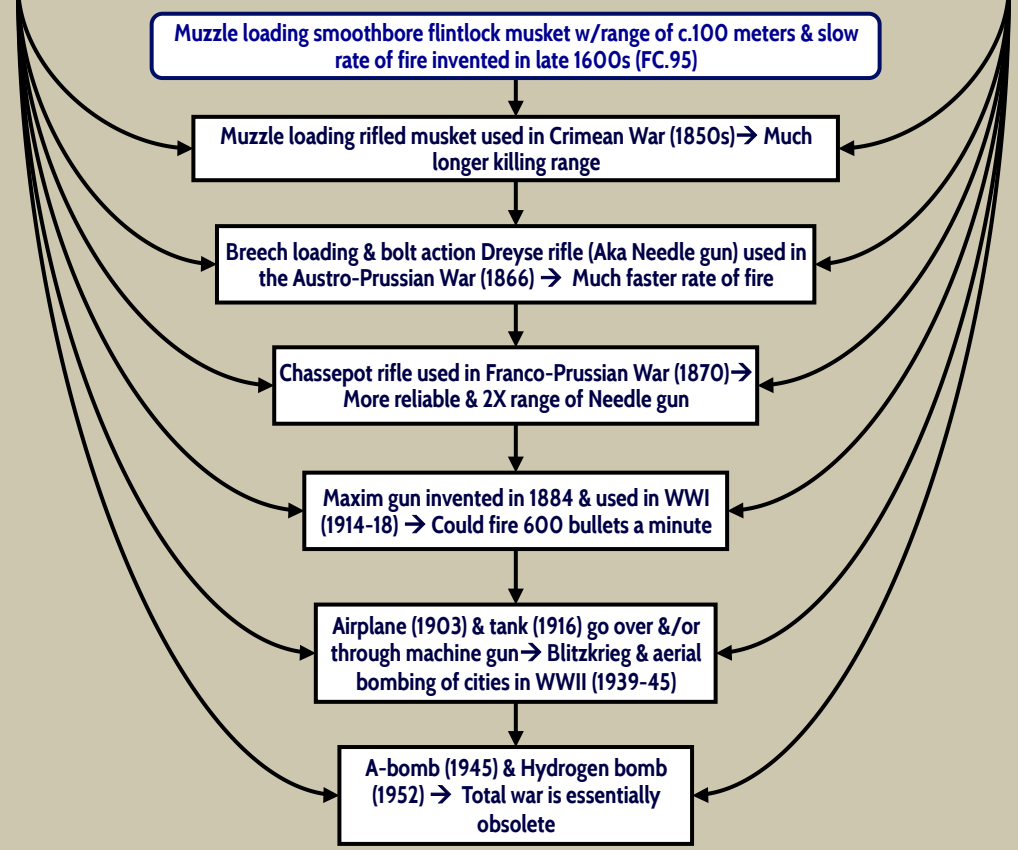
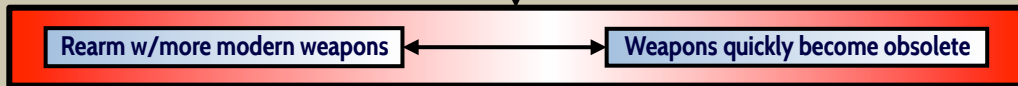
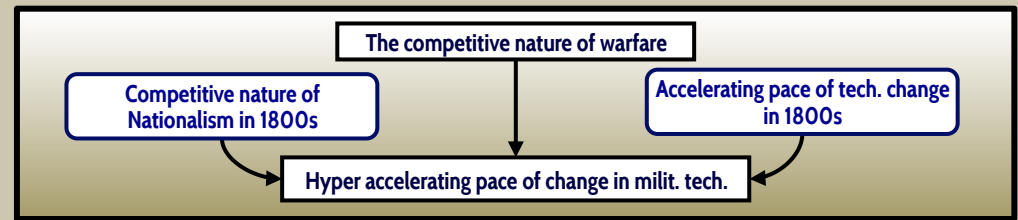
1895 1st trans-Atl. radio transmission

1901 Powered flight

1903

1908 Ford assembly line to mass produce cars

1914 Panama Canal



14.10 AN OVERVIEW OF THE IMPACT OF THE INDUSTRIAL REVOLUTION

1709 Abraham Darby smelts iron with coke

1712 Newcomen steam pump

1733 flying shuttle

1765 Spinning jenny

1769 Water frame, 1st water-powered textile machine

1775 Watt's steam engine

1783 Sun & Planet gear

Cotton gin

1793 Jenner's inoculation vs. smallpox

1801 Trevithick's steam locomotive

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1807

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1870s Lister applies germ theory to surgery

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1878

1884

1885 Rabies vaccine

1st skyscraper (10 stories)

1885

1885 Movies

Automobile

X-rays

1895

1901 1st trans-Atl. radio transmission

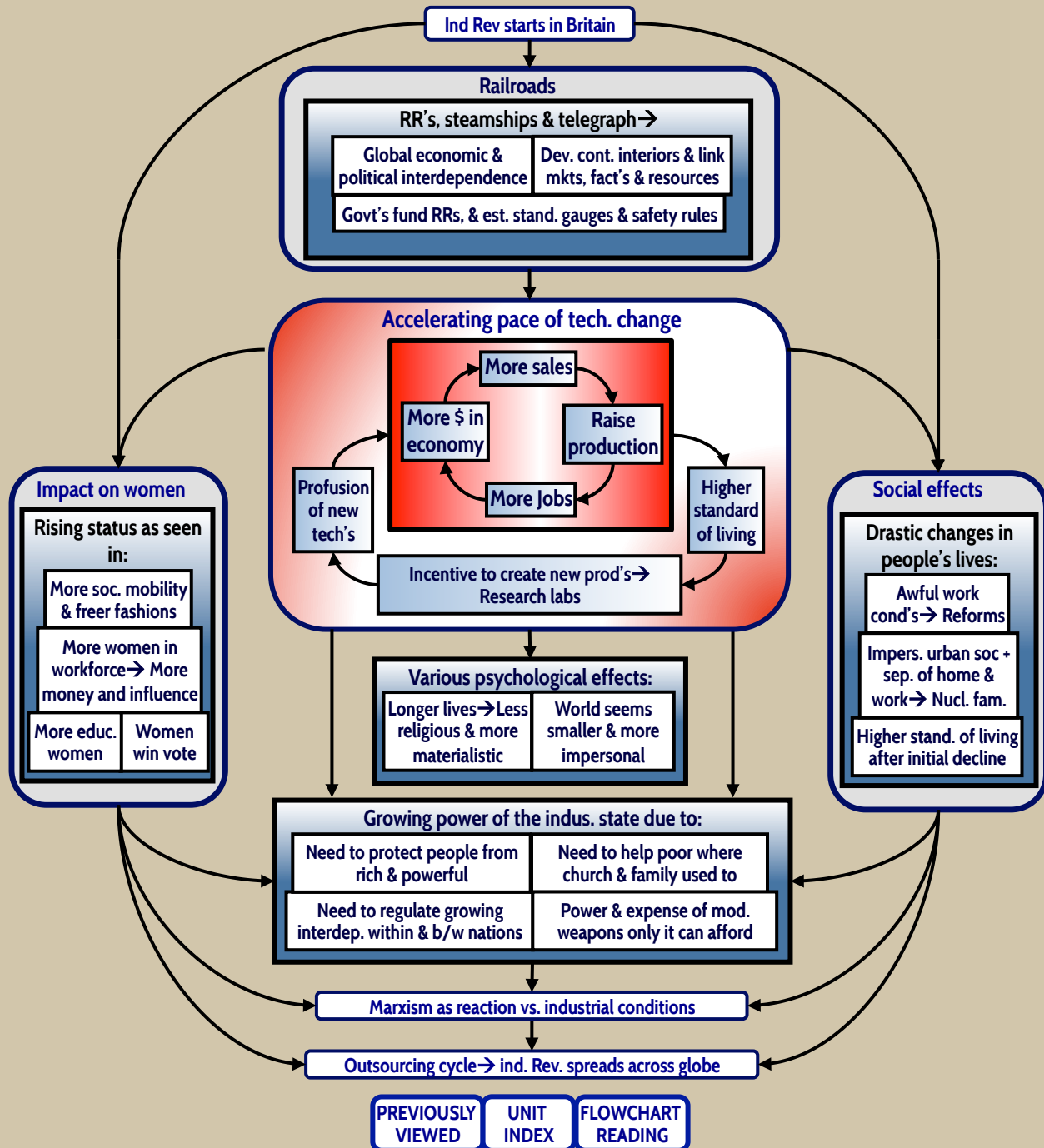
Powered flight

1903

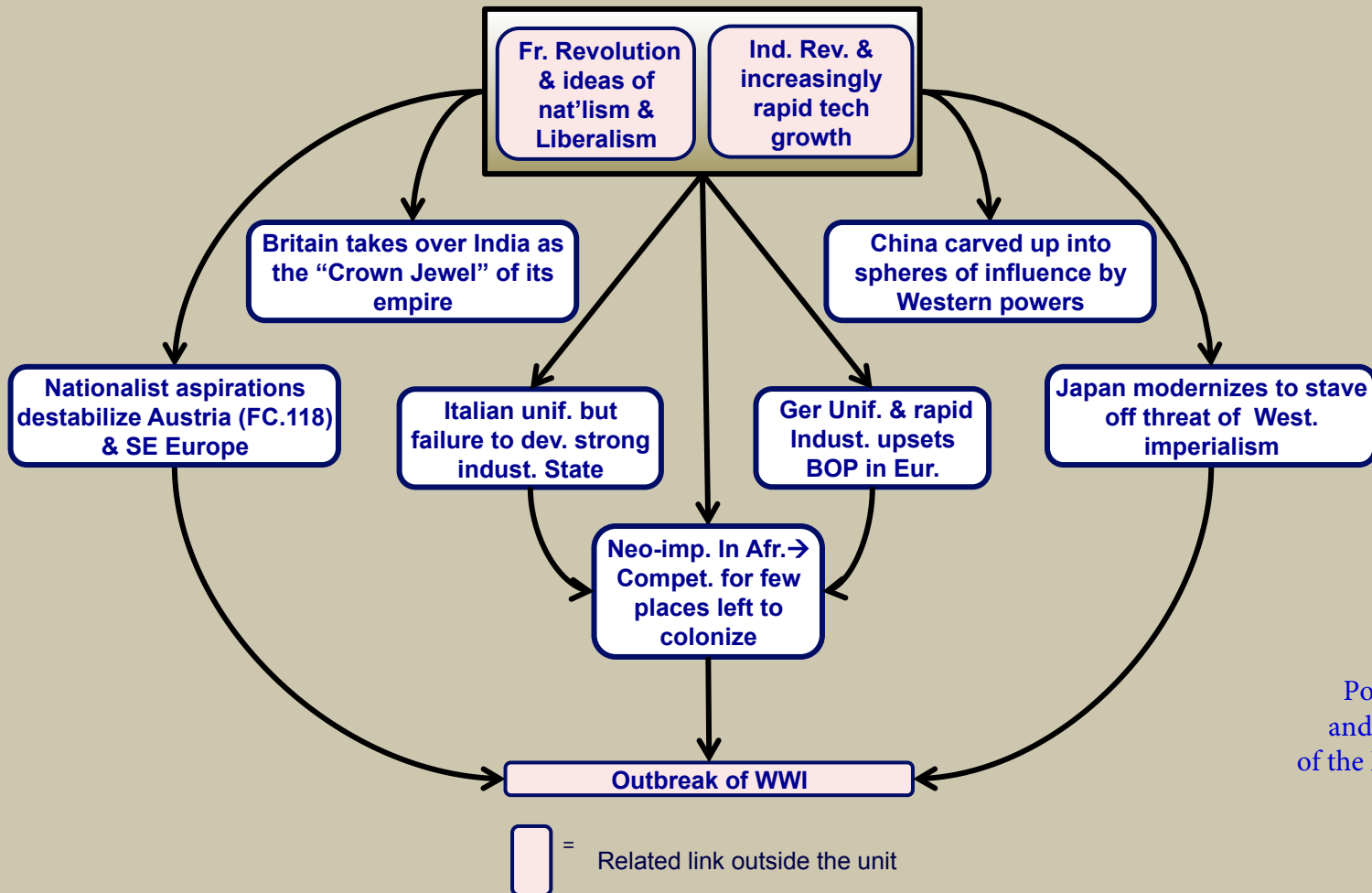
1908 Ford assembly line to mass produce cars

Panama Canal

1914



15. Nationalism & imperialism in the late 1800s



Polar History
and the Empire
of the Elves: a Parody

15.1 THE DECLINE OF THE HAPSBURG EMPIRE IN THE 1800s

1848 Revs across Eur.

1839-58 1st Opium War → Taiping Rebellion → 2nd Opium War

1853-6 Crimean War

1854 Japan forced to open to the world

1857 Great Indian Mutiny → Br. takes over India

1861 Kgd of Italy formed

1861 Serfdom abolished in Russia

1865 Salon des Refuses

1867 Meiji Restoration → Japan's modernization

1868 Austro-Pruss. War

1870-1 Unif. of Germany

1873 Impressionists' first exhibition

1873-82 Br buys Eg's shares in Suez Canal → Occup. Eg

1879 Renoir's "Boating Party"

1881 Anglo-Zulu War

1884 Fr. conq. Indochina

1884 Berlin Conf. to regulate compet. for Afr. colonies

1885 Leopold II's "Congo Free State"

1888 Van Gogh's "Starry Night over Rhone"

1888 Sino-Jap. War

1894-5 Sp.-Am. War

1898 Boxer Rebellion in China

1898 Brit. takes Sudan

1899 Russo-Japan. War

1899-1902 Boer War → Brit. Control of S. Afr.

1903-5 Entente Cordiale b/w Fr. & Br.

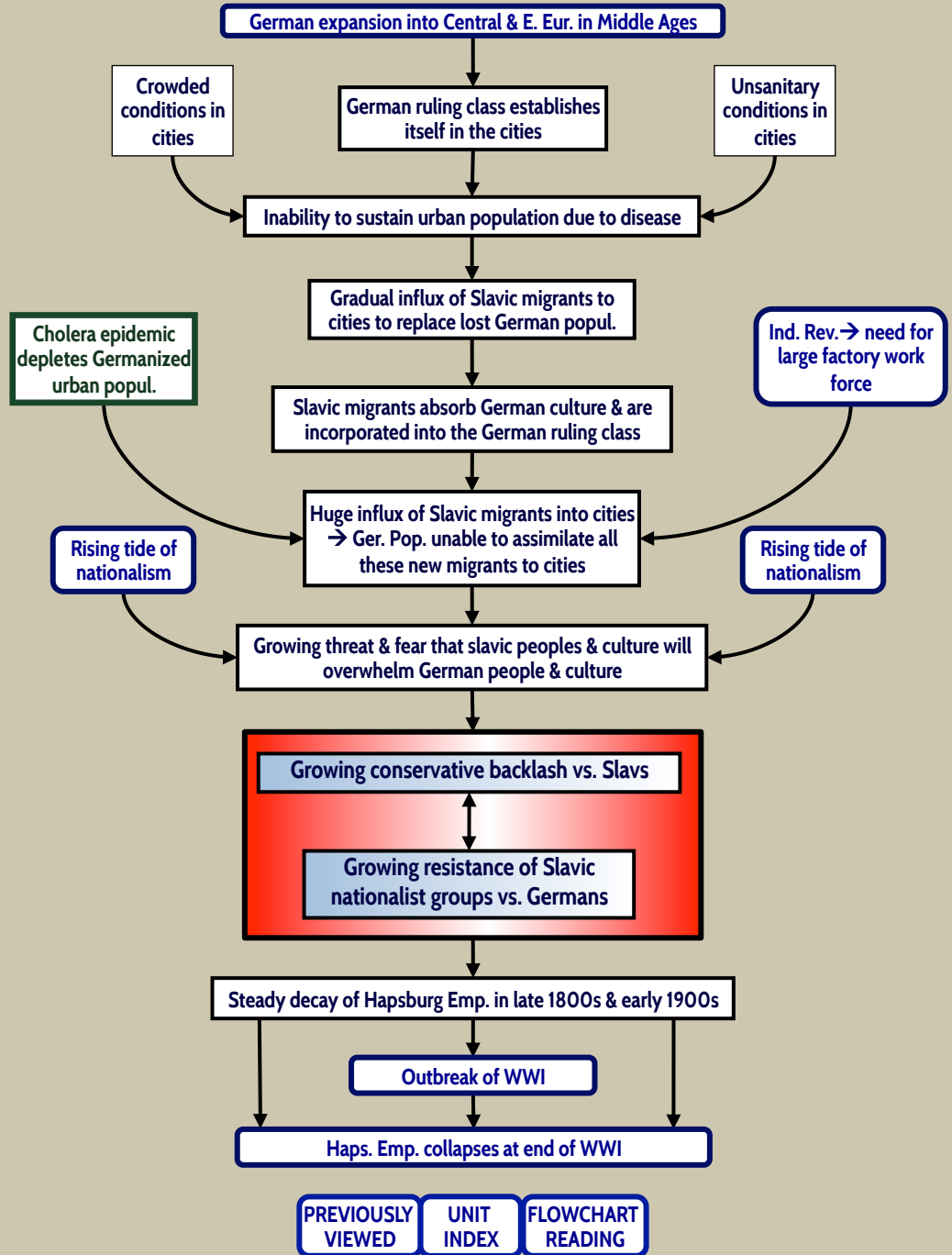
1904 Rev. of 1905 in Russia

1905 Abstract art

c.1900 Chinese Republic founded

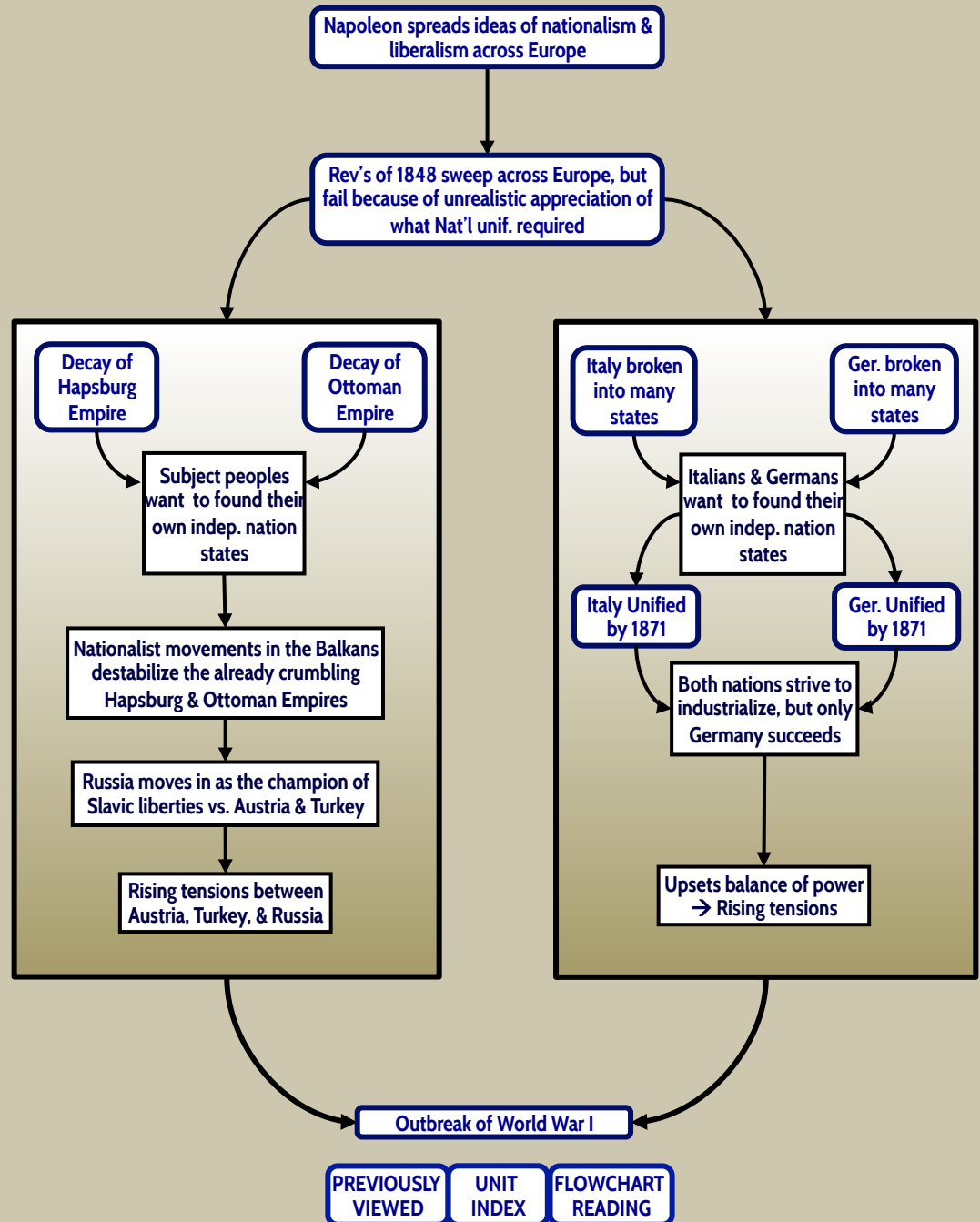
1912 Start of WWI

1914



15.2 EUROPEAN NATIONALISM (1848-1914)

1848	Revs across Eur.	1st Opium War	Taiping Rebellion
1839-58			→ 2nd Opium War
1853-6		Crimean War	
1854	Japan forced to open to the world		Great Indian Mutiny → Br. takes over India
1857			
1861	Kgd of Italy formed		
1861		Serfdom abolished in Russia	
1865	Salon des Refuses		
1867	Meiji Restoration → Japan's modernization	Austro-Pruss. War	
1868			
1870-1			Unif. of Germany
1873		Impressionists' first exhibition	
1873-82	Br buys Eg's shares in Suez Canal → Occup. Eg		
1879	Renoir's "Boating Party"	Anglo-Zulu War	
1881			
1884	Fr. conq. Indochina	Berlin Conf. to regulate compet. for Afr. colonies	
1859-85			
1885	Leopold II's "Congo Free State"		
1888	Van Gogh's "Starry Night over Rhone"	Sino-Jap. War	
1894-5		Sp.-Am. War	
1898			
1898	Boxer Rebellion in China	Brit. takes Sudan	
1899			
1899-1902	Russo-Japan. War	Boer War → Brit. Control of S. Afr.	
1903-5			Entente Cordiale b/w Fr. & Br.
1904			
1905		Rev. of 1905 in Russia	
c.1900	Abstract art	Chinese Republic founded	
1912			Start of WWI
1914			



PREVIOUSLY VIEWED

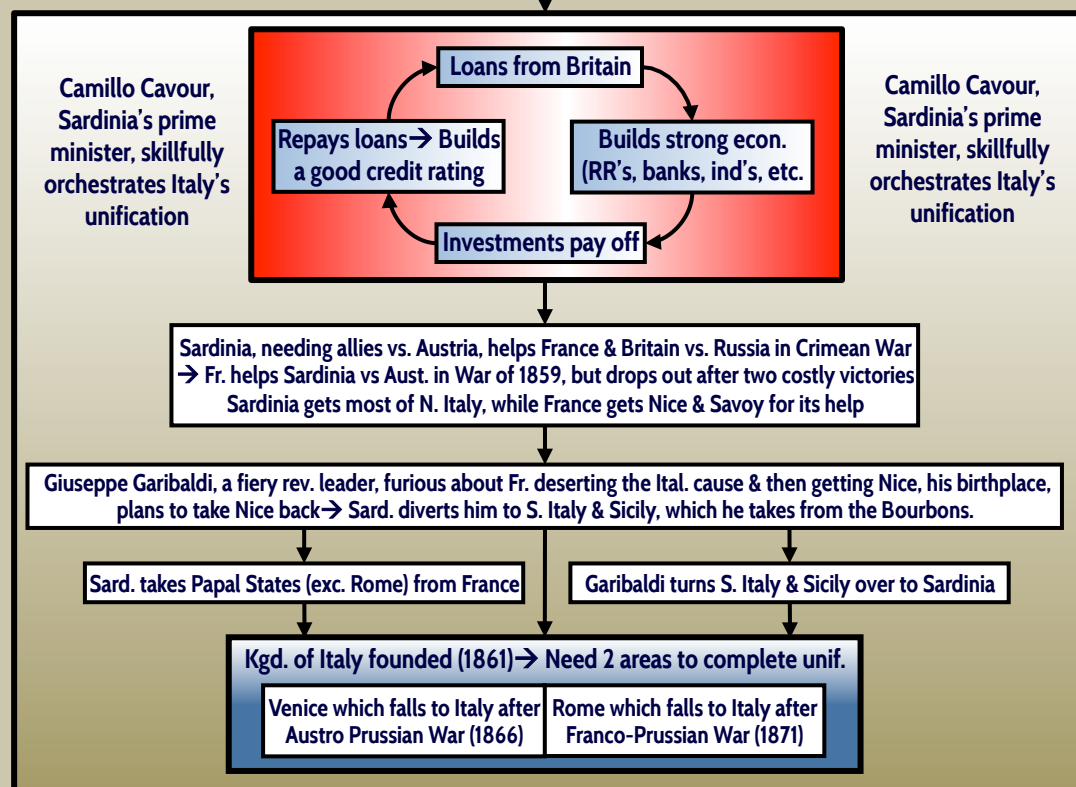
UNIT INDEX

FLOWCHART READING

15.3 THE UNIFICATION OF ITALY & ITS EFFECTS (1848-1914)

Rev's of 1848 fail when Pope & Duke of Tuscany desert the cause of Italian unification & indep.

Kgd. of Sardinia (aka: Piedmont) seen as the natural leader for Italian unification



Sardinia, needing allies vs. Austria, helps France & Britain vs. Russia in Crimean War → Fr. helps Sardinia vs Aust. in War of 1859, but drops out after two costly victories Sardinia gets most of N. Italy, while France gets Nice & Savoy for its help

Giuseppe Garibaldi, a fiery rev. leader, furious about Fr. deserting the Ital. cause & then getting Nice, his birthplace, plans to take Nice back → Sard. diverts him to S. Italy & Sicily, which he takes from the Bourbons.

Sard. takes Papal States (exc. Rome) from France

Garibaldi turns S. Italy & Sicily over to Sardinia

Kgd. of Italy founded (1861) → Need 2 areas to complete unif.

Venice which falls to Italy after Austro Prussian War (1866)	Rome which falls to Italy after Franco-Prussian War (1871)
--	--

Efforts to build Italy w/national army, RR's, & public education largely fail because:

Resistance from local groups (e.g., Mafia)	Uneven distr. of wealth b/w N & S Italy	Different subcultures in N. & S. Italy
--	---	--

Italy's poor performance in World War I

Italy destabilized & open to takeover by Mussolini & the Fascists

1848 Revs across Eur.

1839-58 1st Opium War → Taiping Rebellion → 2nd Opium War

1853-6 Crimean War

1854 Japan forced to open to the world

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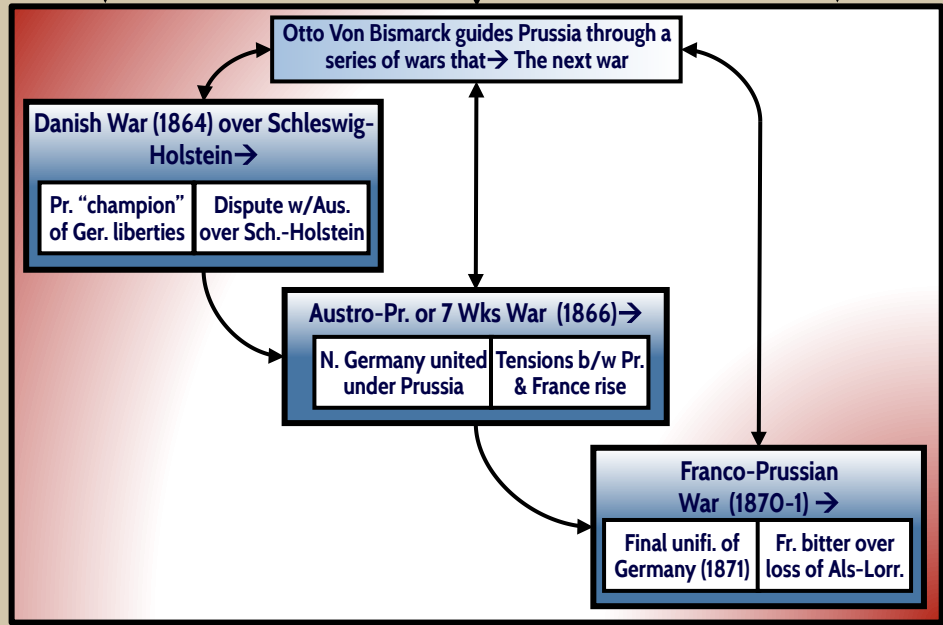
1914

15.4 THE EMERGENCE OF THE GERMAN NATION (1848-1914)

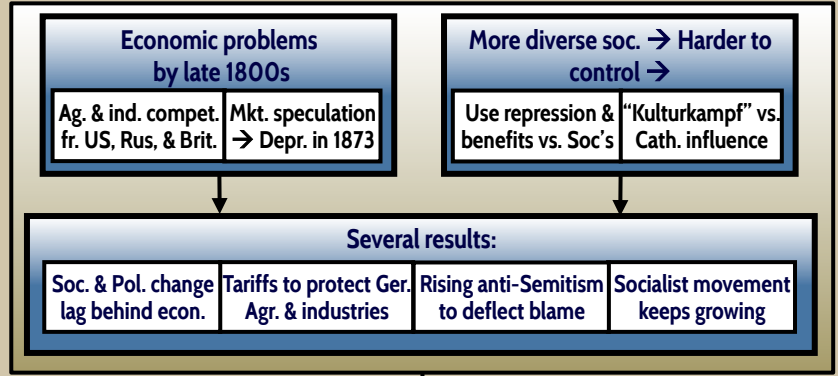
Germany used as battleground since Thirty Years War

Rising tide of Nationalism in 1800s

Cong. of Vienna consolidates Germany into 38 states



Germany rapidly industrializes & even surpasses Brit. steel prod. by 1900



Upsets BOP in Europe

Upsets BOP in Europe

Rising internat'l & domestic tensions -> Outbreak of World War I

PREVIOUSLY VIEWED UNIT INDEX FLOWCHART READING

1848 Revs across Eur.

1839-58 1st Opium War -> Taiping Rebellion -> 2nd Opium War

1853-6 Crimean War

1854 Japan forced to open to the world

1857 Great Indian Mutiny -> Br. takes over India

1861 Kgd of Italy formed

1861 Serfdom abolished in Russia

1865 Salon des Refuses

1867 Meiji Restoration -> Japan's modernization

1868 Austro-Pruss. War

1870-1 Unif. of Germany

1873 Impressionists' first exhibition

1873-82 Br buys Eg's shares in Suez Canal -> Occup. Eg

1879 Renoir's "Boating Party"

1881 Anglo-Zulu War

1884 Fr. conq. Indochina

1859-85 Berlin Conf. to regulate compet. for Afr. colonies

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1888 Sino-Jap. War

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1898 Boxer Rebellion in China

1898 Brit. takes Sudan

1899-1902 Russo-Japan. War

1903-5 Boer War -> Brit. Control of S. Afr.

1904 Entente Cordiale b/w Fr. & Br.

1905 Rev. of 1905 in Russia

c.1900 Abstract art

c.1900 Chinese Republic founded

1912 Start of WWI

1914

15.5 EUROPEAN IMPERIAL EXPANSION INTO AFRICA (c.1870-1914)

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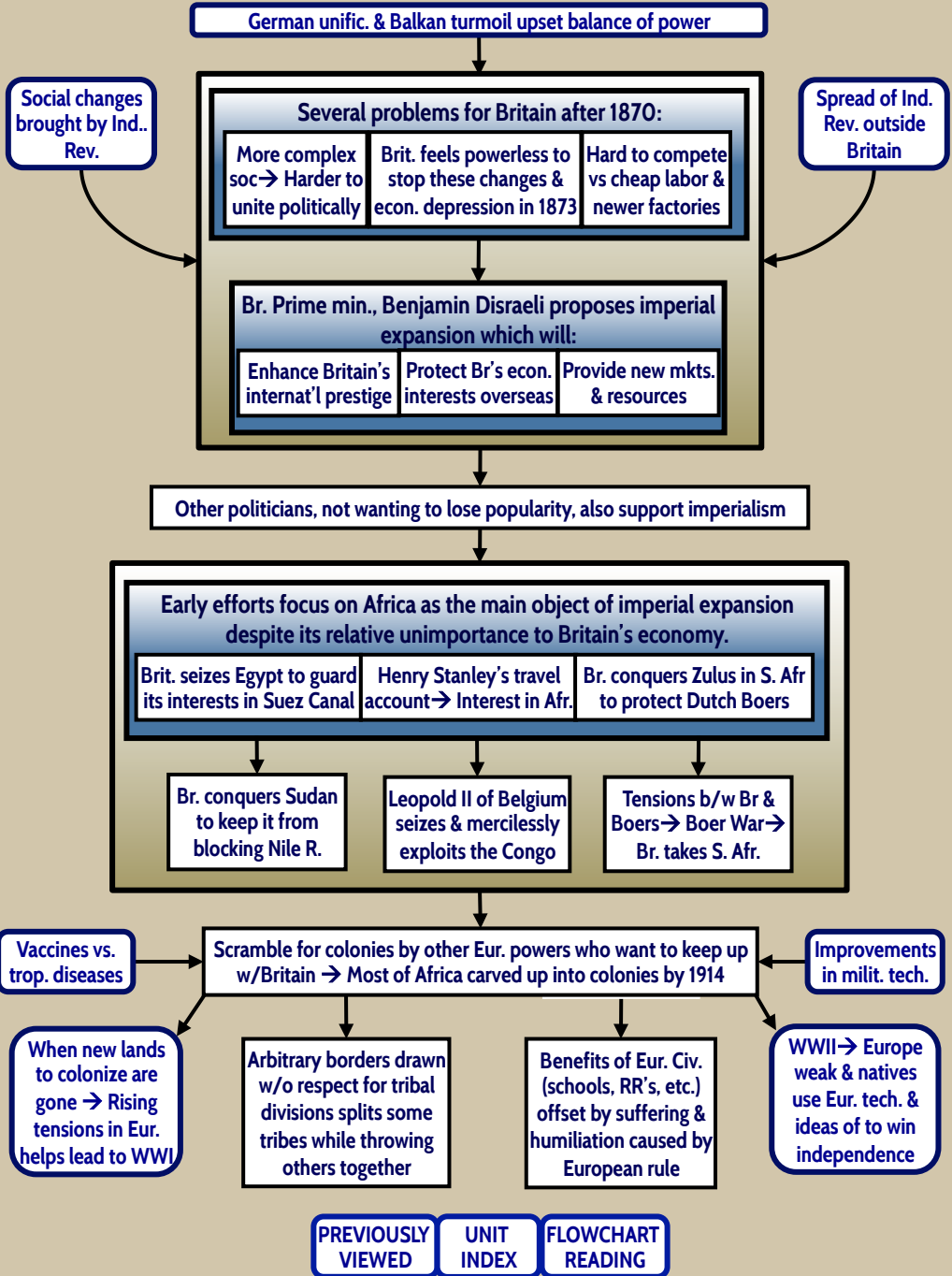
1905 Rev. of 1905 in Russia

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c.1900 Chinese Republic founded

1912 Start of WWI

1914



15.6 THE BRITISH IN INDIA (c.1600-1947)

Decline of Portuguese Emp. in SE Asia by 1600

Decline of Mughal Empire → Growing turmoil

Br. E. Indies Comp.(BEIC) sets up & must defend trading posts in India

BEIC trains native troops like Eur. armies

Defeat Fr. expansion in S. India during 7 Yrs War

Defeat Bengalis at Plassey vs. 30:1 odds (1757)

India wide open for exploitation & conquest by BEIC & its employees →

Many make huge fortunes

Tropical diseases & heat kill many

Many adopt local customs

BEIC in debt → Br. govt. assumes more control

Growing tension between:

British advocating respect for Ind. civ.

British having no respect for Ind. civ.

Br. send missionaries, some to help Indians & some to show Eur. superiority

Br. rapidly modernize Ind., some to help Indians & some to show Eur. superiority

Many Indians upset either way

Many Indians upset either way

Great India Mutiny (1857) → Br. Gov. takes control of India (1858)

Dev. Tea, cotton, coal & iron ind's

Continue bldg. RR's & telegr.

Efficient but segregated bur.

Indep.. movement by Hindus → Indian Muslims want sep. state

Br. needs Indian help → More promises of concessions

Gandhi's non-violent movement

Muslim/Hindu clashes worsen

Br. grants indep. (1947), but to separate Hindu India & Muslim Pakistan

PREVIOUSLY VIEWED

UNIT INDEX

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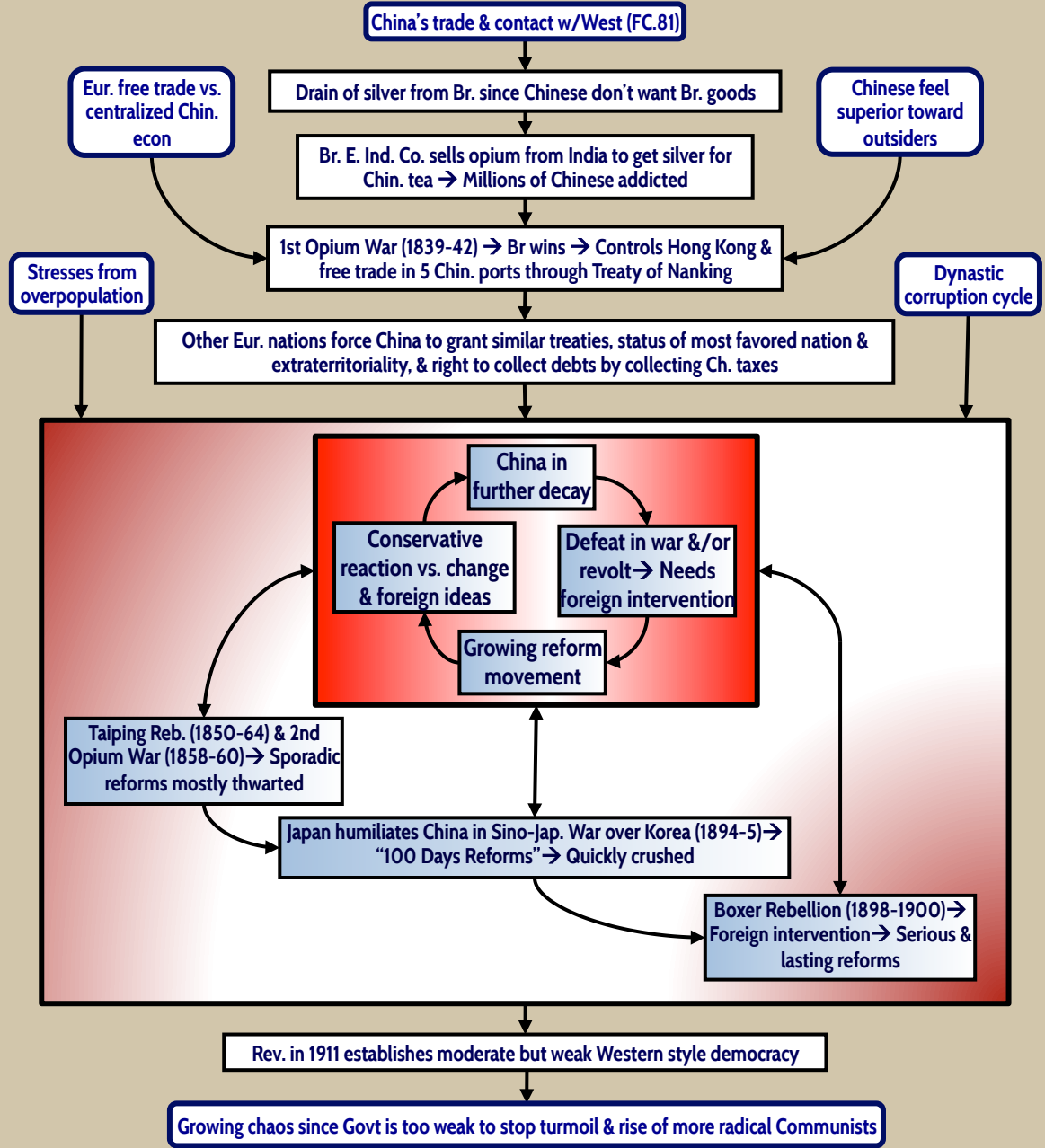
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c.1900 Chinese Republic founded

1912 Start of WWI

1914

15.7 CHINA AND THE WEST (c.1800-1911)



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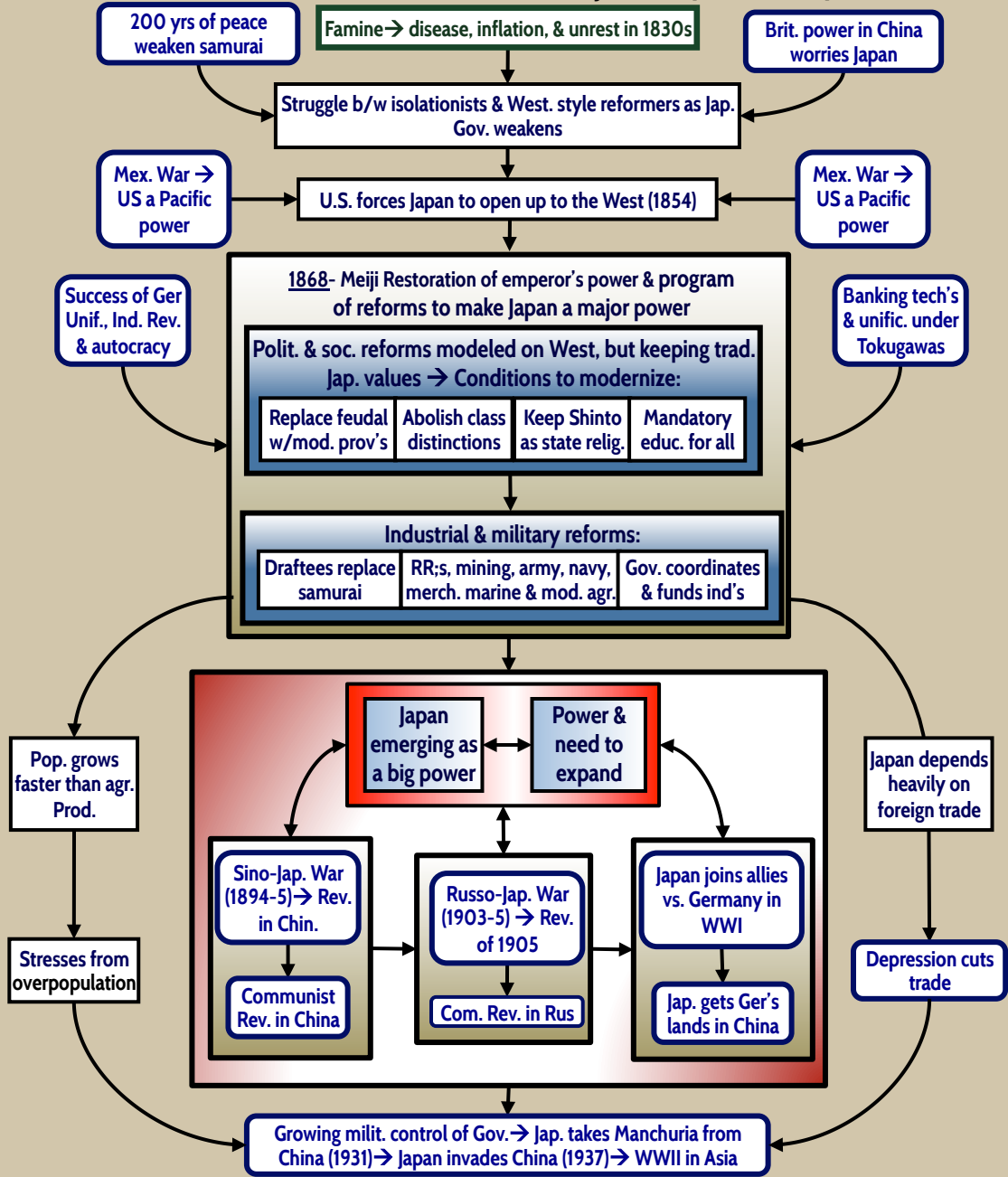
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1912 Start of WWI

1914

15.8 THE EMERGENCE OF MODERN JAPAN (1853-1937)



15.9 POLAR HISTORY & THE EMPIRE OF THE ELVES (1877-1984)

1848 Revs across Eur.

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1853-6 Crimean War

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1914 Start of WWI

Geopolitics of the North Pole

Green toy ore → Use slag for guacamole	Cold → Don't need refrig' s → Can buy guns	Long nights → Trade toys to S. Pole for light bulbs	On Internat' l Date Line → X-mas 2X/yr
--	--	---	--

Empire of the Bozos → Some Siberian Elves driven to Canada

Toy mines need labor since Eskimoes just want to hibernate, fire guns, & bow

Oslo Chimney Massacre (1877) → St. Nicholas flees to N.Pole

St. Nick leads Eskimos in raids to force Elves to work in toy mines since Elves:

Can easily be pushed in ditches	Can hear killer penguins coming
Eat little, but unfortunately, are picky eaters → Need French cooking → Conquest of Quebec (1889) to get French chefs	

Santa allies w/ Clowns who throw cyanide cream pies

Santa hitches flying reindeer to heavily armed sleighs

1st War of the Elves vs. U.S. (1900-01) → U.S. suffers humiliating defeat → U.S. invents airplane (1903) & starts WWI to develop its combat potential



Toy embargo to antagonize Santa → 2nd War of the Elves (1927-8) which U.S. wins using:

Peppermint candy canes → Sick Elves	Planes which are more maneuverable & easier to reproduce than flying reindeer	Fake Santas in malls confuse Elves
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Harsh Treaty of the Tundra → Santa must:

Reduce his airforce to 8 tiny reindeer	Give toys to all "good" boys & girls in world	Can keep his Elvish slave empire
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Santa spreads rumor he doesn't exist → Tricks parents into buying toys for their kids → More toy sales

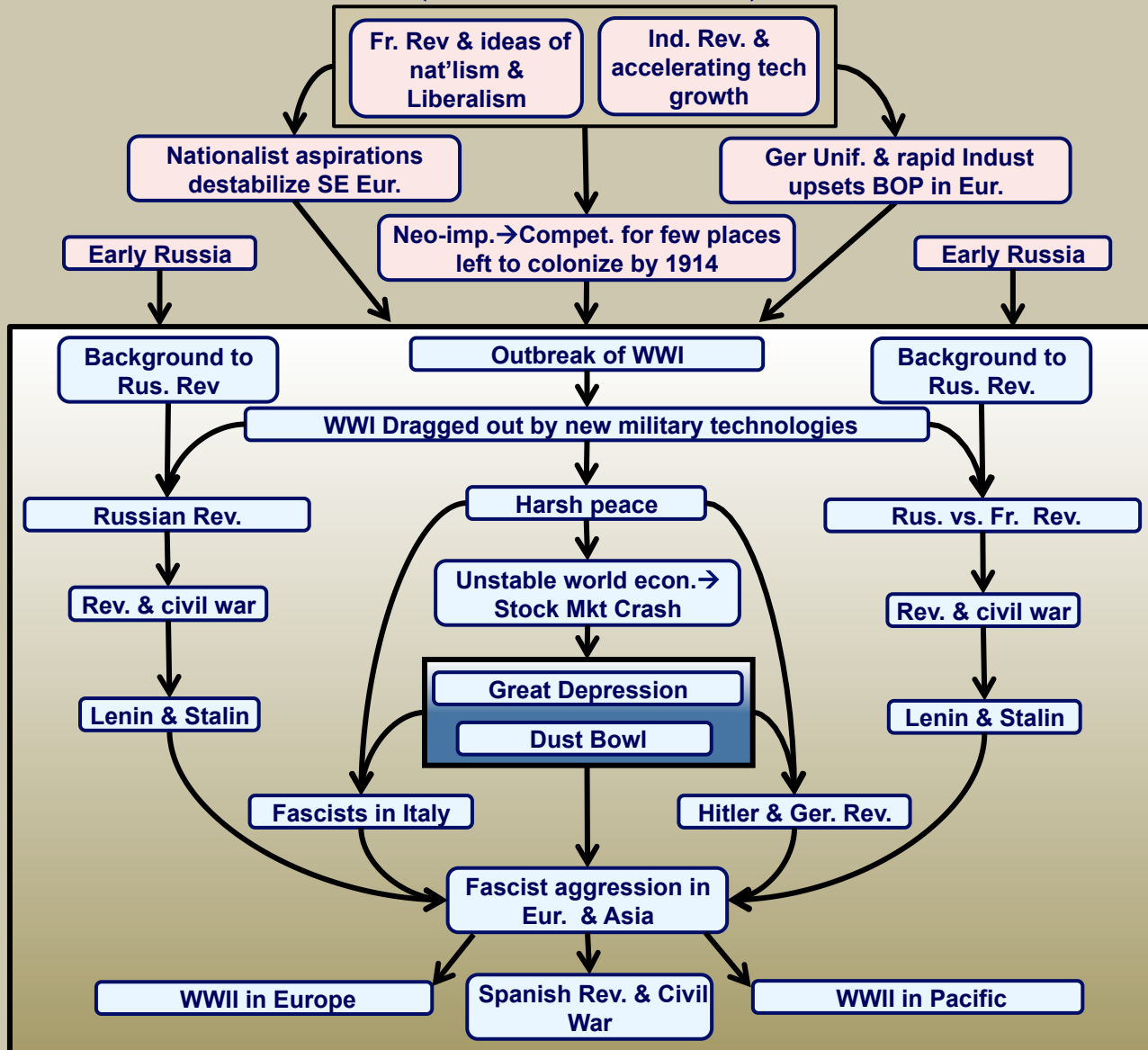
Santa depletes Swiss bank accounts to pay for free toys → Great Depression (1929-39)

November Contract w/U.S. businesses → "Shopping Days Early" to increase toy sales

Business revives until Hitler, who was bad & got no toys, starts WWII → Santa gets huge defense contracts → No toy prod. or X-mas (1941-45)

Huge profits after WWII due to electr. surveillance, strict behavior codes to reduce the # of "good boys & girls" to 284,000, & extension of Xmas season by November (1948), Oct. (1959), & Sept. (1971) Superbowl (1986) Contracts

16. Global war & revolution (1914-45)



1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1919 Bauhaus

1920 1st commercial radio broadcast

1920s Surrealism

Mussolini seizes power

1922 Hyperinflation destabilizes Germany

1923 Stalin's 1st 5-yr Plan

1927 Art Deco

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

Japan seizes Manchuria

1931 Nazis take power

1933 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1930s Stalin's purges

1936-8 Spanish Civil War

1936-9 Jap. invades China → WWII in Asia

1937 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

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1941 Hitler begins the Holocaust

1941 Yalta Conference

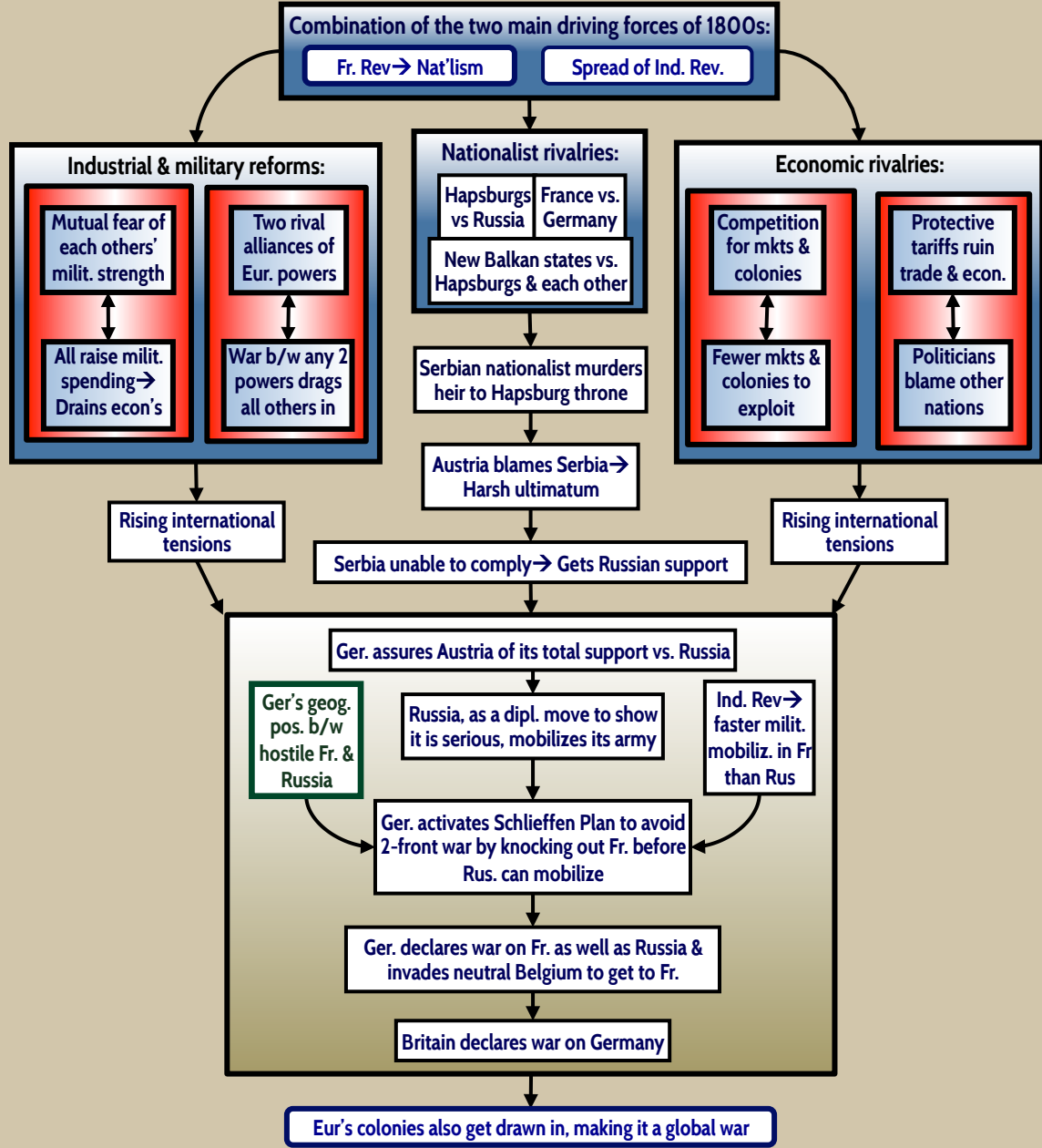
1945 Japan attacks U.S.

1945 End of WWII in Eur.

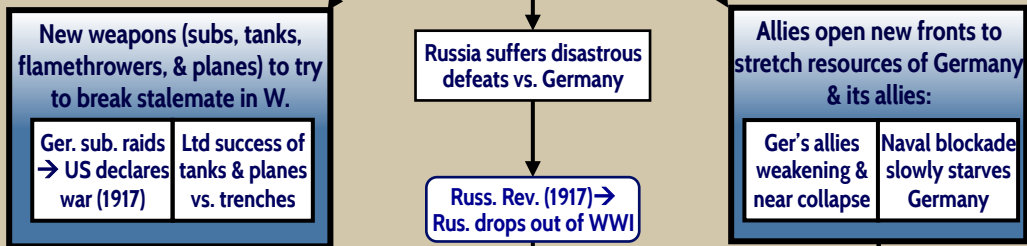
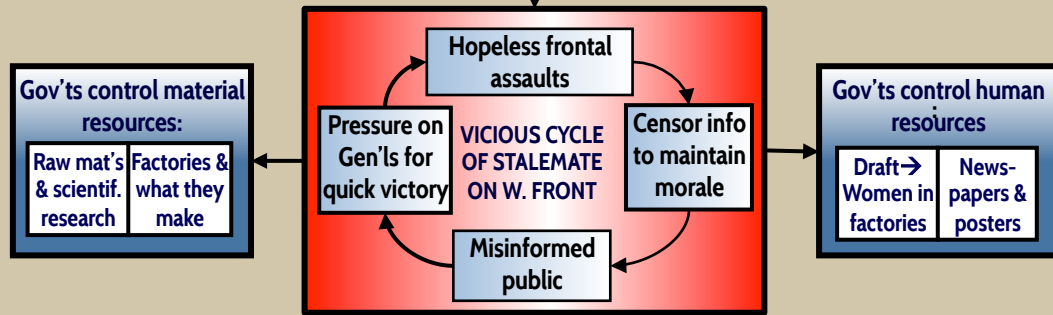
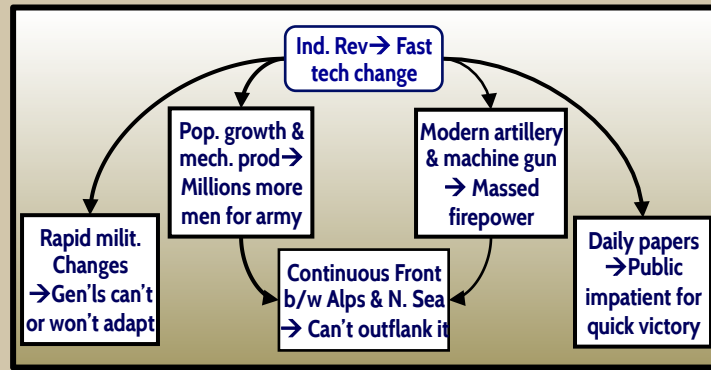
1945 US drops A-bombs on Japan

1945 Nuremberg Trials

16.1 THE CAUSES OF WORLD WAR I (1870-1914)



16.2 THE FIRST WORLD WAR (1914-1918)



Ger's use troops freed from E. front for 1 last offensive before US troops arrive → Nearly succeeds, but wears out Ger. army

Allied offensive drives Ger's steadily back until Germany asks for ceasefire (11/11/1918)

Treaty Of Versailles further destabilizes Europe

1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

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16.3 THE RESULTS OF WORLD WAR I

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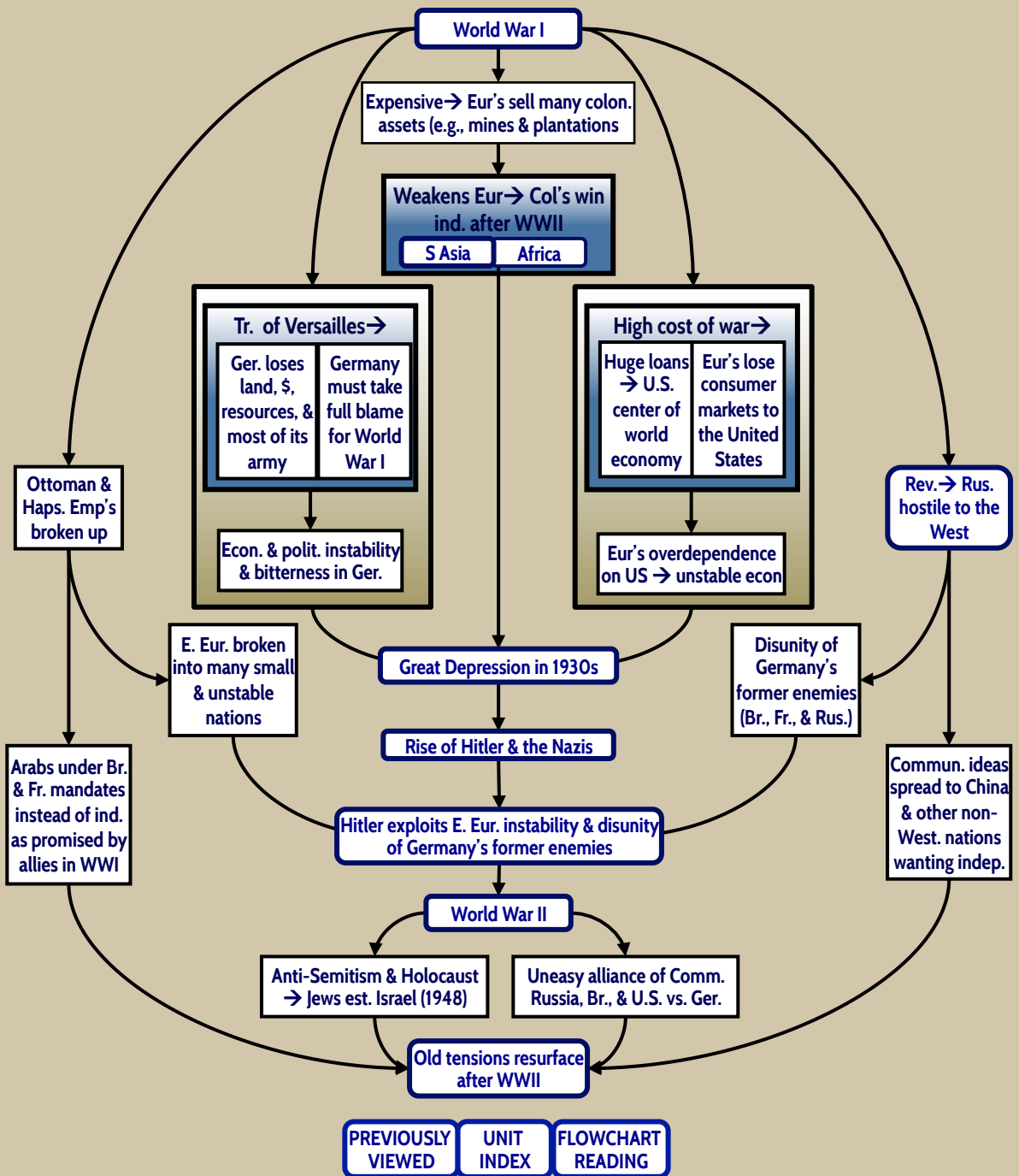
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1908 1st use of public address system → Mass politics of 20th century

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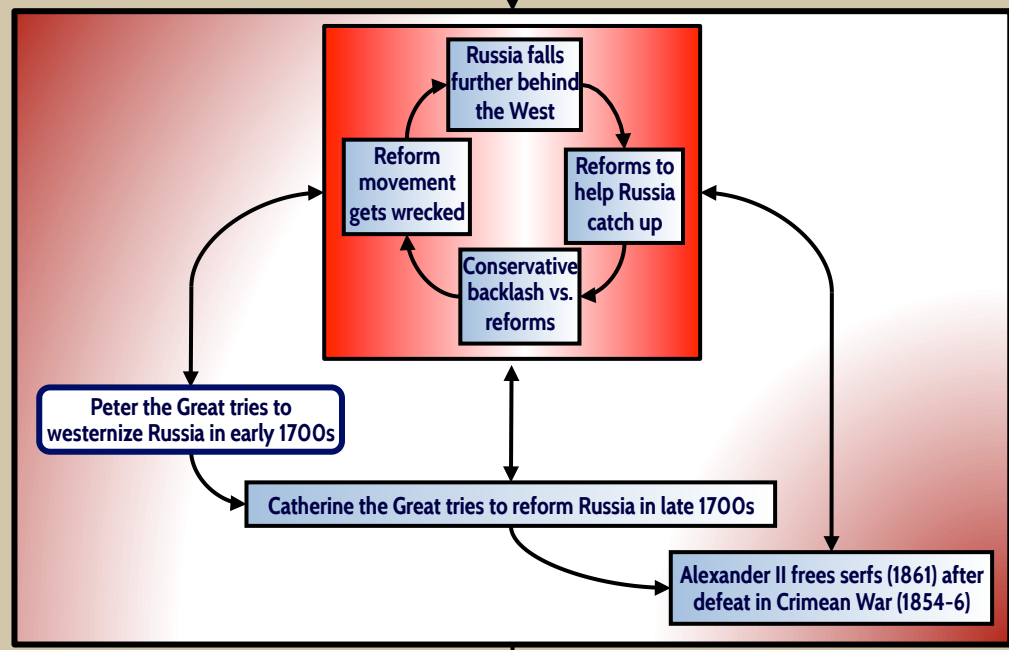
1945 End of WWII in Eur.

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1945 Nuremberg Trials

16.4 THE CAUSES OF THE RUSSIAN REVOLUTION)

Russia's huge size, geog. isolation, & history of foreign invasions → Slow moving & backward autocracy



Ind Rev spreads to Russia

Ind. Rev → Social problems

Rising infl. of Marxism

Jap. defeats Rus. (1903-5)

World War I

World War I

Rev. of 1905 → Forces reforms from Tsar Nicholas II:
 Duma (parliament) → Gets gradually stripped of power | Economic reforms → Many peasants get own lands

Growing gap b/w econ. & polit. progress, aggravated by Rus's defeat in WWI

Russian Revolution

PREVIOUSLY VIEWED

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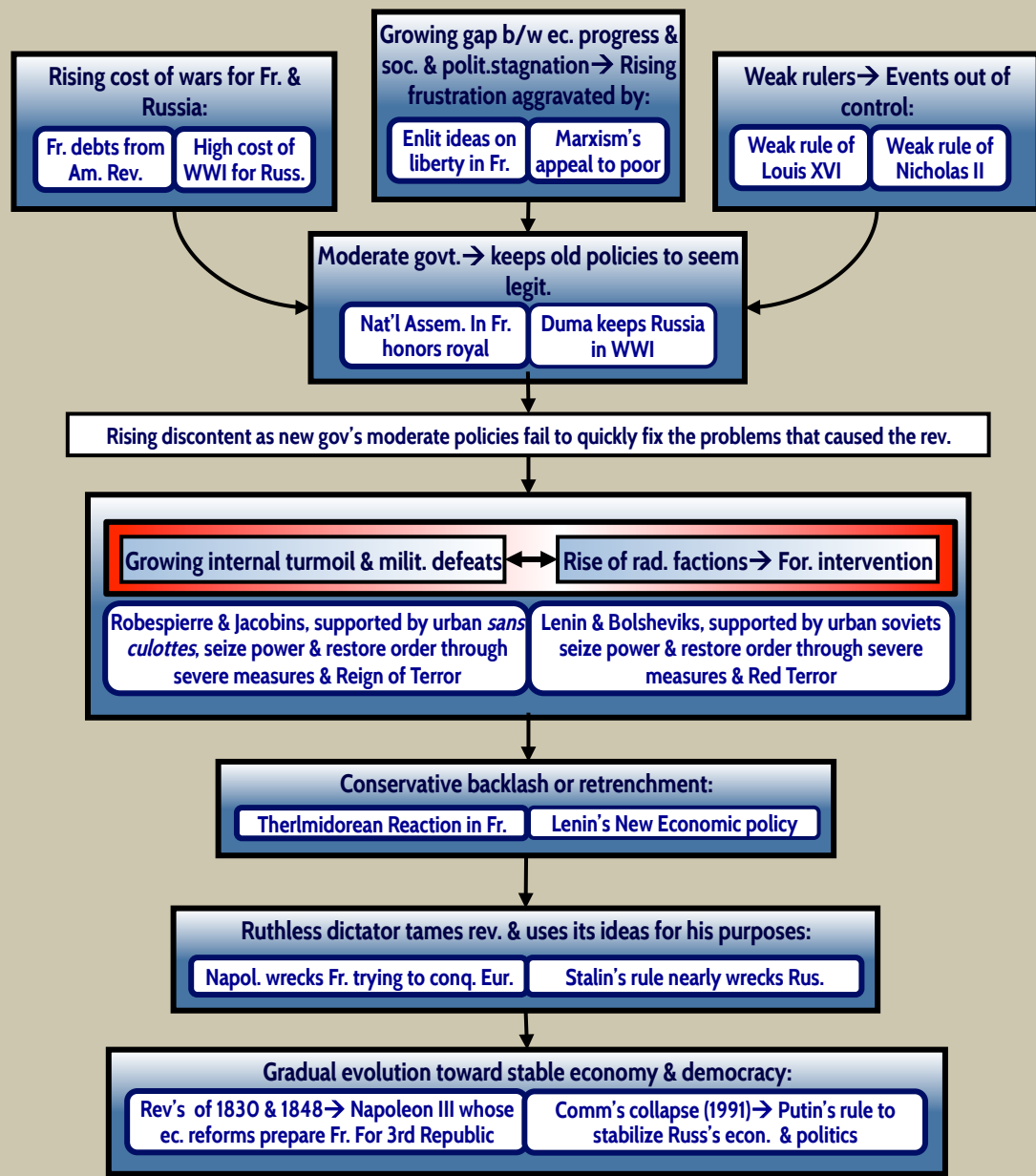
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1945 Nuremberg Trials

16.5A AN OVERVIEW AND COMPARISON OF THE FRENCH & RUSSIAN REVOLUTIONS



16.5 THE COURSE OF THE RUSSIAN REVOLUTION (1917-)

1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

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Swing music

1930s Stalin's purges

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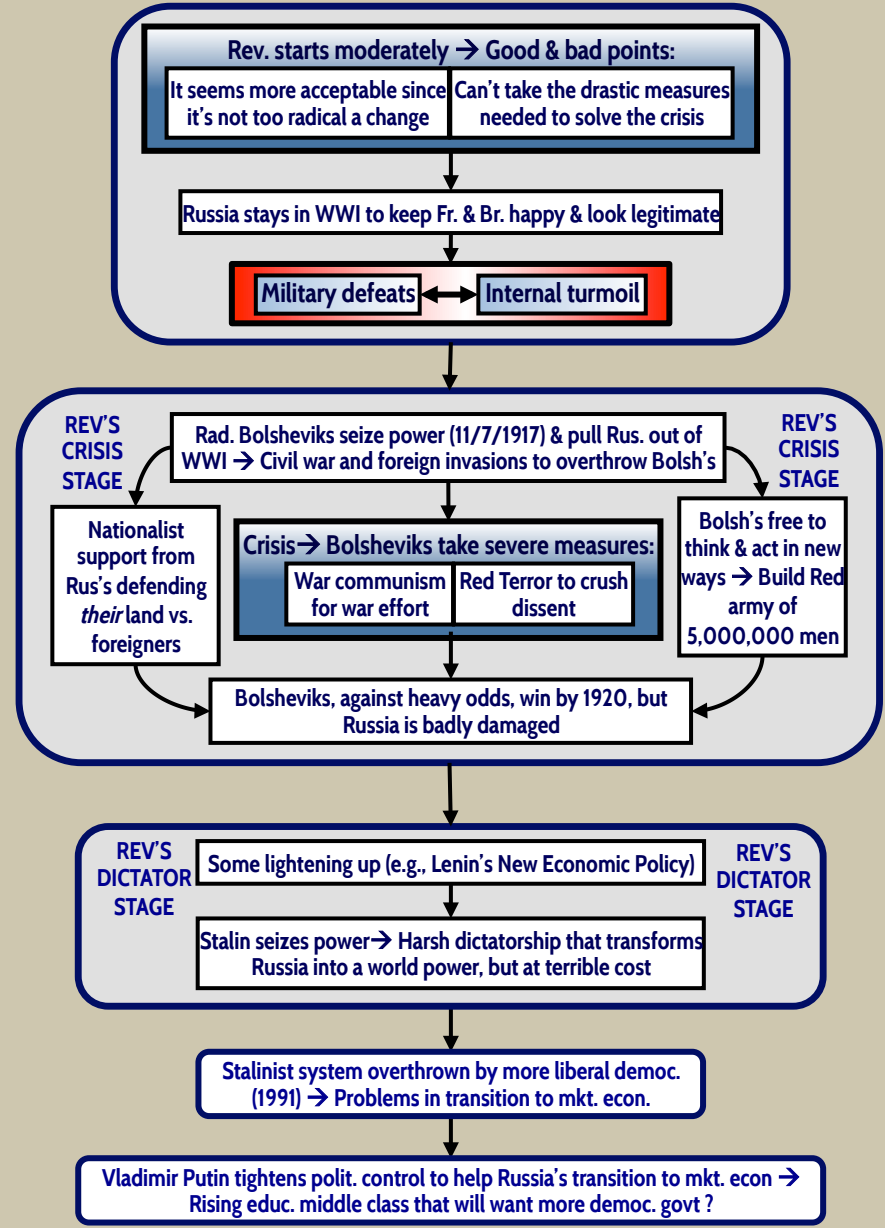
1941 Yalta Conference

Japan attacks U.S.

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



16.5B THE RUSSIAN REVOLUTION AND CIVIL WAR (1917-20)

1908 1st use of public address system →
Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

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1917 Russian Rev. & Civil War

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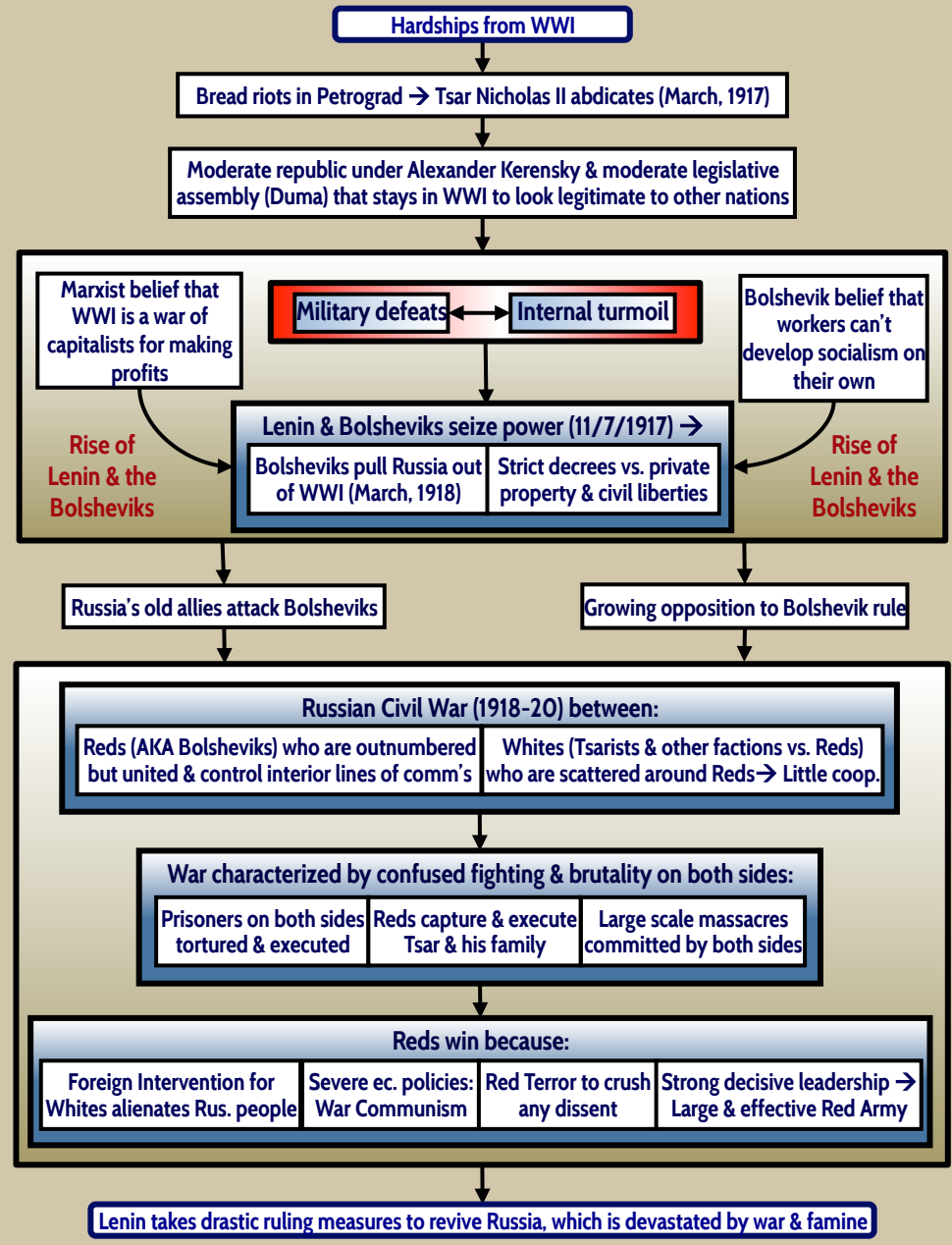
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1914-8 1st use of public address system → Mass politics of 20th century

1917 WWI

1916 Dadaism

1917 Zipper

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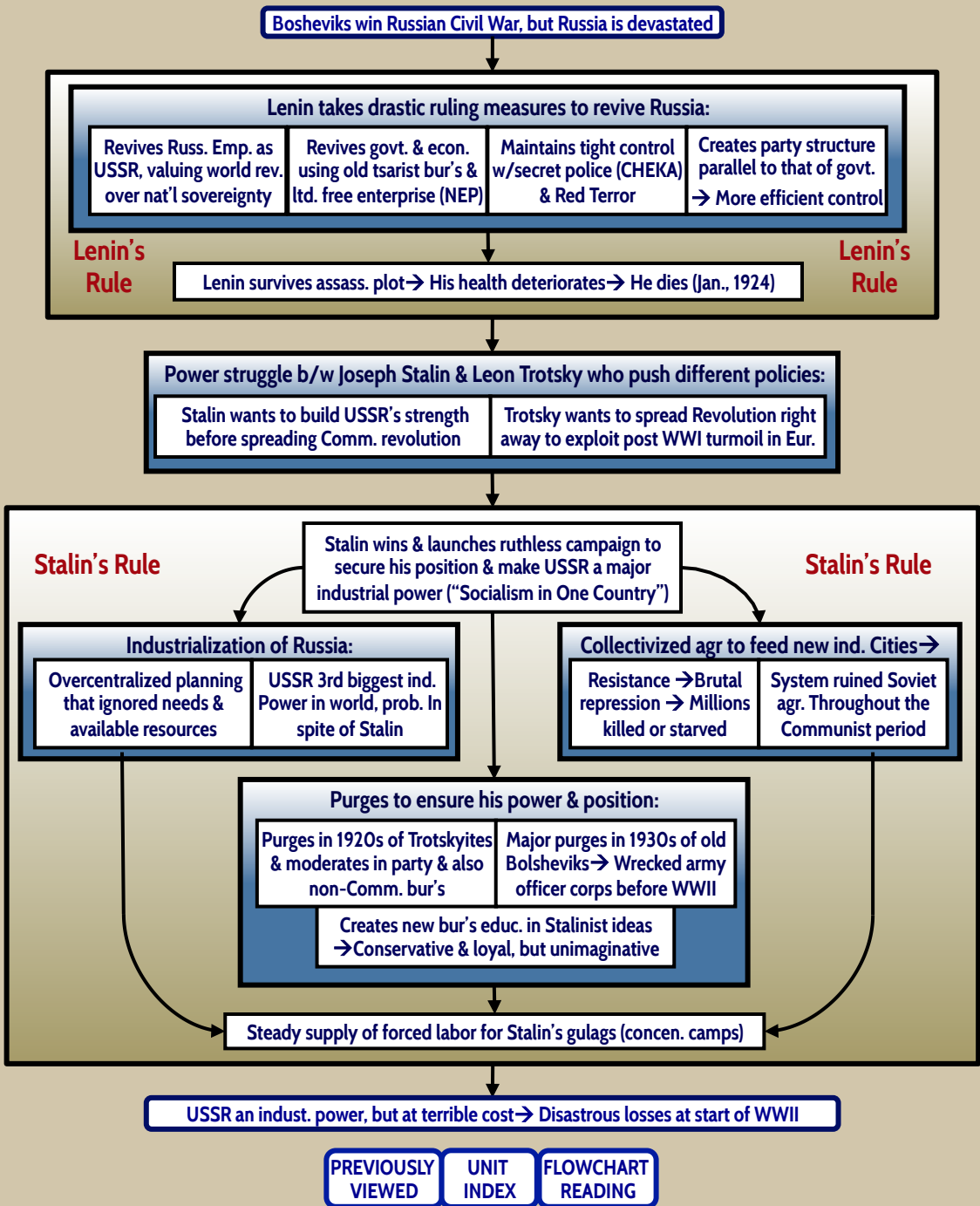
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16.5C THE COMMUNIST DICTATORSHIPS OF LENIN & STALIN (1920-39)



16.6 POST WAR BOOM AND BUST (1920-29)

1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

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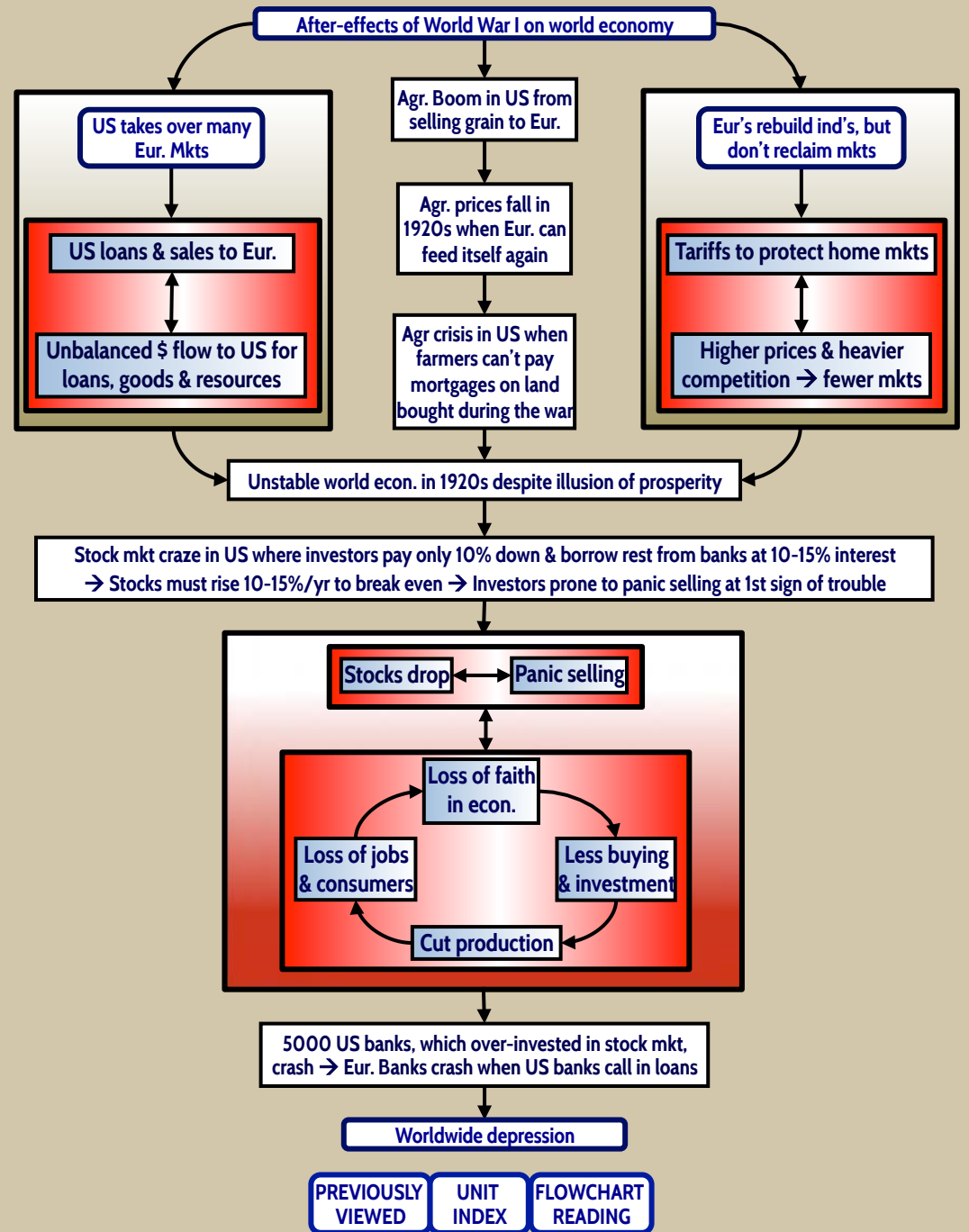
1941 Yalta Conference

1945 Japan attacks U.S.

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



16.7 THE GREAT DEPRESSION & EFFORTS TO SOLVE IT (1929-39)

1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1919 Bauhaus

1920 1st commercial radio broadcast

1920s Surrealism

1920s Mussolini seizes power

1922 Hyperinflation destabilizes Germany

1923 Stalin's 1st 5-yr Plan

1927 Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

1931 Japan seizes Manchuria

1933 Nazis take power

1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1930s Stalin's purges

1936-8 Spanish Civil War

1936-9 Jap. invades China → WWII in Asia

1937 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1940 Hitler invades Russia

1941 Hitler begins the Holocaust

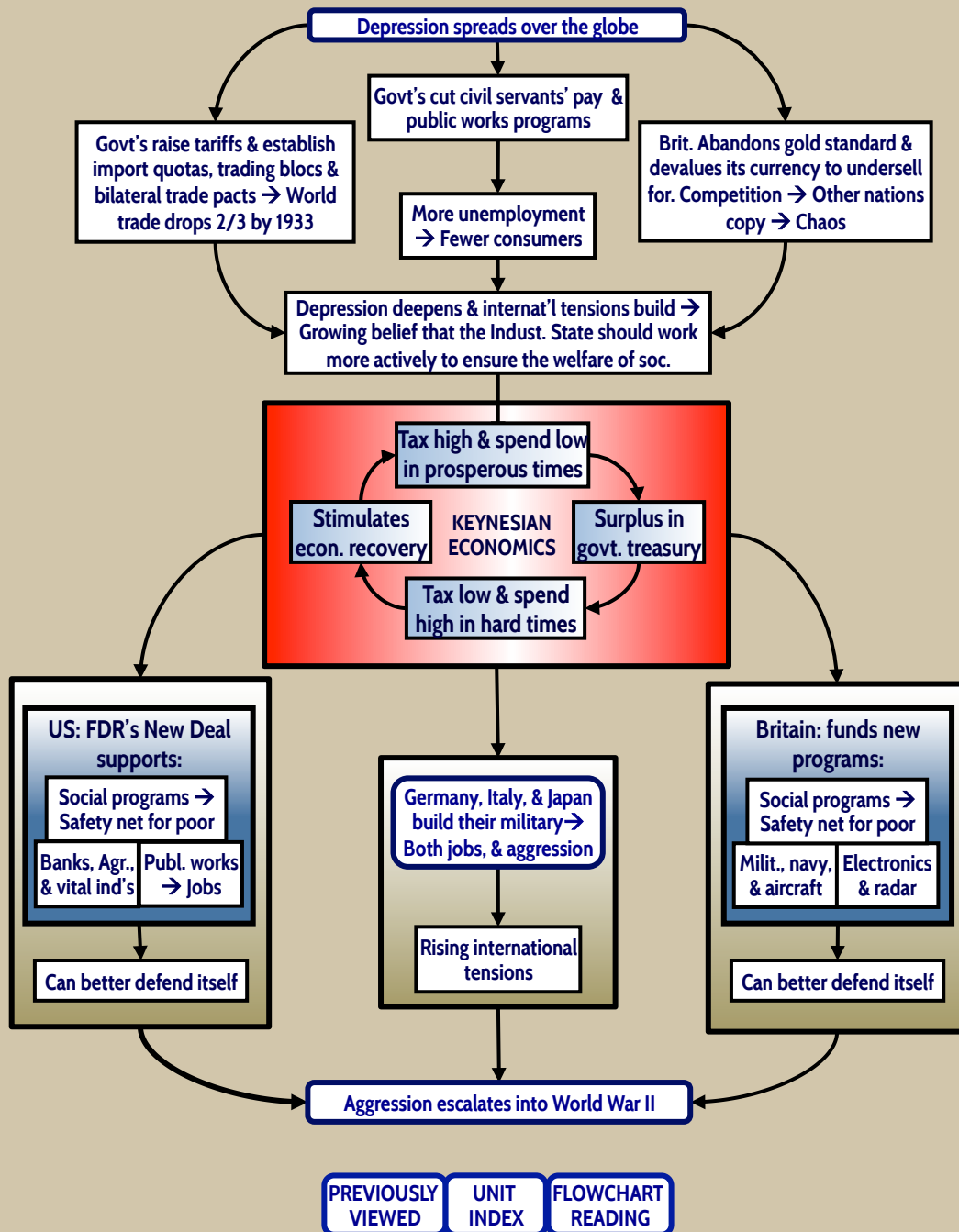
1941 Japan attacks U.S.

1941 Yalta Conference

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



1908 1st use of public address system →
Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1919 Bauhaus

1920 1st commercial radio broadcast

1920s Surrealism

1922 Mussolini seizes power

1923 Hyperinflation destabilizes Germany

1927 Stalin's 1st 5-yr Plan

1927 Art Deco

1928 Penicillin

1929 TV & movies w/sound

1929 Start of Depression

1930s Dust Bowl

1931 Japan seizes Manchuria

1933 Nazis take power

1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1936-8 Stalin's purges

1936-9 Spanish Civil War

1937 Jap. invades China → WWII in Asia

1938 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1940 Hitler invades Russia

1941 Hitler begins the Holocaust

1941 Yalta Conference

1945 Japan attacks U.S.

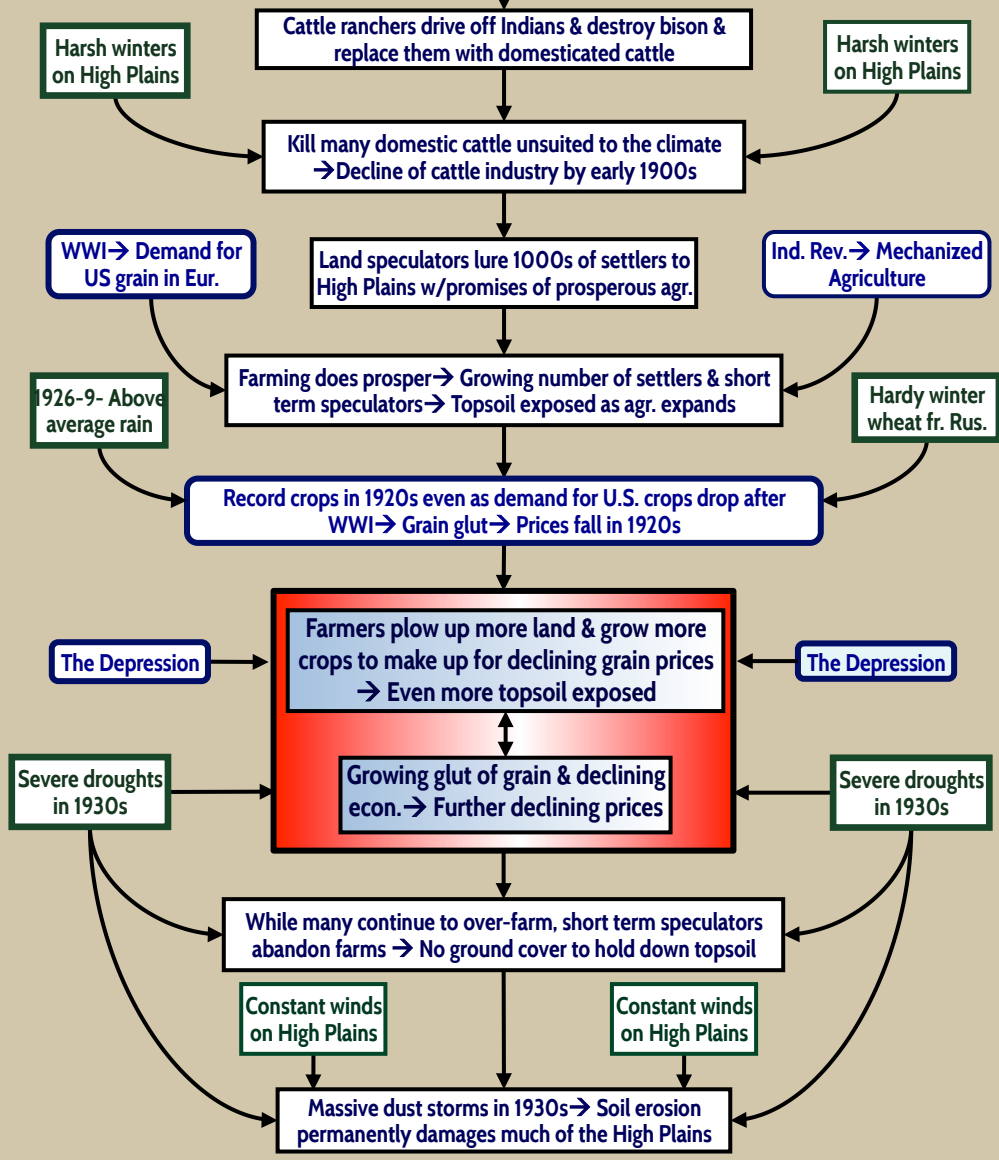
1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials

16.7A THE DUST BOWL OF THE 1930S

High Plains of U.S. w/only 20 inches rain/yr → Dry steppe w/prairie grasses holding down soil → Fit for grazing bison & tribes who survive primarily on them.



1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1920 Bauhaus

1920s Surrealism

1922 Mussolini seizes power

1923 Hyperinflation destabilizes Germany

1927 Stalin's 1st 5-yr Plan

1920s Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

1931 Japan seizes Manchuria

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1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1936-8 Stalin's purges

1936-9 Spanish Civil War

1937 Jap. invades China → WWII in Asia

1938 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 Hitler invades Russia

1941 Hitler begins the Holocaust

1941 Japan attacks U.S.

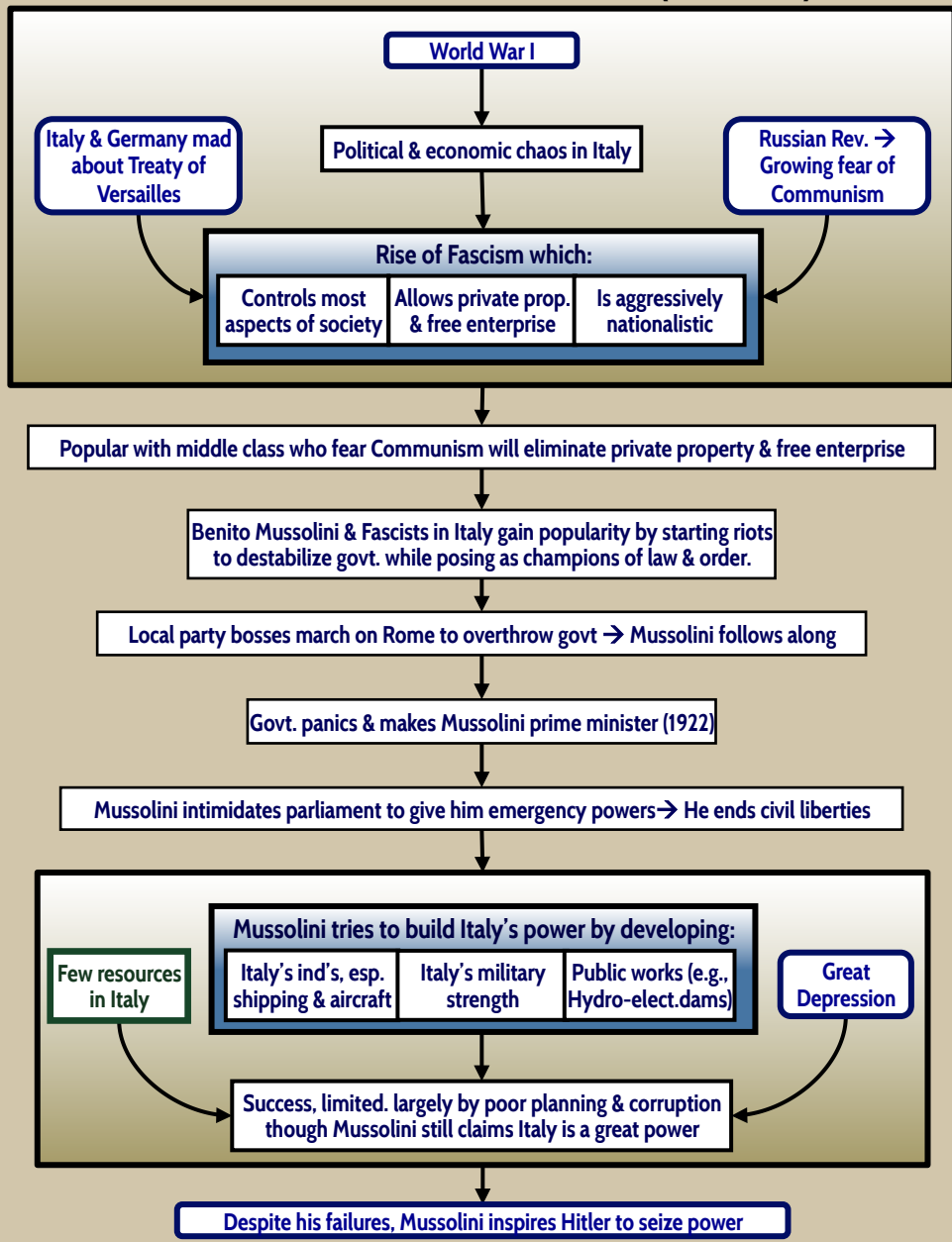
1945 Yalta Conference

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials

16.8 THE RISE OF FASCISM IN ITALY (1919-1925)



16.9 THE RISE OF HITLER AND THE NAZIS (1919-39)

1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1920 1st commercial radio broadcast

1920s Surrealism

1920s Bauhaus

1920s Mussolini seizes power

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1927 Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

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1931 Japan seizes Manchuria

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1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1930s Stalin's purges

1936-8 Spanish Civil War

1936-9 Jap. invades China → WWII in Asia

1937 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 Hitler begins the Holocaust

1941 Hitler invades Russia

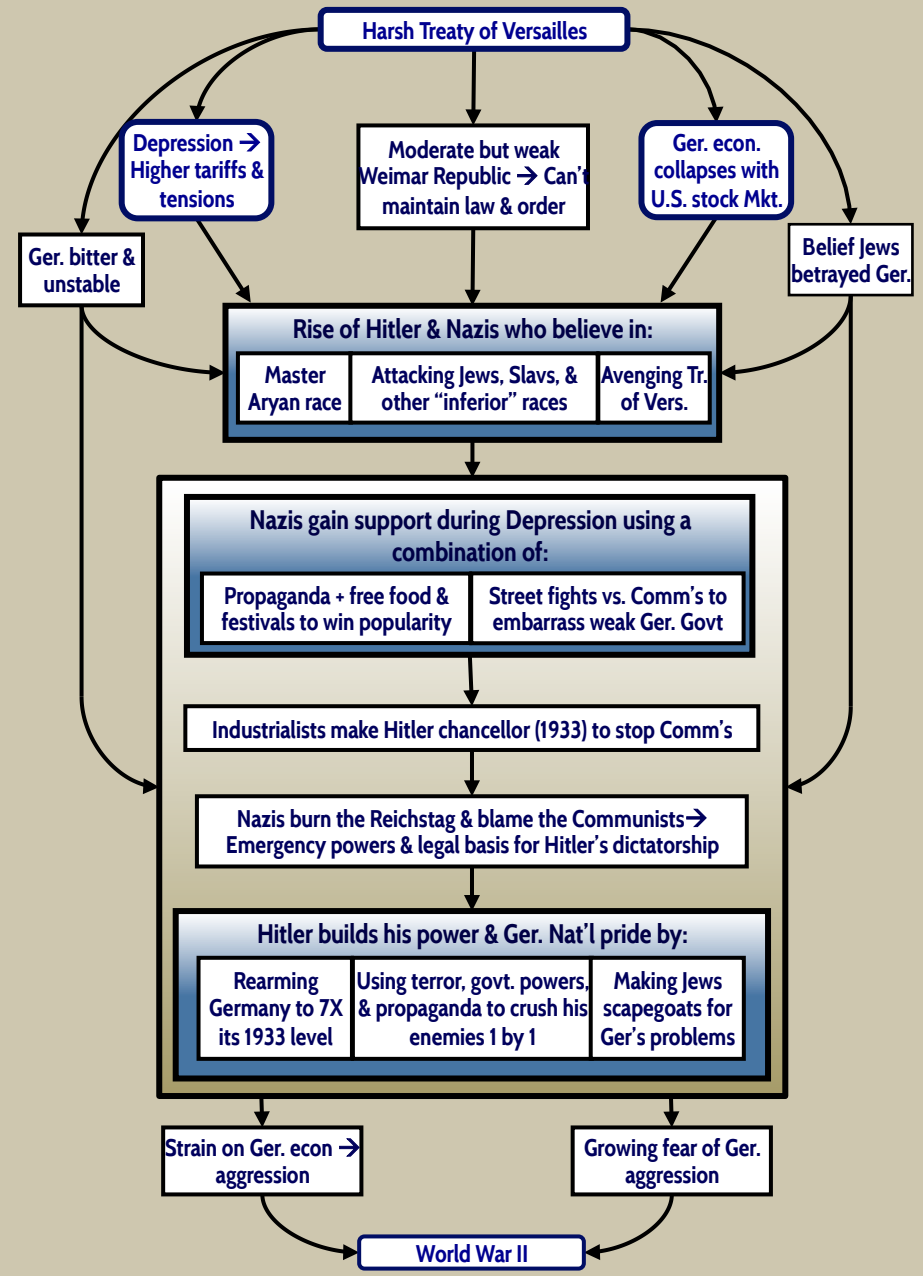
1941 Yalta Conference

1945 Japan attacks U.S.

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



16.9A. THE "GERMAN REVOLUTION" COMPARED TO THE FRENCH REVOLUTION (1918-90)

1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1920 1st commercial radio broadcast

1920s Surrealism

1920s Bauhaus

1922 Mussolini seizes power

1923 Hyperinflation destabilizes Germany

1927 Stalin's 1st 5-yr Plan

1920s Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

1930s Japan seizes Manchuria

1931 Nazis take power

1933 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1930s Stalin's purges

1936-8 Spanish Civil War

1936-9 Jap. invades China → WWII in Asia

1937 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1940 Hitler invades Russia

1941 Hitler begins the Holocaust

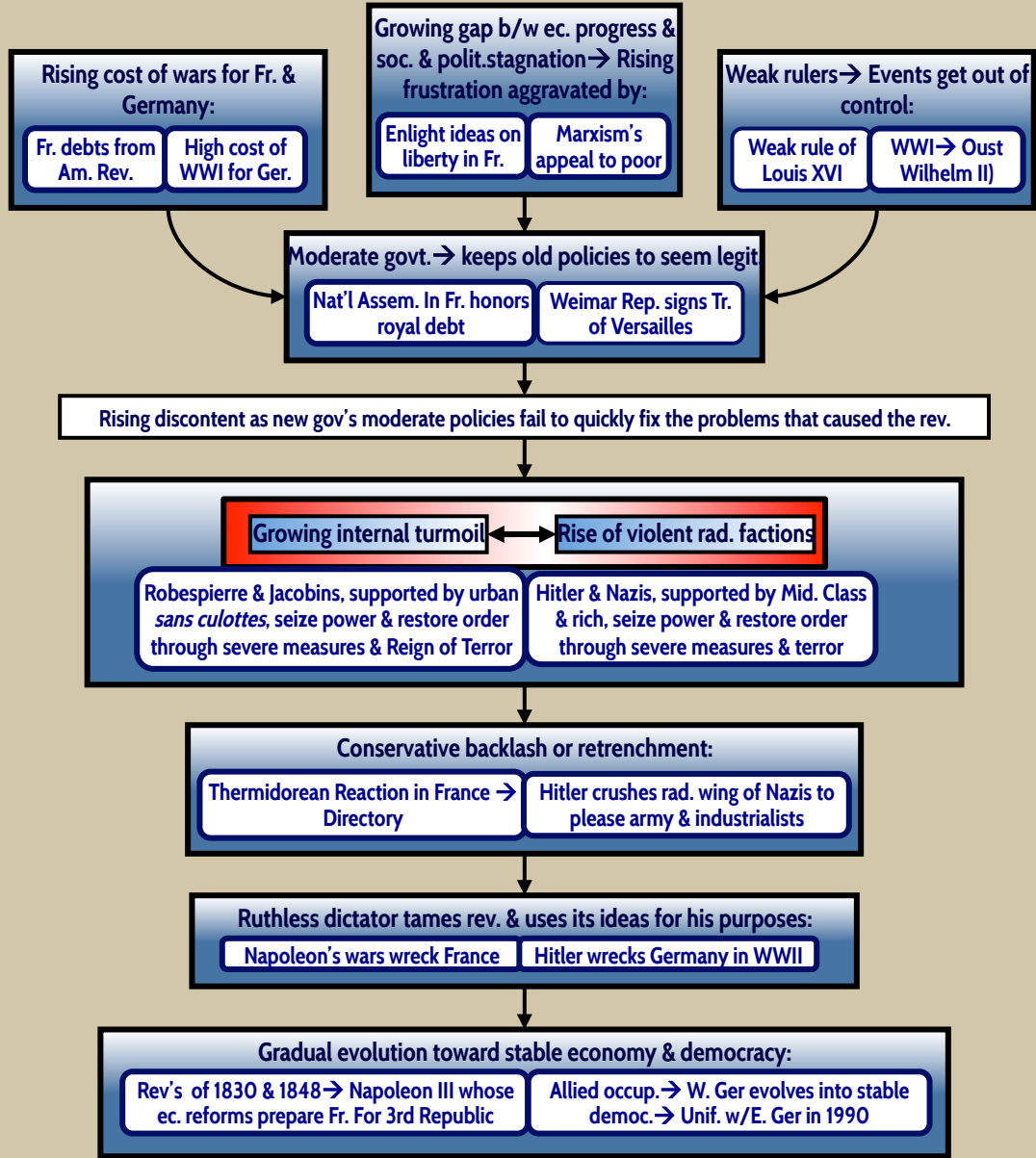
1941 Yalta Conference

1945 Japan attacks U.S.

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



1908 1st use of public address system → Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1920 1st commercial radio broadcast

1920s Surrealism

1920s Bauhaus

1922 Mussolini seizes power

1923 Hyperinflation destabilizes Germany

1927 Stalin's 1st 5-yr Plan

1927 Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

1931 Japan seizes Manchuria

1933 Nazis take power

1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1935 Swing music

1930s Stalin's purges

1936-8 Spanish Civil War

1936-9 Jap. invades China → WWII in Asia

1937 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1941 Hitler begins the Holocaust

1941 Hitler invades Russia

1941 Yalta Conference

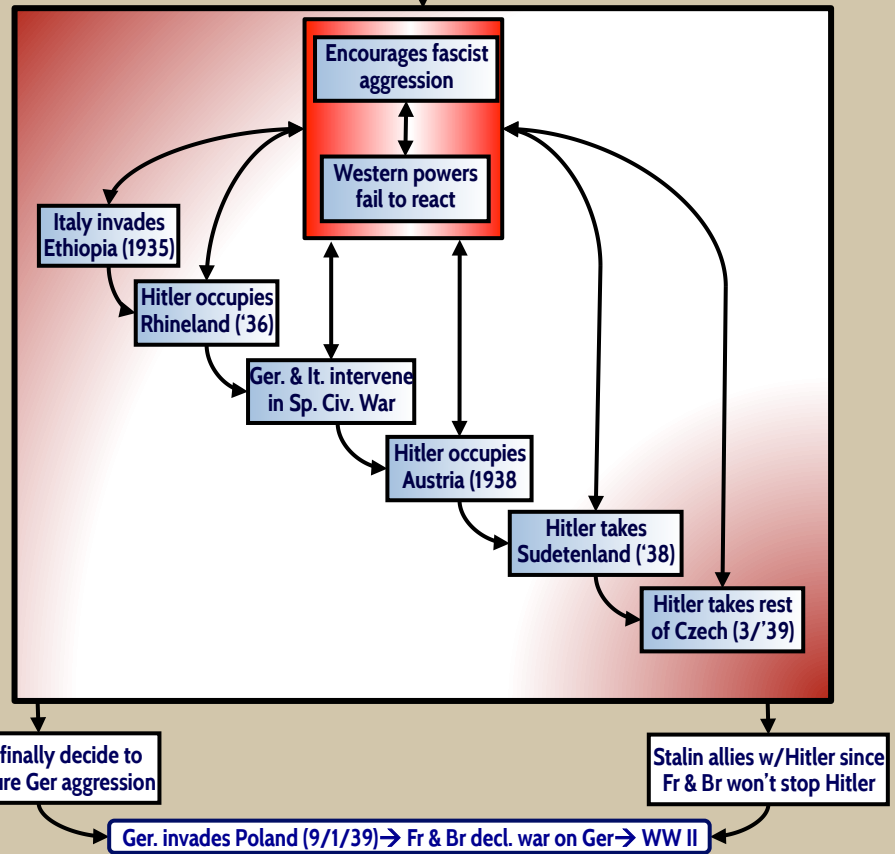
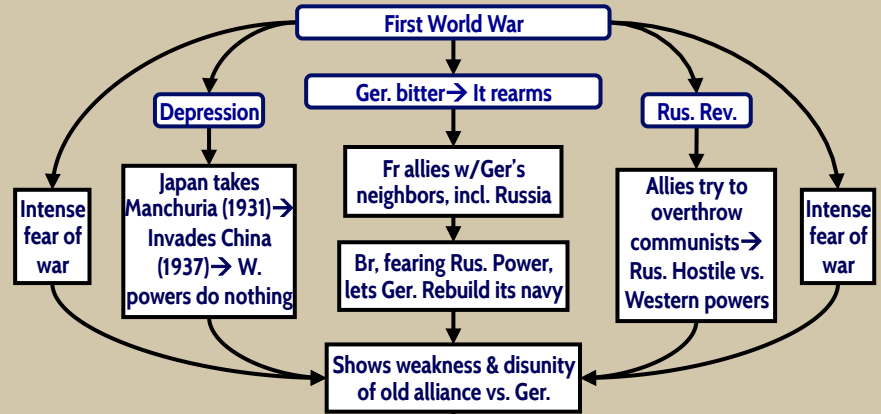
1945 Japan attacks U.S.

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials

16.10 THE ROAD TO WORLD WAR II



1908 1914-8 1917 1916 1917 1917 1919 1919 1920 1920s 1922 1923 1927 1920s 1927 1928 1929 1930s 1931 1933 1935 1935 1930s 1936-8 1936-9 1937 1938 1938 1939 1940 1941 1941 1941 1945 1945 1945 1945

1st use of public address system → Mass politics of 20th century

WWI

Women win the vote in Br. & in U.S. 3 yrs later

Dadaism

Zipper

Tr. of Versailles

Russian Rev. & Civil War

1st commercial radio broadcast

Surrealism

Bauhaus

Mussolini seizes power

Hyperinflation destabilizes Germany

Stalin's 1st 5-yr Plan

Art Deco

Penicillin

TV & movies w/sound

Start of Depression

Dust Bowl

Japan seizes Manchuria

Nazis take power

Nuremberg Laws vs. Jews in Ger.

Mussolini invades Ethiopia

Swing music

Stalin's purges

Spanish Civil War

Jap. invades China → WWII in Asia

Ballpoint pen

Nazi aggression increases

WWII begins in Eur.

1st reg. TV broadcasting

Hitler invades Russia

Hitler begins the Holocaust

Yalta Conference

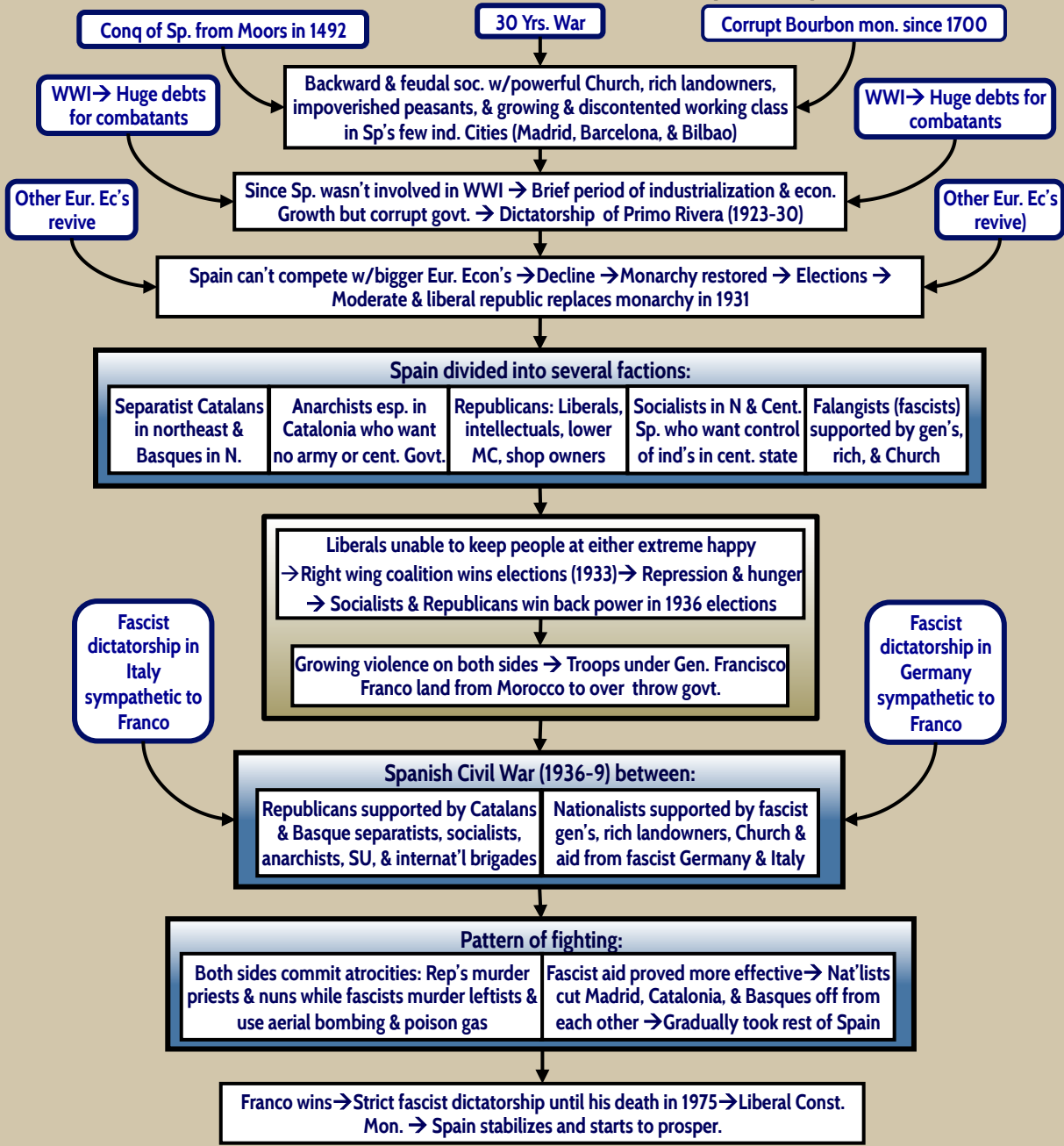
Japan attacks U.S.

End of WWII in Eur.

US drops A-bombs on Japan

Nuremberg Trials

16.10A THE SPANISH REVOLUTION (1931-75)



16.11 WORLD WAR II IN EUROPE (1939-45)

1908 1st use of public address system →
Mass politics of 20th century

1914-8 WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1920 1st commercial radio broadcast

1920s Surrealism

1922 Mussolini seizes power

1923 Bauhaus

1927 Stalin's 1st 5-yr Plan

1927 Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

1931 Japan seizes Manchuria

1933 Nazis take power

1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1936-8 Stalin's purges

1936-9 Spanish Civil War

1937 Jap. invades China → WWII in Asia

1938 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1940 Hitler invades Russia

1941 Hitler begins the Holocaust

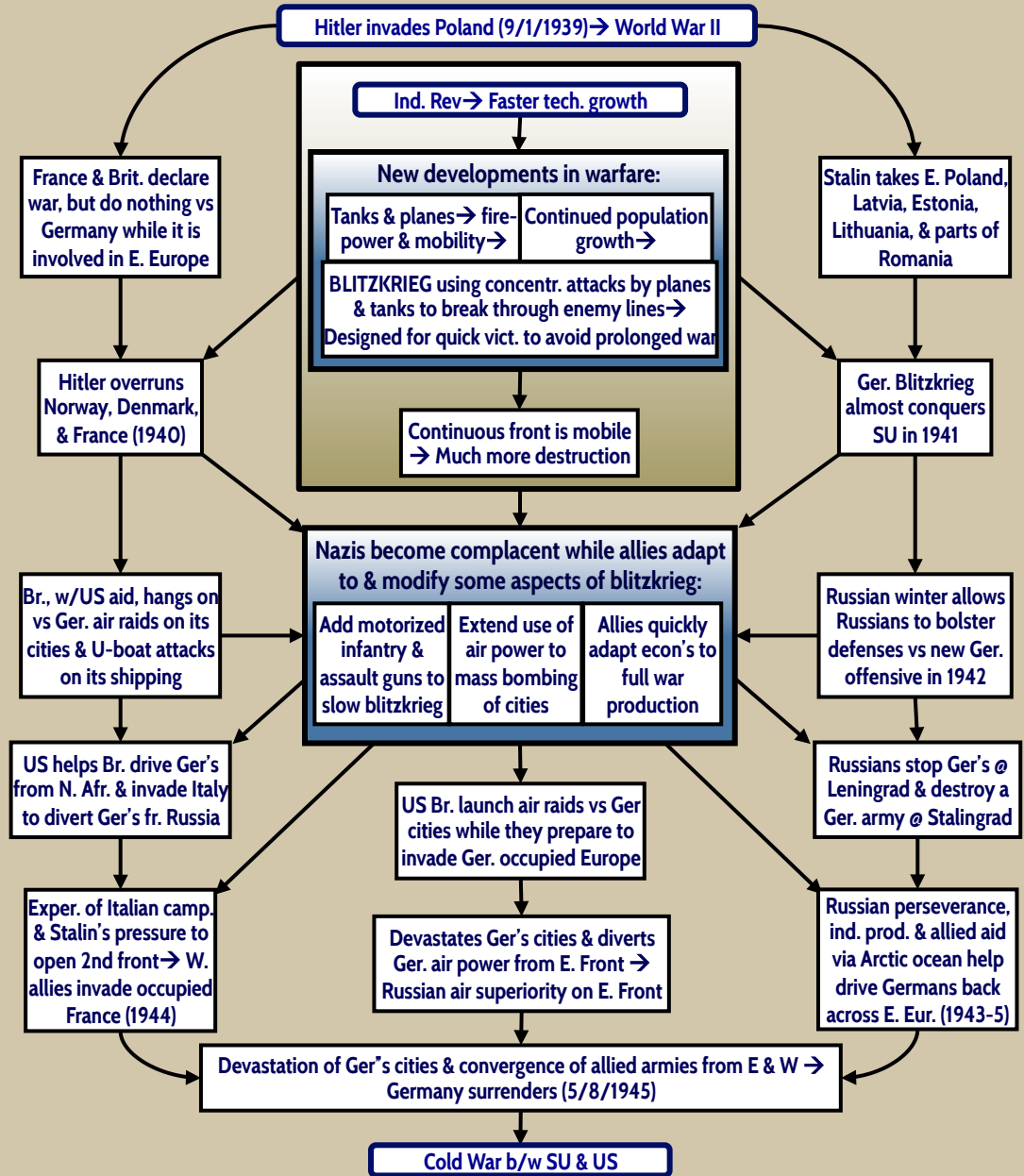
1941 Yalta Conference

1945 Japan attacks U.S.

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



1914-8 1st use of public address system → Mass politics of 20th century
WWI

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1917 Tr. of Versailles

1919 Russian Rev. & Civil War

1919 1st commercial radio broadcast

1920 Surrealism

1920s Bauhaus

1922 Mussolini seizes power

1923 Hyperinflation destabilizes Germany

1927 Stalin's 1st 5-yr Plan

1920s Art Deco

1927 TV & movies w/sound

1928 Penicillin

1929 Start of Depression

1930s Dust Bowl

1931 Japan seizes Manchuria

1933 Nazis take power

1935 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1936-8 Stalin's purges

1936-9 Spanish Civil War

1937 Jap. invades China → WWII in Asia

1938 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1940 Hitler invades Russia

1941 Hitler begins the Holocaust

1941 Japan attacks U.S.

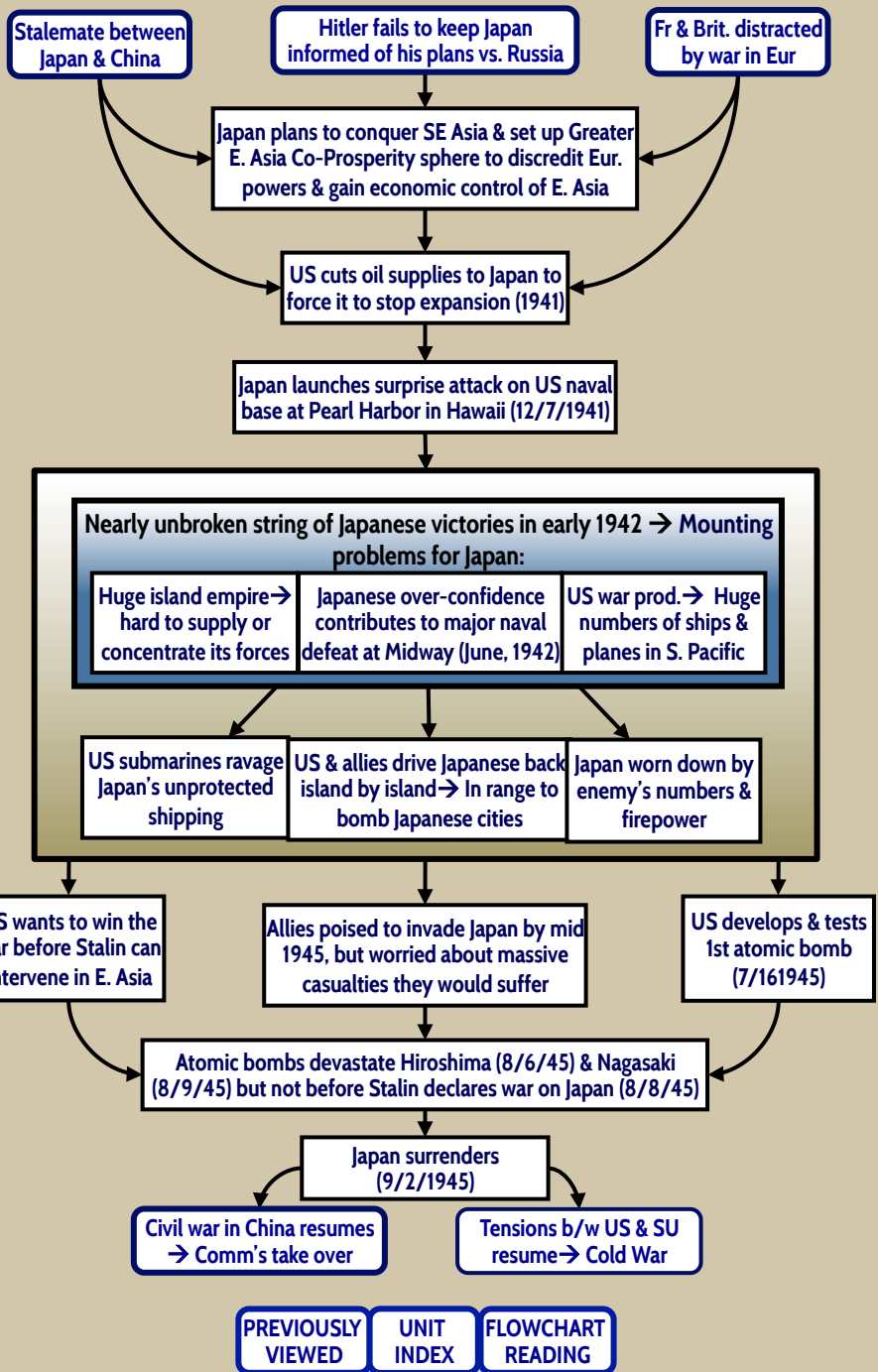
1945 Yalta Conference

1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials

16.12 WORLD WAR II IN THE PACIFIC (1937-45)



16.13 THE EVOLUTION OF THE STATE IN THE EARLY 20TH CENTURY (1900-45)

1914-8 1st use of public address system → Mass politics of 20th century

1917 Dadaism

1916 Zipper

1917 Women win the vote in Br. & in U.S. 3 yrs later

1919 Tr. of Versailles

1919 Russian Rev. & Civil War

1920 Bauhaus

1920 Surrealism

1920s Mussolini seizes power

1922 Hyperinflation destabilizes Germany

1923 Stalin's 1st 5-yr Plan

1927 Art Deco

1920s TV & movies w/sound

1927 Penicillin

1928 Dust Bowl

1929 Start of Depression

1930s Japan seizes Manchuria

1931 Nazis take power

1933 Nuremberg Laws vs. Jews in Ger.

1935 Mussolini invades Ethiopia

1930s Swing music

1936-8 Stalin's purges

1936-9 Spanish Civil War

1937 Jap. invades China → WWII in Asia

1938 Ballpoint pen

1938 Nazi aggression increases

1938 WWII begins in Eur.

1939 1st reg. TV broadcasting

1940 Hitler invades Russia

1941 Hitler begins the Holocaust

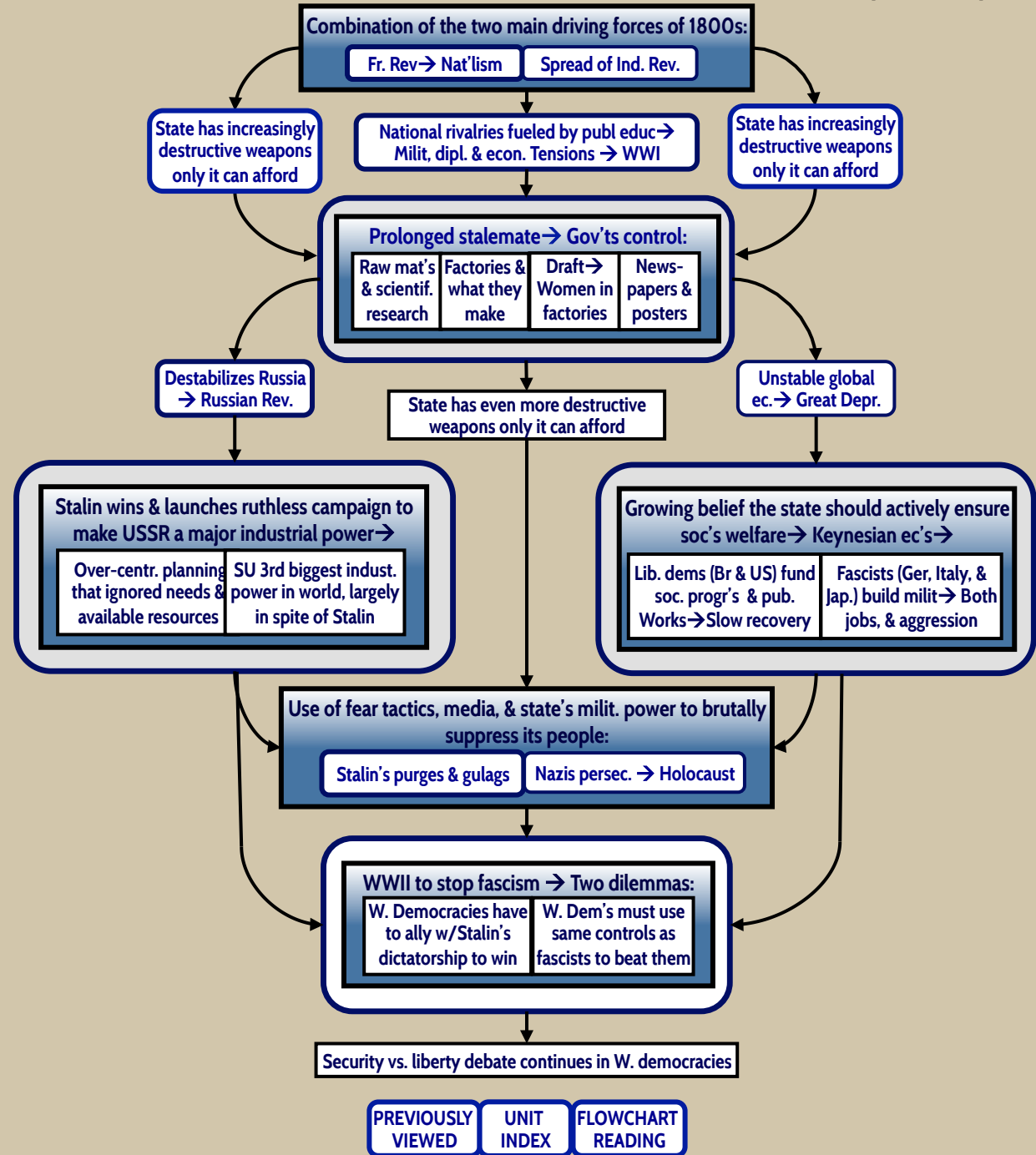
1941 Japan attacks U.S.

1945 Yalta Conference

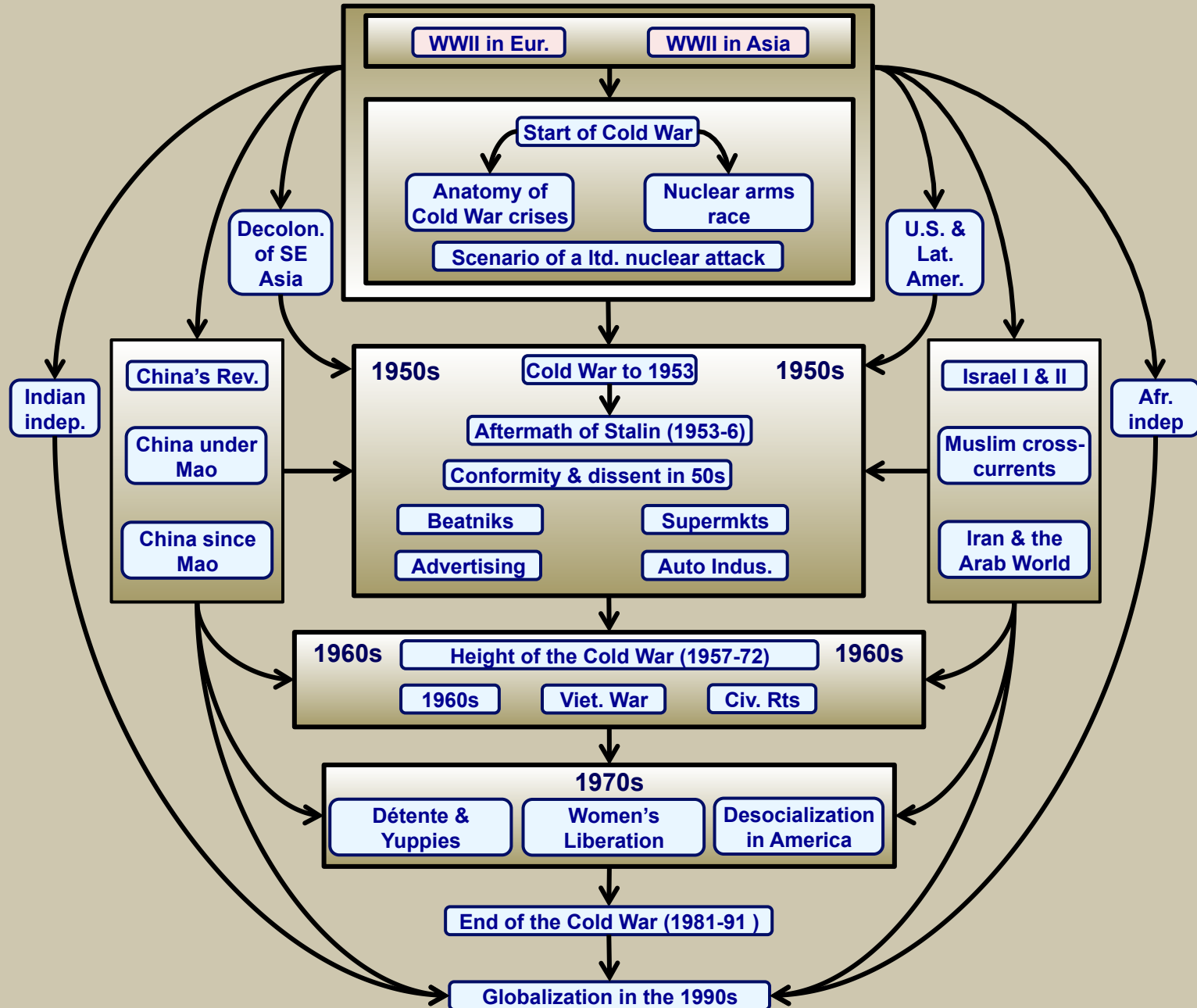
1945 End of WWII in Eur.

1945 US drops A-bombs on Japan

1945 Nuremberg Trials



17. The World since 1945



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 "Iron Curtain" speech, Kinsey Report, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift, Marshall Plan (1949-51), NATO, Israel

1950 Korean War (1950-3), Mao takes over China, McCarthyism

1951 Univac - 1st commercial computer

1952 Videotape recorder invented

1953 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test, Jonas Salk's cure for polio

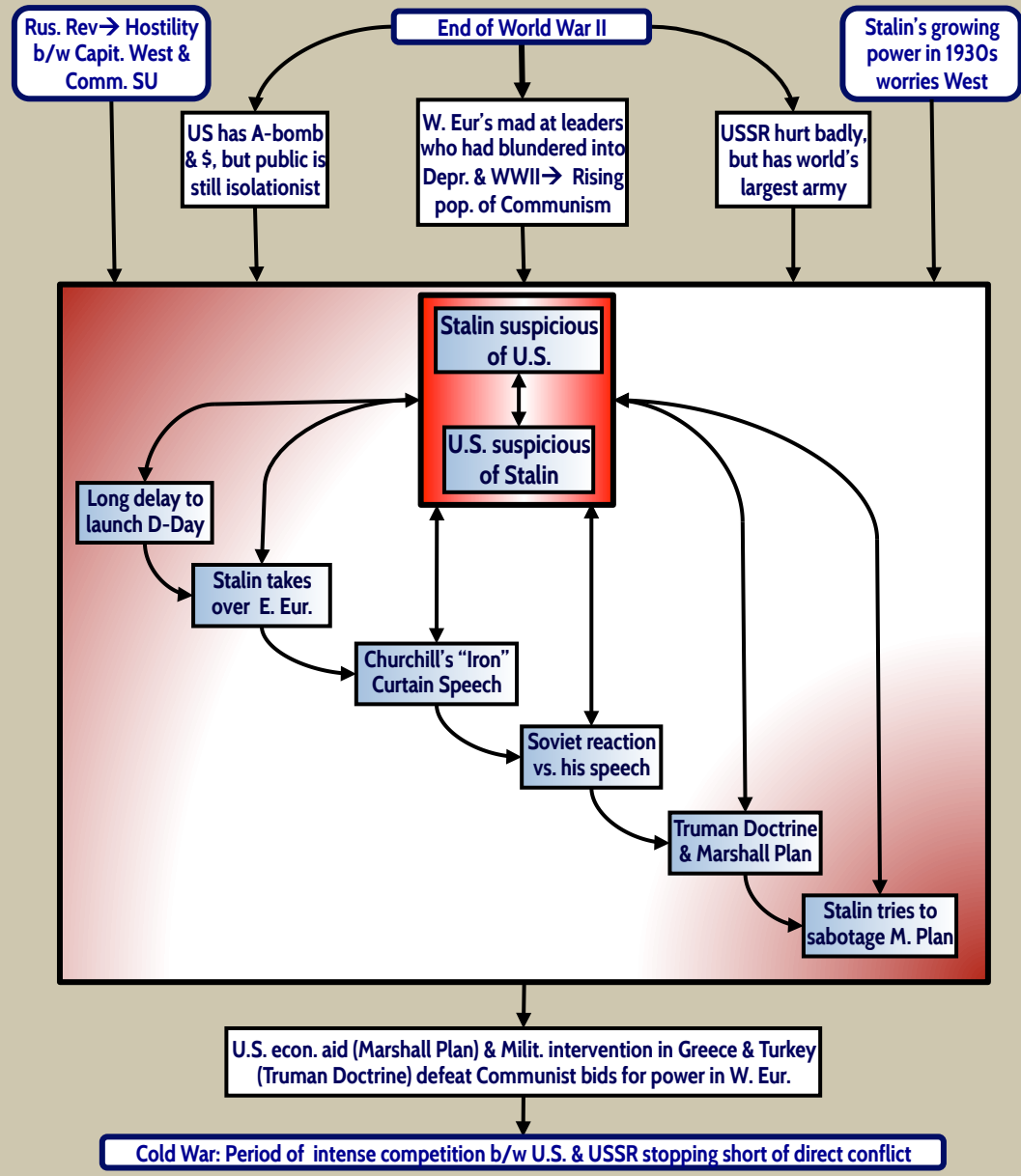
1954 Stalin dies, CIA overthrows Iran's govt., 1st color TV broadcast, Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome", Interstate Highway Act

1957 Howl, Hungarian uprising, Sputnik, On the Road published

17.1 THE START OF THE COLD WAR (1945-48)



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 "Iron Curtain" speech, Kinsey Report, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1949 Marshall Plan (1949-51), NATO, Israel

1950 Korean War (1950-3), Mao takes over China

1951 McCarthyism, Univac - 1st commercial computer

1952 Videotape recorder invented

1953 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test, Jonas Salk's cure for polio

1954 Stalin dies, CIA overthrows Iran's govt., Elvis

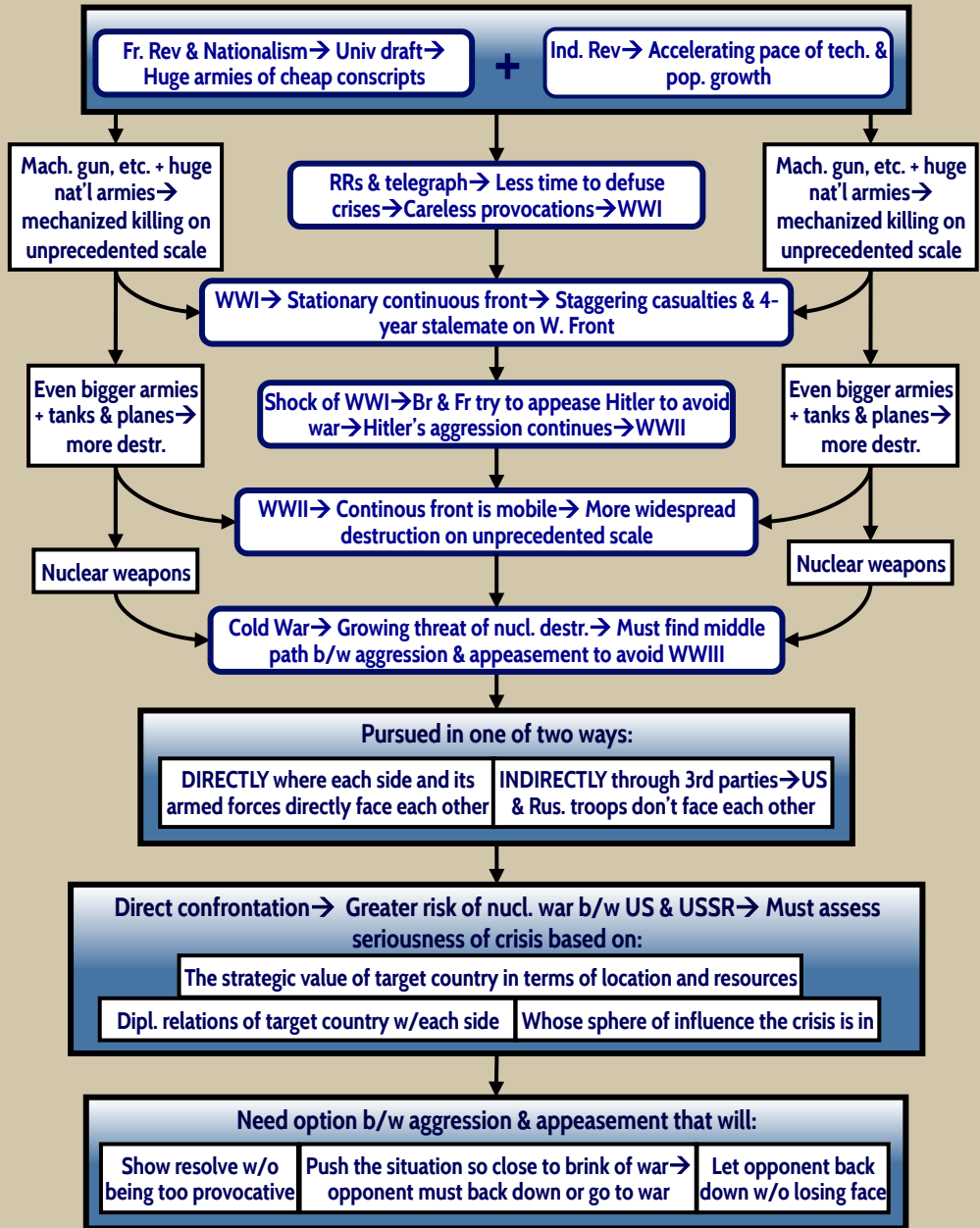
1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome"

1956 Interstate Highway Act

1957 Hungarian uprising, Sputnik, On the Road published

17.2 THE EVOLUTION AND ANATOMY OF COLD WAR CRISES



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 "Iron Curtain" speech, Kinsey Report, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift, Marshall Plan (1949-51), NATO, Israel

1950 McCarthyism, Korean War (1950-3), Mao takes over China

1951 Videotape recorder invented, Univac - 1st commercial computer

1952 1st H-bomb test

1953 pocket-sized transistor radio, DNA's double helix disc., Jonas Salk's cure for polio

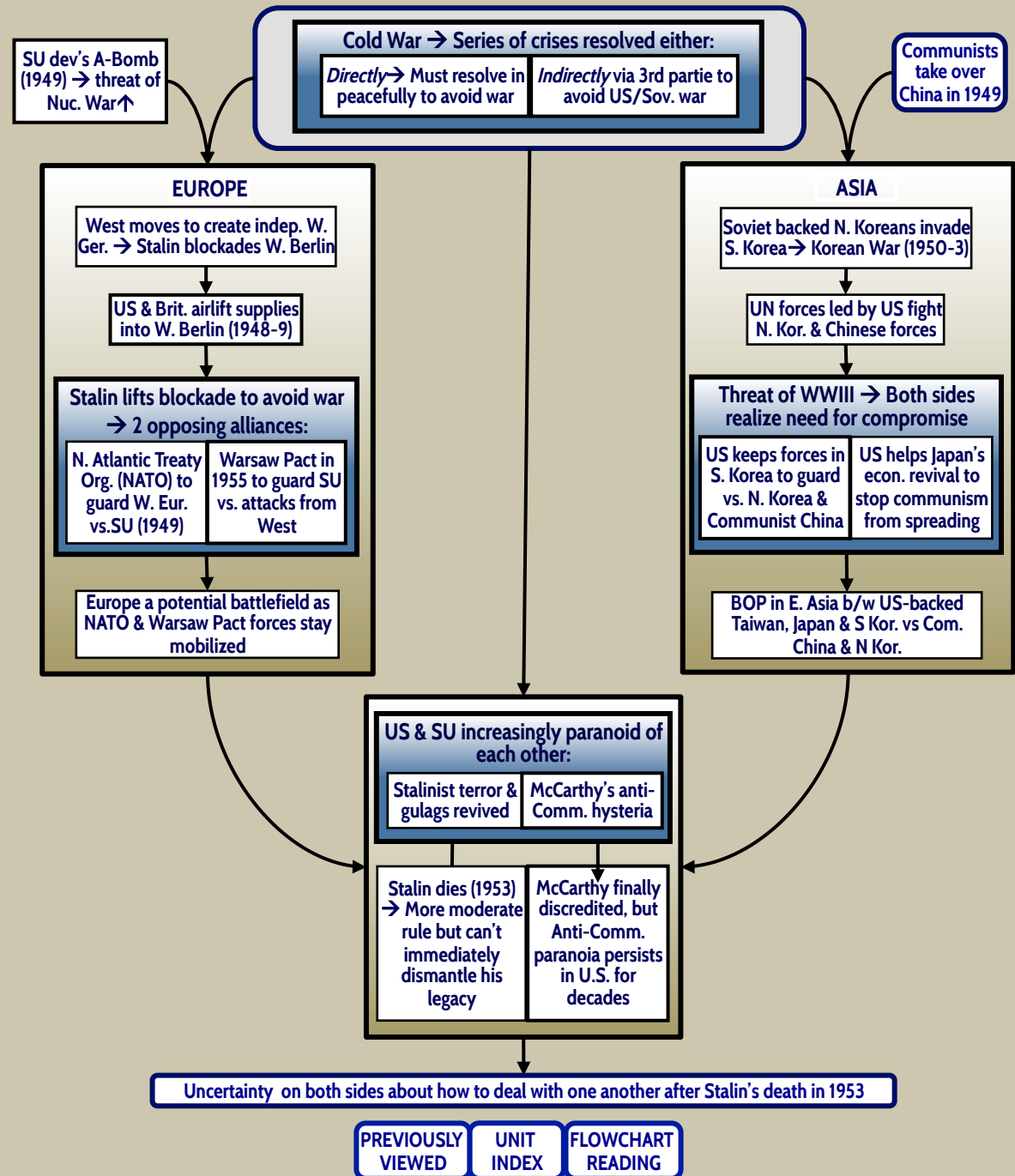
1954 Stalin dies, 1st color TV broadcast, CIA overthrows Iran's govt., Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome", Interstate Highway Act

1957 Howl, Hungarian uprising, Sputnik, On the Road published

17.3 THE EARLY YEARS OF THE COLD WAR (1948-53)



17.3A DECOLONIZATION IN SE ASIA AFTER WORLD WAR II

1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1949 Marshall Plan (1949-51), NATO, Israel

1950 Mao takes over China, Korean War (1950-3)

1951 McCarthyism, Univac - 1st commercial computer

1952 Videotape recorder invented

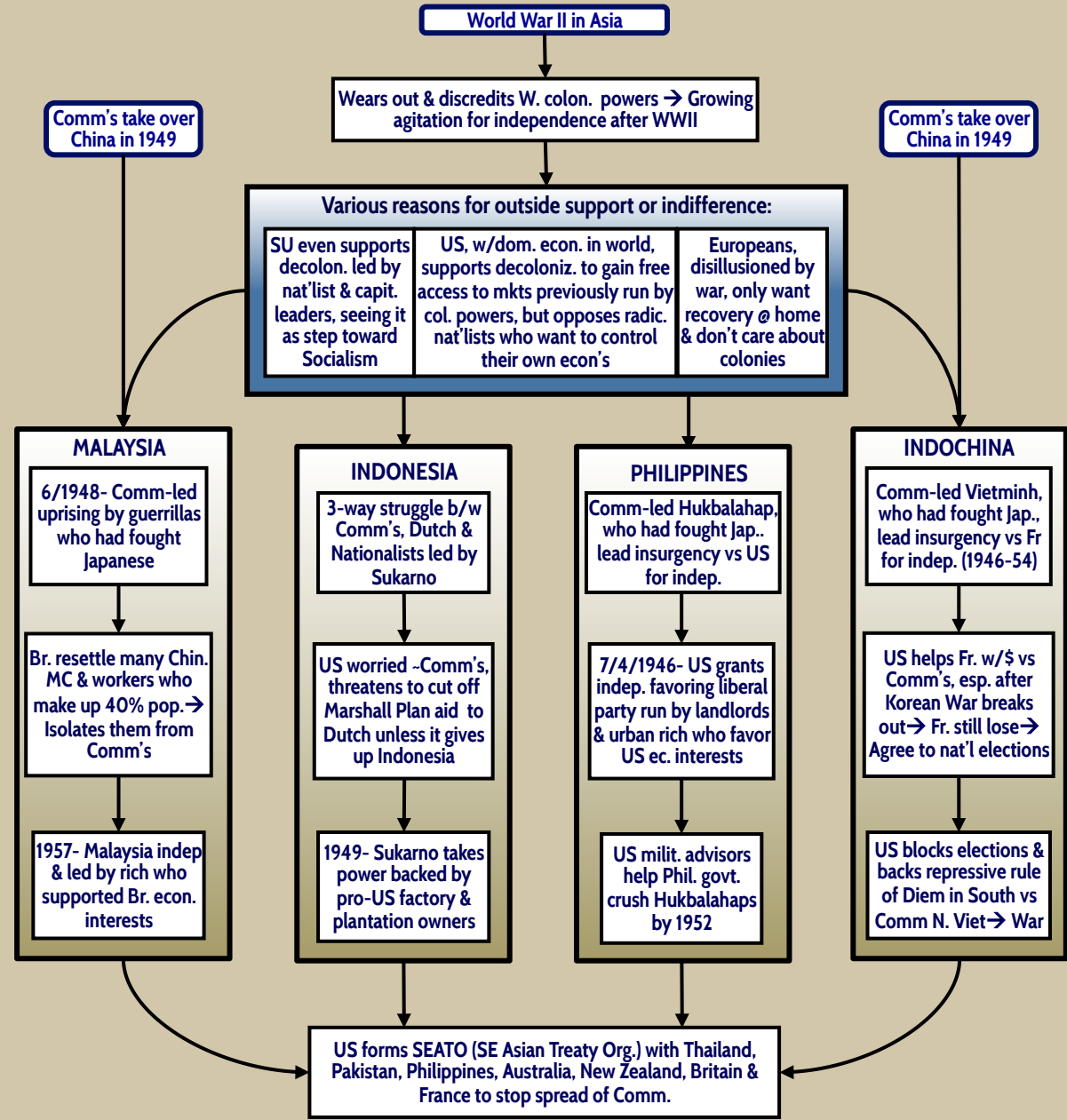
1953 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test, Jonas Salk's cure for polio

1954 Stalin dies, CIA overthrows Iran's govt., 1st color TV broadcast, NBC, Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome"

1957 Howl, Interstate Highway Act, Hungarian uprising, Sputnik, On the Road published



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift, Marshall Plan (1949-51), NATO, Israel

1950 Mao takes over China, Korean War (1950-3)

1951 McCarthyism, Univac - 1st commercial computer

1952 Videotape recorder invented

1953 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test, Jonas Salk's cure for polio

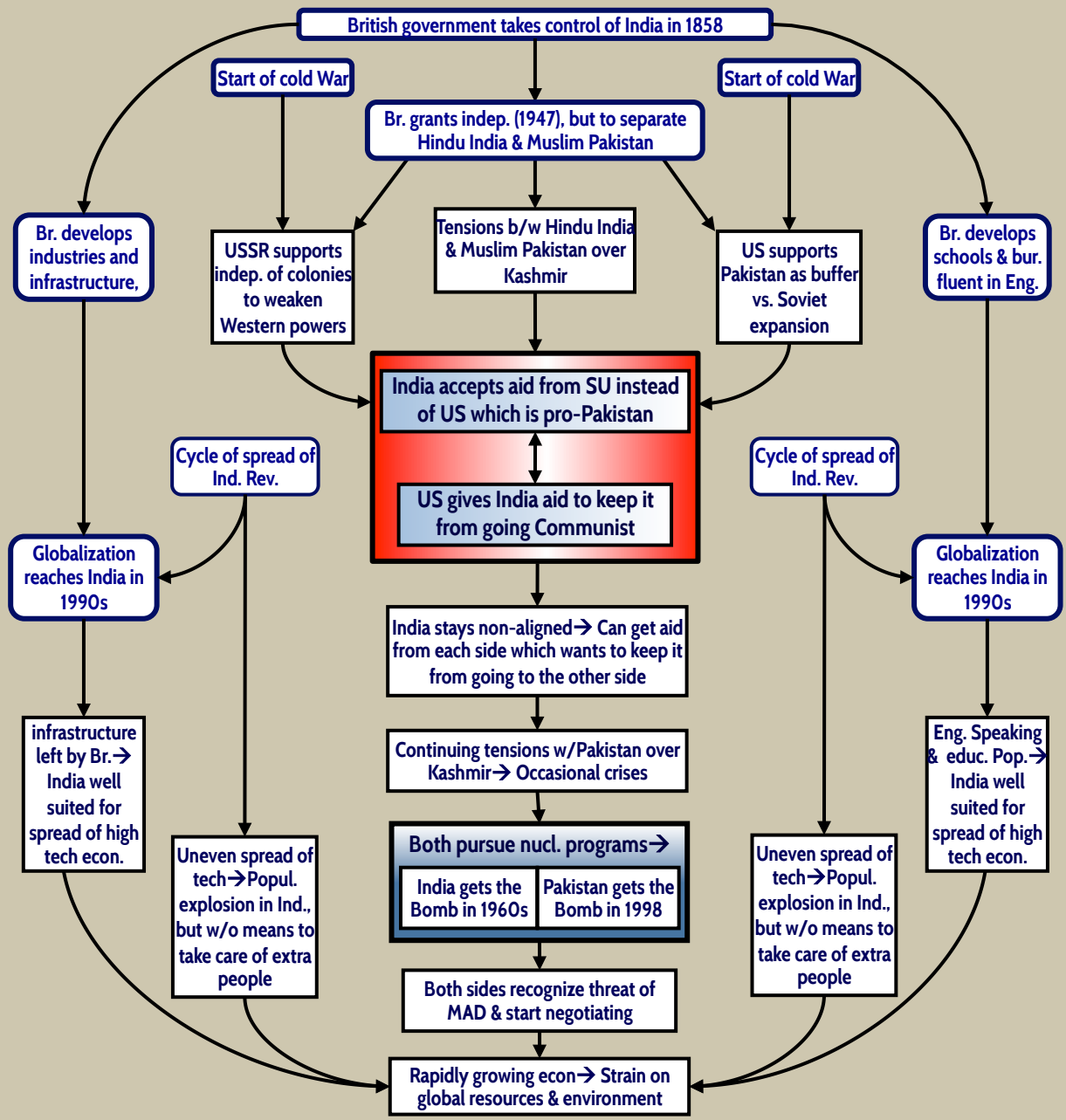
1954 Stalin dies, CIA overthrows Iran's govt., NBC 1st color TV broadcast, Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome", Interstate Highway Act

1957 Howl, Hungarian uprising, Sputnik, On the Road published

17.3B INDIA SINCE WORLD WAR II



17.4 THE AFTERMATH OF STALIN'S DEATH (1953-56)

1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1949 Marshall Plan (1949-51), NATO, Israel

1950 Mao takes over China, Korean War (1950-3)

1951 McCarthyism

1952 Videotape recorder invented, Univac - 1st commercial computer

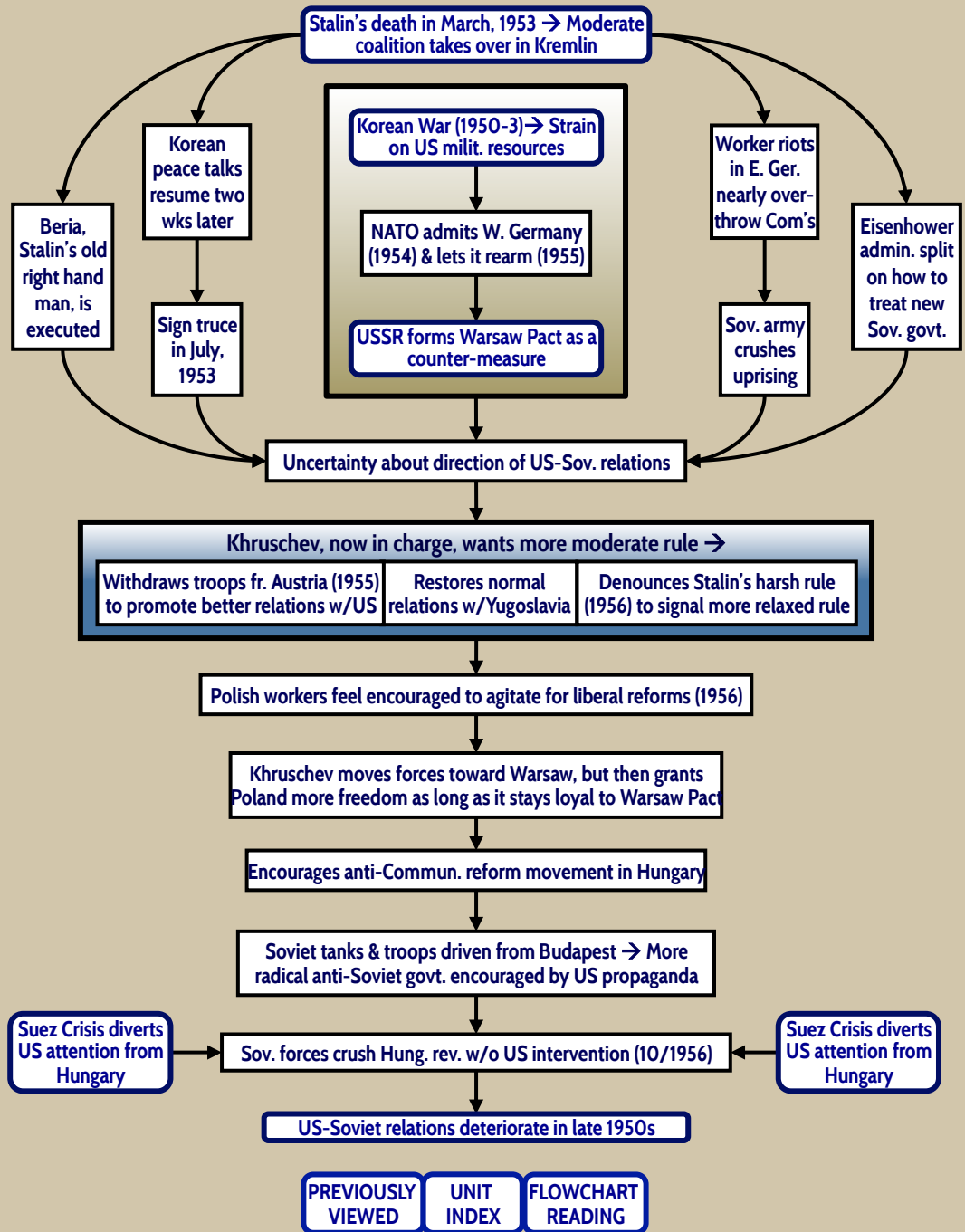
1953 pocket-sized transistor radio, DNA's double helix disc., 1st H-bomb test, Jonas Salk's cure for polio

1954 Stalin dies, CIA overthrows Iran's govt., Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome"

1957 Howl, Interstate Highway Act, Hungarian uprising, Sputnik, On the Road published



17.5 POSTWAR CONFORMITY & THE SEEDS OF DISSENT IN THE 1950S

1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1949 Marshall Plan (1949-51), NATO, Israel

1950 Mao takes over China, Korean War (1950-3)

1951 McCarthyism

1951 Univac - 1st commercial computer

1952 Videotape recorder invented

1953 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test, Jonas Salk's cure for polio

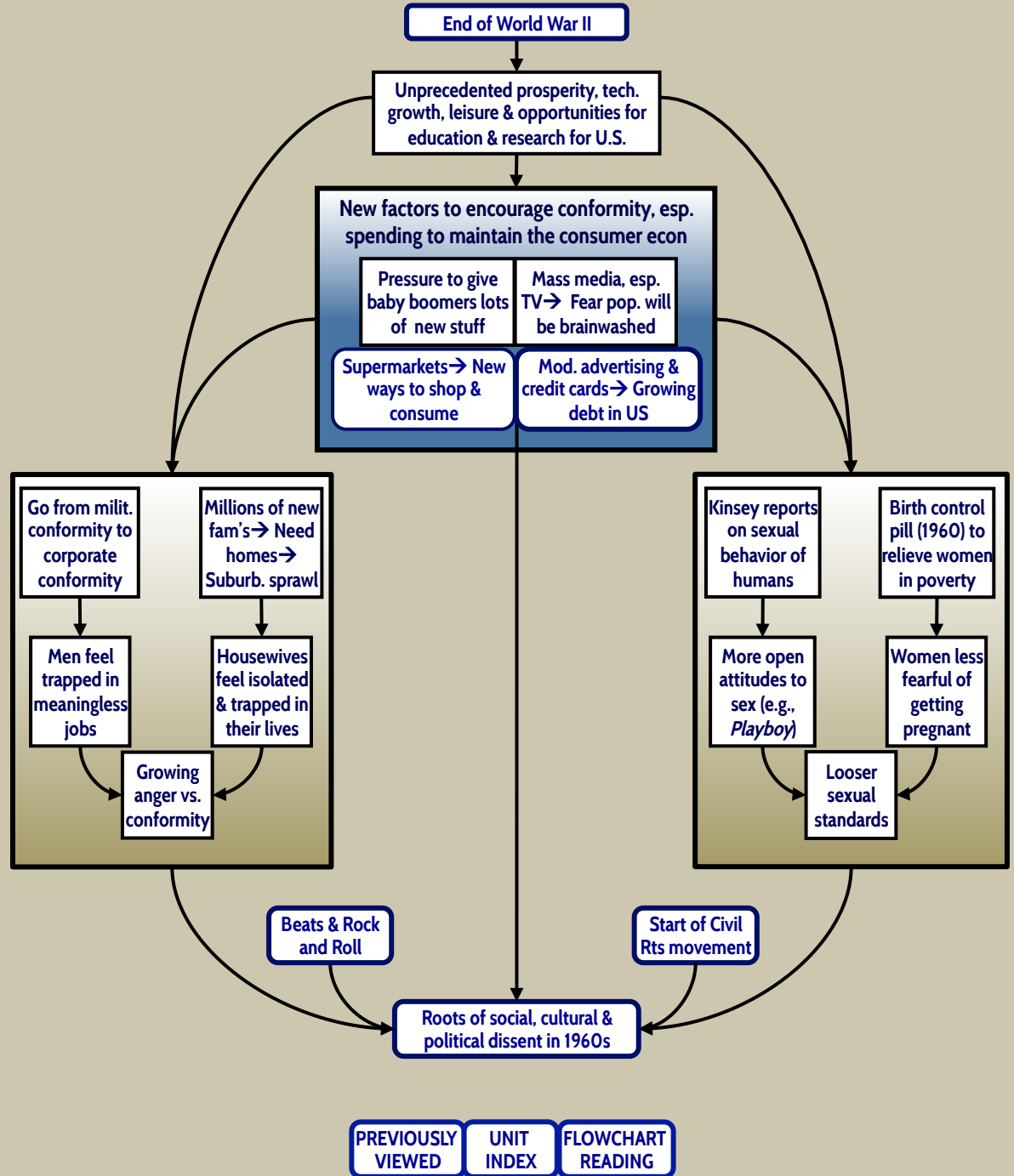
1954 Stalin dies, 1st color TV broadcast, CIA overthrows Iran's govt., Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome"

1956 Howl, Interstate Highway Act

1957 Sputnik, Hungarian uprising, On the Road published



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1949 Marshall Plan (1949-51), NATO, Israel

1950 McCarthyism, Korean War (1950-3), Mao takes over China

1951 Videotape recorder invented, Univac - 1st commercial computer

1952 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test

1953 Stalin dies, CIA overthrows Iran's govt., Jonas Salk's cure for polio

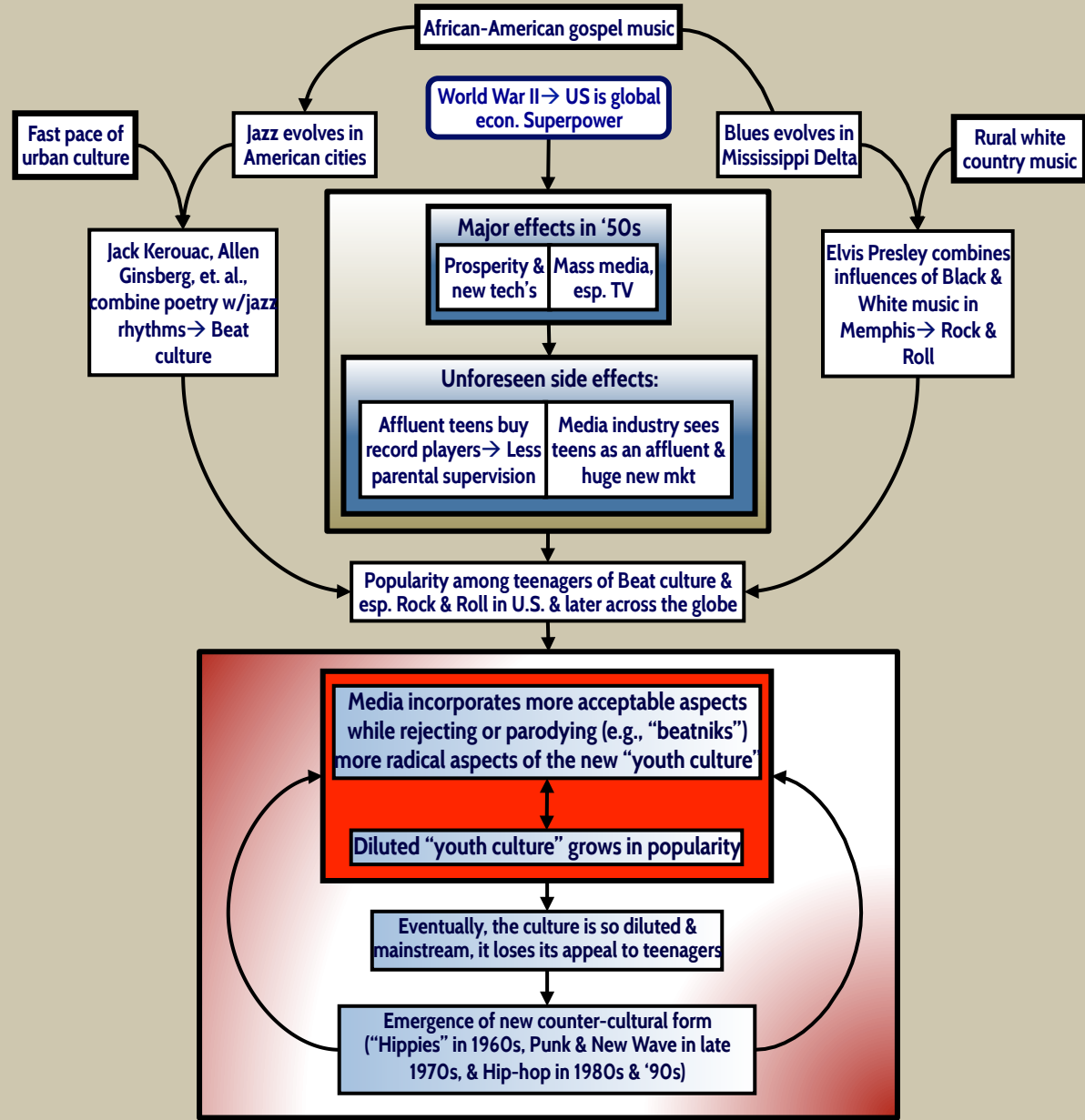
1954 1st color TV broadcast, CIA overthrows Guatemalan govt., Montgomery Bus Boycott, Elvis

1955 Brown v. Bd. Of Educ., Warsaw Pact, "Housewife Syndrome"

1956 Howl, Interstate Highway Act, Hungarian uprising

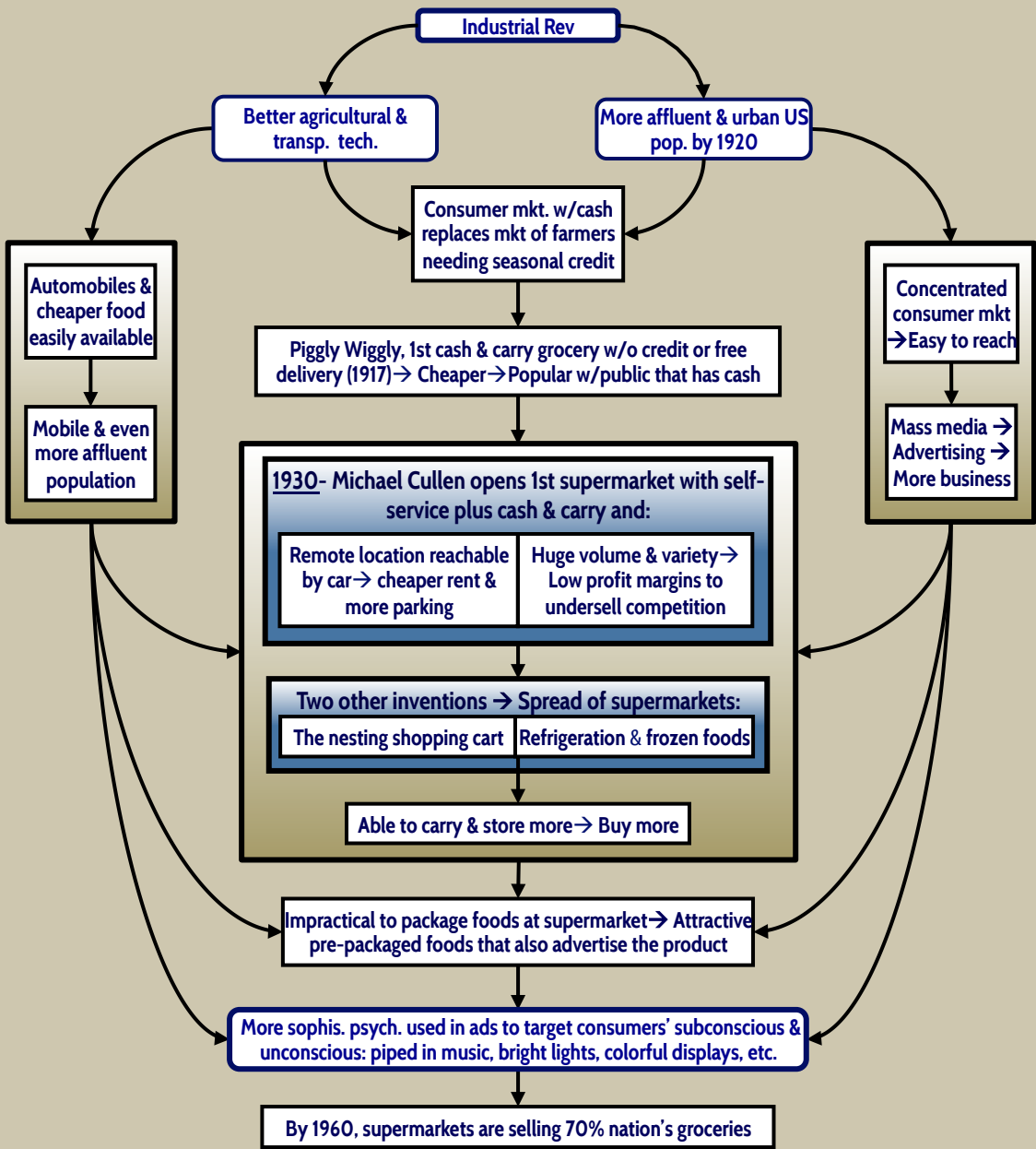
1957 Sputnik, On the Road published

17.5A BEATS, ROCK'N ROLL & THE COUNTER-CULTURE CYCLE (c.1950-)



17.5B THE EVOLUTION OF THE SUPERMARKET & ITS IMPACT (1917-60)

1945	Greek Civil War	ENIAC Computer
1946	Automatic washing machine	
1947	Kinsey Report	"Iron Curtain" speech
	Jackie Robinson	
1948	Window A/C	Indian Indep.
	Transistor	Suburbs
1949	Long-playing Record	McDonalds
	Berlin Airlift	
1949	Marshall Plan (1949-51)	NATO
	Israel	
1950	Mao takes over China	
	Korean War (1950-3)	
1951	McCarthyism	
1951	Univac - 1st commercial computer	
1952	Videotape recorder invented	
1953	1st H-bomb test	
1953	DNA's double helix disc.	
1953	Jonas Salk's cure for polio	
1954	Stalin dies	
1954	CIA overthrows Iran's govt.	
1954	Elvis	
1955	CIA overthrows Guatemalan govt.	
1955	Brown v. Bd. Of Educ.	Montgomery Bus Boycott
1956	Warsaw Pact	"Housewife Syndrome"
1956	Interstate Highway Act	
1957	Hungarian uprising	
1957	On the Road published	
1957	Sputnik	



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1950 Marshall Plan (1949-51), NATO, Israel, Mao takes over China

1951 McCarthyism, Korean War (1950-3)

1952 Videotape recorder invented, Univac - 1st commercial computer

1953 pocket-sized transistor radio, DNA's double helix disc, 1st H-bomb test, Jonas Salk's cure for polio

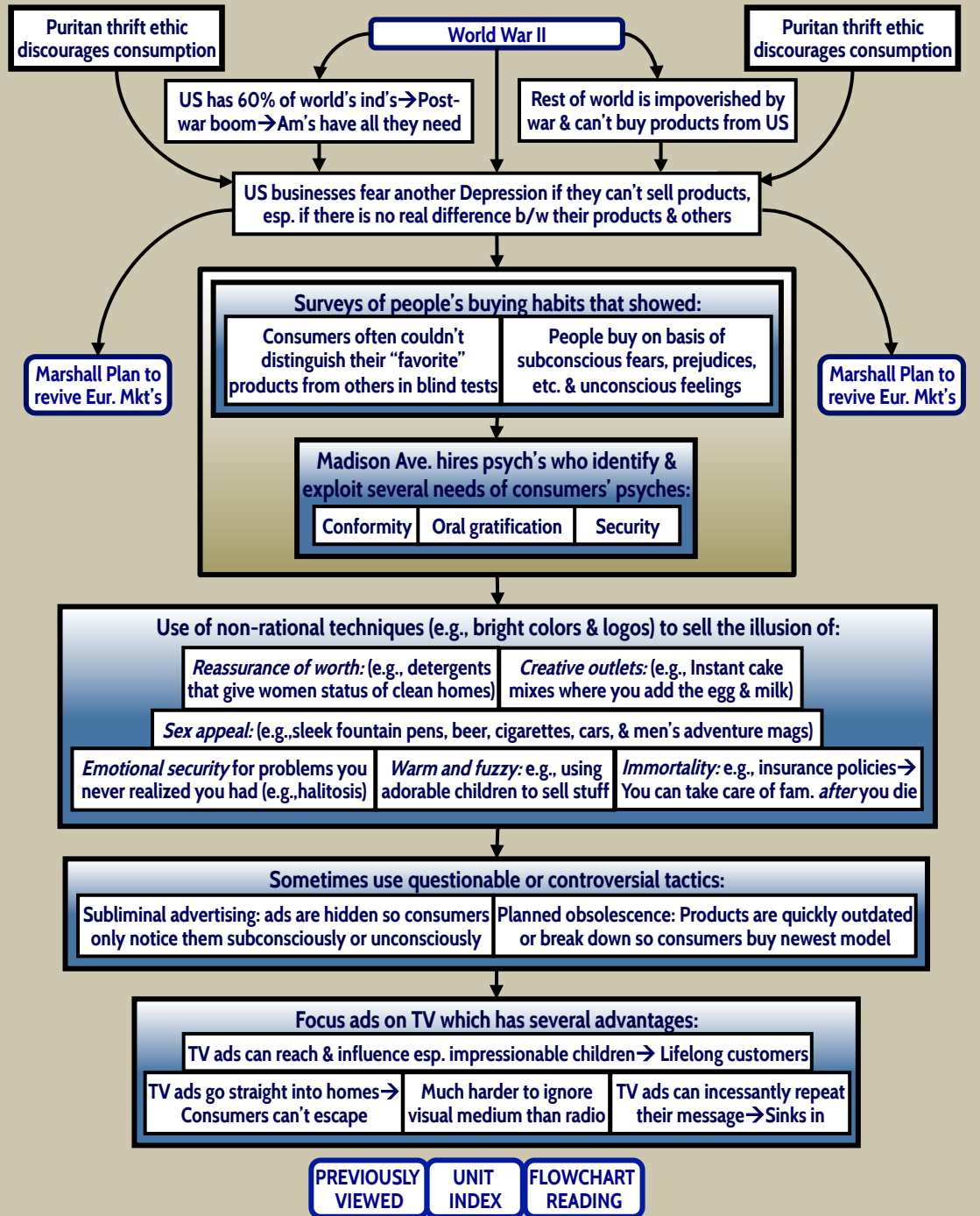
1954 Stalin dies, 1st color TV broadcast, CIA overthrows Iran's govt., Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome", Interstate Highway Act

1957 Howl, Hungarian uprising, Sputnik, On the Road published

17.5C THE HIDDEN PERSUADERS: A SHORT HISTORY OF ADVERTISING



1945 Greek Civil War, ENIAC Computer

1946 Automatic washing machine

1947 Kinsey Report, "Iron Curtain" speech, Jackie Robinson

1948 Window A/C, Transistor, Indian Indep., Suburbs

1949 Long-playing Record, McDonalds, Berlin Airlift

1950 Marshall Plan (1949-51), NATO, Israel, Mao takes over China

1951 McCarthyism, Univac- 1st commercial computer

1952 Videotape recorder invented, 1st H-bomb test

1953 pocket-sized transistor radio, DNA's double helix disc, Jonas Salk's cure for polio

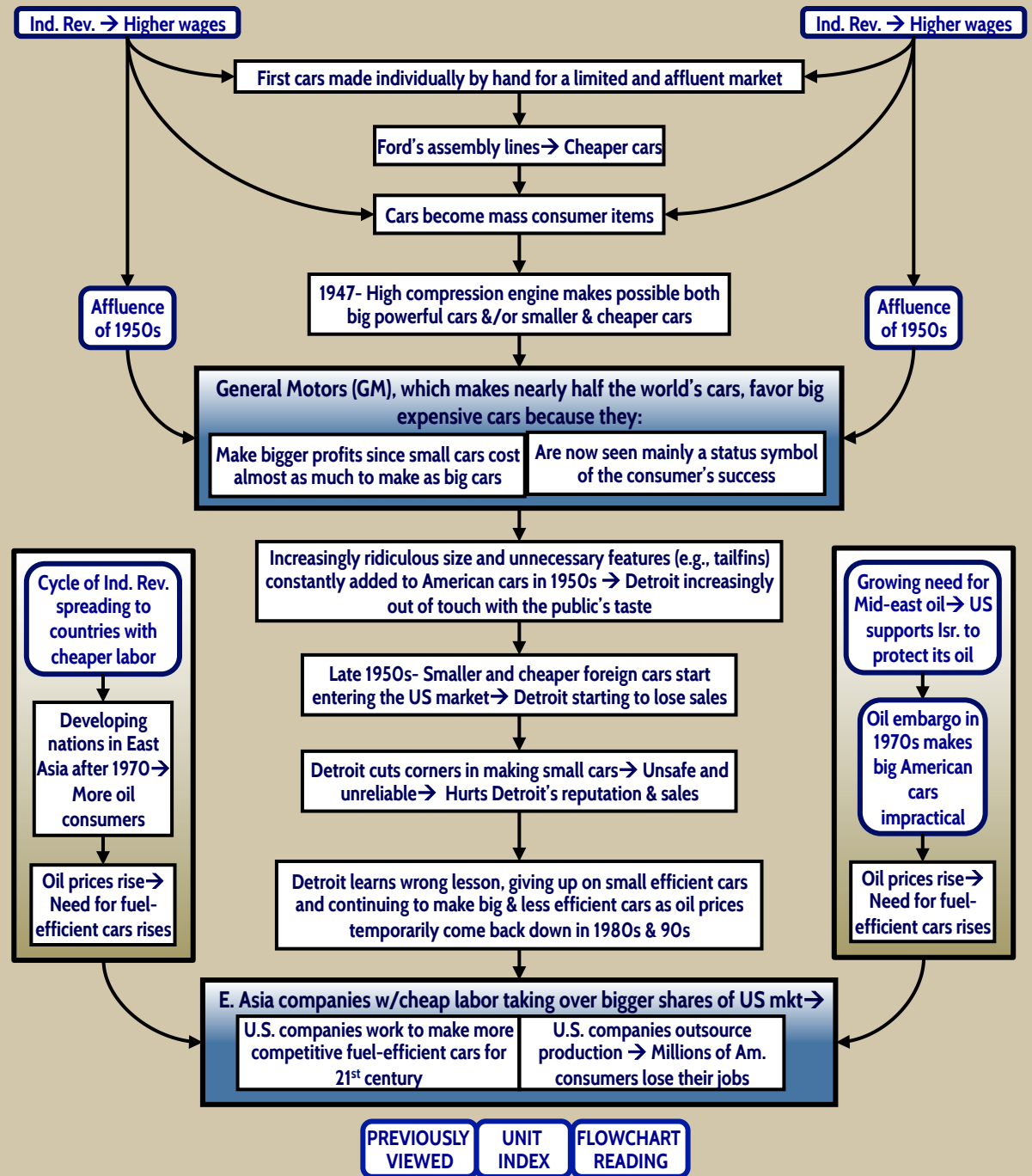
1954 Stalin dies, CIA overthrows Iran's govt., Elvis

1955 Brown v. Bd. Of Educ., CIA overthrows Guatemalan govt., Montgomery Bus Boycott

1956 Warsaw Pact, "Housewife Syndrome", Interstate Highway Act

1957 Howl, Hungarian uprising, Sputnik, On the Road published

17.5D A SHORT HISTORY OF THE AMERICAN AUTO INDUSTRY TO c.2010



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam Beatlemania
Dylan goes electric Malcolm X killed Mod fashions
Counter culture

1966 Watts Riots Mao's Cult. Rev.

1967 6-day War Sgt. Pepper
Tet Offensive MLK killed Black Power
"Prague Spring" RFK killed Women's Lib. protest at Miss Am. pageant

1968 Genocide in Biafra Democr. Convention
Woodstock Stonewall riots
MIRVs Apollo XI Cuyahoga R. Fire

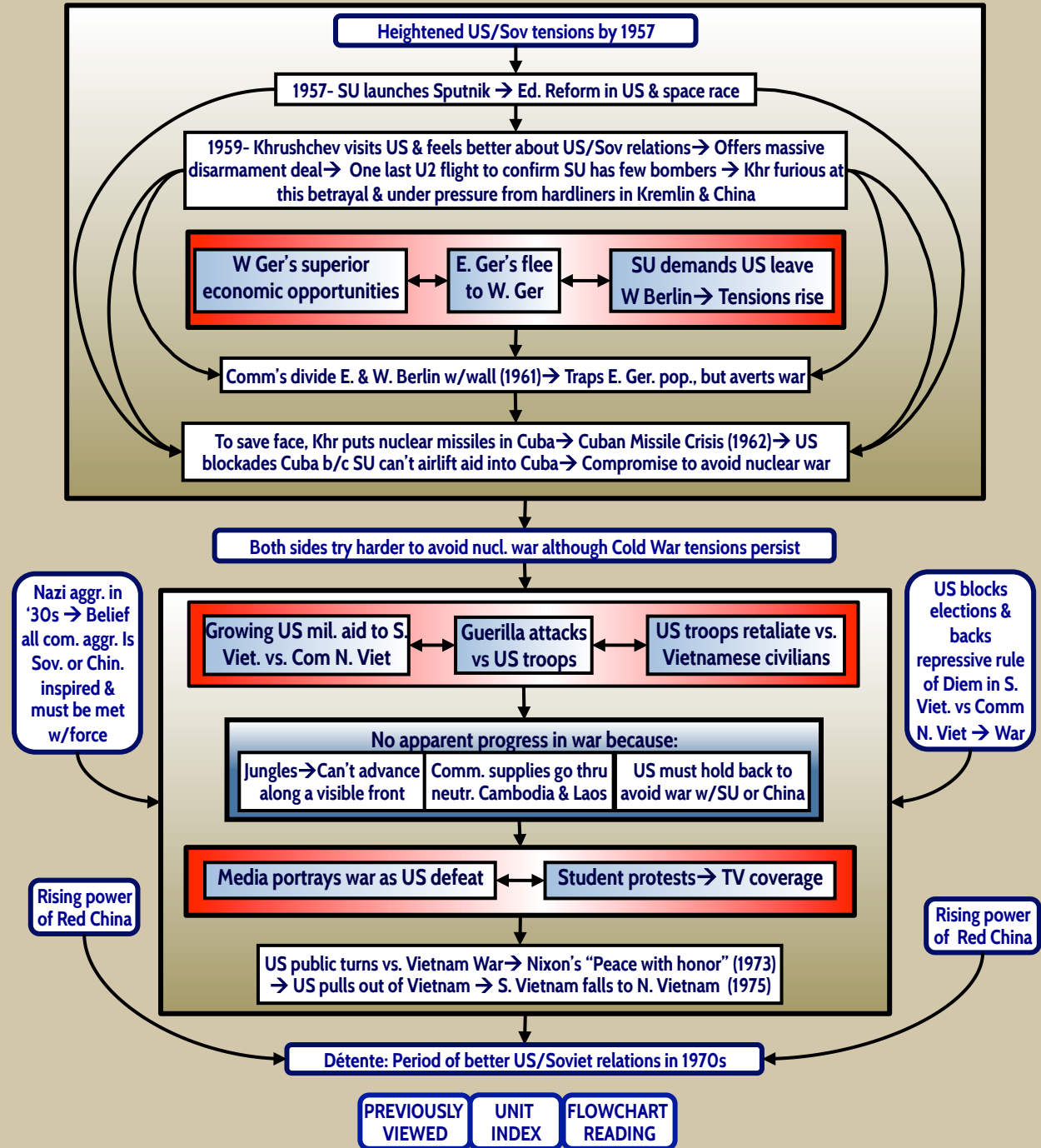
1969 1st Earth Day No fault divorce
Kent State PLO plane hijackings

1970 Microchip All in the Family
Title IX Ms Magazine

1971 Detente Nixon goes to China

1972

17.6 THE HEIGHT OF THE COLD WAR (1957-72)



17.6A AMERICAN FOREIGN POLICY AND THE VIETNAM WAR (1954-75)

1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam Beatlemania

Dylan goes electric Malcolm X killed Mod fashions

1966 Counter culture

1967 Watts Riots Mao's Cult. Rev.

1968 6-day War Sgt. Pepper Black Power

Tet Offensive MLK killed Women's Lib. protest at Miss Am. pageant

"Prague Spring" RFK killed

1969 Genocide in Biafra Democr. Convention

Woodstock Stonewall riots

1970 MIRVs Apollo XI Cuyahoga R. Fire

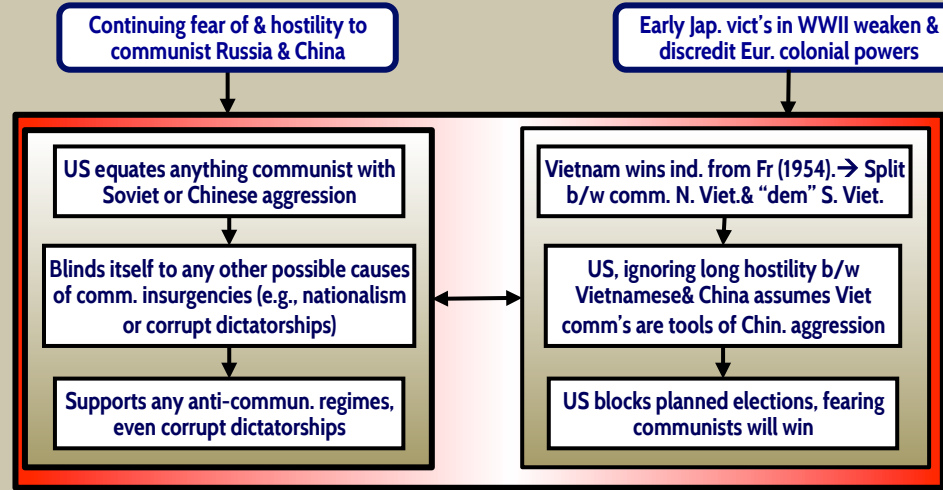
1st Earth Day No fault divorce

1971 Kent State PLO plane hijackings

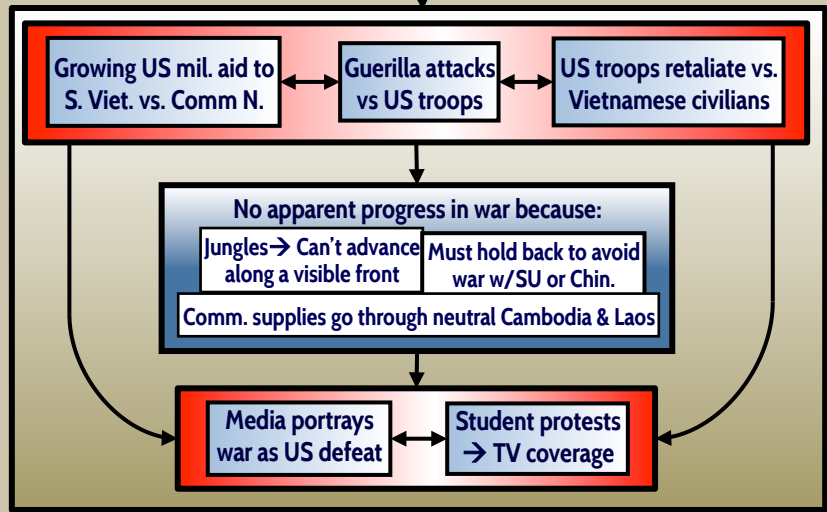
Microchip All in the Family

1972 Title IX Ms Magazine Nixon goes to China

Detente



US supports dictatorship in S. Viet civil war vs Comm. N. Viet.



Rising power of Red China

Rising power of Red China

US public turns vs. Vietnam War → Nixon's "Peace with honor" (1973) → US pulls out of Vietnam → S. Vietnam falls to N. Vietnam (1975)

Détente: Period of better US/Soviet relations in 1970s

1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations Gagarin orbits earth

1960 Birth control pill "Tsar Bomb" Berlin Wall

1961 Sino-Soviet Split "Silent Spring" Rachel Carson Telstar Cuban Missile Crisis

1962 JFK killed Civil Rights Bill Khrushchev deposed

1963 U.S. troops to Vietnam Beatlemania

1964 Dylan goes electric Malcolm X killed Mod fashions Counter culture

1965 Watts Riots Mao's Cult. Rev.

1966 6-day War Sgt. Pepper Black Power

1967 Tet Offensive MLK killed Women's Lib. protest at Miss Am. pageant

1968 "Prague Spring" RFK killed Genocide in Biafra Democ. Convention

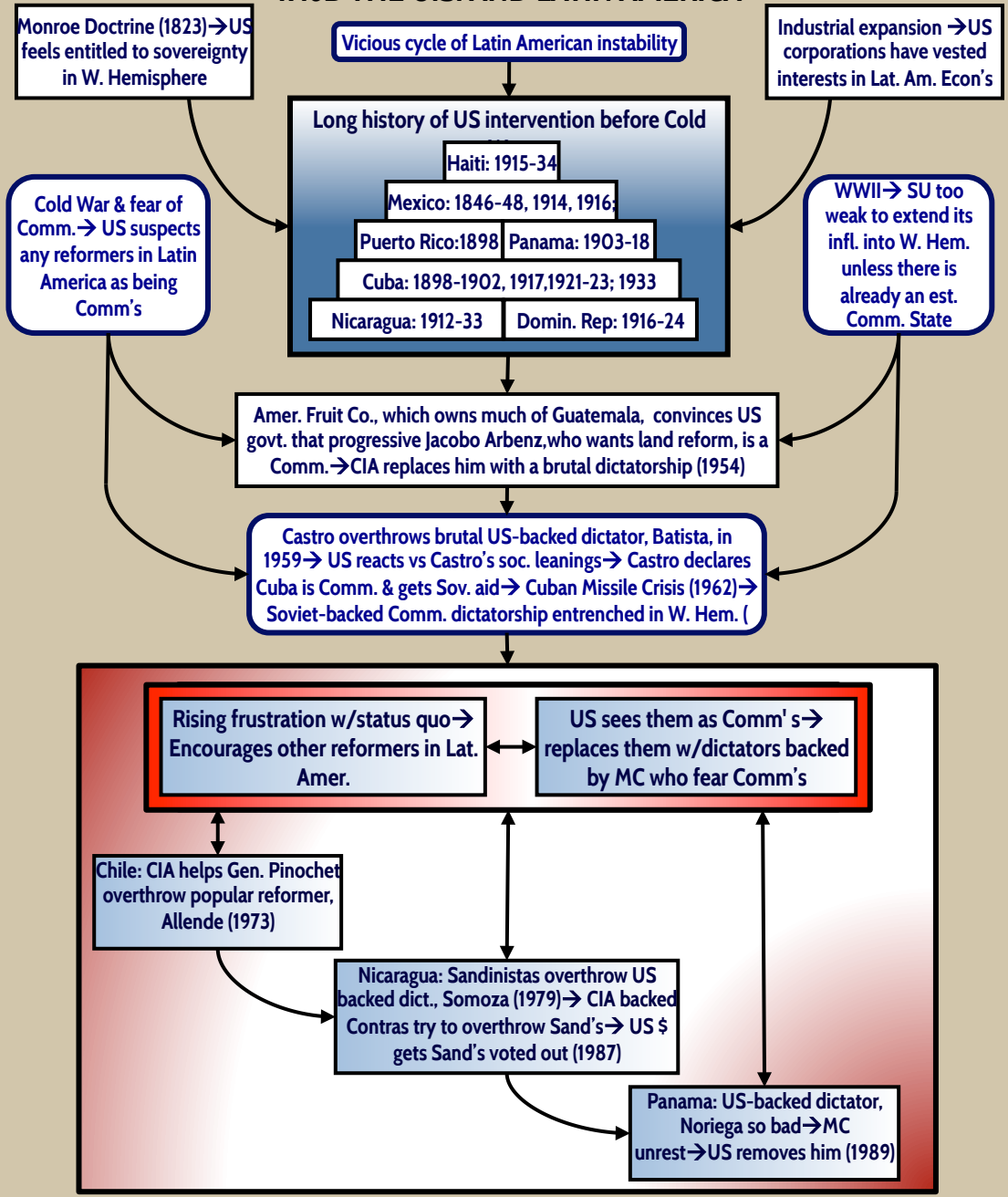
1969 Woodstock Stonewall riots Cuyahoga R. Fire

1970 MIRVs Apollo XI No fault divorce PLO plane hijackings

1971 1st Earth Day Kent State Microchip All in the Family

1972 Title IX Ms Magazine Detente Nixon goes to China

17.6B THE U.S. AND LATIN AMERICA



1958 Stereophonic sound, Mao's Great Leap Forward, Khrushchev visits U.S.

1959 U2 incident, African nations

1960 Birth control pill, Gagarin orbits earth

1961 Sino-Soviet Split, "Tsar Bomb", Berlin Wall

1962 Telstar, Cuban Missile Crisis

1963 JFK killed, Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam, Beatlemania, Dylan goes electric, Malcolm X killed, Mod fashions, Counter culture

1966 Watts Riots, Mao's Cult. Rev.

1967 6-day War, Sgt. Pepper, Black Power

1968 Tet Offensive, MLK killed, Women's Lib. protest at Miss Am. pageant, "Prague Spring", RFK killed

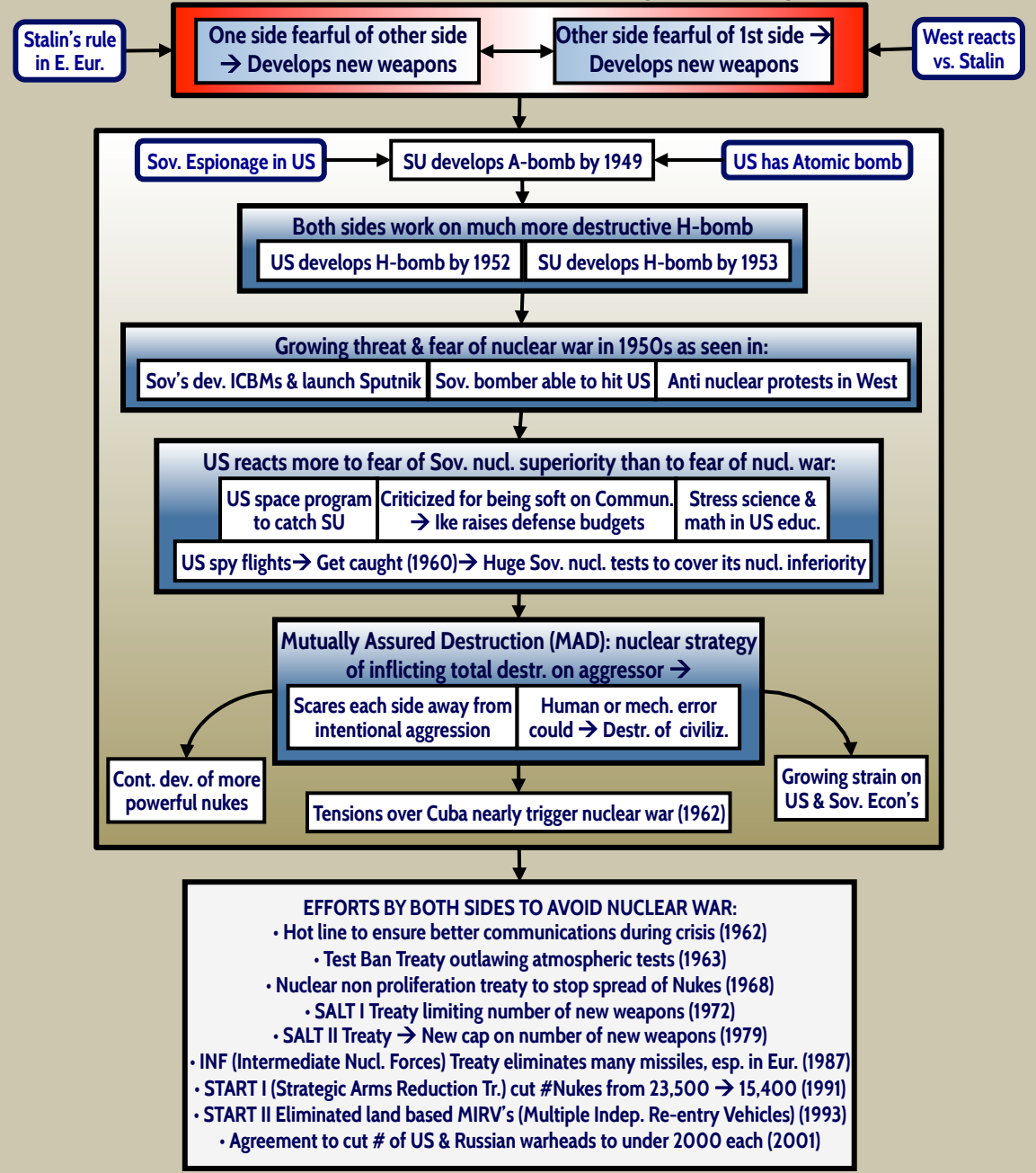
1969 Genocide in Biafra, Democr. Convention, Woodstock, Stonewall riots

1970 MIRVs, Apollo XI, Cuyahoga R. Fire, 1st Earth Day, No fault divorce

1971 PLO plane hijackings, Kent State

1972 Microchip, All in the Family, Ms Magazine, Title IX, Detente, Nixon goes to China

17.7 THE NUCLEAR ARMS RACE (1945-2001)



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations Gagarin orbits earth

1960 Birth control pill "Tsar Bomb" Berlin Wall

1961 Sino-Soviet Split Telstar Cuban Missile Crisis

1962 JFK killed Civil Rights Bill Khrushchev deposed

1963 U.S. troops to Vietnam Beatlemania Mod fashions

1964 Dylan goes electric Malcolm X killed Counter culture

1965 Watts Riots Mao's Cult. Rev.

1966 6-day War Sgt. Pepper Black Power

1967 Tet Offensive MLK killed Women's Lib. protest at Miss Am. pageant

1968 "Prague Spring" RFK killed Genocide in Biafra Democr. Convention

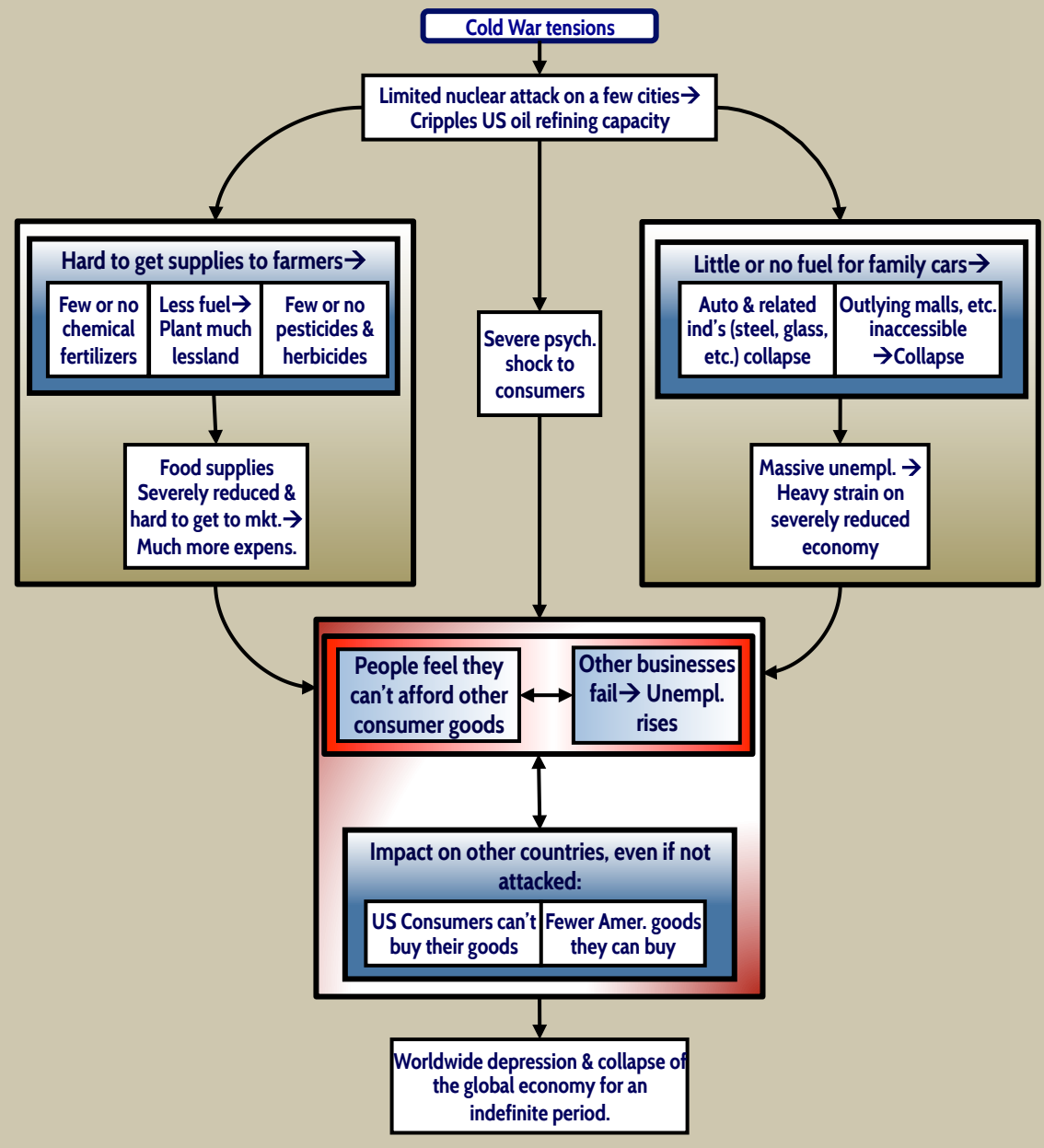
1969 Woodstock Stonewall riots Cuyahoga R. Fire

1970 MIRVs Apollo XI No fault divorce PLO plane hijackings

1971 1st Earth Day Kent State Microchip All in the Family

1972 Title IX Ms Magazine Detente Nixon goes to China

17.7A THE LIKELY EFFECTS OF A LIMITED NUCLEAR ATTACK



1958 Stereophonic sound
Mao's Great Leap Forward
Khrushchev visits U.S.

1959 U2 incident
African nations
Gagarin orbits earth

1960 Birth control pill
Berlin Wall

1961 Sino-Soviet Split
"Tsar Bomb"
Telstar
Cuban Missile Crisis

1962 JFK killed
Civil Rights Bill

1963 Khrushchev deposed
U.S. troops to Vietnam
Beatlemania

1964 Dylan goes electric
Malcolm X killed
Mod fashions
Counter culture

1965 Watts Riots
Mao's Cult. Rev.

1966 6-day War
Sgt. Pepper
Black Power

1967 Tet Offensive
MLK killed
Women's Lib. protest at Miss Am. pageant

1968 "Prague Spring"
RFK killed
Genocide in Biafra
Democr. Convention

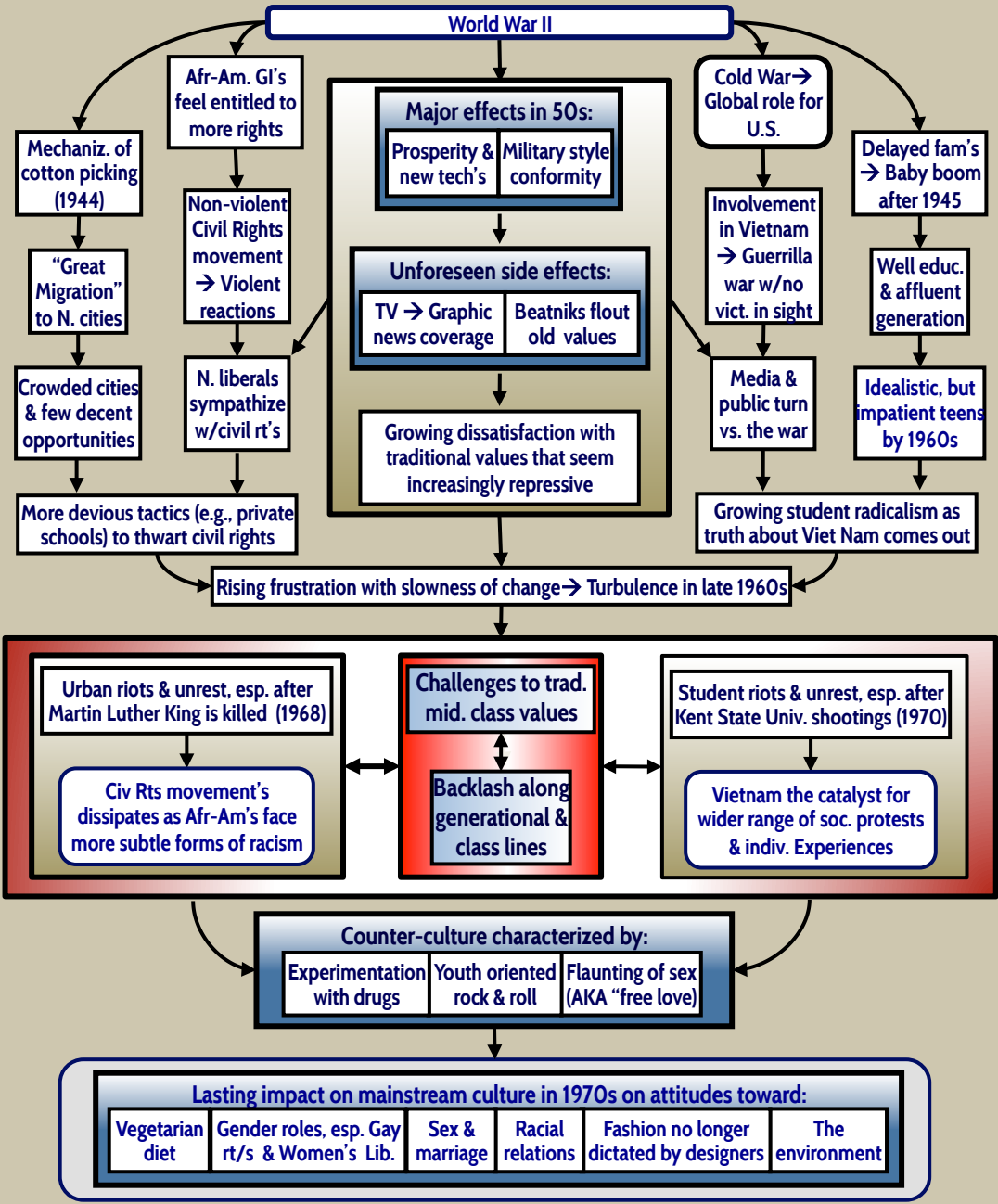
1969 Woodstock
Stonewall riots
Cuyahoga R. Fire

1970 MIRVs
Apollo XI
1st Earth Day
No fault divorce

1971 Kent State
PLO plane hijackings

1972 Microchip
All in the Family
Ms Magazine
Title IX
Nixon goes to China
Detente

17.8 FRAGMENTATION & COUNTERCULTURE IN THE 1960'S



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam Beatlemania

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1966 Counter culture

1967 Watts Riots Mao's Cult. Rev.

1968 6-day War Sgt. Pepper Black Power

Tet Offensive MLK killed Women's Lib. protest at Miss Am. pageant

"Prague Spring" RFK killed

1969 Genocide in Biafra Democ. Convention

Woodstock Stonewall riots

1970 MIRVs Apollo XI Cuyahoga R. Fire

1st Earth Day No fault divorce

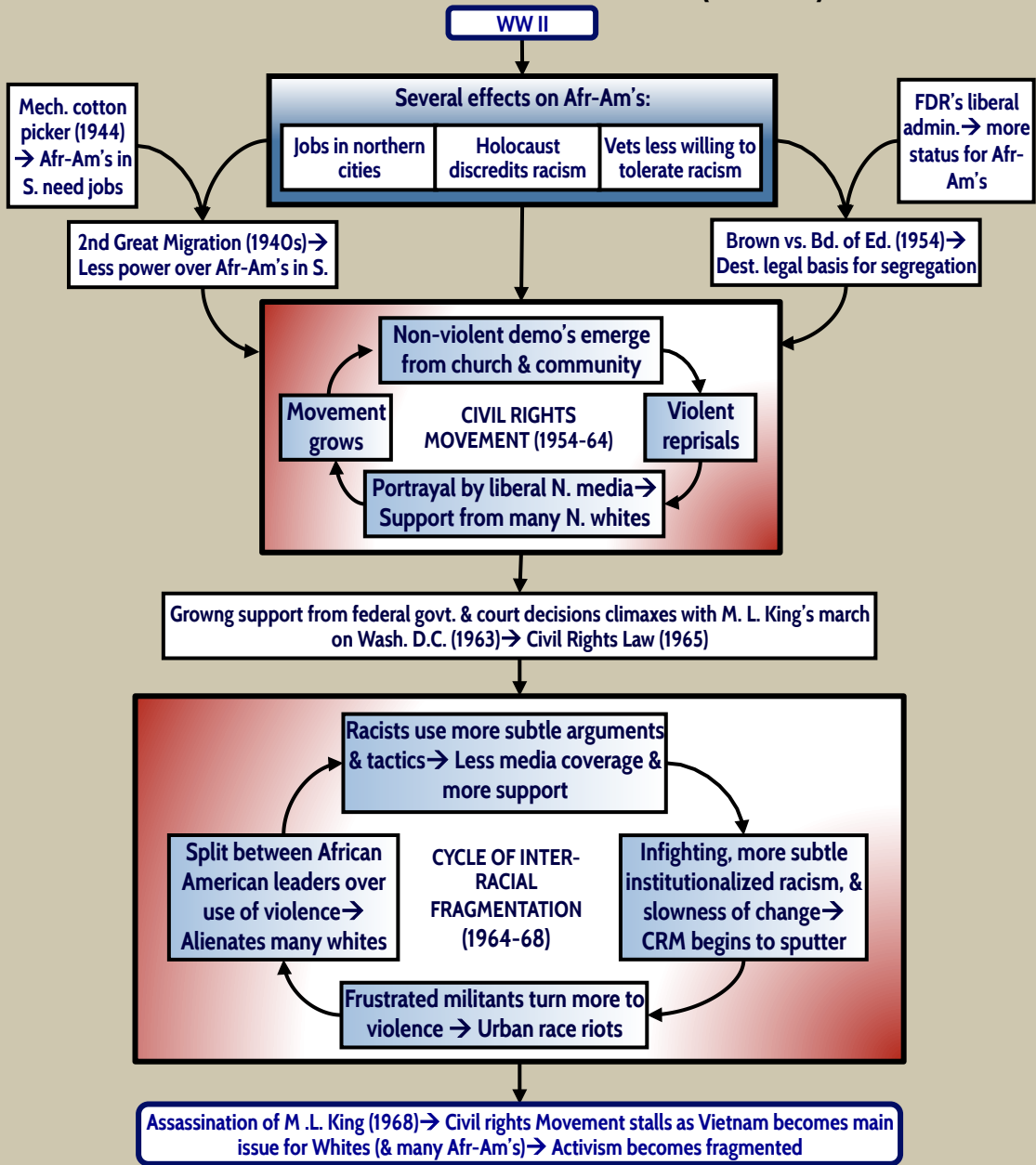
1971 Kent State PLO plane hijackings

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1972 Title IX Ms Magazine

Detente Nixon goes to China

17.8A THE CIVIL RIGHTS MOVEMENT (1954-68)



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations Gagarin orbits earth

1960 Birth control pill "Tsar Bomb" Berlin Wall

1961 Sino-Soviet Split Telstar Cuban Missile Crisis

1962 JFK killed Civil Rights Bill Khrushchev deposed

1963 U.S. troops to Vietnam Beatlemania

1964 Dylan goes electric Malcolm X killed Mod fashions

1965 Watts Riots Mao's Cult. Rev.

1966 6-day War Sgt. Pepper Black Power

1967 Tet Offensive MLK killed Women's Lib. protest at Miss Am. pageant

1968 "Prague Spring" RFK killed Genocide in Biafra Democr. Convention

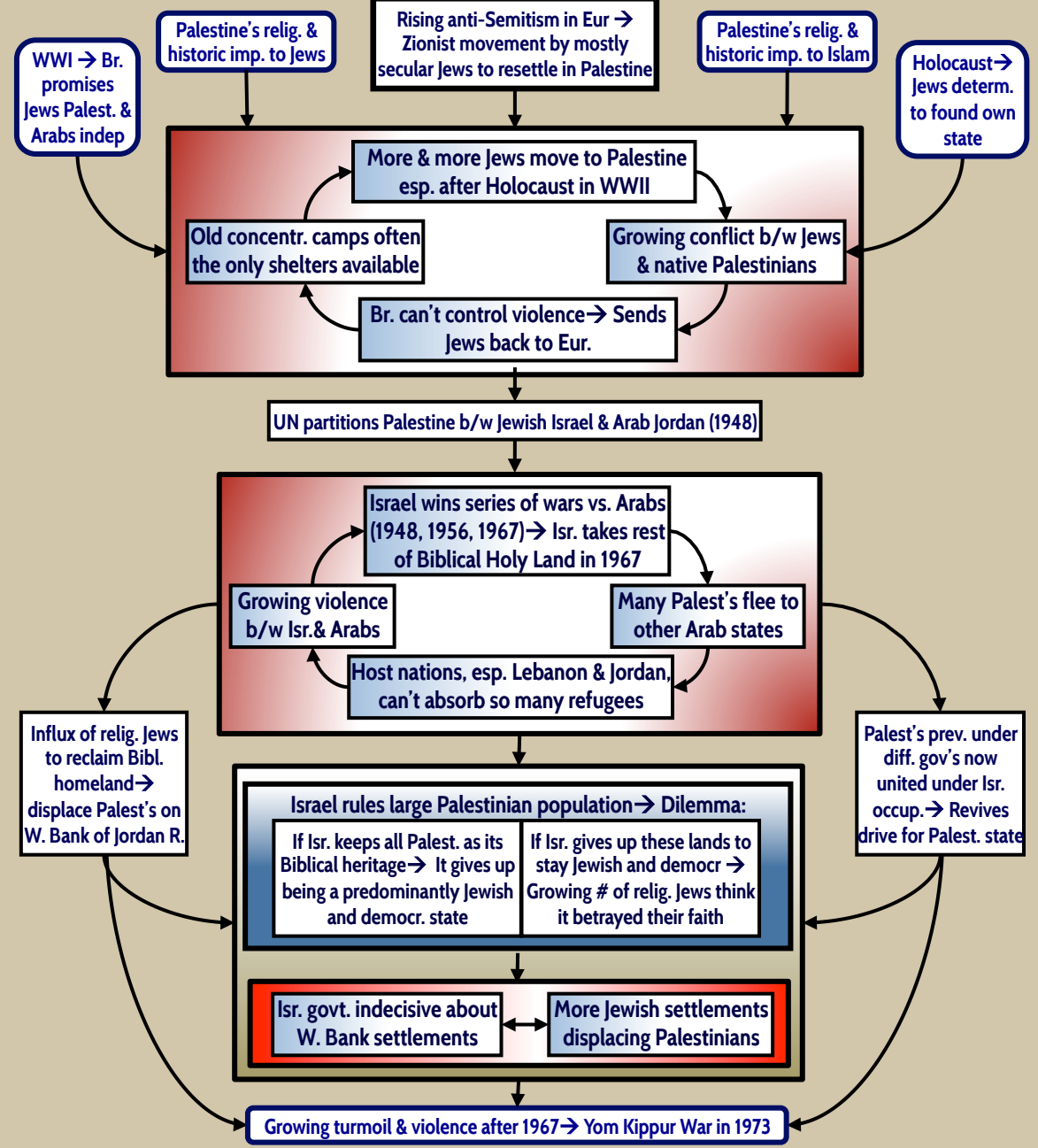
1969 Woodstock Stonewall riots Cuyahoga R. Fire

1970 MIRVs Apollo XI No fault divorce PLO plane hijackings

1971 1st Earth Day Kent State PLO plane hijackings

1972 Microchip All in the Family Ms Magazine Title IX Nixon goes to China Detente

17.9 ISRAEL & THE ARABS (c.1880-1973)



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam Beatlemania

1966 Dylan goes electric Malcolm X killed Counter culture

1967 Watts Riots Mao's Cult. Rev.

1968 6-day War Sgt. Pepper Black Power

Tet Offensive MLK killed Women's Lib. protest at Miss Am. pageant

"Prague Spring" RFK killed

1969 Genocide in Biafra Democr. Convention

Woodstock Stonewall riots

1970 MIRVs Apollo XI Cuyahoga R. Fire

1st Earth Day No fault divorce

1971 PLO plane hijackings

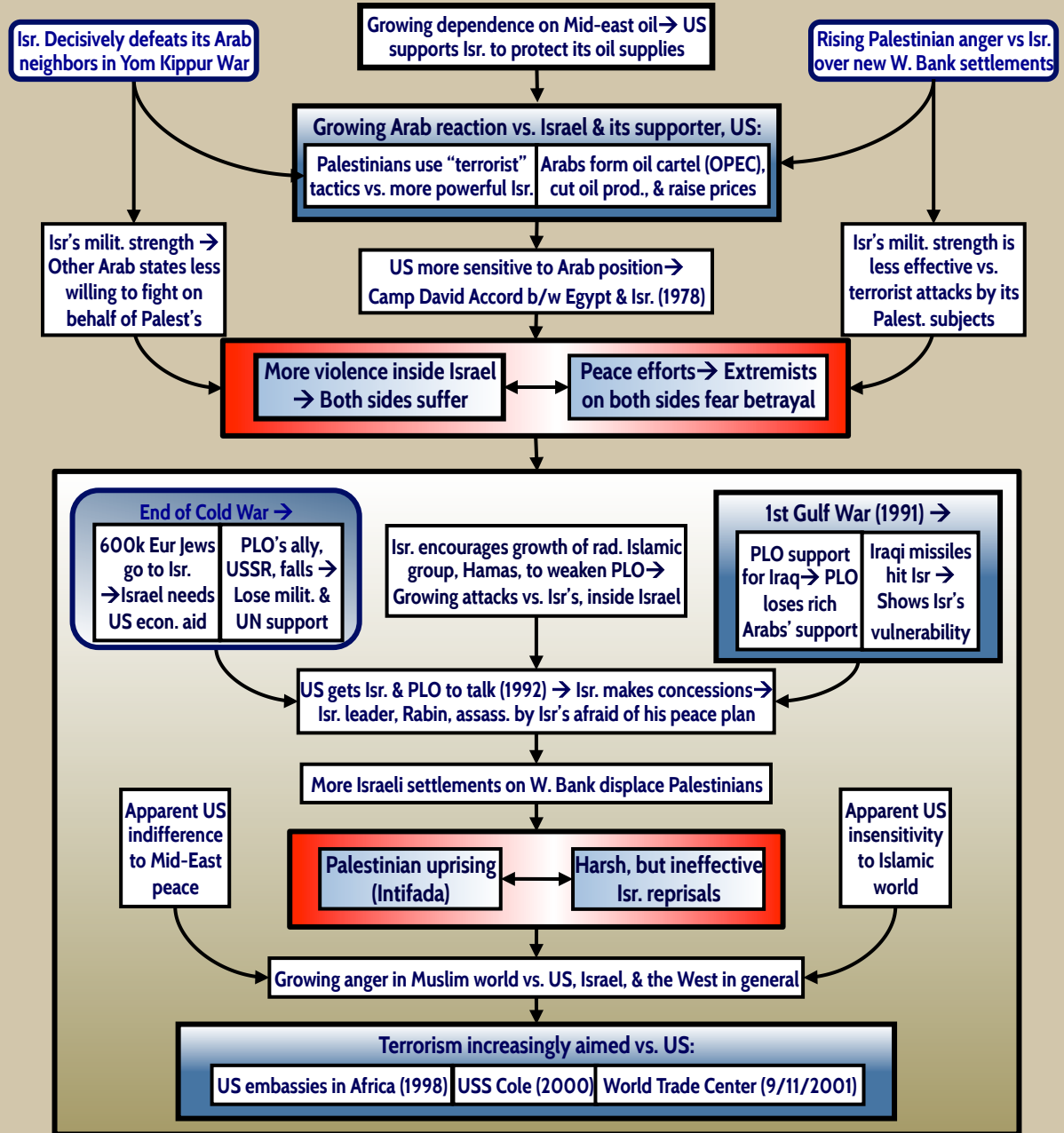
Kent State

1972 Microchip All in the Family

Title IX Ms Magazine

Detente Nixon goes to China

17.10 ISRAEL & THE ARABS (1973-2001)



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam Beatlemania

Dylan goes electric Malcolm X killed Mod fashions

1966 Counter culture

1966 Watts Riots Mao's Cult. Rev.

1967 6-day War Sgt. Pepper

1968 Tet Offensive MLK killed Black Power

"Prague Spring" RFK killed Women's Lib. protest at Miss Am. pageant

1969 Genocide in Biafra Democr. Convention

Woodstock Stonewall riots

1970 MIRVs Apollo XI Cuyahoga R. Fire

1st Earth Day No fault divorce

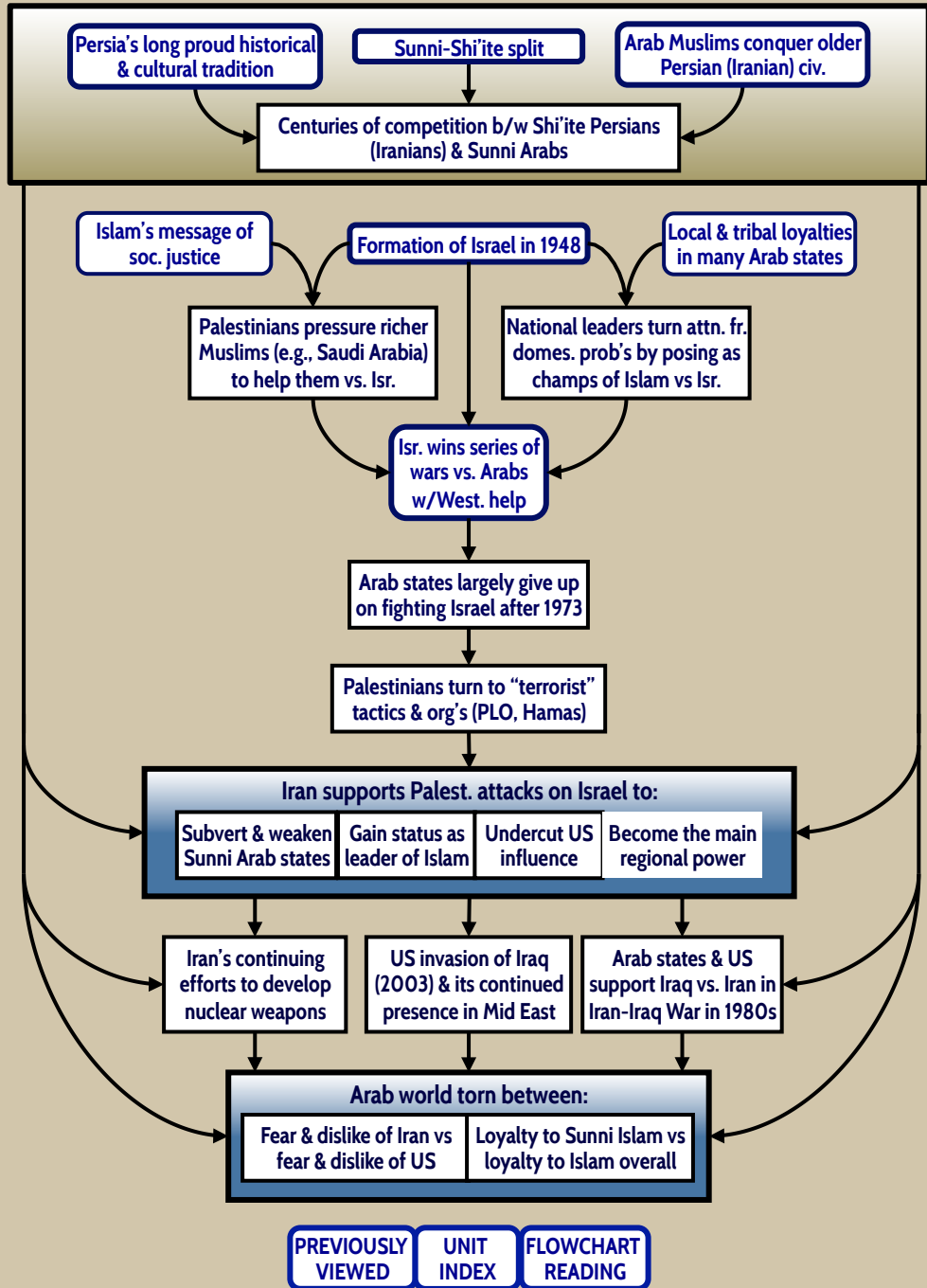
1971 Kent State PLO plane hijackings

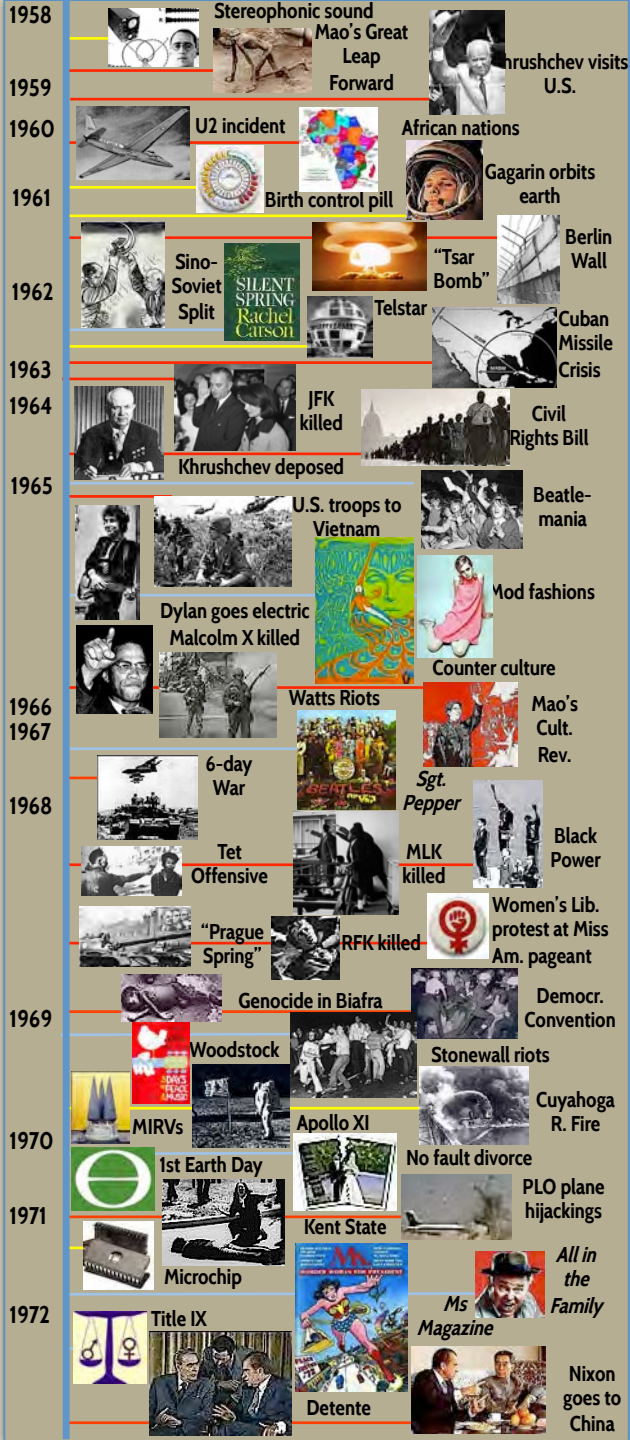
Microchip All in the Family

1972 Title IX Ms Magazine

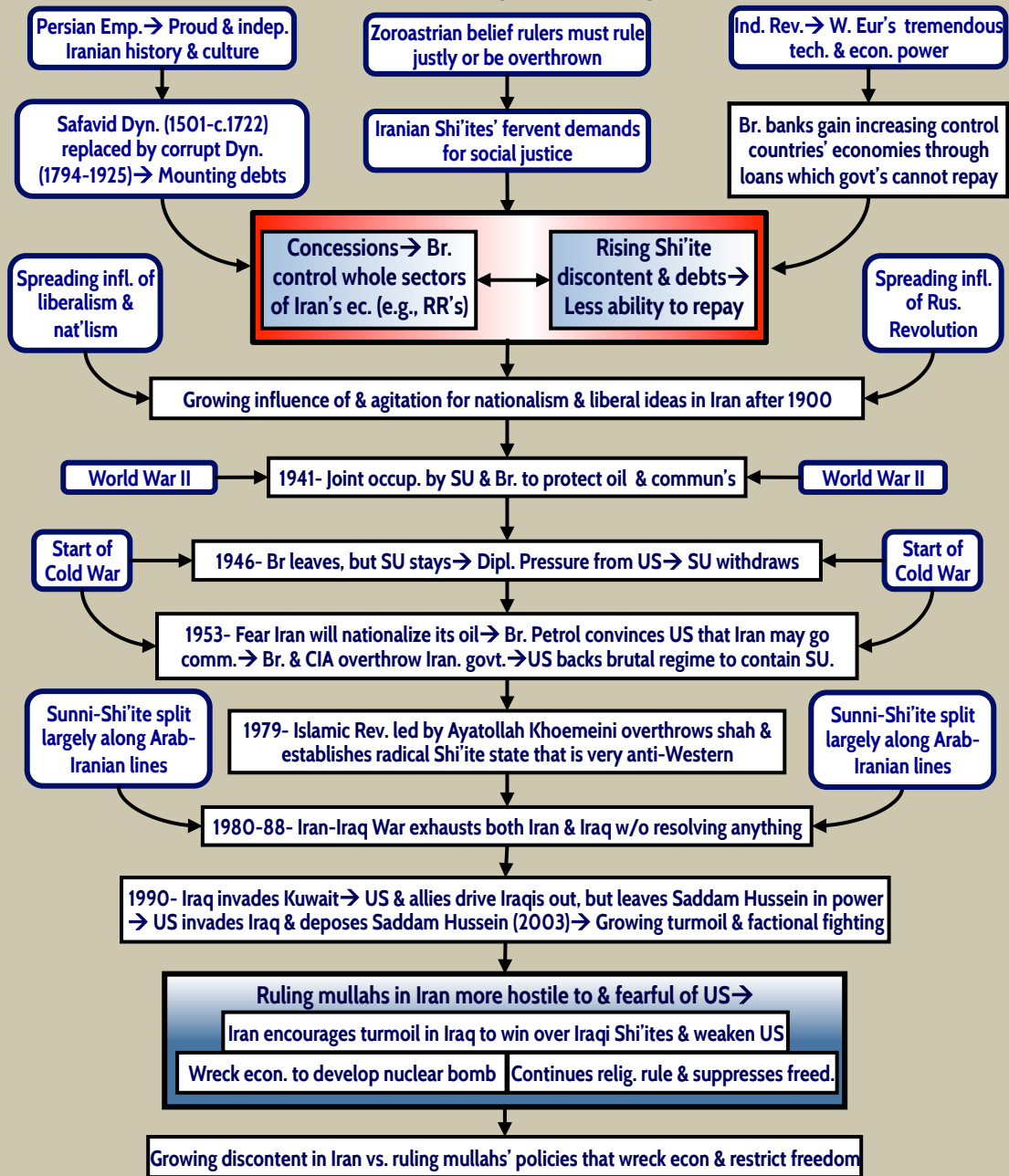
Detente Nixon goes to China

17.11 COMPETING CROSSCURRENTS IN THE MUSLIM WORLD





17.12 IRAN (1872-2009)



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

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"Prague Spring" RFK killed

1969 Genocide in Biafra Democr. Convention

Woodstock Stonewall riots

1970 MIRVs Apollo XI Cuyahoga R. Fire

1st Earth Day No fault divorce

1971 PLO plane hijackings

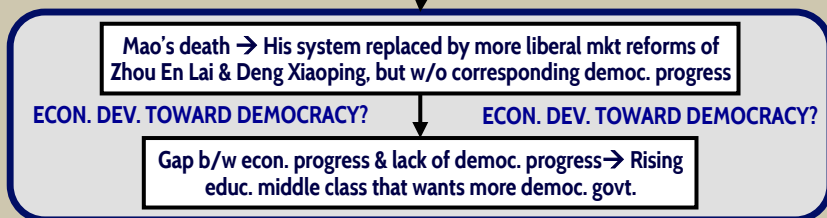
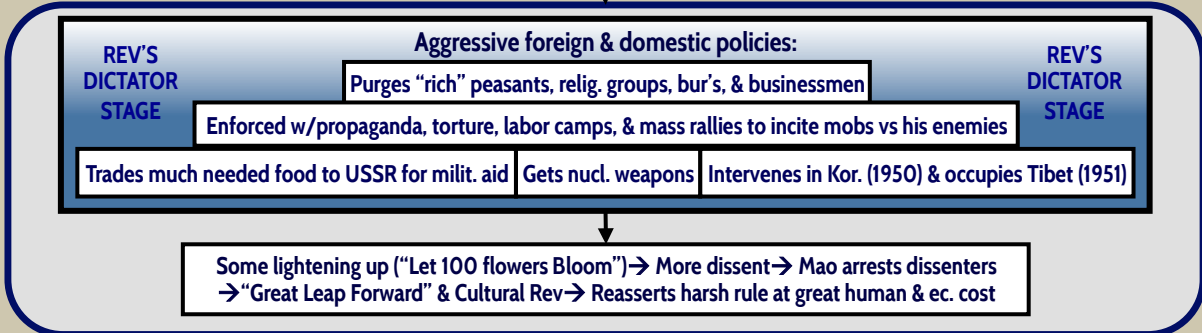
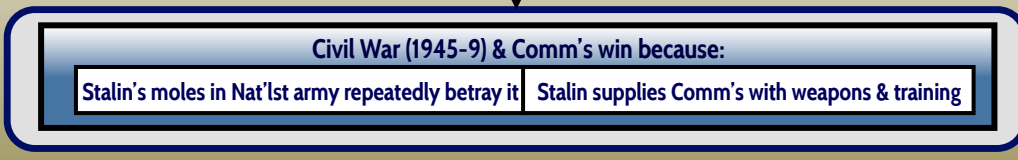
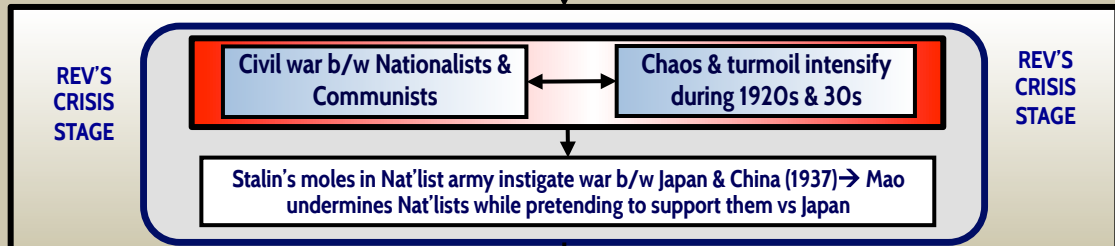
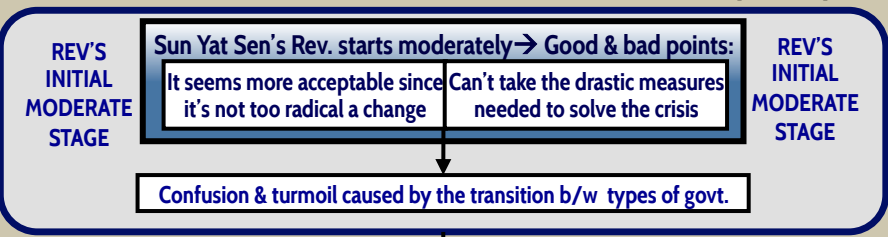
Kent State

Microchip

1972 Title IX Ms Magazine All in the Family

Detente Nixon goes to China

17.13 THE COURSE OF THE CHINESE REVOLUTION (1911-?)



1958 Stereophonic sound Mao's Great Leap Forward Khrushchev visits U.S.

1959 U2 incident African nations

1960 Birth control pill Gagarin orbits earth

1961 Sino-Soviet Split "Tsar Bomb" Berlin Wall

1962 Telstar Cuban Missile Crisis

1963 JFK killed Civil Rights Bill

1964 Khrushchev deposed

1965 U.S. troops to Vietnam Beatlemania

Dylan goes electric Malcolm X killed Mod fashions

1966 Counter culture

1967 Watts Riots Mao's Cult. Rev.

1968 6-day War Sgt. Pepper Black Power

Tet Offensive MLK killed

"Prague Spring" RFK killed Women's Lib. protest at Miss Am. pageant

1969 Genocide in Biafra Democr. Convention

Woodstock Stonewall riots

1970 MIRVs Apollo XI Cuyahoga R. Fire

1st Earth Day No fault divorce

1971 Kent State PLO plane hijackings

Microchip All in the Family

1972 Title IX Ms Magazine

Detente Nixon goes to China

17.13A MAO ZEDONG AND CHINA (1937-76)

Civil war b/w Nationalists & Communists is interrupted by World War II although Mao continues to attack & undermine Chinese Nationalists' efforts vs Japan

Lessons of Stalin's disastrous ind. & agr policies

After WWII, civil war resumes → Mao wins due to Stalin's support & moles who betray Nationalist forces

Korean War (1950) → US forces close to China

Aggressive foreign and domestic policies:

- Purges "rich" peasants, relig. groups, bur's, & businessmen
- Trades much needed food to USSR for milit. aid
- Gets nucl. weapons
- Intervenes in Korea (1950) & occupies Tibet (1951)
- Enforces terror through use of propaganda, psych. & physical torture, forced labor camps, & mass rallies to incite mobs vs his enemies

Mao, feeling strong & confident, launches "Let 100 Flowers Bloom" campaign to encourage more intellectual freedom → People criticize Mao → Mao purges them

Mao concerned about revolution's progress & his own power

- Tries to spread rev. to S. Am, Afr., S. Asia & → Little success
- "Great Leap Forward" (1958) to generate intense econ. dev.:**
 - Gather cooperatives into huge communes → Famine → 30-45 mill. die → Revert to smaller farms
 - Decentr. steel prod. in farms & back yards → Inferior steel due to poor tech. & few incentives
- Split w/SU over ideology & Mao's personality cult

Mao still concerned about his power → Great Cultural Rev. vs. his enemies (1966-70)

- Reign of terror by youthful Red Guards who purge Mao's rivals along with millions of innocent people
- Red Guards damage China's ind's, agr, & educ. → Mao uses Army to rein in Red Gd's & restore order

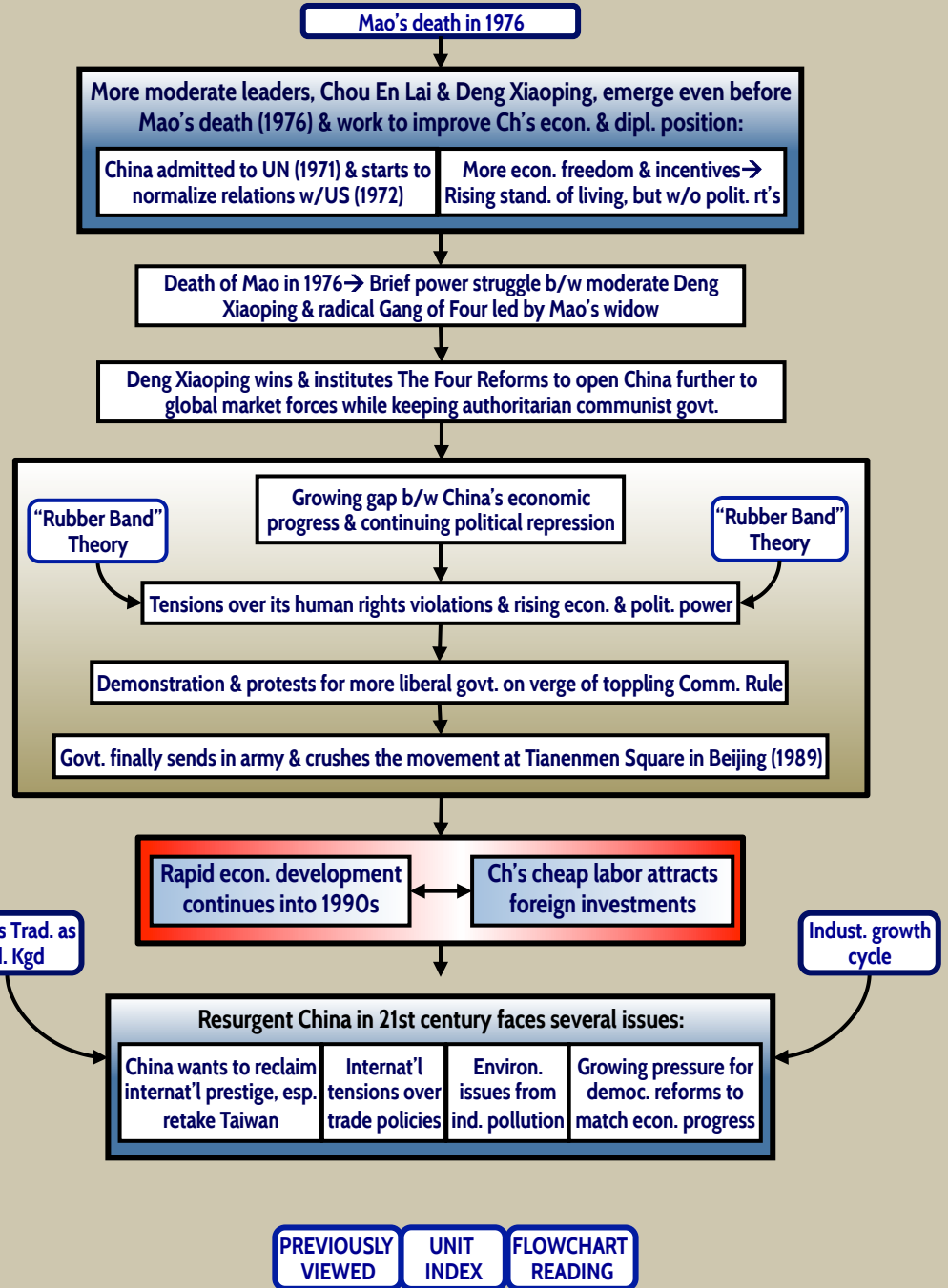
Chinese people continue to suffer in Mao's later years:

- To increase his own power Mao continues ruinous policies
- Mao's reckless policies nearly → War w/USSR
- Mao normalizes relations w/US in vain hope of getting milit. aid

Mao's death (1976) → More moderate policies

1973	CIA coup in Chile	Yom Kippur War -> Oil embargo	US pull out of Vietnam
1974	1st Cell phone	Watergate -> Nixon resigns	Roe v. Wade
1975	Apollo-Soyuz mission	Fall of Saigon	"Killing Fields" in Cambodia
1976	Mao dies	Helsinki Accord	Metric Conversion Act
1978	Space Invaders	Camp David Accord	Deng Xiaoping's reforms
1979	Cassette Walkman	Hip Hop	Fighting b/w Viet. & China
1980	Iranian Rev.	USSR invades Afghanistan	
1981	AIDS epidemic	Iran-Iraq War	
1982	1st woman on Supr. Ct.	Falklands War	
1983	Compact Disc	Apple Macintosh	
1984	Reagan proposes SDI	Hole in the Ozone Layer Discovered	
1985	Gorbachev	Chernobyl meltdown	
1986	Iran-Contra Scandal	Intifada uprising	
1987	INF Treaty	1st genetically eng. animal patented	
1988	Prozac	Tiananmen Square	
1989	Warsaw Pact collapses	Gulf War	
1990	USSR collapses	Internet	
1991			

17.13B CHINA SINCE THE CULTURAL REVOLUTION (1971-2000)



1973 CIA coup in Chile
Yom Kippur War -> Oil embargo
US pulls out of Vietnam

1974 1st Cell phone
Watergate -> Nixon resigns
Roe v. Wade
Pant suits

1975 Apollo-Soyuz mission
"Killing Fields" in Cambodia
Fall of Saigon
Helsinki Accord
Metric Conversion Act

1976 Mao dies
Format wars for Home VCR
Disco
Habitat for Humanity
Apple IIC

1978 Space Invaders
Camp David Accord
Deng Xiaoping's reforms

1979 Cassette Walkman
Hip Hop
Iranian Rev.
USSR invades Afghanistan
Fighting b/w Viet. & China

1980 AIDS epidemic
Iran-Iraq War

1981 1st woman on Supr. Ct.

1982 Falklands War

1983 Compact Disc
Apple Macintosh

1984 Reagan proposes SDI

1985 Gorbachev
Hole in the Ozone Layer Discovered

1986 Iran-Contra Scandal
Chernobyl meltdown

1987 INF Treaty
Intifada uprising

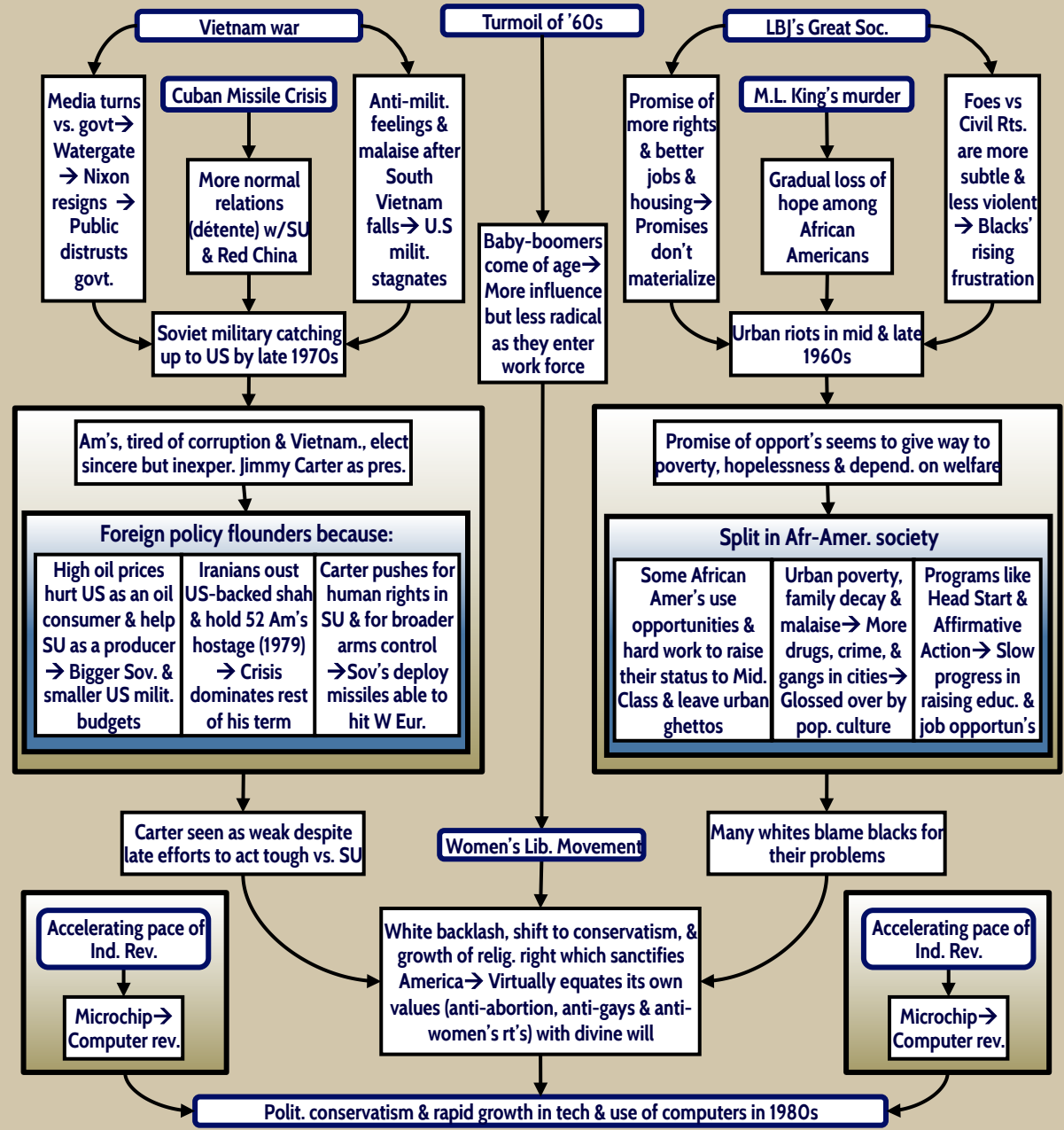
1988 Prozac
1st genetically eng. animal patented

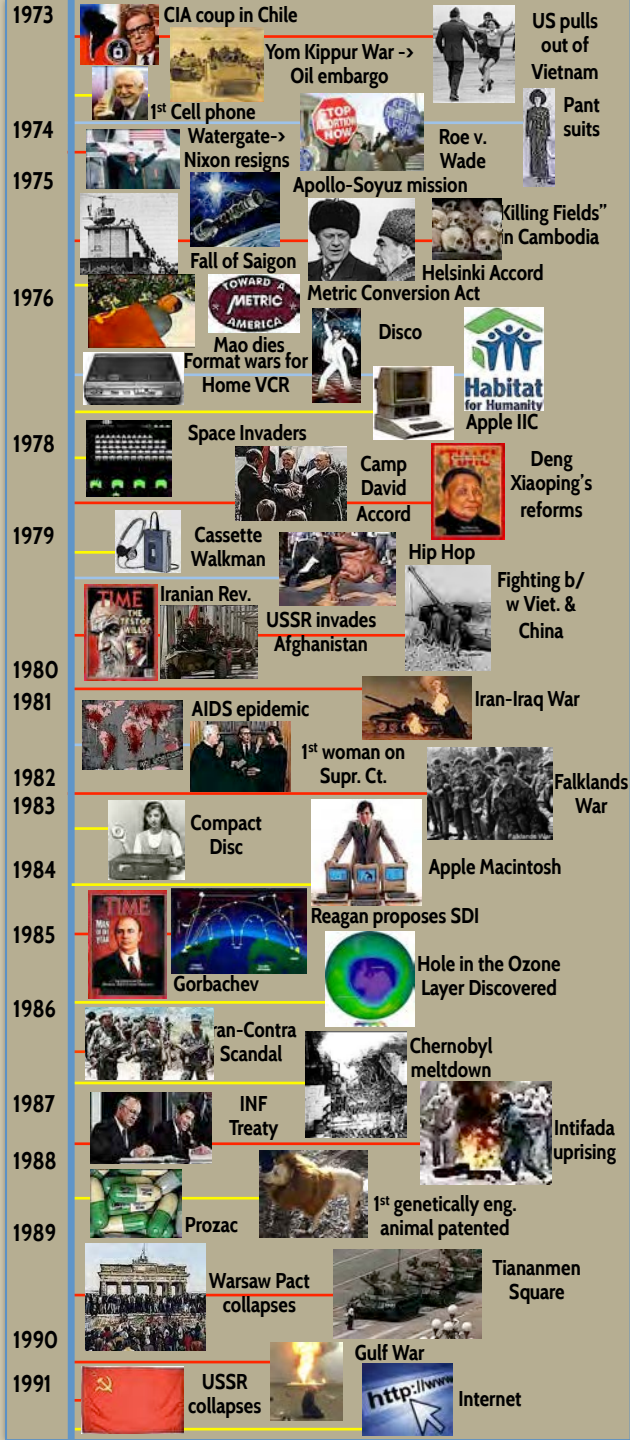
1989 Warsaw Pact collapses
Tianmen Square

1990 USSR collapses
Gulf War

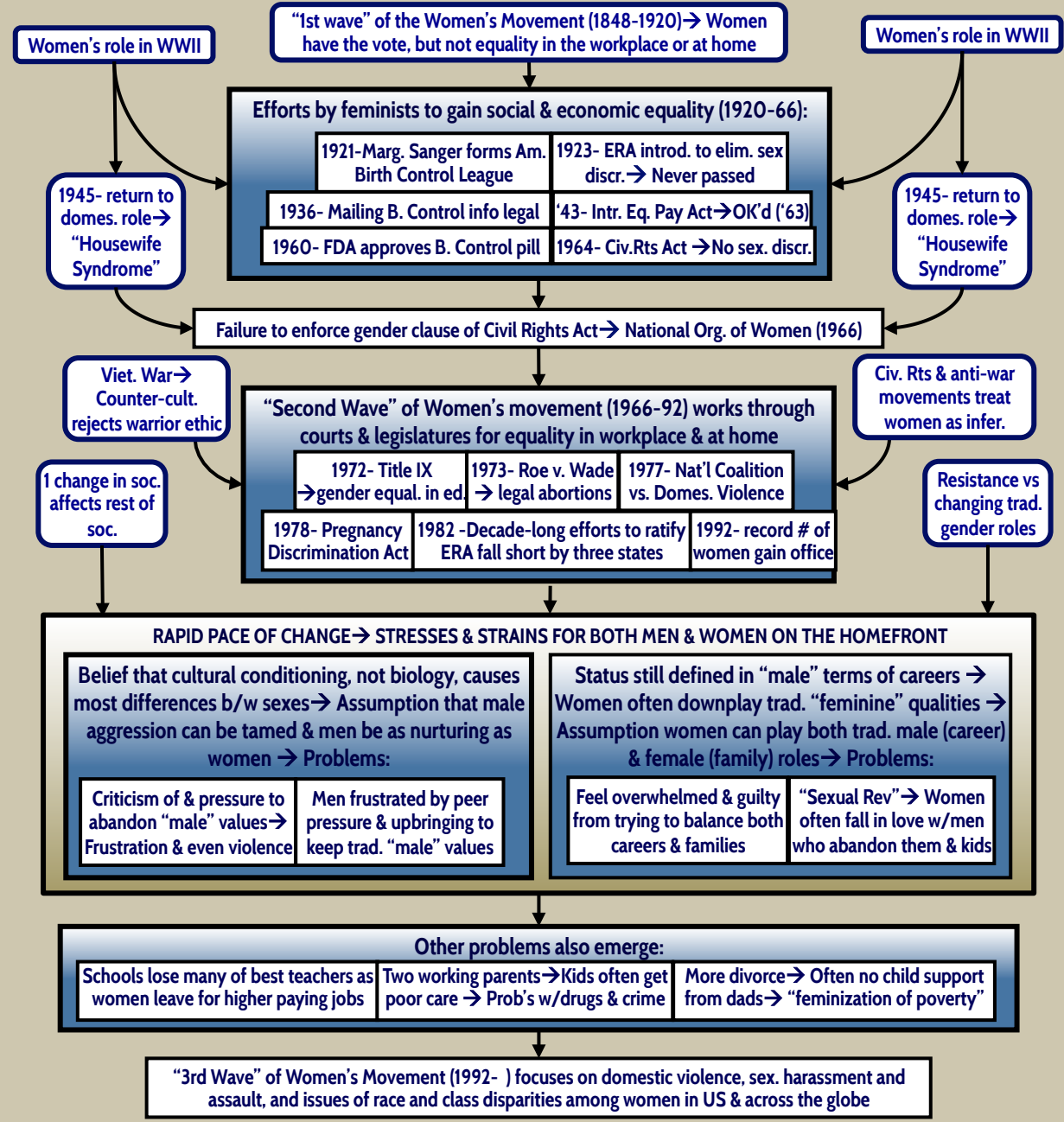
1991 Internet

17.14 DETENTE, YUPPIES, AND THE "ME GENERATION" THE 1970S



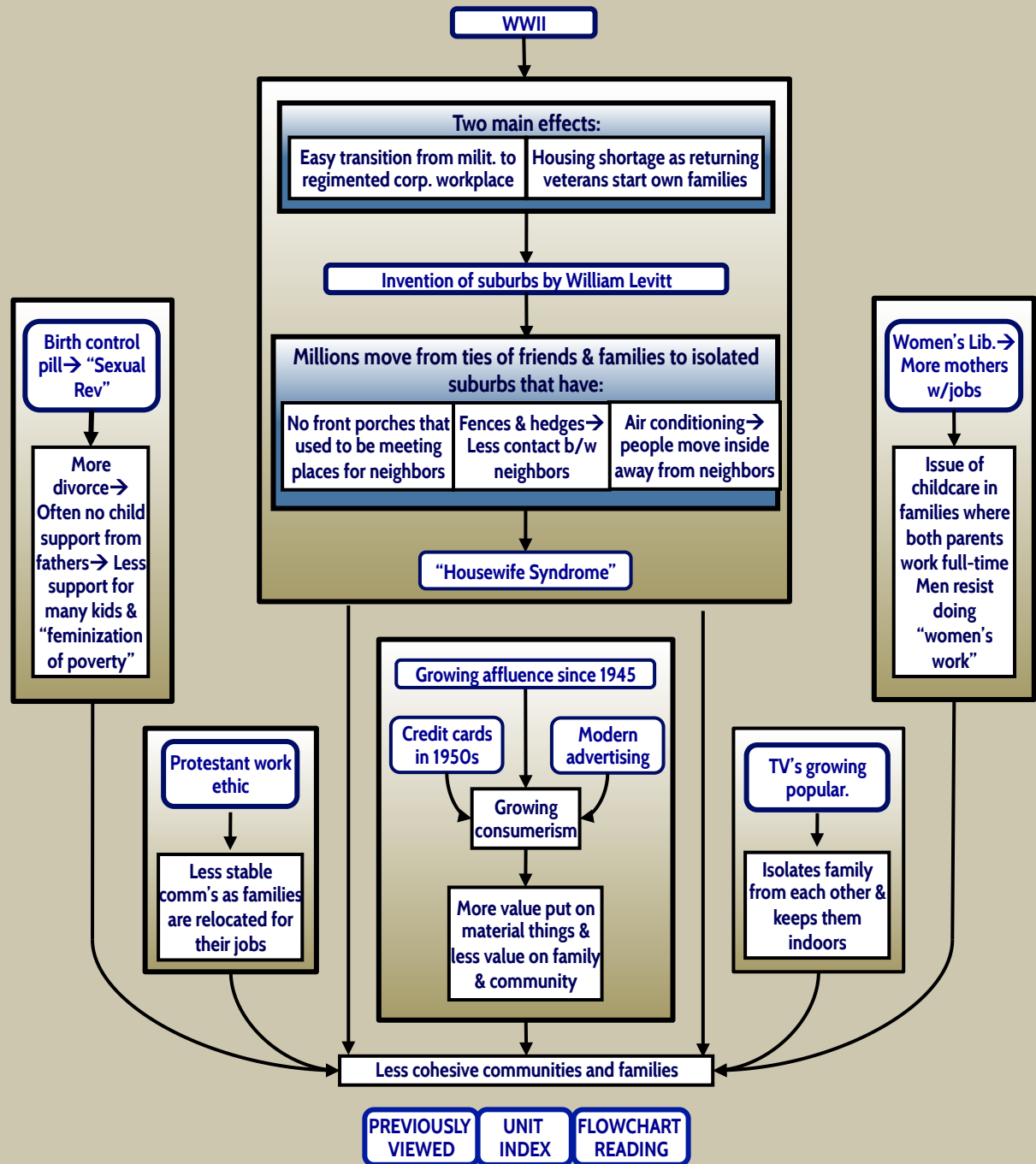


17.15 THE WOMEN'S MOVEMENT II (1920-92)



17.16 THE "DESOCIALIZATION" OF MODERN SOCIETY SINCE 1945

1973	CIA coup in Chile	Yom Kippur War -> Oil embargo	US pulls out of Vietnam
1974	1st Cell phone	Watergate -> Nixon resigns	Roe v. Wade
1975	Apollo-Soyuz mission	Fall of Saigon	"Killing Fields" in Cambodia
1976	Mao dies	Format wars for Home VCR	Helsinki Accord
1978	Space Invaders	Camp David Accord	Deng Xiaoping's reforms
1979	Cassette Walkman	Hip Hop	Fighting b/w Viet. & China
1980	Iranian Rev.	USSR invades Afghanistan	
1981	AIDS epidemic	Iran-Iraq War	
1982	1st woman on Supr. Ct.	Falklands War	
1983	Compact Disc	Apple Macintosh	
1984	Reagan proposes SDI	Gorbachev	Hole in the Ozone Layer Discovered
1985	an-Contra Scandal	Chernobyl meltdown	
1987	INF Treaty	Intifada uprising	
1988	Prozac	1st genetically eng. animal patented	
1989	Warsaw Pact collapses	Tiananmen Square	
1990	USSR collapses	Gulf War	
1991	Internet		



1973 CIA coup in Chile
Yom Kippur War -> Oil embargo
US pulls out of Vietnam

1974 1st Cell phone
Watergate -> Nixon resigns
Roe v. Wade
Pant suits

1975 Apollo-Soyuz mission
Killing Fields in Cambodia
Fall of Saigon
Helsinki Accord
Metric Conversion Act

1976 Mao dies
Format wars for Home VCR
Disco
Habitat for Humanity
Apple IIC

1978 Space Invaders
Camp David Accord
Deng Xiaoping's reforms

1979 Cassette Walkman
Hip Hop
Iranian Rev.
USSR invades Afghanistan
Fighting b/w Viet. & China

1980 AIDS epidemic
Iran-Iraq War

1981 1st woman on Supr. Ct.

1982 Compact Disc
Apple Macintosh
Falklands War

1983 Reagan proposes SDI
Hole in the Ozone Layer Discovered

1984 Gorbachev

1985 an-Contra Scandal
Chernobyl meltdown

1986 INF Treaty
Intifada uprising

1987 Prozac
1st genetically eng. animal patented

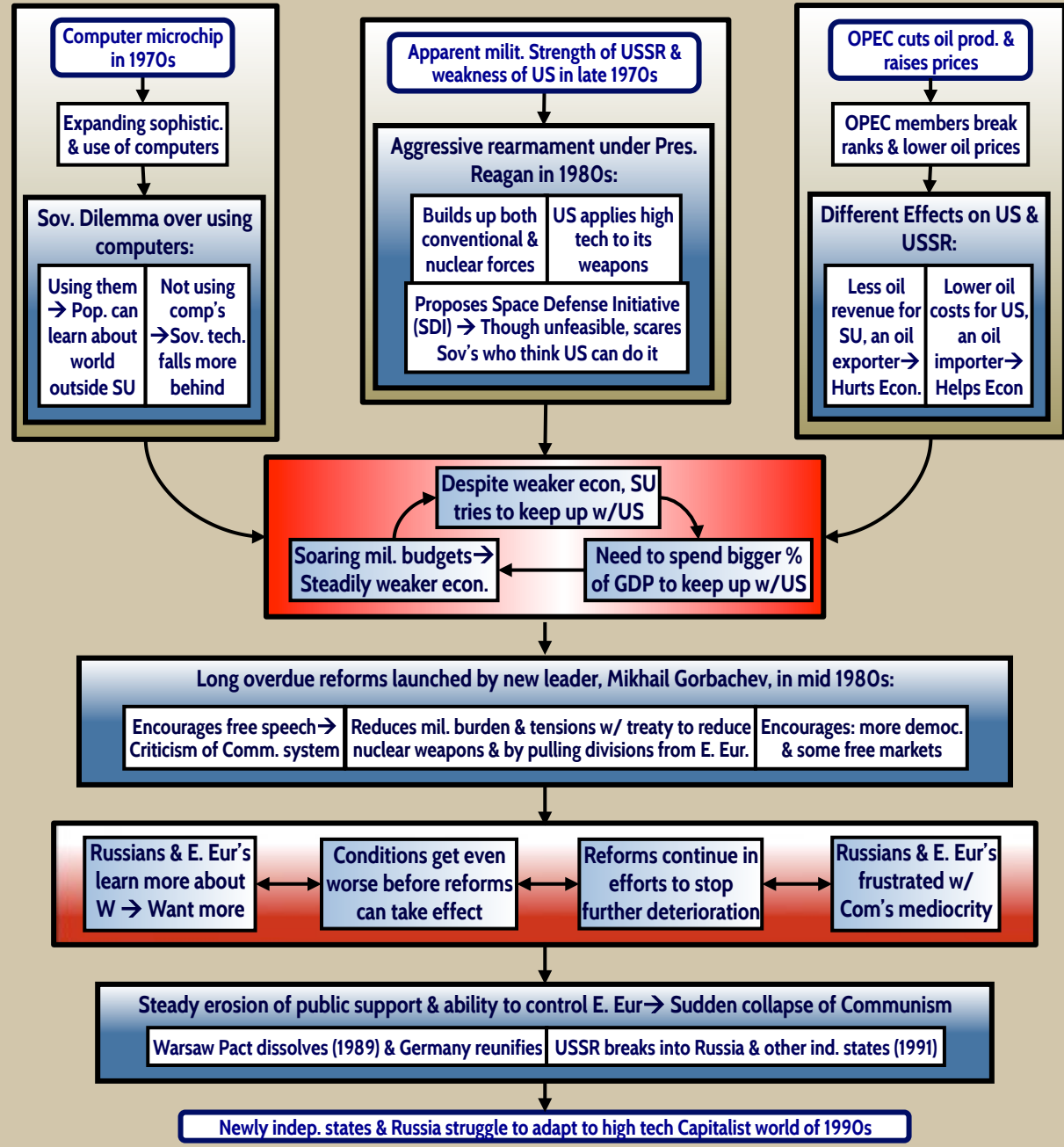
1988 Warsaw Pact collapses
Tiananmen Square

1989 USSR collapses
Gulf War
Internet

1990

1991

17.17 THE END OF THE COLD WAR (1981-91)



1973 CIA coup in Chile
Yom Kippur War -> Oil embargo
US pulls out of Vietnam
1st Cell phone
Watergate -> Nixon resigns
Roe v. Wade
Pant suits

1974
1975 Apollo-Soyuz mission
Killing Fields in Cambodia
Fall of Saigon
Helsinki Accord
Metric Conversion Act

1976 Mao dies
Format wars for Home VCR
Disco
Habitat for Humanity
Apple IIC

1978 Space Invaders
Camp David Accord
Deng Xiaoping's reforms

1979 Cassette Walkman
Hip Hop
Iranian Rev.
USSR invades Afghanistan
Fighting b/w Viet. & China

1980 AIDS epidemic
Iran-Iraq War

1981 1st woman on Supr. Ct.
Falklands War

1982 Compact Disc
Apple Macintosh

1983 Reagan proposes SDI
Gorbachev
Hole in the Ozone Layer Discovered

1984
an-Contra Scandal
Chernobyl meltdown

1985 INF Treaty
Intifada uprising

1986 Prozac
1st genetically eng. animal patented

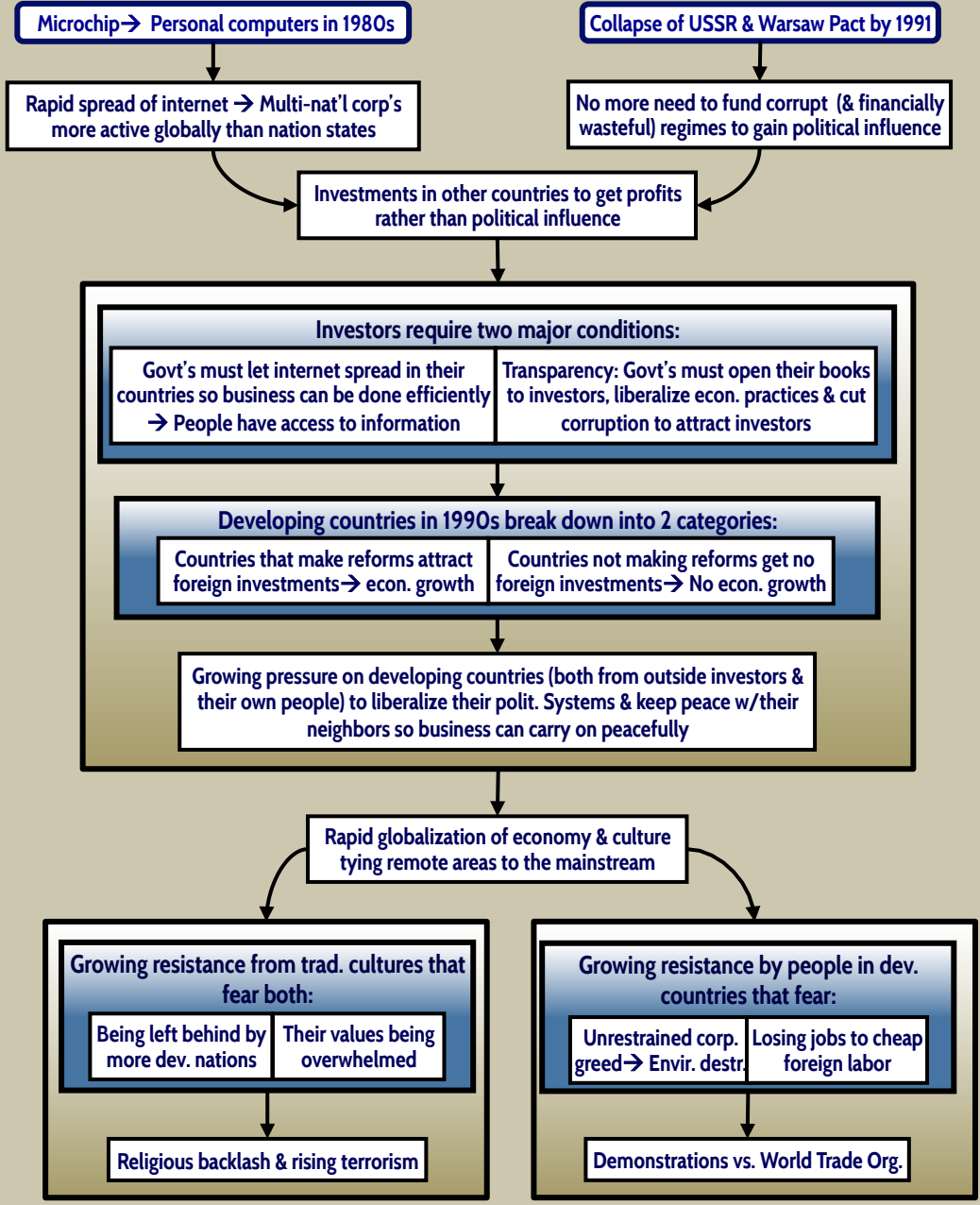
1987 Warsaw Pact collapses
Tiananmen Square

1988
Gulf War

1989 USSR collapses
Internet

1990
1991

17.18 RISING GLOBALIZATION IN 1990s



1973 CIA coup in Chile
Yom Kippur War -> Oil embargo
US pulls out of Vietnam

1974 1st Cell phone
Watergate -> Nixon resigns
Roe v. Wade
Pant suits

1975 Apollo-Soyuz mission
Killing Fields" in Cambodia

1976 Fall of Saigon
Helsinki Accord
Metric Conversion Act
Disco
Habitat for Humanity
Apple IIC

1978 Space Invaders
Camp David Accord
Deng Xiaoping's reforms

1979 Casette Walkman
Hip Hop
Iranian Rev.
USSR invades Afghanistan
Fighting b/w Viet. & China

1980 AIDS epidemic
Iran-Iraq War

1981 1st woman on Supr. Ct.

1982 Falklands War

1983 Compact Disc
Apple Macintosh

1984 Reagan proposes SDI
Gorbachev
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1985 an-Contra Scandal
Chernobyl meltdown

1986 INF Treaty
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1987 Prozac
1st genetically eng. animal patented

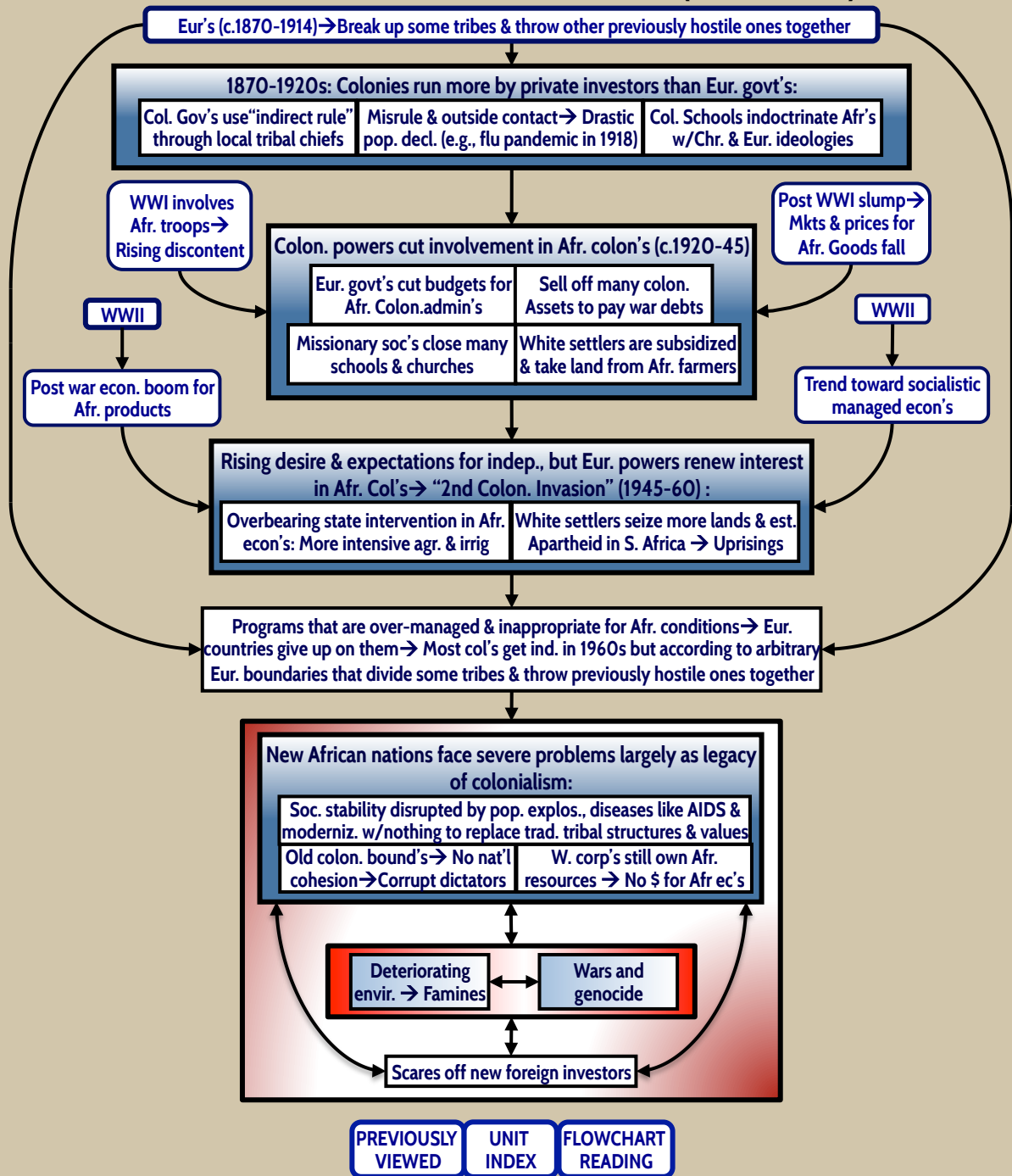
1988 Warsaw Pact collapses
Tiananmen Square

1989 Gulf War

1990 USSR collapses
Internet

1991

17.19 COLONIAL AND POST COLONIAL AFRICA (c.1870-2000)



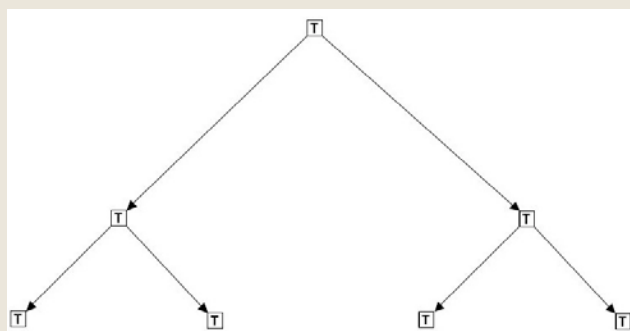
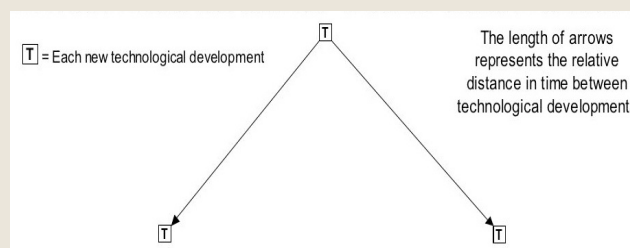
BIOLOGICAL, CULTURAL, AND TECHNOLOGICAL EVOLUTION IN HISTORY

Introduction. There are three types of evolution that have driven the development of human societies. The first of these is biological evolution where nature very slowly adapts us physically to our changing environment. Whether one believes in the theory of dynamic biological change and evolution or a more static creationist model of biology, one cannot deny we are biological beings with certain characteristics that largely distinguish us from other animals. There are five major characteristics that make humans unique. One is our binocular and color vision that gives us depth perception and a more detailed view of our surroundings respectively. This sends a lot of information to our brains for processing, making us very much a visually oriented species with 90% of the information we take in coming in through the eyes. Second we have upright posture, which frees our hands. This brings us to the third factor, our hands with opposable thumbs, which allow us to manipulate various objects and our environment. That in itself would be worth very little if it were not for the fourth characteristic, our brain that allows us to use our hands in intelligent and creative ways. The brain also makes possible the fifth characteristic, speech which allows us to share knowledge and ideas quickly so each generation does not have to rediscover that knowledge on its own, giving it time to discover and develop new knowledge and ideas.

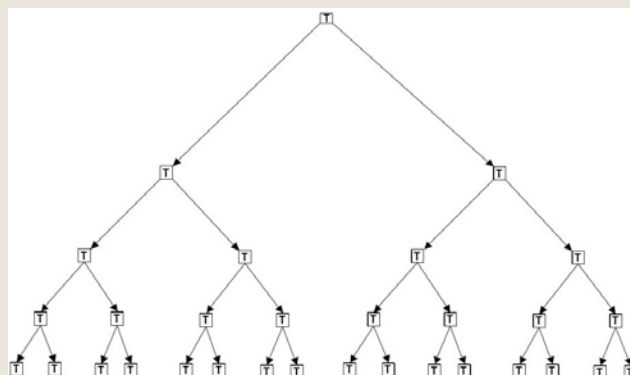
This unique combination of biological characteristics is the basis for two other types of evolution: cultural and technological. One can see cultural evolution as how people adapt their behavior to the environment. Since these are conscious rather than totally random, or non-existent, changes, they occur at a much faster pace than biological change. However, the force of tradition typically keeps people from rapidly changing long-standing cultural traditions that generally have served society well in the past. This is because people throughout most of history have barely survived with little or no surplus, giving them little or no margin for error if the new change

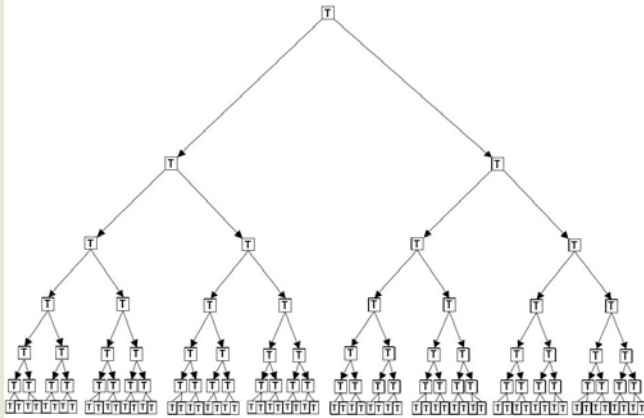
does not work, and making them reluctant to change cultural norms very rapidly.

Technological evolution enables people to adapt or change their environment to meet their needs. This is often something that can be done without *immediately* changing cultural norms, therefore meeting little resistance since it typically improves people's standard of living in the short run, while no one foresees its long-term effects. This makes people more likely to develop new inventions, further improving their standard of living, and so on:

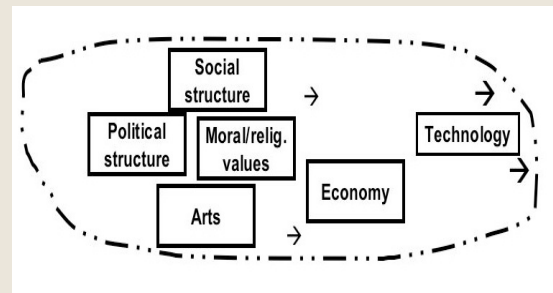
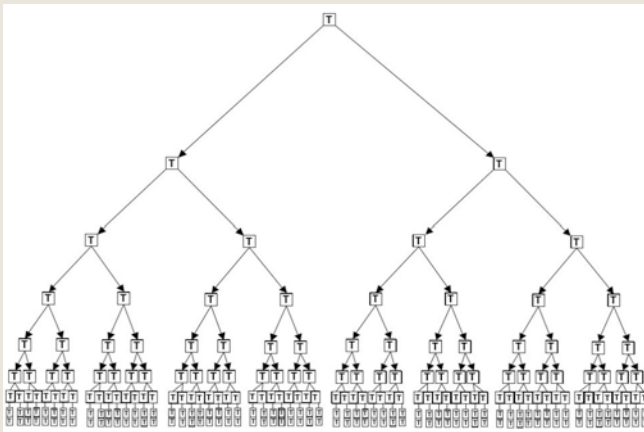
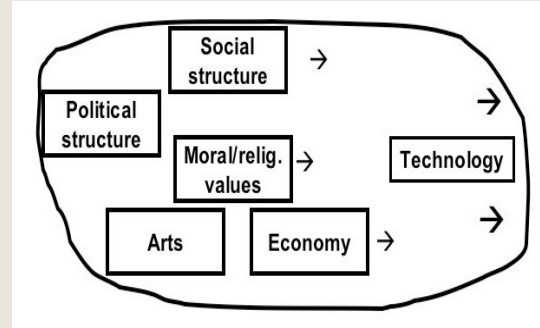


Also, since each new invention often inspires several new inventions, technological change happens at an ever-accelerating and exponential pace that today threatens to spin out of control:

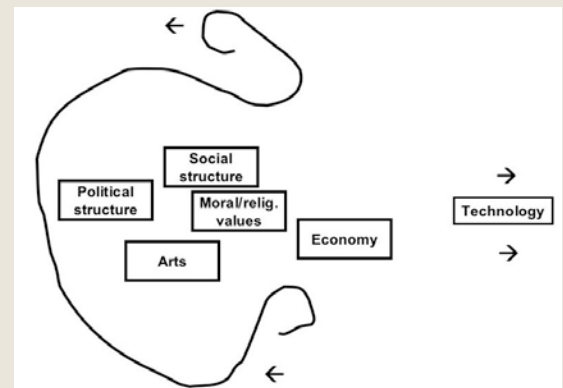




If one part changes faster than the others, they are pulled along, but start to lag:

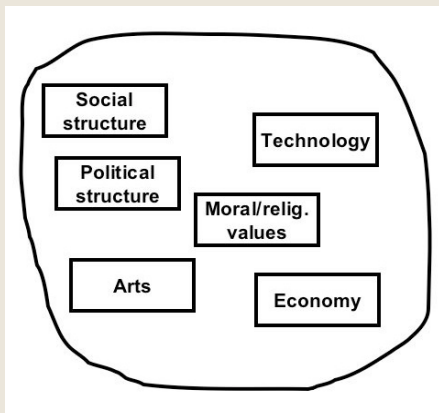


UNTIL... the rubber band snaps, signifying some sort of revolution or major breakdown



The “Rubber Band Theory”. One of the most important concepts to understand about history is how any particular event or development rarely has just one cause or just one result. Typically, if one part of a culture changes, it leads to changes in the other parts of the culture.

One can visualize all the parts of a culture (social structure, political structure, technology, the arts, religion, economy, military institutions, etc.) as being bound together by a rubber band:



An overview of human history. The combination of cultural and technological change along with the Rubber Band Theory helps explain the overall flow of history. The process driving this comes increasingly from technological change. This leads to surpluses that lead, among other things, to wars and conflict since people have typically fought over material wealth. These surpluses and the wars they cause lead to efforts to find new and better technologies. These create even more surpluses and wars, more new technologies, and so on. Since there are more technologies on which to base new ones, each time this feedback cycles around, technological growth accelerates in speed and intensity. This process has created four successive stages of development in human society, each of which feeds back into the cycle of technological growth, thus leading to the next stage.

First, through the vast majority of our species' existence our ancestors followed a hunting and gathering way of life, with men typically doing the hunting and women gathering fruits and grains while watching the children. Such societies were highly mobile as they pursued wild game. They had little or no surplus and therefore virtually no private property since, being mobile, they could carry very little with them. By the same token, they had to be highly cooperative and share freely, since the men as a group did not always bring home any meat and had to rely on what the women had gathered. All this made for a somewhat egalitarian society with little difference in status between men and women. At this early stage, with little previous technology to draw upon, new technologies developed slowly.

That changed somewhat with the next stage: the invention of agriculture (c.8000 B.C.E.). This forced people to settle down as they generated progressively larger surpluses. For the first time, people could amass private property, which led to different social classes distinguished by wealth. That in turn triggered conflict within the society and wars between societies. With survival based increasingly on brute strength, men emerged as the leaders and women's status started to drop.

Social stratification and conflict accelerated during the next stage, pre-industrial civilization, which started c.3000 B.C.E. Two new inventions especially distinguished this stage. First of all, metallurgy, provided new forms of wealth and

weapons with which to fight over that wealth. Writing helped people keep track of and amass larger amounts of wealth. More wealth led to wars of much greater intensity, frequency, and destructiveness. It also further reduced the status of women who had lost virtually all control over property by now.

The fourth stage, industrial society, started in Britain (c.1750) and has spread rapidly across the globe since then. This period has been especially marked by the rapid acceleration of technological growth. Unfortunately, this has been particularly true of military technology, which has increased the destructive power of warfare by several quantum leaps as seen in the two world wars that dominated the first half of the twentieth century. Ironically, the status of women has risen dramatically in industrial societies for two reasons. First, war as a viable option has been greatly reduced as its destructiveness has risen. Also, machines have reduced the need for or value of brute muscle, thus making women more competitive for jobs and opportunities, even in the military.

The challenges of modern society: the rubber bands stretched. Technology is a double-edged sword that has helped generate by far the highest standard of living and longest life expectancy in human existence. But the spiraling rate of technological growth over the past 200 years has created progressively greater stresses on the "rubber bands" holding human society together. This is because, compared to technological growth, all the other aspects of society (social structure, religion, morals, etc.) are much more dependent for their rates of change on cultural evolution which, as mentioned above, is very traditional and slow. This growing gap between the rates of technological change and that of other parts of society has created ever mounting stresses and strains, and continues to do so as technological growth continues to accelerate. These problems break down into three main categories.

First of all, most aspects of society, being more bounded by traditional rates of cultural change, cannot keep up with and adapt to the rate of technological growth. All too often, new technologies are introduced without studying or trying to anticipate their long-range effects. An example of this is the birth control pill introduced in

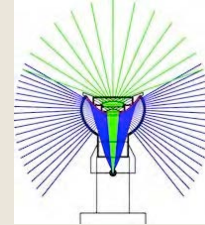
1960. The Pill did free women from being burdened with large numbers of children, which was the goal of its inventors. However, few, if any, people gave serious thought to how the Pill would change people's attitudes toward sex and marriage, or how that would affect the status of women and the raising of future generations of children.

A second problem lies in the unbelievable destructive power of modern weapons, in particular hydrogen bombs. Before the industrial revolution, the destructiveness of war was largely proportional to the number of men directly engaged in it, and the number of those men was largely determined by the relatively low productivity of the pre-industrial societies that had to support them over time. This put distinct limits on how long and destructive wars could be, thus giving societies time to recover. Modern warfare, however, is far less limited by such factors. A relatively few men can launch devastating destruction upon the planet totally out of proportion to their numbers. The technology of destruction has grown even faster than the technology of production, making total war as we understand it obsolete.

Finally, modern technology has transformed our economy from being mainly concerned with producing enough for everyone to being concerned with selling all it produces. This has spawned a pervasive culture of materialism and consumerism heavily influenced by advertising. Modern economies rely on more sales and consumption and sales to make the money to expand their production, which requires more consumption, and so on. Given the vastly larger population that is involved in this cycle and the ever growing levels of per capita consumption, there is no way the environment can support this level of growth.

Counter-balancing this fairly grim prospect for the future is the fact that we are an ingenious and adaptable species that could very well see itself through its technological adolescence. For example, during the Cold War the United States and Soviet Union did manage to avoid a catastrophic third world war. While we are not out of the woods yet, there is still hope while there are still some woods left for us.

How Other Animals See: Safety vs. 3D vision
Many animals, ranging from horses to bees, have their eyes positioned more to the sides of their heads. While this limits their depth perception, it does help them see if a predator, such as a lion or can of bug spray, is stalking them.



Comparative ranges of vision for a horse and a bee

Some fun facts about horse and bee vision:

- **Both a horse and bee have blind spots directly behind them, the bee's vision being blocked by its stinger.**
- **A horse can't see directly below its head, so that blind spot seems like a bottomless pit. It sees its shadow in a similar way, which is why horses shy away from their shadows.**
- **A horse must lower its head to see faraway objects.**
- **A horse must raise its head to see close objects.**
- **If an object is closer than 4 feet, the horse can't see it with its binocular vision.**
- **A grazing horse can see almost all the way around its body.**
- **A bee's spectral range of vision extends almost to ultraviolet light.**

The Prime Directive



One of the best expressions of the Rubber Band Theory was in the science fiction series *Star Trek*. Known as the Prime Directive, it stated that we should not interfere with cultures less

technologically developed than our own, because it would throw all other aspects of their cultures out of balance. In one episode, another civilization, somehow exposed to movies about the gangster culture of America in the 1920s, mimicked its superficial aspects in detail, with drastic impact on the rest of its culture.

Similarly, the sudden introduction of Western vaccines into topical and subtropical regions such as Africa may have temporarily relieved the misery caused by various tropical diseases. However, without the accompanying developments that the West experienced, such as gradually changing attitudes toward birth control, the result has been a massive population explosion that could lead to much more drastic results than the gradual effects of tropical diseases.

[Back to flowchart](#)

A POSSIBLE SCENARIO FOR HUMAN EVOLUTION

Introduction: Where to start? While human history is primarily concerned with cultural and technological evolution, we need to understand a possible scenario for the evolution of the biological characteristics that have served as the basis for the human species' other advances. Maybe a good starting point would be some 75,000,000 years ago. This is a mere drop in the bucket of time, but we have a long way to go before reaching anything closely resembling humans. We pick up our story with the lowly tree shrew.

The tree shrew, which appears quite similar to a mouse, hardly looks like anything we would like to call our ancestor. Yet scientists think this little creature was our connecting link with the lower forms of mammals. Converting this animal into a human would tax the skills of the most imaginative artist. It lacked binocular and color vision, upright posture, hands with opposable thumbs, a larger better-developed brain, and speech. In other words, it had none of the five characteristics that distinguish humans as a species. It also had to lose its tail, fur, and long snout.

The first critical step was moving into the trees away from intense competition on the ground. Life in the trees was more three-dimensional, involving accurately judging distances from branch to branch or else taking some nasty falls. This helped the development of binocular vision. Life in the trees also required hanging on to things to keep from falling. As a result, a primitive grasping hand started to evolve. Also, the more three-dimensional world of the trees required more awareness of things in *all* directions. This stimulated brain size and development.

Some 25,000,000 years later some tree shrews have evolved into the *prosimians*. These included the tarsier and ring-tailed lemur, which are often seen at the zoo and mistaken for monkeys. The prosimians resembled humans much more than the tree shrew, having binocular vision, shorter snouts, hands of a sort, and bigger brains. However, they still lacked erect posture and speech, while their brains, hands, and eyes fell far short of human standards. Some 40,000,000 years ago monkeys evolved from the prosimians. Although showing no obvious new developments toward human characteristics, they were more intelligent than prosimians and had better developed hands and eyes.

Next, we come to the apes, our closest cousins. Apes practiced one activity, tree swinging, that helped lead to human evolution in several ways. First of all, since tree swinging put the ape in an upright position, its head had to switch its position in order to see where it was going. A quadrupedal (four-legged) animal's head connects to the spine at the back of the skull. If we were to stand a dog on its hind legs, its head's normal position would have it looking straight up. The same was true for the still quadrupedal ape when it started tree swinging, making it more prone to crash into trees. Therefore, the ape's normal head position moved to connect to the spine at the base of the skull in order to adapt to this new tree swinging posture. This also paved the way for the later adaptation of erect posture that would free the hands for tool use. Speaking of the hands, tree swinging also led to more use and development of the hands giving apes better hand dexterity. The fairly rapid speeds at which apes swung also meant a lot of things came at them quickly and forced them to react quickly, thus leading to further brain development.

If apes had so much going for them, why did they not all evolve into humans? In general, one can say that evolution and natural selection are conservative and do not favor changes unless forced to by circumstances. This was especially the case with chimps, who had an easy niche in nature and felt no need to evolve. It was also true of gorillas whose great size let them stay pretty much the same. Timing was also important. Gibbons and orangutans were swinging in the trees for so long that their arms became over specialized for tree swinging and could not adapt well to life on the ground where our ancestors evolved. On the other hand, baboons came out of the trees too early and had not swung long enough to develop their upright posture. Thus they remained quadrupedal.

Out of the trees. Still, some three to five million years ago some apes did emerge from the trees into the African Savannah (grassland), and the question once again is *why*? The most likely answer is for food, and this is supported by the most plentiful and durable evidence we have from then: their teeth and jawbones. About this time their molars and jawbones got much bigger, suggesting they were eating lots of seeds and grains, which required massive jaws and molars to grind them up. This also meant that the canine teeth, their main defensive weapon in the harsh and dangerous Savannah, got in the way of chewing. Choosing between defense and eating, nature decided eating was more important and the canines were lost.

This of course created the problem of defense against predators. The solution seems to have been some sort of weapon. It was certainly nothing more than a stick, bone, or rock, but it apparently was effective. If it had not been effective we would not be here to talk about it. The importance of all this is that for the first time in the history of life on the planet, an animal was using a form of technology to extend its power dramatically and increase its chances of survival. The dawn of humans, or more properly, hominids had arrived.

The term *hominids* refers to modern humans (i.e., ourselves), our most direct ancestors, and collateral branches of our family tree that came to a dead end cousins, such as the Neanderthals. The earliest of these hominids, known as Australopithecines, lived from one to five million years ago. They were somewhat human in that they had better developed eyes, posture, hands, and brains than the apes. However, scientists do not generally call them humans because their brains were still much smaller than ours (about 450cc compared to around 1400cc for modern man). Their hands also had little or no precision grip, and they probably could not speak. Many see Australopithecines as the missing link between apes and humans.

There were several varieties of Australopithecines. The earliest, *Australopithecus Afarensis*, provided us with one of the most amazing discoveries in archaeology: forty percent of one skeleton. That may not sound like much, but it was unheard of to find that much of such an old skeleton intact. The scientist who found it, Donald Johansen, was so struck by this find that he even gave it the name Lucy after the Beatles song "Lucy in the Sky with Diamonds."

Australopithecus Afarensis was the likely ancestor of two other branches of Australopithecines. One branch, the larger in size, was vegetarian. The other branch ate both meat and plants. The importance of this is that hunting for meat required more inventiveness than did collecting vegetation. As a result, the meat eaters developed tools (possibly including containers for better gathering) and weapons much more than the vegetarians did.

Eventually the meat eating Australopithecines evolved into what many scientists call the first true humans, *Homo Habilis* ("handy man") with a brain capacity of 650cc. They used and made very crude tools, although they still could not speak. For that reason, other scientists reserve the honor of the first

humans for people known as *Homo Erectus* who had a brain capacity of some 750cc., which gave them the ability to speak.

Technological and cultural developments since the Australopithecines. A good deal of controversy surrounds the evolution of humans and their family tree. However, our evolution over the last million years has revolved increasingly around our technological and cultural innovations rather than biological changes. This is largely because on the one hand, biological changes are purely random, thus making evolution quite slow. However, technological and cultural changes are the products of more conscious and focused efforts to solve problems or create something. Therefore, such innovations happen at a much faster pace and accelerate the pace of change since they build upon previous efforts.

There were two main types of technological development our prehistoric ancestors came up with early on: flint tools and fire. Flint is unique among rocks because, when hit in the right way, it shatters, leaving very thin and razor-sharp pieces that can be worked into blades. Over time, as people spread to areas with little available flint or used up once plentiful supplies, they had to make more efficient use of this precious resource. At first, people were somewhat wasteful of it, maybe making only one hand ax out of a block of flint. It is estimated they got only 2-8 inches of blade for every pound of flint they used. Early Ice Age peoples came up with a method of knocking chips off of a piece of flint and using each chip for an ax or spearhead. As a result, they were able to get up to forty inches of blade per pound of flint. Their descendants would further refine this to get forty feet of blade per pound of flint.

Fire. Of all the things that our ancestors invented or mastered to protect themselves from the harshness of the physical environment, none was more important than fire. As the ancient Greek playwright Aeschylus wrote, it was the "brightness of fire that devises all" To the Greeks, it was the source of their crafts and civilization itself. It was what distinguished humans from the rest of the animal kingdom and gave them so much power; too much power as far as Zeus, king of the Greek gods was concerned.

The first people who mastered fire could use it, but probably not make it. As a result, they depended on natural sources such as volcanoes or forest fires caused by lightning for their fire. Considering

animals' natural fear of fire, we must admire the courage of that first individual who dared to pick up a burning ember and take it home. Once our ancestors had harnessed fire and found a way to keep it burning, they discovered some important uses for it.

The first use was probably for hunting and defense against wild animals, since it was obvious that animals feared fire. A common hunting technique would be to start a brush fire and use it to drive game toward other hunters or over a cliff. The value of fire for light and warmth soon became apparent, especially after our ancestors migrated out of Africa into the cooler climates of Europe and Asia. Fire could also harden sharpened sticks into better weapons. Finally, fire was useful for cooking food with several important results.

Cooked meat in particular held several advantages. The heat caused a chemical reaction that created proteins out of the amino acids in meat, thus making it more nutritious and leading to a healthier population. Fire also killed microbes in the meat, making it safer to eat. Finally, fire softened meat, making it possible for the very young and sick to chew it and thus be nourished. Altogether, cooking led to a healthier population that could grow and spread across the globe. We today are so concerned with overpopulation that we lose sight of how important and difficult it was to maintain a stable or growing population until very recently. Back then the average life expectancy was probably no more than twenty years, and half of all children died before the age of five. Thus extinction was a very real possibility. Cooking removed that possibility a bit.

The Ice Ages. Around 200,000 years ago, the planet started turning much colder. The cause of the ice ages is still unknown and subject of several theories including variations in the tilt of the earth's axis and its orbital path, continental drift, and clouds of cosmic dust blocking some of the sun's radiation. Whatever the cause or causes, glacial sheets of ice moved south, covering much of the Northern Hemisphere. Summertime temperatures in England probably reached no more than 50 degrees Fahrenheit. By the same token, winters were horribly cold.

Such harsh conditions forced important changes in our ancestors and the various other life forms then. Keep in mind that physical adaptations were not planned or conscious. Rather, natural selection just accelerated the process whereby genetic mutations

would be favored. What emerged was a whole new array of animals: giant cave bears, saber toothed cats, and woolly mammoths and rhinos to name a few. Our ancestors also went through some changes as well. Homo Erectus, as our prehistoric ancestors from then are called, had moved into cooler climates in search of game and living space. However, when the glaciers came, they were forced to adapt. What had been a fairly stagnant culture and species in stable conditions now changed at a relatively rapid rate. Even more rapid than their physical evolution was the evolution of their technology and culture.

Accelerated technological development. At this point, we see a cycle of technological development emerge to accelerate our evolution. Tool use stimulated brain development, which helped lead to more successful hunting and gathering. The improved diet and resulting brain development stimulated more tool development, better hunting, and so on. This basic feedback set in motion by hunting and tool use continued to repeat itself through the ages and is still at work today. Each new invention we come up with extends our power and also stimulates us to come up with more new inventions. This was a process that had started long before with the Australopithecines and continues now.

Speech. One of the effects of a bigger brain was the evolution of speech. This allowed both closer cooperation and more efficient sharing of information in such ventures as hunting. Therefore, each generation could easily learn the skills its ancestors had developed and perfected over the years instead of spending most of its time re-discovering them. This stimulated more brain development and ability to speak, encouraging more cooperation and sharing of knowledge, and so on. This feedback also fed back into and further accelerated the previous cycle of technological development, stimulating more sophisticated speech, etc.

However, there were severe limits to early humans' speech. For one thing, their pharynx, or voice box, did not drop enough to allow the full range of sounds we are accustomed to making now. As a result, their physical ability to speak was only about one-tenth of ours in terms of the sounds they could make and the speed at which they could make them. Their mental ability to speak was also severely limited. It takes a brain capacity of about 750cc to reach the ability to speak. Babies today reach that threshold between one and two years of age. Many

prehistoric humans may never have reached that capacity. Or if they did reach the threshold of speech, they probably reached it much later in life than children today do. Combining that with their short life spans, prehistoric peoples had little time to develop anything profound to say, greatly impeding cultural and technological progress for a million years or so.

Better hunting and gathering technology. The Ice Ages also reduced the amount of vegetation available for gathering, thus increasing our ancestors' reliance on hunting and develop more powerful weapons. When a better ability to speak combined with the process of each invention stimulating ideas for even more new inventions, a dramatic leap in technology and culture also took place. By 10,000 B.C.E., our ancestors, known as Cro Magnon but essentially Homo Sapiens Sapiens (i.e., ourselves) in a primitive setting, had learned to use other materials, notably wood, bone, and antler, in combination with flint, thus vastly expanding their range of tools and weapons compared to the crude and limited tool kit of the earliest hominids:

- **the use of bone, antler, and ivory** for making tools that flint was unsuited for;
- **sewing needles** that led to warmer, better fitting clothes;
- **the spear** which both extended the range and power of the hunter as a throwing weapon while maintaining a safe distance from dangerous animals when used as a hand held weapon;
- **barbed and grooved spearheads**, which, being more deadly, led to better hunting;
- **the bolo** for tripping up game;
- **the ability to make fire**, giving them a stable source of warmth;
- **grooved air channels** under the fire which led to hotter fires (which would lead to fired ceramics, which led to pottery and the kiln, and eventually to the furnace for smelting metals with all their contributions to civilization);
- **flint sickles**, with bone or wood handles that led to better gathering and a healthier population;
- **the burin**, the first tool for making other tools;
- **woven baskets**, which also led to better gathering and more food;
- **fishing** with spears, nets, and gorges (a type of hook), which led to a more stable food supply; and
- **crude shelters**, built at first as wind breaks in the entrances of caves, and later as free-standing structures

Looking at all these inventions, Cro Magnons seem to tower over their ancestors, much as we see ourselves towering above them. This is deceptive,

however, because we are building on what our ancestors built. Without the accomplishments of Cro Magnon and those who went before them, our own civilization could never have evolved.

All these new advances had profound implications for the future. For one thing, our ancestors' larger brains would help lead to the development of the human family. Secondly, increasingly efficient hunting, gathering, and fishing made possible a more settled lifestyle, giving people time and opportunities to notice certain things around them, in particular the way seeds grow into plants. This revelation was the basis for the next great step in human evolution, the food producing revolution, or agriculture. Finally, better brain development and technology inspired and made possible new activities and behaviors that make the Cro Magnons seem much more modern to us.

Our ancestors' behavior over the last 100,000 years or so also shows a much higher degree of intelligence than ever before. For example, they seem to have first realized the inevitability of death and created a religion to prepare for it. We have found people buried facing east and west, and also with the pollen of flowers in their graves. Our ancestors apparently worshipped the spirits of cave bears with whom they competed for living space. One Neanderthal cave has the skulls of some eighty bears arranged around it.

Prehistoric people also seem to have cared for their sick and infirm as evidenced by the skeleton of one man who lived to about forty years of age (old for back then) with the use of only one arm. They also apparently practiced female infanticide (killing female babies) as a form of population control. This is a comment not so much on our ancestors' brutal nature as on the brutal conditions they had to deal with in order to survive. Not practicing such a measure might have meant extinction for the whole tribe or species.

Cro Magnons seem more modern to us culturally as well, especially in their art. In southern France and Spain they left a number of cave paintings that are amazing for their artistic touch and sensitivity. These paintings depict the various animals people then hunted. Their function may have been some sort of sympathetic magic in which portraying a successful hunt would cause a successful hunt. Whatever their purpose, these paintings are striking in the way they depict these animals in motion. They also can make us feel much more akin to these people we call our ancestors.

All in the Family: Acting Like Baboons
Since hunting and gathering societies have largely vanished from the savannah, anthropologists study the lives of another closely related primate, baboons, to get clues about our own early social development.

The first thing to keep in mind about this environment is that it is a harsh and dangerous place to live. Therefore, since individual baboons, like humans, are not particularly large or fierce compared to predatory lions who hunt them for lunch, they must rely on the safety of numbers to survive, traveling in troupes of 12-15 individuals.

Of course, any other behaviors that reinforce a group mentality and action are also reinforced, such as grooming one another to tighten social bonds and reduce interpersonal tensions (below). More importantly, there is a strong mother-child bond. And, just as the child depends on the mother for protection, the mother depends on the father and other males for protection. The point here is that human mating habits, gender roles, and family structure are heavily influenced on a primal need to act as a social species.

When Did We Start Talking?

While we don't have actual specimens of hominid brains to tell us when they developed speech, there are some clues. One is the size of their skulls, although that tells us nothing about how their brains were organized. There is also the inside of those skulls. As our ancestors' brains developed and expanded, so did their skulls. Therefore, looking at the parts of the skull next to the parietal lobe, which controls speech as well as hand-eye coordination, paleontologists can get some idea of when speech developed. Another clue comes from the sophistication of the flint tools we find, since the center of the brain linked to hand-eye coordination is also located in the parietal lobe. The logic runs like this: the more sophisticated the flint tools, the more developed the

parietal lobe and with it the ability to speak.

These abilities are also linked to hemispheric brain development, as exhibited by most people being right-handed. Evidence of how we can tell when our ancestors became mostly right-handed lies in scrape marks on Neanderthal teeth. It seems they had a habit of stuffing as much meat in their mouths as possible and cutting off the rest with flint blades. Many Neanderthal teeth exhibit scrape marks from this practice, the vast majority being from upper left to lower right, the direction they would scrape their teeth if they were right-handed.

Our "Stupid" Ancestors

In 1908, the French paleontologist, Marcellin Boule, published an article ejecting Neanderthals from our family tree. He also commissioned an illustration of a Neanderthal, portraying it as dumb and brutish, being excessively hairy and having opposable toes. For decades, our impression of prehistoric ancestors was dominated by Boule's stereotype of Neanderthals, when, in fact, they had brains as large as ours (although maybe not as organized) and were highly intelligent.

Recent Neanderthal reconstructions indicate that, if dressed in a modern business suit, he would more or less fit into today's society.

How Long Did Our Ancestors Live?

Choose your poison. Calculating life expectancies for our ancestors is always tricky, although it's pretty safe to say they were significantly lower than now. We know that infant mortality was very high, with maybe one third to one half of all babies not surviving the first year and many young children also succumbing to "childhood" diseases. Similarly, the very act of childbirth may have killed one in ten women. (My own grandmother fell into that category in 1915.) Just think of the ripple effect. Any woman who has delivered a

child by caesarian very likely would not have survived to have more children. Those children would not have even existed to have children of their own, and so on.

Having no concept of germs and hygiene, the slightest infections might prove to be fatal as well. Eating spoiled meat (much more likely without refrigeration) could kill you. So could an untended broken limb that festered into gangrene. With no vaccines or antibiotics, all sorts of diseases we today only know as exotic names could decimate whole populations. (Anyone who has played the computer game *Oregon Trail* has probably died at least once just from scarlet fever.)

Then, of course there was the occasional wild animal that might eat you or the cliff without a guardrail or warning sign you might fall off to your doom while chasing after your dinner. Studies show that high-risk activities, such as hunting large dangerous animals like bears, led to injuries most closely resembling those of rodeo riders today, the largest percentage being injuries to the head and neck. This makes the advanced age of forty years for a one armed man taken care of by his comrades seem less remarkable, since he was probably spared such dangerous tasks as hunting bears or riding in rodeos.

So what were life expectancies? While the figure of thirty years gets thrown around a lot, there are two bits of evidence that make me think it could be significantly lower. Research at an Indian burial mound at Dixon Mounds, Illinois gives an average life expectancy of seventeen years. The same figure has been quoted for the working class in early industrial cities. However, these figures need to be qualified. For one thing, high rates of infant and child mortality bring down the average. Therefore, if you survived childhood, you could probably expect to live into your

thirties or forties. And there have always been those rare individuals lucky and tough enough to live into their eighties or nineties.

Social class would be another variable. For example, while the industrial working class referred to earlier had an average life expectancy of seventeen, the rich had an average of twice that. After all, they had more fresh meat and protein in their diets, and could afford to throw away spoiled food that the poor would still eat. They probably also had cleaner water, and could afford more medical care, for whatever that was worth before germ theory came along in the 1860s. When reading about kings and emperors, I always make a mental note of their ages when they died, and it typically seems to be somewhere in their fifties, thus ten to twenty years longer than their serfs out in the fields. While a statistically valid study might adjust these figures some, I feel confident that the story would remain the same: the rich lived longer than the poor.

Surprisingly, in addition to herbal cures, many of which did relieve at least the symptoms of a malady, there was even a prehistoric form of brain surgery known as trepanning, where the “surgeon” would drill a hole in the skull to clean head wounds. People apparently believed such treatment could also cure epilepsy migraines, and mental disorders. Pieces of the skull taken out would be worn as charms.

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A POSSIBLE SCENARIO FOR THE EVOLUTION OF THE HUMAN FAMILY AND GENDER ROLES

The dramatic physical changes our ancestors experienced also triggered equally significant social changes that led to the evolution of the most basic social unit of our species: the family. There were two likely lines of development converging to create the family.

First, as our ancestors moved out of the trees into the savannah in search of grains and grasses, they occasionally came across a carcass that they would pick clean for the meat. This casual scavenging gave them a taste for meat that developed into more intentional hunting. With the females tied down by noisy children, the males were generally the only ones free to hunt. Meanwhile the females and children would gather edible plants. Most likely, hunting was rarely successful, providing only about 10-20% of the food our ancestors ate, although the meat did provide valuable protein. The need to supplement the usually meager returns on their hunting may give us another clue as to why the males kept returning to the rest of the group. This pattern of food sharing created bonds vital to the evolution of the family.

Another development had to do with the evolution of a large brain and head which made the birthing process for humans more difficult. As a result, nature compensated by having human babies come to full term prematurely, making them one of the most helpless animals at birth in all of nature. This greatly increased and prolonged children's dependence on their mothers, who in turn needed protection and help getting food, especially in the harsh environment of the savannah.

The question is: why did males keep returning to the females and children? According to one theory, the answer lies in the evolution of year round mating in females to replace the seasonal estrus cycle that occurs in most mammals. The females who developed this pattern (by a purely random mutation) were better able to attract males to help them with food gathering and protection. As a result, more of their children survived to pass this characteristic on to future generations until it became the prevailing trait in humans.

Over time, these factors (year-round mating and food sharing) created permanent bonds that we have come to know as the family. Strengthening these

bonds were two other factors. One was the added companionship and security of family life. We know, for example, that our prehistoric ancestors would feed and care for crippled members of their group despite their inability to contribute significantly to everyone else's survival. Secondly, there was the emotional satisfaction that children gave their parents in terms of companionship, care in old age, and as an extension of themselves.

Gender differences in the species. For centuries there has been a controversy over the source of differences in male and female behavior and values within our species. Oftentimes described as the "Nature vs. Nurture" debate, it focuses on whether differences between men and women are the result of genetic or environmental factors. Coming largely from the Women's Movement in the 1970s, the pendulum swung heavily to the side of nurture, the assumption being that aggressive tendencies in boys were the result of cultural factors and upbringing. The hope and belief was that if boys could be raised in an environment that didn't stress aggression and violence, they would be no more aggressive than girls. Unfortunately, more recent research shows things are not quite that simple. While the environment is important in determining the way aggression is channeled, there are also inherent genetic factors influencing the equation. Testosterone levels in an individual are one factor. How men's and women's brains are structured is another. This may be the result of the hunting and gathering lifestyle our ancestors followed for the vast majority of our species' existence and the different roles men and women played in it.

For men, who did the hunting, stalking and waiting for game required two main mental abilities: staying focused on one goal for long periods of time and keeping quiet during that prolonged period of waiting. This discouraged verbal socializing that could scare off any game. Nature would favor males whose brains were adapted to these qualities by awarding them successful hunts while killing off the more chatty ones through unsuccessful hunting and starvation.

Women, who performed very different tasks, required very different qualities. While looking for and gathering any edible vegetation, they also had to keep track of several children and look out for predators. Unlike men, who had to stay quiet, those women who cooperated with one another (especially in looking out for one another's children) and communicated verbally would be much more successful than women who operated

quietly and independently of one another. For one thing, the sound of a number of women talking might be enough to scare off potential predators. Such cooperation and communication would also create strong social bonds between the women, providing much of the glue that has kept societies together down through the ages. And just as nature would favor men with brains adapted to focus quietly on one goal, it would favor women whose brains were more adapted to verbal socializing and keeping track of several things at once.

Indeed, recent research has shown that men and women's brains are largely structured in those ways. Women will typically use five times as many words in a situation as men will. Also, while men will listen with just one side of their brains, women will use both sides, indicating more of a talent for multi-tasking. However, there is evidence that men are at times more talkative than women, in the situations described above (women among Along these lines, it is important to note that these are general, not absolute, tendencies in men and women. Within each gender there is a wide range of differences between individuals, thus creating a large gray area that one certainly could not describe as absolutely male or female. Thus one should not use these general tendencies as supporting a "biology is destiny" argument for locking men and women into certain rigid roles. By the same token, these are tendencies we cannot afford to ignore in discussing issues of gender differences.

Nature vs. Nurture and Man vs. Pigeon

A good reference point from which to start a discussion on gender roles is the Taoist symbol for Yin and Yang (below). Yin (the dark field) represents stereotypical "female" qualities: shaded, cool, and passive. Yang (the white field) stands for stereotypical "male" qualities: sunlit, warm, and active.



However, the line separating the two is not a distinct straight line, but a curving one that makes the two seem to blend together. Also, there's a white dot in the dark field and a dark

one in the white field, indicating there's always a bit of yin in the yang and a bit of yang in the yin.

By the same token, when talking about men and women, we have to keep in mind that we are dealing at most with general trends instead of absolutes. On the hormonal level, all men have some of the female hormone, estrogen, and all women have some of the male hormone, testosterone. Thus a woman can be an aggressive athlete and still be "feminine" and a man can be nurturing toward children without losing his "masculinity".



Much of the debate throughout the centuries has been whether we are products of natural abilities we were born with or just products of our environment. Through most of history, the assumption was that men simply had abilities that were both different and superior to those of women.

However, starting in the late 1600s philosophers such as John Locke and Helvetius claimed we were "blank slates" at birth and therefore mainly products of our environment.

Playing off this idea, an Englishman, Jeremy Bentham, came up with a philosophy known as Utilitarianism, claiming that if we provide a perfect environment for people, it will create perfect humans. Thus Bentham advocated a wide range of reforms

affecting everything from postal services to prisons.

Bentham even claimed he could use calculus to quantify how much pleasure someone got from a particular experience.

However, in the 1800s experiments on peas by an Austrian monk, Gregor Mendel, led to the field of genetics, which swung the pendulum back toward the idea that everyone's own innate personalities and abilities are determined by our genes.

In the 20th century, the pendulum swung back again toward the "nurture" side of the argument. This was based largely on the work of B. F. Skinner who did experiments on rats and pigeons, using positive reinforcement to encourage them to learn various tasks such as finding their way through a maze at the end of which was a reward in the form of food.

(Note: the author once lost a game of tic-tac-toe to a pigeon trained in this manner. Not surprisingly, there is no love lost between the author and these creatures.)

Skinner's work especially resonated in the 1970s with advocates of the Women's Liberation Movement, since it seemed to minimize any innate differences between men and women. Therefore, much in the spirit of Jeremy Bentham's Utilitarianism, the idea emerged that if boys and girls were raised in a gender-neutral environment, boys would be less aggressive and violent and girls would be more assertive in traditional "male" environments, such as the classroom and workplace.

However, the pendulum has been swinging back toward the nature argument. Recent scientific research shows significant differences in men and women's brain structures. These differences affect such things as motor and spatial skills, how we communicate with each other, and the incidence of learning disabilities. Many of the differences stem from the introduction of large amounts of testosterone into a male fetus, which helps explain some statistical differences in brain function between the two gender-groups.

Therefore, I'm reminded of the story of a former student's cousin whose mother only let him play with non-aggressive and non-military toys. Then one day she came in to find he had torn off the heads of dolls to use as hand-grenades and was using the bodies as guns.

Wherever one stands on the nature vs. nurture issue, since World War II the sexes have moved closer to one another in a variety of ways such as unisex bathrooms and in clothing that is generally seen as appropriate for both men and women. However, the attitude toward gender-neutral childcare still has a political edge to it, with some people claiming it could undermine the moral fabric of our society.

For the time being, the jury is still out concerning where the balance between nature and nurture lies.

In the meantime, even if we men are pigs, at least we're not pigeons.

Housewife Syndrome



In the 1950s, as more and more Americans moved into their own houses in the suburbs, a new phenomenon emerged known as housewife syndrome: a feeling of despair among young housewives and mothers who found themselves isolated and trapped in their single family homes with the children while their husbands took the family cars to work. What so many women may have been missing for the first time was the social bonding and communal sharing of childcare that had made women's lives tolerable throughout history. In the 1970s, the Women's Liberation movement would help many women attempt to fill this void in other ways, especially with professional careers. Meanwhile, some stay-at-home mothers formed support groups where they could bring their children (who would be kept occupied by playing with each other) while socializing with each other, largely recreating the environment that had helped keep their ancestors sane.

Killer Pigeons as pigeon missiles

B.F. Skinner's work with pigeons took an unusual turn in the 1940s. During World War II missiles, such as the German V-2, could be programmed to hit stationary targets. However, finding and hitting moving targets, in particular battleships, was another matter. Building on his research with pigeons, B. F. Skinner pitched an idea called Project Orcon using trained pigeons to guide the missiles. The pigeons would be pre-trained to peck at pictures of the chosen target, getting a treat only when they hit the photograph directly. Eventually, they became so good at their job that they

could even follow a moving target, engaged in a feeding frenzy of pecking the whole time they could see it.

Being sufficiently trained, three pigeons would be stuffed into the nose of a rocket at 120° from one another to give a 360° view of their surroundings. A series of reflectors inside the nosecone gave the pigeons a view outside of the missile. The reflectors were hinged so that the pecking would alter their orientation and cause the missile to shift in the direction of the target. Skinner received \$25,000 for the experiment, which was initially successful. However, improved electronic guidance put an end to the project.

In the 1970s, the U.S. Coast Guard conducted a similar experiment, this time for search-and-rescue missions. Conditioned by stimulus-response training, whenever they saw the desired target pigeons would go into a feeding frenzy and peck at the screen, which had sensors that turned the helicopter in that direction. The pigeons' success rate was 93% compared to only 38% for humans, partly because they didn't get bored from hours of staring at the featureless vastness of the ocean. The project was abandoned in 1983, however, because it had the unfortunate side effect of causing helicopters to crash into one another.

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4. THE BIRTH OF AGRICULTURE (c.8000 B.C.E.)

"Cursed is the ground for your sake; in sorrow shall you eat of it all the days of your life. Thorns also and thistles shall it bring forth to you; and you shall eat the herb of the field. In the sweat of your face shall you eat bread till you return to the ground; for out of it were you taken; for dust you are, and unto dust you shall return." (Genesis)

Introduction. Some 10,000 years ago, only 5-10,000,000 people inhabited the planet, certainly no more. Our ancestors' technology had taken them a long way, but they still lived as part of nature, not in any way as its master. They did not realize it, but the last one per cent of our existence so far would see unbelievable changes sweep across the planet and change its face forever. Humanity stood on the verge of over-running the earth with vast numbers of its species. Supporting those vast numbers was possibly the greatest revolution in our history: agriculture, the ability for people to produce their own food supply. The agricultural revolution had two parts: the domestication of plants and the domestication of livestock.

Why Eurasia and Mesopotamia? Starting with the birth of agriculture most of history's major developments have taken place in the vast land mass known as Eurasia and extending across the Mediterranean and North Africa. Europeans who dominated the globe in the late 1800s and early 1900s claimed religious, cultural, and even biological superiority as the basis for their predominance. While such ideas hold little favor today, there still remains the question of why Asia and Europe have held central place in the history of civilization. Much of the answer probably rests in geographic and biological factors.

The underlying factor is that Eurasia lies along an East-West axis in mostly temperate zones. In contrast, Africa and the Americas are oriented from north to south and thus straddle a variety of climates. As a result, crops found in Eurasia are more adapted to the same diseases, climate, and seasonal variations in sunlight (which determine when plants germinate, flower, and bear fruit). Therefore, domesticated crops and intensive agriculture can spread more rapidly across Eurasia than they can across the vastly different climactic zones in Africa and the Americas. For example,

because of intervening tropical zones, the cultivation of corn in the Temperate Zone of Mexico in the northern hemisphere never spread to Peru in the southern hemisphere until after 1500 when Europeans conquered both regions. Similarly, crops adapted for temperate zones in northern parts of Africa did not reach the southern tip of Africa until Dutch settlers introduced them in the 1600s.

Of course, there are also topographical and even climactic barriers within Eurasia, such as the Tibetan Plateau, Himalayan Mountains, and Asian steppes isolating East Asia from the rest of Eurasia. Therefore, agriculture probably developed independently in China and spread from there to Southeast Asia, Korea, and Japan. However, despite topographical barriers, the similar climates of East Asia and the western half of Eurasia ultimately allowed crop sharing in both directions, thus helping both civilizations advance more quickly.

Why Mesopotamia? More specifically, it was Mesopotamia (modern Iraq) where agriculture first evolved in Eurasia and then spread westward across North Africa and Europe and eastward to the Indus River Valley. Environmental factors favored this specific region as the birthplace of agriculture. First of all, Mesopotamia, and the Middle East in general, have cool rainy winters and hot dry summers, encouraging plants, especially cereals, to develop large seeds for rapid growth in the limited growing season. This produces relatively small plants without woody stems, which, in turn leads to cereals with lots of large seeds (i.e., more food) that are easy to harvest (without woody stems).

Another factor is that Mesopotamia has many self-pollinating crops (six of them exclusive to that area) that can reproduce without pollination with other plants. The importance here is that recessive traits that are vital to farming but harmful to the plant in nature do not get bred out of the plant through cross-pollination. For example, along with the dominant trait for grains and pea pods to shatter in order to spread their seeds is a recessive trait for a few plants not to shatter. This made it easier for people to harvest them, plant more of them next season, and spread the varieties with the normally harmful tendency not to shatter.

Along with the spread of agriculture from Mesopotamia, other ideas and technologies could spread as well, leading to the relatively rapid

development and spread of civilization across Eurasia compared to other regions of the globe whose environments prevented or greatly slowed down such exchanges. And, of course, after the impetus started by Mesopotamia, the exchange of new ideas became two-way, further accelerating the rise and spread of civilization in Eurasia.

The invention of agriculture. In addition to factors unique to Mesopotamia, two other converging factors led to the domestication of plants. First, better hunting and gathering technology provided a more stable food supply. Second, warmer and wetter conditions in the Near East at the end of the last Ice Age about 10,000 years ago led to the spread of cereal grains. Together these provided more stable food supplies that allowed people to settle down in more permanent villages. These villages produced two very different effects that together helped lead to the discovery and triumph of agriculture.

One was a growing population that needed more food than the hunting and gathering lifestyle could supply. This may have been partly due to earlier weaning of the young. Since women in hunting and gathering societies were always on the move, they could deal with only one highly dependent child at a time. Therefore, so they have only one small child to carry at a time, they would nurse their young up to age four to interrupt their fertility until their youngest child was less dependent on the mother. More settled village life made such strict birth control less mandatory, allowing earlier weaning and a higher birth rate as a result.

Settled village life also gave people the opportunity to watch seeds in one place for a long time and notice how seeds grow into plants. Exactly how and when this happened is not known, but women probably made this discovery since they gathered the seeds and had more opportunity to notice how they sprouted and grew. Possible scenarios of this discovery include seeds spilled near camp or a wet grain supply sprouting and growing. However it happened, the realization of the potential of this discovery was probably gradual.

So was the transition to a completely settled agricultural lifestyle. While later civilizations would see agriculture as a gift of the gods, hunting and gathering peoples, such as the early Hebrews quoted above, saw it as a curse since it involved much more work and went against the traditional

ways of life they had followed for countless generations. Whereas tradition today is generally shoved aside and scorned, we should keep in mind that until very recently, it was a major force in people's lives. They did not take change so lightly as we do since it disrupted the fragile stability of their lives. So the question arises as to why did people turn to farming.

The most likely explanation was they had to. For a long time after the discovery of agriculture, people continued to follow a hunting and gathering lifestyle mixed in with some casual agriculture, such as scattering seeds along a riverbank or in a field and coming back in a few months to harvest it. This did improve the food supply, and dramatically increased the number of people that could be supported. Even the primitive agriculture practiced then could support up to fifty times more people than hunting and gathering could. However, those extra people put a growing strain on the natural environment's ability to feed them. One solution was to expand the agriculture. Of course, that led to more food and more population, causing even more strain on the natural food supply and leading to further expansion of the agriculture. In time, both men and women had to devote more and more time to tending the crops and less time to their traditional hunting and gathering ways. Eventually, they settled down and became full-time farmers.

Settled agricultural life had dramatic effects on human society and the environment. First of all, farming required less cooperation and sharing than hunting and gathering did. Before, all members of a tribe had to hunt together and share the results. Since there was no private property or anything to fight over, hunting and gathering societies were (and still are) relatively peaceful and harmonious. In contrast, agriculture allowed individual families to farm their own lands. As a result, private property evolved which led to social classes and more conflict in society between rich and poor.

New agricultural techniques, which replaced the more primitive slash and burn agriculture, also had their effects. The two-field system, which left one field fallow each year to replenish the soil, and crop rotation, which used different crops to take different nutrients out of the soil, reduced soil exhaustion. Both of these, combined with one other technique, irrigation, also created a surplus of grain and the need for a high degree of organization and cooperation. That surplus and level of organization

in turn would lead to the rise of the first cities and civilizations with specialized crafts and technologies such as writing and metallurgy.

In the process of farming, our ancestors also inadvertently disrupted natural selection. There were two varieties of wheat they collected on the hillsides of the Near East. The dominant type shattered upon the slightest touch, scattering the seeds so the species could spread and survive. The other, recessive type, did not scatter its seeds so easily, and thus was harder to find. However, it was easier to harvest since the seeds did not scatter. As a result, a higher proportion of this variety was collected and planted than occurred in nature. With each succeeding year a higher proportion of the non-scattering wheat was harvested and planted. Natural selection had been reversed.

Fun Food Facts

An overwhelming advantage. Of the eight most important agricultural crops in the eastern hemisphere, einkorn wheat, emmer wheat, barley, lentils, peas, chickpeas, rice, and flax, only rice, flax and barley, occurred naturally outside the Fertile Crescent and Anatolia (modern Turkey).

Wild grains provided fifty times more calories than were needed to harvest them.

Rice power. Using traditional methods, a typical rice crop would yield one hundred times as much as was planted, compared to as little as a 2:1 seed to grain ratio of wheat and barley in early medieval Europe. Along with maize and potatoes from the Americas, rice also provides many more calories than wheat and barley. No wonder the populations of South and East Asia have outnumbered those of other civilizations throughout history.

A Chain Reaction of Technology From Pottery & Kilns to the Wheel & Metallurgy
Nowhere is the ripple effect of expanding technology better shown than in how agriculture and settled life led to the wheel and metallurgy,

two of the primary foundation stones of modern technology.

This story actually begins with the mastery of fire in the Paleolithic era, long before the discovery of agriculture. As we have seen, campfires provided heat, light, and defense. They also inadvertently fired any bits of clay in the fire pit. This gave people the idea of purposely firing handmade clay figurines and pottery to make them more durable. This, in turn, led to the realization that hotter fires did a better job of firing clay. Therefore people started building permanent structures (made possible by settled agriculture) to enclose fires and contain their heat. Further experiments showed that small openings in these primitive ovens maximized airflow, creating even hotter fires and the basis for the pottery kiln.

Settled agriculture also made it possible to produce and amass large amounts of pottery for trade, since people no longer had to carry everything they owned as in a mobile hunting and gathering lifestyle. To make pottery more interesting and appealing to customers (especially if there were other potters competing for business), they started decorating their ceramics with pigments made from different minerals. One such mineral was copper oxide, which produced a red color when fired. Firing also inadvertently melted the copper, leaving copper beads in the ashes. This would lead to metallurgy and all the technologies upon which civilization has become increasingly dependent.

The desire and/or need to make more pottery also led to a faster way to turn the pots: the pottery wheel. Not only did that speed up the process of making pottery. It also made it more perfectly circular and regular, thus making

it possible to seal pots with lids that helped keep out bugs and preserve grain supplies, which in turn made for a larger and cleaner food supply and healthier population.

Very likely, the pottery wheel gave someone the idea of turning two such devices on their sides and connecting their centers with an axle. Thus was born the wheel, which would have, and still has, untold profound effects upon civilization.

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THE DOMESTICATION OF LIVESTOCK AND ITS EFFECTS

About the same time as the invention of agriculture (c.8000 BC) another revolution occurred: the taming of wild animals for domestic use. As with agriculture, the more settled lifestyle that better hunting and gathering allowed at the end of the last Ice Age was important, because it gave people the time and opportunity to keep and domesticate animals.

However, while animals of many different species have been tamed and kept as pets by humans, only a very few have been big enough (100 pounds or more) to be useful as sources of food and labor while meeting three basic criteria for true domestication. First, they must be herbivorous (plant eaters) and fast growing so they use up a minimum of our food resources and quickly become useful to us as a food source. Herbivores directly convert the plants they eat into meat, while carnivores require at least one extra level (i.e., other animals) in the food chain to survive. Therefore, pound for pound, it will take up to ten times as much plant nutrition to raise and support a carnivore as it does to for an herbivore.

Secondly, animals suitable for domestication should live in herds or packs with a strict social hierarchy of which humans can assume leadership. The third criterion for domestication is that animals must be easy to tame and willing to breed in captivity. This also rules out most carnivores, who are typically aggressive hunters and less easily domesticated than herbivores. An obvious exception is dogs who, being relatively small, must hunt cooperatively in packs, making them more social and easy to domesticate.

As with agricultural plants, what few animal species that are suitable for domestication are found predominantly in Eurasia and especially in what we call the Middle East of the Fertile Crescent. There were five such animals: sheep, goats, cows, pigs, and horses. The first two of these to be domesticated were sheep and goats, largely because they were the most docile and easy to tame. Sheep provided meat, milk, and fur. They also were *ruminants*, which meant they could digest the cellulose from grass, thus making previously useless land (e.g., rocky hillsides) useful.

As with plants, our ancestors also tampered with natural selection, using selective breeding to produce animals that were fat, meaty, slow, and

with long wool rather than fur that is shed seasonally, qualities that are useful for us but normally harmful to a species in the wild. Eventually, this process would produce sheep and goats that differed considerably from their cousins in nature.

The next animal domesticated was the pig (c.7000 BC). Unlike sheep and goats, the pig was not a ruminant and providing no milk or fur. However, pigs did provide meat and, being scavengers, had several advantages. Whether scavenging in the local woods or city streets, they were cheap to keep. They also needed little or no supervision, making them easy to keep compared to flocks of sheep and goats that needed constant shepherding. Finally, until very recently, towns and cities rarely had proper sanitation facilities, making them extremely unclean and unhealthy. Pigs scavenging in the streets helped keep them a little cleaner. In fact, many towns had laws protecting them, despite their mean dispositions and occasional habit of attacking children.

Cattle were next (c.6500 BC), which gave milk, meat, hides, and could eat grass. However, they were bigger, wilder, and tougher to tame than sheep, goats, and pigs, causing some civilizations, such as the Minoans on Crete, to see the bull as a symbol of power. Probably the most innovative use for the cow was to hitch it up to a plow, tapping a non-human energy source that increased the power at our disposal and the amount of land under cultivation many times over. However, the earliest farmers hitched the plow up to the cow's horns, not the most efficient use of its power.

Somewhat later (c.3000 BC), horses were domesticated with three far-reaching effects. First of all, they could be used as a source of labor like cattle although their full potential wouldn't be tapped until the invention of the horse-collar in China by 200 B.C.E., which pulled from the chest rather than the neck. Secondly, mounted warfare made armies much more mobile, dangerous, and destructive. This was especially true of nomadic horsemen who would occasionally be the scourge of richer and more sedentary civilizations. Finally, mounted messengers dramatically quickened communications, making it possible to keep in touch with and rule much larger empires.

Agriculture and domestication of animals created two basic types of lifestyle: settled farmers tending their crops and livestock in the richer farmlands, and nomads wandering with their herds of sheep,

goats, and horses across the dry grasslands on the fringes of civilization. As we shall see, these two ways of life, nomads and farmers, have clashed repeatedly throughout history. We shall also see how the infectious diseases domesticated herds of animals carried would play a critical role in Eurasia's dominance of the planet.

Learning to Ride the Horse

The best evidence for the domestication of the horse points to Kazakhstan in Central Asia between 4000-3000 B.C.E. There is some disagreement about whether it was first ridden or used to pull a chariot, cart, or plow. The survival of horse bits at first indicates they were ridden, although a bit could be used to lead a horse pulling a plow or cart. Supposedly one problem with riding the horse was breeding it up to size where it could easily support the weight of a man. Another problem was learning where to ride it. Riding the smaller donkey had previously dictated riding on its rump, since its back could not support the weight of a man. Therefore, early depictions of horsemen, such as the bronze relief of Assyrian cavalry below, show them precariously perched on the horses' rumps rather than in the safer small of their backs without saddles or stirrups to stabilize them. As a result, they had to be led by attendants on foot, thus neutralizing the advantage of mobility horses normally provide. However, at this early time, the relative size of the horse and man together probably provided an initial psychological edge against enemies not used to such a sight. Such was the case with the Aztecs when they first encountered Spanish cavalry.

Camels in America?

Originally, the Americas had horses and camels, but they were hunted to extinction about 13,000 years ago. Camels made a brief re-entry into North America in the mid 1800s after the U.S.-Mexican War. The U.S. government brought over a bunch of camels and Arab camel drivers to run caravans across the newly acquired

desert Southwest. Unfortunately the camel drivers felt homesick and soon went home. Stuck with a bunch of camels, the government turned them loose in Arizona where they roamed freely for half a century before dying out. There is still a law on the books in Arizona forbidding railroad passengers from shooting at camels.

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THE RISE OF CITIES AND HYDRAULIC CIVILIZATIONS (c.8000- 3000 B.C.E.)

Introduction: the first cities. Imagine yourself a desert nomad wandering from oasis to oasis with your herd of sheep in the Near East. All you have known is people like yourself living much as you do in tents or under the stars. One day, in your travels you spot what appears to be a mountain off in the distance. In the flat desert plains that seems amazing enough. However, as you approach the mountain, you are even more astounded by its regular pyramidal shape and bright colors. Also, it is surrounded by other rectangular structures, massive towers interspersed with gates teeming with more people than you ever imagined possible. You wander inside the city and your head is spinning from all the hustle and bustle of the market place, the warriors shining brilliantly with bronze armor and weapons, row upon row of mud brick houses, and, towering over everything, that pyramid.

To a nomad, first encountering an ancient city must have been much like walking into a science fiction movie, only more incredible. After all, we have cities on which to base our concepts of science fiction movies. The nomad really had little or nothing to give him the idea for our ancient city. One should see what a remarkable leap forward it was when the human animal started changing the face of the earth with cities. If agriculture, with its surplus that frees other people for other pursuits, is the backbone of civilization, cities are its heart and soul. Cities are where those extra people congregate to practice the arts and skills of civilization: pottery, metallurgy, weaving, art, architecture, literature, commerce, and so on. Even the word *civilization* shows the importance of cities to it, since it comes from the Latin word, *civitas*, meaning city.

The earliest cities arose around 8000 B.C.E., soon after the birth of agriculture, although they do not always seem to have been dependent on farming to survive. The oldest known city was Jericho, dating back to c.8000 B.C.E., making it twice as old as the Egyptian pyramids. Jericho was a desert city, located around a fresh water spring and largely owing its existence to that spring, since traveling caravans would trade their goods to the people of Jericho for its water. Jericho probably had several thousand inhabitants, who were well enough

organized to build a fairly impressive city wall, citadel, and reservoir and dig a moat out of solid rock. Another early city, Catal Huyuk, in modern Turkey, dates from about 6500 B.C.E. It was a religious center, living off of a combination of hunting, farming, and trade.

The rise of hydraulic civilizations. Isolated cities such as Jericho and Catal Huyuk did not create civilizations. That accomplishment depends on a number of cities spread out over an area and sharing a common culture: language, technology, religion, art, and architecture. The first civilizations arose along hot dry river valleys in Egypt, Mesopotamia, northwest India, and China. The importance of rivers to these civilizations has given rise to the term: *hydraulic civilization*, coming from *hydra*, the Greek word for water. Such rivers provided easy transportation and trade for people in their valleys. Such people traded goods and also ideas. In time, a common culture would emerge, as each village would tend to adopt the better ideas and techniques of its neighbors along the river. The rivers and the hot dry climate spawned another activity critical to early civilizations: irrigation.

Let us focus on Mesopotamia, where the Tigris and Euphrates rivers were the only reliable sources of water for farming. The fact that these rivers flooded annually gave the farmers the idea of bringing river water to their fields. At first, it involved nothing more than catching floodwaters and letting them gradually run back to the fields. In time, as the population and need for more farmland increased, the irrigation got more involved and complex. Such a project required a high degree of organization and cooperation, and that required leadership. Keep in mind, ancient peoples viewed rivers as gods. This meant that cutting into them and tapping their water supplies had religious implications. As a result, the local village priest supervised the irrigation.

In return, the priest would get offerings of grain and farm animals. Since these offerings were much more than he could consume himself, the surplus food served as the earliest form of "capital", that is wealth that can be invested in operations beyond what is needed for survival. Naturally, the priest put the "capital" back into his "business", building a bigger temple and storehouse to hold the extra grain and animals. This involved hiring extra accountants, builders, and guards who would settle with their families around the temple. Over time, the irrigation would lead to more crops, which led

to more people, which led to the need to develop more farmland and irrigation. This, in turn led to more offerings and further expansions of the temple and the settlement around it. Once the town was large enough, craftsmen would move in who would provide needed goods such as pottery and tools to the temple's workers. Thus, a third level of population below those of the priest and their workers would emerge. Over the centuries, as the population, irrigation, and temple kept expanding, what was once a small farming village evolved into a thriving city gathered around the temple. Such a city would need or want wood, limestone, metal, and other goods that the area could not supply. As a result, some men would become merchants, traveling far and wide to trade the city's surplus for other goods. In this way, the city would grow even more populous and wealthy.

The long, continuous river valley of Mesopotamia meant that not just one village priest, but dozens were faced with the problems and rewards of irrigation. Thus, the process of cities growing up around temples was repeated over and over throughout Mesopotamia. Since the rivers tended to create a common culture, these cities resembled each other quite a bit in how they grew up and even in how they looked. For example, temple expansion generally took the form of building additions on top of the older temple. This gave the temples, or ziggurats as they were called, the appearance of pyramids. At this point, with dozens of cities united by a common culture springing up throughout Mesopotamia, we can say civilization has emerged. Its first people, the Sumerians, step onto the stage of history around 3000 B.C.E.

Civilization brought problems as well as blessings. For one thing, the continued expansion of population and farmland to feed it eventually led to cities clashing over new lands. With civilization came the first wars. Since priests were ill suited for fighting, they would choose a *lugal*, ("great man") to lead them in the fight. After the war, the *lugal* would be expected to resign his office. However, either because of ambition or the fact that another war was always around the corner, the *lugal* would keep his office. In time, he became a permanent official, the king, who led the city-state in war and administered justice in peacetime.

This often led to tension with priests who felt their own positions threatened. The temple (or, more technically, the gods) controlled most of the land.

This often made the temple unpopular with the people, who looked to the king for protection. Eventually, the king would emerge as the most powerful figure in the city, although the temple would remain quite influential, still controlling much land, patronizing the arts, and acting as a grain bank and redistribution center during times of famine.

Another problem brought on by civilization was that the larger population of cities (sometimes 20-30,000) meant that people did not always know one another. This led to distrust and oftentimes crime. The influx of wealth also meant more clearly defined social classes since the wealth was not distributed evenly. This, plus all the different types of jobs being done, led to distrust and disagreement. Law codes had to be formed and courts of justice maintained, which also led to the need for a king's strong central government.

Town air makes one sick. Since one reason for living in towns was the security of their walls, it was imperative to keep the perimeter of those walls as narrow as possible in order to keep from spreading the city's defenses to thinly. Therefore, towns were typically very crowded and dirty with where garbage and excrement (human and animal) piling up. Therefore, until modern sanitation and medicine came along in the 1800s, life expectancy in towns was generally lower than that in the countryside. As a result, cities were often unable to sustain their populations through natural increase and had to lure peasants and nomads to settle in town with the promise of greater opportunities and excitement.

If the town and rural populations were from different ethnic groups, strife could result. As long as the influx of rural settlers was gradual, they could be assimilated into the town culture. However, if something, such as an epidemic, triggered a sudden population loss in the city, there could be a sudden influx of new settlers who refused to assimilate into the town's dominant culture. This in turn could provoke ethnic strife and the overthrow of the town's ruling class with a new group. This is the likely scenario of how the Akkadians overthrew the Sumerians (c.2350 B.C.E.) and how the ruling urban German class in the Hapsburg Empire went into decline in the 1800s.

Cities and civilization also gave rise to new arts, crafts, and technology. Weaving was certainly one of the most remarkable crafts if we consider how

much imagination it took to see a fabric in the fiber of the flax plant. Its importance should be obvious to anyone who wears clothes. Pottery was another craft of great significance. Sealed pottery jars could keep bugs and vermin out of peoples' food supply, preserving it in terms of quantity and hygiene. The rise of civilization also saw the evolution of two other types of technology vital to our way of life: writing and metallurgy.

Women and Pre-industrial Civilization

The first hydraulic civilizations in Egypt, Mesopotamia, and the Indus River valley brought greater concentrations of wealth. And with that wealth came more conflict, both within cities and between neighboring city-states. In a sense, this is where warfare as we know it began. Of course, there had been tribal wars before, but never on the scale of what happened now.

And, even more than before, a premium was put on men's brute strength at the expense of women.

Another factor working against women was the fact that their work often wasn't as crucial to running a craft in town as it had been in the fields, especially during planting and harvest. Women in town were increasingly confined to the home and treated at times more as property than human beings.

Of course, when looking at various cultures across the globe & historical time, we must realize that there is a vast gray-scale of situations for women. For one thing the transition to lower status was a gradual process that took place at various rates and to various degrees in different places. For example, in medieval England, widows of guild members could carry on their husbands' business, whereas in many or most parts of Europe this was not the case.

Another example was ancient Egypt. Women there had more property rights than their counterparts in more turbulent

areas such as Mesopotamia. For example, in very early in ancient Sumeria, women could train for the highly specialized and prestigious profession of scribe. However, by Babylonian times, the only business they could run was that of a tavern.

We can often see women's higher status at the dawn of civilization in ancient religions, which tended to change more slowly than other aspects of society. For example, the main deity in ancient Japan was the sun goddess Amaterasu. There are also ancient Japanese legends of warrior women. One legend was that of a sorceress Pimiko, who lived shut up with 1000 women and one man, her brother, who was used to communicate orders to her subjects. It wasn't until 1400's and the turbulent era known as the Age of Warring States that women assumed totally submissive roles.

Probably the most famous warrior women were the Amazons of Greek legend. As with most myths and legends, there was likely some kernel of truth at the basis of this legend. In fact, the Greeks had legends of Amazons in several regions, including Asia Minor, the Aegean Sea, and Libya.

Many ancient religions, such as that of the Minoans on Crete, originally worshipped an earth goddess as their primary deity. Minoan art even shows women participating in the sport of bull leaping which also probably had some religious significance. In fact, one could even see the constant bickering between the older Minoan goddess, Hera, and her husband, the more warlike Zeus, as an historical memory of Minoan resistance to the Mycenaean conquest.

While people typically associate Muslim society with veiled women, other civilizations restricted their women's freedom in similar ways. The classical Greeks, when women weren't

confined at home, also had them wear veils as in this Hellenistic statue from the third century BCE.

Similarly, women in medieval and early modern Europe were expected to keep their hair covered in public, only letting it down in the privacy of the home. The almost universal wearing of hats by women until the early 1960s was a lingering holdout of this custom.

In Sung Dynasty China, a surge in agricultural production and population growth prompted a rapid expansion of its cities. As men moved into the cities to practice various crafts instead of farming, they no longer needed the labor of the women that had been so crucial in cultivating rice paddies. From this came the painful and confining practice of foot-binding, which broke the arches of girls' feet, making them unable to walk normally.

Of course one could make the case that women today may subject their feet to a modern version of foot-binding with high heeled shoes.

In the sixteenth century political treatise, *The Prince*, Machiavelli advises rulers to especially avoid taking their subjects' property and women, treating the latter as largely a subset of the former.

Not until the industrial revolution in the 1800s would women's status start to improve appreciably.

Ancient Ikea: Furniture at Jericho

Late one day, when Jericho was being excavated, archaeologists came across a sealed room. Rather than wait till the next morning, they decided to take a peek before quitting for the day. However, the room revealed several pieces of wooden furniture that, being sealed off from the outside world for thousands of years, had not decayed. Unfortunately, opening it up to the moisture of the outside world, the

archaeologists saw the furniture warping before their very eyes. Working late into the night, they coated the wood with melted wax, which would protect it from further warping. One interesting feature of the furniture was it had only three legs, probably because a tripod can sit stably on a rough floor better than something with four legs.

Hazards of Urban Living in the Ancient World

Life in ancient cities had its share of risks. For example, based on Hammurabi's law code, it was apparently not uncommon for the mud brick houses of Mesopotamian cities to collapse on their owners. If the owner died, the builder was supposed to be executed. If the owner's son died, the builder's son would pay the price. If collapsing houses didn't kill you, poisonous snakes lurking in the shadows might. There was also the hazard of scorpions falling from the ceiling onto your face while you slept. In medieval Europe it was rats falling from thatched ceilings. Much better.

Something in the water. Although people had no concept of germ theory or what caused disease, they did have a sense that something in the water could make them sick. Royal palaces were often built around wells to avoid the river water polluted by the commoners. Hittite kings had their water strained, for purposes of ritual purity and protection against black magic, not hygiene, but it still was probably safer. When a Hittite king found a hair in his water, the guilty water carrier was executed.

The Original Gated Communities

Until very recently, a major factor influencing the size of a city has been: defense (i.e., the town wall) in particular the need to keep its perimeter as small as possible. Besides making it easier to defend, this also kept the cost down, good fortifications being quite expensive. The narrow

perimeter of the wall in turn made the city quite crowded with space at a premium.

This also limited urban sprawl, since no one wanted to live outside the town walls' protection against enemies. Any people choosing to live under the walls' protection but outside the city would often be discouraged from doing so by local authorities. At the approach of enemy armies, such suburbs might be cleared out to create a clear field of fire for the city's defenders by denying invaders any cover.

Inside the city walls, the lack of open space and sanitary facilities (unless you count a ditch running down the middle of the street) led to ever mounting piles of garbage and human waste, triggering frequent outbreaks of disease. Until the medical revolution of the 1800s, life expectancies in towns were typically lower than in the countryside. Many cities could not maintain their populations through natural increase, relying on a gradual influx of immigrants seeking their fortunes to sustain their numbers.

The city's crowded conditions also affected architecture. The round huts (probably modeled after older circular tents) proved to be an inefficient use of space, thereby giving way to rectangular architecture as seen in the reconstruction of the ancient city of Catal Huyuk below. Typically, one house's western wall was its neighbor's eastern wall and so on. (In the Babylonian legend upon which *Romeo and Juliet* is based, the star-struck lovers talk through a crack in a wall common to their houses.) Several houses joined together in such a way could also serve as small self-contained fortresses in case invaders broke through the city walls. Even after breaking into Carthage in 146 B.C.E, it took the Romans seven days to subdue the city.

Wild animals, while romanticized in modern cartoons and nature programs, were a major threat to people's lives and wellbeing until everything got paved over and turned into shopping malls. Lions and wolves were constant threats to livestock for both ancient shepherds and American cowboys. David's proficiency with a sling in the Bible was developed to defend sheep against lions rather than protect Israel against giant slow-moving bozos in heavy armor.

In 19th century Singapore, tigers were killing 200 people a year, and as recently as the 1900s there were reports of tiger attacks in villages in India. Therefore, even small villages might have walls, which would be of limited use against large armies, but more practical against bears without opposable thumbs or ladders. By the same token, global warming is driving polar bears into increasing contact with areas of human habitation, and they're not just looking for an ice-cold Coke.

Fighting gridlock. While cities in general were congested, exceptions were made, especially for kings. For example, the Assyrian king, Sennacherib, tore down houses surrounding his new palace in Nineveh to let in light. He also had a ninety-three foot wide processional way leading to his palace. Anyone whose house encroached on this road was hanged on a stake over his house.

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FESTIVE DANCING AND ITS IMPORTANCE IN HISTORY

Introduction. One of the hardest aspects of history to document, yet maybe one of the most important, has been festive dancing. It seems especially remote to us, since we have become progressively more isolated as individuals since the industrial revolution, so we tend to lose sight of the importance of community in our lives. However, we are a social species that has relied on numbers to survive down through the ages, which brings up the question: what has kept us together all these years. The biological root of the answer lies largely in a pleasure center in our inner ears that likes a rhythmic beat.

Hunting, gathering, and dancing. Throughout most of our existence as a species, we have relied on hunting and gathering for our survival. Yet this was the time when our species was especially vulnerable and had to depend on the group for survival. One survival technique against large predators was for people to move together to make it seem that the predator was up against one big animal instead of a lot of small scared animals. Very likely, rhythmic community movement had its origins here, and either was based on or led to rhythmic dancing to celebrate or anticipate a successful hunt. When people practice moving together in time for a prolonged period, it induces a trancelike & spiritual experience of all being together as one. Besides being pleasurable, it also made our ancestors more effective in hunting as well as creating cohesiveness for the whole community in day-to-day life.

Whistle while you work. Experiments in rhythmic movement while doing repetitive tasks indicate workers are happier, more efficient, and able to work longer hours. As early as 1835, a German study claimed workers were 25% more productive when performing tasks together rhythmically. In 1901, a peach grower who hired a singer to perform for his workers said it boosted productivity by 30%.

Early civilized dancing. When cities and civilizations evolved into societies containing many times more people than found in hunting and gathering groups, governments needed to provide the basis for identifying with and loyalty to these new states. Therefore they attempted to control collective dancing by formalizing it into state run religions monopolized by the ruling classes.

The cycle of religious dancing. At this point, we can see a cycle that constantly has repeated itself throughout history. Once the state or a ruling clique within a religion has taken it over, they tend to tighten their control by increasingly formalizing the religious rituals. By the same token, the religion becomes increasingly boring and uninspiring to its members. Therefore, some of them start a new sect from within that religion or a new religion comes along, either of which incorporates festive dancing in its rituals, attracting large numbers of new followers. The new faith or sect grows in numbers until some of its members feel a need to impose some order by rigidly formalizing the rituals. Eventually this religion of sect becomes boring and the cycle goes on.

In Western civilization we can see this cycle repeating at least four times. The first time had to do with the wild Dionysian rites spinning off from the Greeks' state religion of Olympian gods. Euripides' play *The Bacchae* gives us a somewhat frightening scenario of what happens when the king tries to suppress these rites, and the Maenads, formerly mild mannered women who are caught up in the frenzy of the Dionysian worship, literally tear him apart. To their credit, the Greeks realized that to maintain our normal rational ways of living, we must occasionally give in to our irrational passions. Therefore, they incorporated and formalized the Dionysian rites into state festivals. One aspect of these festivals was Greek drama, such as Euripides' play discussed above.

The cycle next repeats in the early days of the Christian Church. The Romans, being a bit more conservative than the Greeks, had severely limited the practice of the Dionysian rites. Unfortunately, they saw Christianity in the same light as the Dionysian rites, since both worshipped the son of a woman and god who had died and been resurrected, and both practiced wild, although typically asexual, rites. Therefore, St. Paul, in an effort to dissociate his religion from the Dionysian rites and make it

look legitimate to the Romans, tried to control the festive dancing. As Christianity grew in popularity and a hierarchy of bishops and archbishops evolved, Church leaders continued efforts to calm down its services.

During the eleventh and twelfth centuries, the Church had gone through a major religious revival, largely from the grassroots level of the monasteries, and emerged as the most powerful institution in Western Europe by 1200. In order to gain more control over its more enthusiastic members' practices and beliefs, it banned dancing in church. However this only pushed the dancing out into the streets where the Church had much less control and evolved into Carnival, the festival that precedes the period of Lent leading up to Easter. At first, Carnival may have had some spiritual aspects, but it soon evolved into an excuse to indulge in the various activities banned during Lent, to satisfy any desire for those activities for the next forty days leading up to Easter. Among those activities was eating meat (thus the word carnival as in carnivore) and festive dancing. Carnival also largely became of parody of the Church and ruling classes, who naturally felt somewhat threatened by it. By the mid 1500s, Northern Europe was in the midst of another religious revival, the Protestant Reformation. At this time, Carnival was still being celebrated in the North, when it ran into two obstacles. One was the puritanical idea, especially associated with the Calvinists (AKA Puritans in America), that most any kind of pleasure was evil. At this time Europe was undergoing major shifts away from a land based to a money and credit based economy. Such shifts always leave some people behind, in this case the peasants, and generate social tensions that occasionally turn into armed rebellions. Therefore, the authorities in the North suppressed Carnival, but with some disturbing results. There is evidence by the 1600s that being deprived of communal dancing was creating a sense of isolation in people with a corresponding rise in depression.

Fast forward to the period of the French Revolution in the late 1700s. A new secular idea was sweeping across France and then Europe: nationalism, which united peoples with a common language, history, and culture into that giant collective consciousness called the nation. The revolution's leaders the importance of communal celebrations in bringing people together and actively promoted civic festivals to unite the people behind their leadership.

When Napoleon seized power in 1799, he repeated the mistake of trying to control and structure such celebrations from above with military parades that had a stirring beat, but reduced the people to being a passive audience. The idea was to replace the horizontal social bonds between the people on the same level with a top-down bond between the people and their leader who was supposed to embody the very nation itself. The result, however, was to seriously reduce the impact of such events on creating social bonds among the people.

Drill and march. The application of rhythmic moving together in time to armies (AKA drill and march) has repeatedly proven effective at different times in history. The first successful demonstration of the drill and march took place during the Age of Warring States in early China around 400 B.C.E. when Sun Tzu, on a bet, trained 100 women with halberds who defeated a comparable size group of men not trained in the drill and march. A later shift in emphasis to cavalry led to the drill and march being forgotten in China until its revival under the later Ming and early Qing dynasties.

The pattern would repeat itself again in the 1920s and 1930s in Fascist Italy and Germany with the extra twist that Mussolini and Hitler in particular had modern loudspeaker systems that allowed them to stage-manage huge spectacles with thousands of people attending. These events did use rhythmic chanting of slogans to create some communal feeling, being reinforced by another psychological phenomenon of losing one's individual identity in such huge crowds. However, the predominantly passive role played by the masses could soon make these stage-managed rallies seem boring, giving them limited success in the long run.

After the end of World War II in 1945, accelerated urbanization, suburbanization, and the tendency to move to a new neighborhood or city every few years have created new subdivisions, but not communities, which require generations to sink the deep common roots that truly unite people. Instead, mass media, especially television, has largely replaced community events in which people are

actively involved. Television watching is a fairly solitary activity where it is rare for whole families to watch the same program together. Television may provide us common cultural reference points, but it doesn't give us community. This lack of community seriously inhibits people from participating in common activities such as festive dancing. In fact, the idea of even trying to start such events on just a neighborhood level would seem laughable, so far have we become cut off from our cultural roots and each other.

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THE EVOLUTION OF EARLY WARFARE TO c.500 B.C.E.

Introduction: the roots of warfare. Probably one of the most unfortunate aspects of humans is their ability and willingness to kill others of their own species in wars, although some would argue that the crisis mode of warfare stimulates and accelerates new developments, especially in technology. However, with the exception of ants, we are the only species that devotes significant resources to large-scale organized efforts to kill each other. Ironically, warfare may be the most “civilized” of human activities, given the root of the word civilized is the Latin word for cities, and warfare, if not invented by cities and civilization, certainly is expressed in its most extreme form by civilizations. This is largely because of the conflict arising from the growing wealth resulting disparities between rich and poor that civilization created.

Stages of pre-civilized warfare. Even among hunting and gathering peoples, conflict would arise over hunting grounds. At first, when population densities were low, it was possible for the losers to move to another hunting ground. However, as population densities increased, the winners, having little or no surplus food or use for slaves, typically killed the losers, although they might spare the women. However, this changed with the higher population densities, greater surpluses and larger tribes and states that came with agriculture, because the conquerors could either enslave or tax the losers.

Warfare in the early Bronze Age (c.3000-1700 B.C.E.) As cities and civilizations evolved with even greater wealth to defend or take from other civilizations, warfare intensified even more. However, armies consisted mainly of peasant levies that had to get back to their crops, and cities still had limited resources for paying large-scale professional armies. Therefore, all defenders had to do was build fortifications of sunbaked mud bricks behind which they would retreat until the invaders had to leave. At worst, a city might have to acknowledge the invaders as overlords and pay them some tribute to leave. Later, when the opportunity arose, they could revolt.

Burning crops. Even the strategy of wearing down enemies by burning their crops was somewhat rare in early warfare. This was because crops didn't

dry out and become susceptible to burning until soon before harvest, and invading armies' ranks were filled mainly with peasant militia who had to return home to harvest their own crops.

Then sometime after 2400 B.C.E., a new siege weapon, a crude battering ram, was developed, which literally pulverized city walls made of sun dried bricks. Now invaders could either directly occupy and tax subject cities or sack and destroy them. This made possible history's first empires: the Akkadians (c. 2350-2250 B.C.E.) and the Third Dynasty of Ur (c.2100-2000 B.C.E.). As a counter-move to the battering ram, cities built their fortifications using much harder oven baked bricks. This proved effective until the Assyrians devised better battering rams and other siege techniques around 800 B.C.E..

One factor that has affected the frequency of wars has been climate change, such as the drought, which hit Mesopotamia around 2000 B.C.E. As food and resources shrank, conflict over what was left intensified, both in terms of frequency and brutality. Warfare was also more widespread and destructive, leading to fewer resources as irrigation systems fell into disrepair, causing more wars and so on.

Around 1800 B.C.E. Indo-European nomads came down from the north with a deadly combination of two weapons: the composite bow and the horse-drawn chariot. Together these weapons gave them vastly increased mobility and firepower, as well as the initial terror inspired by horses, rarely if ever seen in the civilized world up to now. One kingdom after another collapsed like a house of cards before the onslaught of these nomads with their terrifying beasts. People known as the Hyksos conquered Lower Egypt, while the Kassites overthrew Babylon, and the Aryans moved into the ruins of the Indus River Civilization.

The High Bronze Age (c.1700-1000 B.C.E.) As usual, civilization revived with new and revived empires and kingdoms: The Kassites in Mesopotamia, the Hittites in Asia Minor, New Kingdom Egypt, and the Mycenaean Greeks. Since bronze, horses, and chariots were so expensive, each civilization had a strong autocratic king supported by a small elite nobility who could afford to arm themselves and keep the mass of peasants under control. In fact, although called the Bronze Age, most people at this time were still in the Stone

Age because of the expense of metals. Thus the way these kingdoms fought their wars largely determined their political and social structure.

Sometime around 1200 B.C.E., everything came unraveled for these civilizations, once again because of how they, and their enemies, fought their wars. Much of the advantage chariots gave their owners in war was psychological. Thus battles were typically fought between two elite groups of charioteers while the mass of infantry stood by and watched. However, typically behind each chariot was a lightly armed runner who would rescue their downed charioteers and finish off those of the enemy. Such runners, oftentimes foreign mercenaries, came to realize the vulnerability of chariots to lightly armed infantry throwing javelins to bring down both charioteers and their horses. Armed with these tactics, these peoples either weakened or overthrew the big empires and kingdoms of the day. Although Egypt barely survived, the Hittite Empire, the Mycenaeans and Kassites collapsed, allowing the victors to sack and plunder the riches of these civilizations. The Trojan War, immortalized by Homer, also took place at this time. A period of chaos prevailed for the next 200 years, when a new metal ushered in a new age in warfare and empire building: iron.

The Early Iron Age (c.1000-500 B.C.E.) Because of its abundance, iron, often called the democratic metal, probably ushered in the real age of metals for most people in the civilized world once they had mastered the techniques for smelting and shaping it into tools. Iron created and allowed the exploitation of new forms of wealth, which often led to more wars.

Iron also revolutionized warfare, since states could afford to field much larger armies. Two other factors helped in empire building. One was the phonetic alphabet, which allowed governments to keep much better records on such things as taxes, thus giving them much tighter control over their subjects. The other factor, first developed by northern nomads and copied by the Assyrians, was mounted cavalry. Cavalry's greater mobility allowed armies to move armies more quickly, outflank and surround enemies, and operate on rougher ground than chariots which were prone to broken wheels and axles. Mounted messengers also kept rulers much better informed on news about revolts and invasions, enabling them to defend and expand their empires by a factor of several times.

Therefore, the Neo-Assyrian Empire (934-609 B.C.E.) was three times the size of any previous empire. And the Achaemenid Persian Empire (550-330 B.C.E.) was several times larger still. Besides helping build big empires, iron equipped armies would have a radically different political effect: namely, the rise of democracy among the Greeks.

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THE IMPACT OF DISEASE ON EARLY CIVILIZATIONS

Agriculture and cities brought many changes, but not all of them were good. Two things in particular led to problems: irrigation and domestication of animals. The problem with irrigation was that it was transforming a naturally hot and dry environment into a hot and wet one. This brought with it a number of water-borne parasites native to the area, such as the blood fluke that causes Schistosomiasis by burrowing into the skin, entering a new larval stage (schistosomula), then migrating to the liver or lungs, where it matures into the adult form. The overall effect for a society heavily infected with such diseases was a lethargic peasantry unable to produce as much or fight as well against invading enemies.

The second, and more dramatic effect came with the domestication of animals and the subsequent frequent contact with them, because microbes for infectious diseases the animals carried often mutated into forms that were lethal to humans. There are at least 26 diseases we share with poultry, 35 with cattle, 42 with pigs, 46 with sheep and goats, 35 with cattle, 50 with horses, 65 with dogs, and even 32 with rats and mice who typically live in close proximity with humans. The first outbreaks of any of these diseases were often catastrophic, since people had no prior exposure to them and thus had no chance to develop immunities.

The rise of cities was both good news and bad news in this respect. The good news was that the more concentrated populations made possible by cities meant that despite the huge mortality, at least a small percentage of the population could survive and develop resistance to the new disease. The bad news was that the civilization would be more vulnerable to attack by enemies.

In the long run, two things helped populations to develop at least partial immunity to diseases. One was that natural selection favors people with natural resistance to the disease, so they can pass that resistance on to future generations. By the same token, natural selection favors organisms less lethal to their hosts so that they don't have to keep looking for new hosts in order to survive. Therefore the more lethal strains of a disease will typically reach a dead end, literally, when it has killed off all its potential. After six generations or so, a population

was able to adapt enough to keep damage from new outbreaks of a disease from doing too much harm. Oftentimes, the disease becomes a chronic, but less lethal "childhood" sickness that, once people have had it, usually as children, they are immune to any recurrence. Even in their less lethal chronic state, such diseases can have dramatic effects in three ways.

First of all, once adapted to a disease, a civilization could turn it into a lethal weapon, although usually unknowingly, since people didn't understand what caused diseases until the 1800s. Still, people from a civilization could carry a disease to other previously uninfected populations, in particular nomads. This would have one of two results. Either it would virtually wipe out the nomads whose small populations could not sustain the disease long enough to adapt to it. Probably the most dramatic instance of this happening was when Europeans brought infectious diseases, such as smallpox, to the Americas. Within a century, as much as 90% of the Native American population had perished, mostly from European diseases.

On the other hand, the nomads might manage to adapt to the disease and eventually conquer the civilization. The ability to sustain the necessary numbers might come from civilized women captured in raids who could pass on their immunity to their children.

A second effect was that even in their less lethal form, diseases would still kill some people in the cities. Compounding this was the cramped and filthy living conditions typically found in pre-industrial cities. Together these would often prevent cities from sustaining their populations through natural increase. Therefore, people from the countryside and beyond that state's borders would migrate there looking for job opportunities, and often finding them as a result of disease killing previous residents. If something happened that drastically reduced the city's population, there could be a sudden influx of foreign migrants who might replace the older civilization's culture with their own. A likely example of this was the takeover of Sumerian civilization by the foreign Akkadians, not by conquest by infiltration led by Sargon of Kish who held the position of cupbearer to the king.

Finally, there was the effect of civilized diseases on relatively isolated outlying villages that didn't have

the numbers to withstand the initial outbreak of a disease. Such outbreaks would be less frequent, but when they hit, could be much more severe in their effects. An example of this was the American Civil War where big strong soldiers from the countryside died at a much greater rate from diseases than their comrades from the cities who had already been exposed to them and developed some resistance.

A Plague on Bunnies: Rabbits in Australia

Another example of the catastrophic effects of the introduction of a new infectious disease is what was done to rabbits in Australia. Rabbits were unknown to Australia before the British introduced them in 1859. Not only were there no rabbits native to the area, there were no natural predators to control the rabbit population either. As a result, the rabbits were able to multiply like, pardon the expression, rabbits, allowing them to spread like wildfire across the continent and making them a major pest as they consumed the grass desperately needed by shepherders. Supposedly, sixteen rabbits can eat as much grass as one sheep. With close to a billion rabbits infesting the continent, that adds up to the loss of 60 million sheep. And they're cute too.

Any efforts to control them were unsuccessful until 1950 when myxomatosis (a disease related to human smallpox) was introduced. In the first year of exposure, the death rate in exposed rabbits was 99.8%, although the huge rabbit population allowed a large number to survive. In the 2nd year, the death rate dropped to 90%, but still leaving a significant population to carry on. Seven years later, as a result of selecting out rabbits susceptible to the disease and strains of the disease least harmful to their hosts, myxomatosis was killing only 25% of the rabbits. In addition, rabbits found with the disease had much less virulent strains.

Using this as a model of how populations react to new infectious diseases, William McNeill, in his pioneering work, *Plagues and Peoples*, estimated it takes a population around six generations to adapt. For human, that represents 120-150 years.

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THE BIRTH OF WRITING

It's hard for us to imagine what a wonder writing was to people who had never seen it. Therefore, consider the story of John Cremony, an army officer in the American southwest writing a letter to his mother back home. A Navajo Indian saw Cremony writing the letter and asked what he was doing. Cremony replied that he wrote words on the paper and sent it home. His mother would look at the paper and get his message. The Navajo just laughed at such a ridiculous story. Therefore, in order to prove his story, Cremony wrote a note and told the Indian to take it to another officer who would read it and give him a piece of candy. The Navajo took the note to the officer who read it and, to the Navajo's astonishment, gave him a piece of candy. To the Navajo's credit, he was smart enough to catch on and pretend he didn't believe this cheap Jedi mind trick and wanted Cremony to repeat it, thus getting another piece of candy.

Before we condemn the Indians or anyone else for not having writing, we should keep in mind that no one thought of the idea until about 5000 years ago. At that time, the first civilizations were emerging, and with them, a much more complex way of life. The temple of the Sumerian city of Lagash provides a good example. It employed some 1200 people, including 300 slaves. The temple employed 205 cloth workers in addition to sailors, millers, bakers, cooks, guards, fishermen, herders, and scribes. Such a complex operation was beyond one man's ability to keep everything straight in his head. A more efficient record keeping system had to be developed.

Prelude to Writing. People used to think that writing developed overnight in response to the needs of civilization. Actually, it gradually evolved with the

increasingly complex society that started to develop with agriculture. At that time, people started making little clay tokens in various shapes to represent the types and numbers of goods they possessed. For example, a man might have ten small clay discs or one large disc to represent the ten bags of grain he owned. It was such a simple system of record keeping that sometimes the tokens had holes in them and were strung together in a necklace.



Around 3500 B.C.E., cities and much more complex economies were evolving. As a result, we find the number of types of tokens expanding dramatically as new types of goods were being produced and traded. Long distance trade was also starting with merchants and temples sending caravans with large amounts of goods from city to city. The caravan drivers would be entrusted with tokens representing all the goods they were travelling with. They would present the tokens along with the goods to a merchant in the next city after making a transaction.

Unfortunately, it was apparently easy for the caravan driver to steal a few goods and the tokens for himself without the first merchant knowing he had done that instead of selling them honestly. As a result, the first merchant started putting the tokens in a sealed clay ball or envelope. If the second merchant found the seal broken, he knew the goods had been tampered with. However, the sealed envelope made it difficult for the caravan driver to remember how many items of each type of merchandise he was travelling with. Therefore, the merchant started making impressions of the shapes of the tokens on the outside of the clay envelope while it was still wet. Before long, someone realized that the envelope and tokens were not needed as long as there was an impression of them in the clay. The tokens were dispensed with, the envelope was flattened into a tablet, and writing was born.



Even after clay tokens were dispensed with, clay envelopes were still used to protect cuneiform tablets from tampering

Different stages of writing. Writing was first developed for keeping records of goods. In time its uses expanded, and that meant new ways to express and interpret the symbols had to be developed. There were four basic stages in the history of writing.

1) Pictographs (c.3500 - 3000 B.C.E.). In this stage, one pictograph or symbol means what it looks like. For example, a picture of the sun means the "sun". This stage was well suited for straight record keeping, but little else.

2) Ideographs (c.3000 - 2100 B.C.E.). Here the symbols can also mean something a bit more abstract than their literal meaning. A sun can mean "day" as well as "sun". A picture of legs can mean "legs" or "walk". Thus the uses of writing were greatly expanded, although there were severe limits on what one can write this way.

3) Rebus writing (c.2100 - 1000 B.C.E.). This was a critical turning point. Up till now, one related to what the symbols looked like to tell the meaning. With rebus writing, one used the phonetic sounds of words created by symbols to create new words. For example, a word like "Neilson" would be very difficult to write with pictographs unless everyone knew what Neilson looked like as distinguished from other people. However, with rebus writing, one could use the sounds suggested by a picture of a man *kneeling* plus a *sun* to build the word "Neilson". Rebus writing, by making the reader relate to the ears, not the eyes, made it possible to write just about anything. It was a complex system, however, since it required hundreds of symbols, one for each syllable used in a

language. Both Mesopotamian cuneiform and Egyptian hieroglyphics used about 700 symbols.

4) Phonetic alphabet (c. 1000 B.C.E. to the present). This system is based on the fact that we can only make about twenty-five or so different sounds, while we can combine those individual sounds into hundreds of symbols, each requiring a different rebus. The alphabet simplifies the process vastly by using just one symbol for each individual sound we make (e.g.--B, D, K, etc.). Although we generally give credit for the alphabet to the Phoenicians (thus the term "phonetics"), it seems the Egyptians also had an alphabet of sorts that the Phoenicians drew upon. The Greeks completed the process by adding vowels, which the Egyptian and Phoenician systems lacked.

Along with writing, mathematics also evolved to help keep records. The Mesopotamians in particular had some sophisticated math, using base 60 instead of base 10 which we use. Mesopotamian influence is reflected even today in our 360-degree circle with 60 minutes in each degree. They seem to have developed the Pythagorean theorem for figuring out the lengths of the sides of a right triangle. They also figured a number of square and cube roots. The ancient Greeks, who gave us much of our math, drew heavily upon the Mesopotamians for their math.

Scribes and education. Before the invention of a much simpler alphabet, only a small group of men had the time to learn how to read and write a system using some 700 symbols. These men were known as scribes.

Scribes usually came from middle class families with the money to pay for their sons' education. In Egypt, the temple oversaw education, but in Mesopotamia private teachers ran their own schools. Education started around age six and lasted about twelve years. Students went to school from sunrise to sunset about four days out

of five, twelve months of the year. Younger students' lessons involved memorizing long lists of symbols that represented various sounds and syllables. Older students memorized the rules for combining those symbols into words. They also learned math for keeping records and surveying fields. At the end of their schooling, they took an exam. If they passed, they became scribes. If they failed, they could only find employment in such lowly jobs as writing letters for people in local villages.

Classroom discipline was harshly enforced by a man in the back of the classroom who carried a stick for beating students who hadn't learned their lessons well enough. If things got too rough for a student, his parents might have their son's teacher over for dinner, have a few beers, and give him a new coat.

Fully qualified scribes could look forward to a promising career working for the king, temple, or rich merchants. They had high status in society, since their skills were so specialized. In some 2500 years of Mesopotamian history, only one king, Ashurbanipal of Assyria, is known to have been able to read. Society was completely dependent on this narrow class of scribes to keep the machinery of government and business running smoothly. In fact, their dependence was so complete that there was always the danger of scribes taking bribes to misread letters or tamper with government records. Oftentimes, letters were introduced with a plea or threat to the scribes reading the letters to read them accurately. We can easily imagine the palace intrigue that resulted from this situation.

Results of writing. The invention and spread of the much simpler alphabet meant that more people could learn to read. As a result society was less dependent on scribes, whose status declined accordingly. The alphabet also meant the uses of writing could expand to such things as literature,

poetry, and history. Before the alphabet the small number of scribes had to devote most of their energies to running government and business. With the alphabet, more people were literate and free to pursue more cultural applications of writing. We should keep in mind that the vast majority of people, especially the lower classes, remained illiterate until about a century ago.

The importance of writing to history is hard to overestimate. Without it, kings, priests, and businessmen would not be able to keep track of anything beyond their immediate surroundings. With it, trade routes could expand and kings could keep the tax and census records necessary for expanding their city-states into empires. Two subsequent inventions have built upon writing and expanded our capabilities as a species by quantum leaps beyond what they had been before: the printing press and the computer. Today, with the computer, we are witnessing a revolution every bit as dramatic as writing was 5000 years ago. But it is important that we keep in mind that the computer traces its lineage back to those first clay tokens used to keep rudimentary records.

The Logistics of Cuneiform Writing



Cuneiform comes from the Latin word, *cuneus*, meaning wedge. Early pictographs drawn in clay presented the problem of clay bunching up and constantly having to be cleaned off of the tablet. To solve this, scribes started using wedge-shaped styluses with which they would punch differently shaped markings into the clay in various combinations. While this saved immense amounts of time from not having to constantly clean off bunched clay, it also made writing less pictographic and harder to interpret,

thus making the scribes' profession much more specialized and vital to society.



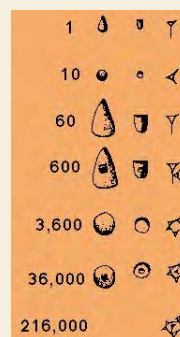
The evolution from clay tokens to pictographs through various stages of Mesopotamian ideographs of four scripts for (top to bottom) cattle, dog, metal, and oil. As inventories and the size of tablets needed to record them grew, scribes sitting in the fields found it easier to write if the tablets were turned 90°, those at the temple reading them kept them facing the same direction. As writing became less pictographic and more abstract, the new direction didn't really matter as far as understanding was concerned.

Signing your John Hancock. Since writing before the invention of the alphabet was so specialized and so few people could write, scribes would prepare documents for merchants who would then sign them with signature seals inscribed with their own unique images that no one could supposedly forge. Surviving signature seals comprise some of the tiniest, but also most exquisite, art objects from ancient Mesopotamia.



Since early writing first evolved to keep inventories, a form of early math also had to be developed as in this early Sumerian tablet. From top to bottom we see recorded 8 "gur-sag-gal" of barley, 16 "pounds" of wool and 16 "quarts" of oil. Surprisingly, a

sophisticated math evolved in Mesopotamia which could solve quadratic equations, calculate square roots and fractions, and developed algorithms for multiplication problems.



Above: The evolution of Mesopotamian numbers. Note how the larger scale of later Babylonian civilization required symbols for larger numbers.

Save your receipts.... for 5000 years. Much of what we know about the ancient Middle East comes from unbaked clay tablets recording inventories and contracts that originally were meant to be destroyed for lack of storage space. However, many of these tablets survived because of what destroyed so much else of these civilizations: fire. As palaces and temples burned, either by accident or from wars, many of these clay tablets were fired and hardened in the flames, thus ensuring their survival until discovery by archaeologists.

A Sampling of Mesopotamian Letters

While writing before the alphabet was confined to a narrow class of scribes, we do have some letters that give us a glimpse into ancient people's lives. Topics included such things as a request for a new chariot to replace the one broken on a rough mountain road and a farmer's unique dilemma of having a lion trapped in his loft, complicated by the fact that the

farmer fears he will get in trouble if the lion starves to death, since only kings could legally kill lions. (Apparently kings didn't make house calls as exterminators then.) As a stopgap until a solution is found, the farmer has thrown a couple of dead dogs and a pig into the loft to keep the lion alive.

Following are some letters giving a taste of life in the ancient Near East. We start with a letter from an ancient collection agency.

"Thirty years ago you left the city of Assur. You have never made a deposit since, and we have not recovered one shekel of silver from you, but we have never made you feel bad about this. Our tablets have been going to you with caravan after caravan, but no report from you has ever come here. We have addressed claims to your father but we have not been claiming one shekel of your private silver. Please, do come back right away; should you be too busy with your business, deposit the silver for us. (Remember) we have never made you feel bad about this matter but we are now forced to appear, in your eyes, acting as gentlemen should not. Please, do come back right away or deposit the silver for us. If not, we will send you a notice from the local ruler and the police and thus put you to shame in the assembly of merchants. You will also cease to be one of us."

"Immediately after you left for the trip, Imgur-sin arrived here and claimed 'He owes me one-third of a mina of silver.' He took your wife and your daughter as pledges. Come back before your wife and your daughter die from the work of constantly grinding barley while in detention. Please, get your wife and your daughter out of this."

Many letters concerned supernatural omens.

"As to Your Majesty's request addressed to me concerning (the incident with) the ravens, here are the relevant omens: 'If a raven brings something into a person's house, this man will obtain something that does not belong to him. If a falcon or a raven drops something he is carrying upon a person's house or in front of a man, this house will have much profit. If a bird carries meat, another bird, or anything else, and drops it upon a person's house, this man will obtain a large inheritance.'"

"The sun did not have an eclipse, it let (the computed event) pass by. The planet Venus will reach the constellation Virgo; the heliacal rising of the planet Mercury is near; there will be a hard rain and the storm god Adad will thunder. Your Majesty should know (all this)."

"...This is what he saw in his dream: (the god said) 'Do not rebuild this temple in ruins; if this temple is rebuilt I will make it fall into the river (Euphrates).' On the day after he had this dream, he did not tell it to anybody. The next day he had again the same dream; this is what the god said: 'do not (you, people of Terqa) rebuild this temple; if you rebuild it I will make it fall into the river!' Here I am sending to my lord a piece from the hem of his garment and a lock of his hair (as surety of his truthfulness). Since that very day, the man (who had the dream) has been sick."

Finally, we have this gem showing that spoiled brats are nothing new:

"I have never before written to you for something precious I wanted. But if you want to be like a father to me, get me a fine string full of beads, to be worn around the head. Seal it with your seal and give it to the carrier of this tablet so that he can bring it to me. If you have none at hand, dig it out of the ground"

wherever (such objects) are (found) and send it to me. I want it very much; do not withhold it from me. In this I will see whether you love me as a real father does. Of course, establish its price for me, write it down and send me the tablet. The young man who is coming to you must not see the string of beads. Seal it (in a package) and give it to him. He must not see the string, the one to be worn around the head, which you are sending. It should be full (of beads) and should be beautiful. If I see it and dislike it, I shall send it back!

“Also, send the cloak of which I spoke to you.”

From *Letters from Mesopotamia*, translated and edited by A. Leo Oppenheim, University of Chicago Press, 1967.

The World's Oldest Known Song



Among the elements of ancient Middle Eastern civilization that connect with us today was music. This tablet, unearthed at the site of the ancient coastal city of Ugarit in Syria, is divided by a horizontal line, with the lyrics on the top half and musical directions below. Its subject is the lament of an infertile woman:

*She [the goddess] let the married
couples have children,
She let them be born to the fathers
But the begotten will cry out, 'She
has not borne any child'
Why have not I as a true wife
borne children for you?*

While there are different interpretations of its melody and

rhythm, the tonal sounds would be familiar to us, the notes being similar to a Western-style major "Do-Re-Mi" scale, which previous theories held that the Greeks had invented. Another theory claims that it denotes a type of harmony with two or more notes being played at the same time, which would be another innovation previously thought non-existent in the ancient world.

Music was as important a part of scribes' education as literature composition, mathematics, and the construction of musical instruments.

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METALLURGY AND ITS IMPACT

Introduction. The time is around 9000 B.C.E. A Stone Age hunter picks his way through a riverbed looking for flint suitable for tools and weapons. His eye is caught by the sight of a rock that glimmers "far, as from the moon" as the Greek poet Homer would put it over 8000 years later. It certainly is not flint, but it is interesting, so he takes it home to see what he can do with it. The rock bends, but does not break or chip under the blows of his hammer stone. Our hunter can shape it into some little trinket such as a pin that will probably make quite a stir with his friends and family and be a valuable item in trade. In such a modest way was metallurgy born.

Today it would be hard to imagine our civilization without metals. After all, just about every manufactured object we have either has metal in it or was made by metal machines and transported on ships, trains, or trucks made of metal. Without metals, we would literally be living back in the Stone Age. The development of metallurgy was a long, and sometimes devious process that involved five basic steps.

1) Identifying and discovering its usefulness.

There is little in nature to suggest the existence of metals or their usefulness. Our Stone Age hunter managed to find a small copper ingot. Unfortunately, metals rarely occur in such a pure state. Instead, we find them mixed with other minerals in rocks called ore. Ores usually do not present the appearance of anything resembling metal, so the question arises as to how people discovered them. As with so many discoveries, it was probably by accident. One likely scenario is that potters would put some minerals containing copper on the pottery to give it a glaze when fired. The kiln's heat would separate the copper from the rest of the glaze, leaving little beads of copper lying around. Further experiments would lead to the realization that other rocks were also ores containing copper.

2) Locating metals in quantity. Our potters, wanting larger amounts of the copper ore, find there is little to be found lying on the surface. As a result, they start digging near the surface deposits and find more copper ore in the ground or the sides of hills. Eventually, they will find that copper mixes with different minerals to produce a variety of ores rarely resembling each other.

3) Mining the ores. Now that they know where the ores are, they have to mine them. This is one of the more unpleasant aspects of ancient metallurgy. In fact, work in the mines will become the most brutal and demoralizing job in the ancient world, being reserved for slaves and condemned criminals. It is unfortunate that the glories of ancient civilizations and the modern civilizations later built upon them would have to depend so much on the intense suffering of slaves whose life expectancy in many of the mines was no more than six months to a year.

4) Smelting the metal. Smelting means heating an ore to a high enough temperature that the metal will separate from the rest of the ore, known as slag. As stated above, the first incidence of smelting was probably by accident in a pottery kiln. Over the years, metal smiths would come up with various innovations that created hotter fires and the ability to smelt stronger metals such as bronze and iron. Bellows were invented for blowing air into the fire. The kiln was enclosed to trap heat. And charcoal, partially burnt wood that burns at a higher temperature than regular wood, was developed as a fuel.

5) Shaping the metal into something useful. There were two basic methods for doing this. One method was to pour the molten metal into molds. The other was to pound the metal into the desired shape, such as a sword.

The ages of metals. There were three basic ages of metals in the ancient world, named after the dominant metal used for tools and weapons in that day and age: the Copper Age (c.4000 - 3000 B.C.E.), the Bronze Age (c.3000 - 1000 B. C.), and the Iron Age (c. 1000 B.C.E. to the present). They followed this sequence from the easiest metal to smelt and shape (copper) to the hardest to smelt and shape (iron).

The Copper Age saw fairly limited use of copper in the Near East, because copper is a soft metal and not useful for many tools and was also quite expensive for the average person. Therefore, most people continued using stone tools.

The Bronze Age, during which such civilizations as Mesopotamia, Egypt, and Minoan Crete reach their zenith, saw metals come into their own in the Near East. Bronze is an alloy (mixture) of copper and another metal, usually tin, that is much stronger

than either of its components. The first bronze used was a natural alloy of copper and arsenic. Unfortunately, arsenic fumes are deadly, and blacksmiths found it quite unpleasant to work with this variety of bronze. But it did give them the idea of mixing copper with other metals to develop a bronze of copper mixed with a small amount of tin, usually only 1-4% of the total mixture. However, even that much tin was scarce and had to be sought out in Europe and central Asia. This was important because trade routes spread ideas as well as goods. Therefore, we see civilization spreading to Europe and central Asia by way of the tin routes. One drawback of Bronze was its expense, which made it available to a limited number of people. As a result, Bronze Age civilizations were highly aristocratic societies of narrow classes of nobles and priests ruling over masses of peasants still using stone tools.

Around 1200 B.C.E., a massive upheaval of nomadic peoples swept through the civilized Near East, toppling or severely weakening the older cultures in that area. The Hittites in Asia Minor (modern Turkey) and Mycenaean Greeks of Trojan War fame disappeared from history at this time. In fact, the Trojan War was probably part of this upheaval. As far as our story is concerned, this wave of invasions seems to have disrupted the trade routes that supplied the Near East with its bronze. This put a rather abrupt end to the Bronze Age.

By this time, people were quite hooked on the idea of metals, and started looking for a substitute for bronze. That substitute was iron. However, iron presented a severe drawback. It has a smelting temperature much higher than ancient furnaces could obtain. All these furnaces could produce was a spongy mass called bloomery iron. This had a tensile strength little better than copper. Fortunately, smiths kept working with bloomery iron and learned how to use it. Hammering out the impurities led to an improved bloomery iron that was much better than copper, but a poor substitute for bronze. Heating it next to charcoal made the carbon in the charcoal combine with the iron. This created a crude form of carburized steel with a tensile strength twice that of bronze. Even without being able to smelt iron, ancient metal smiths had found a way to make it useful.

Iron has been called the democratic metal because it is so plentiful and so many more people could afford it compared to those who could afford

bronze. It could well be that iron is the metal that pulled most people out of the Stone Age. It was not until the masses could arm themselves with iron that democracy could evolve in such places as the Greek city-states. Although we today use many other materials such as plastics, steel made from iron is still the metal that we make our machines from. Even today, we live very much in the Iron Age.

Metals have been very important to civilization throughout history by creating tools that could do old jobs better than ever and new jobs never done before. For example, iron tipped plows in medieval Europe would lead to more land under cultivation, more population, and the rise of towns and civilization in Europe. Metals allowed for more extensive clearing and exploitation of forests since an iron axe can fell trees much faster than a stone axe can. The better housing and food supplies made possible by metals led to a higher standard of living for people who could be better fed and housed because of metal tools.

Metals also created new sources of wealth in their own right. The value that people placed on gold, silver, and even bronze led to a common medium of exchange that everyone agreed was valuable. This made trade much easier. For example, a leather tanner wanting grain might not be able to find any farmers that wanted to trade their grain for leather. But if the tanner could sell his leather to a third party for silver, any farmer would be willing to trade grain for the tanner's silver because everyone recognized silver as something worth having. As a result, all three parties got what they wanted without having to take the trouble of finding someone with exactly what they needed and willing to trade exactly what they wanted. Precious metals made trade easier, expanded trade, and usually benefited all parties involved. As a result, just about everyone's standard of living went up.

One final stage was the invention of coinage around 700 B.C.E. The advantage of coinage was that a government guaranteed the weight and purity of its metals. As a result, people did not have to worry about being cheated with fixed scales or ingots of gold or silver debased with other less valuable metals. The higher level of trust coinage generated further expanded trade.

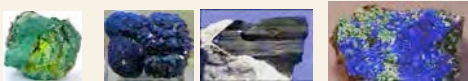
Metals also led to problems. The new wealth they created triggered more wars and conflicts over that wealth. The need for charcoal as fuel led to

deforestation, erosion, and possibly climactic changes in such areas as Asia Minor and the Indus River valley. One theory suggests that the Indus River civilization declined because deforestation caused a hotter, drier climate and crop failures. For the first time, human use and misuse of power was backfiring against us. Metals have indeed proven to be a mixed blessing, but one we would not want to live without.

With the end of this unit around the year 1000 B.C.E., we see the human race has attained most of the skills that will help it survive for several thousand years. Not until the Industrial Revolution in the late 1700's will we see many new technological innovations changing people's lives. Until that time, most innovations will be refinements of the skills first developed in the centuries when civilization first emerged.

Identifying Metals in their Natural State

Except for gold (most metals come mixed with other minerals in what are called ores. As the pictures below should indicate, just identifying metals in their natural states was an exceedingly difficult task, especially if one didn't even know what he was looking for to begin with.



Four different varieties of copper ores: (l. to r.): green malachite, two types of azurite, and malachite mixed with azurite



Three different types of iron ore (l. to r.): limonite, goethite, and magnetite



Silver ore, the one on the right being mixed with gold and quartz

The “Gates of Hell”: Ancient Mining
No benefits or health insurance either.
Mining was such an awful job that in Latin the expression “*in metellum*”, literally go to the metals (i.e., mines), was like telling someone to go to hell, because work in the mines was a virtual hell on earth. The lead mines of Sardinia were especially notorious in this respect. In addition to being tightly shackled, newcomers had one eye blinded and the tendons behind one knee cut to hamper escape attempts. Shifts were four hours on, four hours off, around the clock, every day of the year, until the miner died from overworking, malnutrition, physical abuse, and/or suicide. A common form of suicide was suffocation by stuffing clay into the nostrils. Keep in mind that slaves wouldn't be given guns or knives to kill themselves, since they might find other uses for them. Amazingly, the typical life expectancy of these miners was estimated at fourteen months.

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FARMERS, NOMADS, AND THE SPREAD OF CIVILIZATION

History until c.1500 C.E. largely involved the relationship between two ways of life that most people followed since the birth of agriculture: nomadic herding and settled farming. Environment largely determined how these peoples lived, with wetter climates or river valleys favoring settled farming and drier climates leading to the nomadic way of life. These peoples often co-existed peacefully, exchanging goods and ideas in peaceful trade. But at other times, clashes would frequently occur either because of population pressures forcing the nomads to try to take more land, nomadic jealousy of the richer civilization's goods, or just mutual hostility between the two ways of life.

Each side had its own advantages in such conflicts. On one hand, civilized peoples usually outnumbered nomads, since agriculture could support more people than nomadic herding could. Also, their armies generally had better organization, discipline, equipment and technology. On the other hand, the nomads, being more involved with animals, had more meat and protein in their diets, making them bigger and stronger than the farmers.

Probably even more decisive was the nomads' mobility, which let them choose the time and place in which to attack the more settled farmers and cities. Mobility also made it harder for slower civilized armies to catch them. Finally, since nomads often lived on land unsuited to farming, it was not usually worth the civilized peoples' time and trouble to try and conquer them, even if they could catch them. This, plus their size, often gave nomads a psychological edge against the farmers, which in any given battle, could be the most decisive element in determining which army would break and run.

Still, as long as a civilization was well governed, its economy healthy, and its armies well trained and disciplined, it was very difficult for a few nomads to prevail. Not until civilization experienced internal troubles such as civil wars, famine, or a breakdown in the government and military organization, could the nomads strike

effectively. Typically, they would do this in small-scale isolated attacks, not in one overwhelming wave. Repeatedly raiding the farms, stealing the livestock, and burning the crops, the underlying basis for civilization, over a period of years would trigger a further breakdown in the government, economy, and defense. This, of course, would lead to further raids, more serious breakdowns, and so on. At the same time, the nomads often infiltrated civilization as merchants, settlers, slaves, and mercenaries (professional soldiers). Eventually, the civilization would be so weakened that the nomads could take over. However, this was just the start of a cycle of civilized decline, revival, and expansion that would repeat itself throughout most of recorded history.

After a nomadic takeover, civilization would continue to decline either because the nomads did not care to keep it going, or they cared but just did not know how. What largely determined their attitude toward civilization was the length of contact they had had with it. Generally the longer the contact with civilization, the more it influenced the nomads and made them want to try to continue it. For example, the Saxons who conquered Roman Britain had little prior contact with the Romans and were quite willing to obliterate any signs of Roman civilization they found. On the other hand, such tribes as the Franks and Visigoths who had been exposed to Roman culture for two centuries tried to adopt Roman titles, copy Roman government, live in Roman style villas, wear Roman togas, and even speak Latin.

However, even if the new nomadic masters tried to carry on the old civilized ways, they usually failed because they did not fully understand how the government, record keeping, and technology worked. As a result, the civilization would continue to break down despite their efforts. The damaged economy might not be able to support schools to train civil servants, or the new masters might not even understand the schools' importance. Therefore as civil servants died off, there would be no new civil servants to take their place. Such vital public works as roads and irrigation canals would not be kept up, and the economy would further decline, making it even harder to maintain an efficient

government. For whatever reasons, either neglect or the inability to understand how civilization worked, the decline would continue for decades, generations, or even centuries, as was the case with Europe after the fall of Rome.

Despite all this, there were forces working in favor of civilization's recovery. First of all, extended contact with civilization gradually made the nomads more willing to try to preserve it. This at least slowed the rate of decline. Also, the greater material comforts of civilization, such as sleeping on a soft bed or in a warm dry house, might change the nomads' attitudes toward civilized life. Finally, and possibly most important, many nomadic men would take civilized wives. Their sons, although part of the nomadic ruling class, would also be influenced by their civilized mothers to be more accepting of civilized ways. They might also marry civilized women and further dilute the nomadic influence in their children. Gradually, the distinction between the nomads and the civilized people they ruled would fade, and with it any nomadic hostility toward civilization.

Gradually, the semi-nomadic masters, with their still somewhat restless nomadic spirit, would rebuild civilization to its previous level and expand it to new frontiers, both culturally and geographically. Of course, the revived civilization would meet new nomadic tribes, and the process would start all over again: new clashes with nomads, their eventual victory in a time of civilized weakness, the further decline of civilization, its revival largely through intermarriage, and its further expansion to new frontiers.

This goes a long way toward exploring much of human history. Of course, each situation had its own particular twists and turns. But the pattern has repeated itself again and again, spreading civilization from such isolated centers as Egypt, Mesopotamia, India, China, Mexico, and Peru. For example, from Mesopotamia and Egypt, civilization would spread to Syria and Palestine, up to Asia Minor, and from there to Greece. The Greeks would bring civilization to Rome and the Western Mediterranean. From there it would spread to northern Europe, and eventually the Americas. If

we add other important elements such as colonization and trade, we can view history, for better or worse, as the gradual but steady march of civilization across the planet.

Farmers and Herders: A Natural Symbiosis



Sheep passing through Madrid in 2010 as part of the Madrid Transhumance Celebration

Relations between farmers and nomads weren't always bad. Normally, nomads could migrate with their sheep across farmland after the harvest, the sheep grazing on the stubble and in return leaving droppings to fertilize their land. Nomads had to be careful not to compete with each other for grazing routes, since the second tribe would find the land grazed out. That is why Abraham and Lot agree to split Palestine in the book of Genesis.

Farmers vs. Herders



***Cain Flying before Jehovah's Curse* by Fernand Cormon, 1880**

It's all a matter of point of view. Since almost all the records we have about nomads come from the pens of civilized writers, we get a very negative view of them as "barbarians". However, the early books of the Old Testament give us a rare look at things from the nomads' point of view. Most notably, in the story of the first murder, it is Cain, the

farmer, who kills Abel, the righteous nomadic shepherd.

A Sumerian myth reflecting the cycle of conflict and reconciliation between farmers and nomads is that about a contest between a shepherd, Dumuzi, and farmer, Enkidu, for the hand of Inanna, the goddess of love. She chooses Enkidu for the fine clothes he has to offer but gives the rejected Dumuzi grazing rights, thus making peace between them.

Royal "Goose Chases": Trying to Catch Nomads



Nomadic horsemen using hit and run tactics

Trying to catch the nomads on their home turf, especially after they had adopted the horse and gained tremendous mobility, was generally a futile effort. For example, around 500 B.C.E. the Persian king, Darius I, launched a massive campaign against the nomadic Scythians in the North. The Scythians, being expert horsemen, constantly eluded the Persians, drawing them deeper and deeper into the steppe, ambushing foraging parties and stragglers, and just making life difficult for the invaders until Darius finally gave up and took his worn out army home. The Chinese, having even greater and more chronic problems with the nomadic horsemen to the North, launched similar campaigns, generally with the same costly result. In the end, they just built a big wall across their northern border to keep intruders out.

Even whole tribes with unmounted women, children, and old people could prove extremely difficult to track down. For example, Chief Joseph and 800 people of the Nez Perce nation outmaneuvered and battled 2,000 U.S. cavalry in an 1170-mile trek that spanned the states of Oregon, Washington, Idaho, Wyoming, and Montana as they tried to escape into Canada. They were finally tracked down and forced to surrender, but only after a five-day battle in freezing conditions that killed most of their leaders and left the women and children freezing.

Mother Knows Best

The influence of mothers on their sons in nomadic society is implied by the Greek historian, Herodotus, who tells us that Persian fathers had virtually nothing to do with their sons until age five. That way, if the son died, as so many children did back then, the father would be spared grief at the loss.

Since nomads typically took civilized women after conquering a civilization, those women most likely raised sons of such unions during their early impressionable years, teaching them their own (i.e., civilized) language and culture, which gradually worked its way into the culture both those take personally by nomadic masters and those staying with and still having children by men of their own population, heavily outnumbered nomadic women. Therefore, even if the civilization's infrastructure fell apart, civilized cultural influences (language, religion, etc.) would persist on two levels: the population in general and among the ruling classes.

Rapid transition. To show how quickly nomads could be assimilated into civilized culture, only one generation after the Vikings founded the duchy of Normandy in 911 C.E., the Duke of Normandy could not find anyone who remembered the old Norse language to teach to his son.

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WAR AND PEACE IN MESOPOTAMIA (c.3000-539 B.C.E.)

"Great powers die of indigestion"-- Napoleon

Introduction: the environment. In modern day Iraq, along the banks of the Tigris and Euphrates Rivers, lie the deserted ruins of a civilization that lay forgotten for centuries until its rediscovery in the 1800's. Looking at these ruins, one finds it hard to imagine a thriving civilization full of people haggling in the market place, fighting wars, dancing in festivals, celebrating births and marriages, mourning their dead, and going about their daily routines much as we do today. Yet, that is exactly what went on here when these were not ruins, but the center of the first human civilization.

Every culture is largely a product of its environment and must be understood within the context of that environment. We use the term *geopolitics* to describe an area's geography (physical and climatic) and the effects of that geography on the area's history and politics. Mesopotamia, from the Greek words meaning "land between the rivers," presented a harsh environment to inhabit, but also an ideal one in which to build the first civilization. Its geopolitics consisted of three basic elements:

1) *It was a hot dry river valley.* This forced the inhabitants to organize irrigation projects that led to civilization.

Ancient climate change. Massive expansion of irrigation systems by the Third Dynasty of Ur, rather than being a sign of the dynasty's prosperity, probably reflects a drier climate. Expanded irrigation, which brought salts in the groundwater up into the soil, strained the environment's ability to support the population and probably weakened the Dynasty's ability to contain nomadic raids.

2) *It had virtually no natural resources except for mud and water.* This forced its inhabitants to be very resourceful. Basically, just about everything about early Mesopotamian civilization was made from mud: its houses, temples, palaces,

fortifications, writing tablets, and the crops which were traded for the resources needed to build up this civilization to new heights. Underlying all the glories of this civilization was mud.

Ancient beer. Since brewing helped preserve the barley from spoiling, some historians believe that beer made from barley provided the Sumerians a significant part of their calories as well as a catalyst for barroom brawls.

3) *It was flat and open terrain with virtually no natural barriers.* This led to jealous nomadic neighbors constantly invading Mesopotamia, either breaking up already existing empires or forcing the Mesopotamians to build strong empires at each other's expense in self-defense. Mesopotamian history was nothing if not violent.

Sumer: myth and history (c.2800-2350 B.C.E.). The Sumerians were the people who built the first civilization, living in the southeastern end of Mesopotamia known as Sumer. Our knowledge of the very early Sumerians is much like our knowledge of the early Hebrews in the Biblical book of Genesis. In each case, the dividing line between dim misty legends and a clear historical account was a great flood. In the Bible before the flood, we find patriarchs who loom larger than life, living for well over 900 years each and coming across more like stiff and lifeless statues than real human beings. The same is true of Sumerian heroes or patriarchs before their flood (c.2800 B.C.E.), except they live for tens of thousands of years and seem even more fantastic than the Biblical patriarchs. After the great flood of 2800 B.C.E., we see more written records and, consequently, real personalities emerge. The Bible is the same way after its great flood and Noah. The larger than life patriarchs give way to more human ones, such as Abraham.

The myths that often fill the gaps in the historical record can help us understand real history. If we carefully interpret them, they can tell us about historical events and the values that civilization held. For example, the story of Cain and Abel in the Bible is seen by some as symbolic of the ongoing struggle between farmers and nomads. Only this time it is told from the nomadic Hebrews' point of view rather than from the farmer's point of view. Thus the nomadic shepherd Abel is good and his farmer brother,

Cain, is the murderer. In Mesopotamian myths, the roles are reversed. The many similarities between Biblical stories and Mesopotamian myths suggest early contacts between the two cultures. Both have stories of a great flood and of a paradise, or Garden of Eden, from which humans are driven because of their folly. If a new god replaces an older one, this often signifies that one culture has conquered another. Such was the case when the Babylonian Marduk replaced the Sumerian Enlil as the chief Mesopotamian god, signifying Babylon's conquest of Sumer.

When the Sumerians finally emerge into history, we find them divided into thirteen major city-states who spent a good deal of their time fighting each other. Although they shared a common religion centered around their holy city of Nippur, that religion seems to have done more to spark wars than prevent them. Each city-state had its own patron god or goddess that made it feel superior to the other city-states. Each city-state also wanted to control the holy city of Nippur, which led to constant fighting that caused Nippur to change hands nineteen times in twenty-four years! For centuries, Sumerian chariots and infantry battalions ranged across Mesopotamia, raising its dust in battle. Whenever one city-state, such as Kish, would gain the upper hand and seemed on the verge of conquering Sumer, the other cities would gang up on it and restore the balance of power. And so it went on for centuries.

The Akkadian Empire (c.2350 - 2250 B.C.E.).

It should come as no surprise that all this fighting wore down the Sumerians and left them open to attack from one of the many nomadic desert tribes surrounding them. In this case, it was a people known as the Akkadians. The story goes that its founder, Sargon of Kish, much like Moses, was set afloat in a reed basket as a baby to save his life. He was found by the royal gardener and raised in the palace where he rose quickly to power and influence as the king's cupbearer. At last, he murdered the king and seized the throne, calling himself Sargon, which meant "legitimate king." What this legend most likely tells us is that the Akkadian takeover of Sumer was a long process of gradual infiltration by the Akkadians into Sumerian society rather than the result of one big invasion. The fairly smooth transition to power also suggests that the Akkadians had absorbed much of Sumerian culture and become

civilized. Thus the Akkadian Empire signified the spread of civilization more than its overthrow.

Sargon managed to take over all of Sumer and probably gave it a greater degree of peace than it had known for most of its history. He used Akkadian governors and garrisons (occupation armies) to keep the city-states in line. He would also take hostages and tear down the walls of any rebellious cities to ensure their good behavior.

Once his hold on the Sumer was secure, Sargon fought against the ever-troublesome Elamite tribes in the mountains to the east. He then marched northwestward, subduing all of Mesopotamia and even reaching the Mediterranean Sea, which seemed like the ends of the earth to people then. To commemorate this, Sargon took the title "King of the Four Quarters" (of the known world). His realm was history's first empire.

Sargon's grandson, Naramsin, further extended Akkadian power. However, he supposedly committed the fatal mistake of sacking the holy city of Nippur, which resulted in a series of revolts. These revolts weakened the Akkadian Empire enough to allow some other nomads, the Gutians, to attack and take over. Agade, the Akkadian capital, was so thoroughly destroyed in this turmoil that its location is still not certain.

Sumer's last flowering: the Third Dynasty of Ur (c.2100-2000 B.C.E.). Partly, through a process of absorbing the nomadic Gutians and partly through popular revolts, Sumerian civilization revived in one final flowering known as the Third Dynasty of Ur. Much of Sargon's old empire was reunited, while new cities and expanded trade routes spread civilization northward. The most impressive monument of the age was the ziggurat of Ur. It was 120 feet high with a base of 260 feet by 175 feet. Even today, its mere ruins strike us with awe.

Once again, nomadic tribes, this time the Amorites, weakened and eventually overthrew the Sumerians. As with the earlier Sumerians, civil wars and revolts set them up for this. Gradually, the nomads settled down and new city-states rose up in the north. One of these city-states would build a new civilization grafted upon the old. That city was Babylon.

Hammurabi and the Babylonian Empire

(c.1750-1600 B.C.E.) Certainly one of the most famous figures in Mesopotamian history was the Babylonian king, Hammurabi. When he came to the throne around the year 1750 B.C.E., his city, Babylon, was just one of several city-states vying for power in Mesopotamia. Surrounded by aggressive and warlike rivals, and with a territory only fifty miles in diameter, Babylon needed a shrewd and tough king. Hammurabi fit the bill marvelously.

Over the next twenty-five years, this Babylonian king masterfully maneuvered his city-state among all its hostile neighbors. At one point, he would ally with one state to eliminate another. Later on, he would make a new ally to help him destroy the first. In such a way, he steadily expanded Babylon's borders and swelled its army's ranks with troops supplied by subject cities. One final showdown with the city-state, Larsa, left him master of Mesopotamia and "King of the Four Quarters."

It is one thing to conquer an empire. It is an entirely different thing to hold it together. Hammurabi proved himself an excellent ruler as well as a conqueror. Following the example of the Akkadians, he put governors and garrisons in the subject cities to prevent revolts. But he clearly saw that those measures alone would not be enough to build a lasting empire. Therefore, he worked to establish a code of laws and one language for government and business to tie his empire together. He also constructed public works projects, such as temples and irrigation canals, throughout his empire. By providing jobs and a greater degree of prosperity, he hoped to build loyalty to Babylon or at least reduce resentment to his rule if they saw him working for their welfare.

Little is known about the Babylonian Empire after Hammurabi's death. It seems that his empire entered a period of decline after his death. Usually, the reasons for an empire's decline are numerous, and they interact with each other in a way that makes them feed back upon one another. This creates more problems, making them interact even more intensively, and so on. For example, Hammurabi's building and irrigation projects were very expensive and ate up a good deal of royal revenues. This left the crown with little money to pay its local officials. That led to a greater degree

of freedom for those officials. As a result, their abuses grew, and royal revenues declined further. This process would then repeat itself with greater intensity again and again.

This feedback also led to even more problems. Extra officials were created to gather more taxes, which added further to the burdens of society. In order to pay those extra taxes, farmers started abandoning the two-field system, irrigating and planting both fields each year instead of leaving one fallow. The extra irrigation raised the water table and poisoned the soil with minerals such as salt, while the extra planting without giving the land any rest exhausted the soil's fertility. Crop yields, the underlying basis for civilization, went down and intensified all the other problems feeding into and off of the agriculture. Bit by bit, Babylon's empire crumbled to pieces. And waiting in the wings, as always, were the nomads. Only this time they had a new and frightening weapon with which to terrorize the Near East.

The horse and chariot (c.1650 B.C.E.). As far back as the Sumerians, Mesopotamians had driven in war chariots pulled by wild donkeys, called onagers. However, the old Sumerian chariot had been quite cumbersome, with four solid wheels that added weight and reduced speed and mobility. As a result, such a chariot probably did not play too decisive a role in Mesopotamian warfare. Then, around 1650 B.C.E., nomads from the north appeared with a new type of chariot. It had two wheels mounted on the back, which made it more maneuverable. Also, its wheels were spoked, not solid, making it lighter and faster. Finally, it was pulled by a strange new beast, the horse, which was faster and more powerful than the onager.

Armed with the horse and chariot and the much more powerful composite bow, the northern nomads burst upon the civilized world with a ferocity that sent its kingdoms reeling back in confusion for a century or more. Peasant infantry were totally unprepared for the spectacle of maybe hundreds of chariots drawn by these strange beasts bearing down on them, stirring up clouds of dust, and making strange and terrifying noises. At times, they broke and ran at this sight alone, leaving their cities as open prey to the victorious nomads. All across the Near East, one civilization after another fell prey to the nomads armed with this terrifying new weapon. A people

known as the Hyksos conquered northern Egypt. The Hittites overwhelmed the cities of Asia Minor and even raided as far as Babylon, sacking it in 1595 B.C.E. Another people, the Kassites, conquered Babylon and ruled it more permanently. Further east, the Indus River civilization fell to the Aryans, also armed with the horse and chariot. For a century or more civilization was thrown into turmoil.

Eventually, these nomads would follow the example of other nomadic conquerors by adopting civilized ways and merging their identities with the cultures they had conquered. Civilized people had also learned a lesson: the value of the horse and chariot. For several centuries, the elite corps of Near Eastern armies ruling the battlefields of the Near East would be their battalions of horse drawn chariots.

The First Assyrian Empire (c.1365-1100 B.C.E.). Assyria lies at the northern end of Mesopotamia where many of the trade routes of the Fertile Crescent and the Near East converged. This made Assyria a prosperous land for trade. It also was a dangerous place, since trade routes are also convenient invasion routes. As a result, Assyria had an especially warlike history, and its people were known for two occupations: trade and warfare.

Since they lived in such a rough environment, the Assyrians became quite capable empire builders. Their first empire seems to have encompassed most, if not all, of Mesopotamia, and bordered the newly emerging civilization and empire of the nomadic Hittites. They also conquered the kingdom of Mitanni, originally founded by another chariot driving group of nomads, the Hurrians.

Once again, a new wave of nomads swept in with a devastating ferocity that toppled civilized empires and kingdoms far and wide. To the northwest, a mysterious people known as the Sea Peoples overwhelmed the Hittite Empire. Some of these Sea Peoples, the Peleset (the Biblical Philistines), seriously weakened the Egyptian Empire and conquered Palestine, thus giving Palestine its name. To the west of the Hittites, the Mycenaean Greeks fell to Dorian invaders from the north. The Trojan War was probably part of these upheavals. The Assyrians themselves were not immune, being conquered by the Aramaeans

coming out of the desert. Among the results of these invasions, the trade routes bringing tin to the Near East were cut. This brought the Bronze Age to an abrupt halt and ushered in the Iron Age.

The Second Assyrian Empire (911-612 B.C.E.). The Assyrians were a tough resilient people. Once the dust had settled from the latest round of upheavals and the nomads had started to assume a degree of civilization, the Assyrians reasserted themselves and built what amounted to the greatest Near Eastern Empire up to that point in history. At the height of their power, they ruled over Mesopotamia, Syria, Palestine, and Egypt. There were several reasons for their success as empire builders.

1) *They had a plentiful supply of iron with which to equip their armies.* Other less well-endowed peoples, such as those of Egypt, would be at a decisive disadvantage when fighting the Assyrians.

2) *Refinements in siege warfare.* Up to this point in history, about the only effective method for besieging a city was to starve it into submission. This made sieges long, tedious, and often unsuccessful endeavors. The Assyrians changed all that. They designed rolling siege towers from which they could assault city walls, and battering rams that could pound mud brick walls to dust. Armed with such weapons, the Assyrians were able to reduce city after city and establish a much firmer control over their empire.

3) *A deliberate policy of terror to keep people obedient.* The Assyrians are largely remembered in history as being extremely cruel. To a large extent, this reputation is justified. Cities daring to defy them in a siege or subject peoples desperate enough to revolt often suffered large-scale massacres. The Assyrians themselves who wanted to scare other people from defying them may have exaggerated the extent of this bloodshed. Also, the greater degree of success in besieging cities gave them more opportunities to sack cities than other peoples had. Keep in mind that most ancient peoples indulged in wholesale plunder and slaughter of cities that had tried to resist them and failed. Another Assyrian terrorist tactic was to uproot rebellious peoples en masse and settle them away from their home in order to disorient them in strange surroundings and prevent further revolts. The Ten Lost Tribes of Israel were lost by this process of being resettled

in a new land and gradually losing their culture and identity in the new cultures surrounding them. Contrary to their expectations, the Assyrians' terrorist policies seem to have inspired more revolts than fear.

Mass deportation of peoples was seen as especially effective since gods were typically associated with a place. Thus removing a people from their homeland removed them from the protection of their gods. When more universal religions, such as Judaism and Christianity developed, the idea of god being confined to one place faded away.

4) ***Cavalry.*** At first the horse was seen as useful only for pulling chariots. Eventually, some nomads caught on to the fact that horses could be ridden. This involved solving several problems. First of all, the horse had to be bred up to a size where it was capable of carrying a man. Secondly, it had to get used to someone riding it, since no animal takes kindly to another animal jumping on its back. Finally, people had to figure out where to sit. For some reason, maybe height, men first rode the higher, but precarious, rump. Finally, someone figured out that the lower, but safer, back was a better place to ride.

Nomads to the north especially took to the horse. The speed with which the Plains Indians adapted to the horse when the Spanish introduced it to this continent shows what an impact it probably had on other nomads as well. Nomadic horse archers, controlling their horses with knee pressure, gained a mobility that civilized peoples could never match. Supposedly, a Comanche Indian could fire twenty arrows a minute while hanging under the protection of his horse's neck and moving at a full gallop.

When large civilized armies, such as that of the Persian King, Darius I, tried to conquer such nomads, they usually failed miserably in just trying to catch them. One measure to contain the nomads was the maintenance of long expensive fortified frontiers, such as the Great Wall of China, to stop their raids. Occasionally, the problem of nomadic raids would become a serious threat when various nomadic tribes would be united into one empire, such as that of Attila the Hun or Genghis Khan. Luckily for civilization, such empires were usually dependent on the

personality and leadership of their founders and fell apart soon after their deaths.

The Assyrians were the first civilized people of the Near East to mount the horse for military purposes. Cavalry were more maneuverable and versatile than chariots. For one thing, they could operate on rougher ground than chariot wheels could. Possibly more important, riding the horse led to much faster communications. This allowed kings to build and hold much larger empires than before, since they could learn of revolts and react to them much more quickly. The fact that the Assyrian Empire was three times bigger than any empire, which preceded it, was probably due in large part to the horse.

Assyria administered its empire somewhat harshly but efficiently. States close to the Assyrian homeland answered directly to Assyrian governors and garrisons. States farther away, such as Egypt and Israel, could continue to exist under their own rulers as long as they paid tribute and loyally supplied troops for Assyrian wars. If they rebelled, massacres or mass deportations would result, followed by direct Assyrian rule.

Assyrian history was quite turbulent. It was under constant pressure from nomads to the north, and always quelling revolts within its empire. People objected as much to the Assyrian merchants who flooded their market places as they did to their army and ruling methods. As the Biblical prophet, Nahum put it: "Thou hast multiplied thy merchants above the stars of Heaven" (Nahum III, 16). Assyria's subjects apparently had a wide variety of complaints against their masters.

As long as the empire had able and energetic kings, it survived all these wars and revolts, although they must have been a terrible strain on Assyria's economy and resources. The death of the last strong king, Ashurbanipal, in 625 B.C.E., touched off one last round of popular revolts and invasions that the Assyrians were not destined to survive. An alliance of Babylon with the nomadic Medes to the north finally brought the Assyrian Empire crashing down in ruins. In 612 B.C.E., despite heroic resistance to the last, the Assyrian capital, Nineveh was taken and destroyed. The biblical prophet, Nahum, certainly expressed the feelings of many when he wrote: "Woe to the bloody city!...All who hear of your destruction shall clap their hands over you; for upon whom

has your wickedness not passed continuously." Such celebrating would prove premature, for the Israelites and others like them would soon be trading one master for another. One state that recognized the danger was Egypt. Strangely enough, it allied with the hated Assyrians to stop the advance of a resurgent Babylon. The issue was decided at Carchemish in 605 B.C.E., the last great chariot battle in history. The result was a decisive victory for the Babylonians, who largely took the place of Assyria in the Near East.

The Neo-Babylonian or Chaldaean Empire (612-539 B.C.E.). In dividing the spoils of victory, the Medes got the vast lands to the north, while Babylon got the more compact, but richer and civilized lands of the Fertile Crescent. The Neo-Babylonian or Chaldaean Empire, as it is variously called, encompassed most of the old Assyrian Empire with the exception of Egypt. This period saw Babylon at the height of its power and glory.

Babylon's most famous king during this period was Nebuchadnezzar. His main concern was controlling the Western end of the Fertile Crescent: Syria, Phoenicia, Palestine, and Egypt. He never did conquer Egypt, although it no longer presented a threat to him. The remaining two tribes of Israelites in Judah made the mistake of rebelling. As a result, Jerusalem was sacked and destroyed in 587, and the Jews were hauled to Babylon for a captivity that lasted some seventy years. Fortunately, they kept their identity and were allowed to return home by the Persians who overthrew the Babylonians.

One other people Nebuchadnezzar had trouble with were the Phoenicians who had helped the Jews in this revolt. Although most Phoenician cities surrendered, Tyre did not. This city sat on an island about one-half mile from shore. Supposedly, Nebuchadnezzar laid siege to Tyre for thirteen years without taking it. The main reason was he had no navy with which to blockade Tyre and cut off its supplies. Finally, the Tyrians paid Nebuchadnezzar some tribute if he would leave them alone.

The showpiece of the empire was Babylon, which contained some of the most wondrous sights of the ancient world. The Greek historian, Herodotus, has given us a second hand description of the city at its height. Even taking into account

that Herodotus exaggerated a bit, we get a picture of a marvelous city. The Euphrates River split the city into two halves that were connected by a 400-foot long masonry bridge. A massive double set of walls protected the city from invaders and floods. Herodotus claimed a four-horse chariot could drive on top of the battlements and have enough room to turn around! The main ceremonial gateway was the beautiful Ishtar Gate. It was made of blue glazed bricks and decorated with relief sculptures of various animals. The palace complex covered thirteen acres and supposedly the famous Hanging Gardens of Babylon were placed here. Their purpose was to comfort the queen who was homesick for the lush hills of her homeland. Finally, there was the fabled Tower of Babel, the largest and most elaborate ziggurat of its day. It was eight stories high and, according to Herodotus, the sanctuary on top was filled with tons of gold.

Babylon's final glory was short lived. Various factors combined to weaken it and set it up for a final fall. For one thing, religious disputes over trying to replace Marduk with the moon god split the empire. Even more important were economic factors. Babylon seems to have lost much of its trade because the Medes cut the overland routes to the north. The southern sea routes also suffered when the ports were silted up, preventing ships from coming in or going out. All of these triggered a feedback cycle much like that which wrecked Babylon after Hammurabi's death some 1200 years before. Heavy expenses from building projects and declining revenues from trade caused the government to raise taxes. This extra burden on the peasants caused them to abandon the two-field system and farm and irrigate both fields each year. The soil again became salinated as a result of too much irrigation, which raised the water table and brought salt with it, poisoning the crops in the process. This damaged the economy and lowered tax revenues even further, bringing on more tax increases and so on.

The final blow came in 539 B.C.E. when the Persians took Babylon in a night attack. The center of power shifted away from Babylon to the Persian Empire in the north. Mesopotamia's glory days were over, although its culture heavily influenced the Persians, who in turn heavily influenced Muslim civilization, the dominant culture in the Near East today. As a result,

Mesopotamia is very much with us. Its culture has just changed and evolved with the times.

The "House of Terror" and other Religious Beliefs and Practices

The house of terror. The most impressive monument of the age was the ziggurat of Ur. Its Sumerian name, *E-temen-nigur(u)* means "house whose foundation creates terror", and even today, its mere ruins strike us with awe. Its base measured 210 by 150 feet although we are not sure how tall it was. Its builder, King Shulgi, also declared himself a god in an effort to win the allegiance of his subjects. Saddam Hussein had the façade and ceremonial stairway restored in the 1980s. Unfortunately, it was shaken by bomb blasts and suffered 400 bullet holes during the First Gulf War in 1991, thus living up to its reputation as a house of terror 3,000 years later.

The "real" reason for the flood. The Babylonian version of the Great Flood says the gods could not sleep at night because of all the noise and racket people were making, so they sent the flood to drown out the noise, literally. They shouldn't have been surprised at our behavior and rebelliousness, though, since they fashioned humans from the blood of the demon, Kulgi.

Maybe we really are pigs. In early Sumer, women's legal status was nearly equal to men's, which may explain the prominence of female deities and stories about male faithlessness. For example, the earth goddess, Ninhursag, expels her mate, Enki, from Tilmun, (a paradise like the Garden of Eden), for his faithlessness and for eating eight forbidden fruits. Similarly, when Ishtar, goddess of fertility, finds her husband, Tammuz, partying in her absence, she has him take her place in the underworld, which explains the seasons,

much like similar myths from Egypt (Osiris and Isis), Canaan (Baal and Anat), and Greece (Demeter and Persephone). Throw in the Greek myth of Circe turning Odysseus' men into pigs and a theme seems to emerge.

As was typical in pre-industrial civilizations, women's status started fairly high but quickly declined. In early Sumer women could even become scribes, a fairly prestigious occupation because of it was so specialized. However, as time went on, they lost much of their status, so that by Babylonian times the only business they could legally run was a tavern, which might also be a front for prostitution.

Human sacrifice. Royal funerals in early civilizations such as Sumer and Shang Dynasty China involved the sacrifice of the king's servants and wives to accompany him into the next world. Eventually, animal sacrifices would typically replace human sacrifices, as reflected in the biblical story of Abraham's near sacrifice of his son Isaac and the last minute replacement of a ram as the offering.

Speaking of death. The Sumerian Underworld was ruled by the goddess Ereshkigal and was seen as a dark and murky place that offered no hope of escape to its inhabitants. This is much like the early Hebrew concept of the underworld, *Sheol*, which we find referred to in Job 11:21.

Graveyard shift. In some areas of Mesopotamia, burials were done in shallow graves beneath houses' floors, raising the risk of disease. Eventually, graveyards were moved outside the city, with only kings and maybe some high

officials reserving the right for burial within the city walls.

The Epic of Gilgamesh

The Epic of Gilgamesh was the first great epic poem in history. Although in the poem Gilgamesh is a hero, being two-thirds god, he was also an historic king of Uruk (c.3000 B.C.E.) who was defeated by the king of Kish. Surprisingly, the epic opens with a complaint about his unbridled arrogance and acts toward the people, probably reflecting real complaints of the time. Therefore, they appreciate his deeds abroad all the more since they left the citizens at home in peace.

His first adventure is an encounter with Enkidu, a wild man who has never seen another man or civilization. He is lured to the city by a woman (which he apparently also has never seen), fights Gilgamesh for seven days and nights, and loses, only to become his best friend and sidekick. This reflects the constant struggle and eventual victory of civilized over nomadic ways throughout history.

In his next adventure, when Gilgamesh spurns the love of Ishtar, because such love is always fatal to mortals, she sends a seven-year famine personified as the Bull of Heaven. Gilgamesh and Enkidu kill the bull, which angers the god, Enlil, who causes Enkidu's death through disease. Such an unworthy way to die for such a great hero as Enkidu causes Gilgamesh to realize his own mortality and go in search of immortality.

This quest takes Gilgamesh on a long dangerous journey to find Utnapishtim (in Babylonia, Ziusudra), the Mesopotamian Noah, the only man ever to have attained immortality. He advises Gilgamesh is to give up the quest for

immortality and enjoy life for what it offers. He also relates the story of the flood, a version of which we later encounter in the Bible.

Gilgamesh is unswayed by Utnapishtim's advice, and so the kindly old man tells our hero of a perpetual youth plant at the bottom of the sea. Braving the dangers of the deep and the prickly leaves of the plant, Gilgamesh surfaces with his goal in hand. However, while Gilgamesh is drying off, a snake robs him of his prize and, while making off with the plant, sheds its skin, which explains why the snake constantly sheds and regenerates its skin. The epic ends with Gilgamesh's death and the thought that if Gilgamesh, "peerless, without an equal among men", could not beat fate, what can we do?

Armies and God-Kings

Sumerian armies, such as that pictured above, consisted of four basic parts. The chariots, or more properly battle carts, led the way carrying kings and nobles. They had four solid (not spoked) wheels, which were attached to the axles, so they could not rotate independently. This, along with a rigidly attached yoke harness that could not pivot, made these clunkers hard to turn and maneuver.



Since the larger and more powerful domesticated horse had not reached this far south yet, they were supposedly drawn by wild donkeys known as onagers, but more likely used domesticated donkeys that were easier to control. As a result, Sumerian battle carts probably had

little real function beyond serving as rallying points for the infantry and to boost morale. Not until the horse, pivoting yoke harness, and spoked wheels that turned freely and independently on the axle, would chariot warfare come into its own.



The core of the army would be peasant and town militia armed with long bronze-tipped spears and arranged in a phalanx. For protection, they had leather belts (some with bronze studs) strapped across their chests and draped over their shoulders. A few might have heavy rectangular wooden shields. Leather or bronze helmets protected their heads. Being farmers and townsmen with day jobs, they had little time for training, let alone extended campaigns.

The king would probably have a professional guards regiment, shown in the center carrying big clubs with axe-heads attached to them. Behind them are archers. The fourth element would consist of shepherds and nomads drafted into service as missile troops using bows, slings, javelins, or even rocks. They are shown in the center behind the guards.

However, pitched battles were probably rare since smaller armies could retreat inside their walls and wait for the enemy, which lacked the resources for a sustained siege, to go away. All that changed with Sargon of Kish.

History's first professional army. Sargon of Kish's success in building his empire largely depended on his standing army of 5000 men, probably supported by taxes given by subject cities. By contrast, early Sumerian armies consisted mainly of peasant militia who could only give limited service since they had to tend to their crops at home. The Semitic Akkadians also used hit-and-run tactics, to which the fairly immobile Sumerian phalanxes had a hard time adapting.



Sieges. Recent research suggests another key to Sargon's success in conquering his empire was some sort of crude siege techniques such as a battering ram or undermining, which could bring down the unbaked mud-brick walls of Sumerian cities. Having taken a city, he typically would tear down its walls and install a governor and garrison (occupation army) to keep it under control. After this, city walls were improved with such things as oven baked bricks, thus making them virtually invulnerable to sieges until the Assyrians developed better rams and siege towers c. 900 B.C.



If enemy forces were to break into a city, they often had to deal with vicious house-to-house fighting in the city's narrow streets. Such a battle largely neutralized any advantages an attacking army had in numbers or chariots. Such fighting was typically to the death, since the defenders had little hope of mercy from the attackers, who themselves were furious at the hardships of the siege and street fighting and often impossible to restrain from the orgy of slaughter, rape and destruction that followed the final fall of the city.

The first god-king. Relief sculptures of Naramsin show him wearing a horned helmet, indicating he was the first Mesopotamian ruler to proclaim himself a god. However, unlike their counterparts in Egypt, such boldness was the exception rather than the rule among Mesopotamian rulers.

Hammurabi's Law Code

Maybe not an eye for an eye. Modern research suggests that Hammurabi's famous "eye for an eye" principle was so harsh that it wasn't even used in most cases, judges deferring to the more humane punishments of earlier Sumerian law codes. Below are some of Hammurabi's laws, so judge for yourself if you think they're too harsh.

- If a man has borne false witness in a trial, or has not established the statement that he has made, if that case be a capital trial, that man shall be put to death.
- If a man has stolen goods from a temple, or a house, he shall be put to death; and he that has received the stolen property from him shall be put to death.
- If a man has stolen a child, he shall be put to death.
- If a man has broken into a house he shall be killed and buried before the breach.
- If a man has committed highway robbery...he shall be put to death...
- If the highwayman has not been caught, the man that has been robbed shall state on oath what he has lost and the city or district governor in whose territory or district the robbery took place shall restore to him what he has lost...
- If a life has been lost, the city or district governor shall pay one mina (c. one pound) of silver to the deceased's relatives.
- If a son has struck his father, his hands shall be cut off...
- If a man has knocked out a noble's eye, his eye shall be knocked out.
- If he has knocked out the eye of a plebian (lower class citizen) or has broken the limb of a plebian, he shall pay one mina of silver.

- If any one strike the body of a man higher in rank than he, he shall receive sixty blows with an ox-whip in public.

- If a surgeon has operated with the bronze lancet on a noble for a serious injury and has caused his death, or has removed a cataract for a noble, with the bronze lancet, and has made him lose his eye, his hands shall be cut off.

- If a builder has built a house for a man, and has not made his work sound, and the house he built has fallen and caused the death of his owner, that builder shall be put to death.

- If the owner's son is killed, the builder's son shall be put to death.

- If a slave has said to his master, "You are not my master," he shall be brought to count as his slave, and his master shall cut off his ear.

Daily life in Ancient Mesopotamia
Agriculture was the solid foundation of Mesopotamian civilization, requiring around 90% of the population to support those in the towns. We can gain an inkling of the intense level of constant work required of these peasants to make a living and pay their taxes (typically about 25% of their crops through most of history) by looking how dependent American farmers of fruits and vegetables are on immigrant labor from Mexico because they cannot find American workers willing to work so hard for so little.

The main farming implement was the wooden scratch plow, which was adequate for the thin powdery soils typical of this region. Keep in mind that the area's hot

summers and mild wet winters mandated that crops were planted in the fall and harvested the next spring. The plow was pulled by oxen wearing a yoke harness that pulled on their necks. This was fine for oxen, but not for horses. Not until the Middle Ages when a harness that pulled from the animal's chest could the faster and more durable horse be used for plowing.

Farmers in such a dry climate depended for water on the vast and complex system of irrigation canals that their city-state ran. Maintenance of these canals was never ending as peasants had to dredge them of silt and anything else that settled in them and repair the sluice gates that controlled the flow of water. The large body of Mesopotamian laws concerned with such matters and water rights between farmers underscore irrigation's importance to this culture.

The ancient Mesopotamian home still forms the basis for many homes in the Middle East today. Built of mud bricks around a courtyard, it had a flat roof where people could sleep on hot nights and keep cisterns to catch rain to ensure their water supply in the dry climate. The rectangular shape also made it possible to build such houses in cities that could share walls, thus making more effective use of building materials and space. Typically, such houses would decompose in the rainy season and have to undergo annual repairs.

Like the ancient Greeks, the Sumerians shared a common religion, but each city-state was politically independent and worshipped one particular patron deity from the Sumerian pantheon of gods. Just as the first cities in Mesopotamia grew up around the temple as the economic and political center, the ziggurat remained the social center of the city and focus of each city's pride.

One must also appreciate what incredible engineering feats such monuments represented to less sophisticated neighbors and visitors, especially considering how they towered over the flat landscape of Mesopotamia. However, some people, such as the nomadic Hebrews saw such buildings as the height of folly, as reflected in the biblical story of the Tower of Babel (Ziggurat of Babylon).

Statues of faithful worshippers were left by the thousands in Sumerian temples to keep the gods company when real people weren't around

Long-range trade was the lifeline the Sumerians relied on for goods unavailable in Mesopotamia. Caravan drivers, such as Abraham in the Bible, were the “truck drivers” of the ancient world. Caravans might have 600 pack mules, each capable of carrying 90 pounds. With so much wealth on the road, merchants also had to hire guards to protect their caravans against brigands.

At Sumerian parties, guests would sip barley beer through straws. Some historians believe such beer provided the Sumerians a significant part of their calories, since brewing helped preserve barley from spoiling.

Mesopotamian medicine. Healers in ancient Mesopotamia were priests, pharmacists and physicians, all in one. Medical texts record first the symptoms, the prescription and directions for compounding, then an invocation to the gods. Such methods find counterparts in today's modern pharmaceutical, medical, and spiritual care of the sick.

Assyrian Warfare

The Assyrians were the first civilized people to use cavalry in warfare, adapting it from the northern nomads. Cavalry's greater mobility allowed them to outflank and surround their enemies, move armies more quickly, and operate on rougher ground than chariots which were prone to broken wheels and axles. Interestingly, the Assyrians still used chariots, but they were heavier and probably used as shock units rather than mobile firing platforms like they had been in the Bronze Age. Mounted messengers also helped Assyrian rulers react to revolts more quickly and conquer by far the largest empire up to that time in history.

Learning to ride the horse involved solving several problems. First of all, the horse had to be bred up to a size where it was capable of carrying a man. Secondly, it had to get used to someone riding it, since, animals rarely take kindly to other animals jumping on their backs. Finally, people had to figure out where to sit. For some reason, maybe height, men first rode the higher, but precarious, rump. Finally, someone figured out that the lower, but safer, back was a better place to ride. Seat belts came later, the first one I know of belonging to James I of England in 1600s.

Chariots of fire. Around 900 B.C.E, heavy Assyrian siege towers and battering rams revolutionized warfare again. Such devices were rolled up dirt ramps that were constructed against the walls so they could operate higher where the walls were thinner. While soldiers below battered the wall, those on top of the siege tower provided covering fire to protect the ram and

their comrades from objects, including burning chariots, being thrown down on them. Such devices allowed the Assyrians to storm and sack enemy cities and conquer the largest empire in history up to that time.

This also had the effect making cities less secure from attack and leading to an intensification of warfare. When people started replacing sun-dried with much harder oven-baked bricks or masonry for their fortifications, the balance swung back in favor of defense.

Talk About Respect

Just how well respected were kings back then? Consider this letter from the ruler of Tyre to his overlord:

“To the king, my lord, my god, my sun: A message of your servant Abi-milki of Tyre): Seven times and again seven times I prostrate myself at the feet of Your Majesty—I, the dust under the sandals of Your Majesty. My lord is the sun (god) who rises over all the countries, day after day, according to the ordinance of the sun god his gracious father, whose sweet breath gives life and (which one) craves when he is hiding, who makes the entire country rest under (the protection) of his mighty arm; who thunders in the sky like the storm god so that the entire country trembles at the sound of him.

“This is the message of a slave to his master after he had heard what the kind messenger of the king (said) to his servant upon arriving here, and (felt) the sweet fragrance that came out of the mouth of Your Majesty toward his servant. And he was craving the king’s fragrance before the arrival of the messenger of Your Majesty. How should one not crave for a fragrance, which one’s nose remembers (so well)? And

indeed, I was extremely glad when the fragrance of the king wafted towards me and there was a festival every day because I was so glad...

“You are the sun that rises above me and the wall of bronze that towers (around me). And for this very reason and on account of the mighty arm of Your Majesty, I rest secure....”

From *Letters from Mesopotamia*, translated and edited by A. Leo Oppenheim, University of Chicago Press, 1967.

Babylon: The Queen of Cities

The Greek historian, Herodotus, has given us a second hand description of Babylon at its height. Even taking into account that Herodotus exaggerated a bit, we get a picture of a marvelous city. The Euphrates River split the city into two halves that were connected by a 400-foot long masonry bridge. A massive double set of walls protected the city from invaders and floods. Herodotus claimed a four-horse chariot could drive on top of the battlements and have enough room to turn around!

The main ceremonial gateway was the beautiful Ishtar Gate. It was made of blue glazed bricks and decorated with relief sculptures of various animals. The palace complex covered thirteen acres and supposedly had the famous Hanging Gardens of Babylon. Their purpose was to comfort a queen who was homesick for the lush hills of her homeland. Finally, there was the fabled Tower of Babel, the largest and most elaborate ziggurat of its day. It was eight stories high and, according to Herodotus, the sanctuary on top was filled with tons of gold.

Women's Legal Status in Assyria

The low status of women in ancient Mesopotamia is reflected from the following excerpts from the Code of the Assyrians.

I.2. If a woman, whether the wife of a man or the daughter of a man, utter vulgarity or indulge in low talk, that woman bears her own sin; against her husband, her sons, or her daughter they shall have no claim.

I.7. If a woman bring her hand against a man, they shall prosecute her; 30 *minas* of lead shall she pay, 20 blows shall they inflict on her.

I.8. If a woman in a quarrel injure the testicle of a man, one of her fingers they shall cut off. And if a physician bind it up and the other testicle which is beside it be infected thereby, or take harm; or in a quarrel she injure the other testicle, they shall destroy both of her eyes.

I.9. If a man bring his hand against the wife of a man, treating her like a little child, and they prove it against him, and convict him, one of his fingers they shall cut off. If he kisses her, his lower lip with the blade of an axe they shall draw down and they shall cut off.

I.12. If the wife of a man be walking on the highway, and a man seize her, say to her "I will surely have intercourse with you," if she be not willing and defend herself, and he seize her by force and rape her, whether they catch him upon the wife of a man, or whether at the word of the woman whom he has raped, the elders shall prosecute him, they shall put him to death. There is no punishment for the woman.

I.13. If the wife of a man go out from her house and visit a man where he lives, and he have intercourse with her, knowing

that she is a man's wife, the man and also the woman they shall put to death.

I.14. If a man has relations with the wife of a man either in an inn or on the highway, knowing that she is a man's wife, according as the man, whose wife she is, orders to be done, they shall do to the adulterer. If not knowing that she is a man's wife he rapes her, the adulterer goes free. The husband shall prosecute his wife, doing to her as he likes.

I.15. If a man catch a man with his wife, both of them shall they put to death. If the husband of the woman put his wife to death, he shall also put the man to death. If he cut off the nose of his wife, he shall turn the man into a eunuch, and they shall disfigure the whole of his face.

I.16. If a man has relations with the wife of a man at her wish, there is no penalty for that man. The man shall inflict upon the woman, his wife, the penalty he wishes.

I.18. If a man says to his companion, "They have had intercourse with the wife; I will prove it," and he be not able to prove it, and does not prove it, on that man they shall inflict forty blows, a month of days he shall perform the king's work, they shall mutilate him, and one talent (66 pounds) of lead he shall pay.

I.20. If a man has intercourse with his brother-in-arms, they shall turn him into a eunuch.

I.21. If a man strike the daughter of a man and cause her to drop what is in her, they shall prosecute him, they shall convict him, two talents and thirty *minas* of lead shall he pay, fifty blows they shall inflict on him, one month shall he toil.

I.26. If a woman be dwelling in the house of her father, and her husband has died, any gift which her husband settled upon her---if there be any sons of her husband's, they shall receive it. If there be no sons of her husband's she receives it.

I.32. If a woman be dwelling in the house of father, but has been given to her husband, whether she has been taken to the house of her husband or not, all debts, misdemeanors, and crimes of her husband shall she bear as if she too committed them. Likewise if she be dwelling with her husband, all crimes of his shall she bear as well.

I.35. If a woman, who is a widow, enters into the house of a man, whatsoever she brings with her---all is her husband's. But if a man enters in to a woman's home, whatsoever he brings---all is the woman's.

I.37. If a man divorces his wife, if he wish, he may give her something; if he does not wish, he need not give her anything. Empty shall she go out.

I.40. If the wives of a man, or the daughters of a man go out into the street, their heads are to be veiled. The prostitute is not to be veiled. Maidservants are not to veil themselves. Veiled harlots and maidservants shall have their garments seized and 50 blows inflicted on them and bitumen poured on their heads.

I.46. If a woman whose husband is dead on the death of her husband does not go out from her house, if her husband did not leave her anything, she shall dwell in the house of one of her sons. The sons of her husband shall support her; her food and her drink, as for a fiancé whom they are courting, they shall agree to provide for her. If she be a second wife, and have

no sons of her own, with one of her husband's sons she shall dwell and the group shall support her. If she has sons of her own, her own sons shall support her, and she shall do their work. But if there be one among the sons of her husband who marries her, the other sons need not support her.

I.47. If a man or a woman practices sorcery, and they be caught with it in their hands, they shall prosecute them, they shall convict them. The practicer of magic they shall put to death.

I.50. If a man strike the wife of a man, in her first stage of pregnancy, and cause her to drop that which is in her, it is a crime; two talents of lead he shall pay.

I.51. If a man strike a harlot and cause her to drop that which is in her, blows for blows they shall lay upon him; he shall make restitution for a life.

I.52. If a woman of her own accord drop that which is in her, they shall prosecute her, they shall convict her, they shall crucify her, they shall not bury her. If she dies from dropping that which is in her, they shall crucify her, they shall not bury her.

I.55. If a virgin of her own accord give herself to a man, the man shall take oath, against his wife they shall not draw nigh. Threefold the price of a virgin the ravisher shall pay. The father shall do with his daughter what he pleases.

I.58. Unless it is forbidden in the tablets, a man may strike his wife, pull her hair, her ear he may bruise or pierce. He commits no misdeed thereby.

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CYCLES OF THE NILE AND THEIR IMPACT ON ANCIENT EGYPT

"Hail to thee, O Nile, that issues from the earth and comes to keep Egypt alive! When he rises, then the land is in jubilation, then every belly is in joy."

Egypt was the scene of the other great hydraulic or river civilization of the ancient Near East. Like its Mesopotamian counterpart, it evolved in a hot dry river valley that required irrigation which in turn required organization and a strong government that led to civilization. In fact, Egyptians depended so much on the irrigation and the high level of organization and authority needed to maintain it that they considered their rulers, the pharaohs, gods. The power and effectiveness of these god-kings corresponded directly to Egypt's prosperity, which itself depended on the floods' regularity and the effectiveness of the irrigation system.

All rivers flow down. Egyptian soldiers, having never seen any river but the Nile, described the Euphrates as "in flowing north it flowed south". Similarly, coming from a desert climate where the Nile was the only source of water, they described rain as "the Nile falling from the sky."

However, Egypt, unlike Mesopotamia, which had no natural barriers and was open to attack, was isolated by desert to the east and west and the Mediterranean Sea to the north. As a result, its history was relatively peaceful compared to Mesopotamia's, allowing the Egyptians to build a strong centralized state without external disruptions. Egypt's more peaceful environment tended to make the Egyptians optimistic about life, but also suspicious of strangers and new ideas.

More than anything else, the Egyptians realized quite well that their prosperity and welfare depended on the Nile which provided its people with most of what they needed to survive: fish and wildlife, mud for building materials, a "highway" for easy transportation, and papyrus for paper. Most importantly, the Nile floods annually from June to October, watering the ground and replenishing the soil with a rich fertile layer of silt.

The Egyptians called their land *kmt* ("the Black land") after this layer of silt. The real essence of Egypt consisted of a long thin strip of land along the Nile that was never more than a few miles wide. Outside of this strip was the "Red land", the desert. Today one can still stand literally with one foot in the "Black land" and one foot in the "Red land". To the ancient Egyptians, this symbolized the sharp contrast between life and death.

The Egyptian peasant's yearly schedule revolved around the Nile's cycle. During the flood season, he might work on the pharaoh's projects, such as pyramids. When the floods subsided, he would repair any damage to his home and the irrigation canals and then plant his crops. Harvest time would come in time to gather the crops right before the Nile flooded, and the cycle would start all over again.

Egyptian history overall followed a basic cycle corresponding to and ruled by the Nile's flood cycles. Regular floods led to prosperous agriculture, which would increase the pharaoh's tax revenues and his status in the eyes of his subjects who saw him as responsible for the floods as well as irrigation. As a result, his power and the ability to control the local governors and priests in the various city-states (*nomes*) stretched out along the length of the Nile River valley would grow. Pharaoh's increased authority would bring the irrigation system under even tighter and more efficient control, which would further improve Egypt's agriculture and prosperity. This cycle would keep repeating itself as long as regular floods continued.

However, when irregular floods started, the cycle would reverse itself. The agriculture would decline, lowering the pharaoh's tax revenues and discrediting him in the eyes of his subjects. His power and status would decline, as would his control over the provincial governors and priests. As they got increasingly out of control, the efficiency of the irrigation system would decline, further damaging the agriculture and so on. This cycle would also keep repeating until regular floods would return, and the first part of the cycle would start over.

As a result, Egypt's history is divided into six periods whose prosperous times corresponded roughly to regular floods of the Nile and whose troubled times corresponded to periods when the Nile's annual floods were either too high or too low:

The Old Kingdom (c.2850-2150 B.C.E.)
Regular floods (c.3000-2250 B.C.E.)
The First Intermediate Period (c.2190-2052 B.C.E.)
Low floods (c.2250-1950 B.C.E.)
The Middle Kingdom (c.2052-1778 B.C.E.)
Regular floods (c.1950-1840 B.C.E.)
The 2nd Intermediate Period (c.1778-1570 B.C.E.)
High floods (c.1840-1770 B.C.E.)
The New Kingdom (c.1570-1085 B.C.E.)
Regular floods (c.1770-1170 B.C.E.)
The Final Decline (c.1085-525 B.C.E.)
Low floods (c.1170-1100 B.C.E.)

The Papyrus Trail

Papyrus was an all purpose resource that was even used as medicine. However, its popularity as a writing medium (as opposed to cumbersome clay tablets) nearly drove it to extinction in Egypt. In recent decades it has been revived, but limited amounts of paper are made from it, and those just for its historical significance.

Paper was made by laying down a layer of papyrus reeds crosswise on a second layer and then pounding it with a mallet to make the fibers adhere to one another. If you hold a piece of papyrus up to the light, you can see the two layers.

When the Arabs brought back the Chinese invention of paper in the eighth century C.E., it replaced papyrus as a writing medium, being much cheaper to produce and smoother to write on. At that time, the paper was made from soaking rags into a pulp, instead of wood.

It's not Nice to Fool Mother Nature: The Aswan Dam

In the 1960s, the Russians helped build the Aswan Dam to provide Egypt with hydroelectric power. It was a disaster in several ways. For one thing it buried in water a number of valuable archaeological sites. It also blocked the flow of silt downriver, so they had to build an artificial fertilizer plant. By blocking the annual replenishment of the soil by silt from the

Nile, it has contributed to soil erosion and over-irrigation, which brings salt to the surface. Finally, by slowing the flow of the Nile, it allowed the profusion of a snail carrying a hookworm that infected peasants' bloodstream with a chronic disease called Schistosomiasis, which damages internal organs and impairs children's growth and cognitive development.

As the old commercial said, "It's not nice to fool Mother Nature."

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EGYPT'S OLD AND MIDDLE KINGDOMS

The Old Kingdom (c.2850-2190 B.C.E.).

Egyptian civilization started much as Mesopotamian civilization did, with the rise of independent city-states, called *nomes*, organized around irrigation projects. These city-states often fought each other for land and power. Bit by bit, different nomes absorbed each other in these wars until there were only two kingdoms left: Upper Egypt in the south, and Lower Egypt in the north. Finally, a king of Upper Egypt, known variously as Menes or Narmer, conquered Lower Egypt and united the land. Soon afterwards, the period of Egyptian history known as the Old Kingdom began. Generally, during periods of prosperity such as the Old Kingdom, Egypt would be united under one pharaoh. However, during times of turmoil, it would split back into Upper and Lower Egypt until a strong ruler reunited the land.

The Old Kingdom was a peaceful and prosperous period. It was also the great age of building pyramids, massive tombs to preserve and protect the dead for the afterlife. Tied in with this was the involved and expensive process of mummification, which preserved the body for the next world. Contrary to popular belief, the pyramids were not built using slave labor, but rather the labor of peasants who were free for such work during the flood season. At this time, the pharaoh was seen as a god who embodied all of Egypt and was the only one entitled to an afterlife. However, Egyptian peasants could feel that they were sharing in some of that afterlife by working on the pyramids. Pyramid building also provided peasants with employment and some income from the pharaoh during the flood season when they could do little else anyway.

Better than human sacrifice. Since the Egyptians saw the afterlife in terms of this one, they made thousands of figurines, called *usaebtis*, to come to life and serve them in the next world.

Below: Shabti in the British Museum



There were about eighty of these monumental structures built. The largest of these, the Great Pyramid at Gizeh, contained some 2.3 million limestone blocks, each weighing several tons. Even in the best of times, building such structures would be a huge burden on the economy. In times of low floods, such as started around 2250 B.C.E., the strain proved to be too much. As a result, the Old Kingdom went into a period of decline.

The First Intermediate Period (2190-2052

B.C.E.). There were several reasons for this decline. The huge cost of the pyramids coupled with low floods and the resulting poor crops have already been mentioned. There were also religious, economic, and political factors. Since the pharaoh mainly worshipped Re, the sun god, at Heliopolis, the priests of Re gained power and prestige. Eventually, they undermined the divinity and status of the pharaoh himself, referring to him merely as the "Son of Re". The pharaohs' status also diminished because they often married women of non-royal blood, which made them seem closer to the people and less god-like.

Besides the economic strain of building pyramids and maintaining priests for the benefit of previous pharaohs, the royal treasury also suffered from giving out lands to various priesthoods and nobles. Consequently, they could establish their positions more independently of the pharaoh. The king's officials ruling the different nomes were often of royal blood themselves. Many of them established hereditary positions in their nomes, passing the governorships on to their sons. In time, they became virtually independent rulers, splitting Egypt up into a number of separate city-states. Symbolic of the pharaoh's decline was the fact that these governors started claiming afterlives for themselves, building their own tombs in their home provinces rather than in the shadow of the pharaoh's pyramid.

As often happens, decline bred further decline. The poor harvests hurt the pharaohs' power and prestige since they were supposedly responsible for good crops. This bred turmoil and civil war, further weakening the agriculture and economy. Nubian tribes from the south and Libyans from the western desert seized the opportunity to raid and add to this anarchy. Contemporary accounts reflect this situation. "The dead are thrown in the river...Laughter has perished. Grief walks the

land." According to one Egyptian historian, "Seventy kings ruled for seventy days." The truth is that for nearly two centuries no king ruled all of Egypt. Five dynasties are listed from this period, but none of them could control more than just part of the land.

The Middle Kingdom (2052-1778 B.C.E.).

Eventually, a strong dynasty arose around the city of Thebes in the south and reunited Upper and Lower Egypt in 2052 B.C.E. The new pharaohs faced three major problems in restoring order to Egypt: powerful local governors, the powerful priesthood of the sun god Re, and agricultural turmoil. The new pharaohs replaced local governors with their own men and rotated them occasionally so they could not establish their power in one area. They also created many of their officials from the middle class of artisans and traders. These men would depend on the pharaoh for their positions since they were from humble origins. As a result, they would be more obedient to the pharaoh.

The priests of Re were dealt with by replacing Re with Amon, the patron god of Thebes, as the main state deity. This broke the power of one priesthood by putting another less threatening one in its place. However, over time the priests of Amon would gather huge amounts of land and power into their own hands, controlling an estimated thirty percent of Egypt's real estate by the time of the New Kingdom.

Agriculture and prosperity revived as the pharaohs repaired the complex irrigation system that the Egyptian peasants relied on. One major engineering project was the restoration of Lake Moeris in the desert west of the Nile Delta. Over the years the channel feeding this lake had silted up, causing the lake to dry up. In the Middle Kingdom, the channel was dredged, the lake was restored, and new farmland was developed around it. The lake also served as a reservoir since its channel could be opened up or blocked off in times of high or low floods respectively.

The Middle Kingdom also saw Egyptian power expand beyond its borders. During the Old Kingdom, no major enemies threatened Egypt's security. As a result, the pharaohs had been content to stay mostly within Egypt's borders along the Nile, just safeguarding their gold supply from Nubia to the south and the copper mines in the Sinai

Desert to the east from nomadic raiders. The pharaohs of the Old Kingdom had not even kept a permanent standing army, relying on civil officials to lead peasant recruits whenever campaigns were necessary.

The anarchy of the First Intermediate Period changed that a bit. The rulers of the Middle Kingdom extended Egypt's power southward into Nubia. This land was important to Egypt as its primary source of gold and had been loosely controlled during the Old Kingdom. Now the pharaohs built a string of massive fortresses along the Nile in Nubia to secure their hold over it. Egypt's influence was also felt to the northeast in Palestine in order to protect its copper mines in the Sinai. Its control here was not nearly as tight as it was over Nubia, which the Egyptians saw as especially vital to their interests.

This period also saw Egyptian trade with the outside world increase in importance. Commercial contacts extended to Cyprus for bronze and copper, Phoenicia for cedar wood, the Minoan civilization on Crete for pottery, and the legendary land of Punt (probably the Somali coast of East Africa) for incense.

Culturally, the Middle Kingdom was a golden age in Egyptian history. Art (especially statuary and jewelry) and literature reached a high point of development. In architecture, pyramids were still built, but not on the grand scale of the Old Kingdom. A burial complex known as the "Labyrinth" was built. It had some 3500 burial chambers and was meant to stop grave robbers with its bewildering complexity rather than with a pyramid's mass. Unfortunately, neither method succeeded in foiling the thieves, and only one tomb from 2500 years of Egyptian history, that of Tutankhamen, escaped being looted. When the Greek historian Herodotus saw the Labyrinth, it was more than just ruins, and he claimed it was more impressive than the pyramids.

Fun Facts About Pyramids

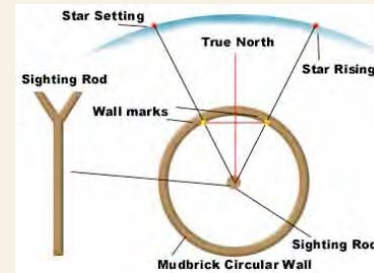
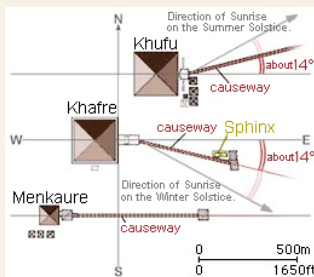
The evolution of the pyramid. The Egyptians believed that in order to have an afterlife, their bodies must be preserved so their *ba* and *ka* (spiritual and physical doubles) could recognize them. Part of this process involved mummifying their bodies. The other part was building a tomb to

protect and preserve their mummified bodies. The first tombs were simple Mastaba tombs in the ground, which were adequate for preserving the bodies in Egypt's hot dry climate. But, since the tombs also held riches to accompany the person into the afterlife, they were also vulnerable to plundering.



The response to plundering was to build pyramids, massive structures with secret passages to the tomb that would foil grave robbers. The earliest pyramids were step pyramids such as this one at Saqqara.

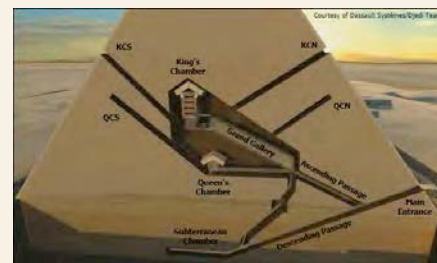
- *The causeways* leading from the Nile to the three Great Pyramids are aligned according to the sunrise of the equinoxes and the summer and winter solstices. The causeway going to the largest pyramid (Khufu) is off of due west by about 14 degrees to north, corresponding to the summer solstice. Similarly, the causeway to the second pyramid (Khafra) is off of due west by about 14 degrees to south, corresponding to the winter solstice, while the causeway to the smallest pyramid (Menkaure) goes due west, corresponding to the spring and fall equinoxes.



- **Finding true north.** The Egyptians believed they had to align their pyramids to true north. To find this, they would erect a circular wall. They would stand in the center of the circle and draw a line to the point of the wall over which a star rose in the east and another line where to where set in the west. By simply bisecting the angle formed by those two lines they had true north.

- Until the Arabs started tearing them off, the Great Pyramid was covered with white 15-ton blocks known as casing stones that were polished flat to an accuracy of 1/100th of an inch to make the pyramid seem to be one giant gleaming stone. This produced an even more impressive and beautiful sight that, according to one theory, reflected light so brightly it could be seen from the moon. They were placed with an accuracy of 5/1000ths of an inch, leaving an intentional gap of about 2/100ths of an inch for adding mortar.

- The Great Pyramid is the only pyramid whose sides are slightly concave and to have airshafts and chambers above ground level.



- *Chariots of the Gods?* The scale of the pyramids has inspired various theories by people such as Erich von Däniken about them being built by aliens from space, since the primitive tools the Egyptians had hardly seem adequate for completing such projects. Some years back, the PBS science show put these assumptions to the test by challenging a group of Egyptian peasants to cut out and transport a 2-ton stone in the time necessary for multiple work crews to cut and transport 2.3 million similar stones. Long story short: they did it.

- Getting stones to the top of such a huge pyramid as it progressively narrowed was another problem to solve. Smaller pyramids and the early stages of building the Great Pyramid could use a wide dirt ramp directly approaching the structure. However, as the Great Pyramid grew too high, one such approach ramp would either be too long or too steep to make the grade. A likely solution was to build a spiral ramp using the outer edge of the completed section to wind up and around the pyramid.



Egyptian Fairy Tales and Proverbs

Talk about imagination. Egyptian folk tales put our ideas about dragons and witches to shame, when talking about wild imagination. Consider the Tale of the Two Brothers, Anubis and Batu. Keep in mind, as with any folk tales in any culture, this might have been passed by word of mouth for centuries before being written down. During that time, hundreds of version might evolve. This is one version.

One day, Anubis' wife tries to seduce his brother, Batu, but (like Joseph) he turns her down. So she tells Anubis that Batu tried to rape her, and he waits in the barn to kill Batu when he returns with the cows. Luckily, the lead cow can talk and says "Look, your elder brother is waiting with his spear to kill you." Batu flees.

Eventually, Anubis learns the truth, kills his wife and throws her to the dogs. Meanwhile, Batu goes to Lebanon and puts his heart in the top of a pine tree and arranges with Anubis to put it in a bowl of cool water if evil ever befalls him.

In Lebanon, the gods make Batu a beautiful wife. However, the sea carries a lock of her hair to Egypt and, as often happens, its scent gets mixed in with pharaoh's laundry, and he falls in love with her. He sends an expedition to find her, which convinces her to desert him for pharaoh and has the pine tree cut down, killing Batu.

Prompted by strange events at home (as if Lebanon is normal), Anubis seeks out his brother's heart and restores him to life. Batu changes himself into a bull to kill his unfaithful wife. She kills the bull, but his blood causes two trees to grow. When the wife hears of the trees, she cuts them down but swallows a flying splinter, making her pregnant, and Batu is reborn as the crown prince, who ascends the throne, judges his mother/wife and makes Anubis his successor. So that's where babies come from.

Egyptian proverbs. While people have always been fascinated and overawed by the Egyptian's accomplishments, such as the pyramids and mummies, their proverbs reveal an equally impressive side to their culture in terms of wisdom. Here is a selection written on temple walls:

*The kingdom of heaven is within you; and whosoever shall know himself shall find it.

*The best and shortest road towards knowledge of truth [is] Nature.

*For every joy there is a price to be paid.

*If his heart rules him, his conscience will soon take the place of the rod.

*What you are doing does not matter so much as what you are learning from doing it.

*If you search for the laws of harmony, you will find knowledge.

*Exuberance is a good stimulus towards action, but the inner light grows in silence and concentration.

*Not the greatest Master can go even one step for his disciple; in himself he must experience each stage of developing consciousness.

Therefore he will know nothing for which he is not ripe.

*The body is the house of God. That is why it is said, "Man know thyself."

*True teaching is not an accumulation of knowledge; it is an awakening of consciousness which goes through successive stages.

*The man who knows how to lead one of his brothers towards what he has known may one day be saved by that very brother.

*People bring about their own undoing through their tongues.

*If one tries to navigate unknown waters one runs the risk of shipwreck. Leave him in error who loves his error.

*Every man is rich in excuses to safeguard his prejudices, his instincts, and his opinions.

*To know means to record in one's memory; but to understand means to blend with the thing and to assimilate it oneself.

*There are two kinds of error: blind credulity and piecemeal criticism.

*Sound skepticism is the necessary condition for good discernment; but piecemeal criticism is an error.

*Love is one thing, knowledge is another.

*True sages are those who give what they have, without meanness and without secret!

*An answer brings no illumination unless the question has matured to a point where it gives rise to this answer which thus becomes its fruit.

*Therefore learn how to put a question.

*What reveals itself to me ceases to be mysterious for me alone: if I unveil it to anyone else, he hears mere words, which betray the living sense:

*Understanding develops by degrees.

*If the Master teaches what is error, the disciple's submission is slavery; if he teaches truth, this submission is ennoblement.

*There grows no wheat where there is no grain.

*An answer is profitable in proportion to the intensity of the quest.

*Listen to your conviction, even if they seem absurd to your reason.

*Know the world in yourself. Never look for yourself in the world, for this would be to project your illusion.

*To teach one must know the nature of those whom one is teaching. In every vital activity it is the path that matters.

*The way of knowledge is narrow.

*Each truth you learn will be, for you, as new as if it had never been written.

*The only active force that arises out of possession is fear of losing the object of possession.

*If you defy an enemy by doubting his courage you double it.

*The first thing necessary in teaching is a master; the second is a pupil capable of carrying on the tradition.

*Peace is the fruit of activity, not of sleep.

*Envious greed must govern to possess and ambition must possess to govern.

*When the governing class isn't chosen for quality it is chosen for material wealth: this always means decadence, the lowest stage a society can reach.

*Two tendencies govern human choice and effort, the search after quantity and the search after quality. They classify mankind.

Some follow Maat, others seek the way of animal instinct.

*Qualities of a moral order are measured by deeds.

*One foot isn't enough to walk with.

*Our senses serve to affirm, not to know.

*We mustn't confuse mastery with mimicry, knowledge with superstitious ignorance.

*Physical consciousness is indispensable for the achievement of knowledge.

*A man can't be judge of his neighbor's intelligence. His own vital experience is never his neighbor's.

*No discussion can throw light if it wanders from the real point.

*Your body is the temple of knowledge.

*Experience will show you, a Master can only point the way.

*A house has the character of the man who lives in it.

*All organs work together in the functioning of the whole.

*A pupil may show you by his own efforts how much he deserves to learn from you.

*Routine and prejudice distort vision. Each man thinks his own horizon is the limit of the world.

*You will free yourself when you learn to be neutral and follow the instructions of your heart without letting things perturb you. This is the way of Maat.

*Judge by cause, not by effect.

*Growth in consciousness doesn't depend on the will of the intellect or its possibilities but on the intensity of the inner urge.

*Every man must act in the rhythm of his time ... such is wisdom.

*Have the wisdom to abandon the values of a time that has passed and pick out the constituents of the future. An environment must be suited to the age and men to their environment.

*Everyone finds himself in the world where he belongs. The essential thing is to have a fixed point from which to check its reality now and then. Always watch and follow nature.

*All seed answer light, but the color is different. The plant reveals what is in the seed.

*Popular beliefs on essential matters must be examined in order to discover the original thought.

*It is the passive resistance from the helm that steers the boat. The key to all problems is the problem of consciousness.

*Man must learn to increase his sense of responsibility and of the fact that everything he does will have its consequences.

*If you would build something solid, don't work with wind: always look for a fixed point, something you know that is stable ... yourself.

*If you would know yourself, take yourself as starting point and go back to its source; your beginning will disclose your end.

*Organization is impossible unless those who know the laws of harmony lay the foundation.

*Knowledge is consciousness of reality. Reality is the sum of the laws that govern nature and of the causes from which they flow.

*Social good is what brings peace to family and society.

*Knowledge is not necessarily wisdom.

*By knowing one reaches belief. By doing one gains conviction. When you know, dare.

*Altruism is the mark of a superior being.

*All is within yourself. Know your most inward self and look for what corresponds with it in nature.

*The seed cannot sprout upwards without simultaneously sending roots into the ground.

*Grain must return to the earth, die, and decompose for new growth to begin.

*Man, know thyself ... and thou shalt know the gods.

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EGYPT'S NEW KINGDOM AND DECLINE (1778-525 B.C.E.)

The Second Intermediate Period (1778-1570 B.C.E.). Around 1800 B.C.E., Egypt entered another period of decline. Once again, irregular floods, this time being too high, probably played a role in undermining the pharaoh's power and authority. A series of pharaohs, ending with the rare rule of a woman, Nitocris, marked the end of the Middle Kingdom and the beginning of another period of anarchy, the Second Intermediate Period.

Agricultural decline and political anarchy followed much the same pattern as during the First Intermediate Period, with Egypt splitting back into its upper and lower halves. One new factor added to the confusion: foreign invasion. A group of peoples known to the Egyptians as Hyksos, or "foreign kings", came thundering into Egypt with the horse drawn chariot and the more powerful composite bow. These new weapons allowed them to conquer Lower Egypt, although Thebes in the south remained independent under the priests of Amon. The Biblical Hebrews were probably not among the Hyksos invaders, but they probably entered Egypt during the time of Hyksos rule as reflected in the Biblical story of Joseph, a foreigner who rises to very high status in Egypt.

The Hyksos, like other nomadic invaders, adopted the ways of their civilized subjects. Their rulers used Egyptian titles and customs, wrote their names in hieroglyphics, and worshiped the Egyptian god Seth. They also used Egyptian officials and tried to maintain the administrative machinery. Still, Hyksos rule was a shock to the Egyptians. When rulers from Thebes finally drove them out, their attitude toward the outside world had been radically changed for the worse. The new era which dawned, the New Kingdom, would see the pharaohs actively pursue a policy of foreign conquest and empire building. Egypt's age of glory had arrived.

Noisy hippos. Supposedly, in order to humiliate the Egyptian ruler in Thebes 200 miles to the south, one Hyksos ruler, told him to give up his hippo pool because the animals' splashing kept him awake at night.

The New Kingdom (1570-1085 B.C.E.). Egyptian history is traditionally divided into thirty-one dynasties or ruling families. The most famous of

these are the eighteenth and nineteenth dynasties who established Egypt as a great imperial power in the Near East. The eighteenth dynasty in particular saw a succession of able rulers.

Amenhotep I (1545-1525 B.C.E.) spent much of his reign securing his realm against the desert tribes who had caused so much trouble during the recent period of turmoil. He realized that it was futile to try to hold the entire desert. Instead he seized various oases scattered throughout the Sahara along Egypt's flanks. This deprived the nomads of places from which to launch raids and refresh themselves. It also gave the Egyptians advanced bases so that they could intercept any nomads trying to slip through for raids.

Thutmose I (1525-1490 B.C.E.) was the pharaoh who really established Egypt's empire. He extended Egyptian power into Nubia once again. This meant Egypt controlled a thin strip of river valley some 1200 miles long. Thutmose also advanced into Palestine and Syria to protect Egypt against any "Hyksos" there. The various independent city-states there, such as Byblos and Ugarit, fell before the onslaught of the pharaoh's army, which fought its way all the way to the upper Euphrates River. There many of the Egyptian soldiers experienced rain for the first time, which they could only describe as "the Nile falling from the sky."

Egyptian rule in Palestine and Syria was more lenient than that of such peoples as the Assyrians and Babylonians. For one thing, any cities that fell to the pharaoh were considered the property of the gods (including pharaoh). As a result, they usually refrained from sacking cities since that would be a sacrilege. Some strategic or especially rebellious cities were left with Egyptian governors and garrisons. However, for the most part, the pharaohs left native rulers in power as long as they remained loyal to Egypt. Taking the sons of these rulers as hostages back to Egypt insured such loyalty. There they were educated in Egyptian ways so that by the time they assumed the reins of power, they saw things from a very Egyptian point of view.

After Thutmose I and the brief reign of his son Thutmose II, we encounter the first woman to make a major mark in history, Hatshepsut (1570-1560 B.C.E.). Technically, she was only a regent, or temporary ruler, for the young king, Thutmose III. However, she liked the feeling of power and decided to keep the throne for herself. Since the

Egyptian people probably would not take kindly to a woman's rule, she styled herself as a "king". Her statues sported a beard and obscured her more feminine features. Hatshepsut did not push her luck trying to lead the army, and her reign was generally peaceful as a result. The most famous event of her reign was a trading expedition to the exotic land of Punt, which brought back myrrh, incense, ivory, monkeys, and a panther.

All in the family. Egyptian royalty continued the ancient practice of brother-sister marriages, which probably originated in the early days of agriculture when men married their sisters to keep the farmland in the family. Therefore, Hatshepsut, whose marriage to her brother (Thutmose III's father) was childless, was Thutmose III's aunt, stepmother, and mother-in-law since he married her daughter.

Hatshepsut's peaceful reign was followed by that of the great warrior pharaoh, Thutmose III (1469-1436 B.C.E.). It is a tribute to Hatshepsut's ability that she had been able to keep this able young soldier under her thumb even after he came of age. The new king's frustration at having been kept from his rightful throne for so long was quickly shown by his having Hatshepsut's name erased from all public inscriptions and replaced either with his own name or those of his ancestors. Thutmose III spent much of his reign restoring Egyptian power in Syria and Palestine where it had slipped during Hatshepsut's less aggressive reign. He waged six campaigns there and another eleven against the Hurrians who had settled down to found the powerful kingdom of Mitanni. Much of this required long drawn out sieges, such as that of Megiddo, which lasted eleven months and involved building a wooden palisade and moat to completely cut the city off from outside help. Sometimes trickery was used. At the siege of Joppa, Egyptian troops supposedly got into the city by hiding in grain bags going in through the gates. At other times, the Egyptians found themselves involved in some pretty hard fighting.

Frisky horses. During Thutmose III's campaign in Palestine, his Canaanite opponents released a mare in an attempt to disrupt the stallions in his chariot corps.

Such extended campaigning so far from home forced the Egyptians to build a large professional army. Most recruits were Egyptians, but foreign mercenaries, and even captives of war made up

larger proportions of the army over time. The Egyptian army was divided into divisions of about 5000 men each. The infantry were armed either with bows and arrows or large shields and axes. The most illustrious branch of the army was the chariot corps, organized into groups of twenty-five chariots each. These were light two man chariots that would sweep in front of the enemy while firing arrows into their ranks to disrupt them. After several such passes, the infantry could move in to finish off the enemy. Egypt also developed a navy whose main purpose was to transport the army by sea between Egypt and Palestine, a much easier trip than marching through the Sinai Desert.

Thutmose III's three successors, Amenhotep II, Thutmose IV, and Amenhotep III, ruled Egypt for some seventy years. They were all able warriors and generals, and maintained Egypt's power in the Near East. However, they added little or nothing to the empire, probably feeling it was already about as big as they could effectively rule.

Egypt at the height of its power and glory must have been a fascinating place to visit. Wealth poured into its treasury, allowing the pharaohs to build the massive temples of Karnak and Thebes, the magnificent tombs cut out of cliffs in the Valley of the Kings along the Nile, and gigantic statues of themselves, some of them up to sixty-five feet in height. Another popular kind of monument was the obelisk, or needle. This was a tall thin piece of granite, carved into a pyramid shape at the top. This peak was then covered with gold to reflect the brilliance of the sun god to whom it was dedicated. The Washington Monument is in the form of an obelisk, although it is not made out of a single piece of stone.

Egypt's cities also reflected the influx of wealth and new peoples that its empire brought in. Thebes, the capital, was especially renowned for its wealth and splendor. Even the Greek hero, Achilles, in the great epic of the Trojan War, *The Iliad*, mentions "Egyptian Thebes, the world's great treasure house...Thebes with its one-hundred gates where two-hundred men issue from each gate with horses and chariots." The influx of foreign peoples also meant an influx of foreign ideas, which may have influenced the pharaoh, Amenhotep IV, known to us as Akhenaton.

The reign of Akhenaton (1370-1353 B.C.E.) was a turning point in Egyptian history. Originally, this

new ruler was named Amonhotep in honor of Amon, the primary state god. However, he changed his name to Akhenaton in honor of Aton, the sun god, whom he wanted his people to worship instead. Why he wanted to change the religion is a matter of dispute. Some people think he was influenced by the simpler religious beliefs of his wife, a princess from Mitanni, or even the Hebrews, then captive in Egypt. Others see a more practical motive: trying to break the power of the priests of Amon, who had gradually gathered huge amounts of land and power into their hands over the last 700 years. Some historians estimate that they owned about thirty percent of all the land in Egypt by Akhenaton's reign. This was tax-free land, which deprived the pharaohs of money and created a growing threat to their own power. This in itself would have been enough motive to change the religion, although purer religious motives may have been mixed in as well. It also shows the importance of religion to a society that feels so helpless before the forces of nature.

A lucky accident. After only fifteen years of occupancy, Akhenaton's new capital, Amarna, was abandoned and taken down "pillar and post". Since it was occupied for only a short time, a hill (known as a tel) didn't form over it as with other sites that were continuously occupied and rebuilt over the centuries. It was discovered purely by chance when an angry Egyptian woman pelted a British tourist with "rocks" that, upon closer inspection, turned out to be clay tablets holding official records from the reign of Akhenaton.

Contrary to popular imagination, Akhenaton did not create a monotheistic religion worshipping only one god. Instead, he made Aton the primary focus of worship in Egypt, with the royal family worshipping him for all of Egypt's benefit. This eliminated the need for any extensive priesthood, which certainly angered the priests of Amon. They in turn played upon people's fears of what would happen if the old gods who had protected Egypt for so long were neglected. In a traditional society such as Egypt, these fears were a powerful force to overcome. Akhenaton tried to escape these problems by moving the capital from Thebes, the center of Amon's worship, to a new city, Tell-el-Amarna, dedicated to Aton. In the end, Akhenaton's experiment failed and barely outlived

him. The nine-year-old Tutankhaton, better known to us as Tutankhamon after he changed his name to please the old state deity, Amon, and his powerful priests, succeeded him. Ironically, Tutankhamon is the best known of the pharaohs, although he was probably just a puppet of the resurgent priests of Amon and died before he was even old enough to rule on his own. However, it was his tomb alone that was destined to survive the ravages of grave robbers and give us a clue to the wealth and splendor of Egypt at its height.

The internal turmoil caused by Akhenaton's reforms and the reaction against them weakened Egypt's hold on its empire and brought its golden age and the eighteenth dynasty to an end. The empire did experience a revival under the nineteenth dynasty founded by Ramses I (1304-1303 B.C.E.). By now, Egypt's main rival for power in the Near East, the kingdom of Mitanni, had been replaced by an even more dangerous power, the Hittite empire. Once again, the pharaoh's chariot corps rolled northward to defend Egypt's interests. Seti I (1303-1290 B.C.E.) met the Hittites and defeated them, but they still remained a power in Palestine.

Seti's successor, Ramses II (1290-1223 B.C.E.), took up the struggle and met the Hittites at Kadesh, one of history's great chariot battles. After being routed by a Hittite surprise attack, Ramses rallied his troops and struck back at the Hittites who had stopped to loot the Egyptian camp. The battle ended basically as a draw that led to a peace treaty and marriage alliance between the two powers. It is remarkable that, after such bitter fighting, the Egyptian and Hittite empires settled down to a peaceful co-existence that lasted until the fall of the Hittite Empire around 1200 B.C.E. At one point, Egypt even sent grain to the Hittites during a famine.

Ramses II was the last Pharaoh to see Egyptian power at its height. After his death, Egypt entered a period of slow but steady decline. The first major shock to its power was the invasion by a mysterious people known to us only as the Sea Peoples. Who they were is not exactly clear, but some of them seem to have come from the area of the Aegean Sea around Greece.

Their path of conquest followed the Eastern coast of the Mediterranean. The Hittite Empire crashed down in ruins before their onslaught and disappeared from history. Syria and Palestine were

hit next as the Sea Peoples passed on to Egypt where the first recorded naval battle in history was fought. The Egyptians won, but it took a tremendous effort that sapped their strength. The *Peleset*, as the Egyptians called the Sea Peoples, made their way to Palestine (which gets its name from them), settled down, and became the Biblical Philistines. This period may also be the time of the Exodus when the Israelites made good their escape from Egypt to the Promised Land.

Final decline (c.1085-525 B.C.E.). By 1085 B.C.E., Egypt was clearly in decline. It had lost its possessions in Palestine to the Philistines and Israelites, while revolts and raids in Nubia were destroying its grip on that vital part of its empire. It also suffered from various internal problems. For one thing, low floods had damaged its economy and weakened its ability to recover from other troubles. For another thing, the powerful priesthood of Amon was a greater threat than ever to the pharaoh's power, especially after Akhenaton's attempt to destroy them had soured relations between king and priests. Finally, the increased reliance on foreign mercenaries created problems since the pharaohs often did not have the money to pay them. This made the troops restless and put the pharaohs into a very dangerous position.

Egypt's internal troubles added to the problems outside its borders. In 940 B.C.E., a Libyan general by the name of Sheshonk forced his way into the royal family through marriage, overthrew his in-laws, and founded the twenty-second dynasty. Around 750 B.C.E., Nubians coming up from the south founded another foreign dynasty, the twenty-fifth. The fact that these foreign rulers had absorbed Egyptian culture can be seen in the pyramids that the Nubians built in their kingdom of Kush to the south.

Egypt was destined to fall under the rule of other peoples even less friendly to its civilization. In 652 B.C.E., the Assyrian king, Ashurbanipal, conquered Upper and Lower Egypt. Although the Egyptians drove the hated Assyrians from their land a few years later, their freedom was short-lived. In 525 B.C.E., the Persian king, Cambyses, overwhelmed any resistance to his armies and took over the Egyptian kingdom. It is at this point that we can say that the age of the pharaohs came to an end, as a long succession of Persian, Macedonian, Roman, Arab, Turkish, and British powers would rule it for the next 2400 years. Not until the modern era

would a native Egyptian again rule over the Gift of the Nile.

Obelisks, Tombs, and Grave Robbing
Down through the centuries, visitors and conquerors, fascinated by Egyptian civilization, have taken home various souvenirs, among them most of its major obelisks. As a result, obelisks grace such cities as Rome, Paris, and even New York City's Central Park. The one in New York is called Cleopatra's needle, although it was actually erected by Hatshepsut some 1400 years before Cleopatra's reign. The Temple of Hatshepsut Obelisk at Karnak, which is 97 feet high and weighs 323 tons



Valley of the Kings. In an effort to foil grave robbers, pharaohs during the New Kingdom were buried in tombs at the end of long tunnels dug out of cliffs along the Nile in what is known as the Valley of the Kings (above). One tomb was placed 320 feet underground at end of a 700-foot tunnel. Unfortunately, of the sixty royal tombs buried this way in these cliffs, only that of a minor pharaoh, known as Tut, escaped being totally ransacked, largely because rubble from a later grave covered its entrance. Even so, Tut's tomb had been broken into twice, although grave robbers were apparently scared off by authorities before they could loot it.

Grave robbing Egyptian style. Typically, grave robbers would tunnel into a tomb from behind to keep from alerting guards with broken seals on the door so they could come back later if they wanted. They then broke open stone sarcophagi,

hacked the gilding from coffins, tore mummies apart for jewelry, and sometimes set the tomb on fire, so they could scrape the melted gold off the floor. Grave robbing released into circulation large amounts of gold that had been hoarded by the pharaohs. Unfortunately, the sudden release of so much precious metal into circulation wreaked havoc with Egypt's economy by triggering inflation.

Holding an Empire

Conquering and maintaining an empire involved extended campaigning far from home, which in turn required a large professional army. Most recruits were Egyptians, but foreign mercenaries, and even captives of war made up larger proportions of the army over time. The Egyptian army was divided into divisions of about 5000 men each. The infantry were armed either with bows and arrows or large shields and axes.

The most illustrious branch of the army was the chariot corps, organized into groups of twenty-five chariots each. These were light two man chariots that would sweep in front of the enemy while firing arrows into their ranks to disrupt them. After several such passes, the infantry could move in to finish off the enemy.

Each Egyptian chariot had a runner behind it to protect and tend wounded comrades and help the chariot crew get out of any tough spots, such as ruts.

This type of warfare with a narrow aristocratic elite fighting from expensive horse-drawn chariots dominated fighting in the Middle East and paralleled the social structure of ancient Middle Eastern societies. Since only kings and nobles could fight this way,

they virtually monopolized the use of force, thus giving them tighter control of society. Not until the much cheaper and plentiful iron technology came along, most notably in Greece, would lower classes be able to dominate warfare and then politics.

Chariots, with their thin wheels, were easily broken by rough ground and might have to be carried when an army was on the march. The wheels often had to be removed when not in use, or else they would gradually warp from the weight. Mycenaean Greek inventories record a huge stockpile of chariot wheels, sort of the Tire Barn of the ancient world.

Egypt also developed a navy whose main purpose was to transport the army and supplies by sea between Egypt and Palestine, a much easier trip than marching through the Sinai Desert.



From the Egyptian perspective, Nubia in the south with its plentiful gold deposits, was actually more important than Palestine. Whereas the Egyptians were generally content to rule the coastal cities of the north with vassal kings, they directly ruled Nubia, holding it with huge forts, such as that of Buhen (below).



The Hittite Empire

Egypt's main rival for dominance of Syria and Palestine was the mysterious Hittite Empire. Until the 19th century, the only clues people had to the existence of the Hittites were a few vague references, such as one in the Bible to an officer of King David's. Then European travelers started discovering markers referring to the Hittites scattered across Asia Minor (aka Turkey). Bit by bit they pieced together the existence of an empire that dominated most of present-day Turkey rivaled Egypt in power.

The Hittites were one of a number of peoples, like the Hyksos and Kassites, coming down from the North with the deadly combination of the composite bow with the horse-drawn chariot. The composite bow consisted of a mixture of wood and horn, giving it much more power and range than the wooden bow used to this point. It had a maximum range of about 250 meters and was powerful enough to tear through bronze armor. On each side of a chariot was a quiver with 30-40 arrows, suggesting its primary use was as a mobile firing platform for soldiers armed with the composite bow.

The arrival of the Hittites and other nomads around 1700 B.C.E created a great upheaval throughout the Middle East. The Hittites sacked Babylon in 1595 B.C.E, although leaving it to another group of nomads, the Kassites, to dominate Mesopotamia for several centuries. Meanwhile, the Hyksos conquered Lower Egypt, thus spreading the use of the composite bow and horse and chariot to the Egyptians, who would later use this technology against the Hittites in battle, using them.



A model of how Hattusas probably appeared at its height

Hittite rule was relatively moderate, their legal system emphasizing compensation to victims more than punishment of criminals. Women also had a relatively high status compared to their counterparts in Mesopotamia.

Hittite chariots were bigger and stronger than those of Egypt and other peoples, holding three men instead of just two. They may have been used as shock weapons to ram their flimsier opponents.



The Hittites would vanish as suddenly and mysteriously as they arrived when, around 1200 B.C.E., a new upheaval of peoples in the Eastern Mediterranean would bring their empire crashing down, to remain all but forgotten for 3,000 years.

The Sea Peoples

Among the various problems Egypt faced around 1200 B.C.E. were invasions by the so-called Sea Peoples who suddenly burst upon the scene in the north, sacking cities and empires throughout the Eastern Mediterranean. most notably the Hittites. Who they were is still a matter of

conjecture, but they seem to have been a mixture of different peoples who joined together for these invasions.

As the Pharaoh Ramses III who met and defeated them recorded:

"The foreign countries made a plot in their islands. Dislodged and scattered by battle were the lands all at one time, and no land could stand before their arms, beginning with Khatti [1], Kode [2], Carchemish [3], Arzawa [4], and Alasiya [5]... A camp was set up in one place in Amor [6], and they desolated its people and its land as though they had never come into being. They came, the flame prepared before them, onwards to Egypt. Their confederacy consisted of Peleset, Tjekker, Sheklesh, Danu, and Weshesh, united lands, and they laid their hands upon the lands to the entire circuit of the earth, their hearts bent and trustful 'Our plan is accomplished!' But the heart of this god, the lord of the gods, was prepared and ready to ensnare them like birds... I established my boundary in Djahi [7], prepared in front of them, the local princes, garrison-commanders, and Maryannu. I caused to be prepared the river mouth like a strong wall with warships, galleys, and skiffs. They were completely equipped both fore and aft with brave fighters carrying their weapons and infantry of all the pick of Egypt, being like roaring lions upon the mountains; chariotry with able warriors and all goodly officers whose hands were competent. Their horses quivered in all their limbs, prepared to crush the foreign countries under their hoofs. "

1] Khatti: The Hittite empire in Anatolia, Hatti

[2] Kode: Cilicia

[3] Carchemish: City on the Euphrates in northern Syria

[4] Arzawa: Country in western Anatolia, allied to Hatti

[5] Alasiya: Cyprus

[6] Amor: Amurru in northern Syria

[7] Djahi: region in Canaan, possibly in the Judean hills

According to Ramses, the Sea Peoples sailed up the Nile where Egyptian ships armed with both rams and archers ambushed and annihilated them with overwhelming firepower. Soldiers stationed on the shore finished off any survivors. The invaders also attacked by land, their army paralleling their ships' movement along the coast. However, their land forces met with no better luck in Egypt than their navy did.



Some of these people, known to the Egyptians as the Peleset and to the Hebrews as Philistines, gave their name to the land where they ultimately settled: Palestine. Others may have become the Israelite tribe of Dan, also known as the Denyen and Danaoi who attacked Troy. A cryptic passage in the Bible (Judges 18:1) says the Danites "had no inheritance in Israel", while another (Judges V: 17) asks: "And Dan, why did he live close to the ships?"

Although Ramses defeated this invasion, it was a turning point for Egypt, as it seriously weakened Egypt's hold on Palestine and Syria and inaugurated the long period of final decline in its glorious history.

Maybe just as important was the new technology some of the Sea Peoples may have picked up in the Hittite Empire and spread along with their power: iron. As suggested by a biblical passage that the Israelites had to rely on the Philistines for repairing their tools, this would largely explain the huge problems they and other older cultures based on bronze technology had fighting the Sea Peoples.

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12. THE INDUS RIVER CIVILIZATION AND THE PATTERN OF INDIAN HISTORY

The Indus River Civilization (c.2500-1700 B.C.E.), evolving in modern Pakistan, was the third of history's great civilizations and would be the basis for India's culture. Like Egypt and Mesopotamia, this was a hydraulic civilization based upon highly organized irrigation and flood control projects requiring a strong central authority to govern their construction and maintenance. Although the Harappan civilization (named after one of its main sites, Harappa) had writing, too little has survived to be deciphered. Therefore, we are not even clear whether there was one central government for the entire region or a number of independent city-states.

However, archaeological evidence clearly shows this was a highly organized civilization. The main cities, Harappa and Mohenjo Daro, had sophisticated urban planning and were built on immense mounds of earth and rubble as protection against floods. Harappa's citadel mound was forty feet high, reinforced against erosion by a forty-five foot thick brick-facing wall, and topped by strong fortifications. Another, slightly smaller mound probably contained graineries, threshing floors, and furnaces for bronze smelting. Altogether the entire complex of mounds covered an area three miles in circumference. Other towns and cities were almost identical to Harappa in layout, each having a west-facing citadel surrounded by blocks of houses and a north-south grid of main streets. The houses were also of a standard design, having a central courtyard surrounded by smaller rooms and corridors. Even the bricks were of two standard types: oven fired for foundations and public buildings and sun dried for private homes. Possibly the most impressive feature was the sophisticated sewage and drainage systems, with brick drain pipes issuing from each home to city-sewers which led to main sewers.

Harappan trade extended as far as Mesopotamia, exporting jewelry made from clay, gold, silver, and semi-precious stones, cotton fabrics (a product unique to this area then), and ceramic toy wagons and animals. A system of standard weights and measures promoted trade between the cities of the Indus. The weights were based on units of 16,

much like India's present currency, the rupee, which consists of sixteen *annans*.



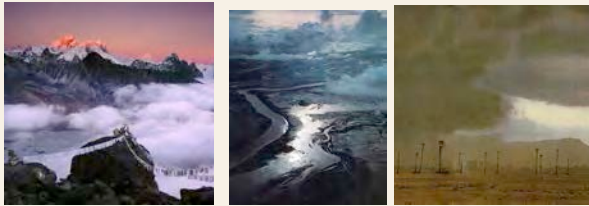
Cubes that may have been part of the Indus civilization's system of weights & measures.

Crudely made statuettes suggest a religion devoted to a mother goddess. Stamp seal inscriptions show the Harappans probably revered such animals as the elephant, tiger, rhino, and buffalo. Large brick lined baths indicate that another feature of their religion was ritual bathing. Both this and a reverence for animals are features of present day Hinduism, suggesting its roots extend back to the Harappan civilization.

There are several theories about the end of the Harappans. Two focus on the climate turning more arid, either from deforestation or a shift of the monsoons away from the river valley. Another suggests that too much irrigation raised the water table and salinated the soil, much as happened in Mesopotamia several times. A fourth theory is that the Indus River changed its course, leaving the Harappan cities high and dry. Whatever the reasons, the Harappans abandoned their cities around 1700 B.C.E., being replaced by new settlers producing much cruder artifacts. Then, around 1500 B.C.E. new invaders, the Aryans armed with the horse and chariot, took over. They would gradually expand to the south-east and develop the civilization we call Indian. However, various aspects of Harappan civilization, especially religious, would survive as integral parts of Indian culture.

The pattern of Indian history. India's geography and climate are varied and have largely determined the course of its history. There are five main features of the environment to consider. First, India is hot and humid, breeding many diseases, which both slowed conquest and absorption of India by newcomers and gave people less faith in this life and reason to explore more spiritual paths. Secondly, the Himalaya and Hindu Kush mountains, two of the tallest ranges in the world, cut India cut off from the rest of Asia. Also, India

is a huge subcontinent cut into very distinct regions ranging from the mountains in the north through the tropical river valley of the Ganges to the barren deserts of the Deccan. All these factors have made it a very difficult country to conquer. Finally, two other factors, India's position on the Indian Ocean and Arabian Sea plus its abundance of spices, gems, and cotton, attracted trade, new peoples, and ideas to its shores.



(l. to r): Along with other mountain ranges, the Himalayas, (“the roof of the world”), have inhibited, but not stopped, invasions by various peoples from the North. The Ganges floodplain which covers NE India. The Deccan, India’s hot central plateau

Together, these factors have made Indian culture and history extremely complex and varied. At the same time it has resisted conquest and attracted new peoples, both keeping them distinct from one another yet absorbing them into the greater unifying fabric of its culture. As a result, Indian history defies treatment as a mere succession of empires, since it has rarely been completely unified by one power. However, there is a certain unity to India's history as seen in its main religion, Hinduism, which has as many variations as India has peoples, yet still maintains a common core that lets us speak about India as a culture that has at once resisted and absorbed a long succession of invaders from Aryans and Greeks to Muslims and the British.

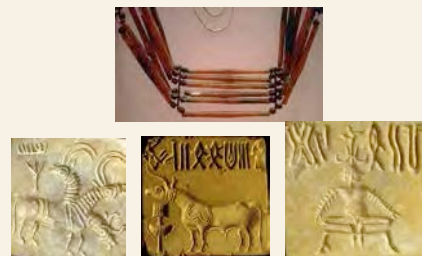
Bringing a Civilization to Life from the Dust



A reconstruction of what Mohenjo Daro probably looked like

Even more than Mesopotamia and Egypt, figuring out the essence of the Harappan (Indus River) civilization and bringing it to life in a way we can relate to is a real challenge. For one thing, Scholars still haven’t even reached agreement on what known languages, if any, the Harappan language was related to. The Harappan script is also a matter of controversy. Although it contains an estimated 400 symbols (600 according to another source) its inscriptions rarely contain more than four or five symbols, something some scholars say is not consistent with true literacy. Therefore, we have very little idea of what the Harappans thought of themselves and the rest of the world.

This forces archaeologists and historians to rely on the physical evidence of surviving artifacts and the foundations of buildings. Of course the only artifacts that have survived are those made of durable materials like stone or clay. Even if those are plentiful, they tell us little about what perishable materials were used, the purposes they were used for, and how plentiful they were. Therefore, archaeologists have to rely on indirect evidence.



Carnelian jewelry and signature seals from the Indus Civilization, which indicate likely contact with and influence from Mesopotamia. The yogic position of the figure in the last seal hints at some continuity between the Harappan culture and later Indian religious practices.

For example, some Native Americans would decorate pottery before firing by impressing woven fabrics onto them.

Even though we have no woven fabrics from their culture at that time, we can infer from pottery that has survived that they did indeed weave fabrics.

Another type of inference can come from soil discoloration in a site. Although no wood may have survived from that culture, darker soil can indicate wooden posts were used as the corner posts of a building. Even after the posts rotted away, they left different minerals that darkened that part of the soil. If archaeologists uncover a pattern of such darker spots, they can reconstruct the shape of that building. Blackened soil in the middle of that pattern could indicate a fire pit and the likelihood of that building being a home. Very carefully scraping away the soil in the fire pit often reveals bone fragments and seeds, giving hints to those people's diets. And if some of their foods and other materials they used didn't come from that region, that could indicate trade routes.

One such material was obsidian, a beautiful black volcanic glass with properties like flint that was highly valued for making ceremonial knives. Since each volcano makes its own unique obsidian, finding artifacts made of its obsidian can help reconstruct trade routes and even long-range networks of trade.

Oftentimes, the only hint that a city had inhabited a certain spot would be a dirt hill, known as a *tel* from the Arab word for mound. Over the centuries of its life, a city would build new structures and streets on top of old ones wrecked by floods, earthquakes, etc. This would gradually raise the level of the city until it was abandoned. Dust would blow in, covering the city until the only evidence of its former existence would be a dirt mound, such as Tel Hazor in Galilee

(below). Over the centuries, different peoples would move in and out, and the very existence of the city would be forgotten until archaeologists started unearthing these tells in the 19th century.



Unfortunately, archaeology in the 1800s was more a treasure hunt for gold than a serious scientific and historical exercise, and treasure hunters would virtually bulldoze a site, thus destroying valuable evidence of postholes, fire pits, and tiny fish bones.

For example, Charles Masson described the ruins of Harappa in 1842, but it was the 1920s before archaeologists paid serious attention to it. Meanwhile, in the 1850s, the British, who were building railroads through the area, used Harappa's oven baked bricks as ballast.

The other major type of evidence consists of the remaining foundations of buildings. Sometimes archaeologists are lucky, such as at Pompeii where volcanic ash from Mt. Vesuvius covered the entire city at one time, leaving it frozen in time for later generations to discover.

Unfortunately, all that usually remain are the foundations of buildings. Carefully excavating these can reveal street plans of cities and the presence of such things as urban planning. The location of a complex of large foundations can tell us where the city's center was with its temples and public buildings.



Excavated ruins of Harappa's granary

However, this cannot tell us how tall the buildings were or how they were decorated, so archeologists will sometimes rely on modern analogies and common sense to reconstruct the buildings. For example, a hot dry climate would dictate houses be built to stay as cool as possible with thick walls, low doorways, and narrow windows to keep out the heat. Roofs would be flat to give more space for storage and activities in the crowded urban environment where every square inch was valued. Flat roofs also provided a place to sleep during the cooler nights.

Out of all these, we can reconstruct, with some confidence, how cities such as Mohenjo Daro looked in their heyday, and even some details of how people lived.

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MASTERS OF THE SEA: THE PHOENICIANS (c.1200-500 B.C.E.)

It is easy for us today to take sea-borne trade and travel. But what if no one had dared to venture across the sea. After all, humans do not take naturally to water, and it is conceivable that a natural fear would have kept us complete landlubbers. If that had been the case, the Americas, Australia, Britain, Japan, and numerous other islands would have been completely outside the mainstream of history. Even contact between points within the vast land mass of Asia, Europe, and Africa would have been much more restricted when one considers how much of that contact has been by way of rivers and seas. The lack of water travel might have slowed the progress of human civilization to a virtual snail's pace. Of course, we cannot know for sure how severe the impact would have been, but it certainly would have been significant. However, people with their natural curiosity did take to the water. Although the Phoenicians were not the first to do so, they advanced the art and technology of seafaring to the point that they are considered the premier sailors of antiquity.

Geopolitics. As with other civilizations, the Phoenicians' environment, or geopolitics, largely influenced their history. First, ancient Phoenicia, modern day Lebanon, was a hilly coastal area whose rough terrain made it hard to unite. As a result, independent city-states such as Byblos, Ugarit, Tyre, and Sidon emerged along the coast.

Secondly, the Phoenicians did not have the sort of rich soil that one found in Egypt and Mesopotamia. In fact, they had only two major natural resources that were useful for trading: timber and snails. Their timber, the fabled cedars of Lebanon, was highly prized for use on the building projects and navies of the ancient Near East. Unfortunately, all that remain are a few isolated clumps of trees, since the cedar forests on the hillsides were clear-cut to meet the demands of ancient customers. The result has been the serious and most likely irreversible erosion of Lebanon's soils. Most likely, the absence of trees to transpire moisture and moderate temperatures also produced a hotter drier climate. The other, rather unlikely resource was the murex snail. This creature, when left to rot in a pool of water under the hot Near Eastern sun, secreted a hormone that produced a precious colorfast dye of scarlet (ancient

purple) color. It took 30,000 of these rotting snails to produce one pound of this dye, making it very expensive. As a result, purple is still seen as the color of royalty, since kings were about the only ones who could afford to dye anything purple. All those decaying snails must have also made it imperative to place the dye works downwind from the cities.

With virtually only these two things to trade, the Phoenicians had to become shrewd traders and, indeed, they were among the sharpest businessmen in the ancient world. Part of their cleverness was the ability to copy other peoples' art and manufacturing styles in order to produce and sell those goods at a cheaper price. It is difficult to identify a distinctive Phoenician artistic style since they were such brilliant copycats. Another example of their business acumen is how they adapted an Egyptian script into the alphabet we use today, minus the vowels. This allowed each merchant to keep his own records rather than having to rely on an expensive scribe to do it for him.

The third and final geopolitical factor of Phoenicia was its position between the two great civilizations of the time: Egypt and Mesopotamia. This brought a lot of trade their way, but also left Phoenicia caught in wars between its powerful neighbors, a situation that modern Lebanon still faces today. For example, the city of Tyre supposedly withstood a siege of five years by the Assyrians and another siege of thirteen years by the Babylonians. Hemmed in and harassed by these empires, the Phoenicians found themselves with only one way to go: across the sea.

The evolution of the Phoenician sailing ship, like so many other developments, was largely the fusion of other people's ideas, although the result bore the distinctive mark of Phoenician genius. There were two main shipbuilding traditions the Phoenicians would draw upon: those of the Minoans on Crete and the Egyptians.

The Minoans who flourished from around 2000 to 1500 B.C.E. were the first real sailors of the ancient Near East. Their ships evolved from dugout canoes to larger craft, with the canoe itself serving as a backbone or keel to which other planks were fastened to build up the sides. The Egyptians did most of their sailing in the safe waters of the Nile or on short excursions along the coast between Egypt and Palestine. Unfortunately, they only had the

short stubby acacia tree from which to make planks. As a result, their ships were patchworks of boards resembling a jigsaw puzzle and requiring a lot of internal support. So the Egyptians put in ribs and cross braces, called thwarts, to hold their ships together.

The Phoenicians, in deciding between using the Minoan keel or Egyptian ribs and thwarts, chose both. This resulted in a rather bulky, but sturdy sailing vessel. In order to seal it against leaking, a layer of tar or pitch covered the lower part of the hull, which the Greek poet, Homer, was referring to this when he spoke of the "black ships". Ships' hulls also often had lead or copper sheaths to guard against sea worms eating into the wood.

For short journeys, men could row these ships, but that was tiring, labor intensive, and expensive in wages and food (which would also take valuable cargo space from trade items). Eventually people figured out how to use wind power, an especially ingenious way of harnessing free energy from nature. Sailing with the wind was no problem. Sailing with a cross or headwind was an entirely different matter. The Phoenicians learned the technique of tacking, turning the sails at an angle to the wind in order to go in the general direction desired. This involved a good deal of zigzagging at different angles to the wind, but it beat rowing, and became a basic part of the sailor's art from then on.

Unfortunately, sea travel and trade also brought piracy, which led to designing specialized warships and naval tactics to meet this threat. At first, naval fights consisted of firing arrows at each other and then grappling enemy ships with hooks to board them for hand-to-hand combat. This mode of fighting at sea continued to be used all the way up through the 1500's C.E. However, around 1000 B.C.E., someone got the idea that sinking enemy ships was a much easier and safer way of disposing of the enemy than fighting them face to face. To this end ships were made much sleeker and more maneuverable with rams attached below the waterline on the bows (fronts) of the ships. The goal now was to ram a hole in the side of the enemy ship and sink it. If that failed, sweeping the enemy ship to shear off its oars with one's ram was the next best thing, since it crippled the other ship and set it up for getting rammed on the next pass. Eventually, a new type of warship evolved, the trireme, a streamlined, low lying ship powered by three banks of oars. It was the most lethal weapon on the high

seas, especially when powered by highly trained expert crews. Slaves were not generally used in ancient fleets, since they were too unreliable, and the main difference between two fleets was often the quality of their rowing crews.

Phoenician exploration and colonies. Equipped with reliable ships and sailing techniques, the Phoenicians took to the sea in search of new markets, resources, and homes. In the process, they explored new lands where they often founded colonies. Their travels took them across the Mediterranean and through the Pillars of Hercules (Straits of Gibraltar), which most people considered the ends of the earth. From there, they sailed to Britain, which to most people was no more than a legend, but for the Phoenicians was a valuable source of tin. Even more astounding, they probably sailed around Africa two thousand years before Vasco da Gama did it for Portugal. Unfortunately, we have few details of Phoenician voyages since they wanted to keep geographic knowledge secret from any competition, in particular the Greeks, who might want to invade their markets. We do know that their method of exploration involved coast hopping rather than open sea sailing, since there were no reliable ways to navigate in open waters at this time.

The Phoenicians also founded colonies around the Mediterranean, in particular along the coast of North Africa. The most famous of these colonies was Carthage, founded by refugees from Tyre who were led by a woman known variously as Elissa, the Biblical Jezebel, and Dido in the Roman epic, the *Aeneid*. Carthage commanded the passage between the Eastern and Western Mediterranean and soon surpassed its mother city in power and wealth. The Carthaginians claimed the Western Mediterranean was their "lake" and tried to keep other peoples out. This led to centuries of bitter warfare between the Carthaginians and Greeks over the island of Sicily. In the end, both sides wore each other out and left the way open for another power, Rome, to take over. After three long and bitter wars, the Romans finally destroyed Carthage in 146 B.C.E., pronouncing a curse on anyone who dared settle there again. However, a century later the Romans themselves, recognizing the Phoenicians' excellent eye for a city, re-founded a new city on that site, even naming it Carthage. Ironically, some 500 years later, a Germanic tribe, the Vandals, seized Carthage and used it as a base from which to launch a raid and sack Rome in 455 C.E.

International Languages for Copycats & Traders

The custom of making cheap copies of products to undersell the originals is nothing new, and the Phoenicians were masters of the practice. After all, given the time and difficulties of transportation, it was expensive, tedious, and dangerous to go all the way to Egypt, buy a sarcophagus lid, then go all the way to some place like Assyria and sell it for a profit to cover the costs of getting and transporting it. It was much simpler to make good copies of such things at home and take them to Assyria where "Egyptian" goods would be seem exotic and command a good price. After all, who in Assyria could even tell the difference between an authentic Egyptian sarcophagus lid and a cheaper knockoff?

Lingua franca (literally French language) is a term referring to a common language used to communicate for trade and diplomacy between different cultures. It comes from the 1700s when French was the dominant power and cultural influence in Europe, and any educated person would learn French to communicate in other European countries and their colonies. It typically has also been seen as a sign of being educated and urbane.

The first such language was Sumerian, which remained a part of a scribe's curriculum in Mesopotamia literature and poetry long after the Sumerians' political power had waned. It was succeeded by Akkadian written in cuneiform and remained so for centuries as wars, trade, and diplomacy spread throughout the Fertile Crescent. Even diplomacy between Egypt and the Hittite Empire was carried on in cuneiform, since both cultures' scripts were hieroglyphic and thus difficult to use in other languages. By contrast cuneiform was based purely on sounds and more easily adapted to other languages.

In succeeding centuries, other languages would serve as the *linguae francae* of their eras. Alexander the Great's conquests made Koine (common) Greek the language of the Eastern Mediterranean for 1000 years. Rome's empire did the same for Latin in the West, where it remained an essential part of the curriculum and the Catholic faith until the twentieth century and is still offered in schools. Similarly, because of the Arabs' political power extending from Spain to India and the belief that one should learn the Quran in its original language, Arabic has been the *lingua franca* of the Muslim world. In East Asia, China has functioned as the common language between cultures. In the last century, British and American political and cultural influence have made English a global *lingua franca*.

However, trading far outside the range of one's *lingua franca* where there was no common language understood on either side was more tricky. According to the Greek historian, Herodotus, this is how the Phoenicians (AKA Carthaginians) managed it:

"The Phoenicians no sooner arrive-- they unload their wares. Having arranged them in an orderly fashion along the beach, leave them and returning aboard their ships, raise a great smoke. The natives, when they see the smoke, come down to the shore-- lay out as much gold as they think the goods are worth, and then withdraw to a distance. The Carthaginians then come ashore and look. If it does not seem sufficient, they go aboard ship and wait patiently. Then the natives approach and add to their gold until the Carthaginians are content. Neither party deals unfairly by the other: for the Carthaginians never touch the gold until it comes up to the worth of their goods, nor do the natives ever carry off the goods until the gold is taken away."

The Phoenician Alphabet and Spelling Bees

The idea behind the phonetic alphabet was to have one symbol for each of the 20-30 sounds we use in our particular language instead of one symbol for each of the hundreds of syllables and sound combinations we can make.

Although the Phoenicians are popularly credited with inventing the *phonetic* alphabet (thus its name), it was probably more an Egyptian development of gradually reducing syllabaries (writing scripts like cuneiform with a symbol for each syllable and/or combination of sounds one can make) down to fewer and fewer symbols until they had an alphabet.

Even if the Egyptians invented the alphabet, it was the Phoenicians who adopted the alphabet for keeping their own records and spread its use in their travels. Among those receiving it were the Greeks, who would add one more innovation that Semitic writing scripts didn't need: vowels.

As any student of a foreign language will tell you, different languages make or stress certain sounds while not using others. As a result, phonetic alphabets for different languages will often have variations. For instance, the Latin alphabet, from which we derive our own alphabet, had no letters for j and w.

Languages also change over time so that the sounds associated with certain languages will change as well. A good example is beta, the ancient Greek letter for b, which is now pronounced like a v. Both b and v are what linguists call bilabials, since both sounds are made with both lips. Peter the Great of Russia inaugurated a reform of the Cyrillic alphabet in the early 1700s to reflect the changes in the Russian language over the previous centuries.

Spelling, especially with more standardization since the invention of the printing press (c.1451), has had an even harder time keeping up with changes. Keep in mind that spelling originally reflects how a word is pronounced. Thus the English word *knight* is not spelled that way to make spelling bees more challenging. Rather, it's a history lesson frozen in time telling us how it was pronounced in the middle Ages.

Ancient Warships and Naval Tactics

Unfortunately, sea trade was often a tempting target for pirates, and merchants had to defend themselves at sea. Up to now, naval battles had largely been land battles fought at sea, with the each side trying to board the enemy's ships and take them over. Obviously, this was a dangerous way to conduct trade. If only there were a better way.

Then, one day a shipwright created a specially designed war galley with a ram on the front, the goal now being to ram enemy ships in the side and sink them. They also streamlined their ships to make them faster than their enemies. The key to victory now was speed and maneuverability, as seen below in the *penteconter* (50-oared galley).



But what if their enemies did the same thing?

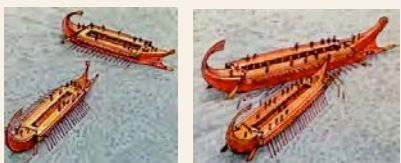
They could lengthen the ship to add more rowers and speed, but that would also make the ship more fragile and harder to turn. Therefore, they tried an extra bank (level) of oars. This made the ships a bit taller, but the extra power and speed from the added rowers more than made up

for that. Further experiments arrived at an arrangement of three banks of oars as the maximum and optimum size of the galley.



Thus was born the *trireme*, the premier warship of its time. Later variations would be called *quadriremes*, *quinquiremes*, etc., which historians used to think referred to how many banks of oars there were. However, modern experiments suggest that the numbers referred to the numbers of rowers per vertical line of oars. For example, a trireme could have three banks of oars with one man per oar. However, if a second rower were added to the top bank, it would be called a quadrireme. Two rowers per oar on the top two banks would make it a quinquireme, and so on. Experiments have shown that the maximum number of men on one oar was eight. Beyond that, the man at the far end of the oar would have to do too much running to keep up with the movement of his end of the oar.

Naval tactics. There were two basic tactics ancient navies used these ships for. The first was ramming the side of an enemy ship to sink it (below left). One problem would be if a ship embedded its ram so deeply in the enemy ship that it couldn't easily extricate itself by backwatering, making it a sitting target for another enemy ship.



The other tactic was the oar rake (above right). If a ship couldn't get a clean shot at ramming an enemy ship, it might approach at an oblique angle, shearing off the enemy oars with its ram, leaving the immobilized enemy ship a sitting target to be rammed. One danger of this tactic was the attacking ship's crew's failure to pull in its oars to avoid losing them as well when the two ships passed closely by one another. Success in using either of these tactics depended primarily on the quality of the crews involved. Therefore, despite the impression given in Hollywood epics, slave crews were generally not used since they were unreliable

Naval games of Chicken. Another gutsy move, known as the Rhodian tactic, involved steering for a head-on collision with an enemy ship. At the last moment the rowers would drag their oars which, like a car slamming on the brakes, would cause the front of the ship to dip down and undercut the other ship, ramming it below the waterline while only getting rammed above the waterline. The jolt of impact between two ships in a naval battle could easily throw people overboard if they weren't hanging on tight.

However, these tactics required large crews of highly skilled rowers rowing in complete unison. For example, one trireme would need 170 such rowers, while ancient fleets often topped 100 such ships. Thus, each fleet in a battle using the tactics of ramming and oar rakes could have over 20,000 skilled rowers.

And those rowers were quite vulnerable and hard to replace. In addition to deaths in naval battles,

which could be horrific, rowers faced the risks of storms and shipwreck. The storm that wrecked the Roman fleet off the coast of Sicily in 254 B.C.E. may have killed 100,000 men back when populations were much lower and such losses were much harder to replace.

Therefore, given the difficulty of finding and replacing skilled rowers, navies down through history usually reverted to the time-honored strategy of grappling and boarding enemy ships to turn sea battles into land battles. Such tactics required less skill in maneuvering so that navies could rely on cheaper free and slave labor. To compensate for the lack of skilled rowers, warships also tended to get bigger. One monstrous double-hulled warship required 3,000 rowers, and proved impractical to use in battle.

Making rowers' lives more miserable and dangerous were the extremely cramped and filthy conditions in which they lived. The streamlined nature of ancient galleys dictated that multiple layers of rowers were packed in like sardines leaving virtually no elbow or head room. Air circulation was minimal, making conditions extremely hot.

If ships were in a hurry, rowers would be fed while rowing, crewmen even stuffing wine-soaked bread into the rowers' mouths so they wouldn't even miss a stroke while rowing. Just one rower missing a stroke could cause a chain reaction of all the oars on that side running afoul of one another, maybe even forcing the

whole crew to stop rowing so they can regain their rhythm.

There were also no bathrooms, except the narrow benches where the rowers might be stuck 24/7. Pity the poor men on lower levels directly beneath comrades who were equally desperate for a potty break.

Reportedly, people could sometimes pick up the stench of these navies before they could even see them approaching. Ships would often be submerged to wash away the filth after a voyage.

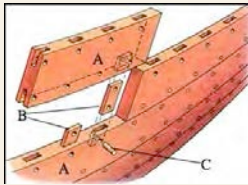


A diagram showing the arrangement of rowers on a trireme

In order to keep time in rowing with all the oars in the same line in the water, all the oars needed to be the same weight and length (about 14 feet). This raised the problem of how to keep the oars of the top level of rowers (thranites) the same length as the others, since they were higher up and farther from the water. The solution was the outrigger, a construction built out from the hull. Therefore, while the thranites were vertically farther from the water, they were horizontally closer to the line where all the oars met the water, thus keeping them all the same length. The only difference was that the thranites had to row at a steeper angle than the other levels of rowers. As a result, they were generally the most skilled and highest paid rowers on a ship.

Building Ships Without Nails

One of the things we especially take for granted today is mass-produced nails, which we can buy by the hundreds for just a few dollars at the local hardware store. However, such a simple technology is only made possible by precisely calibrated machines that did not exist until the industrial revolution in the 1800s. Before the invention of nails, ships were held together by *mortise and tenon* construction. Below is a description of how to build an ancient ship using this technique.



The hull's planks (A) were fitted with upper & lower rows of holes & slots.

Smaller slats (B), also with holes, were placed into the slots of the lower plank, with their holes lining up with the plank's holes.

Pegs (C) were then put through the holes, locking the slats and plank in place.

The next plank was put in place over the lower plank, with the slats fitting into its lower slots and its lower holes lined up with the upper holes of the slats.

Pegs were then put through the holes of the plank and upper holes of the slats, locking the plank into place with the lower plank.

Once complete, the entire hull was covered with a layer of copper or lead to keep out sea worms and barnacles and then coated with tar or pitch to make it watertight.

The 1st Circumnavigation of Africa ***(c.600 B.C.E.)***

Unlike the Portuguese explorer da Gama, the Phoenicians started on the east coast of Africa and sailed back up the west coast.

The Greek historian, Herodotus, a source hostile to the Phoenicians, tells us an Egyptian pharaoh commissioned a Phoenician crew to sail around Africa. Along the way they ate elephant meat and met a hairy tribe of people known as gorillas, whose females apparently were not too friendly, one of them mauling a Phoenician sailor. (They killed her and brought her skin back to Carthage.) According to the captain, as they sailed west around the southern tip of Africa, the sun was to their right (i.e., north). As a result, Herodotus dismissed the story of this voyage as a typical Phoenician lie, because everyone knows the sun is always to the south. That is, everyone in the northern hemisphere, but not in the southern hemisphere, where the sun *is* to the north. Therefore, for the very reason Herodotus thought the Phoenicians were lying, we think they were telling the truth.



In 2008, a group of scientists with the approval of the Royal Geographical Society, set out to recreate the Phoenician circumnavigation of Africa. Two years later, they had accomplished this feat in the *Phoenicia*, a full-size replica of a Phoenician sailing ship even built using ancient methods.

A Short History of Carthage

The most illustrious and powerful Phoenician city wasn't even in Phoenicia. Rather it was Carthage, a Tyrian colony on the coast of North Africa.

According to legend, Carthage was founded by a queen of Tyre, named Elissa (known as Jezebel in the *Bible* and as Dido in the Roman epic, *The Aeneid*). When Elissa asked the local natives for some land, they jokingly told her she could have as much land as she could cover with an oxhide. Completely undaunted, she had an oxhide cut into narrow strips and laid end to end around a perimeter of land that would become Carthage.



A view of how ancient Carthage probably looked. Its circular naval harbor was protected by a very narrow approach.

As with other Phoenician cities, Carthage's main sources of wealth were trade and manufacture. Therefore, it is hard to identify Carthaginian workmanship since they, like other Phoenicians, made cheap copies of other cultures' goods in order to undersell the competition. Also, although of more Middle Eastern origin, Carthage's culture was heavily influenced by its arch-rivals, the Greeks.

Carthage ruled the coast of North Africa, southern Spain, and the western end of Sicily. Control of that strategic island would have secured the markets and riches of the

Western Mediterranean, but the Carthaginians faced a race of sailors and merchants just as determined as they were to control Sicily: the Greeks.

Over the centuries, a pattern of wars emerged where Carthage would mount a huge offensive and nearly conquer Sicily, until a leader, usually from Syracuse), would emerge to save the Greek cause. Then each side would recover for a few years and start all over again. Thus a series of Syracusan leaders Gelon (480), Dionysius (early 300's), and Agathocles (late 300's), and Pyrrhus of Epirus (270's), a king from north-western Greece, each saved the Greek cause in turn. Ironically, a people with little or no experience at sea, the Romans, would be the winner.



The Punic Wars, as the three wars between Rome and Carthage are called, spanned over a century (264-146 BCE) and collectively constituted one of the most epic struggles in history. In the First Punic War (264-241 BCE) Rome built its first navy and crushed several Carthaginian fleets, only to have its own fleets swallowed up by storms. After 23 years, the Romans destroyed one last Carthaginian fleet, thus ending the war and stripping Carthage of Sicily and Sardinia.

But Carthage wasn't finished yet. Its general, Hamilcar Barca more than compensated for the loss of Sicily by conquering much of Spain, thus providing his home city with a new

source of silver and mercenaries. The renewed Carthaginian threat triggered a Second Punic War (218-201 BCE). In order to take the war to Rome's back yard, the Carthaginian general, Hannibal, marched his army, including 37 war elephants over the Alps into Italy. (All but one of the elephants, named Cyrus, died in the crossing.)

Hannibal would prove to be one of history's greatest generals, destroying one Roman army after another and holding the Romans at bay in Italy for 16 years. However, the Romans were every bit as persevering as the Carthaginians. Behind the leadership of their own brilliant general, Scipio Africanus, they drove the Carthaginians from Spain and invaded North Africa. This forced Hannibal to return to defend his home city. At the battle of Zama in 202 BCE, the Romans defeated Hannibal, and Carthage sued for peace.

Despite a harsh peace treaty, Carthage recovered its prosperity, although not its political or military power. However, Rome remained paranoid about a revived Carthage and treacherously attacked it in 149 BCE. The Third Punic War (149-146 BCE) amounted to little more than an epic siege of Carthage that ended with its destruction by the Romans. The victors burned the city and cursed the ground for any future settlers.

However, Carthage's story wasn't over yet as it took an ironic twist that played itself out some 600 years later. Despite the curse they laid on the land, the Romans resettled Carthage a century after its destruction. Once again, Carthage flourished. And

then, in the 5th century CE, when the Roman Empire in the West was falling apart, a Germanic tribe known as the Vandals invaded North Africa, took Carthage, and used it as a base to attack shipping in the Mediterranean. In 455, the Vandal fleet sailed up the Tiber River and sacked Rome, seeming to exact revenge for the destruction of the Phoenician city 600 years earlier.

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14. THE ISRAELITES (c.2000-500 B.C.E.)

Introduction. Another people who had an even greater impact on history without building a great empire were the Israelites, also known as the Hebrews or Jews. In the course of their history, they would establish Judaism as the first great monotheistic religion and also heavily influence Christianity and Islam. Together these are the three dominant religions throughout the Near East, Europe, much of Africa, the Western Hemisphere and Australia. In addition, these faiths have also shaped the law codes, art, culture, social customs, economics, and histories of their respective societies. Yet if it had not been for their religion, the Jews probably would not have been any more than a footnote in the history books.

The Patriarchal period (c.2000-1650 B.C.E.).

The Jews first appear as the *Habiru*, a Mesopotamian word referring generically to any nomads whom they came into contact with. It was only much later that the *Habiru*, or Hebrews, were associated specifically with the Jews. Evidence of contact between Mesopotamia and the early Hebrews can be seen in the various stories shared by the two cultures, such as the Great Flood. Around 2000 B.C.E., various groups of *Habiru*, known as Amorites, gradually weakened and overthrew the Sumerian empire of the Third Dynasty of Ur. Among these tribes was a patriarchal clan that would come to be known as the Jews. One leader of this clan was Abraham, whom Jews, Christians, and Muslims all look back upon as their spiritual ancestor. While many of his Amorite kinsmen and allies were settling down and adapting to the civilized ways of their subjects, Abraham continued in his nomadic ways. His travels took him over much of the civilized world from Mesopotamia to various places in Palestine, then known as Canaan. He even made his way to Egypt during a famine before returning to Canaan. Thus Abraham's travels put him in contact with the great civilizations of the ancient Near East. Several Biblical stories, such as that of the Great Flood, seem to reflect this contact.

Abraham is especially remembered for his **covenant**. This was an agreement with his god to follow and worship him exclusively in exchange for his protection. Such a covenant was apparently not unique among Semitic tribes. For example, Abraham refers to the god of his brother Nahor

(Genesis 31: 53), implying Nahor and his people had a similar covenant with their own particular god. This also seems to imply that Abraham and his people believed in other gods at this time, but refused to worship them. Instead, they were the "chosen people" of their god, a distinction that would grow in importance as they came to see their god in more universal and cosmic proportions as the only god.

The Egyptian Period and Exodus (c.1650-1200 B.C.E.).

Around 1650 B.C.E., the Hebrews' history became intertwined with that of Egypt. It was at this time that the Semitic people known as the Hyksos overran and ruled much of Egypt. Although the Hebrews were probably not part of the actual invasion, they do seem to have been related to the Hyksos. For example, Hyksos names with "Jacob", a Hebrew name, occur. The story of the quick rise to power of Joseph, Abraham's descendant, probably could not have occurred under native Egyptian rule. And when Joseph's family migrated to Egypt, they went to Goshen, a Hyksos city.

There is about a 400-year lapse between the end of Genesis, when Joseph is at the height of his power, and the beginning of the next book of the Bible, Exodus. At that point we find Joseph's people, the Israelites, enslaved by the Egyptians. What has happened in between has been a resurgence of Egyptian power that drove the Hyksos out of Egypt. Naturally, the Israelites did not fare too well in this change of masters.

It was probably during the upheaval of peoples the Egyptians called the Sea Peoples that the next great figure in Jewish history, Moses, was born. Although he grew up in the upper ranks of Egyptian society, Moses kept, or regained, touch with his unfortunate kinsmen. Pitying an Israelite slave who was being beaten by his Egyptian master, Moses killed the Egyptian and then fled into the desert. It was there that he found what he saw as a sign from God: a burning bush that was not consumed in its flames. This inspired him to lead his people out of Egypt.

The Exodus, as this mass migration is called, is probably the most important single event in the history of the Jews, since it won them their freedom and gave them their identity as a people. It probably occurred after Ramses II's reign, when the strain of extended warfare and the burden of

supporting the powerful priesthood of Amon were starting to take their toll on Egypt. The Biblical ten plagues that forced the pharaoh to let the Israelites go may reflect Egypt's internal troubles at that time. Also, more than the Israelites escaped at this time, as reflected in the Bible's reference to a "mixed multitude".

The Ten Plagues that afflicted Egypt were:
1) The Nile turning into blood; 2) skin boils; 3) gnats; 4) flies; 5) locusts; 6) dead cows; 7) darkness; 8) hail; 9) frogs; and 10) Passover when an angel of death killed all the firstborn sons of Egyptians.

***Reed or Red.* Some scholars think that "Red Sea" mistranslation of "Sea of Reeds" of which there are three fordable lakes fitting that description.**

There are six possible locations for Mt. Sinai

The Exodus was also important in the development of the Jewish religion. The climactic event of the Exodus was receiving the Ten Commandments at Mt. Sinai. The revolutionary nature of these laws is easily obscured by the fact that they have become an essential part of our culture. This makes them commonplace, and thus taken for granted. However, the idea that people are morally responsible for their own actions rather than just being at the mercy of fickle gods who act unpredictably dates from the time of the Ten Commandments. Also, the idea of worshipping only one god and not making idols that one can touch and feel was a radical departure from most other peoples' practice up to that point in history. Since that time, the Ten Commandments have served as the religious, moral, and ethical foundations for the Jewish, Christian, and Islamic cultures.

Israel (c.1200-586 B.C.E.). The Bible tells us the Israelites wandered for forty years in the wilderness. This might be a reasonable figure for a nomadic people used to wandering. Both Archaeology and the Bible give us a date of around 1200 B.C.E. for the Israelites' entrance into the Promised Land, because this was when Jericho and other Canaanite cities seem to have been destroyed by invaders. Also the Sea Peoples, or Peleset as

the Egyptians called them, probably arrived in Palestine about this time. Although they would later be the Israelites' archenemies, the Philistines, their raids at this time probably helped the Israelites by weakening the Egyptian Empire.

The Bible gives two very different versions of the conquest of Israel. One version has Joshua, Moses' successor, winning one spectacular victory that delivered the whole land into the Israelites' hands. The other version gives the impression of a piecemeal conquest. This is probably closer to the truth. The nomadic Israelites were divided into twelve tribes loosely held together by their common religion. Most likely, each tribe took over its own part of Israel independently of the other tribes. It was a fairly drawn out process that involved fighting here and peaceful absorption there. Many of the inhabitants were Habiru, akin to the Israelites, but who had stayed behind when Joseph and his clan went to Egypt.

Israel's geopolitics did not mark it out as the ideal place to settle. It was hot and dry with scattered areas that had enough fertile soil and water to make them worth settling in. It had few natural resources besides some copper and iron in the south. Worst of all, it was in between the great empires of Egypt to the south and Mesopotamia to the north. This made it a constant battleground or highway for invading armies. That situation has not changed too much to the present day.

***Angelic topography.* According to popular legend, Palestine was so rocky because, when God sent angels with a bag of rocks to distribute over the earth, the bag broke and all its contents fell on Palestine.**

Settling in Israel created two very different problems for the Israelites. Like other nomadic peoples who conquered civilized areas, the Israelites found themselves drawn to adopt the ways of their more settled subjects. However, their transition to civilization was particularly difficult, because the Canaanites' polytheistic religion drew many Israelites to its rituals. Since the Israelites saw themselves as God's chosen people, and felt that their survival and success depended on God's favor, they took very harsh measures against anyone, Israelite or Canaanite, they found practicing pagan religions.

Another problem the Israelites faced was hostile neighbors, especially the Sea Peoples, or Philistines, who had settled in the coastal areas of Palestine. These people, possibly from contact with the Hittites, whom they had conquered, had iron technology and weapons. This gave them a decisive edge in battle that allowed them to deal some fairly serious beatings to the different Israelite tribes. As long as the tribes remained separate and did not cooperate, the Philistines could do just about as they pleased. They even captured the Israelites' holiest object, the Ark of the Covenant, in battle. Because of this outrage, the Israelites started agitating for a king to unite them against the common enemy.

The Tribe of Dan may have once been Sea Peoples, known elsewhere as Danaoi in the *Iliad* and also as Denyen. A vague reference in the Bible talks about the men of the Dan living by the sea: "And Dan, why did he live close to the ships?" (Judges V: 17)

Up to this point, the main officials of the Israelites had been tribal leaders called judges. These men, such as Samson and Gideon, often served as military leaders as well as performing judicial functions. There was at least one woman judge, Deborah, who was renowned for her wisdom. The most influential of the judges at this time was Samuel. He tried to convince the Israelites that a king would be a bad idea, since he would demand military service and forced labor, just as they had endured when in Egypt. Nevertheless, the people insisted and Samuel chose Saul as Israel's first king.

Saul's reign (c.1020-1000 B.C.E.) was not a happy one. Besides facing the formidable Philistines and other enemies in battle, he also had to deal with the different tribes refusing to cooperate with each other. He even had trouble with the judge Samuel, who may have been jealous of the power this new king was taking at the expense of the judges. In the end, Saul's reign ended in a military disaster at the hands of the Philistines. His reign was important, nonetheless, because, once the Israelites had taken that fateful step towards civilized monarchy, they never went back to their old nomadic ways.

***Royal headaches.* Saul seems to have suffered from severe headaches, possibly migraines, which only the soothing music played by David could cure.**

The reigns of the next two kings, David (c.1000-961 B.C.E.) and Solomon (961-922 B.C.E.), saw Israel's power at its height. The Israelites during this time were able to extend their sway directly or indirectly over the Eastern Mediterranean coast from the Sinai Desert in the south to the Euphrates River in the north. Much of their success was a result of timing, since both Egypt and Assyria were experiencing internal problems at the time, creating a power vacuum which the Israelites could fill.

The reigns of David and Solomon saw further signs of the transition from nomadic to civilized life. David founded, or refounded, the city of Jerusalem and built a splendid palace there. Solomon built a magnificent temple in which the Ark of the Covenant could reside rather than in a tent. Both kings built up a standing army and bureaucracy to protect and rule the land. Of course, there was a price for all this: heavy taxation and even forced labor. True to Samuel's prediction, many Israelites did grumble about how this was just like their forced labor in Egypt.

***I told you so.* Just like Samuel had told the Israelites, when they got a king their taxes would go up. In addition to higher taxes, building the Temple also involved the forced labor of 180,000 workers. The royal court wasn't cheap either. Each month one tribe supplied the court with its food and drink. On a daily basis it supposedly consumed: 155 bushels of flour, 300 bushels of meal, 30 oxen, and 100 sheep. Keep in mind Solomon had 700 wives, most of whom probably needed to eat.**

The divided kingdom (922-586 B.C.E.).

Dissatisfaction with Solomon's high taxes and forced labor led to the kingdom splitting after his death in 922 B.C.E. The ten tribes in the north, feeling they had borne more than their fair share of the burden, broke away and founded the kingdom of Israel, while David's line continued to rule the remaining two tribes in the southern kingdom of

Judah. Neither kingdom had the power and resources to maintain itself in the style of David and Solomon. A growing gap between rich and poor led to social turmoil, while corruption and internal quarrels further weakened each kingdom. And all the while, the spreading shadow of the Assyrian Empire was approaching the Israelites.

Both kingdoms gave in to Assyrian rule and were allowed to govern themselves as long as they loyally supplied the Assyrians with money and troops. Unfortunately, the northern kingdom of Israel made the mistake of rebelling. The Assyrian lion descended with typical speed and ferocity, killing much of the population and dragging the rest off into mass exile. There, the ten tribes of Israel became the "ten lost tribes of Israel", being absorbed by the surrounding cultures and losing their identity as a people.

Rats or plague? The Assyrians did besiege Jerusalem in 688 B.C.E., but were apparently repulsed. The Biblical version in II Kings says the city was delivered by God who slew 185,000 Assyrians (a lot more than they could have possibly brought). Whatever the number, this suggests some sort of epidemic, such as cholera, as the agent of their destruction. The Greek Historian, Herodotus, says it was an infestation of rodents that ate the Assyrians' bowstrings. Or course, rodents also carry disease, so the two accounts may not be that far apart.

The southern kingdom of Judah managed to hang on until 586 B.C.E., when it rebelled against the Babylonian successors to the Assyrian Empire. Babylonian vengeance was also swift and deadly. Jerusalem was sacked and burned, and the remaining two tribes were dragged into captivity in Babylonia. However, these two tribes managed to survive and keep their identity, largely because the Persians, who conquered the Babylonians in 539 B.C.E., allowed them to return to their homeland before they were totally absorbed and had lost their identity.

Ironically, this time of troubles saw the Jewish religion achieve new heights. Since the time of David, a succession of prophets had emerged in order to chastise the people for their sins and warn them of God's retribution. When that retribution came at the hands of outside powers, such as Assyria and Babylon, the idea emerged that the

Jewish god was the god of all peoples. For example, the prophet Jonah was sent to warn the Assyrians to mend their ways, showing a concern for **Gentiles** (non Jewish peoples) that had not appeared previously.

Also, in the midst of all these troubles, a messianic idea evolved of a day when divine grace would put an end to human conflict and suffering. Unlike most ancient peoples, such as the Greeks and Romans, who put their golden ages in the past, the Jews saw theirs in the future. The Jews passed this idea on to Christianity and Islam. In later centuries, it would become one of the most dynamic forces in the history of human thought. The Jews were fortunate to have such an optimistic view of the future, for they would need it. Few, if any, people, have endured the suffering and displacement that they were destined to undergo in the 2500 years after the fall of Jerusalem while still maintaining their identity as a people. Although the Persians let them return home from Babylon, fate would not let them stay there.

In 66 C.E., the Jews rebelled against another master, this time Rome. Four years later, Roman legions broke into, sacked, and destroyed Jerusalem. This was the start of the **Diaspora**, or dispersal of the Jews. For the next 1900 years, the Jews would be a people without a home. Scattered across Europe and the Near East, they would experience alternating periods of tolerance and intense persecution at the hands of the people under whom they lived. The low point of all this was the methodical execution of 6,000,000 Jews by the Nazis in World War II. Remarkably, the Jews kept their identity as a people, and in 1948 finally regained a homeland in Israel. Seeing them through all these centuries of trials and tribulations was the vision of a better day to come when *"Nation shall not lift up sword against nation Neither shall they learn war anymore."* (Isaiah 2:4)

Joshua and the Giants



The Osiris pillars in the Temple of Ramses II at Abu Simbel

As the Israelites approached Canaan, Moses sent twelve spies to scout it out. When they returned with reports of a land of giants, only Joshua and one other spy, Caleb, felt confident about moving in. Because of their lack of faith, the Israelites had to wander forty years in the wilderness before finally entering the Promised Land.

So what were the giants they saw? Very likely they were giant statues meant to scare and intimidate people, especially desert nomads having no prior experience with such things. Apparently, they did the job. One can almost imagine an ancient accountant entering the costs of these statues as part of the defense budget. Yes, the Israelites had been in Egypt, but after long years of wandering in the wilderness few if any old timers remained who may have actually seen something like this and knew what they were. That's assuming the Israelites were in a part of Egypt that had such statues.

It's good to keep in mind that monumental statues and architecture, besides being a great ego trip for the rulers who had them built, also served the practical purpose of scaring away invaders and keeping the locals in line. To maintain that fiction, rulers typically did few public appearances, and those would be from elevated positions to distort people's perception of them. Thus the only impression their subjects usually had of them were larger than lifelike statues put in very public places. I'm reminded of an account by a Russian peasant's meeting with Tsar Nicholas II and his disappointment with how short and ordinary he was. Along those lines, when emperor Hirohito announced Japan's surrender in 1945, it was the first time the Japanese public had ever heard him speak. Even then it wasn't a live broadcast, but a taped one.

Closer to home, in most presidential elections it is the taller candidate who wins. We still seem to crave a larger than life hero to solve our problems and protect us.

Gideon and Samson

Two other famous judges in the Bible were Gideon and Samson. What makes them and other characters in the Bible, like David and Saul, interesting is that they are so human and flawed. Compare this to kings like Ramses II of Egypt, who have themselves portrayed as gods, or at least godlike, and capable of no mistakes, much like modern politicians. But, then again, the Bible is not about people so much as about God and how even the greatest of us need God's help. A little humility doesn't hurt either.

Gideon. When God comes to Gideon, (meaning "Destroyer," "Mighty warrior," or "Feller of trees") and tells him to destroy idols to Baal and fight the Midianites and Amelikes, Gideon asks for a sign, that the next morning there will be a dry fleece with wet ground all around. When God performs this sign, Gideon asks God to reverse the sign for the next morning (i.e., a wet fleece surrounded by dry ground. When God, showing a great deal of patience by the way, does this, Gideon finally agrees to go.

When 32,000 men show up to fight the Midianites, God has Gideon send home those who were afraid, which reduces his army by 22,000. But God tells Gideon this is still too many, so he has them go to the river for a drink and send home those who lap the water like dogs instead of cupping it and bringing to their faces. Only 300 men are left after this test. Then Gideon and his 300, equipped with horns and torches, surround the Midianite camp. At the sign they blow their horns (think of a big marching band bursting into your room at 3 AM) surprising and confusing the Midianites so much that they turn on each other with their swords.

Samson, of course, was famous for his long hair that somehow gave him super-strength to do such things as wrestle a lion with his bare hands and kill an entire army with a donkey's jawbone. His girlfriend, Delilah, a Philistine spy, kept trying to find the secret of his strength. So he told her that binding him with seven bowstrings would weaken him. So she tried that while he was asleep, but when the Philistines came, he broke the strings and killed them. So she cries that he doesn't love her, and, for some reason, he isn't suspicious and tells her to bind him with fresh rope, which she does and the same thing happens again. So she cries some more and he tells her to bind his hair, and she does with the same results again.

Even after destroying a lot of good rope and bowstrings, not to mention having to kill hundreds of Philistines, Samson still isn't suspicious of Delilah, who's crying up a storm again, and he finally tells her to cut his hair. This time of course, he does lose his strength and is captured and blinded by the Philistines.

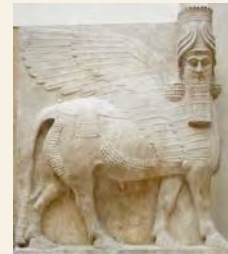
However, the Philistines, don't seem any brighter than Samson and forget to keep his hair short. When it grows back, he regains his strength and, with a prayer to God for strength, brings down a temple, killing a bunch of Philistines, not to mention himself.

Two Mothers One Baby, & a Very Wise King
In the Bible, when asked by God as what gift he would desire, king Solomon replied he wanted the wisdom to govern justly. Indeed, the Israelite king's wisdom was so proverbial that we still have the expression "as wise as Solomon."

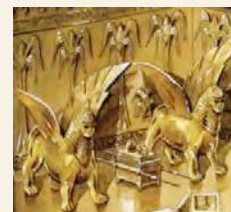
Nothing better illustrates this than the story of two young mothers, one of whose baby has died. After she tries to switch babies with the

other woman, a dispute ensues. They take the case to king Solomon, who has no way of telling who the living baby belongs to. So he tells a guard to cut the baby in half and give part to each woman. The woman whose baby died agrees to this, while the real mother says the imposter can have the living baby if only the king will spare it. Thus he knew the real mother for the selfless love only a mother could have.

The long strange evolution of the angel
Although the *Bible* has several references to Angels as messengers of God, there is no detailed description of how they looked. Not that this stopped people from filling in this gap of information with their imaginations. Oddly enough, the story begins with the Assyrians who used gigantic statues of monstrous winged bulls with human heads to flank the gates of their palaces. Their main purpose was to scare visitors and subjects into behaving. Knowing the Assyrians, it seems to have worked.



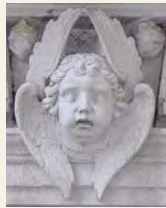
Fast forward a few centuries to King Solomon of Israel who is about to build the Temple in Jerusalem. Having little experience in such architecture, he hires the Phoenician king of Tyre, Hiram. Of course, the Phoenicians were among history's greatest copycats, so Hiram, looking for something to model his cherubim (angels) on to guard the Holy of Holies, uses the Assyrian man-headed winged bulls.



Over time, the cherubim became more anthropomorphic (human in form) and assumed the forms of adult human-like beings with wings, sometimes fearsomely armed with swords of fire (especially in Northern Europe), sometimes just as messengers.



Then something strange happened. They devolved into cute “cherubic” winged babies flying around in the backgrounds of paintings.



Some painters, such as El Greco, even showed them as disembodied winged babies' heads which, when one thinks about it, were as creepy and frightening as giant man-headed winged bulls.

The Sling

The sling was the traditional weapon of shepherds, such as David, because it was cheap and deadly. With practice, slingers could fire stones or lead bullets at tremendous velocity and with deadly accuracy. So the idea that David was at such a disadvantage against Goliath may be a bit of an overstatement, especially if he could keep his distance from the lumbering giant wearing cumbersome armor.



Since slingers needed a lot of individual space to swing their weapons without obstruction, armies could only employ a few of them, so they couldn't provide concentrated firepower against an enemy army. However, they were good for skirmishing, and generals like Hannibal often had a number of slingers with them. Slingers liked to inscribe their lead bullets with insults and nasty messages for their recipients. The two places with reputations for the best slingers were the Balearic Islands at the western end of the Mediterranean and the island of Rhodes at the eastern end.

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THE PERSIAN EMPIRE (c.550-330 B.C.E.)

Introduction. Few people today can boast a longer and prouder history than the Iranians, descendants of the ancient Persians. Not only did they build the greatest empire of the ancient Near East, but they also absorbed the ancient civilizations they ruled, in particular that of Mesopotamia. They then added their own distinctive touches and passed them on to Islamic civilization, still one of the main cultural traditions of modern times. Therefore, this remarkable people who have survived and flourished from antiquity to the present have been a major connecting link with our past.

We first encounter the Persians around 2000 B.C.E. emerging from the grassy steppes of Central Asia in the north. At that point, they were closely associated with two other peoples: the Medes and Aryans. The latter of these turned eastward, crossed the Hindu Kush Mountains, and overthrew the Indus River civilization. Eventually these nomads would settle down and build Indian civilization upon the foundations laid by the Indus culture. Meanwhile the Persians and Medes were turning westward where they encountered the Elamites, a people whose extended contact with Mesopotamia had influenced them to absorb the culture of the "Cradle of Civilization".

The Medes and Persians in turn started absorbing Elamite culture. One need only look at the relief sculptures of the Persians, with their curly beards and stiff formal poses, to see the connection with Mesopotamia. However, the process of becoming civilized was a long one for these people, since they were still on the northeastern fringes of the older Near Eastern cultures. When they emerge fully into the light of history in the pages of the Greek historian Herodotus, they are still very nomadic in their customs and values. According to Herodotus, the nomadic Persians had only three simple goals in educating their sons: "to ride a horse, to draw a bow, and to speak the truth." What more did nomads need? The Medes were actually the first of these nomadic peoples to establish an empire when they joined forces with Babylon to overthrow the Assyrian Empire in 612 B.C.E. In the aftermath, Babylon took the richer civilized lands of the Fertile Crescent, while the Medes took the more extensive but wilder lands to the north. Among their subjects were their compatriots, the Persians. It is here that we encounter the founder of the Persian Empire.

Cyrus the Great and the Rise of Persia (c.550-522 B.C.E.). Herodotus gives us a detailed and somewhat fanciful account of Cyrus the Great's rise to power. As in the stories of so many great men and legendary figures in history, from Sargon of Kish and Moses to Oedipus and Romulus and Remus, Cyrus barely survived infancy due to a royal death sentence from a king nervous about the child's destiny. In each story, someone saves the baby, who grows up and comes back to overthrow the king who tried to do him in. What does seem clear is that Cyrus led the Persians in revolt against the Medes and overthrew them around 550 B.C.E.

Although the Medes' old neighbors were certainly glad to see the powerful Median state overthrown, they soon found their new neighbor, Persia, was an even more dangerous foe. Cyrus first turned westward against Croesus, king of Lydia in Asia Minor, a land renowned for its wealth, as seen in the old saying "rich as Croesus" to denote how wealthy someone is. In order to deal with the tough Lydian cavalry, Cyrus placed camels in front of his lines. The Lydian horses, unused to the camels' strange smell, panicked and bolted, giving Cyrus the victory and Lydia.

Cyrus next turned south against Babylon, whose empire was seething with revolt. Herodotus claims that Cyrus had his troops divert the course of the Euphrates so they could march into the city's unguarded river gates. However true that may be, Babylon's empire collapsed like a house of cards, leaving Cyrus the master of a huge empire. Still, he pressed onward, this time into the vast and wild expanses of Central Asia. His intentions here were probably defensive, to protect the frontiers of civilization from the swarms of nomadic horsemen to the northeast. It was here in 530 B.C.E. that Cyrus died in battle against a tribe known as the Massagetae. In his twenty-nine year reign, he had built the largest empire in history up to that time.

Cyrus' son and successor, Cambyses (530-522 B.C.E.), is mainly remembered for his conquest of Egypt in 525 B.C.E. His attempts to conquer the Nile further south and the desert oases of the Sahara met with less success. Supposedly, one of Cambyses' armies was swallowed up by a desert sandstorm. Cambyses was especially unpopular with the Egyptians, who claimed he committed various atrocities, including the slaying of the sacred bull of Apis. Since our main source for his life is Herodotus, who relied heavily on Egyptian

sources for his book, we have a picture of Cambyses as a drunken lunatic. Cambyses died in 522 B.C.E on his way to Babylon to crush a revolt led by his cousin, Darius, who then succeeded him as the next Great King of Persia.

The power of quick thinking. According to Herodotus, Persian boys were taught three things: to ride a horse, shoot a bow, and tell the truth. This created a dilemma for a Persian noble when the king, Cambyses, who was known as a drunkard and lunatic, asked who was better: himself or his father. Not wanting either to lie or offend the king, he responded: "You are not equal to your father for you do not have a son equal to the one he had."

Darius I "the Great" and the consolidation of the Persian Empire. Although Cyrus had founded the Persian Empire, Darius I (522-486 B.C.E.) gave it the internal organization and structure that allowed it to last for 200 years. His accomplishment is all the more impressive when we consider the empire's enormous size, the scale of which no one had ever dealt with before. Darius dealt especially with three areas: organization of the empire's provinces, keeping the provincial governors under control, and maintaining communications with his far flung empire.

Organizing the provincial government presented two options. Darius could either create small provinces with governors too weak to rebel, but also too weak to defend their provinces against invasion. Or he could create large provinces able to defend themselves, but also more capable of defying his authority. He created about twenty large provinces, called *satrapies*. These ensured that he would not have to race from one end of his empire to the other defending it against every little tribe that decided to attack. Each such campaign might involve years of preparation, marching and fighting. Meanwhile, other frontiers would be vulnerable to attack, involving more years of campaigning and leaving the king with little time for other duties.

Since larger provinces gave the governors, known as *satraps*, a lot of power, Darius took several precautions to keep his satraps from rebelling. For one thing, he had the provincial treasury officials, secretaries, and garrisons answer directly to him,

not to the satraps, except in emergencies. This generally deprived the satraps of the money and troops they needed to revolt while ensuring the defense of the satrapies. There were also officials known as the "King's Ears". These personal agents of the king would travel to the various satraps' courts to check up on their behavior and official records. The King's Ears commanded a great deal of fear and respect, sometimes showing up with no armed escort, but still being able to put down rebellious satraps before the revolts went beyond the planning stages.

Communications in such a far-flung realm was another major problem. Here the Persians adopted the Assyrian practice of setting up a system of relay riders, much like the old Pony Express in American history. Each horse and rider would carry a message for a day and then pass it on to the next horse and rider. In order to speed things along, the Persians established a road system to tie the empire together. The most famous of these was the King's Highway, which stretched 1677 miles from the Persian capital of Susa to Sardis in Asia Minor. It had patrols against bandits, relay stations with fresh horses for the royal messengers, and 111 inns for travelers, placed about one day's journey apart from each other. Another road going through the desert to Egypt had underground cisterns with water for travelers. Although these roads helped trade and travel, their main priority was for the relay riders who could carry a message from Sardis to the king in Susa within seven days, an amazing speed for back then. As Herodotus described these riders: *"Nothing stops these couriers from covering their allotted stops in the quickest possible time--neither snow, rain, heat, nor darkness."*

In general, Darius took existing practices and institutions and adopted them on a larger scale. However, in one respect, he differed quite markedly from previous Mesopotamian rulers. That was in his treatment of Persia's subjects. Darius realized that there was no way his far-flung empire could survive constant revolts such as had plagued the Assyrians. Therefore, he followed a policy of tolerance toward his subjects' customs and religions. For example, the Jews were allowed to return to Israel from their Babylonian captivity, causing them to sing the Persians' praises in the Bible.

Darius and other Persian kings also adopted local titles, such as pharaoh in Egypt, to win popular support. Sometimes they also kept local rulers in

power as Persian vassals, such as in the Greek cities in Asia Minor. This hopefully would ensure them more loyalty, although it could backfire if those rulers were unpopular to begin with. While Persian rule may not have been wildly popular, most people tolerated it as an improvement over the harsher rule of the Assyrians and Babylonians. Keeping their subjects happy went a long way toward keeping the Persian Empire intact. It also ensured the cooperation of the Syrians and Babylonians, whose scribes and administrative skills were badly needed to keep the government running smoothly.

The Persians also worked hard to promote economic prosperity. Their roads, strong government, and stable coinage encouraged trade. They also promoted agriculture with irrigation projects and the introduction of new crops to different areas, such as sesame to Egypt and rice to Mesopotamia. Of course, increased prosperity also generated more taxes. The Persians also kept their subjects happy by charging moderate tax rates, about twenty per cent of a person's income. Despite this modest tax rate, the Persian kings were fabulously wealthy. By the time Alexander the Great took over the Persian Empire in 330 B.C.E., the Persian kings had reportedly amassed a treasury of 5500 tons of silver.

Darius and other Persian kings further enhanced their authority by assuming divine or semi-divine status to overawe their subjects. In certain provinces, such as Egypt, they took the titles of local rulers who were often seen as gods. They also built a fabulous capital, Persepolis, in the middle of the desert, and adorned it with magnificent government buildings. The Persians also adopted the elaborate court ritual of their subjects. One had to go through a virtual army of officials before getting an audience with the king. When one approached the king, he performed a rite known as *proskynesis*, which involved throwing oneself at the king's feet. It was a great honor just to be allowed to kiss the hem of his garment and a serious offence for anyone outside the king's closest friends and advisors to look him in the eye. Such elaborate ritual could enhance the king's authority, but it could also cut him off from the day-to-day realities of empire.

Religion. The Persians, like most ancient peoples, started out with a polytheistic religion to account for

the forces of nature. However, around 600 B.C.E., a new religion emerged, called *Zoroastrianism* after its founder, Zoroaster. This was a dualistic religion, which meant it saw life as a constant struggle between the forces of good and evil. In the end people would all be held accountable for their deeds in a judgment day when they would go to heaven as a reward for good deeds or suffer eternal punishment for their sins. Zoroastrianism seems to have had some influence on Judaism. In the book of Daniel, which takes place at the Persian court, the ideas of Heaven and Hell and of Satan as a force always opposed to God first appear in the Bible. Both of these ideas have become central to Christianity and Islam as well as Judaism.

Decline and fall (c.464-330 B.C.E.). Any state needs a strong ruler to keep things running smoothly. After the death of Xerxes (486-464 B.C.E.), the Persian Empire lacked that strong hand. As a result, various problems developed that fed back upon one another and led to Persia's decline and fall. For one thing, weak rulers led to numerous provincial revolts, especially in Egypt, which always had detested Persian rule. Secondly, the provincial satraps also became more independent, ruling their satrapies more as kings than as the king's loyal subjects. They even carried on their own foreign policies and waged war on each other, which only added to Persia's problems.

Revolts and unruly satraps caused serious economic problems for the empire. Persian taxes became heavier and more oppressive, which led to economic depression and revolts, which in turn led to more repression, heavier taxes and so on. The Persian kings also started hoarding gold and silver rather than re-circulating it. This created economic turmoil without enough gold and silver for doing business. As a result of this economic turmoil, the Persian kings got weaker still, which fed back into the problem of revolts and powerful satraps and so on.

Around 400 B.C.E., Cyrus the Younger, a royal prince, rebelled against his brother and king, Artaxerxes. Although Cyrus was killed in battle, his force of 10,000 Greek mercenaries survived only to find themselves stranded in the heart of Persia. In order to get home, they marched and fought their way through a good part of the Persian Empire. This exploit, known as the March of the Ten Thousand, exposed the weakness of the empire. And encouraged Alexander the Great to invade

Persia, which he conquered in a remarkably short time and with a remarkably small army.

Nevertheless, the Persians survived and reestablished their empire under the Sassanid dynasty around 200 C.E. Around 650 C.E., they fell once again, this time to the Arabs inspired by their new religion, Islam. Still, Persia survived, passing its culture on to the Arabs. Thus the Islamic culture which emerged was very much Persian, and ultimately Mesopotamian, in origin. The Persian Empire revived once again around 1500 under the Safavid dynasty, and its culture and traditions live on today in modern Iran.

The Golden Touch

Lydia's neighbor, Phrygia, was also renowned for its wealth thanks to gold dust in its rivers. We remember this through a Phrygian king named Midas.



Gold stater of Croesus of Lydia

Croesus of Lydia's legendary wealth was the source of one of history's great innovations, coinage. Very simply, this gave people a piece of gold (which for some silly reason everyone thought was valuable) in a standard increment of guaranteed weight and purity. This eliminated the need to weigh and test every lump of gold in every trade transaction, saving people a lot of time and giving them the peace of mind, thus promoting more trade and wealth. Also, since only the state had the right to issue coins, it gained more control over the flow of wealth. This also expedited the collection of taxes.

Croesus of Lydia Destroys a Great Empire: His Own

In addition to coinage, Croesus of Lydia provided us with one of the great stories of folly in history. As Cyrus' Persian realm advanced westward, Croesus became more and more determined to go to war with the

rising new power. The Greek sage and Croesus' friend, Solon, warned the king against this:

"...they [the Persians] eat as much as they have, never as much as they want. They drink no wine but only water. They have no good things at all, not even figs for dessert. Now if you conquer this people, what will you get from them, seeing they have nothing for you to take? And if they conquer you, think how many good things you will lose, for once they taste the luxuries of Lydia they will hold on to them so tightly that nothing will make them let go. I am thankful myself that the gods have never put it into the Persians' heads to attack the Lydians."

Although still dead set on going to war, Croesus decided to ask the gods, who supposedly spoke through certain chosen priests and priestesses known as oracles. But first, he had to figure out which oracle was the most reliable. So Croesus sent messengers to all the famous oracles with the question of what he would be doing in 100 days. Only the oracle of Apollo at Delphi got the right answer: boiling a rabbit and tortoise together in the same pot.



Cyrus of Persia's camels panic the Lydian cavalry before the walls of Sardis

Having figured out which oracle was best, he sent messengers to Delphi to ask Apollo if he should go to war with Persia. However, the oracle was prone to giving ambiguous answers that could be interpreted either way, thus making it difficult to ever prove it wrong. This also had the effect of making people interpret

the oracle's answers however they wanted. Therefore, when the oracle told Croesus that if he went to war he would destroy a great empire, he assumed the empire would be Persia.

Wrong.

After an indecisive battle, both armies disbanded for winter, the usual practice then since weather was bad, roads were muddy, and forage for horses was hard to get. Except that after disbanding, Cyrus regrouped his army and rapidly marched on the Lydian capital, Sardis, appearing so suddenly that, as the Greek historian Herodotus would put it, he was the messenger of his own arrival.

Croesus gathered his own army, in particular the excellent Lydian cavalry, and marched out to meet Cyrus. But the Persian king had another trick up his sleeve: camels. Seeing that there were no camels in this part of the world, Cyrus knew the Lydian horses weren't used to their smell. So he put a line of camels in front of his army, the scent of which immediately panicked the Lydian horses, disrupting their army and giving Cyrus the victory.

As the oracle had foretold, Croesus had indeed destroyed a great empire: his own.



A Greek vase shows Cyrus rescuing Croesus from burning himself to death on his own pyre. According to Herodotus, Cyrus was unable to quench the flames. Therefore, Croesus called out to Apollo,

who immediately blew up a big storm that saved the Lydian king. Seeing the esteem in which the gods held Croesus, Cyrus kept him as a trusted advisor. At least that's the story according to Herodotus. Newer research indicates Croesus died when Sardis fell.

The Writing on the Wall

The expression *writing on the wall*, indicating a portent of doom, goes back to the Persian conquest of Babylon in 539 B.C.E. as recounted in the biblical book of "Daniel". According to the story, the Babylonian king Belshazzar has a banquet, gets drunk, and orders the gold goblets sacked from the temple of Jerusalem in 586 B.C.E. brought out to praise 'the gods of gold and silver, brass, iron, wood, and stone'. Soon afterward, a disembodied hand appears and writes a cryptic message on the wall: "mene, mene, Tekel u-Pharsin." Unable to interpret this, the king summons the Jew, Daniel, since he is reputedly be gifted in such matters. Daniel's interpretation was:

"And this is the writing that was inscribed: mina, mina, shekel, half-mina. This is the interpretation of the matter: mina, God has numbered the days of your kingdom and brought it to an end; shekel, you have been weighed on the scales and found wanting; half-mina, your kingdom is divided and given to the Medes and Persians."- Daniel 5:25-28

A mina was a measure of currency, from the root of the word to count. Shekel, another measure of currency came from the word to weigh. The word *peres* for half shekel could also mean divide.

That very night, Cyrus' Persians entered Babylon and overthrew the dissolute Belshazzar.

Persian Hydraulic Engineering

The power of strong backs. The Persians were hydraulic engineers par excellence. In order to conquer Babylon, Cyrus diverted the Euphrates River, which ran through the middle of the city, and walked in while the Babylonians were distracted by a religious festival. Similarly, a century later when the Athenians had sailed up the Nile to help an Egyptian revolt, the Persians diverted a channel of the Delta, leaving the entire Athenian fleet stuck in the mud.

On a more constructive note, the Persians dug a canal connecting the Nile to the Red Sea, establishing direct water trade between India and the Mediterranean. The canal eventually silted up and a more permanent canal wasn't built until the completion of the Suez Canal in 1869.

The Power of the Great King

The Persian religion, Zoroastrianism, held kingship as sacred, but did not see the king as a god. Still, one had to be extremely careful around the Great King. Symbolic of this was the practice of *proskynesis*, kneeling with one's face to the floor as a sign of complete submission. It was a great honor to be allowed to kiss the hem of the Great King's robe.

Safety tip of the day: Never look the king directly in the eye.

The power of a word. The fear and respect accorded the king's agents, known as the King's Ears, was apparent when one of them showed up in the court of a satrap planning a revolt. He read three decrees from the king. The first decree was routine, just to see if the satrap's troops were listening. The second decree ordered the satrap's troops to throw down their arms. The hall immediately resounded with the sound of weapons clanging on the palace floor. The third decree was for

the satrap's troops to arrest and kill the satrap. The revolt was over before it could begin.

Some costly furniture. The Great King's justice could be harsh. For example, when one of his satraps, Sisamenes, was caught in corruption, Darius had him skinned and made into a chair. Then he made Sisamenes' son the new governor and sat him in that chair as a constant reminder of the price of corruption.

However, the king, not being seen as a god, was subject to his own laws. Illustrating this is the biblical story of Daniel, a trusted advisor to king Xerxes, and an object of jealousy from others at court. Knowing Daniel was Jewish and not allowed to worship other gods, his enemies tricked Xerxes into making a law condemning anyone not willing to worship the Persian god Ahuramazda. The evil counselors then pointed out to Xerxes that Daniel was disobeying the law. As a result, despite his friendship with Daniel, Xerxes had to abide by his own law and have Daniel thrown to the lions. Luckily, the lions weren't hungry then and, taking this as a sign from God, Xerxes had his friend released.

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16. PRE-COLUMBIAN AMERICA TO C.1500 C.E.

Introduction. What if a bunch of Cro Magnons (i.e., our species 30,000 years ago) were dropped onto another planet with the same basic conditions and ecology as earth? Being isolated from any other cultures, would they develop civilizations comparable to those that developed in the eastern hemisphere? To answer that question, we need look no further than the Americas, because civilizations did develop there most likely without any outside cultural contacts.

However, the civilizations that developed there lagged significantly behind those in Eurasia and North Africa, largely because of four environmental factors. First of all, the Americas, like Africa, are aligned along a north-south axis, unlike the civilizations in Eurasia and North Africa, which are aligned along an east-west axis. The significance of this is that being in roughly the same latitudinal zone with similar cycles and amounts of daylight, civilizations in Eurasia could more easily share crops with one another. By contrast, in the Americas it was harder to spread cultivation of crops such as corn from Mexico because it took a long time to adapt them to regions with different amounts of sunlight. Secondly, corn, the main domestic crop, was originally a grass that was much harder than other crops, such as wheat and rice, to develop into a plant yielding enough food to sustain large populations, one of the primary requirements for developing a civilization. Third, the two main centers where civilizations developed in the Americas, Mexico and Peru, were cut off from contact with one another by jungles and mountains, which minimized their ability to share new ideas and technology. In fact, they seem to have been unaware of each other's existence when Europeans arrived. Contrast this with Eurasia, where all sorts of ideas and technology did spread between civilizations. Early China borrowed quite a bit from the Middle East, and later became the source of much technology used in the West, such as the compass, which allowed the Europeans to reach the Americas and effectively destroy the civilizations that were developing there.

The fourth factor was largely man-made, namely excellent hunting technology and techniques that wiped out horses and camels, which did exist in the Americas when humans first arrived. This had two major effects. First, it left Native Americans with

no large draught animals for pulling plows. This severely reduced the amount of land one person could farm and the amount of food available to sustain extra populations in cities and civilization. Secondly, since large herds of domestic animals have been the primary source of communicable diseases from which humans suffer, the lack of such animals made the Americas relatively free of such diseases. In the short run this helped Native Americans. However, having had no prior exposure to such diseases as smallpox and measles, they had virtually no resistance when first exposed to them by Europeans. Some estimates of Native American population loss between 1500 and 1600 run as high as 94%. As stated previously, civilization in the Americas developed independently in two primary locations: Central America, especially Mexico, in the north and Peru in the south.

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PRE-COLUMBIAN MEXICO

Mesoamerica (Mexico and Central America). The first civilization in this part of the Americas was that of the Mayans (c.250-900 C.E.), although they built upon the older culture of the Olmecs, in what is now south-central Mexico. Some historians hesitate to call Olmec culture a civilization, since it seems they established ritual centers where people gathered at particular times of the year rather than being inhabited by large numbers of people year round. The Olmecs are especially remembered for their giant carvings of heads. They also practiced blood sacrifices and played a ballgame, both of which would become distinctive features of the Mayans and of all the Mesoamerican civilizations that followed them. It seems to have been like racquetball in that players tried to keep a rubber ball (sometimes weighing as much as nine pounds) in play on a narrow court between two walls. However, they could not use their hands, and later versions had a circular goal higher than the heads of the players. This game often had ritual purposes than might even involve a human sacrifice of the losing team.

Most people count the Mayans as the first true Mesoamerican civilization and refer to the period of their cultural flourishing as the Classical period of Mesomerica. However, instead of being major population centers, their “cities” were more ritual centers/royal courts centered on royal dynasties that also had priestly duties, giving them much of their power and status. Politically, they functioned as city-states, some of which, such as Tikal and Palenque, ruled over a number of such smaller states.

The Mayans were the real basis for later Mesoamerican civilizations, having sophisticated astronomy and math, including the use of zero, which helped them develop remarkably precise calendars. The Mayans were the only Pre-Columbian civilization known to have writing. Appearing similar to Egyptian writing, it is typically referred to as hieroglyphic, consisting of around 1000 symbols representing a mixture of logograms (e.g., & representing and) and syllables. As in the ancient Middle East, such a system made writing a highly specialized craft, giving scribes a high position in society. Later Mesoamerican societies, such as the Aztecs, did have books written on three barks. However, these only held pictures mostly concerned with religious and ritual topics.

Mayan cities and architecture served as the model for cities of ensuing civilizations: being centered on a plaza that was usually oriented toward a cardinal direction. Plazas typically were ringed with government buildings, stepped temple pyramids (for blood sacrifices, including humans), sometimes a ball-court. The stepped pyramid became the most notable feature of Mesoamerican architecture, spreading as far north as Cahokia, Illinois.

The reasons for the fall of the Mayans around 900 C.E. remain a mystery. There are various theories, such as disease or revolt by the lower classes. Because writing was limited to so few people, it was lost after the fall of the Mayans, whose successors never revived the concept beyond books with pictures describing such things as religious rituals. As a result, historians are limited to art and archaeology as their main sources of information about the peoples who came afterward. There were a variety of peoples who built upon the Mayan achievement, much as successive peoples built upon Sumerian civilization in Mesopotamia. However, without written records, we know relatively little about them beyond their names: Zapotecs, Mixtecs, Toltecs, and so on. In fact many historians now think that the Toltecs were invented by the Aztecs as their mythical predecessors.

One early city that seems to have traded influences with the Mayans was Teotihuacan, which flourished c.100-450 C.E. in central Mexico. After the Great Pyramid of Cholula in Peru, it had the two largest pyramids in the Americas, the temples of the Sun and the Moon, and a population estimated between 100,000 and 250,000 people, making it one of the largest cities in the world at that time. As with the Toltecs, there is controversy over who built and ruled the city and the extent of its political power. Equally mysterious is the reasons for its decline, although it seems to correspond with a period of droughts in the mid sixth century. Skeletal evidence of infants from the time shows signs of malnutrition. Also evidence of fires limited to major public buildings could indicate the city fell to foreign invaders or internal revolt. Teotihuacan, with its two great pyramids remained a sacred site place of pilgrimage to later cultures, being seen by the Aztecs as the birthplace of the sun.

Mesoamerican civilizations constantly faced migrations and invasions by northern nomads who were generically referred to by the more civilized peoples in Mexico as *Chichimec* 's, a term roughly

translated as barbarians. Over time, these peoples would assimilate, revive, and expand the cultures of the older Mexican civilizations in much the same way that nomadic tribes did time and again in Eurasia.

The influence of Mexican civilization extended northward into the American Southwest and up the Mississippi River to Cahokia, Illinois, not far from St. Louis. Urban planning around plazas, art motifs, and architecture were all based on those found in Mexico. Cahokia had a pyramid mound that was the largest such earthen structure in the Americas. Its population at its height in the eleventh century is estimated at between 8,000 and 40,000. It also had Woodhenge, a circle of posts used for marking the solstices and equinoxes. Cahokia was abandoned around 1400 C.E., although, once again, the reasons remain a mystery.

The final Mesoamerican civilization before the arrival of Europeans was that of the Aztecs, who established their capital, Tenochtitlan, on artificial islands (*chinampas*) in the middle of Lake Texcoco in the Valley of Mexico. By the 1500s, it had a population of some 200,000 people, dwarfing virtually every city in Europe at that time, except maybe Paris. Making this possible was its location in the middle of the lake, which allowed critical food supplies to be transported by water from a much larger area of farmland than most other Meso-American cities. The Aztecs would expand their city and the farmland feeding it by making more chinampas, which could yield up to seven crops a year and support the city's huge population.

Tenochtitlan was laid out in a rectangular grid crisscrossed by canals, much like Venice. It was accessible both by water and by way of three causeways leading north, south and west to the shores of Lake Texcoco. There were several bridges in the causeways to allow canoes to sail through. These bridges could also be removed if the city were under attack. Since much of Lake Texcoco's water is brackish, the Aztecs built a dike to protect the city's fresh water springs. There was a twin city, Tlatelolco, which was taken over by Tenochtitlan in 1473.

One of the most famous (or infamous) aspects of Aztec culture was its religion, which demanded massive human sacrifices to feed the sun god. Aztec warfare was primarily for the purpose of capturing sacrificial victims rather than killing the enemy.

This made many of the Aztecs' subjects, who were ripe for revolt by the time of Cortez's arrival, join him to overthrow them.

Meso-American Religious Beliefs

As one might expect from a civilization evolving in total isolation, Meso-American religions had both striking differences from those in the Eastern Hemisphere, but also basic similarities, since they evolved in similar conditions. One similarity was they were polytheistic, seeing gods and spirits in the different forces of nature they could not control. They could merge their gods' characteristics in seemingly endless ways and combinations. Much like the Egyptians, some of their gods would have human faces and animal bodies or vice versa.

On the other hand, since they saw time as cyclical, they didn't see particular gods or attributes as permanently good or evil. What might be appropriate at one time or season could be inappropriate at another. One of the more unique Mayan deities was Ixtab, goddess of suicide, an act the Mayans believed sent one to Heaven.



Left: Tlaloc, the Aztec version of the Meso-American rain god and & thunder as well as fertility & agriculture. Sometimes he was shown as an old man w/amphibian or reptilian fangs & tears, symbolizing rain. He carried an ax to symbolize thunder. Sometimes referred to as "he who lights the sky" and "he who urinates."

Right: An Olmec chaneque

The Mayan Calendars and Apocalypse

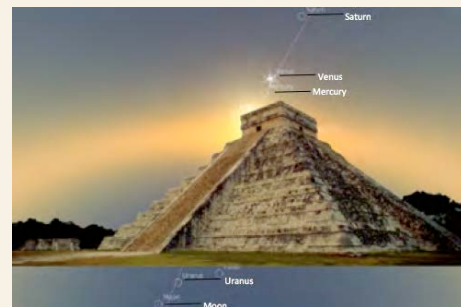
Mayan astronomical observations were so precise they could plot the course of Venus within 14 seconds per year. Mayan priests could predict solar and lunar eclipses, an ability that may have overawed the rest of the populace and kept them submissive.

The Mayans had several calendars, largely drawn from older Olmec calendars and influencing most later Mesoamerican calendars. These calendars include a lunar one and a 584 day cycle for the planet Venus. One was a regular solar calendar (Haab') of 365 days with eighteen months of twenty days each and five "nameless" days (Wayab') at the end of the year. These last five days were considered particularly dangerous, because it was believed that the boundaries between this world and the underworld dissolved, thus letting in evil spirits that could unleash catastrophes. Of course there were special rituals and customs designed to prevent such disasters, such as not leaving home or washing and combing one's hair. Since the Haab' had exactly 365 days, it was a full day off every four years, and therefore was not used for agricultural purposes.

There was also a religious calendar of 260 days known as a Tzolk'in. There are different theories on the origin of this calendar (e.g., the length of human pregnancy since the first missed menstrual cycle or the length of time it takes crops to mature). A larger unit of time, known as a Calendar Round, consisted of a 52-year cycle when the solar and religious calendars would end on the same day. There was fear that end of this cycle would bring the end of the world, so there were great ceremonies and ritual purifications performed, including evidence of the people even destroying their possessions and houses in preparation for this event.

When the apocalypse didn't take place there would be great celebrations, often involving the erection of commemorative stela and even new temples.

Much was made of the Mayan prediction of the end of the world on December 21, 2012 when Saturn, Venus, Mercury, Uranus, and the moon lined up in relation to the main pyramid at Chichen Itza at sunrise (11:11 GMT). All I can say is that on December 22, some people were terribly disappointed.



One aspect of Olmec and Meso-American religions was the belief in Chanèques, old dwarf-like creatures with baby faces who pestered people in general with bad practical jokes and especially enjoyed molesting women. The best way to deal with them was to throw water over them, leading to the theory that they were associated with Tlaloc, the rain god.































Mayan Writing and Math



The Mayans had the only writing system in pre-Columbian America that fully represented a spoken language. Like Egyptian hieroglyphics, it was a mixture of

logograms representing specific words (lower left) and phonetic symbols for syllables. At some times, it had up to 500 symbols. While many inscriptions survive, only four complete books escaped methodical destruction by the Spanish who saw Mayan writings as satanic.

Along with astronomy, Mayan math was highly developed, including the use of zero for sophisticated calculations.

0 	1 	2 	3 	4 
5 	6 	7 	8 	9 
10 	11 	12 	13 	14 
15 	16 	17 	18 	19 
20 	21 	22 	23 	24 
25 	26 	27 	28 	29 

Mayan positional number system

Aztec History and the Mexican Flag
The Mexican flag is based on the story of how the god, Huitzilopochtli (“Left-handed Hummingbird”) told the wandering Aztecs to settle where they found an eagle perched on a cactus and eating a rattlesnake. When they found such a sight they founded their capital, Tenochtitlan, the site of present day Mexico City. Earlier the host king of a city-state had exiled them when they had honored his daughter by skinning her and wearing her skin in a ceremonial dance. Apparently, the king was not very religious.



In the Aztec language Tenochtitlan meant “place of the prickly pear cactus”.

Aztec Warfare

Aztec warfare was more a ritualized affair, the goal being for individuals to capture enemies for sacrifice to their gods. Another ritualistic aspect of Aztec warfare was announcing the time and place for a battle to their enemies.

The distinctive Aztec weapon was an ax consisting of a wooden club with sharp pieces of obsidian protruding from it. By contrast, the Spanish, although heavily outnumbered, had superior weapons and worked together to kill any individual Aztec warriors trying to capture them. Even during the last ditch defense of Tenochtitlan, the Aztecs were focused on capturing Spaniards to be sacrificed to their gods.



Although nobles led the army, commoners could rise up through the ranks through valor in combat. Capturing an enemy earned a warrior the right to wear a cloak with flowers into battle. Capturing four enemies (sort of like an Aztec ace) earned him a jaguar skin. Much like the ancient Spartans, Aztec women who died in childbirth were honored like warriors.

The Aztecs would spare a conquered city, but destroy its temples, forcing their new subjects to worship the Aztec gods. This idea of the gods going to war had parallels in the Eastern Hemisphere. A good example would be how the gods and goddesses take part in the fighting in the legends of the Trojan War.

Aztec Religion

According to Aztec beliefs, the gods created humans from their own blood, so humans were constantly indebted to them. There was also the belief in the instability of the world, in particular the recurring deaths of the sun and its renewal through the sacrifice of one of the gods.

Keeping the sun going on a day-to-day basis required human sacrifices on a colossal scale compared to any other civilization. Estimates for the numbers of victims range from 20,000 to 80,000 in a single year. Not surprisingly, the Aztecs were not popular among their subject peoples who had to supply these victims.



The Aztec sunstone and calendar, which was modeled after the Mayan Calendar

The Aztec New 52-year (Calendar Round). The Aztecs, like the Mayans, believed they were currently living in the age of the fifth sun, which could perish at the end of a current 52-year cycle. Therefore, the end of such a cycle was a period of intense anxiety for the Aztecs, who fasted, stayed at home, and most importantly, extinguished all fires for the days preceding it. It was the job of the priests to light a new fire at the precise moment the Pleiades appeared on August 13, the Mayan and Aztec New Year. This was done by cutting open a victim's chest, and working furiously to kindle a new fire in the open wound. Once the fire was lit, the priests quickly removed the victim's heart and cast it onto a brazier. Hundreds of couriers were lined up to ignite their

torches and scatter throughout the city to rekindle the temples' altar fires and then the hearths in people's homes. After that there would be twelve days of wild celebrations to mark the beginning of the new 52-year cycle.

In case you're curious, the last Calendar Round before Cortez' arrival in 1519 occurred in 1507.

The Aztec Capital and Society

Tenochtitlan was the Aztec home city, located in the middle of Lake Texcoco which itself was surrounded by other city-states tributary to the Aztecs. Tenochtitlan had an aqueduct for clean water and three causeways connecting it to the surrounding shores. When under attack, sections of these causeways could be removed. In typical Meso-American fashion, it had a central plaza aligned along a north-south axis and containing its main temples.



Mayans and Aztecs, much like the Sumerians, would use old temples as the foundation for new ones. Archaeologists sometimes would find 7 or 8 layers of temples, the old ones nested inside newer levels. This cutaway (right) of the Great Temple of Tenochtitlan shows six such layers.

Thanks to its position in the middle of a lake, it was possible to supply and support a huge population estimated at 200,000 to 300,000. This was especially crucial because the wheel had not been developed in the Americas, except for children's toys. Whenever they needed to expand their

city, the Aztecs built more *chinampas*, man-made floating gardens the Aztecs would make by sinking fences into the lake bed, filling them with dirt and rooting them with trees.

About 95% of Aztec society consisted of commoners (macehualtin) who did the work for the other 5% who were nobles (pitipin), including the emperor (tlatoni). Among the nobles' privileges was exclusive the right to wear cotton clothing, violation of which by a commoner brought the death sentence. They also had the right to wear gold jewelry and live in two-story houses. Nobles lived under a harsh code of conduct as well, being expected to act with dignity and humility and even to sacrifice their own blood in the religion rituals. Dishonest officials, such as judges also faced the death penalty.

The emperor was an absolute ruler who was considered superhuman. He commanded the army in battle and served as high priest for the Aztec religion. He also lived in incredible luxury, surrounded by a court consisting of hundreds of nobles, singers, dancers and other entertainers.

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PRE-COLUMBIAN PERU TO C.1500 C.E.

Peru. The other center of civilization, culminating with the Inca, was what is now Peru. This region had three different ecological zones, which provided different resources: the Amazon rain forest to the east where root crops were grown, the desert coast to the west which had excellent fishing, and the Andes Altiplano in between where potatoes were grown. Except for Tibet, the Altiplano is the largest plateau on earth, averaging 3,300 meters in altitude. Its climate is cool and dry, making Lake Titicaca its primary source of fresh water. The Altiplano also had the one significant beast of burden in the Americas, the llama. However, it could only carry half the load that its counterparts in Eurasia could, giving it limited usefulness.

Much like in Mesopotamia, civilization in Peru started largely with irrigation of rivers coming from the Andes down to the desert coast. Such projects required organization, leading to a hierarchy of authority that collected surplus crops as taxes/offerings and settled in ritual centers. However, since the Peruvian cultures had no writings or even books with pictures, we know even less about them than we do about Mesoamerica.

Peruvian civilization began with the Chavin Culture (c.900-200 BCE) in the Altiplano and on the coast of central Peru. Its early center, the "Old Temple" at Chavín de Huántar, built c. 900 BCE, was more a place for ritual gathering rather than a city, having residences for only a few hundred people. Not until c.400 CE was there a jump in population and the development of proto-cities (large central communities with smaller satellite communities nearby), the evolution of specialized crafts such as ceramics and gold work, and the social stratification that comes with uneven distribution of wealth. The llama was also domesticated at this time. A religious elite who led the rituals believed to be essential for divine favor ruled the Chavin culture. Archaeological evidence suggests that the Chavin culture did not engage in warfare, although surrounding peoples did.

Following the Chavin came the Moche Culture (c.100-800 CE) in the northern coastal plain of Peru. They are mainly noted for their irrigation projects, gold work, and in particular ceramics. Moche culture had the ability to mass-produce ceramics through the use of molds. More remarkable was the striking realism of their ceramic

portraits. Scholars still debate whether this was a single empire or a group of states sharing the same culture. Ice core samples from the Andes indicate serious climactic disruptions in the sixth century consisting of thirty years of heavy rains and then thirty years of drought. This did not immediately cause the downfall of the Moche, but may have opened the way for other factors that would.

The Chimu Culture (c.900-1470 CE) succeeded the Moche, also flourishing in Peru's northern coastal plain. They founded a kingdom in the early 1300s, which expanded over a wide area. Their power was concentrated in four walled cities, the most important of which, Chan Chan, had an estimated 12,000 artisans making up the bulk of its population. Interestingly, the Chimu primarily worshipped the moon, since it is visible during both night and day. They saw the sun, which the Inca mainly worshipped, as a destructive force, probably because of its intensity in the desert. The Chimu were conquered in 1470 by the best-known Peruvian civilization, the Inca.

The Inca first developed as a city-state around Cuzco in the 1100s. Their real expansion began in 1438 under the leadership of Sapa Inca who conquered most of southern Peru. By 1520, the eve of the Spanish conquest, the empire stretched in a thin line along the Andes from southern Columbia in the north to northern Argentina and Chile in the south. Tying this elongated empire together was a remarkable system of some 15-25,000 miles of roads that often had to span mountain gorges. It counts as one of the great engineering feats of the pre-industrial world. The Inca had a corps of relay runners to carry messages with remarkable speed and efficiency. Politically, the empire was organized with four main provincial centers carrying out the will of the great Inca (ruler) in Cuzco.

Inca society had a strict hierarchy of classes enforced by strict laws. In spirit it was largely socialist, with the state collecting crops and redistributing them according to individual needs to ensure the welfare of everyone. Laws were also strict. Like the Aztecs, they primarily worshipped the sun. However, they had nothing like the Aztecs' human sacrifices to alienate their subjects. Although they lacked a writing system, Incas were capable of sophisticated record keeping with the use of the quipu, a system of knots on color-coded strings and knots that could keep track of various goods.

They could even use it to write accounts of events. However, that system was so complicated that it still hasn't been deciphered.

The coming of the Europeans. Both the Aztecs and Incas were at the height of their power when the Europeans arrived in the early 1500s. Amazingly, Spanish conquistadors were able to topple these empires quickly with tiny forces: Cortez commanding only several hundred men in Mexico and Pizarro doing the same with a mere 167 men in Peru. Three factors especially helped both men: civil unrest, the rigid authoritarian structure that ruled both empires, and disease. In Mexico, many of the Aztecs' subjects joined the Spanish in overthrowing their masters, while a civil war was raging when Pizarro invaded Peru. In both cases, the Spanish captured the local rulers, largely paralyzing their subjects into inaction long enough for the Spanish to gain a commanding position to take over. Finally, and in the long run most devastating, was smallpox, which broke out during the siege of Tenochtitlan, seriously weakening the city's defenses and spirit. In the case of Peru, smallpox preceded Pizarro and weakened the Incan Empire before the Spanish arrived. In both cases, empires seemingly at the height of their power vanished almost overnight.

Macchu Pichu and Incan Walls

Macchu Pichu is probably the best-known Incan site. Perched on a mountain ledge 7,970 feet above sea level, it was probably built as an estate for the Inca emperor, Pachacuti (1438-1472), but was abandoned in 1572 after the Spanish conquest. However, the Spanish never found it. As a result, it remained unknown, except to locals, until its discovery in 1911 by the American historian Hiram Bingham.



Inca walls were built of polished stones that fit together so tightly that one cannot fit a piece of paper between them. They were

also built without mortar, making them more flexible without breaking in an earthquake. By contrast, brick and mortar buildings were the first to go in the San Francisco Earthquake in 1906.

The Qipu



Although they lacked a writing system, Incas were capable of sophisticated record keeping with the use of the quipu, a system of knots on color-coded strings that could keep track of various goods. They could even use it to write accounts of events. However, that system was so complicated that it still hasn't been deciphered.

The Last Inca

After his capture by Pizarro, the captive emperor, Atahualpa, promised to give Pizarro a room filled with gold and two other rooms with silver in return for his release. Having received the ransom, Pizarro had Atahualpa strangled and then made his younger brother, Túpac Hualpa, puppet emperor of the Incas. When he died of smallpox, Pizarro appointed Manco Inca Yupanqui as emperor and tried to rule through him. However, mistreatment by Pizarro's brothers prompted Manco Inca to escape and trigger a rebellion, supposedly raising an army of 200,000 men. After being defeated by the Spanish, Manco retreated into the mountains where he held out until his death in 1544. His son, Túpac Amaru, succeeded him as the last ruler of the Inca until his murder by the Spanish in 1572.

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BRONZE AGE GREECE: THE MINOANS & MYCENAEANS (c.2000-1100B.C.E.)

Introduction. While the peoples of the ancient Near East gave us civilization, the Greeks gave it forms and meanings that make us look to them as the founders of our own culture, Western Civilization. Greek genius and energy extended in numerous directions. Much of our math and science plus the idea of scientific research and the acquisition of knowledge apart from any religious or political authority goes back to the Greeks. The philosophy of such Greeks as Socrates, Plato, and Aristotle laid the foundations for the way we look at the world today. Our art, architecture, drama, literature, and poetry are all firmly based on Greek models. And possibly most important, our ideas of democracy, the value of the individual in society, and toleration of dissent and open criticism as a means of improving society were all products of the Greek genius. Even those critical of our own society and Western Civilization overall have the Greeks, creators of Western Civilization, to thank for that right.

Greece's geography strongly affected its history. Greece was a hilly and mountainous land, breaking it up into literally hundreds of independent city-states. These city-states spent much of their time fighting one another rather than uniting in a common cause. Greece was also by the sea with many natural harbors. This and the fact that it had poor soil and few natural resources forced the Greeks to be traders and sailors, following in the footsteps of the Phoenicians and eventually surpassing them.

The Minoans (c.2000-1500 B.C.E.). The first Greek civilization was that of the Minoans on the island of Crete just south of Greece. Quite clearly, the Minoans were heavily influenced by two older Near Eastern civilizations, Mesopotamia and Egypt, by way of the Cycladic Islands, which formed natural stepping-stones for the spread of people from Greece and of civilized ideas from the Middle East. Egyptian influence on the Minoans is especially apparent. Minoan architecture used columns much as Egyptian architecture did. Minoan art also seems to copy Egyptian art by only showing people in profile, never frontally. Still, the Minoans added their own touches, making their figures much more natural looking than the still figures we find in Egyptian art.

Since we have not been able to translate the few examples of their hieroglyphic script, known as Linear A, there are some very large gaps in the picture we have of these people. We do not even know what the people on Crete called themselves. The term *Minoans* comes from Greek myths concerning a legendary king of Crete, Minos, who supposedly ruled a vast sea empire. As with most myths, there is a grain of truth in this myth, for the Minoans were a seafaring people who depended on their navy and trade for power and prosperity.

Two things, both relating to Crete's maritime position, largely determined the nature of the Minoan's civilization. First, they had a large fleet, which was useful for both trade and defense. Second, Crete's isolated position meant there was no major threat to its security at this time and therefore little need for fortifications. These two factors helped create a peaceful and prosperous civilization reflected in three aspects of Minoan culture: its cities and architecture, the status of its women, and its art, especially its pottery.

The Minoans had several main cities centered around palace complexes which collected the island's surplus wealth as taxes and redistributed it to support the various activities that distinguish a civilization: arts, crafts, trade, and government. The largest of these centers was at Knossos, whose palace complex was so big and confusing to visitors, that it has come down to us in Greek myth as the Labyrinth, or maze, home of the legendary beast, the Minotaur. The sophistication of the Minoans is also shown by the fact that they had water pipes, sewers, and even toilets with pipes leading to outside drains. Since their island position eliminated the need for fortifications, Minoan cities were less crowded and more spread out than cities in other civilizations.

More than a maze. Labyrinth comes from the Greek word *labrys*, meaning double-headed axe, a common Minoan symbol. Later it referred to the huge Minoan palace (i.e., house of the *labrys*). Interestingly, while the axe is a symbol of male power in other cultures, Minoan art shows only goddesses and priestesses wielding it.

Minoan women seem to have had much higher status than their counterparts in many other ancient civilizations. One likely reason was that, in the absence of a powerful warrior class and a constant

need for defense, they had more opportunity for attaining some social stature. This is reflected in their religion where the primary deity was an earth goddess. Minoan art also depicts women as being much freer, even participating with men in a dangerous gymnastic ritual of vaulting themselves over a charging bull.

Minoan art especially its pottery, also shows a peaceful prosperous society, depicting floral designs and such marine wildlife as dolphins and octopuses rather than scenes of war. Its diffusion around the Aegean and Eastern Mediterranean shows that Minoan influence was quite widespread, extending throughout the Cycladic Islands and Southern Greece. The myth of Theseus and the Minotaur where Athens had to send a yearly sacrifice of its children to Crete, reflects Minoan rule and indicates that it might not always have been so peaceful. Recent archaeological evidence indicates the Minoans did at times practice human sacrifices.

Minoan civilization continued to prosper until it came to a sudden and mysterious end. A combination of archaeology and mythology provide clues to how this may have happened. This eruption triggered a series of devastating tsunamis that leveled Crete's cities, which were all on the north face of the island in the tidal wave's path. In addition, it also destroyed the Minoans' navy, leaving them defenseless against invaders. Recent discoveries of jumbled mixtures of building materials, potter fragments, and tiny sea organisms far inland and above sea level indicate the devastating power of the tsunamis. Together these weakened the Minoans enough to let another people, the Mycenaean Greeks eventually take over around 1450 B.C.E.

This seems to correspond to the myth of the lost continent of Atlantis, passed on to the Greeks from the Egyptians who had been frequent trading partners with the Minoans. When the Minoans, whose fleet was likely destroyed by the tidal wave, suddenly stopped coming to visit Egypt, stories drifted southward about an island blown into the sea (i.e., Thera) which the Egyptians assumed was Crete. Over the centuries the stories kept growing until Crete became the vast mythical continent and empire of Atlantis set in the *Atlantic* Ocean. The Greeks picked up the story, which is found in its most complete form in Plato's dialogues, *Timaeus* and *Critias*.

The Mycenaeans (c.1500-1100 B.C.E.) were Greeks from the mainland who took advantage of the Minoans' weakened state to conquer Crete and assume Minoan dominance of the Aegean and Eastern Mediterranean. They were a vigorous and active people who engaged in trade and some piracy over a wide area extending from southern Italy in the west to Troy and the Black Sea in the northeast. We are almost as much in the dark about Mycenaean history and society as we are about the Minoans. We do have some written records in a script called Linear B which concern themselves mainly with official tax records and inventories.

Three types of evidence tell us at least a little about Mycenaean society. First of all, we know that they were divided into different city-states such as Mycenae, Pylos, Tiryns, and Athens. Most of these consisted of highly fortified central palace complexes, which ruled over surrounding villages. The Mycenaeans tried to run these as highly centralized states such as existed in Egypt and Mesopotamia. We do not know if these city-states were completely independent or looked to one city, probably Mycenae, for leadership. However, sources, such as the *Iliad* tell us that the Mycenaeans could apparently unite in a common endeavor such as the Trojan War.

Second, the art, armor, and remains of fortifications, such as those at Mycenae, tell us the Mycenaeans were much more warlike than the Minoans. Later Greeks had no idea of the existence of Mycenaean civilization and thought these massive walls and gates had been built by a mythical race of giants known as the Cyclopes.

Finally, archaeological remains also tell us that the Mycenaeans, at least the upper classes, were fabulously wealthy from trade and probably occasional piracy. Gold funeral masks, jewelry, bronze weapons, tripods, and a storeroom with 2853 stemmed goblets all attest to the Mycenaeans' wealth. Keep in mind this is only what we have found. There is no telling how much of their wealth was plundered by grave robbers.

Wheel maintenance. Because spoked wheels on Bronze Age chariots were so fragile, people would remove them when the chariots were not in use so the weight of the chariot didn't warp the wheels. Inventory records at Knossos from the Mycenaean

period record they had 340 chariots and 1000 pairs of chariot wheels.

Around 1200 B.C.E., a period of migrations and turmoil began that would weaken and eventually help destroy Mycenaean civilization. Once again, the main troublemakers were the Sea Peoples whom we have seen destroy the Hittite Empire, conquer the coast of Palestine, and shake the Egyptian Empire to its very foundations. The Sea Peoples also hit the Mycenaeans, destroying some settlements and driving other inhabitants inland or across the sea away from their raids. The historical Trojan War and sack of Troy took place at this time at the hands of the Mycenaeans, who may have been running from and, in some cases, joining up with the Sea Peoples. Hittite records associate their own decline with people known as the *Ahiwaya*, translated as "Achaean" (Greeks).

Troy and the Sea Peoples. In the Odyssey, Odysseus makes up a story of being part of an expedition that first sacked Troy and then attacked Egypt, only to be defeated, much like what happened with the Sea Peoples. An alternate version of the Trojan War says the Helen at Troy was only a phantom Helen and that Menelaus had to go to Egypt to get his real wife back.

Whatever role the Mycenaeans may have played in all these raids, the result was widespread turmoil as cities were sacked, populations displaced, and trade disrupted. Even though the Mycenaeans survived the actual onslaught of the Sea Peoples, they did not survive the aftermath of all this destruction. Reduced revenue from trade may have caused more warfare between the city-states over the meager resources left in Greece. This warfare would only serve to weaken the Mycenaeans further, wreck trade even more, aggravate grain shortages at home, and so on. This recurring feedback of problems opened the way for a new wave of Greek tribes, the Dorians, to move down and take over much of Greece. A period of anarchy and poverty now settled over the Greek world, virtually blotting out any memories of the Minoans and Mycenaeans. However, on top of the foundations laid by these early Greek cultures an even more creative and vibrant civilization would be built, that of the classical Greeks.

Reconstructing Previously Unknown Civilizations



An artist's idea of how the Minoan center at Knossos looked

It was the Englishman, Sir Arthur Evans who discovered the Minoans in 1894. Being extremely near sighted, he was especially interested in signature seals, since his poor vision encouraged viewing them very close-up and in detail. When told there were plenty such seals on Crete, he went there where he discovered a whole new civilization by accident.

Evans is often criticized for his use of modern construction materials, especially concrete, and the assumptions he made in reconstructing the Minoan capital, Knossos. But to be fair, archaeology was in its infancy in the 1800s and there were no established rules on how to excavate a site. To many, it was little more than a treasure hunt to dig up gold and other precious objects while virtually bulldozing away other less exciting, but more critical, bits of evidence about that civilization. That's what The German classical enthusiast, Heinrich Schliemann, basically did when he discovered and excavated the site of Troy in 1870. Symbolizing this is a picture of his wife Sophie wearing the gold and jewelry taken from Troy as if it were her personal wardrobe.



Complicating efforts for Evans was Linear A, some sort of hieroglyphic script that still remains undeciphered since there are so few

surviving examples of it to work from. Our main example of Linear A is the Phaistos Disk, discovered in 1908. It is written on both sides in a spiral pattern with 242 symbols divided into 61 groups. Interestingly, the symbols were stamped, not written, raising speculation that the Minoans were capable of “printing” out large numbers of a document. Of course this raises the question of where are there other copies. Also, whom would they be for, since reading was so complicated and limited to very few people.



Thera: A Catastrophe of Nuclear Proportions



A tsunami one-half second before hitting Sumatra in 2007. This photo was found preserved in a digital camera a year and a half later. Its owner presumably lost his life within seconds of taking it.

Steam explosions. The eruption on Thera was a steam explosion where water rushes into a crack in the volcano, exposing it to super hot magma that quickly heats the water to steam, expanding it to one hundred times its previous volume and triggering a violent explosion.

In a similar eruption on Krakatoa in 1883, the shock wave circled the globe four times in one direction and three times the other. Traveling at the speed of sound, the eruption was heard three and a half hours later in Madagascar. It stampeded sheep in Australia and panicked natives in the South Pacific. The tsunami it

generated picked up a Dutch freighter and set it back down a half mile inland. It blew a cubic mile of dust into the air, darkening the sky 150 kilometers away, slightly lowering global temperatures for several years and also producing some spectacular sunsets.

Thera’s crater was four times the size of Krakatoa’s, suggesting it may have been the most catastrophic volcanic explosion on Earth in the last 10,000 years. Some scientists calculate it was 90 times greater than the Mt. St. Helens eruption. The satellite photo below suggests the roughly circular outline the island had before half of it was blown to bits.



Bad timing. Ash fall evidence from Thera indicates it erupted in late winter or early spring when Minoan ships would be in one of their five harbors, all of which were on the northern coast of Crete and in the tsunami’s path. The tsunami may have been 300 feet high, swamping the coast of North Africa and driving salty seawater 200 miles up the Nile, with consequent effects on Egypt’s agriculture. Some even associate Thera’s eruption with the Ten Plagues that hit Egypt where contemporary sources talked about the Western sky darkening.

Thera’s settlement at Akrotiri was buried in 900 feet of ash, more than what buried Pompeii. Ash fall had a more long-term impact by blocking sunlight and cooling the climate on a global scale for several years before settling back to earth. By comparison, ash fall from the Tambora volcanic eruption in Indonesia in 1815, the largest in recorded history, a year later produced what was called the “year without summer” and the greatest famine of the

1800s in the United States and Europe. Famines in turn breed political unrest, possibly explaining the Hittite invasion of Syria to get grain and the seven year of famine predicted for Egypt in Joseph's dream and subsequent migrations of people there, including the Hyksos.

Mycenae



The “Cyclopean walls” of Mycenae’s fortifications were 5 meters thick & 10-12 meters high

The palace complex at Mycenae was entered through the Lion’s Gate, over which was a lintel stone weighing ten tons. On top of that were two large statues of lions. Mycenae’s wall was ten meters high and 900 meters long, being made of stones weighing up to 12 tons each. For water, there was an underground cistern right outside the citadel that could only be approached by a tunnel from within Mycenae’s walls.

The nearby Treasury of Atreus, a tholos (beehive) tomb built into the side of a hill, has an entrance more than five meters high over which is placed a stone lintel weighing 120 tons. Inside, the dome is sixteen meters in diameter & fourteen meters high.



Entrance to the giant tholos (“beehive”) tomb at Mycenae known as the Treasury of Atreus for all the treasure Mycenaean rulers had buried with them.

Tholos tombs were dug out of the sides of hills. The entrance to the one at Mycenae is 17 feet high with a single stone slab across the top weighing 120 tons. The facade was fitted with brightly colored stones and flanked by two ornamented columns of red and green stone.

Inside the Treasury of Atreus, the dome is nearly 30 feet in diameter and 43 feet high, built of large stone blocks cut in a curve and fitted so precisely that it is still perfectly sound 3200 years later. Originally the dome was decorated with bronze rosettes nailed to the stones. We still have some of the bronze nails.

Mycenaean Warfare



One view on how Mycenaean nobles may have fought from chariots in the Trojan War (c.1200 B.C.E.) Homer, living some 500 years later when chariots were no longer used in battle, thought warriors in the Trojan War just rode them to battle where they dismounted to fight.

Most of Homer’s descriptions of battles at Troy as duels between heroic nobles are probably to make his story more exciting, much like in Hollywood movies. A few passages in the *Iliad* describe the armies as fighting in “close ordered ranks,” which is probably more typical of how battles were fought.

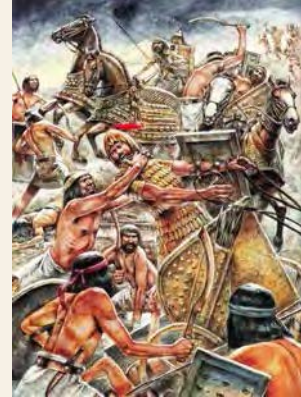


There was no standardization of Mycenaean arms and armor. The richest nobles could afford a full suit of armor known as the Dendra panoply and worn by the charioteer at the top. Most warriors were probably armed just with helmets, shields and fabric greaves (shin guards). Helmets were either of bronze or boar's teeth glued onto a leather cap (below). Most warriors probably couldn't afford a helmet of any sort.



Mycenaean shields were constructed of several layers of hide glued together. They also had a strap that went around the neck so that a warrior getting the worst of it could hang the shield over his back as he ran away. Homer describes some body-length tower shields in a concave figure-8 shape. However, these had gone out of use some 200 years before the Trojan War took place.

Homer also seems to have confused Mycenaean long pikes with the throwing javelins of his own day. Both would have been used, but the longer pikes kept enemies at bay better, especially when warriors fought in a close phalanx-type formation.



The end of chariot warfare. In the turmoil of the late Bronze Age, foreign mercenaries who served as chariot runners had become familiar with chariots and horses and seem to have caught on to two weaknesses of horse-drawn chariots. For one thing, they saw that the chariot drivers and warriors could be hauled down from behind. Secondly, they saw that horses did not like impaling themselves on a wall of spears and would not charge formations of infantry that stood their ground instead of panicking. Once that psychological edge was lost, the days of chariot warfare dominated by a few rich nobles were numbered, and so were the Bronze Age civilizations that depended on them.

Slavery in Ancient Greece



A Greek woman being taken captive. The primary source for new slaves was warfare, usually with a neighboring Greek state. This meant that most Greek slaves shared a common language and culture with their masters, many having been free Greeks earlier in life.

Slavery in the ancient world was so common that few people even questioned its morality, largely because even the simplest tasks were so labor

intensive that some sort of help was needed. Most Greek slave owners had only one or two slaves that they probably worked alongside with in their fields or shops. Thus, in many cases they were to some degree part of the family.

But have things really changed that much when we think of who harvests our fruit and vegetables and makes our clothes?

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In town, life was generally easier for household slaves, whose tasks were much less grueling than those on the farm. Educated slaves taken in war would have it the easiest, serving as tutors for their masters' children or as accountants. After the disastrous siege of Syracuse (413 B.C.E.), Athenian prisoners able to recite Greek playwrights were rescued from long agonizing deaths in local quarries. Such slaves would often have more authority and more comfortable lives than most freemen. Greek authors complained, with some exaggeration, about how uppity many slaves were, wearing fancy clothes and being disrespectful to their masters and other free Greeks. Stock characters in later Greek and Roman comedy portrayed slaves as constantly conniving to get something at the expense of their dimwitted masters (below), a theme that has continued down through history to modern sitcoms, with hired help replacing slaves in the plotlines.



By the same token, many slaves were treated horribly, especially those working in mines or on rich nobles' estates (which grew in number after 400 B.C.E.) The silver mines of Laurium owned by Athens were especially notorious for their brutality. This lends an ironic twist to our perception of the Athenians as being the foremost example of democracy when we consider that the basis for supporting that democracy came from the brutal slave labor in the silver mines of Laurium.

THE DARK AGE OF GREECE AND RISE OF THE POLIS (c.1100-750 B.C.E.)

Introduction: the Dark Age of Greece. The centuries following the fall of the Mycenaeans are mostly obscured from our view by an extreme scarcity of records. As a result, this is known as the Dark Age of Greek history. Still, there are a few things that we know about this period that saw the transition from Mycenaean to classical Greek civilization. It was a period of chaos and the movements of peoples. New tribes of Greeks, the Dorians, moved in and displaced or conquered older inhabitants. Those peoples in turn would migrate, oftentimes overseas, in search of new homes. It was also a period of illiteracy and poverty leaving us no written records or sophisticated monuments to tell us about the culture of this period.

All this led to the Greek world at this time being divided up between various Greek-speaking peoples who were distinguishable from each other by slight differences in dialect and religious practices. However, their similarities were important enough so that we can talk about the Greeks as a people. Two of these Greek peoples in particular should be mentioned: the Dorians and Ionians. The Dorians were Greek invaders who came down from the north to conquer many of the Mycenaean strongholds around 1100 B.C.E. Sometimes they completely blended in with their pre-Dorian subjects, and there was little class conflict in their city-states. In other places the Dorians did not intermarry and remained a distinct ruling class over the non-Dorian population. The most extreme cases of this were Sparta and Thessaly, where the non-Dorians were virtually enslaved and forced to work the soil for the ruling Dorians. Such situations posed a constant threat of violence within city-states.

The Ionians were pre-Dorian inhabitants who avoided conquest by the Dorians, either by fighting them off or by migrating. The region of Attica, centered around Athens, was one main pocket of resistance to Dorian conquest, as seen in the myth of the Athenian king, Codrus, who sacrificed himself in battle to ensure Athens' safety against a Dorian invasion. Many Ionians either chose to migrate overseas or were forced to do so by invaders. Most of them settled in the Cycladic Islands or on the western coast of Asia Minor, which became known as Ionia from the large number of Ionian Greeks there.

The birth of the Polis. The chaos and Greece's mountainous terrain forced people to huddle under the protection of a defensible hill known as an *acropolis*. By 800 B.C.E., these fortified centers had produced more security and settled conditions that triggered two important developments vital to the emergence of Greek culture. First, the more settled conditions plus the fact that Greece was by the sea and had few resources led to a revival of trade and contact with the older cultures to the East. For example, the Greeks adopted the Phoenician alphabet and added vowels to it, so literacy returned to Greece. Also, Egyptian influence can be seen in Greek architecture and sculpture. Here too we see the Greeks would add their own innovations, giving their pillars more slender and graceful lines, and creating more lifelike statues than the stiff formal Egyptian models they had to copy. These influences would lead to and be the partial basis of classical Greek civilization.

The typical *acropolis* was originally a bit inland on a hill to give people ample time to seek shelter when enemies were spotted coming in from the sea. As times became more settled, the term polis shifted from its original meaning of fortified settlement to the city that had sprung up around it. Since the city had outgrown the polis' original function of defense, it became the site of the city's temples.

Also, the settled conditions along with Greece's poor soils and hilly and dry conditions led to a new type of agriculture and farmer at this time. Instead of the overly centralized agriculture of the Mycenaean period and the under-worked aristocratic estates of the earlier Dark Age, farmers started developing less desirable lands, which the nobles probably did not even want. Rather than raising just grain crops or grazing livestock, they developed a mixed agriculture of grains, orchards, and vineyards that was better adapted to the varied conditions of their lands and climate. The intensive labor such farms required bred very independent farmers who would be largely responsible for the emergence of democracy in the Greek polis.

The revival of trade and development of small independent farms also combined to allow the settlements to grow into towns and cities (*poleis*) that spread out beyond the confines of their original acropolises. Later, in some cities, notably Athens, the acropolis would become a place to build temples

to the gods while also serving as a reminder of earlier more turbulent times. In order to understand the Greeks, one must understand what this most distinctive of all Greek institutions, the *polis* (city-state), meant to them.

The word *polis* means city, but it was much more than that to the Greek citizen. It was the central focus of his political, cultural, religious, and social life. Much of this was because the Greek climate was ideal for people to spend most of their time outdoors. Therefore, they interacted with one another much more than we do and became more tightly knit as a community. Since poleis were so isolated from each other by mountains, they became largely self-sufficient and self-conscious communities. Greeks generally saw their poleis as complete in themselves, not needing to unite with other Greek poleis for more security or fulfillment. We can see three main qualities that were typical of major and minor poleis alike.

1) *The polis was an independent political unit* with its own foreign policy, coinage, patron deity, and even calendar. For example, the tiny island of Ceos off the coast of Attica, had four independent city-states, each claiming the right to carry on its own business and wage war as it saw fit-- all this on an island no more than ten miles in length!

Greek political terminology

- **Politics: Activities concerning the polis**
- **Monarchy: rule by one person (from *archon*, meaning ruler)**
- **Democracy: rule by the people**
- **Oligarchy: rule by a few**
- **Aristocracy: Rule by the best (i.e., the nobles)**
- **Anarchy: Rule by no one**
- **Plutocracy: rule by the rich**
- **Meritocracy: rule by those deserving to rule (i.e., those w/merit)**

2) *The polis was on a small scale.* This is obvious from the example of Ceos. But consider a major city-state such as Corinth, which controlled an area of only some 320 square miles, considerably smaller than an average county in one of our states. Athens, by far the most influential of the city-states on our own culture, controlled an area only about the size of Rhode Island. Yet it is to Athens that we look for the birth of such things as our drama, philosophy, architecture, history, and democracy.

“Small scale” especially describes the Greek polis, Mycenae, whose entire army of 80 men

showed up for the battle of Plataea against the Persians in 479 B.C.E.

3) *The polis was personal in nature.* This follows logically from its small size. Greek philosophers such as Aristotle and Plato thought that a polis should be small enough for every citizen to know every other citizen. If it got any bigger, it would get too impersonal and not work for the individual citizen's benefit. Even in Athens, the most populous Greek city-state, some citizens could pay their taxes in very personal ways, such as by equipping and maintaining a warship for a year or by producing a dramatic play for the yearly festival dedicated to Dionysus. This tended to breed a healthy competition where citizens would strive to make their plays or warships the best ones possible, thus benefiting the polis as a whole.

The polis' small and personal nature bred an intense loyalty in its citizens that had both its good and bad points. On the plus side, it did inspire members of the community to work hard for the civic welfare. The incredible accomplishments of Athens in the fifth century B.C.E. are the most outstanding example of what this civic pride could accomplish.

The Athenian leader, Pericles, largely summed up the Greek civic spirit: “We do not say someone not involved in the polis’ affairs is minding his own business. We say he has no business here at all.”

On the negative side, the polis' narrow loyalties led to intense rivalries and chronic warfare between neighboring city-states. These wars could be long, bitter, and costly. Sparta and Argos were almost always in a state of war with each other or armed truce waiting for war. The Peloponnesian War between Sparta and Athens lasted 27 years, destroying Athens' empire and golden age. Sometimes city-states would be entirely destroyed in these wars, such as happened to Plataea and Sybaris. In addition, there was often civil strife within the city-state as well: between rich and poor, Dorians and non-Dorians, and citizens and non-citizens. This internal turmoil could be every bit as vicious and bloody as fighting between city-states. Ultimately, the Greeks sealed their own doom by wasting energy and resources in their own petty squabbles while other larger powers were waiting in the wings for the right moment to strike.

However, there were several factors that gave the Greeks a common identity and some degree of unity. First of all, the Greeks spoke a common language that largely gave them a common way of looking at things. The Greeks generally divided the world into those who spoke Greek and those who did not. Those who did not speak Greek were called *barbarians*, since, to the Greeks, they senselessly babbled ("bar-bar-bar").

Religion also gave the Greeks a common identity. Athletic contests in honor of the gods especially emphasized the Greeks' unity as a people. The most famous of these were the Olympic Games held every four years in honor of Zeus. During these games a truce was called between all Greek city-states, allowing Greeks to travel in peace to the games, even through the territory of hostile states. The modern Olympics, although no more successful than the ancient games in putting an end to war, still serve as a symbol of peace in a less than peaceful world.

Even the high and mighty pay. Philip II of Macedon, who would conquer Greece, was fined for violating the sacred truce and molesting Athenians going to the Olympics. He paid his dues.

Finally, several city-states might combine into leagues. These leagues might be purely for the purpose of celebrating religious rites or kinship common to their cities. A good example was the Delphic Amphictyony, a league of twelve cities formed to promote and protect the Oracle of Delphi. Some leagues were for political and defensive purposes. The Peloponnesian League under Sparta and the Delian League under Athens were for such a purpose and together claimed the loyalties of most of the city-states in Greece and Ionia. This was good for preventing war between individual city-states. But it backfired when Sparta and Athens went to war in 431 B.C.E. and dragged most of the Greek world into the most tragic and destructive struggle in ancient Greek history.

By 750 B.C.E., the Greek world had largely taken shape as a collection of city-states, often at war with one another, but also feeling certain common ties of language, religion, and customs. At this point, there was nothing remarkable about the Greeks, but forces were at work that would transform Greece into the home of democracy and the birthplace of Western Civilization.
Reckoning time in Olympiads

Reckoning time in Olympiads

Among other things the Olympics did to promote some unity among Greeks was a common way of reckoning time, since each polis had its own calendar. The basic unit of time was the Olympiad, the four-year period between Olympic games. Greeks addressing an audience from different poleis with different calendars would give dates as such and such year of such and such Olympiad.

For example:

776 B.C.E. = 1st year of 1st Olympiad

775 B.C.E. = 2nd year of 1st Olympiad

772 B.C.E. = 1st year of 2nd Olympiad

676 B.C.E. = 1st year of 26th Olympiad

478 B.C.E. = 3rd year of 75th Olympiad

An Introduction to Homer & Trojan War cycle

"Rage--Goddess, sing the rage of Peleus' son

Achilles,

*Murderous, doomed, that cost the Achaeans
countless losses,*

*Hurled in their multitudes to the house of
Hades strong souls*

*Of heroes, but gave their bodies to be the
delicate feasting*

*Of dogs, of all birds, and the will of Zeus was
accomplished*

*Since that time when first there stood in
division of conflict*

*Atreus' son the lord of men and brilliant
Achilles"*

Thus begins Homer's *Iliad*, the great epic of the Trojan War and the first great work of literature in Western Civilization. Homer was the first and greatest of poets to the Greeks, who looked to him for moral guidance, relied on him for inspiration for their plays, and had Greek schoolboys memorize whole chapters of his *Iliad* and *Odyssey* as an essential part of their education. Such was Homer's grip on the Greek imagination that Alexander the Great, believing himself a descendant of the Greek hero, Achilles, slept each night with a copy of the *Iliad* under his pillow and made Troy the first stop on his march across Asia.

The Iliad (from Ilium the Greek word for Troy) is part of a larger cycle of poems about

the Trojan War and itself only describes a few days in the tenth year of that struggle. Therefore, by the end of the poem, Troy's fate, while foretold, is still not resolved. Although full of action, the *Iliad* is also a remarkably mature statement on the human condition, human values, and the tragic impact of war on its innocent victims as well as those who fight it.

Background. The story starts with the wedding of a sea nymph, Thetis, to a mortal, Peleus (whose son will be Achilles). All the gods are invited except one, Eris (Discord), who, to get revenge, makes a golden apple with the inscription "To the most beautiful" and throws it between the goddesses Aphrodite, Athena, and Hera. An argument ensues over the apple between the three goddesses who go to Zeus to judge who gets it. Zeus is wise enough to avoid this controversy and sends them to a Trojan prince, Paris, to award the apple. Each goddess offers Paris a bribe for the apple, Hera promising great power, Athena offering prowess in battle, and Aphrodite promising the most beautiful woman in the world. Aphrodite's bribe seems the most enticing and Paris gives her the apple, in the process making two very bitter and powerful enemies for himself and Troy.

The most beautiful woman in the world is Helen, wife of Menelaus of Sparta. With Aphrodite's help, Paris entices Helen to leave with him for Troy. When the Trojans, also bewitched by Helen's unearthly beauty, refuse to return her to Menelaus and the Greeks, the war is on. The Greeks sit for nine years before Troy but are unable to breach its walls, occupying themselves by plundering surrounding cities. One of the slaves taken in these raids is the daughter of a priest of Apollo. When Agamemnon, leader of the Greeks refuses to return the girl to her father, Apollo unleashes an epidemic upon the Greek camp which has raged for nine days when a council is called to determine the cause of the

epidemic. It is at this point that the *Iliad* begins.

Summary of the *Iliad*. The poem begins with the poet's invocation (cited above) to the Muse of song and poetry to inspire him to sing his tale. The very first word of the poem is "rage", referring to the rage of Achilles and the tragic chain of events that rage unleashes. Achilles' anger is triggered when, Agamemnon, told he must give his slave girl back to her father to appease Apollo, angrily takes the slave girl Achilles, the greatest of the Greek warriors, had won from the same city. At stake for the two warriors and most valued by men in Homeric society is their honor, which is visibly measured by the plunder taken in battle. Furious over this insult, Achilles quits the war and has his mother, Thetis, convince Zeus to give the Trojans victory in battle so the Greeks will sorely miss him and beg him to come back to help them. It is a request that will tragically backfire on Achilles.

As the Trojans, aware of Achilles' absence, venture out to fight the Greeks, Paris calls for a truce and rashly challenges any Greek to a duel to decide the fate of the war. When Helen's estranged husband, Menelaus, eagerly steps forth, Paris skulks back into the Trojan ranks. However, Hector, Paris' brother and the greatest hero of the Trojans, forces Paris back out for the decisive duel. Menelaus, lusting for revenge on the cowardly wife-stealer, is beating Paris and about to finish him off, when Aphrodite saves him and whisks him off to Helen's bedroom. As Menelaus rages back and forth looking for his foe, Athena and Hera, fearing the war will end before Troy is destroyed, trick a Trojan archer, Pandarus, into thinking if he shoots the unprotected Menelaus, Troy will win the war and he will be a hero. However, Athena only lets Pandarus' arrow draw enough blood to shock and anger the Greeks over this treachery. With the truce thus broken, the war resumes.

At first, the fighting favors the Greeks thanks to the exploits of Diomedes who, with Athena's help, even wounds Ares, the god of war. Alarmed by all this, Hector goes into Troy to get his brother back into the fight and to urge the women of Troy to offer sacrifices for victory. The tragedy of war, especially for women, is tenderly captured by Homer's description of Hector's final farewell to his wife, Andromache:

*"So speaking he set his child again in the arms of his beloved wife, who took him back again to her fragrant bosom smiling in her tears; and her husband saw, and took pity upon her, and stroked her with his hand, and called her by name and spoke to her:
' Poor Andromache! Why does your heart sorrow so much for me?
No man is going to hurl me to Hades, unless it is fated, but as for fate, I think that no man yet has escaped it once it has taken its first form, neither brave man nor coward.
Go therefore back to our house, and take up your own work, the loom and the distaff, and see to it that your handmaidens ply their work also; but the men must see to the fighting, all men who are the people of Ilion [Troy], but I beyond others.'
So Glorious Hector spoke and again took up the helmet with its crest of horse-hair, while his beloved wife went homeward, turning to look back on the way, letting the live tears fall.
And as she came in speed into the well settled household of Hector the slayer of men, she found numbers of handmaidens within, and her coming stirred all of them into lamentation.*

So they mourned in his house over Hector while he was living still, for they thought he would never again come back from the fighting alive, escaping the Achaian hands and their violence." (vi, 482-502)

The emotion of this scene is intensified by the fact that it is the last time Andromache ever sees her husband alive. After this, Hector goes out and challenges any Greek to a duel to decide the outcome of the war. Meeting his challenge is Ajax, a huge warrior who, more than any other Greek, stands his ground even when the gods clearly favor Troy that day. The two men fight a long inconclusive duel that is only cut short by nightfall. As a sign of mutual respect, the two warriors exchange gifts before returning to their respective armies. Any such signs of civility will soon be extinguished by the escalating savagery of war.

The next day, Zeus, ready to honor his promise to Thetis, forbids any of the other gods from getting involved in the fighting, although he does give in to Athena's plea to let them give their favorite heroes advice. In the subsequent fighting, Zeus gives victory to the Trojans as one Greek hero after another is wounded and the Greeks fall back to their camp. Homer's description of the violence of the fighting is both poetic and brutal:

"Aias, Oileus' son, in an outrush caught Kleoboulos alive, where he was fouled in the running confusion, and there unstrung his strength, hewing with the hilted sword at the neck, so all the sword was smoking with blood and over both eyes closed the red death and the strong destiny." (xvi, 330-334)

"Meriones on his light feet overtaking Akamas stabbed him in the right shoulder as he climbed up behind his horses

and the darkness drifted over his eyes as he crashed from the chariot." (xvi, 342-4)

"There first of all he struck with the shining spear Pronoos in the chest where it was left bare by the shield, & unstrung his limbs' strength." (xvi, 399-400)

"Next he struck Erylaos, as he swept in, with a great stone in the middle of the head, and all the head broke into two pieces inside the heavy helmet, and he in the dust face downward dropped while death breaking the spirit drifted about him." (xvi, 411-414)

The Greeks are driven to their ships where the fighting assumes new levels of brutal desperation. Any previous civility between the two sides is replaced by such acts as savagely throwing the heads of slain enemies at their surviving comrades' feet. As the Trojans close in to burn the Greek ships, only Ajax seems can hold the line, desperately cutting down any Trojan threatening his ship with fire.

Although Achilles may be able to turn a cold and unfeeling eye from his former comrades' threatened destruction, his best friend, Patroclus, cannot. Patroclus convinces him to lend him his armor to make the Trojans believe Achilles is back in the fight, thus giving the Greeks enough time to escape with their lives. He promises to return as soon as the Greeks have been given such a reprieve, but gets caught up in the excitement of the Trojans fleeing him (in Achilles' armor), pursuing them to their walls and even trying to storm them. But Hector, helped by Apollo, kills Patroclus and strips him of Achilles' armor.

Achilles, grief stricken by Patroclus' death, makes amends with the Greeks, but spurns Agamemnon's offer to return the slave girl

over whom the tragic argument had started. Even though it is foretold that his own death will soon follow Hector's, all that matters to Achilles now is avenging Patroclus' death. At Thetis' request, Hephaestus, the god of fire, fashions a brilliant suit of armor that only makes Achilles more imposing and invincible in battle. Consumed by his bloodlust for revenge, he goes on a terrifying and murderous rampage, even taking twelve Trojans as prisoners for a human sacrifice at Patroclus' funeral. Not even the renewed participation of the gods can stem the fury of Achilles in battle:

"As inhuman fire sweeps on in fury through the deep angles of a drywood mountain and sets ablaze the depth of the timber and the blustering wind lashes the flame along, so Achilles swept everywhere with his spear like something more than a mortal harrying them as they died, and the black earth ran blood." (xx, 409-494)

The panicked Trojans flee into their city. But Hector, blaming himself for this disaster since he had convinced the Trojans to stand against Achilles, decides to stand against him despite the pleading of his parents and others from the walls above. After coldly rejecting Hector's request that the victor return his opponent's body to his people for decent burial, the battle is joined. Achilles slays Hector, strips him of his (Achilles') old armor, and brutally drags the dead Trojan hero's naked body behind his chariot in the dust. At this point, Andromache, working at her loom to keep her mind off the battle, learns of her husband's fate. Notice how Homer ends this passage with a description of the gifts Aphrodite had given Andromache for her headdress on her wedding day, and how they fall off her head now that her husband has died and her relationship with Hector has come full circle:

*"She heard from the great bastion the noise of mourning and sorrow.
Her limbs spun, and the shuttle dropped from her hand to the ground. Then she called aloud to her lovely-haired handmaidens: 'Come here. Two of you come with me, so I can see what has happened. I heard the voice of Hector's honoured mother, within me my own heart rising beats in my mouth, my limbs under me are frozen. Surely some evil is near for the children of Priam. May what I say come never close to my ear; yet dreadfully I fear that great Achilleus might have cut off bold Hector alone, away from the city, and be driving him into the flat land, might put an end to that bitter pride of courage, that always was on him, since he would never stay back where the men were in numbers but break far out in front, and give way in his fury to no man.' So she spoke, and ran out of the house like a raving woman with pulsing heart, and her two handmaidens went along with her. But when she came to the bastion and where the men were gathered she stopped, staring on the wall; and she saw him being dragged in front of the city, and the running horses dragged him at random toward the hollow ships of the Achaians. The darkness of night misted over the eyes of Andromache. She fell backward, and gasped the life breath from her, and far off threw from her head the shining gear that ordered her headdress, the diadem and the cap, and the holding-band woven together, and the circlet, which Aphrodite the golden once had given her*

on that day when Hector of the shining helmet led her forth from the house of Eetion, and gave numberless gifts to win her." (xxii, 447-73)

Victory does not appease Achilles' rage, even as he daily drags Hector's naked body, still tied to his chariot, around Patroclus' funeral pyre. However, the gods protect Hector's body from decay and escort Priam, his old father and king of Troy, to Achilles' tent to ransom his son's body. Recognizing the will of the gods and moved by the pathetic sight of this old man forced to beg his son's killer to let him recover his body, Achilles agrees to the ransom. The two men grieve together and then share a meal as a sign of some sort of reconciliation (though the war will go on). Achilles has come to terms with his own humanity and at last realizes the futility of his actions and all he has lived for. In the end his real victory, rather than being over any external enemy, is over the beast within himself, but at a terrible cost.

The fall of Troy and the returns of the Greeks. The *Iliad* ends with Troy still standing, although perched on the edge of doom. Its final days play out in tragic form (making it a favorite theme of later Greek tragedies). New allies, first the Amazons and then the Ethiopians, come to help the Trojans, but are defeated by Achilles. Achilles himself is soon killed (which he knew from a prophecy would happen soon after he killed Hector). When the Greeks award his armor to Odysseus as the one who has done the most to help the Greek war effort, his main competitor, Ajax, commits suicide after a fit of madness. Paris also dies in an archery duel, but the Trojans still refuse to surrender Helen and her treasure. Even after the Greeks, as directed by soothsayers, get the bow and arrows of Heracles (which never miss their mark) and steal the Palladium, a statue of Pallas Athena protecting Troy, the city continues to stand.

Then one day the Greeks are suddenly gone, leaving only a mysterious giant wooden horse and an actor, Sinon, who conveniently gets caught by the Trojans. He convinces the Trojans that the Greeks had left the horse as an offering to Poseidon to ensure a safe homecoming and had built it big enough so the Trojans could not bring it into their city, since it would make them invincible against attack. Despite several warnings, the Trojans bring the horse into their city, and, to fit it in, break part of their gate as well as the charm its walls (built by Poseidon and Apollo) had against any attackers. That night, the main Greek army returns while Greeks hidden in the horse climb out, kill the guards, and open the gates to their comrades. Troy is brutally sacked and destroyed, its men killed, its women and children enslaved, and its temples desecrated.

The gods, angry over sacrileges done to their temples, ensure that most of the Greek heroes' returns are neither easy nor happy. Agamemnon's own wife, Clytemnestra, upon his return, murders him, because of a continuing curse of bloodguilt. There were versions where Diomedes and Odysseus, return home to find their wives unfaithful. One version even has Menelaus find the Helen he takes back at Troy is only a phantom Helen and he must go to Egypt to recover his true wife before returning home happily.

The *Odyssey* is the most famous tale of the returns, recounting the trials and adventures of Odysseus as he desperately tries to get home to his wife Penelope and son Telemachus.

*"Tell me Muse, of the man of many ways, who was driven far journeys, after he had sacked Troy's sacred citadel.
Many were they whose cities he saw, whose minds he learned of,
Many the pains he suffered in his spirit on the wide sea,*

struggling for his own life and the homecoming of his companions."

It is significant that Homer's other great epic should focus on Odysseus, since in many ways he is the archetypal Greek hero. More than his strength and bravery in battle, the Greeks admired his quick-witted resourcefulness (including an incredible talent for lying) that gets him through one crisis after another. At one point when the giant cyclops, Polyphemus has trapped him and his men, Odysseus says his name is Nobody. Later, when the injured cyclops is screaming in pain from being blinded in his sleep by Odysseus, and neighbors ask what the problem is, Polyphemus' reply that Nobody hurt him sends the neighbors home satisfied.

The *Odyssey* is more of classic adventure tale traveling across a mythical world of gods, monsters, sorceresses, and shipwrecks, climaxing with a battle against the villainous suitors who have invaded Odysseus' household, and ending with the happy reunion of Odysseus and his family after twenty years' absence. The *Iliad*, by contrast, stays in the same location, is much more ambiguous in its ending and its attitude toward material values, divine justice, and our purpose in life. However, that also makes it a much more thought provoking and powerful statement that has inspired succeeding generations to question assumptions about such issues as divine justice and the human condition.

The Yearly Round of Agriculture in Greece
Greece was not a particularly fertile country, with a dry climate, rough terrain, and only 30% of its land being arable, with much of that controlled by nobles. Reliance on just one crop put farmers at risk of starvation, since there was no backup crop or surplus from previous years. Therefore, the Greeks diversified to raising grain, grapes and olives. In addition to spreading the risk of starvation, this also spread the intense workload across the whole calendar year.

Grapes were harvested in August and September, then poured into a vat and trampled to squeeze the juice into waiting jars where they would ferment into wine. Greek wine was more of a thick syrup that was typically mixed with at least three parts water for every part wine. Even children drank it.

Grain crops, such as wheat and barley were planted in the fall to take advantage of the cooler rainy weather of winter and avoid the scorching Mediterranean summers. Harvest took place in late spring or early summer.

Olives were harvested in October and November. Boys climbed the trees to shake the olives out of the branches into nets below. Oil was then squeezed out using a simple olive press.



A Greek vase depicting the harvesting of olives

Sybaris and the Danger of Dancing Horses
Being so independent, Greek *poleis* could develop fierce rivalries, such as that between Crotona and Sybaris in Southern Italy. From Sybaris we get the word *sybarite*, meaning someone who indulges in decadent luxury, because Sybaris was legendary for its wealth and such stories as the one about the man who couldn't sleep well because a crumpled rose petal had gotten into his bed. Sybaris may have been the first city with a streetlight system.

Sybarites also taught their horses to dance to music, and this would be their ultimate undoing. In 510 B.C.E., when at war with their archrival, Crotona, they found a band in front of Crotona's army. As the battle

began, the band struck up a tune that apparently sent the Sybarite horses boogying on down while the Crotonites passed right through the Sybarite cavalry and into the city. At least that's the story. Crotona did indeed destroy Sybaris in 510 B.C.E., and then diverted the River Crathis over its site to destroy any evidence of its existence. It wasn't rediscovered until the mid 1960s.

The Olympics



The Olympics were more a religious festival than athletic event, although the ancient Greeks saw physical excellence as a form of worship to gods who themselves were seen as just really big people. All people who could show they were Greeks were invited, and during the games, there was a sacred truce across Greece to protect athletes traveling to Olympia. Of course, cheating was seen as a sacrilege, and cheaters, when caught, had to dedicate a statue to Zeus along a particular walkway at Olympia, thus immortalizing themselves in a less than desirable way.

Athletes trained at Olympia for ten months, as did the judges, who were all chosen from the host city, Elis.

The stadium was just a grassy knoll around the field and could hold about 45,000 men. It was hot, dusty, and infested with flies, and one of the most common prayers by spectators was to *Zeus, averter of flies*. There was also a carnival atmosphere, described in five words by the comic playwright, Menander: "*Crowd, market, acrobats, amusement, thieves*"

There are two legends about how the Olympics began. In one Agamemnon's grandfather, Pelops, won a race to gain a woman's hand in marriage. In the other

Apollo beat Hermes in a race and Ares in a boxing match. At first, there was one race of one *stade* (~192 meters). Later a 2 *stade* and 24-stade race were added. Originally, participants wore a loincloth, but later ran in the nude, except in the hoplite race where they wore a helmet, shield, and greaves (bronze shin guards).

Boxing was one of the oldest Greek sports, being mentioned in the *Iliad* as one of the games held in honor of Patroclus. It was added as the second Olympic sport in 688 BCE. According to mythology, Apollo invented boxing, defeating and killing Phorbas, a boxer who urged travelers through Delphi to compete with him. Another tradition had Apollo beating Ares in a boxing match at Olympia. To soften the blows, boxers wrapped their fists with tape around mutton fat. In Roman times, these were reinforced with lead, making the sport much more brutal and dangerous.

One strategy was to position an opponent with the sun in his face. There was no holding one's opponent or punching his genitals. There were also no time limits or separate rounds, though both boxers could agree to a break or kind of sudden death known as a *klimax*, which was taking turns hitting each other in the head. (Maybe this is where the term sudden death came from.)



In wrestling, contestants were anointed with olive oil then dusted with powder to make them easier to grasp. Competition took place in "*keroma*", or beeswax, a muddy and sticky arena. Victory depended on one competitor acknowledging defeat by raising his right hand with the index finger pointed.

Rules:

- * Blows were not allowed.
- * Tripping was permitted.

- * No biting or gouging was allowed.
- * There was no weight distinction.



The pankration, ("all strength") a combination of wrestling and boxing, was added in 648 B.C.E. in the 33rd Olympiad. Greeks believed that the Athenian hero, Theseus, invented it order to defeat the Minotaur in the labyrinth.

There were no boxing gloves used in the pankration. Only biting and gouging of the genitals were forbidden, making it the most dangerous and toughest of all events. Kicking was frowned on, but still played an important part in the pankration. A kick to the stomach was called *gastrizein* (the stomach-trick). Three champions won by breaking their opponents' fingers, which was seen as a sign they couldn't bring their opponents down. One of them, Sostratus of Sicyon, was known as "Mr. Fingertips." Another champion, Arrachion of Phigalia, was being strangled and losing consciousness, so he twisted his opponent's leg, causing him to surrender just as he died. He was probably the only dead athlete to win the Olympics.

The quoit or javelin was important in both war and hunting and is mentioned by Homer as one of the sports in the games Achilles held to honor his friend Patroclus.

The javelin was about as long as a man's height. We don't know if it had simply a pointed end, or a metal head like those used in battle; both types are seen in vase paintings.

Distinguishing the ancient from the modern javelin was a leather strap formed in a loop and attached at the javelin's center of gravity. In war and hunting, thongs were also used, but were permanently attached. In the case of athletics, each competitor tied the thong

where it helped him the most. The fingers released the thong upon throwing the quoit. The thong increased the power and distance of the throw by making the grip more secure and putting a spin on the javelin in flight.

There were two forms of this event: throwing for distance or at a target.

Throwing for distance (also included in the pentathlon) required making the javelin fall within an area defined on three sides.

First the athlete tightened the thong, putting his index and middle fingers into the loop. He pushed the javelin back with his left hand to tighten the thong and to grip the fingers of his right hand. The run-up and throw used the same throwing style used by javelin-throwers today.

Throwing the javelin at a target was commonly done on horseback, which required a steady eye, a strong hand, and the flexibility of an experienced horseman. As the horse was galloping, the rider had to throw the javelin at a target when the horse reached a certain point or a certain distance from the target. The horse's movement of the horse affected the steadiness of the rider's hand and control over his movements. Thus he had to keep complete coordination between the rhythm of the horse's gallop and the movement of his hand, while still keeping his eyes focused on the target.

The pentathlon was added in 708 B.C.E. in the 18th Olympiad and consisted of five events: discus, javelin, long jump, running, and wrestling. According to mythology, the pentathlon was invented by the hero Jason, who awarded the prize to his friend Peleus (who had come in second in everything but wrestling, in which he placed first).

The pentathlon was a combination of two types of events that existed in ancient world: the light events (jumping, running and javelin) and heavy events (discus and

wrestling). We don't know exactly how the winner was decided or the order of events except that wrestling was last.

The discus was one event that had no relation to military exercises or farm work. It went back at least to Homer's Iliad when it is an event in Patroclus' funeral games.

In Greek mythology the discus was responsible for several accidental killings such as when Zephyr blew Apollo's throw off course, killing his friend, Hyakinthos.

The discus was originally made of stone, and then later made of iron, lead, or bronze. Like today, it had two convex curves with a large circumference, ranging from 17 to 32 cm in diameter and weighing from 1.3 to 6.6 kilograms.

Small wooden pegs marked a thrower's performance, and it was measured with rods. The natural movements of an athlete have not changed except that the athlete had to keep his feet in place. Unlike mythology, there are no reports of any accidents during the competition, because the spectators sat on the embankments.



Broad jump with weights. The sport of jumping is linked to ancient warfare in Greece with its rough terrain where soldiers' ability to jump during battle would have been crucial. In the ancient Olympic Games jumping existed primarily as a component of the pentathlon, and was seldom held as a singular event.

Unlike modern jumping, ancient Greek athletes held stone or lead weights called *halters (above)* as a means to increase the distance of a jump. He did this by swinging the weights during the

run-up to his jump and holding onto them until the end of his flight, when he jettisoned them backwards. Then, he came down on the soil with his feet together.

The jump was considered one of the most difficult of the original Olympic events because of the timing and coordination required between running and jumping and swinging and releasing the weights. For this reason, the jump was at times accompanied by a flute player, whose sounds underlined the rhythm and musical flow of a properly executed jump.

Chariot racing (both 2 & 4 horse) was added in 680 B.C.E. Races involved heats of ten chariots running 12 laps (8 miles) with 23 turns, leading to many accidents. The prize for winning went to the owner, even if she was a woman, not the driver, who was only awarded a cotton headband.

This event was especially prestigious to win since it was the one place where owners could show off their wealth with fancy trapping. One year the Athenian, Alcibiades entered no fewer than seven splendid chariot teams. Another Athenian, Cimon, father of Miltiades, won three times had had the Horses buried in the family tomb.

The Roman emperor, Nero, delayed the games from 65 to 67 C.E. so he could compete personally entering a 10-horse chariot. Although he was thrown from the chariot, he was given the crown anyway, since if he could've finished he would certainly have won. Later his victory was declared invalid and the bribe he paid was ordered returned.

Women and the Olympics. Women were banned from the Olympics and any woman caught there was to be thrown down from Mt. Typaeum. One woman, Kalliptaira or Pherenike, whose father, husband, and two brothers were all Olympic victors, entered the games disguised as a trainer to see her son compete. When he won, her dress got caught as she jumped the fence to greet him, exposing her as a woman. Fortunately, she was pardoned since so many of her family were Olympic victors, although later trainers had to enter naked to prevent such a security breach from recurring.

Although women could not directly compete in the Olympics, they could enter chariots for the chariot race, the prize for which went to the owner, not the driver. Women did have their own parallel games in honor of Hera, but they only consisted of a foot race, like the first Olympics.

Olympic victors were awarded an olive wreath...along with fame and virtual immortality among their citizens. A breach would be opened in the city wall for the victory parade. Poems would be composed in their honor, the most revered poet next to Homer being Pindar of Thebes, who largely wrote odes to victorious athletes. In some cases, free meals for life were given to victors. In the case of Milo of Crotona, this was no bargain, since he supposedly ate a whole cow every day.

Famous Olympic athletes. Stories, however true, abound concerning Olympic athletes. One such athlete, Milo of Crotona, trained by carrying a calf around on his shoulders. As the calf grew, so did his strength. Supposedly he died when he stuck hands and feet into a tree with wedges inserted into it in an effort to split it. Unfortunately, he got trapped when the wood snapped shut and he was eaten by wild animals.

Another athlete, Theagenes of Thasos, reportedly won 1400 crowns at various games. After his death, an archrival would come each night and beat on a statue dedicated to Theagenes, until one night it fell and killed him. The statue was tried for murder, convicted after putting up a weak defense, and exiled to the bottom of the sea. However, when a famine hit, the statue was restored and Theagenes was worshipped as a god of healing. Go figure.

The Olympics were part of a four-year cycle of games, the others being the Pythean Games held at Delphi, the Isthmian Games, and Nemean Games. In addition, city-states often held their own religious/sports festivals, the most famous being the Panathenaea in honor of Athena at Athens.

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THE RISE OF GREEK DEMOCRACY (c.750-500 B.C.E)

The Age of Colonization (c.750-550 B.C.E). Greece was not a rich land capable of supporting a large population. Yet the revival of stable conditions and the rise of a new class of independent farmers practicing a mixed agriculture of grains, vines, and orchards after 800 B.C.E brought population growth. This, in turn, brought problems, since family lands had to be split up among the surviving sons. These sons also had families to support, but on less land than their fathers had. Greece's poor soil and occasional droughts would lead to famines, forcing the victims of those crop failures to seek loans from the rich nobles. Of course, there was interest on the loan, generally equal to one-sixth of the peasants' crops. Failure to pay back the loan and interest in time led to the loss of the family lands or the personal freedom of the farmer and his family. Unfortunately, bad harvests often run in cycles of several years at a time. As a result, the Greek poleis in the eighth century B.C.E had a few rich nobles and a multitude of desperately poor people, creating an unstable situation for the polis and the nobles who controlled it. Therefore, many city-states started looking for new lands on which to settle their surplus populations. The Age of Colonization was born.

Word study: economics. The word economics comes from the Greek word *oikos*, meaning land, which was the basis for the Greek economy. Thus the leader of a new colony was known as an oikist, since he parceled out land to his followers.

The Greeks looked for several qualities in a site for a colony: good soil, plentiful natural resources, defensible land, and a good location for trade. They especially found such sites along the coasts of the North Aegean and Black Seas to the northeast, and Sicily and Southern Italy to the west. However, Greek colonies dotted the map of the Mediterranean

from Egypt and Cyrene in North Africa to Spain and Southern France in the West.

Founding a colony was no easy task. A leader and enough settlers had to be found, which often involved two city-states combining their efforts to found the colony. Finding a site for the colony was also a problem. Generally, colonists would ask the Oracle of Delphi for advice, usually getting a vague double-edged answer that could be interpreted in several ways, thus making the Oracle always right. For example, the colonists who founded Byzantium by the Black Sea were told to found their city across from the blind men. They figured the blind men were the settlers of nearby Chalcedon who had missed the much superior site of nearby Byzantium, since it controlled the trade routes between the Black and Aegean Seas and between Europe and Asia.

Although a colony was an independent city-state in its own right, it generally kept close relations with its mother city (*metropolis*), symbolized by taking part of the metropolis' sacred fire, representing its life, to light the fire of the new colony. Eventually, many Greek colonies, especially ones to the west such as Syracuse, Tarentum, and Neapolis (Naples), would surpass their mother cities in wealth and power. As a result, Southern Italy and Sicily came to be known as Magna Graecia, (Greater Greece).

Colonies triggered a feedback cycle that would help maintain the colonial movement and lead to dramatic economic, social, and political changes in the Greek homeland. First of all, colonies relieved population pressures at home and provided resources to their mother cities. This helped support the emergence of craftsmen who made such things as pottery and armor for export. It also made life easier for the free farmers who had more land now that there was less crowding. These two rising groups, craftsmen and free farmers, constituted a new group, the middle class, which could

afford arms and armor and help defend their poleis.

That, in turn, allowed the Greeks to deploy into a *phalanx*, a much larger mass formation of heavily armored soldiers who together formed a sort of human tank. Thanks to this deadly new formation, the Greeks were better able to found and defend colonies in territories with large hostile populations. This would feed back into the beginning of the process whereby colonies would produce more wealth and resources that would add further to the rising middle class that could afford arms and armor, leading to more heavily armed Greeks who could found and defend more colonies, and so on.

Another development that helped this process was a new invention: coinage. Although for centuries, people had used gold and silver as common mediums of exchange to expedite trade, there were always problems of determining the accurate weight and purity of such metals to avoid being cheated. Then, around 600 B.C.E., the Lydians, neighbors of the Ionian Greeks in Asia Minor, issued the first coins, lumps of gold marked with a government stamp guaranteeing the weight and purity of those lumps. Greek poleis soon picked up on this practice and issued their own coins. Coinage created a more portable form of wealth that everyone agreed was valuable. Trade became much easier to carry on, thus increasing its volume and the fortunes of the merchants involved in it. Overall, this signaled a growing shift from the land-based economy dominated by the nobles to the more dynamic money economy controlled by the middle class.

The Western way of war. The cycle of colonization spread a new type of warfare across the Greek world. Previously, Greek warfare had been the domain of the nobles, since they were the only ones who could afford the arms and armor necessary for fighting in the front lines. While this put the

brunt of the fighting on their shoulders, it also gave them prestige and power, since they had the weapons to enforce their will.

However, by the mid seventh century B.C.E., the wealth brought in by colonies led to a new type of warfare, the hoplite phalanx, a compact formation of heavily armored soldiers (hoplites, from the Greek word for shield) with overlapping shields and armed with spears. The idea was to use the weight of the phalanx to plow through the enemy. It wasn't elegant, but it was effective and brought into play two new revolutionary factors. First, since the phalanx's success relied on numbers, anyone able to afford heavy armor and shield had to be used. This meant including the rising middle class of independent farmers, craftsmen, and merchants, which would have a dramatic impact on the polis' political structure in the future.

Secondly, the hoplite phalanx created a new concept of warfare. Previously, when warfare had been primarily a matter of honor and power for a narrow group of kings and nobles who had nothing better to do, battles had mainly been a matter of hit-and-run tactics with some face-to-face combat. However, with middle class farmers now making up the bulk of the phalanx, warfare became a matter of defending their very livelihood. Therefore, the practice developed of meeting invaders in short, but brutal, head-on clashes to protect the defending farmers' lands and homes from ruin. Also, the fact that most of those fighting the battles had regular occupations to get back to reinforced this urge for a quick resolution of a war in one decisive battle.

This concept of resolving wars in decisive head-on clashes long outlived the Greek poleis that started it. The Romans would subscribe to this principle with systematic efficiency and pass it on to Western Civilization where it is still seen as *the* way to fight wars. Until the mid 1900s this strategy served Western powers well, but in recent decades it has not always

proven effective, as the Vietnam War, Israeli occupation of the West Bank and Gaza, and American occupation in Iraq have shown.

Pheidon, the ruler of Argos, was the first to use the new hoplite phalanx against Sparta, defeating it in the process. Soon Sparta had adapted to these new tactics, and other Greek poleis quickly proceeded to arm their middle classes and form phalanxes of their own in order to survive. Soon the "Hoplite Revolution" had spread throughout Greece and its colonies.

By 550 B.C.E, the cycle of Greek colonization was running out as few good sites for new colonies remained. However, colonization had spread of Greek civilization to other peoples, notably the Macedonians to the north and the Romans to the west. Rome in particular would adapt Greek culture to its own needs and pass it on to Western Civilization.

The rise of Greek democracy. Increased prosperity oftentimes leads to trouble, for it creates expectations of power and status to go with it. People who have virtually nothing expect nothing more. People who have had a taste of something generally expect more and will even fight to get it. Such is the fuel of revolutions, and ancient Greece was no exception. The problem was that, while the middle class artisans and farmers had little or no social status or political power to go with the expectation to fight in the phalanx. Their frustration in more commercial poleis played itself out somewhat differently than in the more agricultural poleis, but ultimately with the same basic result.

In many, usually the more commercial poleis such as Corinth, Megara, and Athens, some disgruntled and ambitious nobles used the frustrated middle class to seize power from the ruling aristocracy. The government they set up was called a tyranny, from the Greek word tyrannos, meaning one-man rule. Such an arrangement was usually illegal, but not

necessarily evil. That association with the word tyrant would come later.

In order to maintain his popularity, the tyrant typically did three things. First, he protected peoples' rights with a written law code, literally carved in stone, so that the laws could not be changed or interpreted upon the whim of the rich and powerful. Second, he confiscated the lands of the nobles he had driven from power and redistributed them among the poor. Finally, he provided jobs through building projects: harbors, fortifications, and stone temples with graceful fluted columns, a new Greek innovation. In addition, tyrants had the means to patronize the arts. Thus the sixth century B.C.E. saw a flourishing of Greek culture in such areas as architecture, sculpture, and poetry.

A crucial shortcut. One particularly useful public works project the tyrant, Periander of Corinth, sponsored was a runway for hauling ships across the Isthmus of Corinth thus saving sailors a 200 mile voyage through treacherous waters from the Aegean Sea to the Gulf of Corinth. Much of Corinth's prosperity came from this runway which operated all the way to 883 C.E. Today a canal performs the same service for ships.

However, the increased prosperity brought on by the tyrants only gave the people a taste for more of the same. By the second or third generation, tyrants could not or would not meet those growing demands, and people grew resentful. In reaction to this resentment, tyrants would often resort to repressive measures, which just caused more resentment, more repression, and so on. Eventually, this feedback of resentment and repression would lead to a revolution to replace the tyrants with a limited democracy especially favoring the hoplite class of small landholding farmers, though excluding the poor, women, and slaves.

Bratty behavior. Tyrants' sons were often brats who mistreated their subjects and seemed to do everything they could to get themselves overthrown, as seen in this dialogue between Dionysius, tyrant of Syracuse, and his son:

Dionysius: *"You should stop treating people that way"*

His son: *"That's easy for you to say. You never had a tyrant for a father."*

Dionysius: *"And if you keep acting like that, you won't have a tyrant for a son."*
Dad turned out to be right.

In the more agricultural poleis, the farmer-hoplites seem to have taken control more peacefully. Their dual status as farmers and hoplites supported each other in maintaining control. As farmers, they were the ones who could afford arms and armor and serve in the phalanx. And as hoplites in the phalanx, they were the ones with the power to run the state. Much like the states that experienced tyrannies, these agrarian poleis also established limited democracies favoring the small land-holding farmers. While these democracies may have excluded a majority of their populations, they did exhibit several characteristics that made them a unique experiment in history and a giant step toward democracy.

1) *A high value was placed on equality, at least among the citizens ruling the polis.* This ethos of equality discouraged the accumulation of large fortunes and encouraged the rich to donate their services and wealth to the polis. This created a fine balance between individual rights and working for the welfare of the society as a whole that helped create fairly stable poleis.

2) *The polis was largely dominated by a middle class of small landholders, merchants, and craftsmen..*

In addition to women and slaves, Greek democracies typically excluded freemen without any property from the full advantages

of citizenship. However, despite its shortcomings, the moderate style of democracy born in Greece by 500 B.C.E was the basis for the later, much more broadly based democracy in Athens and our own idea of individuals controlling their own destinies.

3) *Hoplite warfare limited the scope and damage of warfare among the Greek poleis.* Since it was the farmers who both declared war and fought it for the polis, they made sure that it was short and decisive so it would not disrupt their agricultural work or damage their crops. A typical war might take only three days: one day to march into enemy territory, one day to fight, and one day to get back home to the crops. They also made sure it was cheap. Since hoplite warfare was simple and everyone supplied his own equipment and rations, there was no need for taxes to support generals and buy supplies. This limited, almost ritualistic, style of warfare maintained a stability among the Greek poleis despite the frequency of their wars.

Private Property & Infanticide in Greece

The early Greeks had no clearly defined concept of private property, since they saw their farms as ancestral land belonging to all their ancestors, and thus not theirs to sell. However, they could sign away the rights to part of their crops (typically one-sixth) as collateral on loans, which was a halfway step to the fully developed idea of private property.

The Greeks also did not practice primogeniture (giving all their land to the oldest sons), maybe from a belief that since their farms were ancestral lands, they also belonged to all their descendants. As a result, in families with more than one son, farms would be split up into progressively smaller plots that

eventually couldn't support all the families living on them. To avoid this situation, Greeks commonly tried to limit their families to one son, the extra help needed on the farms coming from slaves who had no rights of inheritance. (This also gives another perspective on why slaves were seen as so crucial to ancient societies that did not practice primogeniture.)

Extra sons would be left on temple steps in the hope that someone would adopt them before they died. Of course, with high childhood mortality rates, this could backfire if the surviving eldest son died after any younger brothers had been disposed of. In Mary Renault's historical novel, *The Last of the Wine*, the main character explains how the plague that swept through Athens in 430 B.C.E. saved his life by killing his older brother.

Similarly, the Greeks tried to limit family size to only one girl. Even though daughters had no inheritance rights, their families were expected to provide them with dowries to attract prospective husbands who would take them off their families' hands. Thus peasants and poor urban families were especially likely to abandon daughters on temple steps or even engage in outright female infanticide.

The Oracle of Delphi



The theater at Delphi, which was also the site of the Pythean games, one of the four-year cycle of athletic competitions in Greece, and the only one with musical and poetic contests

There were numerous oracles throughout the ancient world, but the one at Delphi had the highest reputation when it came to giving advice and predicting the future. In mythology, Delphi was where Apollo slew a monstrous dragon known as the Python and buried its remains so they could rot and emanate inspirational fumes.

An elderly local woman of blameless character was chosen to be the priestess, known as the Pythea, through whom Apollo would speak. Sitting on a tripod, she would breathe in some intoxicating fumes, which some believe came from gasses containing ethylene, a natural intoxicant, emanating from a fissure in the earth. The Pythea would babble some drug-induced nonsense that the priests would "translate." Typically, their answers would be ambiguous enough to be interpreted in more than one way, thus making it impossible to prove the Oracle wrong.

Apollo only "inhabited" Delphi nine months of the year, spending the winter in the North with the Hyperboreans. During that time Dionysus, the god of wine and revelry and Apollo's half-brother, took his place and the Oracle was closed for business. Even in the remaining nine months, the Oracle was

only open the seventh day of each month

Petitioners, carrying laurel branches sacred to Apollo, would bring a sacrificial animal (usually a goat), and a monetary fee for the god. Lots were drawn to determine the order of admission, although representatives of city-states and those with especially large donations to Apollo got to move up in line. (The bribe by Croesus of Lydia's representatives was supposedly so large they secured a permanent spot at the head of the line.)

The sacrificial goat was first showered with water and observed to make sure it shivered from the hooves upward, and then sacrificed to observe its organs, in particular its liver, to ensure the signs were favorable. According to Plutarch, the priests once put the question to the Pythea despite bad omens, causing her to go into a violent hysterical reaction and die.

When the Pythea was not available, petitioners could put simple Yes-or-No questions to the priests, who would then toss some colored beans, one color meaning "yes," another "no."

The huge amount of wealth in offerings stored in various city-states' treasuries at Delphi made it a tempting target. In the fourth century B.C.E. a neighboring polis, Phokis, seized Delphi and used its treasures to buy a big army of mercenaries with which to terrorize neighboring poleis. This led to the Third *Sacred War* (356 BC–346 BC), which exhausted Thebes and other Greek city-states and helped Philip of Macedon conquer Greece.



The treasury of the Athenians' offerings to Apollo at Delphi. Many other city-states had such treasuries, making Delphi a tempting target for its neighbors.

Some famous prophecies by the Pythea.

- When Croesus of Lydia asked if he should go to war with Persia, the oracle said if he did, he would destroy a great empire. He went to war and, as the oracle predicted, destroyed a great empire... his own.
- Colonists from Megara were told to found their city across from the blind men. They figured the blind men were the settlers of Chalcedon who had missed the much superior site of nearby Byzantium, since it controlled the trade routes between the Black and Aegean Seas and between Europe and Asia.
- When the Athenians asked where to found a colony, the oracle replied "You must found your city where you shall drink water by measure and eat barley cake w/o measure." Luckily the Athenians found some very fertile land near a spring known as *Medimnos* to the locals. Since *medimnos* was also the Greek word for dry measure, like a bushel, they could indeed drink water by measure and eat without measure (at least compared to the meager harvests back home). The result was the city of Thurii in southern Italy.

- When the Athenians asked the oracle how to defeat the huge invasion of Persians led by Xerxes, the Pythia initially told them to flee to the ends of the earth. Not satisfied with this response, they finally got a second reply that the wooden walls alone would remain unvanquished. This sparked a vigorous debate on whether it meant an old wooden wall around the Acropolis or the navy. One Athenian, Themistocles was convinced it meant the navy and convinced the Athenians to invest a sudden windfall of money into a crash-building program to construct 200 triremes. As it turned out, Themistocles was right and his fleet saved Athens and the rest of Greece.

Greek Colonies: Like “Frogs Around a Pond”

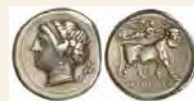


A map showing areas of Greek (green), Phoenician (pink), and Etruscan (yellow) colonization

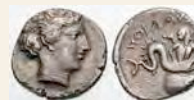
“*Like frogs around a pond*” is how Plato described the Greeks who had settled in hundreds of colonies around the Mediterranean, Aegean, and Black Seas. The Greeks founded so many colonies in Southern Italy and Sicily that the area became known as Magna Graecia (Greater Greece). However, we should remember each colony had its own proud history as an independent state.

Behind each colony was a mother city known as a metropolis. Several *poleis* founded large numbers of colonies. Miletus, the foremost Greek polis in Ionia (western Turkey) led colonization in the North Aegean and Black Sea, supposedly founding some 70 cities (although probably fewer). Chalkis, from the island of Euboea, founded some 30 colonies in the North-western Aegean, giving that region the name Chalcidice.

Below are some of the more prominent Greek colonies, some of them still important cities, and pictures of their distinctive coinage.



Neapolis, modern Naples. was founded by colonists from Corinth around 750 B.C.E. and remains the most important city in Southern Italy.



Tarentum, founded 712 B.C.E. was the only colony Sparta founded. Supposedly during its foundation was the Second Messenian War, during which a number of sons were mysteriously born even though the men were away at war. These sons made claims to their own Spartan land, leading to tensions that were solved by sending the claimants to found a colony in Italy if they gave up claims to land back home. The result was Tarentum, which would grow into one of the richest and most powerful cities in Southern Italy. In fact, it was so rich that it waged war by hiring foreign kings to its fighting for it. One such king would be Pyrrhus of Epirus who was hired to stop the expansion of another rising Italian state: Rome.



Syracuse, also founded by Corinth in 733 B.C.E, was the greatest Greek city in Sicily, leading other Greeks against Carthage’s repeated attempts to conquer the island.



Messana, controlling the straits between Italy and Sicily, was founded by Messenian refugees fleeing from Sparta. Its original name was Zancle, meaning “reaping hook” from the shape of his harbor.



Massalia (modern Marseilles) was a colony of Phokaia in Ionia. The oath settlers took, which as a common form of oath, was to toss iron bars into the sea and swear that they would not return to Phokaia until those iron bars floated to the top.

A Colonization Agreement by Settlers from Thera (c.630 B.C.E.).

The following decree was found in the island of Thera (Santorini) regulating the colonists setting out to found Cyrene in North Africa. It gets across the desperate conditions that drove Greeks to leave their home cities to find new homes.

“It was resolved by the Assembly [at Thera]. Since Apollo spontaneously ordered Battus and the Theraeans to colonize Cyrene, the Theraeans are determined to send to Libya Battus as leader and king; and the Theraeans shall sail as his companions. They shall sail on equal terms from each

household, one son from each. Men in the prime of youth are to be enlisted from all the districts. Of the other Theraeans any free man may sail if he wishes. If the colonists occupy the settlement, men from the same households who later land in Libya shall share in citizenship, shall be eligible for office, and shall be allotted unoccupied land. But if they fail to occupy the settlement and if the people of Thera are unable to help them and if for five years they are beset by privation, then they may without fear leave the land [and return] to Thera, [receive back] their property and be citizens. He who refuses to sail when the city sends him shall be liable to the death penalty and his property shall be confiscated. Any father who gives refuge or asylum (?) to his son or any brother who [does the same] for his brothers shall suffer the same penalty as the person refusing to sail.

“On these terms they swore oaths, both those who stayed behind and those who sailed to found the colony. And they invoked curses on those who violated the terms and did not abide by them, whether living in Libya or staying behind. They fashioned waxen images and all together, men, women, boys and girls, watched (?) [them] burn while pronouncing curses, [saying that] any person who did not abide by this oath but violated it should waste away and melt like the images, he and his son and his property; but that those who abided by this oath, whether they sailed to Libya or stayed behind, should find much happiness, they and their sons.

When Theran colonists tried to return home from Cyrene in N. Africa, the people of Thera drove them back since their island was already overpopulated.

The Invention of Coinage



A comparison of the relative sizes of different Greek coins

The basic coin of Ancient Greece was the silver *drachma* (literally “handful”), which was a bit bigger than a dime. Six silver *obols* (from the Greek word for a spit of iron) equaled one drachma. For larger transactions there were the mina, (1.1 pounds of silver and worth 100 drachmas) and the talent weighing 66 pounds and worth 6,000 drachmae or 60 minae. In the fifth century B.C.E., the typical laborer earned 3 obols a day, or 180 drachmae a year. It would cost about a talent of silver to pay the crew of a warship for one month.

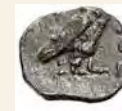


One of the first Greek coins to be minted, a silver stater of Miletus (c.525 B.C.E. Its small size gives an indication of the value and rarity of silver coins at this early date.

How to mint an ancient coin. The flan (lump of metal) was placed between the reverse die on top and the obverse die underneath (both of which were carved backwards so their impression would come out right on the finished coin. Striking the punch with the hammer would leave an impression on both sides of the coin.

Since coins were struck manually, mistakes were more common than today. For example, the punch might slip off the coin, causing an off-strike with only part of the obverse (front) of the coin showing in one

corner. Or coins might inadvertently be struck a second time. Since coins were expensive to strike, such coins would often be put into circulation rather than melting them back down for re-striking.



The Hoplite Phalanx & Western Way of War



Two Greek poleis' phalanxes about to clash in battle.

The Advent Of Hoplite Warfare (c.650 B.C.E.). Previously, only nobles could afford armor, which gave them tight control on power in the polis. Then around 650 B.C.E., Pheidon of Argos came up with a new innovation. As the Spartan nobles, Argos' archenemies arrived for battle, they were surprised as a much larger army than the usual few hundred Argive nobles showed up. Worse than that, they charged at a run in a compact mass that could roll over anyone who got in their way. Needless to say, the Spartans didn't stick around to ask any questions.

But for them to survive, they had to adapt to this new style of hoplite phalanx warfare. So did Tegea, Sparta's next foe. And so did every other polis that wanted to survive the constant wars with their neighbors. Soon the “hoplite revolution” had spread across

Greece and what Victor Davis Hanson calls the Western Way of War, was born.

Hoplite equipment. Since each hoplite (heavily armed infantryman) had to supply his own arms and armor, one would see a large variety of individual equipment in a Greek hoplite phalanx. Each man decorated his shield with his own or his family's design so that he could easily find his shield and his friends could recognize him in battle.

At first a fully armed hoplite's equipment included several pieces. One was a Corinthian helmet that totally encased the head except for narrow slits in front. While giving maximum protection, this also could create a terrifying sense of isolation and confusion as to the situation evolving around them. Thus the close order of battle also served the purpose of reassuring the hoplite he was not alone. The hoplite also wore bronze body armor and greaves (shin guards) and carried a large convex-shaped wooden shield (*hoplon*) covered with a thin layer of bronze. The convex shape allowed him more protection as he buried his shoulder into it to push his side to victory. All this could weight up to sixty-five pounds, being worn in the hot summer sun while exerting oneself to the absolute limit.

The primary weapon was a six to eight foot-long spear with points at both ends. When held upright as he pushed forward, the extra point, called a lizard sticker, allowed a hoplite to quickly punch down on any wounded enemies he may be stepping over. When held overhead, which men in the front ranks did since they were face to face with the enemy, the extra point gave the spear more balance, allowing the hoplite to hold it closer to the center and extend his reach. He also carried a short sword as a secondary weapon, which was especially useful if the spear shattered (which they

often did) and he needed something for the very cramped melee taking place.



Later, the hoplite's equipment was modified by adopting a more open helmet so one could see better, a cape hanging from the shield or boots to replace the greaves, and lighter armor made of multiple levels of linen glued together. While lighter and cheaper, this also made the hoplite more vulnerable in battle, probably leading to higher casualty rates. To compensate, spears got progressively longer until they evolved into the 13-foot long Macedonian pike.

The Face of Battle from inside a phalanx. Hoplite phalanx battles were bloody, but usually brief affairs, being in essence big shoving matches and brawls to break the other side's formation...sort of like American football, except with knives. As such, they required little training, just a lot of nerve.

To keep their courage up, soldiers would typically pass around the wineskin to steady their nerves, a common practice, whether officially or unofficially condoned, through most of history. They would also sing a paean (hymn) to one of the gods. Writers referred to this reaction as *pseudomachia* (false courage). The comic playwright, Aristophanes, may have best expressed the terror battle inspired, saying that if medals were brown, we'd all be heroes.

Both sides would approach in close formations generally around eight men

deep, each man hugging to his comrade on the right to cover his unshielded right side, which often caused phalanxes to drift to their right as they advanced. As they were about to meet, they might charge the last 100-200 meters at a run. This gave added momentum, but also made the phalanx's ranks a bit ragged. However, that didn't matter much, since everyone would quickly pile up behind his front ranks to deliver the big push.

The front ranks were more involved in hacking and stabbing at their counterparts, while trying to keep their balance as they were crushed between the two armies pushing desperately against one another. To an extent, it was a series of separate battles and shoving matches between individual columns of men. Opposing soldiers might have found themselves side by side in their separate columns shoving in opposite directions and not even free to deal with each other as they were pushed onward past each other. Another dynamic may have been a tumbling effect as hoplites were shoved backwards and lost their footing. Similarly, those moving forward might trip over fallen soldiers, thus disrupting their forward momentum and allowing the enemy to regain some momentum.

Many casualties came from being trampled or suffocated. Exhaustion also must have taken its toll as the heavy armor in the hot sun could even cause heat strokes and heart attacks, especially for the older men in the ranks. No surprise then that the first thing hoplites did after battle was take off their armor.

The crucial moment came either when one phalanx broke through a significant part of the enemy, or panic set in and men from one side ran away. Such action typically began at the rear of the army where men were freer to leave. For that reason, some of the steadier veterans would be stationed in

back to prevent younger soldiers from panicking. If an army kept its ranks for an orderly retreat, it might lose 5% of its men. If it broke and ran, that number would rise significantly, depending on how serious the victors' pursuit was to take down men with their backs exposed to attack from behind. Huge disparities in casualties between two armies in a battle generally reflect a great slaughter after the battle had been decided.

In the aftermath, the invaders would retreat home or face a prolonged siege of the defenders' city. Since most of the victors were also full-time farmers who had to get home to tend their crops, they would leave with little being accomplished beyond bragging rights and maybe a few slaves being taken. Rarely did one polis win such a decisive victory as to conquer another polis or wipe it out. Even the defenders' crops would be left largely untouched, since wheat and barley aren't dry enough to burn until right before harvest time, and the victors had to be home by then. Likewise, olive orchards and vineyards were relatively untouched, because it took a lot of time and labor to cut them down, and the victors couldn't afford to be away from home that long.



A view from behind a phalanx illustrating the "push of pike." This also gives a sense of phalanx warfare as more of a brawl and shoving match than being organized and well drilled. The Spartans would change that (and Western warfare forever) with the drill and march)

That begs the question of what this accomplished. Actually, quite a bit. For one thing, as ironic as it may sound, hoplite phalanx warfare probably kept Greece more stable, since it relied on a highly ritualized type of warfare fought by farmers

heavily constrained by the limits of their agricultural year. It has been said that a typical war between two poleis lasted three days: one to march to your enemy's land, one to fight the battle, and one to get back home. While it may be a bit of a stretch to describe Greek wars in such simplistic terms, it does emphasize how their style of warfare limited the damage done to the polis. Not until the more professionalized and prolonged warfare developed by Athens and Sparta in the late fifth century B.C.E. did Greek wars turn into the destructive phenomenon that would wreck the polis and leave the way open for Macedon to take over.

Secondly, hoplite phalanx warfare created a whole new dynamic within Greek society, since it depended on middle class farmers, not just a few elite nobles to defend the polis. And once those farmers were armed and the playing field with the nobles was more level, they were much less likely to blindly follow orders unless they saw them as in their interests as well.

Third, the Greeks had created a style of warfare that made them Greeks dangerous way beyond their numbers, allowing them to successfully found and defend colonies throughout the Mediterranean and also defend drive off two invasions by the Persian Empire. This in turn gave them a psychological edge in fighting non-Greeks. Enemies, like the Persians at Marathon, thought the Greeks were crazy maniacs, charging against larger armies for face-to-face combat. Of course this was what made the heavily armored hoplite phalanx so effective against lighter armed troops with little or no protective armor. In addition, anytime you can make your opponent think you're crazy and capable of doing anything gives you a distinct psychological advantage. And that psychological edge is 90% of any fight.

From warrior to soldier. Finally, the Greek way of war created a new definition of hero that carries down to the present. Hoplite battles were quick but bloody affairs, being little more than glorified shoving matches with sharp edged weapons thrown in to add to the fun. A phalanx's success depended above all on each man holding his place in line. As the Greeks put it, you wear armor for yourself but carry your shield for your comrades. This created a whole new military ethos that survives today. Instead of the lone Homeric warrior fighting to win personal glory, heroism now consisted of the soldier holding his place in line and fighting for the group. History has shown that in battles between organized soldiers and lone warriors, the soldiers usually win. Ask any veteran of fighting in Iraq, Afghanistan, or Vietnam what he was fighting for, his first answer won't be personal glory, the flag, mom, or apple pie. It will be his comrades in arms.

The poet Tyrtaeus' exhortation to a young Spartan hoplite

"Beautiful and honorable [kalon] it is for a brave [agathos] warrior to die, fallen among the foremost fighters, in battle for his native land; but to leave his polis and rich fields and beg--that is most painful of all, as he wanders with his dear mother and aged father, his small children and wedded wife. Detested he will be in the eyes of all those to whom he comes, constrained by need and hateful poverty. He shames his birth and belies his glorious appearance; dishonor and misery are his companions. If no account is taken of a warrior who is a wanderer, if there is no respect for him or his family in the future, then let us fight with all our hearts for this land and die for our children, no longer hesitating to risk our lives. Young men, stand firm beside each other and fight. Do not begin shameful flight or fear. Rather create a mighty, valorous spirit in your breasts, and do not show love for your lives when you are

fighting with warriors. Do not flee, abandoning the older men, whose knees are no longer nimble. For shameful-and-ugly [aischron] it is for an older warrior to fall among the foremost fighters and lie out ahead of the young men-- a man whose hair is already white and his beard gray-- as he breathes out his valorous spirit in the dust, holding his bloody genitals in his own hands, his body laid bare. Shameful-and-ugly [aischra] is this to the eyes, and a cause of resentment to look upon. But to the young men all is seemly, while the glorious flower of lovely youth is theirs. To men the young man is admirable to look upon, and to women lovable while he lives, and beautiful-and-honorable when he lies among the foremost fighters. So let a man take a firm stance and stand fast, with both feet planted upon the ground, biting his lip with his teeth."

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THE RISE OF SPARTA TO 500 B.C.E.

*"Come home with your shield or on it."
--Spartan women to their men leaving for war*

The Laconic answer. By 338 BC, Philip II of Macedon had conquered all of Greece except Sparta, which by then had fallen on hard times, having only a lingering reputation for mental and physical toughness, though her army was only about 1000 men as opposed to Philip's 25-30,000.

Besides toughness, the Spartans so renown for short sentences and replies that we still use the word laconic (describing brevity of speech), from Laconia, the region surrounding Sparta. Therefore, with his army poised on Sparta's borders, Philip sent a message: "When I enter your country, if you do not yield at once, I will burn your villages and destroy your cities. If I enter Laconia, I will level it the ground."

The Spartan answer was typically laconic and to the point: "If".

Philip left them alone.

No Greek city-state aroused such great interest and admiration among other Greeks as Sparta. This was largely because the Spartans did about everything contrary to the way other Greeks did. For example, Sparta had no fortifications, claiming its men were its walls. While other Greeks emphasized their individuality with their own personal armor, the Spartans wore red uniforms that masked their individuality and any blood lost from wounds. Therefore, it should come as no surprise that we remember Sparta for being a military state always ready for war, but not against other city-states so much as against its own enserfed subjects.

Originally, Sparta was much like other Greek city-states, being a leader in poetry and dance. However, by 750 B.C.E., population growth led to the need for expansion. Instead of colonizing overseas, like other Greeks did, the Spartans decided to attack their neighbors, the Messenians. In two bitterly fought wars, they subdued the Messenians and turned them into serfs (*Helots*) who had to work the soil for their masters. Unfortunately for the Spartans, the Helots vastly outnumbered them.

As a result, Sparta became a military state constantly on guard against the ever-present threat of a Helot revolt. This especially shaped five aspects of Spartan society: its infants, its boys, its girls, its government, and its foreign policy. Infants were the virtual property of the state from birth when state inspectors would examine them for any signs of weakness or defects. Babies judged unlikely to be able to serve as healthy soldiers or mothers were left to die on nearby Mt. Taygetus.

Boys were taken from home at age seven to live in the barracks. There they were formed into platoons under the command of an older man and the ablest of their number. Life in the barracks involved a lot of hard exercise and bullying by the older boys. At age twelve it got much worse. Adolescence brought the Spartan training at its worst. The boys received one flimsy garment, although they usually trained and exercised in the nude. They slept out in the open year round, only being allowed to make a bed of rushes that were picked by hand, not cut. They were fed very little, forcing them to steal food to supplement their diet and teaching them to forage the countryside as soldiers. Their training, games, and punishments were all extremely harsh. One notorious contest involved tying boys to the altar of Artemis Orthia and flogging them until they cried out. Reportedly, some of them kept silent until they died under the lash.

Double indemnity. Spartan boys caught stealing were beaten twice: once for stealing and once for getting caught.

Sobriety tests. Spartan boys learned sobriety by having to watch a helot get extremely drunk and act like a fool. Similarly, I know a woman who, when her teenage daughter came home drunk, forced her to look at herself in a mirror for an extended time. At first she thought it was funny, but soon saw how ridiculous she looked. She never came home drunk again (or at least let her mother catch her doing so).

At age eighteen, the Spartan entered the *Krypteia*, or secret police, for two years. The *Krypteia*'s task was to spy on and terrorize the Helots in order to keep them from plotting revolt. The Spartans even declared ritual warfare on the Helots each year to remind themselves and the Helots of their situation and Spartan resolve to deal with it. At age twenty, the Spartan entered the army where he would spend

the next thirty years. As an adult, he could grow his hair shoulder length in the Spartan fashion to look more terrifying to his enemies. Not surprisingly, he had little in the way of a family life. However, it was illegal *not* to marry in Sparta, since it was part of the Spartan's duty to produce strong healthy children for the next generation. After getting married, the young husband might have to sneak out of the barracks at night in order to see his wife and children. It was said some Spartan fathers went for years without seeing their families by the light of day. At age fifty, the Spartan could finally move home, although he remained on active reserve for ten more years.

***Not exactly the Food Channel.* Spartans were also notorious for their horrible food, in particular their goat's blood soup. One visitor, having tasted their food, said it was no wonder Spartans weren't afraid to die.**

***Spartan Match.com.* Unmarried Spartan men were said to be attacked in the street by unmarried Spartan women and were forced to march naked down the street singing this was a fitting punishment for not having wives. Eventually, all the unmarried Spartan men and women would be put into a dark room where they would randomly find their spouses. Maybe the Spartan view of love and romance was best seen in their statue of Aphrodite with her legs shackled.**

Girls did not have it much easier. Although they did live at home rather than in the barracks, they also went through arduous training and exercise. All of this was for one purpose: to produce strong healthy children for the next generation. Surprisingly, Spartan women were the most liberated women in ancient Greece. This was because the men were away with the army, leaving the women to supervise the Helots and run the farms. In fact, Spartan women scandalized other Greeks with how outspoken and free they were.

***Burial rights.* Only Spartan men who had died in battle and women who had died in childbirth were granted the right of tombstones.**

***Beating swords into money.* To prevent the pursuit of material wealth and promote strong**

muscles, Spartan money was made of iron bars.

Spartan government, in sharp contrast with the democracies found in other city-states, kept elements of the old monarchy and aristocracy. They had two kings whose duty was to lead the army. Most power rested with five officials known as *ephors* and a council of thirty elders, the *Gerousia*. There was also an assembly of all Spartan men that voted only on issues the *Gerousia* presented them. The Spartans had a very conservative foreign policy, since they did not want to risk a Helot revolt while they were away at war. They did extend their influence through leadership of the Peloponnesian League, which contained most of the city-states in the Peloponnesus, making Sparta the most powerful Greek city-state, although its army was never very large.

***Rewarding the big mouths.* Even Spartan voting was unique. Someone would hide out of sight of the assembly and judge which side voted louder.**

Spartan discipline did produce magnificent soldiers, inured to hardship and blind obedience to authority, but with little talent for original thinking or self-discipline. However, in the Persian wars, the Spartans would do more than their share in the defense of freedom, as ironic as that may have sounded to them.

Sparta and Argos: A Heated Rivalry

Like high school rivalries that go back beyond anyone's living memory of why they started, the Greek polis typically had an intense rivalry with a neighboring polis. Except, of course, the Greeks played out their rivalries with spears instead of basketballs. Sparta was no exception to this, its archenemy being the nearby city-state of Argos.

Stories about concerning this long-standing rivalry and hatred, going back at least to 660 B.C.E. when Pheidon of Argos first used the hoplite phalanx against the Spartans at Hysiae, seizing control of Elis and the Olympics. The Spartans seem to have driven him out by c.570 B.C., giving control of the

Olympics to Elis, which became a strong ally with Sparta after that.

One of the more famous incidents between Sparta and Argos was the Battle of the Champions, when each side chose 300 champions to decide a war. In the end, there were two Argives and one Spartan left, so the Argives went home to announce their victory. Meanwhile the lone Spartan stayed to claim the field and victory, leaving the issue in dispute.

Another well-known story concerned the Battle of Sepia in 494 B.C.E. The Argives decided they could do no better than copy the Spartan army's moves to keep them from gaining a tactical advantage. So for several days the Spartans would come out in formation and the Argives would match that formation, then the Spartans would sound their trumpets to break for breakfast and the Argives would do the same. Naturally the Spartans grew weary of this pattern, until one day after more of this copycat maneuvering, the Spartan trumpets sounded, and so did the trumpets of the Argives who broke for breakfast. However, following previous orders the Spartans quickly reformed and charged, breaking in just as the Argives were sitting down to their Wheaties.

Sparta and the Western Way of Drill-and-March



Part of a Spartan phalanx. Unlike the individually decorated shields most Greeks carried, the Spartans uniformly decorated theirs with the Greek L, for Lacedaemonians, which included full-blooded Spartiates and other free people in Sparta, known as the *perioeci* (dwellers round). The

uniformity of Spartan equipment help reinforce the ethos of fighting together for one another, not individually for personal gain or glory.

In his book *Keeping Together in Time*, William McNeill relates how after hours of drill-and-march in the army he would actually feel somewhat exhilarated. He traces this feeling to the cadence of the march and a pleasure center in our ears that likes a beat. From there he hypothesizes that the success of modern Western armies has been the rediscovery of the drill-and-march used by the Romans. Such a group exercise creates strong feelings of solidarity among soldiers and makes them more likely to stand together and hold their ground in the chaos and terror of battle. This is why armies still use it even though marching in ranks on the modern battlefield would be suicidal.



The combined armies (left) of Sparta and another polis collide with an opposing phalanx. The Spartans (bottom left), who are well-drilled, still keep their ranks neat, while the other *poleis'* phalanxes are already bunched up together like a bunch of 5-year olds playing soccer. Notice how the Spartans here are only six ranks deep as opposed to most other phalanxes, which have eight ranks. This is because of Sparta's low population and the need sometimes to spread out their line to keep from being outflanked. The quality of their soldiers usually more than made up the difference. The Spartans also

hold the right side of the line. This was the most dangerous position and thus the place of honor in the Greek phalanx because a hoplite's right side was unshielded.

We know the Romans used the drill-and-march, but did they invent it, or learn it from someone else? My suspicion is the Spartans invented it, the evidence being, besides their reputation in battle, the fact that they marched to music. Also, although Sparta spurned most cultural pursuits, it did continue to value and practice choral (group) dancing after the Lycurgan reforms.

From the Spartans drill-and-march may have spread to the Thebans. The 50-deep phalanx that Epaminondas pioneered must have required much more training and coordination that the drill and march could provide. Furthermore, we know Philip II of Macedon watched the Thebans train when he was a hostage in Thebes as a boy. Philip would be the next connecting link, since his phalanx required much more precise coordination and maneuvering than the brawling style of the citizen hoplite phalanx.

The Macedonian system spread across a vast area thanks to Alexander's campaigns, and I would guess the Romans, having multiple contacts with the Hellenistic system starting with Pyrrhus of Epirus around 280 B.C.E., at some point adopted it as their own, probably the late first century B.C.E. when Marius' reforms made the Roman army a professional organization with full-time soldiers that had the time to practice the drill-and-march. At the peak of the Roman army's efficiency, legionaries would train with the drill-and-march four hours a day, transforming them from warriors to soldiers in a well-oiled military machine that no one could match head to head for centuries.

The Roman Empire's decline and fall largely correlated with the declining use of the drill-and-march. This was partly because of growing reliance on more mobile cavalry, horses not able to coordinate their movements with the precision that humans can. Another factor was increased reliance on barbarian recruits who, still imbued with the individualistic warrior ethos, were unwilling to succumb to the cooperative group movements that the Roman system demanded of its soldiers.

Therefore, the drill-and-march was largely lost in the West for a thousand years, until the Renaissance when massed infantry formations started again to dominate the battlefields of Europe. The key to this revival was the Renaissance's recovery of ancient Greek and Roman texts, particularly those of Aelian and Vegetius, who described the Roman system in detail.

It's likely that the Swiss, who fought in dense phalanxes of pikemen, were familiar with these texts and used them to coordinate their complex maneuvers, making them the terror of Renaissance battlefields until other people caught on to their techniques and/or learned to read Latin.

We know that in the late 1500s, the Dutch leader, Maurice of Nassau adapted the Roman system to loading and firing the cumbersome matchlock muskets of the day to create a constant rate of gunfire by rotating successive lines of musketeers, much like the Romans would rotate in fresh lines of infantry to relieve the tired ones up front. As firearms progressively dominated the battlefields of Europe, so did the drill-and-march and the Western way of war that went with it.

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THE RISE OF ATHENS TO 500 B.C.E.

While Athens is the city we generally think of when the Greeks are mentioned, it did not always seem destined for glory. Rather, its greatness was the product of a long history laying the foundations for the great accomplishments of the fifth century B.C.E.

Athens's foundation myth. According to the story, Poseidon and Athena had a contest to see who the new city in Attica would be named after. Poseidon gave the city spring of water, while Athena gave it the olive tree. Athena won, since Poseidon, as god of the sea, had produced a spring of salt water, while olive oil would prove a most useful commodity for the Athenians to trade. Still, it would be on the sea, Poseidon's realm, that the Athenians would build their power.

Two things in Athens' early history led to internal peace that made its history and development much easier. First of all, there was no Dorian conquest of *Attica*, the region surrounding Athens. The myth of the Athenian king, Codrus, who sacrificed himself in battle against the Dorians tells us there probably was Dorian pressure on Attica, but that it failed. Consequently, with no conflict of Dorians against non-Dorians, internal peace could reign in Athenian society. Second, Athens united all of Attica under its rule at a fairly early date and made all its subjects Athenian citizens. Therefore, they were more likely to work for Athens' interests in contrast to the Spartan Helots who were always looking for an opportunity to revolt.

Despite these advantages, the tensions that accompanied both a rising middle class and overpopulation in other poleis affected Athens as well. For example, there was a failed attempt to establish tyranny at Athens by a man named Cylon who seized the Acropolis with the aid of Megarian troops.

One issue causing discontent was the lack of a written law code. Since nobles controlled the religion, which was seen as the source of law, they could say the law was whatever they pleased and then change it at will. At last, in 621 B.C.E., they gave in and commissioned Draco, whose name

meant "dragon", to write down the laws. His law code was so harsh that even today we use the term "draconian" to describe something extremely severe. Some people claimed Draco's law code was written in blood rather than ink. But Draco did get the laws written down, which was a step forward for the people. And, of course, they wanted more.

By 600 B.C.E., the nobles in Athens were becoming more nervous as the complaints of the very poor and the rising middle class grew increasingly louder. As a result, they gave a man named Solon extraordinary powers to reform the state and ease the tensions between the different classes. Solon passed both economic and political reforms that laid the foundations for Athens' later greatness.

The Draconic answer? When asked why he specified the death sentence for such crimes as idleness and stealing a cabbage or apple, Draco replied, "Yes, it's unfair. Little crimes and big crimes get the same punishment. If only I could think of a punishment worse than death for the serious ones."

Economic reforms. Solon improved Athens' economy in several ways. First, since Attica's soil was particularly poor for farming wheat and barley, he outlawed the export of grain from Attica. This encouraged the cultivation of olive trees that were better suited for Attica's soil. The olive oil produced from these trees was a valuable commodity used for cleansing and as a fuel for light and cooking. Later, grapevines would also be cultivated, and Attica's wine became still another highly valued Athenian product. Second, Solon developed trade and manufacture in Athens, largely through attracting skilled craftsmen to settle there. He especially encouraged pottery since Attica had excellent clay for ceramics. In later years, Athenian pottery would come to be some of the most beautiful and highly valued in the Mediterranean. One other thing Solon did to relieve the poverty in Athens was to abolish debts and debt slavery. While this was not popular with the nobles, it did ease some of the tensions threatening Athenian society at that time.

The profits gained from selling olive oil, pottery, and wine were then used for buying grain from the Black Sea. Since Athens' economy now was much more suited to local conditions than when it was barely getting by on the old subsistence agriculture, it could buy the grain it needed and still have money left over. The Athenians could use this extra money for further developing their economy through more trade, industry, and olive orchards. This would lead to even more profits, and so on.

Solon's reforms set the stage for the Persian Wars and Athens' later cultural accomplishments. Since Athens was heavily dependent on the Black Sea for grain, it was very sensitive to any events in that part of the world, just as the United States today is sensitive to events in Middle East where it gets much of its oil. As a result, Athens expanded to the shores of the Black Sea, thus leading to a collision with Persia over control of that region.

Solon's political reforms made the Athenian state more democratic in three ways. First, he changed the qualifications for holding public office from being determined by birth into a particular class to how much wealth one had. This meant that someone not born a noble still had a chance to rise up through society by means of his ability. Solon also admitted the poorest class of citizens to participate in the popular assembly and juries. Finally, he granted a few powers and privileges to the popular assembly, which opened the way for more sweeping democratic reforms a century later.

These measures delayed, but did not prevent, the overthrow of the aristocrats by a tyrant. Fighting in Athens continued between the Hill (peasants on small farms), Shore (artisans and traders), and Plain (nobles) factions. Eventually, the leader of the hill faction, Peisistratus, gained the upper hand and became tyrant. Peisistratus did two things important for Athens' future. For one thing, like other Greek tyrants, he enriched the lower classes by providing them with land and jobs on building projects. Second, he secured Athens' grain supply from the Black Sea by getting control of the town of Sigeum, which safeguarded Athens' grain ships in that area but also set Athens up for an eventual clash with Persia.

Perseverance furthers. It took Peisistratus three times to secure power as tyrant. One time he faked his own mugging to get voted a bodyguard with which he tried to seize power. Another time he dressed an unusually tall woman in armor and rode with her in a chariot to Athens, spreading word that Athena was coming to put him in power. Incredibly, it worked.

There were also cultural developments during Peisistratus' rule. For one thing, he gathered scholars to take all the different versions of Homer's *Iliad* and decide which was the definitive one. One other cultural accomplishment was the invention of tragic drama. This evolved from rather boisterous goat songs (*tragoidea*) dedicated to Dionysus, the god of song and revelry. However, by this time, these songs had become much more serious, and the addition of an actor to interact with the chorus of fifty led to the birth of drama.

From oral to written tradition. By writing down a definitive version of any oral tradition, there is no telling what alternate versions are lost and forgotten. For example, in one version of the Trojan War cycle, Penelope has been unfaithful to Odysseus and kills him when he returns from Troy.

Tragoidea, the Greek word for goat songs, is the root of our word tragedy. The connection is somewhat inappropriate (by our standards) songs sung to Dionysus by satyrs or goat shepherds. At some point, the songs started getting more serious and were formalized into being sung by a chorus of fifty men. Thespis (from whose name we get the word Thespian) created the first actor, took the next step by having one actor step out and engage in dialogue with the chorus, to create some tension and make things more interesting. Other playwrights continued adding innovations. Aeschylus added a second actor on stage, and Sophocles added a third actor and scenery while reducing the chorus from 50 members to 15.

As we have seen, in most poleis the first generation of tyrants would rule rather peacefully. For example, Cypselus, tyrant of Corinth, was so popular that he went about without so much as a bodyguard. However, the second or third generation of tyrants usually ran into problems, either because their rule was oppressive or people wanted more political rights to go along with their rising wealth. Athens was no exception. Peisistratus ruled and died peacefully, but his son, Hippias, ruled more oppressively, especially after an unsuccessful assassination attempt aroused his suspicions of all around him. Popular anger would grow, triggering more oppression, causing more anger, and so on. Finally, Hippias was driven out of Athens with help from the Spartans who then put a garrison of 700 soldiers in Athens' Acropolis. However, the Spartans were hardly the people to go along with the democratic aspirations of the Athenians, and their garrison had to be driven out of the Acropolis before democracy could be established. The man who did this, Cleisthenes, was also responsible for setting up a stable democracy at Athens.

“First go free the Athenians.” In order to get Sparta’s help against Hippias, Cleisthenes made a huge donation to the oracle of Delphi. After that, whenever the Spartans consulted the oracle, the only answer they could get was, “First go free the Athenians.”

Cleisthenes saw clearly that the friction between the factions of Hill, Shore, and Plain and between the four different tribes had to be stopped. He cleverly did this by breaking up the old tribes and replacing them with ten artificial tribes comprised of elements from different tribes and factions. Artificially mixing people from different loyalties tended to break up those old loyalties, leaving only loyalty to Athens. Cleisthenes also made the popular assembly the main law making body. The democracy that emerged, much like those in other poleis of the time, was a somewhat limited one favoring the middle class of farmers, merchants and craftsmen. However, it was still a democracy, which meant the Athenians had more than ever at stake Athens' security.

Therefore, the combination of this greater sense of commitment to Athens, the struggle with Persia over the security of the Black Sea grain supply, and the fortunate discovery of large deposits of silver at Laurium in Attica, would prompt the Athenians to use their economic power to build a navy with which to fight Persia. It was this navy which would lead the Greeks to victory over Persia and lay the foundations for the Athenian Empire in the fifth century B.C.E. That empire in turn would provide the wealth to support the cultural flowering at Athens that has been the basis for so much of Western Civilization.

Mystery Cults



A dancing Maenad

There was little that was inspirational or hopeful about the traditional Greek religion of Olympian gods. In the *Odyssey*, Achilles’ ghost tells Odysseus he would rather be a slave on earth than rule in Hades (the Underworld). As result, many Greeks turned to mystery cults (from the Greek *mystes*, meaning secret) as a supplement to, rather than replacement for, the old religion. We know little about these cults since, as the name implies, they were highly secretive, the death penalty being the punishment for divulging what went on in them. The playwright, Aeschylus, was even put on trial for his life for hinting at what occurred in the Eleusinian rites.

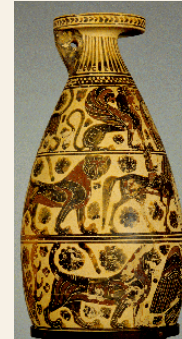
Athens was especially known for the Eleusinian Mysteries sacred to Demeter, mother of Persephone who, since she ate 6 pomegranate seeds after being kidnapped to Hades, had to return there for half of every year, thus causing winter. To the Greeks, her return every spring symbolized eternal rebirth, which they hoped to attain from the Eleusinian Mysteries.

Another god connected with mystery cults was Bacchus, god of wine and revelry. His primary followers were women known as maenads (“raving ones”) who reportedly engaged in wild drunken rites in the forests and hills and doing such “uncivilized” things as nursing wild animals, playing with snakes, and killing prey with their bare hands and eating their flesh raw. Since the Dionysian rites were both wild and secretive, the Romans would outlaw them and be suspicious of any other secretive cults, including one called Christianity.



Dionysus, god of wine and revelry, surrounded by maenads, women devoted to his wild rites and revelries.

The Archaic Period (c.700-500 BCE) was a very active and creative period in Greek history with figures becoming less stylized and more natural looking. The powerful city of Corinth was the innovator at this time and dominated pottery exportation in the 7th and early 6th centuries B.C.E. The vessel below comes from an Etruscan site in central Italy, a region where Greek commercial contacts and influence were strong. The decorative motifs include exotic animals, "oriental" creatures such as the sphinx, and filler ornaments such as rosettes.



In the 6th century BCE, black figure ware (black figures painted onto red background) became the dominant technique in pottery. Figures also continued their evolution to a more natural style. Although Corinth still led the way, Athenian pottery was also making its mark.

Early Greek Art: the Geometric and Archaic Eras



People typically think of the naturalistic classical style of sculpture and pottery painting when reminded of the Greeks. However, the classical style was the product of a long evolution of different styles that also showed the Greeks’ energy and strong creative impulse. They also show influences from other cultures, in particular Egypt, and highlight the contributions of other Greek *poleis*, notably Corinth.

The Geometric style (shown above) was the earliest type of pottery in the recovery after the Dark Age (c.110-800 BCE), being decorated with highly stylized figures along with geometric designs.



Attic Black Figure Amphora with a lid (c.540 BCE).

In archaic sculpture, the predominant motif was the *Kouros* (youth) or *Kore* (maiden). One can see the strong Egyptian influence in the stylized pose and eyes.



**Statue of a kouros ca. 590–580
B.C.E.; Athens,; Naxian marble;
Ht. w/o plinth 76" (193.04 cm)**

Since we see Greek sculpture and temples today as bare marble, it is easy to forget that they were originally painted, as evidenced by a few flecks of paint remaining on some statues. The Greeks seem to have liked bright colors, as seen by this reconstruction of how a kore (statue of a young maiden) was painted.



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THE IONIAN PHILOSOPHERS AND THE BIRTH OF WESTERN SCIENCE

Introduction. When people think of the ancient Greeks, they usually think of such things as Greek architecture, literature, and democracy. However, there is one other contribution they made that is central to Western Civilization: the birth of Western science.

There were three main factors that converged to help create Greek science. First of all, there was the influence of Egypt, especially in medicine, which the Greeks would draw heavily upon. Second, Mesopotamian civilization also had a significant impact, passing on its math and astronomy, including the ability to predict eclipses (although they did not know why they occurred). Third, there was the growing prosperity and freedom of expression in the polis, allowing the Greeks to break free of older mythological explanations and come up with totally new theories. All these factors combined to make the Greeks the first people to give non-mythological explanations of the universe. Such non-mythological explanations are what we call science.

However, there were also three basic limitations handicapping Greek scientists compared to scientists today. For one thing, they had no concept of science as we understand it. They thought of themselves as philosophers (literally "lovers of wisdom") who were seeking answers to all sorts of problems about their world: moral, ethical, and metaphysical as well as physical. The Greeks did not divide knowledge into separate disciplines the way we do. The philosopher, Plato, lectured on geometry as well as what we call philosophy, seeing them as closely intertwined, while Parmenides of Elea and Empedocles of Acragas wrote on physical science in poetic verse. Second, the Greeks had no guidelines on what they were supposed to be studying, since they were the first to ask these kinds of questions without relying on religious explanations. However, they did define certain issues and came up with the right questions to ask, which is a major part of solving a problem. Finally,

they had no instruments to help them gather data, which slowed progress tremendously.

The Milesian philosophers. Greek science was born with the Ionian philosophers, especially in Miletus, around 600 B.C.E. The first of these philosophers, Thales of Miletus, successfully predicted a solar eclipse in 585 B.C.E., calculated the distance of ships at sea, and experimented with the strange magnetic properties of a rock near the city of Magnesia (from which we get the term "magnet"). However, the question that Thales and other Ionian philosophers wrestled with was: What is the primary element that is the root of all matter and change? Thales postulated that there is one primary element in nature, water, since it can exist in all three states of matter: solid, liquid, and gas.

A bit too preoccupied. Supposedly, Thales was so preoccupied with gazing at the heavens while walking along one day that he fell into a well. The same solar eclipse Thales predicted in 585 B.C.E. also interrupted a battle between the Medes and Lydians, frightening them into making peace with one another.

Thales' student, Anaximander, proposed the theory that the stars and planets are concentric rings of fire surrounding the earth and that humans evolved from fish, since babies are too helpless at birth to survive on their own and therefore must arise from simpler more self-sufficient species. He disagreed with Thales over the primary element, saying water was not the primary element since it does not give rise to fire. Therefore, the primary element should be some indeterminate element with built-in opposites (e.g., hot vs. cold; wet vs. dry). For lack of a better name, he called this element the "Boundless." Another Milesian, Anaximenes, said the primary element was air or vapor, since rain is pressed from the air.

Anaximander thought the earth was shaped like a cylinder, three times as wide as it is deep. He also said heavenly bodies are rings of fire obscured by mist except for holes through which we can view small parts.

Making room for fire. Three of the four elements, earth, water, and air, corresponded to the three states of matter. However, fire created a dilemma, since it was neither solid, liquid, nor gas, yet it obviously existed. Therefore, it was given the status of being a fourth element.

The nature of change. All these speculations were based on the assumption there is one eternal and unchanging element that is the basis for all matter. Yet, if there is just one unchanging element, how does one account for all the apparent diversity and change one apparently sees in nature? From this time, Greek science was largely split into two camps: those who said we can trust our senses and those who said we cannot.

Among those who distrusted the senses was Parmenides of Elea, who, through some rather interesting logic, said there is no such thing as motion. He based this on the premise that there is no such thing as nothingness or empty space since it is illogical to assume that something can arise from nothing. Therefore, matter cannot be destroyed, since that would create empty space. Also, we cannot move, since that would involve moving into empty space, which of course, cannot exist. The implication was that any movement we perceive is an illusion, thus showing we cannot trust our senses.

On the other hand, there was Heraclitus of Ephesus, who said the world consists largely of opposites, such as day and night, hot and cold, wet and dry, etc. These opposites act upon one another to create change. Therefore not only does change occur, but is constant. As Heraclitus would say, you cannot put your foot into the same river twice, since it is always different water flowing by. However, since we perceive change, we must trust our senses at least to an extent.

A partial reconciliation of these views was worked out by two different philosophers postulating the general idea of numerous unchanging elements that could combine with each other in various ways. First, there was Empedocles of Acragas who said

that the mind can be deceived as well as the senses, so we should use both. This led to his theory of four elements, earth, water, air, and fire, where any substance is defined by a fixed proportion of one or more of these elements (e.g., bone = 4 parts fire, 2 parts water, and 2 parts earth). Although the specifics were wrong, Empedocles' idea of a Law of Fixed Proportions is an important part of chemistry today.

In the fifth century B.C.E., Democritus of Abdera developed the first atomic theory, saying the universe consists both of void and tiny indestructible atoms. He said these atoms are in perpetual motion and collision causing constant change and new compounds. Differences in substance are supposedly due to the shapes of the atoms and their positions and arrangements relative to one another.

In the fifth century B.C.E., Athens, with its powerful empire and money, became the new center of philosophy, drawing learned men from all over the Greek world. Many of these men were known as the Sophists. They doubted our ability to discover the answers to the riddles of nature, and therefore turned philosophy's focus more to issues concerning Man and his place in society. As one philosopher, Protagoras, put it, "Man is the measure of all things." Being widely traveled, the Sophists doubted the existence of absolute right and wrong since they had seen different cultures react differently to moral issues, such as public nudity, which did not bother the Greeks. As a result, they claimed that morals were socially induced and changeable from society to society. Some Sophists supposedly boasted they could teach their students to prove the right side of an argument to be wrong. This, plus the fact that they taught for money, discredited them in many people's eyes.

Too radical for even the Athenians. Anaxagoras of Clazomenae hypothesized there was life on other planets and that the sun was a rock as big as the Peloponnesus. Apparently, these ideas were too much even for the normally open-minded Athenians who tried him for impiety.

Luckily, Anaxagoras' friend, the powerful politician, Pericles, got him off the hook. Heraclides Ponticus came up with the idea of the earth rotating on its axis and that Mercury and Venus circle the sun, which still circles the earth.

Socrates (470-399 B.C.E.) was one of Athens' most famous philosophers at this time. Like the Sophists, with whom he was wrongly associated, he focused on Man and society rather than the forces of nature. As the Roman philosopher, Cicero, put it, "Socrates called philosophy down from the sky..." Unlike the Sophists, he did not see morals as relative to different societies and situations. He saw right and wrong as absolute and worked to show that we each have within us the innate ability to arrive at that truth. Therefore, his method of teaching, known even today as the Socratic method, was to question his students' ideas rather than lecture on his own. Through a series of leading questions he would help his students realize the truth for themselves.

Unfortunately, such a technique practiced in public tended to embarrass a number of people trapped by Socrates' logic, thus making him several enemies. In 399 B.C.E., he was tried and executed for corrupting the youth and introducing new gods into the state. Although Socrates left us no writings, his pupil Plato preserved his teachings in a number of written dialogues. Socrates influenced two other giants in Greek philosophy, Plato and Aristotle, who both agreed with Socrates on our innate ability to reason. However, they differed greatly on the old question of whether or not we can trust our senses.

Socrates in deep thought. Supposedly during the siege of Potidaea in the Peloponnesian War, Socrates was suddenly struck by a thought and became so absorbed in thinking that he just stopped in his tracks. Having stayed in that position all that day and the following night and attracted a crowd of onlookers in the process, he finally resolved the problem the next day and resumed walking as if nothing unusual had happened.

***Socrates and the Oracle.* Another story about Socrates was that a student of his asked the Oracle of Delphi if anyone was wiser than Socrates. Instead of its usual ambiguous answer, the oracle said no one was wiser than Socrates. Hearing this, Socrates tried to disprove the Oracle, but finally agreed with it, saying that, while other people typically claimed knowledge and expertise in something or other, at least he realized how little he really knew.**

Plato (428-347) was the first of these philosophers. He was also influenced by the early philosopher and mathematician, Pythagoras of Croton in South Italy, who is most famous for the Pythagorean theorem for finding the length of the hypotenuse in a right triangle. Pythagoras thought that all the principles of the universe were bound up with the mystical properties of numbers. He felt the whole universe can be perceived as a harmony of numbers, even defining objects as numbers (e.g., justice = 4). He saw music as mathematical and, in the process, discovered the principles of octaves and fifths. He also thought the universe orbited around a central fire, a theory that would ultimately influence Copernicus in his heliocentric theory 2000 years later.

Some other Pythagorean numerical values assigned to various things were: Male=3; Female=2; Marriage=5; Opportunity=7; 10= perfect number

Plato drew upon Pythagoras' idea of a central fire and proposed there are two worlds: the perfect World of Being and this world, which is the imperfect World of Becoming where things are constantly changing. This makes it impossible for us to truly know anything, since this world is only a dim reflection of the perfect World of Being. As Plato put it, our perception of reality was no better than that of a man in a cave, trying to perceive the outside world through viewing the shadows cast against the wall of the cave by a fire. Since our senses alone cannot be trusted, Plato said we should rely on abstract reason, especially math, much as Pythagoras had. The sign over the entrance to

Plato's school, the Academy, reflected this quite well: "Let no one unskilled in geometry enter."

In Plato's allegory of the cave, one person breaks free and experiences the real world outside. When he comes back to tell the others about true reality, they kill him, a likely reference to the trial and execution of Socrates.

Aristotle (384-322 B.C.E.) was a pupil at Plato's Academy, but held a very different view of the world from his old teacher, believing in the value of the senses as well as the mind. Although he agreed with Plato on our innate power of reasoning, he asserted that nothing exists in our minds that does not first exist in the sensory world. Therefore, we must rely on our senses and experiment to discover the truth.

Aristotle accepted the theory of four elements and the idea that the elements were defined on the basis of two sets of contrasting qualities: hot vs. cold, and wet vs. dry, with earth being cold and dry, water being cold and wet, air being hot and wet, and fire being hot and dry. Thus, according to Aristotle, we should be able to change substances by changing their qualities. The best example was heating cold and wet water to make it into hot and wet air (vapor). This idea would inspire generations of alchemists in the fruitless pursuit of a means of turning lead into gold.

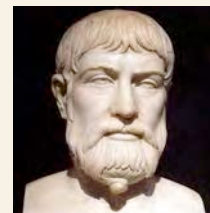
Aristotle said the four elements have a natural tendency to move toward the center of the universe, with the heavier substances (earth and water) displacing the lighter ones (air and fire), so that water rests on land, air on top of water, and fire on top of air. He also said there was a celestial element, ether, which was perfect and unchanging and moved in perfect circles around the center of the universe, which is earth where all terrestrial elements are clustered.

***Greek medical theories.* Some Greek doctors argued there was one cause for all diseases, while others said each individual case of sickness was a unique disease.**

Eventually the dominant theory to emerge would be that of the four humors (bile, black bile, blood, and phlegm) that each corresponded to one of the four elements. Supposedly, sickness was the result of an imbalance of the humors, cured by some form of purgative such as bleeding, induced vomiting, or enemas. The theory of humors would dominate Western medical practice into the 1800s.

Aristotle's theories of the elements and universe were highly logical and interlocking, making it hard to disprove one part without attacking the whole system. Although Aristotle often failed to test his own theories (so that he reported the wrong number of horse's teeth and men's ribs), his theories were easier to understand than Plato's and reinstated the value of the senses, compiling data, and experimenting in order to find the truth. Although Plato's theories would not be the most widely accepted over the next 2000 years, they would survive and be revived during the Italian Renaissance. Since then, the idea of using math to verify scientific theories has also been an essential part of Western Science. While both Plato and Aristotle had flaws in their theories, they each contributed powerful ideas that would have profound effects on Western civilization for 2000 years until the Scientific Revolution of the 1700's.

Greek Lyric Poetry



Pindar

In the seventh century B.C. a new style of poetry, Lyric, succeeded the more stately and heroic epic. Lyric poems were shorter, used different meters, and most importantly, were concerned with the whole range of human experience from the heartaches of love and death to running away in battle, political propaganda, and insulting one's enemies. Unlike Homer, whose

purpose was to glorify his heroes, the Lyric poets often showed their subjects (including themselves) in an unfavorable and insulting light, which gave an even more human touch to their poetry than did Homer's idealized verse. For example, compare Homer's terrifying description of a storm at sea in the *Odyssey* with Archilochus of Paros' simple but moving epitaph for a sailor lost at sea:

But after we had left the island and there was no more land in sight, but only the sky and the sea, then Kronian Zeus drew on a blueblack cloud, and settled it over the hollow ship, and the open sea was darkened beneath it; and she ran on, but not for a very long time, as suddenly a screaming west Wind came upon us, stormily blowing, and the blast of the stormwind snapped both forestays that were holding the mast, and the mast went over backwards, and all the running gear collapsed in the wash; and at the stern of the ship the mast pole crashed down on the steersman's head and pounded to pieces all the bones of his head, so that he like a diver dropped from the high deck, and the proud life left his bones there. Zeus with thunder and lightning together crushed on our vessel, and, struck by the thunderbolt of Zeus, she spun in a circle, and all was full of brimstone. My men were thrown in the water, and bobbing like seacrows they were washed away on the running waves all around the black ship, and the god took away their homecoming."

Hide we away these painful gifts of the lord Poseidon

Archilochus of Paros (c.680-640 BC) is an especially good poet to start with thanks to his willingness to show himself in such an honest (and often unflattering) light. Several of his

poems aimed at insulting the family of a woman who jilted him supposedly were so effective that not only the woman, but her sisters as well, hanged themselves from embarrassment and shame. The first poem shamelessly brags about how he ran away in battle, something Homer would never consider glorifying.

Some Barbarian is waving my shield, since I was obliged to Leave that perfectly good piece of equipment behind Under a bush. But I got away, so what does it matter? Let the shield go; I can buy another one equally good.

I will make nothing better by crying, I will make nothing Worse by giving myself what entertainment I can

Glaukos, a soldier of fortune's your friend as long as he's fighting

One main thing I understand, to come back with deadly evil at the man who does me wrong

[This reflects a cultural value that was common among the Greeks and Romans before supposedly being replaced by the Christian ethos of love and forgiveness. The epitaph of the Roman dictator, Sulla, was basically a paraphrase of this sentiment.]

Hipponax of Ephesos (c.550 BC) shows us an angry side of the Greeks

Keep travelling, you swine, the whole way toward Smyrna. Go through the Lydian land, past the tomb of Alyattes, The grave of Gyges and the pillar of Megastrys, The monument of Atys, son of Alyattes,

*Big chief, and point your paunch against
the sun's setting.*

*Hold my jacket, somebody, while I hit
Boupalos in the eye.
I can hit with both hands, and I never miss
punches.*

*Semonides of Amorgos gives us some interesting
insights into the Greeks' less than enlightened
attitudes toward women by comparing them to
different animals and forces of nature.*

*One from the sea. She has two different
sorts of mood.*

*One day she is all smiles and happiness. A
man*

*Who comes to visit sees her in the house
and says:*

*"There is no better wife than this one
anywhere*

*In all mankind, nor prettier." Then,
another day*

*There'll be no living with her, you can't get
within*

*Sight, or come near her, or she flies into a
rage*

*And holds you at a distance like a bitch
with pups,*

*Cantankerous and cross with all the world.
It makes*

*No difference whether they are friends or
enemies.*

*No better thing befalls a man than a good
wife,*

No worse thing than a bad one.

*A woman thick around the ankles is no
good*

*Solon (c.630-550 BC), the great Athenian
reformer, used poetry to defend his political
reforms.*

*I gave the people as much privilege as they
have a right to:*

*I neither degraded them from rank nor
gave them free hand;*

*And for those who already held the power
and were envied for money,*

*I worked it out that they also should have
no cause for complaint.*

*I stood there holding my sturdy shield over
both the parties;*

*I would not let either side win a victory that
was wrong.*

*Theognis of Megara (c.650 BC) reflects the
Greeks' attitudes toward such things as
moderation, the love of one's city-state, and the
value of true friendship and revenge against
one's enemies.*

*Try for nothing excessive. The middle
degree is best. So*

*Kynos, you will win virtue, a difficult
thing to attain.*

*It is easier to make bad out of good than
good out of evil.*

*Never try to teach me. I am too old to be
taught.*

*I have been in my time as far as the land of
Sicily.*

*I have been to Euboea, where vineyards
grow in the plain,*

*And Sparta, the shining city by the reedy
banks of Eurotas;*

*And everywhere I was met with enthusiasm
and love,*

*But my heart has taken no joy from the
attentions of strangers.*

*A man's own country is dearest. This is the
truth in the end.*

*May wide and towering heaven collapse
upon me in all its*

*Bronze and terror, catastrophe to the
peoples of earth,*

*On that day when I no longer stand by my
companions,*

*On that day when I cease to harry my
enemies.*

Alcman represents Sparta before it was transformed from a cultural leader into a military camp.

Counterbalanced against the iron is the sweet lyre-playing.

Pindar of Thebes (522-443 B.C.) was considered by the Greeks second only to Homer among poets. So great was his stature that when Alexander the Great sacked and burned Thebes, Pindar's house was the only building he spared besides the temples. Although primarily famous for his odes to victorious Olympian athletes, he also had some valuable insight into war.

*War is sweet to those who have not tried it.
The experienced
Man is frightened at the heart to see it
advancing.*

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THE PERSIAN WARS (510-478 B.C.E.)

"In winter, on your soft couch by the fire, full of food, drinking sweet wine and cracking nuts, say this to the chance traveler at your door: 'What is your name, my good friend? Where do you live? How many years can you number? How old were you when the Persians came...?'"-- Xenophanes

To the Greeks, there was one defining event in their history: the Persian Wars. Even today, we see a good deal of truth in this assessment, for the Greek victory in the Persian Wars triggered the building of the Athenian navy, which led to the Athenian Empire, the expansion of the concept of democracy, and the means to develop Greek civilization to its height.

Two main factors led to the Persian Wars. First, there was Persian expansion into Western Asia Minor, (bringing Ionian Greeks under their control) and into Thrace on the European side of the Aegean in search of gold. Second, Solon's reforms and Peisistratus' seizing control of Sigeum had made Athens especially sensitive to any threats to its grain route from the Black Sea. Further complicating this was the fact that several Athenian nobles held lands in the North Aegean. The spark igniting this into war with Persian was a revolt of the Ionian Greeks.

The Ionian Revolt (510-494 B.C.E.). The Ionian Greeks had peacefully submitted to Persian rule and lived under Persian appointed Greek tyrants since the time of Cyrus the Great. Then in 510 B.C.E., they raised the standard of revolt and drove their tyrants out. Realizing they needed help against the mighty Great King, Darius, they appealed to their cousins across the Aegean for aid. Sparta, ever wary of a Helot revolt, refused to help. However, Athens and another city-state, Eretria, did send ships and troops who joined the Ionians, marched inland, and burned the provincial capital, Sardis, to the ground. After a Persian force defeated the Greeks as they were returning from Sardis, the Ionian Greeks decided to stake

everything on a naval battle at Lade (494 B.C.E.). Unfortunately, the combination of disunity in their ranks and Persian promises of leniency caused the naval squadron of one polis after another to defect to the Persians and Ionian resistance quickly collapsed. Miletus, leader of the revolt was sacked and the rest of Ionia fell back under Persian sway.

Athens alone (494-490 B.C.E.). The Athenians and Eretrians had eluded the Ionian disaster, but not Darius' notice. After finding out who the Athenians were, Darius supposedly appointed a slave to remind him of them daily until he had punished them. In 492 B.C.E., an expedition set sail, but much of it was shipwrecked off the coast of Thrace and the rest of it was forced to return home. Nothing daunted, Darius prepared another invasion force that set out in 490 B.C.E.

Persian ambassadors had preceded the army to demand earth and water as signs of submission from all the Greeks. Most gave in rather than face the might of the Great King. However, the Athenians supposedly threw them into a pit and told them to take as much earth as they wanted, while the Spartans, equally defiant, gave them their water by throwing them into a well. Not a good thing to ambassadors who traveled under the special protection of the gods.

Later that year, a Persian force of some 20,000 men landed at Marathon in Attica. Unfortunately, the Spartans, being as superstitious as they were defiant, could not march before the end of a festival on the full moon. Thus the Athenians were left to face the might of Persia all alone, or nearly alone, since the tiny city-state of Plataea sent its army of 1000 men to stand bravely by Athens. The Greeks still faced an army twice as numerous as theirs and reputedly invincible in battle. Therefore, they did the last thing the lightly clad and overconfident Persians expected: they charged.

Persian armies relied on the traditional use of skirmishing with arrows and javelins). Such troops were brave, but unprepared

for the charge of a heavily armored Greek phalanx. One Athenian general, Miltiades, realized this weakness from previous experiences with the Persians and urged the Athenians to exploit it. But he was only one of ten Athenian generals who rotated command on a daily basis. Luckily, the Athenian general, Callimachus, agreed to Miltiades' plan on his day to command and ordered the attack. Greek phalanxes were normally 8 men deep. However, the Athenians had to weaken the center of their line to half that to keep from being outflanked by the Persians

When the Greeks charged, the Persians hardly had time to unleash a volley of arrows before the phalanx was upon them. The shock of this heavily armored human tank crashing into their lines sent them reeling back and scurrying for their ships. The Persian fleet made a quick dash for defenseless Athens, only to find the Athenians had doubled back to meet them. Having lost their stomach for anymore fighting, they sailed for home.

Huge disparities in ancient battles were common. Most of the losers' casualties took place during their panicked flight after the real fighting was finished, their undefended backs being easy targets for the pursuing enemy. In addition, many would be trampled to death by their own comrades in the rush to get away.

Xerxes' invasion (480-478 B.C.E.). The Athenians and other Greeks knew they had little cause for celebration, for the Persians would surely be back. It took ten years for the next invasion to materialize, because Egypt rebelled, as usual, and then Darius died. His son and successor, Xerxes, needed a decade to set his house in order and create a new army to invade Greece. Hoping to crush the Greeks by weight of numbers, this new army was nearly ten times as big as the one that lost at Marathon.

Greek preparations were more thorough this time. For one thing, many, although by no means all, the city-states banded together in a defensive league with Sparta as its leader. The Athenians let their leader, Themistocles convince them to use the extra money from a large lode of silver found at Laurium in Attica to pay for a larger fleet, believing sea power would be the key to victory. It was one of the most fateful budget decisions in all history.

The Greeks sent an advance force of some 7000 men under the Spartan king Leonidas to hold the narrow pass of Thermopylae in northern Greece. Nearby was a Greek fleet holding the narrow straits of Artemesium. Fighting in such narrow spaces would prevent the Persians from using their superior numbers to advantage.

The 300 Spartans accompanying Leonidas were handpicked with the special provision that they all had sons to succeed them. This ensured that none of their family lines would be wiped out if they were killed. This, along with the Pythia's prophecy that Sparta or one of her kings must perish, indicates that this may have been a suicide mission to save Sparta.

Strange death rites. Upon arriving at Thermopylae, Xerxes sent scouts to observe the Greeks. They reported the Spartans were combing and oiling their long hair. When Xerxes laughed at such effeminate behavior, Demaratus, an exiled Spartan king at his court, told him that **these Greeks were Spartans, that they were preparing for battle and they would sell their lives dearly. Not being impressed, Xerxes waited several days for the Greeks to run away. They didn't leave.**

For several days, the Greeks, led by the Spartans, severely repulsed any Persian assaults at Thermopylae and threatened to stall Xerxes' whole invasion. Unfortunately, treachery accomplished what frontal assaults could not, for a local

shepherd showed the Persians another path behind the Greeks. Before the trap was closed, most of the Greeks escaped. However, Leonidas and his picked guard of 300 Spartans along with 700 troops from Thespis chose to stay.

The Greeks fought and died to the last man, selling their lives dearly in the process. When Thermopylae fell, the Greek fleet defending nearby Artemesium had to retreat after some hard fighting.

“So much the better, we shall fight in the shade.” --the Spartan Deineces when told the Persian arrows would be so numerous that they would blot out the sun.

“Go, stranger, and tell the Spartans we lie here according to their laws”--epitaph for the Spartans who died at Thermopylae. It’s impossible to tell for sure how many Persians died at Thermopylae, but some estimates put the toll as high as 20,000.

As the Persian multitude spread southward, city after city surrendered or was abandoned, until the Peloponnesus was about the only part of Greece left free. Even the Athenians had to evacuate their population to the nearby island of Salamis and watch their city go up in flames as they waited for the decisive battle to decide the issue. That battle took place in the strait of water between Salamis and Attica. The Greeks, led by the Athenian, Themistocles, lured the Persians into the narrows where they were ambushed, crushed together so they could not maneuver, and destroyed ship by ship.

Themistocles’ trickery. The Athenian leader, Themistocles realized the best chance for victory lay in luring the Persian navy into the narrows of Salamis where they couldn’t use their superior numbers. He just had to convince the other Greek leaders, many of whom wanted to make their stand off the coast of the Peloponnesus. To thwart this, he sent a messenger to Xerxes warning him that the Greeks would try to escape out the backside of the Strait. Believing this

message, Xerxes sent part of his navy to cut off the Greeks’ escape. This accomplished two things. First, it forced the Greeks to fight where Themistocles thought they had the best chance of victory. Secondly, it removed part of Xerxes’ fleet from the battle.

Dual victories. Supposedly on the same day as Salamis, the Greeks in Sicily, led by Syracuse, won a major battle at Himera, crushing a Carthaginian invasion launched in conjunction with Xerxes’ expedition to keep the Greeks in Italy and Sicily from helping their comrades in the East.

After the Greek victory at Salamis, Xerxes went home, leaving part of his army to finish the job of conquering Greece. However, the next year (479 B.C.E.) the Greeks crushed the Persian army at Plataea, with the Spartans carrying off the honors for valor. That same year the remainder of the Persian fleet was caught and destroyed at Mycale, leading to a second, more successful Ionian revolt. It also left the way open for the Greeks to destroy Xerxes’ bridge of boats across the Hellespont from Asia into Europe. The destruction of that bridge signaled the end of the Persian wars, although no one at that time could assume the Persians would not come back.

A fitting war trophy. Having dismantled Xerxes’ bridge of boats, the Greeks returned home towing the huge rope cables used to hold the bridge together.

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THE ATHENIAN EMPIRE (478-431 B.C.E.)

Formation of the Delian League. We can well imagine the Greeks' incredible feelings of pride and accomplishment in 478 B.C.E. after defeating the Persian Empire. The Athenians felt that they in particular had done more than their part with their army at Marathon and their navy at Salamis and Mycale. It was this incredible victory which gave them the self-confidence and drive to lead Greece in its political and cultural golden age for the next half century.

However, victory had been won at a heavy price. Fields, orchards, and vineyards lay devastated throughout much of Greece, and it would take decades for the vineyards and olive groves in particular to be restored. Athens itself was in ruins, being burned by the Persians in vengeance for the destruction of Sardis during the Ionian Revolt. Therefore, the Athenians immediately set to work to rebuild their city, and in particular its fortifications. The Spartans, probably through fear or jealousy of Athens' growing power, tried to convince the Athenians not to rebuild their walls. They said that if the Persians came back and recaptured Athens, they could use it as a fortified base against other Greeks. The Athenian leader, Themistocles, stalled the Spartans on the issue until his fellow Athenians had enough time to erect defensible fortifications. (This was later extended by what was known as the Long Walls to connect Athens to its port, Piraeus, so it could not be cut off from its fleet.) By the time Sparta realized what was happening, it was too late to do anything. One could already see bad relations starting to emerge between Athens and Sparta. In time, they would get much worse.

Since the Athenians and other Greeks could not assume that the Persians would not come back, they decided the best defense was a good offense, and formed an alliance known as the Delian League. The League's main goals were to liberate the Ionian Greeks from Persian rule and to safeguard the islands in the Aegean from further Persian aggression. The key to doing this was sea power, and that made Athens the natural leader, since it had by far the largest navy and also the incentive to strike back at Persia. At first, Sparta had been offered leadership in the league because of its military reputation. However, constant fear of Helot revolts made the Spartans reluctant to commit themselves overseas. Also, their king, Pausanias, had angered the other Greeks by showing that

typical Spartan lust for gold. As a result, he was recalled, leaving Athens to lead the way.

The Persian navy, or what was left of it, was in no shape to halt the Greek advance after taking two serious beatings from the Greeks in the recent war. Ionia was stripped from the Great King's grasp, and the Persians were swept from the Aegean sea island by island. Within a few years, the Delian League controlled virtually all the Greeks in the islands and coastal regions of the Aegean.

From Delian League to Athenian Empire. At first each polis liberated from Persia was expected to join the league and contribute ships for the common navy. However, most of these states were so small that the construction and maintenance of even one ship was a heavy burden. Therefore, most of these states started paying money to Athens which used their combined contributions to build and man the League's navy. This triggered a feedback cycle where Athens came to have the only powerful navy in the Aegean, putting the other Greeks at its mercy. Athens could then use its navy to keep league members under control, forcing them to pay more money to maintain the fleet which kept them under control, and so on.

The changing nature of the league became apparent a decade after the defeat of the Persians when the island states of Naxos (469 B.C.) and Thasos (465 B.C) felt secure enough to try to pull out of the League. However, Athens and its navy immediately pushed them back in, claiming the Persian threat was still there. The Naxians and Thasians could do little about it since the only navy they had was the one they were paying Athens to build and man. And that was being used to keep them *in* the League so they could keep paying Athens more money. The Delian League was turning into an Athenian Empire.

A tightening grip. By 445 B.C.E., the only league cities still keeping their own navies were Lesbos, Chios, and Samos.

The cycle supporting Athens' grip on its empire also supported (and was itself reinforced by) another feedback loop that expanded and supported the Athenian democracy. It started with the empire needing the fleet as its main source of power and control. Likewise, the fleet needed the poor people of Athens to serve as its rowers. Since these people, even more than the middle class hoplites, were the mainstay of Athens' power, they gained political

influence to go with their military importance, thus making Athens a much more broadly based democracy. The poor at Athens in turn needed the empire and its taxes to support their jobs in the fleet and their status in Athens. This fed back into the empire needing the navy, and so on.

The Athenian democracy likewise strongly enforced collection of league dues to maintain what in essence was now an "imperial democracy. Thus the navy was the critical connecting link between empire and democracy, holding the empire together on the one hand, while providing the basis for democratic power on the other. The Athenian democratic leader, Pericles, especially broadened Athenian democracy by providing pay for public offices so the poor could afford to participate in their polis' government.

Athens further tightened its hold on its empire by settling Athenian citizens in colonies (*cleruchies*) on the lands of cities it suspected of disloyalty, making their subjects come to Athens to try certain cases in Athenian courts, thus supplying them with extra revenues, and moving the league treasury from its original home on the island of Delos to Athens where the Athenians claimed it would be safer from Persian aggression. Athens installed or supported democracies in its subject states, feeling they would be friendlier to Athenian policies since they owed their power to Athens. It also allowed the minting and use of only Athenian coins. This provided the empire with a stable and standard coinage as well as exposing everyone in the empire to Athenian propaganda every time they looked at a coin and saw the Athenian symbols of the owl and Athena.

When Pericles came to power in 460 B.C.E., the Athenians were trying to extend their power and influence in mainland Greece while also supporting a major revolt against the Persians in Egypt. However, Athens overextended itself in these ventures that, after initial successes, both failed miserably. Sparta led a coalition of Greeks to stop Athens' expansion in Greece, while the Persians trapped and destroyed a large Athenian fleet on the Nile by diverting the course of the river and leaving the Athenian ships stuck in the mud. As a result, Pericles abandoned Egypt to the Persians, left the rest of mainland Greece to the other Greeks, and restricted Athens' activity to consolidating its hold on its Aegean empire. By 445 BC, peace Persia and Sparta, recognizing each others' spheres of control

allowed Athens to concentrate on more cultural pursuits which flourished in a number of areas.

A cultural golden age. In sculpture, the *severe classical* style succeeded the stiffer Archaic style after the Persian Wars. One key to this was the practice, known as *contrapposto*, of portraying a figure with its weight shifted more to one foot than the other, which, of course is how we normally stand. The body was also turned in a more naturalistic pose and the face was given a serene, but more realistic expression. The severe style was quite restrained and moderate compared to later developments, expressing the typical Greek belief in moderation in all things, whether in art, politics, or personal lifestyle. The overall result was a lifelike portrayal of the human body that seemed to declare the emergence of a much more self assured humanity along with Greek independence from older Near Eastern artistic forms. Other art forms showed similar energy and creativity.

Wingless victory. While most statues of Nike, the goddess for victory, had wings, the Athenians dedicated a statue to her without wings so that she could never leave Athens.

In architecture, Pericles used the surplus from the league treasury for an ambitious building program, paid for with funds from the league treasury to adorn Athens' Acropolis. This also provided jobs for the poor, resulting in widespread popular support for Pericles' policies. Foremost among these buildings was the Parthenon. Constructed almost entirely of marble (even the roof) it is considered the pinnacle of Classical architecture with its perfectly measured proportions and simplicity. Ironically, there is hardly a straight line in the building. The architects, realizing perfectly straight lines would give the illusion of imperfection, created slight bulges in the floor and columns to make it *look* perfect. Although in ruins from an explosion in 1687 resulting from its use as a gunpowder magazine, the Parthenon still stands as a powerful, yet elegant testament to Athenian and Greek civilization in its golden age.

Another important, if less spectacular art form that flourished at this time was pottery. Around 530 B.C., the Greeks developed a new way of vase painting known as the red figure style. Instead of the earlier technique of painting black figures on a red background (known as the black figure style), potters put red figures on a black background with details painted in black or etched in with a needle.

This technique, combined with the refined skills of the vase painters' working on such an awkward surface, gave Athenian pottery unsurpassed beauty and elegance, putting it in high demand throughout the Mediterranean.

In addition to its artistic value, Athenian pottery provides an invaluable record of nearly all aspects of Greek daily life, especially ones of which we would have little evidence otherwise, such as the lives of women, working conditions and techniques of various crafts, and social (including sexual) practices. Given these themes and the large number of surviving pieces, Greek pottery also reflected the more democratic nature of Greek society, since it was available to more people than had been true in earlier societies where high art was generally reserved for kings and nobles with the power and wealth to command the services of artisans.

Possibly the most creative expression of the Greek genius at this time was in the realm of tragic and comic drama, itself a uniquely Greek institution. While still sacred to the god of wine and revelry, Dionysus, Greek drama at this time developed into a vibrant art form that also formed a vital aspect of public discourse on contemporary problems facing the Athenian democracy. However, being part of a state supported religious festival still overtly concerned with religious or mythological themes, the tragedians' expressed their views indirectly by putting new twists on old myths. This kept discussion of the themes treated in the plays on a more remote and philosophical level. That, in turn, allowed the Athenians to reflect on moral issues that were relative to, if not directly about, current problems that they could then understand and deal with more effectively.

For example, Sophocles' *Oedipus the King* on one level was about flawed leadership which, no matter how well intentioned, could lead to disastrous results, in this case a plague afflicting Thebes for some mysterious reason. However, this play was produced soon after a devastating plague had swept through Athens and killed its leader, Pericles, who had led Athens into the Peloponnesian War. It must have given the Athenians watching it reason to reflect on their own similar problems and what had caused them.

Greek comedy was best represented by Aristophanes, sometimes referred to as the Father of Comedy. Whereas Greek tragedians expressed their ideas with some restraint, comedy cut loose

practically all restraints in its satirical attacks on contemporary policies, social practices, and politicians. Where else, in the midst of a desperate war, could one get away with staging such anti-war plays as *Lysistrata*, where the women of warring Athens and Sparta band together in a sex strike until the men come to their senses and end the war?

Such freedom of expression was also found in the realm of philosophy. We have seen how the most famous philosopher of the time, Socrates, "called philosophy down from the skies" to examine moral and ethical issues. In addition to Socrates, there arose a number of independent thinkers, referred to collectively as the Sophists, who were drawn to Athens' free and creative atmosphere. Inspired by the rapid advances in the arts, architecture, urban planning, and sciences, they believed human potential was virtually unlimited. One Sophist, Protagoras, said that, since the existence of the gods cannot be proven or disproven, Man is the measure of all things who determines what is real or not. This opened the floodgates to a whole variety of new ideas that also challenged traditional values. In his play, *The Clouds*, Aristophanes mercilessly satirized the Sophists as men who boasted they could argue either side of an argument and make it seem right. This belief that there is no real basis for truth would especially affect a younger generation of Athenians. Some of them, ungrounded in any sense of values, would mistake cleverness for wisdom and lead Athens down the road to ruin.

It is incredible to think that Western Civilization is firmly rooted in this short, but intense outpouring of creative energy from a single city-state with perhaps a total of 40,000 citizens. However, Athens' golden age would be short-lived as growing tensions would trigger a series of wars that would end the age of the polis.

Athenian Democracy and Justice in Action



Athenian jurors' ballots. Hollow ones stood for innocent, solid ones for guilty.

After 461 B.C.E., the popular assembly, which all citizens could attend, was made the main law-making body of Athens. Earlier, Themistocles had gotten a law passed that chose by lot all Athenian officials, except the

ten generals. All 700 officials served for one year and without pay. Thus, it was likely an Athenian citizen would have to do some sort of public service several times in his lifetime.

Preparing business for the Assembly was the Boule, a committee of fifty men chosen by lot from one of Athens' ten tribes who served for one-tenth of the year, giving way to fifty men from another tribe, and so on. The head of the Boule and state was one man chosen by lot for one day. When a mob unjustly wanted to try Athens' generals for dereliction of duty, the head of state happened to be a man named Socrates who vetoed the proceedings for his day as "president". Unfortunately, people didn't cool down in the following twenty-four hours and the next "president" allowed the trial to proceed with disastrous result.

Athenian law courts, depending on the seriousness of the case, would have up to 1001 jurors on a case and chosen by lot in order to prevent bribery. Judges probably voted along with the jurors. There were no lawyers and few rules in Athenian courts. Litigants might bring in their families dressed in rags to win the jurors' sympathy, often having speeches written for them by professional speechwriters. Speeches were limited in time by a simple water clock, known as the *clepsydra* (below). Athens had 6,000 paid jurors, mostly poor and elderly citizens, a system somewhat like welfare. Imperial tribute and the rule that all law cases in the empire had to be tried in Athens ensured the poor and elderly Athenian citizens had employment and income.



Punishment included confiscation of a convicted defender's property, exile, fines, or the loss of civil rights. In capital cases,

execution was done by stoning, crucifixion, or, in Socrates' case, with a poison known as hemlock. (This induced vomiting and severe convulsions, not numbness as in the account by Plato, who probably wanted to preserve Socrates' dignity.) Accusers failing to win one-fifth of the jurors' votes had to pay heavy fines.

In cases of murder, if the criminal couldn't be found, a scapegoat or the murder weapon was found and sentenced to exile. There was even a special court for those already exiled for homicide and then charged with first-degree murder. It was held at sea with the defendant pleading his case from a boat.

Daily Life and the Cost of Living



A Greek boy learning his lessons. The Greeks were excellent artists, even mastering perspective, but apparently unable to get the right proportional size of a child's head to his body. Either that or people used to be born with tiny heads.

The official view we get of Athens is the splendid Acropolis, agora, but most of the city was quite squalid. Houses were modest, even for the rich, usually having no more than a few cubicles. Drapes served as doors between rooms, giving one very little privacy. In fact, personal privacy was much less valued, social and public life being seen as the natural way to live. The Greek word for privacy could also imply insanity (from isolation), showing how much more social society was then.

Floors were either mud for the poor or stone for the rich. Furniture was sparse and moved as needed, sometimes having only

three legs to accommodate uneven floors. At dinner men reclined on couches, while women sat upright in chairs. Roofs were flat, so people could sleep on them during the heat of summer. Cooking was done on an open brazier with a hole in the roof or a clay pipe (for the rich) to let out smoke.

Sanitation was minimal, with most streets being nothing more than narrow filth infested alleys. As a result, men spent as most of their time away from home exercising in the gymnasium or hanging out in the agora, an open public square which might be filled with flimsy booths, stalls, and workshops. Women were generally stuck at home.

Cost of living. Life was simple, but also cheap, although calculating the cost of living from one era to the next is extremely tricky. For example, in 600 B.C.E when coinage was in its infancy and quite rare, one sheep or medimnos (1.5 bushels) of grain would cost a single drachma (a silver coin roughly the size of a dime). Two centuries later, the medimnos had doubled in price and a sheep would cost 10-20 drachmae.

However, just to give some idea of the cost of living, let's use wages and prices from the fifth century B.C.E. at the height of Athenian power. The average laborers, jurors, and rowers in the navy made about three obols (half a drachma) per day, while a hoplite on active duty was paid 1 full drachma. Thus the average yearly income for most Athenians seems to have been around 180 drachmae.

The average annual cost of living for a married couple with two children was an estimated 75 drachmae for grain, 45 drachmae for other foods (fish, vegetables, fruit, etc.), 16 drachmae for clothes and

shoes, 36 drachmae for rent, and 8 drachmae for other expenses.

Greek religion was primarily a public affair handled by the state, once again privacy and personal beliefs being of secondary importance. Therefore, priests were usually state officials, the idea being a very economic one where society gave offerings to the gods in return for their favors. Sacrifices should be of domesticated animals, the ox generally seen as being the best, but others might be favored by various gods (e.g., the pig by Demeter). The Olympics were opened with a sacrifice of 100 bulls to Zeus, which must have been a real mess.

The sacrificial knife was hidden in a basket under barley leaves. The priest would wash his hands with sacred water and sprinkle some on the sacrificial victim. If it shook its head, that would be a sign it was ready to be sacrificed. The victim would first be stunned with a mallet and then its throat slit to the sound of women's ritual screams. The priest held the victim's head up so its blood would spurt onto the altar. It was then butchered, with the heart and other entrails roasted and sacrificed along with the thighbones covered with fat. However, most of the meat was boiled in cauldrons and given to the public, a trick that the titan Prometheus supposedly taught people to shortchange the gods.

Childhood, especially the first five years, was an extremely dangerous time until very recently, mainly because of diseases. The ideal family consisted of one boy and one girl to prevent dividing the inheritance.

Birthing involved the father's family smearing pitch around the house during labor.

The mother and her helpers were isolated with a midwife only used if complications

developed. Childbirth was dangerous for mother and child alike, with an estimated one in ten women dying in the process. The birth of a boy was announced by hanging an olive wreath over the door, that of a girl with a strip of cloth.

The baby was wrapped tightly in long strips of linen called swaddling, the purpose being to correct deformed limbs while the baby's bones were still soft. A child's first few days were the most dangerous when poor health or cost of another mouth to feed might lead to it being left to die, often at a temple in an earthenware jar with some sort of bracelet or necklace to serve as identification if the baby were adopted and survived. Such babies were typically rescued by childless women or someone needing a slave. Most boys escaped such a fate, and although it was illegal to kill girls, exposing them in such a manner and abortions were not.

A week after birth the family held an *Amphidromia*, which involved a ritual cleansing of the mother and any helpers and the formal acceptance of the child. After this it was illegal to abandon the child. At ten days, there would be a banquet involving presents for the baby, including amulets against demons. The baby was also named, boys usually being named after the paternal grandfather. His full name would consist of his given name, patronymic (father's name) and the deme and tribe of the polis to which he belonged.

Before being potty-trained, children would go naked or in a tunic without underwear. After all, there were no disposable diapers before the 1970s and washing any clothes, including diapers, was extremely labor and water intensive. Also, this was a culture with a dry climate and no running water.

Education. Boys and girls were raised together until being separated at age six (seven by the Greeks' reckoning since they counted time in the womb as the first year. Girls would stay home with their mothers, learning the domestic arts. In the city, a slave, known as a pedagogue, taught a boy manners, accompanied him to school, and could even punish him for misbehaving. All but the poorest boys went to school, with public education being provided for orphans of veterans who had died in battle.

Teachers were badly paid and treated, and usually held classes in their homes. The school day lasted from one-half hour after daybreak to one-half hour before dusk. It was illegal to take boys to and from school in dark. A student practiced writing on a wax tablet. Besides basic reading, writing, and arithmetic, boys studied Homer, music (which taught rhythm and movement), singing, and playing a stringed instrument known as the lyre. Homer's *Iliad* and *Odyssey* were considered the core of an education, since they taught lessons essential to being a good citizen of the polis: war, ethics, peace, and politics. Afternoons were devoted to sports and physical education, which conditioned boys for war.

Much as in Sparta, things got rougher at age twelve, when *Paidotribes*, austere men in purple cloaks and armed with a long two-branched stick took over. They taught gymnastics and physical education in the *palaestra*, an open area surrounded by a covered colonnade. Boys stripped, and rubbed themselves down with oil and fine sand or dust to protect them against the chill. After warming up to music, they practice throwing the discus and javelin, running, jumping, and wrestling. Afterwards they went to the bathhouse where a slave would rub them down with oil and scrape off any dirt with a metal instrument known as a *strigil*.

At age 18, the young man took the Ephebic oath of loyalty to the polis and began two years of military training and service. He remained liable for military service anytime after that until age fifty.

Metics. Athens' wealth and opportunities attracted many skilled artisans and merchants from all over the Greek world. These men, known as *metics*, controlled much of the commercial and industrial life of Athens. Since citizenship in the polis was seen as a closed family, metics were not eligible for naturalization, but many were apparently willing to endure that stigma in return for the economic opportunities Athens offered.

Out of an estimated population of 250,000, only about 40,000 of Attica's population were citizens. In addition to women, children, and metics, the rest were slaves, who were the foundation upon which Greek culture and democracy were built. Except for a few with skills, most were confined to domestic work (the lucky ones), farm labor, industry (such as pottery or making armor), and (worst of all) mine labor.

Rich Athenians might have 50 slaves, while even poor farmers usually had at least one. They had virtually no rights; could be bought and sold at will and punished severely, although killing them was illegal. Since it was assumed they always lied, they had to be tortured for their testimony in a court case for it to be legal. However, some skilled slaves led prosperous lives and held important positions as secretaries and overseers.

Attitudes toward women as seen in Greek literature



A Greek wedding vase showing the bride being led to her husband's home by the wrist like a captive of war. Girls were married off as early as age fifteen to men twice their age. This was not unknown in other pre-industrial cities. For example, in *Romeo and Juliet* set and written in the Renaissance, Juliet at age fourteen is set to be married to Paris, who is thirty. For example, in *Romeo and Juliet* set and written in the Renaissance, Juliet at age fourteen is set to be married to Paris, who is thirty.

The Greeks, may have invented democracy, but not for women. Unfortunately, women's status in Greece, was all too similar to, if not worse than, the status in most other societies. Hesiod (c.700 B.C.) his book, *Works and Days*, tells how Zeus, angry with Prometheus ("Son of Iapetos") for giving men fire, has the gods fashion Pandora, the first woman, as a curse to men:

*"Then, stirred to anger, Zeus of the Storm Cloud, addressed him as follows:
'Son of Iapetos, you who surpass all others in planning,
you rejoice in your theft of my fire and in having deceived me,
being the cause of great pain to yourself and men in the future.
I shall give them in payment of fire an evil which all shall
take to their hearts with delight, an evil to love and embrace.'
Thus the Father of Gods and Men addressed him, and laughed.
And he commanded far-famed Hephaistos immediately to make it*

*out of water and clay, and give it the voice of
a human and
put in it strength and cause it to look like a
goddess immortal,
having the lovely, desirable shape of a virgin.
And then he
ordered Athena to teach her the skill of
intricate weaving.
And Aphrodite the Golden he ordered to shed
on her charm and
make her an object of painful love and
exhausting desire.
And he ordered Hermes the Guide, the
Slayer of Argos,
to put in her mind a dog's shamelessness and
the deceit of a thief.
Thus spoke their king, Zeus, son of Kronos,
and they obeyed him...."*

Semonides of Amorgos compares women to different animals and their qualities:

*"In the beginning God made various kinds of
women
with various minds. He made one from the
hairy sow,
that one whose house is smeared with mud, and
all within
likes in dishevelment and rolls along the
ground,
while the pig-woman in unlaundered clothing
sits
unwashed herself among the dunghills and
grows fat.*

*God made another woman from the
mischievous
vixen, whose mind gets into everything. No act
of wickedness unknown to her; no act of good
either, because the things she says are often bad
but sometimes good. Her temper changes all
the time...*

*Even the wife who appears to be the best
behaved
turns out to be the one who lets herself go
wrong.
Her husband gawps and doesn't notice;
neighbors do;*

*and smile to see how another man gets fooled.
Each man will pick faults in someone else's
wife
and boasts of his own each time he speaks of
her. And yet
the same thing happens to us all. But we don't
see.
For women are the biggest single bad thing
Zeus
has made for us; a ball and a chain; we can't
get loose
since that time when the fight about a wife
began
the great War, and they volunteered and went to
Hell"*

Women's status was neither enviable, visible, nor remarkable compared to other ancient societies. However, male authors as far back as Homer did give them a voice through very prominent and strong characters, with such goddesses as Athena and Hera, Hector's wife, Andromache, who portrays the plight of women caught in war, and Penelope, whose repeated weaving and unraveling of a burial shroud to stall the evil suitors, is every bit as clever as the trickery done by her quick-witted husband Odysseus. Plato even advocated complete equality for women in *The Republic*.



In an age when nearly everyone wore clothes made at home, either by the women of the house or their slaves, nearly all women needed to be skilled at spinning wool and weaving it. Thus a major part of a woman's education was learning this art.



Greek women were expected to stay at home as a safeguard to their reputations (and husbands' "property". In Western culture, it was considered improper for women to "let down their hair" in public until the twentieth century. Even into the 1960s, "proper" women always went out in public wearing a hat.

Strong characters and points of view especially surface in Greek drama. There are the spurned and vengeful women, such as Clytemnestra in Aeschylus' *Agamemnon* and the title character in Euripides' *Medea*. There is the frightening transformation of the mild mannered Theban housewives into the wild maenads in Euripides' *Bacchae*. It is a woman, Sophocles' title character, Antigone, who performs the first act of civil disobedience in Western literature by giving her brother a decent and religious burial in defiance of the king. (Interestingly, it was an Athenian priestess, Theano, who committed the first recorded act of civil disobedience some years later by defying the state's order to use her religious authority to curse Alcibiades.) There is the powerful statement about the plight of Andromache, Cassandra, and Hecuba as victims of war in Euripides' *Trojan Women*. And never have women so successfully or humorously made their point about the senselessness of war as in Aristophanes' *Lysistrata* when they go on a sex strike to end the Peloponnesian War.

Women could neither write nor act in Greek plays, although they could attend them since they were part of public religious rites. However, just as these plays, albeit written

by men, have survived and influenced subsequent ages, so too have the women's voices contained within them survived. The Greek playwright, Euripides, captures the plight of Greek women through his title character, Medea:

*"Of all beings who breathe and have intelligence,
we women are the most miserable creatures.
First we have to buy a husband at a steep price,
then take a master for our bodies.
This second evil is worse than the first, but
the greatest struggle turns on whether we
get a bad
husband or a good one. Divorce is not
respectable
for a woman and she cannot deny her
husband.
Confronting new customs and rules,
she needs to be a prophet, unless she has
learned
at home how best to manage her bedmate.
If we work things out well and the husband
lives with us without resisting his yoke,
life is enviable. Otherwise it is better to die.
A man when he is tired of being with those
inside
goes out and relieves his heart of boredom,
or turns to some friend or contemporary.
But we have to look to one person only.
They say we have a life secure from danger
living at home, while they wield their spears
in battle.
They are mistaken! I would rather stand
three
times beside a shield than give birth once."*

Aristophanes play, *Lysistrata*, also gives the female point of view:

*"All the long time the war has lasted, we
have endured in modest silence all you
men did; we never allowed ourselves to
open our lips. We were far from satisfied,
for we knew how things were going; often
in our homes we would hear you
discussing, upside down and inside out,*

some important turn of affairs. Then with sad hearts, but smiling lips, we would ask you: Well, in today's Assembly did they vote Peace?--But, "Mind your own business!" the husband would growl, "Hold your tongue, do!" And I would say no more...but presently I would come to know you had arrived at some fresh decision more fatally foolish than ever. 'Ah! my dear man,' I would say, 'what madness next!' But he would only look at me askance and say: 'Just weave your web, do; else your cheeks will smart for hours. War is men's business!'

In his play, *Tereus*, Sophocles gives some insight to the transition from being a carefree girl to the responsibilities of married life with a man much older than herself:

"Now outside [my father's house] I am nothing. Yet I have often observed woman's nature in this regard, how we are nothing. When we are young in our father's house, I think we live the sweetest life of all humankind; for ignorance always brings children up delightfully. But when we have reached maturity and can understand we are thrust out and sold away from the gods of our fathers and our parents, some to foreigners, some to barbarians, some to joyless houses, some full of reproach. And finally, once a single night has united us we have to praise our lot and pretend that all is well."

Euripides' *Melanippe* states women's prominence in religious matters.

*"Men's blame and abuse of women is vain-
- the twanging of an empty bowstring.*

*Women are better than men and I will prove it...
They manage the house and guard within the home goods from the sea. No house is clean and prosperous without a wife. And in divine affairs-- I think this of the first importance-- we have the greatest part. For at the oracles of Phoebus women expound Apollo's will. At the holy seat of Dodona by the sacred oak the female race conveys the thoughts of Zeus to all Greeks who desired it. As for the holy rituals performed for the Fates and the nameless goddesses, these are not holy in men's hands; but among women they flourish, every one of them. Thus in holy service woman plays the righteous role. How then is it fair for the race of women to be abused? Will not the empty censure of men cease; and those who think all women should be blamed alike if one is found erring? Let me make further distinctions. There is nothing worse than a bad woman, and nothing better than a good one. Only their natures differ..."*

The Parthenon: More than meets the eye



Similarly, the Propylaea, the ceremonial gateway at the top of the Acropolis, was damaged by a lightning strike a few years earlier when it was being used by the Turks as a gunpowder magazine. That's why they moved their gunpowder to an even higher place of storage, the Parthenon.

[Back to flowchart](#)

Although the Parthenon is seen as the perfect expression of Greek architecture, there is hardly a straight line in the building. The architects, realizing perfectly straight lines would give the illusion of imperfection, created slight bulges in the floor and columns to make it *look* perfect. Therefore, an object placed on the floor at one end could not be seen from floor level at the other end. Its pillars also lean in at a 1° angle, so that, if the columns on opposite sides were extended up they would cross after around 2.2 km. Columns at opposite ends would meet about 5 km up.

Instead of the normal 6 columns by 13 columns used in Doric temples, the Parthenon is 8 columns by 17, each column having 20 shallow vertical flutings.

Its dimensions are: Width = 30.88m., Length = 69.5m., and Height = 13.72m., which gives a 9:4 ratio of length to width. Using these dimensions, the following equations are approximately true.

$$r * H = W$$

$$r * W = L$$

$$r^2 * H = L$$

The Parthenon has actually weathered the forces of nature remarkably well down through the centuries. Its main damage came from a direct hit by a Venetian shell during a siege in 1687 when the Turks were storing their gunpowder there.

HISTORY AS TRAGEDY: THE PELOPONNESIAN WAR (431-404 B.C.E.)

The conflict that triggered the long collapse of the polis was the Peloponnesian War. It started when Athens, wanting to control trade to the west with Southern Italy and Sicily, helped Corcyra in a dispute with its founding city, Corinth. In retaliation, Corinth helped another of its former colonies, Potidaea, in a revolt against Athens and also turned to Sparta for help. This prompted Athens' leader, Pericles, to issue the Megarian Decree, cutting off all the empire's trade with another Spartan ally, Megara. As Megara joined Corinth in pressuring Sparta to take action against Athens, war fever grew on both sides.

In 431 B.C.E., as war with Sparta loomed, Euripides (485-406 B.C.E.), the third of the great tragic playwrights staged *Medea*. Its title character, the barbarian princess who had helped Jason get the Golden Fleece, is rejected by Jason in favor of a more desirable marriage to a princess of Corinth. Medea exacts a grisly revenge, murdering, not only Jason's new bride, but her own children to keep them from her enemies. At the end of the play, however, she is granted asylum in Athens. Did *Medea* represent the Athenians' own ruthlessness as they prepared for war, or possibly the civil strife in Corcyra that Athens had recently allied with against its enemy, Corinth? Either way, Euripides' closing lines warn the Athenians against the uncertainty of the future: "***Many things are determined by Zeus on Olympus, and many wishes are unexpectedly granted by the gods. But many things we expect to happen do not come to pass, for the gods continue to bring about what we did not expect.***" Euripides' warning went unheeded and war was declared.

Our main source for the period is Thucydides, whose *History of the Peloponnesian War* set the standard for historical accuracy and impartiality until the modern era. His history is especially valuable for its portrayal of the psychological effects of war on the human spirit. And just as the plays of the time let us use tragedy as history, Thucydides' account of the prolonged agony of the Peloponnesian War presents history as a form of

tragedy. His history along with the tragic dramas of the time and Aristophanes' satirical comedies chronicle the long descent into madness that seemed to overtake the Athenians as the war dragged on.

Since Sparta was a land power and Athens was a naval power, Pericles, decided to rely on the navy to protect the empire and raid the coasts of the Peloponnesus. When the Spartans marched into Attica, he would pull the rural population inside the Long Walls, abandoning the countryside to the enemy until they left. As long as its grain routes were open, Athens should be able to hold out until Sparta tired of the war and gave up.

It was not easy to convince the Athenians to leave the countryside and passively watch from the Long Walls as their homes and fields went up in flames. However, Pericles' policy might have worked except for one thing that he had not counted on. In the second year of war, an epidemic broke out in Athens. Ordinarily, any epidemic would have been bad enough, but the crowded and unsanitary conditions of Athens under siege in the heat of summer intensified its effects. Thucydides gives a frightening account of the disease:

"The crowding of the people out of the country into the city aggravated the misery; and the newly arrived suffered most. For, having no houses of their own, but inhabiting in the height of summer stifling huts, the mortality among them was dreadful, and they perished in wild disorder. The dead lay as they had died, one upon another, while others hardly alive wallowed in the streets and crawled about every fountain craving for water. The temples in which they lodged were full of the corpses of those who died in them; for the violence of the calamity was such that men, not knowing where to turn, grew reckless of all law, human and divine. The customs that had hitherto been observed at funerals were universally violated, and they buried their dead each one as best he could. Many, having no proper appliances, because the deaths in their household had been so frequent, made no scruple of using the

burial-place of others. When one man had raised a funeral pyre, others would come, and throwing on their dead first, set fire to it; or when some other corpse was already burning, before they could be stopped would throw their own dead upon it and depart.

"There were other and worse forms of lawlessness which the plague introduced at Athens. Men who had hitherto concealed their indulgence in pleasure now grew bolder. For, seeing the sudden change, how the rich died in a moment, and those who had nothing immediately inherited their property, they reflected that life and riches were alike transitory, and they resolved to enjoy themselves while they could, and to think only of pleasure...for offenses against human law no punishment was to be feared; no one would live long enough to be called to account. Already a far heavier sentence had been passed and was hanging over a man's head; before that fell, why should he not take a little pleasure? (II,48-49; 52-53)



The combined misery of epidemic and watching their homes and farms going up in flames was too much for many Athenians who now blamed Pericles for their troubles. This was the sort of mob scene that haunts any politician's nightmares.

A lesser man would have run away. However, Pericles, who himself had lost two sons to the epidemic, faced the mob head-on, telling them they had voted for the war and only had themselves to blame for what it brought. If they didn't have the stomach to persevere, then they could make peace. However the fault lay with them, not him.

His speech had the effect of calming the mob and keeping Athens on course in the war.

Only a man of Pericles' caliber could talk to a mob like that and get away with it.

Among the epidemic's victims was Pericles whose moderate and reasonable leadership would be sorely missed by Athens. Afterwards, men of much narrower vision would guide the polis on less trustworthy paths, and eventually to ruin. Soon afterwards, Sophocles staged *Oedipus the King*, considered by many as the greatest of Greek tragedies. Taking place in Thebes that is also suffering from a mysterious plague, an oracle says the murderer of the previous king, Laius, must be found and punished. The present king, Oedipus, who does not realize he himself unwittingly had killed Laius years before, launches an investigation. When Oedipus finally realizes he is the killer, he blinds himself and goes into exile to free Thebes from the curse. Given the time it was written, one could see Sophocles comparing Pericles to Oedipus, both being great leaders with the best intentions for their respective cities. However, some fatal unforeseen flaw in each leads, however unjustly, to disaster. The play ends with a somber warning by the chorus on the uncertainty of life:

*"People of Thebes, my countrymen, look on
Oedipus*

*He solved the famous riddle with his brilliance,
he rose to power, a man beyond all power.*

*Who could behold his greatness without envy?
Now what a black sea of terror has overwhelmed
him.*

*Now as we keep our watch and wait the final day
count no man happy till he dies, free of pain at
last."*

The first phase of the struggle, known as the Archidamian War, lasted ten years and became increasingly vicious the longer it lasted. Athens brutally put down revolts by the city-states, Mytiline and Skione, totally destroying the latter when it fell. Likewise, Thebes besieged and finally destroyed Athens' ally, Plataea, which had bravely stood by Athens at the Battle of Marathon sixty

years earlier. Thucydides gives a grim analysis of the effects of war and the resulting civil strife within the various city-states:

"In peace and prosperity, both states and individuals are more generous, because they are not under pressure; but war, which cuts down the margin of comfort in daily life, is a teacher of violence, and assimilates ordinary people's characters to their conditions.

"Revolution now became endemic;... even the former prestige of words was changed. Reckless daring was counted the courage of a good party man; prudent hesitation cowardice in disguise; moderation, a cover for weakness, and the ability to see all sides, inability to do anything...The bitter speaker was always trusted, and his opponent held suspect. The successful conspirator was reckoned intelligent, and he who detected a plot more brilliant still, but he who planned not to need such methods was accused of splitting the party and being afraid of the enemy...

"The tie of party took precedence over that of the family;...Most people would rather be called clever knaves (if knave is what they are) than honest fools; they are ashamed of the latter label, but proud of the former.

"The cause of the whole trouble was the pursuit of power for the sake of greed and personal ambition...Leaders everywhere used honorable slogans--'political equality for the masses' or 'the rule of a wise elite'; but the commonwealth which they served in name was the prize that they fought for...And moderate men fell victims to both sides...And the cruder intellects generally survived better; for conscious of their deficiencies and their opponents' cleverness, and fearing that they might get the worst of it in debate and be victims of some cunning plot if they delayed, they struck boldly and at once; but the others, contemptuously sure that they could see danger in time and had no

need to take by force what they could get by wit, were more often caught off their guard and destroyed."

At this time, comic drama, also sacred to Dionysus, was becoming increasingly popular in Athens, with two annual festivals, also sacred to Dionysus, being devoted to comedy. Whereas tragic drama skillfully veiled its messages in myth, Aristophanes, the most prominent of the comic playwrights, blatantly attacked his targets head-on, whether they be the war (during which he wrote numerous anti-war plays), social and political ills, specific public figures, or the Athenian democracy itself. Aristophanes, a conservative upset with the disturbing trends of the times, pulled no punches and, to the Athenians' credit, got away with it all. One of his favorite victims was the popular, but crude and brutal politician, Cleon the Tanner, whose character and tactics Thucydides seemed to be specifically describing in the passage cited above. Supposedly, when no actor could be found with the nerve to play Cleon in *The Knights*, Aristophanes himself played the role.

In Aristophanes' oldest surviving play, *The Acharnians* (425 B.C.E.), Dicaeopolis, a farmer ruined by the war, makes a separate peace with Sparta. The resulting prosperity (including wine and dancing girls) for Dicaeopolis and his neighbors is contrasted with a returning general who has only wounds to show for his efforts.

The Knights (424 B.C.E.) raked both Cleon and the Athenian democracy over the coals. Lord Demos ("Democracy") has two slaves, Nicias and Demosthenes (two conservative politicians) who are ruled by the cruel overseer, the Paphlagonian leather monger, an obvious reference to Cleon the Tanner. The two slaves recruit a crude sausage seller, Agoracritus, who engages Cleon in a shameless bribery contest for the favor of Lord Demos, offering cheap fish, fresh rabbit meat, pillows for the stone assembly seats, and even world dominion. Agoracritus finally wins by offering the aged Lord Demos renewed youth. Thus the democracy is revived as young, energetic, and statesmanlike just as in the good old days. This

appeased the democratic audience that had been portrayed as old, conceited, and easily fooled. Cleon was not so lucky, being accused in the play of bribery, slander, lies, threatening opponents with the charge of treason, and false accusations. Coming at the peak of Cleon's popularity after he had won a victory over the Spartans at Sphacteria and then arrogantly refused to make peace, *The Knights* helped deflate his ego and won Aristophanes first prize in the dramatic competition

In *The Wasps* (422 B.C.), Aristophanes took on the addiction many Athenians had to serving as jurors in the courts. He also lambasts Cleon who had raised the jurors' pay, largely funding the raise with fines and legal fees paid by political enemies whom he brought to court. As the chorus tells the jurors, "*You deprive yourself of your own pay if you don't find the accused guilty.*" At another point the character, Philocleon ("Lover of Cleon"), himself a chronic juror, says "*We are the only ones whom Cleon, the great bawler, does not badger. On the contrary he protects and caresses us; he keeps off the flies...*" Philocleon's son, Bdelycleon ("Hater of Cleon") finally breaks his father's addiction to the courts by letting him stage mock trials at home. In one he tries the family dog, Labes, for stealing some cheese. A second dog testifies against Labes, saying he refused to share the cheese. Bdelycleon, defending Labes, brings in her puppies, urging them to "*yap up on your haunches, beg and whine*" to win the court's sympathy (a common tactic then). Philocleon at last acquits the dog.

Disaster and Collapse (421-404 B.C.E.). At this point, a dynamic Spartan leader, Brasidas, emerged. In very un-Spartan fashion, he was a skilled diplomat as well as soldier who even commanded the loyalty of the Helots fighting for him. Believing the best defense is a good offense, he marched north to encourage Athens' subjects around Thrace, in particular Amphipolis, to rebel. With Brasidas threatening their power in a very sensitive area, it was Athens' turn to ask for peace and the Sparta's turn to refuse.

Therefore, the Athenians sent Cleon north to deal with the situation. In the ensuing battle, Brasidas

defeated and killed Cleon, but also died in the fighting. Finally, in 421 B.C.E. both sides were ready for peace. In the resulting Peace of Nicias, neither side gained anything, supposedly returning any lands taken during the war. However, neither side abided by these terms, keeping tensions high and the likelihood of a lasting peace correspondingly low.

In 417 B.C.E. Athens attacked the small island state of Melos for no good reason. When Melos fell in 415 B.C.E. the Athenians mercilessly slaughtered the men and enslaved the women and children. Euripides expressed his outrage at this reckless abuse of power in *The Trojan Women*, possibly the most powerful statement until modern times on the senseless suffering caused by war. The scene is Troy after its brutal destruction as seen through the eyes of the victims, the various Trojan women being parceled out as slaves to different Greek warriors. One by one, they learn of their individual fates, including the murder of Hector's baby son, Astyanax. Poseidon at the start of the play utters a grim warning to the Greeks for their sacrileges in the sack of Troy, but one that could as well apply to the Athenians for their recent actions: "***How are ye blind, ye treaders down of cities, ye that cast temples to desolation and lay waste tombs, the untrodden sanctuaries where lie the ancient dead; yourselves so soon to die!***"

Convincing the Athenians to carry out the horrible massacre of the Melians was Alcibiades, a young man who was totally unscrupulous in his pursuit of power and publicity, at one point entering seven chariots in the Olympics and at another buying a very expensive dog and cutting off its tail so people would talk about him.

The Sicilian Expedition. In 415 B.C.E. Alcibiades convinced the Assembly to invade Sicily, blinding them to the realities and difficulties of the undertaking with the lure of untold riches. Therefore, the Athenians, sent a large fleet and army under Alcibiades and Nicias (who was opposed to the expedition to start with).

Some good advice backfires. Nicias, who was opposed to the Sicilian adventure, tried to scare the Assembly from voting for it by saying it would require a huge expedition. Not only did the Assembly vote for such a huge force, it made Nicias one of its generals because he gave them such good advice.

Alcibiades might have carried out the whole scheme if he had been allowed to. However, he was summoned home on what were probably trumped up charges of defacing some statues sacred to Hermes. Instead of facing a hostile jury, he jumped ship, went to Sparta, and convinced it to declare war on Athens while it was occupied in Sicily.

All this left Nicias in command in Sicily. Considering his lack of enthusiasm and slow-moving, superstitious ways, he made remarkable success, besieging Syracuse and almost cutting it off from outside help. However, Nicias' failure to act quickly let the Syracusans turn the tables on him, and soon it was the Athenians who were in danger of being cut off from escape. A second army and fleet came to relieve Nicias' force, but soon they too found themselves in a trap that was quickly closing. Unfortunately, a lunar eclipse caused the superstitious Nicias to wait twenty-seven days before letting the Athenians make their move. By then it was too late. After a desperate and futile effort to break out of Syracuse's harbor, the Athenians abandoned their waterlogged fleet and tried to escape overland. The army, demoralized by defeat and decimated by hunger, thirst, and disease, came to an end in a pathetic mob scene where the desperately lapped up water in the Assinarus River while the Syracusans mercilessly slaughtered them.

When the day dawned Nicias led forward his army, and the Syracusans and the allies again assailed them on every side, hurling javelins and other missiles at them. The Athenians hurried on to the river Assinarus. They hoped to gain a little relief if they forded the river, for the mass of horsemen and other troops overwhelmed and crushed them; and they were worn out by fatigue and thirst. But no sooner did

they reach the water than they lost all order and rushed in; every man was trying to cross first, and, the enemy pressing upon them at the same time, the passage of the river became hopeless. Being compelled to keep close together they fell one upon another, and trampled each other under foot; some at once perished, pierced by their own spears; others got entangled in the baggage and were carried down the stream. The Syracusans stood upon the further bank of the river, which was steep, and hurled missiles from above on the Athenians, who were huddled together in the deep bed of the stream and for the most part were drinking greedily. The Peloponnesians came down the bank and slaughtered them, falling chiefly upon those who were in the river. Whereupon the water at once became foul but was drunk all the same, although muddy and dyed with blood, and the crowd fought for it."

Nearly all the Athenians were either killed or captured by the Syracusans. Because of their great number, the prisoners were kept in a quarry where exposure to the elements killed most of them off. Some who could recite passages from Euripides' plays, which were popular in Syracuse, were rescued by rich families. These who eventually returned home made a point of thanking Euripides for saving their lives..

Descent into madness: Athens' comeback and final fall (413-404 B.C.E.). Hardly an Athenian family was left untouched by the Sicilian disaster, while Athens itself had lost two fleets and armies. Now trouble piled on top of trouble as much of Athens' empire rose up in revolt. Thanks to Alcibiades, the Spartans now continuously occupied a fort in Attica to keep the Athenians huddled behind their Long Walls. Worst of all, Alcibiades had arranged for the Spartans to ally with Persia, getting Persian money and ships in return for promising to turn Ionia over to the Great King. An oligarchic revolution even briefly replaced Athens' democracy.

Despite these adversities, the Athenians bounced back, scraping together enough money and men to build a new fleet and carry on the war for nine more years. Alcibiades even returned to the graces of the Athenians and led their fleet to several decisive victories that at least partially restored Athens' crumbling empire. On two different occasions, Sparta even asked for peace, and was twice turned down by the Athenians, a foolish response since Persia could easily rebuild any Spartan fleets the Athenians destroyed.

In the midst of all this Aristophanes produced possibly his most outrageous, and profound statement on the war, *Lysistrata* in 411 B.C.E. In it the main character, Lysistrata ("she who disbands armies") organizes the women of Athens and Sparta, who are all sick of the war, to stage a sex strike and seize the treasury on the Acropolis until the men agree to make peace. The lowly women, who abound in common sense, triumph, and peace is happily made. Unfortunately, in real life, the war went on.

Another crisis erupted when an old drinking friend of Alcibiades, whom he had irresponsibly left in command of the fleet during his absence, offered battle against orders and was defeated. The Athenians, blaming Alcibiades, exiled him a second time. With him went Athens' best chance to win the war. In 406 B.C.E., stormy conditions after an Athenian victory at Arginusae prevented the rescue of several thousand shipwrecked Athenians. The mob blamed the six Athenian generals in charge of the fleet and had them tried and executed.

In the midst of their troubles, when the comic poet, Eupolis, drowned, the Athenians voted to ban any more playwrights from having to serve in the army or navy.

These events inspired Euripides' frightening portrayal of human madness, *The Bacchae*, produced a year after his death in 406 B.C.E. In it Dionysus returns to Thebes and incites wild frenzies in the forest by the local women who become his followers, the Maenads. When the king, Pentheus,

who represents civilized rationality, tries to save Thebes from the wild irrational Dionysiac rites, he is torn apart by the Maenads. Madness reigns supreme as his own mother returns to town with his head on a stick, thinking it is a lion. Greek audiences must have been especially shaken as they watched the one thing on which they especially prided themselves, their moderate rationality, drowning in a sea of madness, whether on stage or in war.

Unlike the earlier days when the playwrights could help guide the democracy on a wise course, it seemed they could no longer offer guidance through the morass of problems Athens had gotten itself into. Now they could only point out the shocking failure of its leaders and assembly in the policies they pursued. And after the deaths of Euripides and Sophocles, there seemed to be no playwrights with the talents to do that.

Therefore, in Aristophanes' play, *The Frogs*, Dionysus goes down to Hades to retrieve a good playwright from the dead. A poetry contest between Aeschylus and Euripides, with the verses weighed on a cheese scale, ensues to decide who gets to return to earth. Aeschylus wins first place and Sophocles gets second, even though he is not even in the contest. The play ends with the chorus of frogs escorting Aeschylus back to earth, urging him to "*heal the sick state, fight the ignoble, cowardly, inward foe, and bring us peace.*"

However the Athenians continued to ignore the wiser counsels of their playwrights. In 405 B.C.E. they built one last fleet, paying for it by stripping the gold from the temples and statues. However, a clever Spartan general, Lysander, lulled the Athenian generals into a false sense of security and then destroyed their fleet in a surprise attack at Aegospotami. Athens fell the next year after a long desperate siege. The Long Walls were torn down and its empire was stripped away, although Sparta did spare the city from destruction, probably as a counterweight against the rising power of Thebes. The democracy was replaced by an oligarchy of thirty men led by another of Socrates' old students, Critias, who conducted a vicious reign of terror.

Several years later, the Athenians were able to restore their independence, democracy and even the Long Walls. However, peace was no more in sight than it had been twenty-seven years before. In 399 B.C.E., Socrates was tried and executed for corrupting the youth of the city with his teachings. That event, as much as any, symbolized the end of Athens' cultural golden age.

Casual Match: The Coming of War (431 B.C.E.)



Big wars and other man-made disasters have a way of starting with small incidents that quickly escalate in small increments and get out of control before anyone realizes it or can do anything about it. For the Greeks started in a remote polis in northwestern Greece, Epidamnus, when the democratic faction drove out the oligarchs.

The oligarchs replied by joining local tribes in an attack on Epidamnus.

To protect themselves, the democrats first appealed for help to their *metropolis* (founding city), Corcyra.

When Corcyra refused help, the Epidamnian democrats appealed to *Corcyra's metropolis*, Corinth, which sent a force to help restore them to power.

Corcyra then attacked and defeated the Corinthian force sent to Epidamnus, so the Corinthians started building a large fleet to get revenge against their former colony.

Corcyra, feeling the heat, appealed to Athens for an alliance. Athens had recently founded the colony of Thurii in Southern Italy and wanted to expand its influence even more in those parts, traditionally the realm of Corinthian trade and influence.

However, not wanting to antagonize Corinth's ally, Sparta, the Athenians agreed to only a defensive alliance with Corcyra and sent a squadron of 10 triremes north with instructions to help only if Corcyra was losing the battle. As luck would have it, the Corinthians started driving back the Corcyraeans, thus bringing the Athenian squadron into the battle. When 20 more Athenian triremes appeared on the horizon, the Corinthians retreated, but even more determined to get revenge.

At this point things really got out of hand. First, the Corinthians incited another of their old colonies, Potidaea, to rebel against Athens.

The Athenian leader Pericles retaliated by decreeing a trade embargo cutting off all the empire's trade with another Spartan ally, Megara. So Megara joined Corinth in pressuring Sparta to take action against Athens, and war fever grew on both sides.

Sparta, which up to now had kept clear of this crisis, now found itself pressured by two of its Peloponnesian allies, Corinth and Megara, into acting against Athens. The Corinthian delegate's speech, as reported by Thucydides, tried to shame the Spartans into declaring war, stressing the differences between the two cities:

"You have no idea what sort of people these Athenians are, how totally different from yourselves. They are always thinking of new schemes, and are quick to make their plans & to carry them out: you are content with what you have, and are reluctant to do even what is necessary. They are bold, adventurous, sanguine: you are cautious, and trust neither to your power nor to your judgment. They love foreign adventure, you hate it: for they think they stand to gain; that you stand to lose something. When victorious they make the most of it; when defeated, they fall back less than anyone. They give their bodies to Athens as if they were public property; they use their minds for Athens in the most individual way possible. They make a plan; if it fails, they think they have lost something; if it succeeds, this success is nothing in comparison with what they are going to do next. It is impossible for them either to enjoy peace and quiet themselves or allow anyone else to." — Thucydides II, 40

The Mytilenean revolt (428-427 B.C.E.). When the Athenians put down a revolt by the city-state, Mytilene, they voted to put all the men to death and enslave the women and children. Fortunately, cooler heads prevailed the next day as the politician, Diodotus, convinced the assembly to kill 1000 ringleaders but spare the rest of the city on the grounds that to destroy Mytilene was to destroy future revenues.

However, the ship carrying the first sentence had a day's jump on the ship carrying the milder one. Mytileneans in Athens offered a huge reward if the second crew could get there in time. While the second crew rowed continuously in shifts, even taking its meals at the oars, the first crew was in no hurry to carry out the death penalty for an entire city. Still, they got to Mytilene first and had read the city's death sentence when the second ship arrived to stop the slaughter.

Skione, another polis rebelled in 421 B.C.E.

However, it wasn't so lucky as Mytilene. The Athenians wiped it off the map when it fell.

The destruction of Plataea (429-427 B.C.E.). Luck also ran out on Plataea, the tiny polis which had bravely stood by Athens at the Battle of Marathon sixty years earlier. Caught between Athens and Thebes, it constantly relied on the former for protection from the latter. However, Athens' current distractions elsewhere offered the perfect opportunity to finish it off.

For two years, the Spartans and Thebans besieged Plataea before launching a final assault on the city using a dirt siege mound reinforced with a lattice-work of logs. The Plataeans tried to counter this by raising the height of their wall with bricks taken from demolished houses. But, it was to no avail as the Spartans finally broke in and destroyed the city.

In 417 B.C.E. Athens attacked the small island state of Melos for no good reason. Thucydides'

In the end, war was declared, triggering a collective agony that would embroil the entire Greek world, with few breaks, for 27 years. A whole generation of Greeks would grow up knowing nothing but war and its evils.



Descent into Brutality (428-431 B.C.E.)

Thucydides continues the theme of the moral decay war brings by describing the brutal methods that both sides increasingly used as the war dragged on.

dialogue between Melian and Athenian delegates reveals how deeply the Athenians had become corrupted by power:

Athenians: Well, then, we Athenians will use no fine words; we will not go out of our way to prove at length that we have a right to rule, because we overthrew the Persians; or that we attack you now because we are suffering any injury at your hands. We should not convince you if we did; nor must you expect to convince us by arguing that, although a colony of the Lacedaemonians (Spartans), you have taken no part in their expeditions, or that you have never done us any wrong. But you and we should say what we really think, and aim only at what is possible, for we both alike know that into the discussion of human affairs the question of justice only enters where the pressure of necessity is equal, and that the powerful exact what they can, and the weak grant what they must...And we will now endeavor to show that we have come in the interests of our empire, and that in what we are about to say we are only seeking the preservation of your city. For we want to make you ours with the least trouble to ourselves, and it is for the interest of us both that you should not be destroyed.

Melians: It may be your interest to be our masters, but how can it be ours to be your slaves?

Athenians: To you the gain will be that by submission you will avert the worst; and we shall be all the richer for your preservation.

Melians: But must we be your enemies? Will you not receive us as your friends if we are neutral and remain at peace with you?

Athenians: No your enmity is not half so mischievous to us as your friendship; for the one is in the eyes of our subjects an argument of our power, the other of our weakness.

Melians: But are your subjects really unable to distinguish between states in which you have no concern, and those which are chiefly your own colonies, and in some cases have revolted and been subdued by you?

Athenians: Why, they do not doubt that both of them have a good deal to say for themselves on the score of justice, but they think that states like yours are left free because they are able to defend themselves, and that we do not attack them because we dare not. So that your subjection will give us an increase of security, as well as an extension of empire. For we are masters of the sea, and you who are islanders, and insignificant islanders too, must not be allowed to escape us."

When Melos fell in 415 B.C.E. the Athenians mercilessly slaughtered the men and enslaved the women and children.

The lights of Greek civilization were being snuffed out one by one.

Pylos and Sphacteria (425 B.C.E.)



Athenian politics also took disturbing turns as politicians of narrower vision than that of Pericles assumed precedence. The most notable of these was Cleon the Tanner, whom both Thucydides and the comic playwright, Aristophanes, depicted as a crude rabble rouser.

It was Cleon, for instance, who had convinced the Athenians to vote to destroy Mytilene. He was also the first speaker in the Assembly to shout, curse, and gesticulate wildly, as well as use ruthless intimidation to get his way. Aristophanes, in particular, lampooned Cleon mercilessly in several of his plays.

In 425 B.C.E., the Athenians trapped a force of Spartans on the island of Sphacteria off the south-western coast of the Peloponnese. However, as efforts to force them to surrender

dragged on, Cleon led the outcry against this delay until his oligarchic opponent, Nicias, suggested he take command.

Trapped by his own bluster, Cleon took command on Sphacteria. As luck would have it, a brush fire had swept fire and smoke across the island. Therefore when the Athenians attacked, the Peloponnesian force, weakened by smoke and hunger, quickly surrendered. Amazingly, among the prisoners were 120 Spartans.

The capture of 120 Spartans was a shocking event that shattered the aura of Spartan invincibility. Also as long as these hostages remained in Athenian hands, the Spartans, who definitely wanted their comrades back, couldn't afford to raid Attica. The Spartans even asked Athens for an end to the war, but the Athenians, convinced by Cleon, refused, and the war dragged on.

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THE DECLINE OF THE POLIS (431-338 B.C.E.)

If the Persian Wars were the great epic of Greek history, the century of conflict between Greek poleis from 431 to 338 B.C.E. was its great tragedy. During this time, the Greeks wasted their energies fighting one another and left the way open for an outside power, Macedon, to come in and take over. There were three main lines of development that led to the final fall of the polis in the fifth and fourth centuries B.C.E.

Economic and military changes. First of all, the Persian wars exposed the Greeks to a wider world of trade as well as different military tactics that could threaten the powerful, but largely immobile hoplite phalanx. Athens especially adapted to these new challenges, relying more on trade, foreign grain, and a money economy, along with the navy and Long Walls to protect its empire. Growing fear of Athens and the resulting Peloponnesian War would force other poleis to adapt in order to be able to compete with Athens. Sparta, in particular, built a navy and, after the Peloponnesian War, relied increasingly on mercenaries to bolster its power. In addition, lightly armed troops known as peltasts were used to give Greek armies more flexibility.

As a result, more and more Greeks were drawn from the countryside by the lure of riches to be made as traders and mercenaries. Trade and a money economy grew in importance compared to the small family farms that had previously been the mainstay of the polis' economy. Also, warfare became professional, sophisticated, chronic, and expensive. This contrasted sharply with the previous style of cheap, amateur, and less destructive warfare waged by hoplite farmers over the last 250 years. Rising taxes to support this new style of warfare put increasing burdens on the farmer hoplites who started to decline economically, militarily, and politically. Gradually, large estates worked by tenant farmers or slaves would replace the small family owned farms worked by independent farmers. And once these farmers, the backbone of the traditional polis, went into decline, so did the polis itself. The Greeks were still a dynamic people, but the polis itself was starting to decay.

The spread of Greek civilization by way of its colonies to peoples outside of Greece triggered the second long term process affecting the polis. Many of these people assumed at least a veneer of Greek

culture and built quasi-Greek states that mimicked the Greeks in their organization, military institutions, and culture. Most notable of these states was Macedon, a region to the north of Greece that had acted as a buffer against aggressive tribes further north. In 359 B.C.E., one of these tribes, the Illyrians, killed a Macedonian king in battle. It was his successor, Philip II, who would build a strong kingdom on the ruins of this disaster. Like the economic changes then taking place, this spread of Greek civilization to Macedon would contribute to the downfall of the Greek polis.

Chronic warfare, beginning with the Peloponnesian war, was the third reason for the decline of the polis. There were three basic causes for this war which itself would trigger a self-destructive cycle. First, there was a basic underlying fear other poleis had of the dominant Greek state, which at this time was Athens. Second, there was the mutual hostility between individual poleis such as Corinth against Corcyra, Athens against Megara, and Thebes against Plataea. Finally, there was a fatal flaw infecting Greek diplomacy at this time. Since most poleis were tied to either the Peloponnesian League (Sparta's alliance) or the Athenian Empire, any conflict between individual members of the opposing alliances could eventually drag the whole Greek world into a much larger and more destructive war. It was such a flaw of interlocking alliances that would pull all of Europe and eventually much of the world into World War I in 1914.

All these factors led to an unfortunate pattern of wars that also would eventually destroy the polis. Triggering this pattern was a tendency of the poleis to gang up against the most powerful Greek state at that time. This would bring about not only the downfall of that state, but also the rise of another polis to dominance, causing the other poleis to gang up on *that* state, and so on. This cycle would repeat itself three times: first in the Peloponnesian War to bring down Athens, next in a series of wars that wrecked Sparta's power and brought Thebes to pre-eminence, and finally in the struggle against Thebes that would leave all of Greece open to attack by the growing Macedonian kingdom to the north.

Continuing warfare after the Peloponnesian War (404-355 B.C.E.). We have already seen in detail how Sparta defeated Athens in the Peloponnesian War. However, Sparta's victory hardly meant

peace for the Greek world. Many of Athens' subjects had joined Sparta, believing they would be free to run their own lives. Instead, the Spartans installed pro-Spartan oligarchies that were watched over by Spartan governors and garrisons in many poleis. Sparta also failed to turn over Ionia to Persia in return for its aid against Athens. Naturally, such high-handed actions angered both Persia and most other Greeks. Leading the way were the Athenians who replaced the repressive Spartan-backed oligarchy of The Thirty with a new democracy.

All this led to the Corinthian War (395-387 B.C.E.). The Spartans in Ionia could more than hold their own against the Persian forces there. However, what Persian armies could not accomplish, Persian gold could by funding Athens, Thebes, and Corinth against Sparta, which drew the Spartan forces out of Ionia and back to Greece. Persia also gave Athens a navy that crushed the Spartan fleet, sailed to Athens, and oversaw the rebuilding of the Long Walls. Sparta's gains from the Peloponnesian War were quickly slipping away.

Faced with such a powerful coalition, Sparta made peace with Persia, handing Ionia over in return for help against the other Greeks. In 387 B.C.E. Persia dictated a treaty called the King's Peace to all the Greeks, taking Ionia for itself, and putting its ally Sparta back on top of the Greek world. The irony of it all was that the Persians, without striking a blow, had accomplished what Xerxes' huge army had failed to do a century before.

Naturally, the Greeks, did not abide by this decision for long, with Thebes and Athens leading the resistance against Sparta. The Thebans drove the Spartan garrison from their citadel and formed the Boeotian League in direct defiance of Sparta and the King's Peace.

More than a lap dance. In 382 B.C.E., Sparta had treacherously seized the Cadmea, Thebes' acropolis, in a surprise move to control the city. Three years later, a group of Theban men, disguised as dancing girls, entertained and then murdered their unsuspecting Spartan guests and regained Thebes' freedom.

At Leuctra in 371 B.C.E., the Theban general, Epaminondas stacked one flank of his phalanx 50

ranks deep, crushed the opposing Spartan wing, and then rolled up the rest of their army. A similar battle at Mantinea nine years later destroyed the mystique of Spartan invincibility, and with it most of Sparta's power and influence. Unfortunately for Thebes, Epaminondas was killed, and with him died Thebes' main hope to dominate the Greek world.

Although Thebans had a reputation as brawlers and "fire eaters", Epaminondas' 50-deep formation used against Sparta must have required some training with the drill-and-march. Another of his innovations was greater use of cavalry, almost totally neglected by the Greeks till now, since nobles, unpopular with the democrats, filled their ranks. Despite this, Epaminondas actively enlisted their support, giving Thebes' army another edge. On the sidelines watching all this was a young hostage, Philip II of Macedon, who would later use these reforms to build his own army.

Meanwhile, the Athenians had formed a second Delian League with various Aegean states, promising to treat them better than they had treated the first Delian League. But Athens soon reverted to its old imperialist behavior. This triggered a revolt known as the Social War that ended Athens' imperial ambitions once and for all. Thus by 355 B.C.E., after 75 years of almost constant warfare, Athens' empire was gone, Sparta's army and reputation were wrecked, and Thebes' hopes for dominance were virtually laid to rest with Epaminondas. The polis' resulting exhaustion combined with the long-range forces undermining the polis due to the Persian Wars and Greek colonization left the polis in serious decline opened the way for a new power to step in.

The rise of Macedon (355-336 B.C.E.). Macedon was a country north of Greece inhabited by tribes speaking a dialect related to Greek. While the Greeks considered them barbarians, the Macedonians liked to think of themselves as Greeks, and had played a minor role in Greek history from time to time. However, Macedon had never been a strong power until Philip II came to the throne in 359 B.C.E. after invading tribes from the north had killed his predecessor.

Philip was one of the most remarkable figures in Greek history, only being overshadowed by his son

Alexander. He was a shrewd, ambitious, and unscrupulous politician who knew how to exploit the hopes, fears, and mutual hatreds of the Greeks to his own advantage. The key to much of Philip's success was control of the gold mines of Amphipolis, which gave him the money to do three things: build roads to tie his country together, bribe Greek politicians, and build up his army. Philip was an outstanding organizer and general who built what was probably the best army up to that point in history. Its main striking arm was an excellent cavalry, but it also utilized a phalanx armed with thirteen-foot long pikes (spears) and lightly armed peltasts. Together, these gave him the flexibility and coordination to deal with almost any situation on a battlefield.

Preferring diplomacy to fighting whenever possible, Philip was able to work his way into the confidence of various Greek states to undermine their resistance to him when he finally decided to strike. For example, he gained a foothold in Greece by defending Delphi from another city-state, Phokis. He also undermined Athens' power by taking and then freeing one of its allies and posing as the champion of all Greek liberties. Bit by bit, Philip worked his way southward, with only a few Greeks recognizing what was happening. Among these was Demosthenes, probably the greatest orator of the ancient world. In a masterful series of speeches known as *Philippics*, he repeatedly warned the Athenians of the danger to the north, but they did little.

A bit obsessive compulsive? While growing up, Demosthenes reportedly shaved half his head so he wouldn't be tempted to go out to play and neglect his studies. He also supposedly put pebbles in his mouth to help himself speak clearly, and developed a strong voice by speaking over the sound of the surf by the seashore.

Historians through the ages have blamed the Athenians for their failure to react well to the Macedonian threat. However, in all fairness, the Athens faced a difficult dilemma, since acting against Philip could have been as ruinous as not moving to stop him. On the one hand, failing to act against Philip would allow him to conquer Greece. However, on the other hand, without an empire to provide it with the full treasury it had the previous century, Athens could no longer sustain a prolonged war against such a power as Macedon.

Therefore, fighting such a war very likely would have wrecked Athens' finances and given Philip the victory anyway.

Athens and Thebes did finally band together to meet the Macedonians at Chaeronea in 338 B.C. A tricky back-stepping maneuver by the Macedonian phalanx lured the Athenians out of position, exposing the Thebans to the decisive cavalry charge led by Philip's eighteen-year old son, Alexander. Demosthenes and others fled the field, leaving their shields and Greek liberty in the dust. For all intents and purposes, the age of the Greek polis was dead. The age of Alexander the Great and the Hellenistic kingdoms was about to dawn.

The March of the Ten Thousand



Rhodian slingers hold off harassing Persian cavalry as the 10,000 Greeks try to fight their way out of the Persian Empire

One of the epic events in ancient history, known as the March of the Ten Thousand, was the journey of a force of Greek mercenaries out of the heart of the Persian Empire in an attempt to get home.

It started around 400 B.C.E., when Cyrus the Younger, a Persian prince, rebelled against his brother and king, Artaxerxes. By this time, the reputation of Greek mercenaries had made them eagerly sought after by Greek and non-Greek rulers alike, so Cyrus hired a force of 13,000 of them in his bid for the throne, but not telling them his real goal. Since the mercenaries had no real sense of Persia's interior geography, he was able to lead them along, not revealing his intent to overthrow his brother until they were already facing the Great King's army in Mesopotamia at a place known as Cunaxa. The Greek mercenaries won their part of the battle, easily plowing through and panicking the lightly armed Persian militia, but Cyrus was killed and the Greeks

found themselves stranded in the middle of the Persian Empire surrounded by hostile forces.

When Artaxerxes demanded their surrender, the Greeks replied by demanding *he* surrender to *them*, since they had won their part of the battle. Faced with this standoff, the Persians invited the Greek generals to dinner to talk, and then treacherously murdered them, leaving the Greeks both leaderless and stuck in the middle of a hostile land far from home with no real idea of how to get back.

Nothing daunted, the Greeks elected new generals and resolved to march and fight their home, striking north along the Euphrates. When harassed by Persian cavalry, they mobilized some makeshift cavalry and Rhodian slingers to protect their foragers. Leaving Mesopotamia, they then had to fight their way through Kurdistan, still inhabited by the fiercely independent Kurds, and struggle through the snows of Armenia, suffering from snow blindness. Finally, one day a cry went up: “Thalassa! Thalassa! (The Sea! The Sea!)” Having made it to the Black Sea, they knew they could find their way home.

After this, they signed on to fight for Sparta in the wars still raging in Greece. Their exploits were recorded by one of the participants, the Athenian Xenophon. That book, the *Anabasis*, became a “best seller” of sorts in Greece, pointing out the internal weaknesses of the Persian Empire and inspiring Alexander the Great (who always kept a copy close at hand) to conquer the Persian Empire for himself.

Athens Wins Back its Freedom



Thrasyboulos leads his fellow democrats against the regime of Critias and The Thirty in the battle between Athens and the Piraeus.

Critias, leader of the oligarchy of the Thirty, was a particularly nasty ruler who purged people largely on hearsay and to confiscate their property. Among his victims was Lysias, a metic (resident alien) and speechwriter for the courts. We still have his frightening account of being arrested by the Thirty and charged with treason, and of his harrowing escape from Athens after bribing a guard.

Thebes, which was starting to turn against Sparta, was a major refuge and gathering spot for a growing number of Athenian exiles led by a man named Thrasboulos. Having gathered enough strength in Thebes and support at home, they made moveD on Athens. Unfortunately for Critias and the Spartans who supported him, Sparta had torn down the Long Walls, leaving the way into Athens wide open. The democrats first rallied the people in Athens’ port, Piraeus, and then moved against the government. The two sides met between Athens and the Piraeus. Critias was overthrown, the garrison of 700 Spartans in the Acropolis was allowed to go home, and the Athenians reestablished their democracy.

Soon afterward, Conon, the one Athenian general at Aegospotami with the presence of mind to save six ships from the Spartans, showed up with a Persian-funded fleet. Having a navy once again, the Athenians rebuilt the Long Walls to secure contact between Athens and its port of Piraeus.

Socrates' trial and death



Jacques Louis David's painting of the death of Socrates

In 399 B.C.E. Socrates was tried for corrupting Athens' youth. This was largely an attempt to find a scapegoat for Athens' recent defeat by Sparta and Critias' subsequent reign of terror, since two of Socrates' students, Alcibiades and Critias, had been involved in the city's recent troubles. When convicted and asked to propose a punishment, Socrates suggested free meals for life and a state pension for his time and efforts in trying to improve society. The jurors were not amused and sentenced him to death by drinking hemlock.

While waiting for the final sentence to be carried out, Socrates refused an offer from followers to help him escape, saying he had lived under Athens' laws for seventy years, so who was he to go against them when they didn't suit him. Therefore he took the poison and died peacefully, although not as peacefully and painlessly as Plato would have us believe in his dialogue, *Crito*, where the hemlock produces a gradual numbness that creeps up from the extremities to the vital organs. In reality, hemlock produces violent convulsions before finishing off its victim. It's still better than crucifixion, which was also used as a form of execution.

The New Warfare



Athenian peltasts (left), led by Iphicrates, ambush and wipe out a Spartan force at Lechaemum in 391 B.C.E. using hit and run tactics.

The Persian Wars had taught the Greeks the value of light-armed troops, causing them to increasingly use *peltasts*. Originally the term *peltasts* referred to the light crescent shaped shields and the lightly armed Thracian troops who carried them, but later it denoted any light-armed Greek troops.

A blow to Spartan invincibility. In 391 B.C.E. at Lechaum near Corinth, a force of Athenian peltasts led by a general, Iphicrates, ambushed and wiped out a force of 600 Spartan hoplites whose heavy armor and tight formation kept them from coming to grips with their enemy.

Greek hoplites' shields and armor (below left) also got lighter in the fourth century B.C.E., with more open helmets replacing the all encasing Corinthian helmets, layers of linen glued together replacing bronze for body armor, and boots, known as *iphicratids* (named after an Athenian general), replacing the bronze greaves (shin guards). While this gave hoplites more mobility, it also gave them less protection and probably led to higher casualty rates in Greek battles. The only compensation was a longer spear to keep the enemy at bay. But this was only useful if used in large numbers in a tightly drilled formation, which the increasing use of mercenaries did allow.

Over time, there was an increasing convergence between the hoplite and peltast (below right) as the peltast's shield became larger, he assumed a helmet and light armor, and also carried a thrusting spear in addition to javelins for hand to hand combat.



Epaminondas and the Brief Ascendancy of Thebes



Although Thebans (above) had a reputation as brawlers and “fire eaters”, Epaminondas’ 50-deep formation used against Sparta must have required some training with the drill-and-march. Another of his innovations was greater use of cavalry, almost totally neglected by the Greeks till now, since nobles, unpopular with the democrats, filled their ranks. Despite that, Epaminondas actively enlisted their support, giving Thebes’ army another edge. On the sidelines watching all this was a young hostage, Philip II of Macedon, who would later use these reforms in building his own army.

Epaminondas of Thebes (c.418-362 B.C.E.), along with another man, Pelopidas, would lead Thebes to its brief moment of glory. A follower of the Greek philosopher, Pythagoras, he was an ascetic who owned only one cloak (which kept him at home naked on laundry day), was vegetarian, and believed in reincarnation and equality for women. He spurned wealth, women (never

marrying), wine, and rich foods, seen in antiquity as the four main sins. He was a visionary leader who organized the region of Boeotia around Thebes into a democratic federation, trained its army in new tactics, and made it believe it could even beat Sparta. After four uncontested invasions by Sparta, Epaminondas finally convinced the Thebans and surrounding Boeotians to face them at Leuctra in 371 B.C.E.

The place of honor in Greek phalanxes was traditionally the right flank, since a hoplite’s right side was unshielded and most exposed to danger. However, with both sides typically putting their best troops on the right, it was troops on the left that faced the enemy’s toughest hoplites. At the Battle of Leuctra, to show the rest of the Boeotians that the Thebans, who usually fought on the right, were willing to take the greatest risks, Epaminondas put them on the left opposite the Spartans. To even the odds, he stacked this phalanx 50 ranks deep.

He also placed the Thebans in advance of the rest of the Boeotian army so they could finish off the Spartans first. Although the Spartans were a bit drunk and overconfident, not having lost a hoplite battle in living memory, they fought well, but there was no way they could withstand the onslaught of a 50-deep phalanx. Once they were defeated, their Peloponnesian allies, who were less than enthusiastic in fighting for Sparta anyway, broke and ran.

One thousand Spartans, including 400 of the rapidly dwindling full *Spartiate* class had died, and with them perished the aura of Spartan invincibility. When news of the crushing defeat at Leuctra reached Sparta, the women whose men had died fighting walked with their heads proudly held high, while those whose men had survived hung theirs in shame.

Epaminondas realized that to crush Sparta once and for all, he must destroy its power base. Therefore, he invaded the Peloponnesus, inciting revolt among Sparta's reluctant allies. In Arcadia he founded Megalopolis, whose great theater and walls survive today. (It would become the capital of the Achaean League in the Hellenistic era.) Picking up more support, he invaded Messenia and Laconia, freeing thousands of Helots, whose one wish, according to the historian Xenophon, was to eat the Spartans raw. The Spartans holed up in their city, refusing to come out and fight an invading force that may have been 70,000. However, the Spartans' reputation prevented Epaminondas from invading the city.

In 362 B.C.E., Epaminondas again defeated the Spartans, now allied with the Athenians, at Mantinea. However, Epaminondas was killed in the battle, depriving Thebes of its great leader and one chance to emerge as the great power in Greece. That left the way open for Philip of Macedon.

Philip II's Military Reforms



The Macedonian phalanx, being 16 men deep and using 13-foot long pikes known as *sarissas*, was like a human porcupine.

The army with which Philip II conquered Greece and his son Alexander conquered Persia was largely the culmination and synthesis of the various military innovations taking place in Greece at the time: peltasts, cavalry, siege engines, and a new twist on the phalanx. The genius of Philip and Alexander was how they welded

all these elements into an army that was greater than the sum of its individual parts, since it could adapt to any situation.

The Companion cavalry may have been history's first shock cavalry, using the impetus and shock of the horse's charge to drive back an enemy. The trick was to keep from flying backward off the horse upon impact, because the stirrup, which helps the rider keep his place, had not been invented yet. One theory is that the Macedonians were trained to release their lances at the moment of impact. While this would reduce the impact of the lance hitting an opponent, it was probably adequate since most cavalry then wore little or no armor.

The Macedonian phalanx. Phalangites (members of the phalanx) wore light or no armor, but were protected by their longer pikes which, when leveled would project more than five rows forward, making a virtually impenetrable wall of iron. The back ranks would twirl their upraised pikes to deflect incoming arrows and javelins. Obviously, something this coordinated required endless training compared to the much simpler Greek phalanx. The phalanx was largely the anvil for the cavalry's hammer, its main task being to hold pin down the opposing part of the line while the cavalry turned its flanks.

Siege engines. Philip also adopted torsion-powered siege engines that used the energy stored in and released from twisted ropes to propel arrows and stones. It seems that Dionysius of Syracuse pioneered these new contraptions around 400 B.C.E. Philip further developed them and made them easily dismantled so the parts could be loaded on pack animals and reassembled when needed. Philip's son, Alexander, would make great use of these devices, sometimes to psychologically unnerve opponents who had never seen such things.

The End of the Polis: Philip II conquers Greece



Wax image of Philip II of Macedon based on an ivory head found in his grave

After the death of Epaminondas in 362 B.C.E., there was no one power to stop the encroachment into Greece by Philip II. He got his foot in the door with the Third Sacred War (356 BC- 346 BC). This was caused by the Greek polis, Phocis, seizing Delphi and using its treasures to support a large army of mercenaries. When the Phocian leader, Onomarchus defeated Thebes and the Boeotians, Philip came to the “rescue” by defeating the Phocians and recovering the holy site of Delphi. Having interjected himself into Greek politics, he never left.

Guns or butter: Athens’ dilemma in Fighting Philip II of Macedon. As Philip kept expanding southward, the Athenian orator Demosthenes kept calling for a major military buildup action to stop the Macedonian king. This would involve a Rapid Deployment Force (RDF) of 50 triremes and 10,000 troops always ready to more plus another 10 triremes and 2000 men always fighting Philip.

However there was a major problem with this: money. Demosthenes’ proposed RDF would cost 160 talents of silver each year and the smaller force another 92 talents. At the height of Athens’ power in the fifth century B.C.E., its revenue had been about 500 talents of silver per year. However, after its defeat in the Peloponnesian War and subsequent loss of both empire and business in general, yearly revenues by 355 B.C.E. had dropped to 130 talents, not

nearly enough to pay the 252 talents Demosthenes’ proposed force would cost.

To revive its economy, Athens set up the Theoric Fund in the late 350s to develop its harbor and trade, and by 339 B.C.E. its annual income was back up to 400 talents. This could fund the proposed force of 12,000 mercenaries and 60 triremes, but could Athens afford such a drain on its economy? And even if it could, a force this size would be no match for Philip, who had 32,000 soldiers at the Battle of Chaeronea in 338 B.C.E. Most likely, such a force in a prolonged war with Macedon would have quickly depleted Athens’ treasury. Whether it fought or sat back and saved its money for more peaceful pursuits, Athens would probably have fallen to Macedon. Even adding what meager forces other *poleis* could and were willing to contribute, and the story would still be the same. The days of the independent polis were numbered. *The final blow* came at Chaeronea in 338 B.C.E. against the combined forces of Athens, Thebes, and various other allies and showed the advantage of a professional army over part-time citizen hoplites. Philip began with a tricky feigned retreat by his phalanx (something only well-drilled professionals could pull off without losing order). This drew the Athenians and allies out of position, leaving a gap in their line that exposed the Theban left flank. Philip’s 18 year old son, Alexander charged with the Companion cavalry into this gap taking the Thebans from the flank & rear. Seeing their Theban allies defeated, the other Greeks broke and ran. Only Thebes’ Sacred Band of 300 (below) stood their ground where they fought & died to a man.



Philip realized he couldn't rule the Greeks as a king. So he formed a supposedly free association of Greeks (except Sparta), the League of Corinth, whose avowed purpose was to wage a war of vengeance against Persia, thus giving the Greeks a common cause for which to fight. Unfortunately for Philip, he was murdered in 336 B.C.E. as he was about to set out on this campaign. Succeeding him was his even more remarkable son, Alexander III, known to history as Alexander the Great.

For all intents and purposes, the age of the polis had ended.

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ALEXANDER THE GREAT AND THE HELLENISTIC AGE (336-31 B.C.E.)

The period of the Greek polis before the Macedonian conquest of Greece and Alexander the Great's conquests is known as the *Hellenic Age* and is concerned primarily with the narrow world of Greek poleis in Greece and the Aegean. The three centuries following Alexander's death are known as the *Hellenistic Age*, during which period Greek influence was spread across Asia far beyond the Greek homeland.

Alexander the Great (336-323 B.C.E.). Philip of Macedon was smart enough to realize that it would be wise to rule the Greeks as leniently as possible. Therefore, instead of occupying Greece, he formed all the poleis (except Sparta which he left alone) into a league whose purpose was to invade Persia and supposedly avenge Xerxes' invasion from 150 years before. He even called it the Corinthian League to make the Greeks think it was for their benefit. But, with Philip as president, everyone recognized quite well who was in charge and that the era of the free polis was over, at least for the time being. Then, in 336 B.C.E., the opportunity for revolt suddenly presented itself when Philip was assassinated.

Philip's successor was Alexander III of Macedon, known to us as Alexander the Great. Few figures in history have inspired so many tales of romance and adventure. This is easy to understand when one looks at a map of Alexander's empire, and considers it took him only eleven years to conquer it.

When Alexander came to the throne, he was only twenty years old, although he had excellent training and experience for someone so young. He had received a tough, almost Spartan, training from a man named Leonidas. Then, at age thirteen, he was tutored by the Greek philosopher, Aristotle, who trained Alexander's intellect as intensively as Leonidas had trained his body. Largely because of his education, Alexander displayed both an incredible physical toughness and intellectual genius. Those qualities, combined with early campaigns against northern tribes and at the battle of Chaeronea, made the young king more than ready to assume power. However, the various Greek city-states did not realize this until it was too late. Almost immediately after Philip's death, the Greeks, led by Thebes and Athens, raised the standard of revolt. The young king was at their

gates so quickly that they could not believe it was really Alexander. A quick surrender saved them this time, but a second revolt by Thebes upon a rumor that Alexander had died while campaigning against tribes in the north led to a second rapid descent by the Macedonian king and the destruction of Thebes as a warning to other Greeks.

Alexander then prepared to pursue his father's plans to conquer Persia. For the next eleven years, from 334 to 323 B.C.E., he carried out one of the most amazing campaigns of conquest in history, only being rivaled by the Mongols under Chinghis Khan. During that time, his army marched over 21,000 miles, covering terrain ranging from the hot plains of Mesopotamia to the Hindu Kush Mountains and the hot humid environment of India. He even conquered Bactria, modern Afghanistan, something Soviet forces failed to do in the 1980's using advanced modern weaponry. Such feats required Alexander's brilliant and flexible mind. Whether faced with the massive armies of Darius III, the island fortress of Tyre, the mountain stronghold known as the Sogdian Rock in Bactria, or crossing the rain swollen waters of the Jhelum River in the face of a hostile Indian army, Alexander could always come up with an ingenious, and usually unexpected solution to the problem.

Alexander's success was also largely due to his charismatic personality. He knew thousands of his troops by name, and shared the dangers of battle and the fruits of victory equally with them. He could put down a mutiny with a mere speech reminding his soldiers of their shared exploits, or shame his troops to action by leading an assault alone. Ironically, in the end, the only army that halted his advance into Asia was his own. Tired from years of marching and fighting, and thousands of miles from home in the hot, humid plains of India, they refused to go any further. It was only then that Alexander turned around and went back. Soon afterwards in Babylon, he died, struck down by fever. Although on his deathbed, he let his troops file through his tent for one last farewell to their dying king and comrade. He was only thirty-three years of age when he died.

Various factors besides his personality aided Alexander. His father left him an excellent, well-drilled army that Alexander constantly experimented with to adapt to the changing conditions of his campaigns. The Persian Empire at that time was also in a state of decay and ruled by a timid king, Darius III, whose tendency to panic in

battle cost him two large armies and his empire. Still, Alexander met some fierce resistance, especially in Bactria and India, and had to prove his abilities as a general constantly. In the end, Alexander's immortality was assured by his early death that gave rise to a wealth of romantic legends surrounding this handsome young man who conquered most of the known world.

Alexander's successors and the establishment of a new order (323-c.275B.C.E.). Alexander died leaving only a mentally unfit half brother, Philip Arrhidaeus, and a pregnant wife, Roxanne, who eventually gave birth to a son, Alexander IV. Neither of these was capable of ruling, which left the job of organizing and ruling Alexander's empire to his generals. Rarely, if ever, has a more capable and ambitious group of men been gathered in one place with such an empire at stake. As one might expect, a long and bitter struggle for control of the empire ensued.

The basic pattern of these wars was that one general would gather a large amount of power into his hands, which would drive the other generals to unite against him before he took everything and destroyed them. As a result, no one was able to control all of Alexander's empire, which had fragmented by 275 B.C.E. into three large kingdoms: Antigonid Macedon, Seleucid Asia, and Ptolemaic Egypt.

The first of these kingdoms, Macedon, was ruled by the Antigonid dynasty. The Antigonids also tried to maintain control of Greece, but were only able to hold onto various strategic cities from time to time. Opposing the Antigonids and each other were the Aetolian and Achaean Leagues, which commanded the allegiance of most of the cities in Greece. Greece during this period saw a confusing and continuous power struggle between these leagues, Macedon, and various independent city-states such as Athens and Sparta. In the end, no one gained control and everyone was worn out from all this constant bickering. This set the stage for Rome to come in and finally establish long lasting peace and stability through its conquest of Greece in 146 B.C.E.

The bulk of Alexander's Asian lands were united under the Seleucid dynasty, founded by Seleucus I. Because of the size of their Empire, the Seleucids did what they could to attract Greek and Macedonian soldiers, artisans, and merchants to settle in their realms. Although many Greeks and

Macedonians were willing to abandon their poorer homelands for the promise of wealthier horizons to the east, they were still few in number compared to the native population they ruled. Most Greeks and Macedonians coming to settle in Asia were concentrated in the many Greek style poleis founded by the Hellenistic monarchs. The Seleucids in particular were great founders of cities, seeing each one as an island of Greek power and culture in the midst of a hostile Asian sea. Outside of these Greek cities, native culture continued, largely untouched by Greek civilization. Most of these colonies were concentrated in the western parts of the empire, especially in Asia Minor and Syria, the most famous being the Syrian city of Antioch. In the vast interior of the eastern part of the empire, the cities were few and far between, and the influence of Greek culture was confined to the cities, reaching very little into the countryside. Even in the western parts of the empire, Greek influence rarely spread outside of the cities.

Such a widespread realm had virtually no cohesion, making it very difficult to hold together. Almost immediately after Seleucus I founded his dynasty, the fringes of the empire started to splinter. Seleucus first let his Indian lands go to the great Indian king, Chandragupta, in return for 500 war elephants. Asia Minor also started to fragment when Attalus, king of the city-state of Pergamum, started to carve out a kingdom in the western and southern parts of the peninsula. Soon other states such as Bithynia, Pontus, and Cappadocia were also emerging in Asia Minor. This left Syria, Palestine, and the Asian heartland to the Seleucids. A new tribe, known as the Parthians, invaded from the northeast and kept chipping away at the Seleucid lands until all that remained were the lands around Antioch in Syria. In 64 B.C.E., the Roman general, Pompey, finally put an end to these pathetic remnants and replaced Greek rule in the East with that of Rome.

The last, most successful, and longest-lived kingdom was in Egypt, founded by another of Alexander's generals, Ptolemy. He clearly saw that no one would be able to hold all of Alexander's empire together. Therefore, he went for a more realistic and limited goal, taking Egypt, which was rich and fairly isolated from invasion. All the kings of this dynasty were named Ptolemy and ruled much as the pharaohs had done for centuries. They were absolute rulers over a highly centralized state. All land was owned by the king and worked by the peasants for his benefit. Government monopolies

on grain, oil, metals, glass, and papyrus also swelled the king's treasury, making Ptolemaic Egypt the richest of the Hellenistic kingdoms.

The Ptolemies copied the pharaohs of old by practicing brother-sister marriages. Thanks largely to that, the last ruler of the dynasty, Cleopatra VII, was pureblooded Macedonian. She was also the only Ptolemaic ruler in 300 years to learn to speak the Egyptian language of her subjects.

The showpiece of the Ptolemaic kingdom was Alexandria, which was founded by Alexander in 330 B.C.E. and destined to be the greatest of all Hellenistic cities. It was here that the Ptolemies established possibly the finest library and university up to that point in history. The library had an estimated 700,000 scrolls and was the largest collection of books in the ancient world. Unfortunately, it was destroyed by several fires set off by wars and riots that occasionally rocked Alexandria throughout its history. There is no telling how much ancient knowledge was lost as a result.

The Museum, or university, in Alexandria was also another splendid example of royal patronage. It had some 14,000 students along with botanical gardens, a zoological park, and a medical school. It was here that many of the greatest minds of the day converged to develop and show off their talents. As a result, ancient Greek science saw many of its greatest advances in Alexandria during this period. Finally, there was the Lighthouse of Pharos, which was 100 feet tall and cast a beacon for 30 miles. It supposedly had a steam-powered foghorn and a system of mirrors much like a periscope, so that people on ground level could survey the horizon from the perspective of being on top.

One primary feature of Hellenistic cities was urban planning, pioneered by the 5th century architect, Hippodamus of Miletus, who laid out his city in a rectangular grid. The Romans would inherit this style of urban planning and use it for their cities. It is still the dominant layout for our cities and towns.

The Ptolemies' main rivals were the Seleucid rulers of Asia. These two powers clashed constantly for a century over control of Syria and Palestine, with the Seleucids finally winning the struggle. The Ptolemies also built a large navy and had political

and economic interests in Asia Minor. Egypt's wealth and stability made it the last of the Hellenistic kingdoms to fall, as with the others, at the hands of Rome. In 31 B.C.E., in a naval battle at Actium off the coast of Greece, the combined fleets of the Roman general, Marc Antony, and Cleopatra were destroyed by another Roman, Octavian. This marked the end of Hellenistic Egypt, and also the Hellenistic era, although to a large extent, Roman civilization was a continuation of Hellenistic civilization.

The Ptolemies experimented with training Egyptian peasants in phalanx tactics, using them at the battle of Raphia in 217 B.C.E., one of many battles between the Seleucids and Ptolemies over Syria and Palestine. Although the Egyptians fought well, their new status as soldiers encouraged them to agitate for more rights, thus destabilizing the Ptolemaic state for the next 200 years.

Hellenistic civilization differed in several respects from that of the preceding age of the polis and was characterized by three features. First of all, Hellenistic civilization was on a much larger scale than that of the polis. For example, Hellenistic armies were much larger than the armies of the old Greek city-states. Whereas before, a Greek army of 10,000 hoplites was considered large, Hellenistic armies often totaled 60-70,000 men. There were also many non-Greek elements in Hellenistic armies, in particular large stables of war elephants whose purpose was to overpower and trample enemy formations much like modern tanks do. However, the heart of the Hellenistic army was still a phalanx of Greek and Macedonian troops. Navies were also larger in size and number. The limited numbers of skilled rowers led to a return to boarding and grappling tactics that required less skill and finesse than ramming and clipping.

Along these lines, trade was on a much larger scale than in the old Greek world centered around the Eastern Mediterranean and Aegean Seas. Alexander's conquests largely fused the Greeks' Mediterranean centered economy with the Asian centered economy of Persia. Commerce flourished between the Greek and Persian worlds, with trade links being established as far east as India and China, creating a virtual world economy. The volume of trade was also large. Ptolemaic Egypt was able to export an estimated 20,000,000 bushels of grain each year. This made Hellenistic

civilization much richer than the older Hellenic civilization, which made much more money available for the patronage of cultural pursuits. The best example of this was in Alexandria, the capital of Ptolemaic Egypt, already discussed above.

The second feature of Hellenistic Civilization caused by its large scale was the large number of older cultures it ruled over and was subsequently influenced by. Babylonian math and Egyptian medicine were the most notable examples of this influence. However, the fusion of cultures took place as far away as India and Bactria, where an interesting dialogue was written down between a Buddhist monk and Menander, the Greek ruler of a Greek kingdom which controlled Bactria and Northwest India in the third and second centuries B.C.E. Greek sculpture also had its influence on the Gandharan style of Buddhist sculpture as seen by the portrayal of curly haired Buddhas, even though the Greeks were the only ones in the area with curly hair. This influence even filtered as far east as China where the curly haired motif of Buddhas showed up.

The third aspect of Hellenistic civilization to note was that Greek influence was dominant and spread widely across Alexander's empire, especially throughout the Middle East as seen in the widespread use of Koine (common) Greek in the cities there. For example, the New Testament of the Bible was written in Koine Greek rather than Hebrew since it could reach more people that way. However, as mentioned above, the small numbers of Greeks and Macedonians compared to the numbers of peoples they ruled meant that they stayed concentrated in the cities and their cultural influence rarely reached the peasants in the countryside.

Pitch to stress accents. Some believe that before the Hellenistic period, Greek was spoken with tonal, instead of stress accents. However, the spread of the use of Greek across the Hellenistic world led to Koine Greek, which used stress accents that were easier for non-Greeks to learn and speak.

Hellenistic accomplishments. Because of the expansion of trade, its wealth, and contact with other cultures and ideas, Hellenistic civilization flourished in a variety of areas. Prominent among these were medicine, philosophy, math, and

mechanical science. In medicine, the center of research and development was Alexandria, where researchers came up with several new findings. They used dissections to show the distinction between arteries and nerves. They learned to use the pulse for diagnosis and saw the heart as a pump with valves. They were even able to control bleeding with tourniquets and surgically remove hernias, bladder stones, and hemorrhoids.

Despite these findings, there was still no comprehensive understanding of how the human body operates as an integrated system of organs. For example, Greek physicians thought the heart only pumped blood out of the heart and had no concept of the circulatory system, believing the body produced new blood rather than recirculating and oxygenating it in the lungs. It would not be until the 1600's that serious progress would be made beyond the Greeks in our understanding of human anatomy and physiology.

In philosophy, several new ideas emerged. One of these, Stoicism (named after the colonnaded walkway, or *stoa*, in which it was taught in Athens), stressed, among other things, doing one's duty and bearing up under hardship. Even today, the term *stoic* is used to denote someone who bears adversity with strength and courage. The other major new philosophy to emerge was Epicureanism. This said our main goal in life is to avoid pain. Many people misinterpreted this to mean we should live a hedonistic, "eat, drink, and be merry" lifestyle. The term *epicurean* still denotes this sort of attitude. However, Epicureus, the founder of this philosophy, saw such a lifestyle as ultimately destructive, and therefore exactly the opposite of what he was striving for. Rather, we should live moderate sensible lives. This and his idea that God exists, but is totally detached from events on earth, would have a profound influence on the philosophy of Deism during the Enlightenment in the 1700's.

There were also considerable accomplishments in mathematics and mechanical science during the Hellenistic Age. Greek mathematicians mainly excelled in geometry, since they did not have place value digits or the zero, both of which are needed for higher level computations. Euclid wrote a geometry book whose proofs are still used in schools today. Eratosthenes, another mathematician working in Ptolemaic Egypt, accurately calculated the circumference of the earth by measuring the different lengths of shadows of two sticks two hundred miles apart at high noon on the summer

solstice. However, Eratosthenes' calculation was ignored in favor of a much smaller estimate of the earth's size. This was important, since the smaller estimate of the size of the globe would give captains the courage to sail the high seas during the Age of Exploration.

In mechanical science, the steam engine was invented by Hero of Alexandria and used for various toys and tricks to amaze people, such as opening temple doors. However, people having plenty of cheap slave or poor labor, found few practical uses for steam power, and it was eventually forgotten until the 1600's in Western Europe when there was a need for labor saving devices. Finally, there was Archimedes of Syracuse who demonstrated the properties of water displacement. He also defended his city from a besieging Roman army by designing catapults and fantastic machines, such as giant cranes for picking up and dropping enemy ships beneath Syracuse's walls. Thanks largely to Archimedes' devices, Syracuse held out for two years before the Romans broke in. Archimedes died in the sack of the city, totally absorbed in a math problem and oblivious to the havoc going on around him.

Conclusion. If one looks only at how many people were directly affected by Greek culture during the Hellenistic Age, then the Greeks would seem to have failed to spread their culture. However, looking at numbers alone to assess the success of the Hellenistic Greeks is deceptive. While Greek culture was largely confined to Greek cities, the high culture of most civilizations was also confined to their cities as well. It is true that Greek culture had little lasting impact in Mesopotamia and farther east. However, its impact in Asia Minor, Syria, Palestine, and Egypt was quite profound. The fact that Koine Greek became the common language spoken throughout the Eastern Mediterranean cities and was the original language of the New Testament says a great deal about Greek influence.

Just as important, if not more, the Romans, coming into contact with the Hellenistic East, would adopt Greek culture as their own and pass it on to our culture developing in Western Europe. The Romans' successors in the East, the medieval Byzantines (Greeks), would also pass Greek civilization directly on to Western Europe and to the Muslim Arabs. They, in turn, would add to Greek math and science and then pass it on to Western Europe through Muslim Spain. Thus Europe received its Greek heritage from three separate

sources. That alone should show the importance of the Greeks to our own culture, and how, thanks to the diffusion of Greek culture during the Hellenistic Age, the Greeks are still very much with us.

Why Alexander the Great?

What, if anything, earned Alexander III of Macedon the title the "Great"? The most obvious answer is the huge empire he conquered in only 11 years, marching with his army across 23,000 miles of some of the planet's most difficult terrain.

From Alexander's point of view he was following the heroic tradition of his ancestor, Achilles. His first stop in Asia was at Troy to visit the tomb of his heroic ancestor. For many of his Macedonian followers, that and Alexander's own exploits in battle were enough to count him great.

In addition, a whole body of romantic legends grew up around Alexander, linking him to other cultures, making it even harder to separate fact from myth. Persian legends had him exploring the depths of the sea in a diving bell. Into the 20th century, Afghan tribes would claim any child with blue eyes was descended from Alexander or that their horses were descended from Alexander's horse, Bucephalus.

However, Alexander's campaigns killed untold thousands, many of them innocent civilians. To them, he must have seemed to be nothing more than a thug or power mad lunatic.

His campaigns did transform the world that came afterward, but so did the careers of Mao, Stalin, and Hitler, the three biggest killers in history (in that order), but we don't call them great...yet. There are people even now who yearn for the good old days of those dictators, so who knows how future historians will judge them? Keep in mind that Peter I of Russia was largely hated in his day for the brutal methods he used to modernize Russia, and today he is also called the Great.

So, in the end, what made Alexander "Great"? In the narrow sense, he was a remarkable general and leader who successfully took his

army on the most epic march in history and got at least some of them back home so they could build his legend. Also, he died young, so that image of a fallen Achilles cut down in the bloom of youth remained frozen in people's minds. Therefore, it's easy to see why this wildly successful young warrior is remembered as "the Great" as long as we forget the thousands of corpses on which that legend was built..

Except that good history should never let us forget.

Alexander's Early Years (356-336 B.C.E.)



Alexander and his horse,
Bucephalus

The taming of Bucephalus. One of the most famous legends about Alexander was how, at age nine, he tamed a horse so wild that Philip, Alexander's father, was about to have it destroyed. Alexander made a deal with his father that if he could tame the horse he could keep it. Seeing the horse was afraid of its shadow, he turned it toward the sun and then mounted it without any trouble. That horse, Bucephalus ("Ox-head") was Alexander's primary war charger until it died of wounds in India, nearly 20 years later.

The Persian ambassadors. Another story of the young Alexander concerned some Persian ambassadors visiting his father's court. Instead of asking them childlike questions about such things as elephants and their funny clothes, he interrogated them about the size of their empire, its roads, its form of government, its king, its army, and so on, as if he were already planning its conquest. Maybe he was.

Alexander had excellent training and education. At age thirteen, after a tough, almost Spartan, training from a man named Leonidas, the Greek philosopher, Aristotle, tutored him, training his intellect as intensively as Leonidas had trained his body. As a result, Alexander displayed both incredible physical toughness and intellectual curiosity. Those qualities, combined with early campaigns against northern tribes and leading the decisive charge at the battle of Chaeronea, made him more than ready to assume power.

Alexander's parents also strongly influenced his character. His charismatic and mystical side came from his mother Olympias, a princess from Epirus and devotee of Dionysus who kept snakes as part of her rites. His father, Philip, gave him his cool analytical talents. Together, they made him a brilliant and charismatic leader able to inspire his men to follow him to the ends of the earth.

Olympias and Philip had a stormy relationship, mainly over his various politically motivated marriages, which sparked her fear for Alexander's position as heir to the throne. She even told her son that he was really the son of Zeus who came to her in the form of a snake one night. This seriously damaged Alexander's relationship with his father, although his only conceivable competition for the throne was a mentally unfit half-brother, Philip Arrhidaeus. Rumor had it that Olympias had poisoned him as a child to damage his brain. Even if she didn't, she probably wasn't above such things.

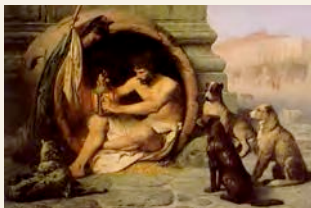
Things came to a head at one of Philip's weddings when the bride's father offered a toast that Philip's new wife would give him a *legitimate* heir, probably referring to Olympias' non-Macedonian origins. An argument ensued between Alexander and Philip who staggered drunkenly toward his son with a spear, but fell flat on his face. After remarking how Philip wanted to conquer Persia, but couldn't even cross the room Alexander left the court for several months before finally returning.

But Alexander had certainly been groomed for the throne. At age 16, Philip left him in charge as regent while away, during which Alexander launched a campaign against some northern tribes and then founded a city named after himself, the first of some 25 such Alexandrias. At 18, he led the decisive cavalry charge at Chaeronea, the battle that gave Philip control of Greece, Philip supposedly remarking he was sorry he couldn't leave a kingdom big enough for his son.



Diogenes the Cynic. After Chaeronea, Alexander had the honor of returning the ashes of the fallen Athenians to Athens. On this, his only visit to Athens, he met the Cynic philosopher, Diogenes, whose life was an ongoing protest against society's corruption. The term cynic supposedly came from the Greek word for dog (cynos), since they shamelessly lived on the streets like dogs.

Diogenes supposedly lived in a large tub, going about Athens with a lantern in the daytime, claiming to be looking for an honest man, but never finding one. Alexander found him sitting in a hole in the beach and asked what he could do for him. When Diogenes told him to stop blocking his sunlight, Alexander said if he were not Alexander, he would want to be Diogenes.



In 336 BCE, Philip was assassinated during the procession for his daughter's marriage. The assassin was immediately killed, causing some to suspect Alexander was behind the murder and had the assassin killed to keep him from revealing the details of the plot. The debate

continues. Whatever his involvement in Philip's murder, Alexander moved quickly to secure his claim to the throne, gaining support from the army and generals.

Philip's death sparked revolts by both Greeks and the northern tribes against the young king. Alexander and his army moved with such speed that neither the Greeks nor northern tribes had time to prepare for his arrival. When Thebes led a second revolt, Alexander had the city destroyed as a warning to other Greeks, sparing only its temples and the house of the poet Pindar. Having secured his throne, he was now ready to embark on the great adventure across Asia.

God of War (334-330 B.C.E.)



Alexander leads the Companion Cavalry across the Granicus River in his first major battle in the conquest of Persia.

In 334 BCE, Alexander launched his invasion of Persia, officially to avenge the Persians' burning of Athens 150 years earlier. He landed with an army of some 35,000 Macedonians and Greeks at Troy, where his supposed ancestor, Achilles, had fought in the legendary Trojan War. Alexander, who supposedly slept with a dagger and a copy of Homer's *Iliad* under his pillow, performed a ritual dance at Achilles' tomb to mark his entry into Asia.

For the Macedonians, who liked to claim Greek heritage but were still very tribal and locked into a more old-fashioned heroic tradition, this probably had greater significance than it did for the Greeks, who were more urbane and looked down on the Macedonians as barbarians more than as Greeks. However, that might not have been so true of the Greek mercenaries in the army, who were by and large uneducated and more open to a macho heroic tradition.

Alexander's first major battle was against Persia's western satraps at the Granicus River in 334 B.C.E. Seeing the Persian cavalry perched on the edge of the opposite bluff where it was too steep for them to charge down against him, Alexander led his Companion Cavalry and light infantry across the river.

A furious melee ensued as the Macedonian cavalry slammed into the Persians. However, the Macedonians' longer lances and heavier armor, combined with the fury of Alexander in the lead, scattered the Persian cavalry, leaving the Persians' Greek mercenaries isolated and surrounded.

Alexander let any Persians surrender, since they were just obeying their king. However, he saw the Greek mercenaries as traitors and had all but 2000 of them killed, the survivors being sent to a hellish life in Macedonia's mines.

After the Granicus, Asia Minor lay open to Alexander, who liberated the Ionian Greeks, a stated goal of his campaign. One major problem was defeating the Persian navy to secure his supply lines and communications with home. However, he had no real navy with which to combat the Persians. Then, one day he was watching an eagle flying over the sea but always returning to land, just as Persia's flimsy galleys regularly had to seek harbors for protection and supplies. This gave him the idea of defeating the Persian navy from land by methodically reducing the coastal cities of the Eastern Mediterranean.

The Gordian Knot. At Gordium Alexander was confronted with the Gordian knot. Legend said whoever could undo the knot would rule all Asia. What it looked like is anyone's guess, but it was apparently tied in such a way that both ends were hidden, making it very difficult to unravel by hand. Reportedly, after pondering the knot, he took out his sword and cut it in half. However true this story is, it shows how Alexander could cut to the heart of any complex problems for a solution.

While crossing the Gates of Cilicia, which connect Asia Minor and Syria, Alexander became ill. At this time a message came to him that Darius was trying to bribe Alexander's physician, Philip, to poison his king. When Philip came to give Alexander his medicine, the king handed him the note about the plot. Philip looked up in horror, only to see Alexander had already taken the medicine, showing his complete faith in the doctor. This was another popular story among the troops, since it showed the tight bond between Alexander and his men.

Alexander's charisma. Alexander knew thousands of his troops by name, and shared the dangers of battle and the fruits of victory equally with them. He could put down a mutiny with a mere speech reminding his soldiers of their shared exploits, or shame his troops into action by leading an assault alone. Ironically, in the end, the only army that stopped him would be his own. Tired from years of marching and fighting, and thousands of miles from home in the hot, humid plains of India, they refused to go any further. Only then did he turn around and go back.

The Battle of Issus (333 B.C.E.). The next year, the Persian king, Darius III came looking for Alexander with a huge force. By chance, the two armies passed within fifteen miles of one another with an intervening mountain range concealing each other's movements. Unfortunately, a camp of wounded Macedonians left behind by Alexander fell into the hands of the Persians who mutilated and massacred them. News of this atrocity only enraged Alexander and the Macedonians. They would get their revenge on the plain of Issus.

At Issus, Darius had an overwhelming number of men, but chose a narrow place for battle where he couldn't use those numbers effectively. Seeing this, Alexander ordered his left and center to grimly hang on, while he and his Companion cavalry slammed into the massed Persian infantry on his right, scattering them in a panic that spread to the support troops behind them.

Turning to his left, Alexander then led a wild charge against Darius in the center of the Persian line. Seeing the Macedonian king bearing down on him like some sort of madman, Darius panicked and fled. As word of the Great King's flight spread, the rest of the Persian army fell apart. Thousands died in the ensuing rout, many trampled by their own comrades in the rush to get away.

Among the spoils of battle was Darius' family. When Alexander entered their tent, they mistook his best friend, Hephaestion, as the king since he was taller. Despite this honest mistake, Alexander treated them well. So well, in fact, that when Persian troops came to rescue them during the battle of Gaugamela, Darius' mother reportedly refused to go with them, preferring Alexander to her own son..

The siege of Tyre (332 B.C.E.). After Issus, Alexander proceeded to reduce the coastal cities of Syria and Phoenicia to neutralize the Persian fleet. His greatest challenge came from Tyre, an island city that had resisted sieges by the Assyrians and Babylonians for 7 and 13 years respectively. Alexander solved this problem by building a dirt causeway (mole) connecting Tyre to the mainland.

The Tyrians' counter-siege techniques held up the Macedonians' efforts to build the mole for seven months. They would pour boiling sand onto anyone at the foot of the walls and snatch any Macedonians they could with grappling hooks, hauling them to the top of the walls, and torturing them in front of their comrades. When the mole was completed, Alexander could assault the city by both land and sea, putting siege towers on pairs of ships lashed together for stability. Its defenders paid a heavy price for their previous atrocities, as thousands of them were massacred and even more enslaved. The seven months Alexander needed to take Tyre was the longest time he spent in one place during his entire reign. Even today, Tyre remains connected to the mainland by Alexander's mole.



Tyrian fireships try unsuccessfully to burn the siege towers at the head of the Macedonian mole approaching their city.

The next Phoenician city, Gaza, held out for another two months. When it fell, Alexander had taken the last Persian naval base, thus forcing the Persian navy to disperse, thus securing his own communications with Greece and Macedonia.

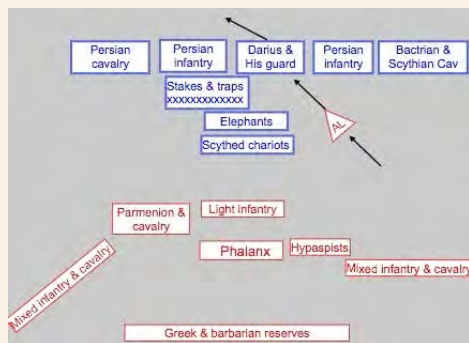
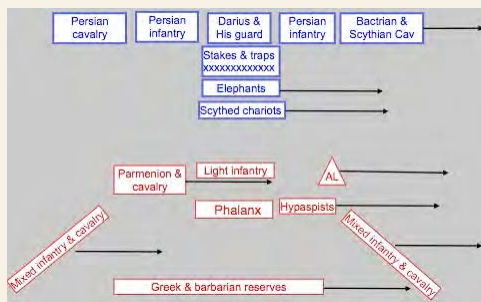
At this time, Alexander received a message from Darius offering him the Western half of his empire and 10,000 talents of silver in return for peace and his family. Alexander's old general, Parmenio, said if he were Alexander, he'd accept. Alexander replied, "and if I were Parmenio, I'd accept too. But I'm Alexander, and we keep on advancing."

After Gaza, Alexander entered Egypt. This was more a triumphal march than an invasion since the Egyptians hated Persian rule so much. While in Egypt, Alexander crossed the desert to a famous oracle at the oasis of Siwa. The priests there proclaimed him the son of their primary deity, Amon. Coins of Alexander, probably struck after his death, showed him wearing the lion skin of Heracles and ram's horn of Amon on the obverse. On the reverse is a seated Zeus, whom the Greeks often equated with the Egyptian Amon. The question is whether Alexander took these claims of divinity seriously or just used them for propaganda purposes.

Meanwhile Darius was waiting with a huge army at Gaugamela in Mesopotamia, even having slaves clear out a flat area for his hordes of Asiatic cavalry. As Alexander approached, he handled the swiftly flowing Tigris River by placing cavalry upstream to break the current and more cavalry downstream to catch anyone swept away. As a result he lost no one in the crossing.

The night before the battle there was a lunar eclipse, the cause of which Alexander had learned from Aristotle. However, to calm his more superstitious troops, he sent seers to tell them the eclipsed moon was Persia. Supposedly, the Persians, fearing a night attack, stayed up all night. By contrast, Alexander slept so well he had to be awakened in the morning.

To prevent being outflanked by Darius' overwhelming numbers, Alexander formed oblique wings and reserves that could collapse into a box to meet an attack from anywhere. To protect himself against another direct attack by Alexander, Darius had placed elephants, stakes, and traps along with his personal bodyguard in front of himself. In reaction, Alexander unexpectedly marched his army to the right, forcing the Persians to do the same to avoid being outflanked.



Having drawn Darius away from the stakes and pits, Alexander and his Companion cavalry suddenly charged obliquely across the field straight at Darius. Before the Persians could react, the Companion cavalry hit the Great King's bodyguard. As at Issus, Darius fled, and his army started to disintegrate.

But it took time for panic to work its way across the whole field.

Meanwhile, the rest of Alexander's army had to hang on desperately. In the center of the line, chariots with scythes attached to the axles charged. The phalanx opened lanes to let them through while peltasts and archers shot the drivers, causing the chariots either to retreat or pass through harmlessly.

However, the tight order of the phalanx was disrupted, which allowed the Persian infantry to get in among the phalangites and do some serious damage. This in turn forced Alexander to abandon his pursuit of Darius in order to save the rest of his army. When it was over, the carnage at Gaugamela was even more horrific than at Issus, the vast majority of the casualties coming in the panicked flight when Darius left the field.

After Gaugamela, Alexander triumphantly entered Babylon, still a resplendent city with its fabled Ishtar Gate and Hanging Gardens. Here he gave his soldiers a much needed month long rest.

But their labors had hardly begun.

Ever Onward: the Eastern Satrapies (330-327 B.C.E.)



After Babylon, Alexander continued to the Persian capital, Persepolis, which surrendered with 150,000 talents (4950 tons) of silver. One night, after some heavy drinking, the Macedonians burned the city in revenge for the burning of Athens in 480 BCE. The story goes that Alexander let a Greek *hetaira* start the fire, saying it took a whole Persian army to burn Athens, but only one Greek woman to burn Persepolis.

The destruction of Persepolis signaled the end of the League of Corinth's commitment to follow Alexander. Many Macedonian troops thought this was the end of their campaign as well, but as Macedonian subjects, they were still obligated to follow their king further eastward.

After Gaugemela, the Macedonians continued their pursuit of Darius. As they closed in on him, his general, Bessus, killed him and proclaimed himself the new Persian ruler. Nonetheless Alexander continued his pursuit eastward into Bactria, now to get Bessus.

Bactria, modern Afghanistan. The furthest reaches of the Persian Empire. A harsh land that bred harsh men. An entire British army perished here in 1845. The Russians did no better in the 1980s. The 19th century British poet, Rudyard Kipling, may have best described what it was like to fight here:

*"When you're left for dying on Afghanistan's plains
And the women come out to cut up what remains
Just roll to your rifle and blow out your brains."*

In relentless pursuit of Bessus, Alexander plunged ever deeper into this land of hopelessly entangled tribal feuds. Eventually Bessus' men wore out and betrayed him to Alexander who had him mutilated like a commoner before executing him. This cleared the way for Alexander to claim the title of Great King

Still, he pressed on.

Bactria confronted Alexander with a whole new style of warfare that forced him to divide his army into five columns to sweep across the country.

One column was nearly wiped out in an ambush and had to be rescued.

Alexander himself took an arrow in the leg, a stone to the neck and another to the head. In addition he almost died from drinking bad water.

Alexander spent three years here bringing its various tribes to heel, the longest it took him to conquer any territory.

The Sogdian Rock . At one point, he faced a mountain fortress known as the Sogdian Rock whose defenders laughed that the Macedonians would have to grow wings to take it. Alexander picked 300 volunteers, offering 12 talents of silver to the first one to scale the cliffs above the Sogdian Rock, 11 talents to the second, and so on. The next morning, the Bactrians awoke to find 300 of the enemy perched above them ready to attack.

After that, Bactrians would surrender at the mere word of Alexander's approach.

From king to King of Kings. With each new conquest, Alexander faced the growing problem of reconciling his old Macedonian position as first among equals with the his Persian subjects' view of him as King of Kings, an absolute monarch. Increasingly, he adopted Persian clothes, officials, and court customs to meet the expectations of his new position.

One issue that especially annoyed the Macedonians was the custom of *proskynesis* (groveling before the king), which at first only Persian subjects were required to perform. However, when he tried to get his Macedonian officers to perform this rite, the court historian, Callisthenes, refused, ruining the ceremony. Alexander dropped the matter after this.

All the tensions from extended campaigning in Bactria and new court rituals finally boiled over at one of the Macedonians' infamous drinking bouts. Cleitus the Black, an old soldier who had saved Alexander's life at the Granicus River, started shooting his mouth off about Macedonians lost in an ambush in Bactria, blaming Alexander's generalship. Meanwhile his friends exalted his exploits over those of Alexander. This drunken quarrel turned into a shouting match with friends having to hold them both back. Alexander threw an apple.

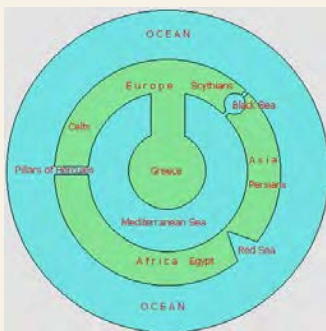
Cleitus replied with a snide remark about saving Alexander's life.

At that, Alexander ran him through and killed him.

Shocked by his own action, Alexander went into mourning, refusing to eat, drink, or sleep for three days. Finally, his friends convinced him to come out and lead them again.

But they weren't going home yet.

India and the Ends of the Earth



A map of the Greek concept of the world showing its one land mass surrounded by Ocean

But Alexander wasn't through yet. In 327 B.C.E. he led his army across the Hindu Kush Mountains into India, a land the Greeks believed only Dionysus and Heracles had seen. Now Alexander would add his name to that list.

Descending from the mountains, the Macedonians came across Aornus," the Birdless Rock", a 7000 foot plateau that commanded local passes and supply lines. Legend said even Krishna couldn't take it.

So Alexander had to.

Therefore, he built a huge mound for his catapults, something the Indians had never seen and totally panicked them. As the catapults cleared the ramparts, Alexander led the assault over the walls. Another great victory and the legend kept growing.

After that, the Macedonians plunged into the Punjab, an area with a complex network of city-states ruled by princes. Alexander exploited the situation whenever possible by playing princes off against one another. One prince he had to fight was Porus, a seven-foot giant whose army waited across the Jhelum River.

It was the height of the monsoon season, so the river was swollen and particularly difficult to cross. Alexander played a game of stockpiling a huge supply of food for Porus to see, making him think the Macedonians were willing to wait out the monsoon. Likewise, Alexander would stage fake night attacks with lots of noise to wake the Indians. Soon Porus tired of reacting to each of these moves. Then one night Alexander exploited a heavily wooded bend in the river to slip part of his army across. As Porus rushed to meet this threat, Alexander hurried to get the rest of his army across.

The battle that followed was probably the most brutal and desperate the Macedonians ever had to fight.

Indian armies used two especially deadly weapons. One was a type of longbow. The other was war elephants, giant organic tanks that could trample through the enemy, knocking some men aside with their trunks while crushing others.

The Macedonian phalanx tried to hold these beasts at bay with its wall of pikes while others showered them with missiles to panic them and still others would try to get under or behind them to chop at their hamstrings.

In addition, it was raining, making this battle a loud chaotic scene of trumpeting elephants, drums, gongs, thunder, and screaming men all bathed in mud and blood.

Eventually, Macedonian training and discipline wore down the elephants and turned the tide of battle. Supposedly, Porus kept fighting even while wounded until his elephant knelt down and forced him to surrender. When Alexander met Porus, whose courage he respected, he asked

how he would like to be treated. Porus' reply was short and to the point: "Like a king." Alexander agreed, making Porus his vassal king.

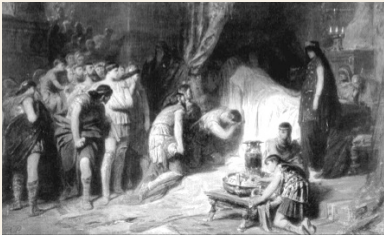
It was at this time that Alexander's war charger, Bucephalus died of wounds. Alexander founded a city, Bucephalia, in honor of the horse that had taken him through so many battles.

A map of the Greek concept of the world showed an outer ring of Ocean surrounding the one land mass. Supposedly, Alexander wanted to march all the way to the shores of Ocean. However, his troops, suffering from homesickness, India's hot humid conditions, poisonous snakes, rotting leather, corroding arms and armor, and uncertainty of how far it was to the Ocean, finally refused to go any further.

After pouting for a while, Alexander agreed to go back.

In the end only one army had stopped Alexander: his own.

Death...and Immortality (327-323 B.C.E.)



The Malloi. Although Alexander agreed to return home, the route there was not the same they had taken to India. Instead, he plunged further south into India to the Arabian Sea. From there he would cross the Gedrosian Desert back to Babylon. Unfortunately, this involved more hard fighting. The Macedonians, not wanting to die on their way home, were naturally reluctant to risk their lives in assaulting these cities. Things came to a head at the city of the Malloi, where Alexander, frustrated with his soldiers, seized a ladder and scaled the walls with only two comrades. Amazingly, he clawed his way to the top and cleared the nearby ramparts of defenders while

his stunned soldiers scrambled to follow him. However, before they could get to him, an arrow from an Indian longbow found its mark in Alexander's chest.

Overwhelmed with terror for the one man who could get them home and shame for letting him down, the Macedonians tore apart the city of the Malloi. Meanwhile, Alexander was carried back to his tent where surgeons extracted the barbed arrowhead that took with it a good part of his lung. Alexander's troops anxiously waited outside his tent all night. When the rumor spread that he had died, Alexander struggled to his feet and walked out to show his men he was still alive. Then, so all his men could see him, he mounted a horse. As the forest resounded with his soldiers' cheers, he returned to his tent and collapsed.

March through the Gedrosian Desert. Although not completely recovered from his wound, Alexander led his men homeward. Half of the army would march through the Gedrosian Desert while the rest of the army would sail along the coast to supply them. However, things did not work out as planned.

The Gedrosian Desert was a virtual hell on earth, providing the Macedonians with neither food nor water for the 60 days it took to make the passage. The heat was so intense that the army had to march at night. One day, a flashflood from a rainstorm upstream washed through their camp, which was in a dry riverbed, wiping out most of the camp followers, who were predominantly women and children. Alexander's tent was also washed away, but he was away on business. Horses, mules, and men floundered and sank in the deep sand, while a long string of abandoned equipment, pack animals' bones, and the lifeless bodies of men, women, and children marked the army's tortuous path.

The last drop of water. The story goes that one day, a soldier presented Alexander with a helmet of water, the only water to be found in

the area. Holding the helmet up for the whole army to see, Alexander poured out all the water, showing that if the army couldn't drink, neither would he. The historian Arrian relates it was as if the whole army had been given a drink. Finally, the remains of the army reached the end of the Gedrosian Desert, which may have claimed three-fourth's of those who had left India. Gedrosia was at once Alexander's greatest tragedy and greatest triumph.

Having returned to Babylon, Alexander, who had already married a Bactrian princess, Roxane, now married Barsine, a daughter of Darius, thus securing a stronger legal claim to the Persian throne. In addition, seeing there were too few Greeks and Macedonians to administer such a huge empire by themselves, Alexander arranged to marry 10,000 of his soldiers to Persian women. The wedding feast lasted five days and took place in a pavilion 800 yards long with jeweled & gilded columns 30 feet tall.

Likewise, realizing he needed the Persians' help in defending his empire, Alexander had arranged for 30,000 Persian youths to be trained in Macedonian tactics. Upon reviewing these newly trained troops, he declared them his successors, an unguarded remark which his veterans took badly.

After all, they, not these Persian upstarts, were the men who had fought at Granicus, Issus, Gaugamela, & Jhelum River, had stormed a 1000 cities such as Tyre, Gaza, and Thebes & marched through Gedrosia where all others had failed. So now these battle-hardened veterans saw themselves being replaced by Alexander's Persian "successors".

This came to a head at Opis as Alexander was addressing veterans being discharged so they could go home. As he was thanking them for their loyal service, they started yelling insults and complaints, telling him to go back to his "successors."

This was the type of ugly scene that would overthrow many Roman emperors unless they put it down with a bloodbath of decimations. What ensued was possibly the most remarkable of all Alexander's achievements.

First he jumped from the platform, had the ringleaders arrested, and then addressed the troops.

He reminded them how his father had brought them up from rude shepherds and taught them how to fight, making them masters of Greece and Macedonia.

He recounted the conquests he had led them in, making them masters of the known world, and how he had shared all their dangers and hardships.

He tore open his tunic to show all his wounds, and how they were all in front.

He reminded them how he had selflessly shared the plunder with his men, making them each wealthy beyond their wildest dreams, and how he was now sending them back to a comfortable retirement after all these years.

And this was how they were repaying him-- with a mutiny.

Then all right, they could go home with their wealth and reputations and tell everyone how they had abandoned him in Asia.

Then, turning toward his tent, he left them with one last word: "Go!"

His men, stunned by this speech, at once rushed Alexander's tent, begging him to take them back.

Alexander soon emerged from his tent, and the soldiers were tearfully reconciled with their king.

Only Alexander could deal with a mutiny in such a way.

Alexander's death. In 323 B.C.E., while at Babylon, Alexander came down with a fever that got progressively worse. When it became apparent that he wouldn't survive, he let his soldiers file through his tent to say their final farewells, using what little strength he had left to gesture in reply. After they had gone, his generals crowded around him wanting to know to whom he was leaving his empire. Supposedly with his dying breath, in a barely audible voice, he said "To the strongest." He was not yet 33 years old when he died.

It was said on that night a shooting star suddenly appeared, cutting brightly through the heavens, and then just as suddenly burned out and disappeared. To people of that time, it seemed neither Heaven or Earth would ever be the same again.

The Logistics of Alexander's Army



Even the most scholarly texts ignore the day-to-day logistics of such things as how to get an army of thousands of soldiers, camp followers, cavalry horses and pack animals from one place to the next. Where and how did they get enough food and water to sustain them? How did they traverse various physical barriers like rivers and mountains? What were the roads like, how many men could walk abreast on them, and how far did the army on the march stretch? Of course, spending as much time discussing these issues in proportion to how much time people in real life had to spend solving them would be inconvenient and boring. But it's important to occasionally take the time to look at them so we can fully appreciate what an accomplishment it was for someone like Alexander to take an army from Greece all the way to India and back.

Our sedentary lifestyles today dictate we should consume no more than 2000 calories a day. However, the hard physical labor typically done by our ancestors required an estimated 6000-6500 calories, including 70 grams of protein *each day*.

The staple of a soldier's diet in Alexander's army was grain (wheat, barley, and millet) that was stored dry to prevent rapid spoilage. Without refrigeration, meat, fish, fruit, and vegetables were rarely given unless found in quantity on the march. Therefore, each soldier needed a minimum of 3.9 pounds of wheat, which would yield 3.5 pounds of bread and 3600 calories *each day*. However, this was really stretching it for soldiers marching with heavy loads all day in the hot sun. A more realistic figure would be five pounds of wheat daily to keep the army from dropping dead from hunger. That means that an army of 50,000 men would need 250,000 pounds (125 tons) of grain *each day*.

They also needed water. In the arid conditions of the desert a man would need 9 quarts of water each day, leading to a total of 450,000 quarts a day for the army as a whole *each day*.

But recent studies show that animals then also needed to eat and drink, the average horse requiring about 10 pounds of grain, 10 pounds of forage, and 8 gallons of water *each day*. Figuring there were 10,000 cavalry horses, that comes to 100,000 pounds of grain, 100,000 pounds of forage, and 80,000 gallons of water *each day*.

But wait! Carrying food and water also required thousands of pack animals and servants (that I imagine also liked to eat and drink *each day*). A reasonable estimate would be one servant and one pack animal for every four soldiers and 50 soldiers respectively to carry non-comestible supplies (tents, etc.), which adds 12,500 men and 1300 baggage animals to the total. (I won't even mention camels, which were used extensively after Egypt and consumed 4 pounds of grain, 50-60 pounds of straw, and 10 gallons of water *each day*.)

Each pack animal could carry 250 pounds (including 10 pounds per day for its own grain). Adding a second day of food reduced the amount of non-comestibles it could carry to 230 pounds, and so on. Thus carrying 25 days supply for themselves would mean they were only carrying enough for themselves to eat and nothing more, making their very presence less than worthless. And that's for an area *with* water and forage for horses.

Therefore, the number of pack animals needed to carry 1 day's food supply (269,000 pounds grain) for 50,000 men and 10,000 horses would be 1121 (269,000 divided by 240, which was the carrying capacity of one animal minus 10 pounds of its own grain for 1 day).

If two days' rations were carried, that would be 538,000 pounds divided by 230 (250 minus 20), requiring 2340 more animals.

The army would need 40,350 pack animals to carry 15 days' of supplies, 107,600 animals for 20 days, and so on.

A realistic upper end would be 10 days' supply, requiring 17,933 animals.

But it gets even better, because the much smaller crop yields back then meant the army had to draw supplies from a much bigger area, which would require more animals to carry grain *to* the army. But we won't even count that.

Marching through terrain with water, but neither food nor forage meant the army must bring 343,000 pounds of food and forage for one day. Divide that by 230 (250 pounds minus 20 for each pack animal's own grain *and forage*), and the army would need 1492 animals to carry just one day's supplies. Carrying more than 12.5 days' supply would be impossible since the pack animals will need all of it for themselves.

Marching through a desert *without food, forage, or water*, would dictate carrying 1.26 million pounds divided by 150 (250 minus 20 for food and 80 pounds of water at 10 pounds per gallon). The army would then need 8400 animals just to

carry 1 day's supply. At that rate, pack animals could only carry enough to supply themselves alone for 2.5 days. If each person carried 30 pounds of supplies (in addition to his own equipment), the army could last 4 days in the desert with 11,400 pack animals.

The length of the baggage train also must also be considered. At 5 yards per animal (animals apparently need their space, too), traveling single file (such as through mountain passes), an army with 27,000 animals (17,000 of them carrying 10 days' supplies) and 62,500 men (soldiers and servants) would stretch 30 miles. Since the Macedonian army probably only marched on average 15 miles per day (much less in rough terrain such as mountain passes), that means the front of the army would be reaching the next night's campsite two days before the end of the army even started. Even walking 10 abreast (an optimistic figure), the army would stretch three miles, creating a very vulnerable target for raiders.

Yet Alexander did make this 11,000-mile march, traversing deserts for more than 4 days between resupplying, which begs the question: how did he do it? Of course the time and expense of writing with quills on papyrus was so great that ancient historians couldn't bother themselves with such mundane issues. In other words, we don't know how Alexander did it. Maybe that's why they called him the Great.

Alexander's Successors and the Battle for his Empire (323-301 B.C.E.)



As with most paintings of what we imagine the Colossus of Rhodes looked like, this shows it as impossibly big.

Alexander's generals, called the Diadochoi (Successors) were an exceptionally talented and ambitious group of men. (Great generals usually have an almost equally talented group of officers capable of understanding the nuances of their orders and carrying them out effectively.) Therefore, once Alexander's strong hand was removed, it was to be expected these men would fight tooth and nail to grab as much power for themselves as possible. The result was nearly a half-century of wars between the Diadochoi and their successors (Epigonoι) before a fairly stable political situation emerged by c.275 B.C.E. Since this is such a complex period of wars and intrigue, it would be best to just present some of the main events to give a flavor of the times.

The Lamian War. Almost immediately upon news of Alexander's death, the Greeks, led by Demosthenes and Athens, rose up in revolt. After some initial victories against Antipater, Alexander's general in Greece, Macedonian reinforcements arrived and crushed the revolt. Demosthenes, upon being tracked down, took poison rather than fall prisoner to the Macedonians.

The Bactrian mutiny. Meanwhile, some 23,000 troops, left to garrison Bactria (Afghanistan) in the farthest reaches of the empire, decided to march home. A Macedonian general, Peithon, rounded them up but, instead of returning them to Bactria, massacred them. Given the small number of Greeks and Macedonians available to garrison the empire, was an especially irrational thing to do.

Ptolemy and Egypt. The Macedonian general, Ptolemy, had taken Egypt as his share of the empire upon Alexander's death. To add to his prestige, he diverted Alexander's body from its destination in Macedon to Alexandria, claiming it had been Alexander's wish to be buried there. Perdikkas, the regent for Philip III Arrhidaeus and the young Alexander IV, took this as an act of rebellion and invaded Egypt. However, when

a number of his men were swept away while trying to cross the Nile and another thousand supposedly eaten by crocodiles, Perdikkas' officers murdered him.

Eumenes, the one Greek involved in these wars, had no prior military experience but proved to be as brilliant a general as his Macedonian opponents. At one point, when faced with a mutiny by his troops, Eumenes had them stand before Alexander's empty throne (at least he said it was Alexander's) and convinced them they should obey him as if Alexander were still alive and sitting there. However, when part of his army switched sides in the middle of a battle, allowing his camp to be plundered, Eumenes' soldiers, who were Macedonians and didn't like Greeks anyway, betrayed him to the enemy general, Antigonus the One-eyed, in return for their baggage. Antigonus had him executed, despite the pleading of his son, Demetrius, to spare Eumenes' life.

The end of Alexander's family. Except for his sister, Thessaloniki, the rest of Alexander's family met grisly ends, being little more than pawns caught in the wars between his generals. First of all, Alexander's mother, Olympias, murdered his half-brother, Philip Arrhidaeus, to secure the throne for her grandson, Alexander IV. Right after that, one of Alexander's generals, Cassander, killed Olympias. Six years later, when Alexander IV was almost of age to assume the throne in his own right, Cassander had him and his mother Roxanne murdered. With all the males of the royal family eliminated, Alexander's generals started assuming royal titles for themselves.



Truly Winged Victory. In 306 B.C.E. Antigonos' son, Demetrius Poliorcites ("besieger of cities"), dedicated the famous statue of Winged Victory to commemorate defeating Ptolemy in a huge naval battle. Next year, however, Demetrius was defeated after an epic siege of Rhodes. Maybe he should have left the wings off his statue of Victory like the Athenians did with theirs.



The Helepolis was a massive siege tower built during the siege of Rhodes (305-4 B.C.E.) and for which Demetrius earned his nickname, "Besieger of Cities". It was ten stories tall, armed with catapults, and plated with iron on three sides. In addition to men pushing it from behind, it required 200 men inside to drive a capstan attached by belts to a mechanical device, to move it. The Rhodians stopped it by flooding the land in front of their walls so it couldn't support the tower.

The Colossus of Rhodes was a huge statue built by the Rhodians as their own victory trophy, buying the bronze and iron needed for it with money from the sale of the armaments Demetrius Poliorcites had left behind after his unsuccessful siege. Although supposedly so tall that ships could sail between its legs, it was most likely much smaller, but was still considered one

of the Seven Wonders of the Ancient World. Toppled by an earthquake in 222 BCE, it lay in Rhodes' harbor for 900 years, still a major tourist attraction, before being sold as scrap metal. Not a piece remains.

Pachyderm power. The battle finally determining that Alexander's empire would not be reunited took place at Ipsus in 301 B.C.E., pitting Antigonos the One-eyed and his son Demetrius Poliorcites against two other Macedonian generals, Seleucus and Lysimachus. The decisive element was a corps of 480 Indian war elephants traded to Seleucus by Chandragupta Maurya in return for Alexander's lands in northwest India. In the battle, the elephants turned Antigonos' flank and then trampled through his phalanx. Antigonos went down fighting at the age of 80.

Demetrius Poliorcites survived the Battle of Ipsus and made his way to Macedon, where he seized power by murdering the two sons of Cassander (who himself had earlier murdered Alexander's mother and son). Demetrius, not the most stable of personalities, quickly lost Macedon and was finally captured by Seleucus, who let his prisoner slowly drink himself to death. Demetrius' son, Antigonos Gonatus ("knock-knees") retook Macedon where he established the Antigonid Dynasty.

The Galatians were Celtic Gauls who invaded Greece around 275 B.C.E. Luckily for the Greeks, Antigonos Gonatus defeated them and drove them out. They eventually settled in Asia Minor (modern Turkey), giving their name to the region known as Galatia and a book in the New Testament.

Alexandria: Queen of Hellenistic Cities



A view of how Alexandria probably looked in the Hellenistic era, showing its layout into a rectangular grid (a design the Romans would adopt and pass on to the West), the lighthouse (top) and the jetty connecting it to the mainland and dividing the harbor into two parts, one for regular commerce and the other just for grain, Egypt's primary export.

Under the Ptolemies, it was said that when one left Alexandria he was leaving Egypt. In fact, it was more like entering Egypt, since Alexandria was such a thoroughly Hellenized city that the real Egypt and Egyptians only existed in the countryside beyond its walls. The city also had so much white stone that it was supposedly blinding in the daylight and incapable of being burned. Its streets were laid out in a rectangular grid to take advantage of the cool daily sea breezes.

Whenever a ship came into Alexandria's harbor, government officials would confiscate any books not found in the library. Scribes would copy the books and give the copies back to the original owners, since each generation of hand-copied books would have more mistakes than the last. Therefore the library of Alexandria had the best versions of thousands of books. Too bad it burned down.

Organic Tanks and Fire Pigs



Probably the best Hollywood portrayal of how to combat war elephants is the Battle of Pellennor Fields in the fantasy film, *Return of the King*, although the "oliphants" are much bigger than real elephants.

"Organic tanks". Hellenistic rulers especially valued war elephants, which could be effective in panicking the enemy's cavalry and trampling its infantry. However, they in turn could be panicked by fire, loud blasts of trumpets, or showers of javelins, making them just as prone to trample their own troops as those of the enemy. In such circumstances, the mahouts (drivers of the elephants) would kill them by driving stakes into the bases of their skulls. Soldiers would also try to slash their tendons, although getting under one of these beasts to do that must have been especially risky.

Firepigs? Pigs were presumably used in ancient warfare to panic elephants with their squealing. Later sources refer to "firepigs" which were coated with tar and oil and then set on fire to stampede enemy elephants or cavalry and disrupt opposing infantry formations.

They were also used in the final stage of sapping (undermining) enemy walls. After a tunnel was dug under a part of the wall and propped up by flammable timbers, flaming pigs would be sent in to set the supports on fire to collapse the tunnel and hopefully the wall above, creating a breach into which besieging forces could enter the city or fort.

Obviously, these critters wouldn't last too long, but may have provided the victors with a ready-made dinner after a hard day of fighting.

Behemoths of the Sea



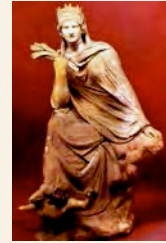
Behemoth ships. The shortage of skilled rowers encouraged Hellenistic monarchs to substitute size for speed and mobility. However, ships referred to as hepteres (“sixers”) or septiremes (“seveners”) did not refer to the number of banks of oars, as previously thought, but to the number of rowers per vertical row of oars. For example, a septireme would most likely have two banks of oars with four rowers on the top oar and three on the bottom. Modern research indicates that the maximum number of rowers an oar could accommodate was eight. Thus ancient references to “30s” and “40s” were probably pure fantasy or mistranslations of original sources.

The mother of all behemoths (top) was a 420-foot long twin-hulled warship built by the Ptolemies that carried a crew of 1,000 rowers and 3,000 marines on its deck. However, it proved too large for using in battle and was mainly used for show. Its peacetime counterpart was a huge 300-foot long pleasure barge (belwo) with columns that towered sixty feet above the water. Obviously, such a top-heavy monster was not sea-worthy, so was towed up the Nile by dozens of galleys, largely for the purpose of over-awing the Ptolemies’ Egyptian subjects.



Ptolemy IV’s “fun behemoth” (matched any of today’s superrich as far as showy over-indulgence was concerned. (Also available for weddings and bar mitzvahs)

Hellenistic Philosophy



During the classical period, the small personal nature of the polis encouraged a belief in the individual’s ability to find truth on his own and to make a difference in society. The philosophies of Plato and Aristotle especially reflected this. However, after Alexander, the huge scale of Hellenistic kingdoms and the more absolute nature of their monarchies made people feel less in control of their own lives and fates. Tyche (above), the goddess of chance or fortune, became especially popular as a symbol of this sense of helplessness at the hands of the universe. The philosophies of the age also reflected this, showing less concern for civic affairs (since they were out of our control anyway). Instead, they stressed attaining personal inner peace in the world as it is rather than trying to change it.

Stoicism, was started by Zeno of Citium, a Phoenician town on Cyprus. It got its name from the covered porch (stoa) where Zeno met with his students. Thus the term Stoics literally meant “porchers”. Zeno said the Cosmos was organized along rational principles (logos), and that we attain peace when we learn to accept life as it is and live according to its logos. While Zeno’s philosophy stressed bearing up under hardship and doing one’s duty, it did not advocate working for empty honors or trying to change the system. Stoicism was especially popular during the Roman Empire, helping people make sense of their lives under the autocratic rule of the emperors.

Epicureanism, started by Epicurus of Samos took a different view of the universe, saying it was beyond rational understanding, that the gods were totally detached from our affairs, and that there may or may not be an afterlife. Therefore, our goal in this life should be to avoid pain. This has been misunderstood as advocating a

hedonistic lifestyle, as seen in our use of the word *epicurean* for someone who especially enjoys fine foods. However, Epicurus said such excesses ultimately lead to pain and thus should be avoided. Epicureanism, with its total absence of any sort of divine involvement in this world, has been seen as the first truly humanistic philosophy. It experienced a revival of interest in the 1700s in the form of Deism, a philosophy popular with such founding fathers as Thomas Jefferson and Ben Franklin.

Hellenistic Art



Statue of a child and a goose

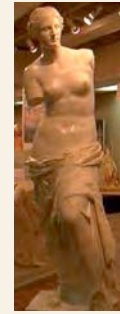
Hellenistic art, while continuing the Classical period's more natural and realistic portrayals of people, expanded its approach from just showing idealized images of the male nude to more realistic and, at times, unflattering views of all sorts of people: old men and women, children, dying barbarians, and even drunks. Roman sculpture would carry on the Hellenistic age's brutally honest approach to sculpture rather than the classical ideal.



Statue of a dying Gaul and a boxer



Statue of an old drunken woman and old woman in a market



Aphrodite of Melos (AKA Venus de Milo) c. second century B.C.E. There were no statues done of female nudes until the 4th century B.C.E. since the male figure was seen as the only standard of beauty. Thus the portrayal of the female nude may indicate a slightly higher status for women.

[Back to flowchart](#)

INTRODUCTION TO THE RISE OF ROME

Introduction. When we think of the Greeks, we think of a bold, intelligent people who gave us so much in the way of art, architecture, drama, democracy, science, and math. When we think of the Romans, we think of empire builders. They were a more down to earth people who may have done little that was original compared to what the Greeks did. But they built and maintained an empire that peacefully embraced the entire Mediterranean Sea for some two centuries, an accomplishment unparalleled in history. The Romans also spread civilization into Western Europe. In that sense, they were the bridge between the older cultures of the ancient Near East and our culture, known as Western Civilization.

There is probably no story that better illustrates what the early Romans were all about than that of the founding of Rome by the twin brothers, Romulus and Remus. According to this legend, there was disagreement over where to found the city. When omens from the gods failed to settle the dispute, Romulus just started digging the *pomerium* (sacred boundary) of Rome where he thought the gods wanted it. Remus mockingly leaped over this trench and Romulus killed him, declaring that such a fate should befall all who dared to breach the walls of Rome. The story of Romulus and Remus shows that the Roman sense of honor, duty, and loyalty to Rome ran even deeper than family and kinship ties. Other Roman legends also had this theme of honor and duty running through them: the story of Horatius, who single-handedly defended a bridge against invading Etruscans in order to buy his city time to prepare a defense; the consul Brutus who had his own sons executed for plotting treason against Rome; and Lucretia, who committed suicide rather than live with dishonor to herself and Rome. Such stories idealize the Roman character, but also raise the question of what factors shaped it and pushed Rome to greatness. And, of course, the first place to look is the environment surrounding Rome and its people.

Geopolitics. At the time of its founding around 750 B.C.E., there was little to hint that Rome and Italy would be the center of the greatest empire in antiquity. Italy did have good soil along with some

resources and good harbors in the South. These features attracted Greek colonists whose culture would exercise an immense influence on Roman civilization. Also, Italy's soil tended to make its people farmers rather than artisans and merchants.

These factors, in particular the close ties to the soil, largely molded the Romans' personality as a people. While it is dangerous to stereotype a whole people's character, there are certain values and circumstances that any people as a whole share which helps define how they think and act. The quick-witted Greeks, whom the sea and lack of resources forced into becoming clever and resourceful traders, looked upon the agricultural Romans as slow and dull. But there were several characteristics that would help the Romans become great empire builders.

First of all, being farmers bred a certain ability and willingness to persevere through hardships. Nothing shows this better than Rome's dogged perseverance and eventual victories in its first two wars against Carthage, wars which dragged on for 23 and 17 years respectively.

The Romans' reputation for perseverance especially shows up in the story where a delegation came to a Roman general about to besiege their city. After boasting they had ten years worth of food stockpiled, the Roman general calmly announced, "Then I guess the city will fall in the eleventh year." The city surrendered the next day.

Agriculture tended to make the Romans somewhat more conservative and wary of change. They were also a tightly knit society, more willing to submit to the rule of law than the quarrelsome Greeks ever were. This Roman discipline produced magnificent soldiers and the most efficient and effective armies in the ancient world. It also produced an intense desire for the rule of law that made the Romans possibly the greatest lawgivers in history. Many Western European countries today base their law codes directly on earlier Roman law codes.

One other characteristic marked the Romans for greatness: a willingness to adapt other peoples' ideas for their own purposes. All people borrow ideas, but few have been so adept at it as the

Romans. Their art, architecture, technology, city planning, and military tactics all owed a great deal to other peoples' influences. Indeed, there was little that the Romans did that was totally original. But the sum total of what they did was uniquely Roman and marked them out as one of the most remarkable peoples in history.

The Romans especially adapted weapons and techniques of warfare from their neighbors and enemies. Along with urban planning on a rectangular grid, which they applied to their military camps, they got the Greek phalanx from the Etruscans. Later, they traded this for the more flexible manipular tactics of their Samnite enemies. From the Greeks they got siege weapons, while from the Gauls they got chain mail and from the Spaniards the short sword which would be their primary close order combat weapon.

Italy's topography also had an impact. The Alps to the North provided some protection, although occasionally invaders, such as the Gauls and Carthaginians, did break in. Another mountain range, the Apennines, ran along the length of the peninsula much like a backbone. While this had the effect of dividing Italy into various city-states, it was not nearly to the extent that Greece was broken up by its mountains. These two factors, plus the Roman character, allowed Rome to unite Italy relatively free from outside interference

Finally, Italy's location favored it in two ways. It had a strategic position that divided the Mediterranean into western and eastern halves. Also, it was far enough away from the older civilizations of antiquity to allow it to develop on its own without too much outside interference. Therefore, once Italy was unified, its geographic position allowed Rome to unite the Mediterranean under its rule.

The Aeneid



Aeneas escaping with his family from Troy

For the origins of the Romans, as with any ancient people whose beginnings go back before they kept written records, we must rely partially on legends. We typically refer to such stories as myths, but for those telling them, they were history lessons containing the combined collective wisdom of that society and invaluable lessons on life. For us, they are valuable on two accounts. First, there is typically some historical fact to be derived from such tales, as long as we are careful in how we interpret them. Secondly, they tell us a lot about the values of the people relating them.

For the Romans, their history began with Aeneas' story as told in the *Aeneid*, an epic poem trying to tie Roman mythology and history with that of the Greeks. Although it emulated the *Iliad* and *Odyssey*, it was not the product of an oral tradition evolving over a long time. Rather Vergil wrote it as a finished work centuries later for his patron, the emperor Augustus. Its hero, Aeneas was the son of Aphrodite and a Trojan prince. His son, Iulus, would give rise to the Julian clan, whose descendants would include Julius Caesar and Augustus.

In Book II Aeneas recounts the story of the Trojan Horse and the sack of Troy, which is our main source for details of that story. After leading a heroic but doomed defense of his city, he escapes with a number of followers and his son while carrying his aged father, Anchises, on his shoulders.

After various adventures largely paralleling the wanderings of Odysseus, the Trojans are cast ashore at the recently founded city of Carthage where Aeneas meets Dido, the Queen of Carthage, with whom he has a love affair. However, the gods beckon Aeneas to find a homeland for his people, causing the heartbroken Dido to commit suicide when he leaves. This sets the stage for the epic struggle between Rome and Carthage centuries later. Interestingly enough, Carthage was probably founded shortly before Rome.

The Trojans finally reach Italy, where Aeneas meets the Sibyl, a prophetess who foretells all the wars he must fight. She then escorts him to the underworld, much like Odysseus' journey there in *The Odyssey*. In the underworld Aeneas talks with many of the dead, including his father, Anchises, who foretells Rome's greatness and shows him future great Romans, including Aeneas' descendants, Julius Caesar and Augustus. Aeneas, now sure of his destiny, determines to settle in Italy

In Italy, Aeneas meets Latinus, king of the Latins, who, to avoid a horrible prophecy that his daughter, Lavinia, will be the destruction of her people, marries her off to Aeneas. However, she is already betrothed to another Latin prince, Turnus, which triggers a war between the Trojans and Latins. After many heroic deeds, *The Aeneid* ends with Aeneas slaying Turnus to end the war.

Rome's Foundation Myth: Romulus and Remus



Statue of the Capitoline Wolf nursing Romulus and Remus

According to legend, Aeneas' son, Iulus founds a new city, Alba Longa. Twelve generations later, Iulus' descendant, Numitor, inherits the throne,

which is usurped by his evil brother Amulius, who drives out Numitor and kills his male relatives. He also forces Numitor's daughter, Rhea Sylvia, to become a Vestal Virgin (priestess of Vesta) so she can bear no children. But she gets pregnant anyway, claiming she was raped by the god Mars. Numitor has her imprisoned and orders her twin boys, Romulus and Remus, drowned. However, the man entrusted with this awful task cannot carry through with it, so he leaves the boys on a river bank, hoping floods will do his dirty work.

Instead, they are found and nursed by a she-wolf and fed by a woodpecker under a fig tree, all sacred symbols. Later, a shepherd, Faustulus finds them, so he and his wife raise them as their own sons. The boys grow up and form a band of shepherds, attacking brigands and sharing their take with Faustulus. However, during a festival of Pan, brigands capture Remus and take him to Amulius, claiming he was raiding the king's lands. Faustulus tells Romulus his origins, who then breaks into the city, frees Remus, and restores Numitor to his rightful throne of Alba Longa.

Romulus and Remus then decide to found their own city, but disagree over the site. Looking for omens Remus sees six vultures first, but then Romulus sees twelve. When Romulus starts to dig the sacred *pomerium* (city boundary), Remus jumps over it and mocks it. Romulus then kills his brother with the words "So perish whoever else shall overleap my battlements." Thus Rome was founded with the bloodguilt of fratricide.

Other Roman legends also had this theme of honor and duty running through them: the story of Horatius, who single-handedly defended a bridge against invading Etruscans in order to buy his city time to prepare a defense; the consul Brutus who had his own sons executed for plotting treason against Rome; and Lucretia, who committed suicide rather than live with dishonor to herself and Rome. Such stories idealize the Roman character, but also raise the question of what factors shaped it and pushed Rome to greatness.

Folding Alps, Land Bridges, and Dwarf Elephants



A dwarf elephant and hippo next to a modern African elephant

The name Alps probably derives from the Latin word, *albus*, meaning white. They were formed by a collision of the African and European tectonic plates, which folded the land in between into mountains. The same collision of the African and European tectonic plates that formed the Alps also formed the Apennines, although it was a gentler collision, if that can be said about any collision of tectonic plates.

During the Ice Ages, when more water was locked up in the icecaps, there was a land bridge connecting southern Italy to Sicily and then North Africa, thus cutting the Mediterranean in two.

One natural curiosity once seen in Sicily and Southern Italy were dwarf elephants, which stood only about three feet tall and were native to the Mediterranean. These creatures may have reached Sicily and Southern Italy by the aforementioned land bridge or swimming - a hypothesis supported by the fact that modern elephants swim well. Once on shore, the unique ecological factors of islands, such as small land area, limited resources and absence of large predators, pushed natural selection in the direction of reduced body size - a process known as insular dwarfism. Unfortunately, these animals were probably extinct by historical times. They would have made great pets.

THE ETRUSCANS AND THEIR IMPACT ON ROME (C.650-500 B.C.E.)

Although there is evidence in Roman myth and archaeology of various shepherd villages on Rome's seven hills, the city's history really started with the Etruscans. The origins of this mysterious people are obscure. Some ancient sources liked to trace them back to Asia Minor because of their religious practices such as augury (reading flights of birds to tell the future), style of dress (in particular their pointed shoes which resembled those of the Hittites), their use of the arch in architecture, and their obscure language. However, even to this day, the origins of the Etruscans remain a mystery.

The Etruscans were organized into a loose confederation of city-states to the north of Rome. Around 650 B.C.E., they took control of the site of Rome, with its defensible hills and location on a ford of the Tiber River. They did a number of things to transform this crude collection of shepherds' huts into a true city. For one thing, they introduced rectangular urban planning. They also drained the surrounding marshes and built underground sewers. They built public works using the arch and vault, and laid out roads and bridges. They promoted trade, the development of metallurgy, and better agriculture in and around Rome.

Clearing the air. Among the most useful skills the Etruscans taught the Romans was that of drainage engineering. Vertical shafts would be dug in low-lying land that would drain standing water to a channel (cuniculus), which in turn would lead down to the nearest river or stream. Besides turning low-lying swamps and marshes into useful farmland, such drainage projects also eliminated malaria by driving off the anopheles mosquito. Ironically, they had no idea of what caused malaria, which in Latin means bad air.

The Etruscans, being heavily influenced by the Greeks, also introduced the Greek alphabet, thus introducing Greek influence into Roman culture. In fact, Roman nobles during this period would send their sons to be educated in Etruscan schools much as they would later send their sons to Greece for an education. The dark and gloomy Etruscan religion, in particular the custom of gladiators fighting to the death at the funeral of a king or noble, also had a significant impact on Rome. This is seen much

later in Christian images of demons that seem to be modeled after Etruscan demons. Overall, the Romans owed a great deal to the Etruscans. The genius they would show for urban planning, road and bridge building, and civil engineering projects such as public aqueducts and baths, was a direct result of the legacy left by the Etruscans.

Those “fascist” Romans. The Romans also adopted a number of Etruscan symbols of power and authority: the military standard of the eagle, the scarlet military cloak for generals, and the purple-bordered togas denoting nobility. They also used the custom of preceding an official with *lictors*, men who bore the *fascies*, a bundle of rods with an ax, which symbolized the official’s power of life and death. (Inside the city’s *pomerium* there was no ax in the bundle, indicating more limited power.) It is from *fascies*, a symbol of power, that we get the word fascist.

By 500 B.C.E., the Etruscans had made Rome most important city in the central Italian region of Latium. This enabled it to dominate its close neighbors, the Latins and finally encouraged it to rebel against its masters and shake off Etruscan rule, the traditional date being 509 B.C.E. However, Rome was still in a precarious position. Etruscan aggression from the north remained a serious threat, while hill tribes from the east were also attacking, and the Latin tribes to the south saw this as a chance to rebel against Roman rule, now that it had lost Etruscan support.

The Etruscans made a concerted effort to restore their rule over Rome. The story of the Roman hero, Horatius, single-handedly defending the bridge to Rome against an Etruscan surprise attack reflects this effort. However, the Etruscans' loose organization into a confederacy of independent city-states made them vulnerable to attack by the Greeks in South Italy who were their rivals for trade and sea power. In 474 B.C.E., the Greeks, and peoples of Latium allied to defeat the Etruscan navies at Cumae. After this Rome was able permanently shake off Etruscan rule.

The way Rome dealt with the Latins anticipates its success as a ruler in the future. Having beaten them at the Battle of Lake Regillus, Rome formed the Latin League, with itself as leader, but treating the Latins more as allies than subjects and sharing joint conquests 50-50 with them. As a result, the Latins

were some of Rome's staunchest allies, especially in the dark days of the Second Punic War against Hannibal.

Rome dealt with the hill tribes, the Aequi, Volsci, and Hernici in a more clever and devious way. First, it allied with the Hernici who were in the center, thus isolating the Aequi and Volsci from each other. As a result, Rome and the Hernici could defeat the Volsci, and Aequi one at a time. Then, with the Aequi and Volsci under control, Rome could turn against the Hernici.

Except for one brief interlude with invading Gauls from the North, Rome was now secure enough to embark upon the conquest of Italy.

Those Wild Etruscan Women



Etruscan women had relatively high status, as seen by statues of men and women reclining together on dining couches. Greeks and Romans alike, such as the Greek historian Theopompus of Chios, had some very pointed ideas about this: *"...Further they dine, not with their own husbands, but with any men who happen to be present, and they pledge with wine any whom they wish. They also drink excessively and are very good looking. The Etruscans rear all the babies that are born, not knowing who the father is in any single case..."*

The Sibylline Books: Rome's Books of Prophecy



The Sibyl offers the remaining three books for quadruple her original price for nine books

The story goes that one day, the Etruscan king of Rome, Tarquinius Superbus, was approached by an old woman who offered to sell him a set of nine books for an outrageously high price. When Tarquin turned her down, she burned three of the books and doubled her price. Tarquin, thinking her crazy, refused this offer. So she burned three more books and doubled the price again for the remaining three. Amazed at her behavior, Tarquin accepted this last offer, buying what turned out to be books with prophesies about Rome's future.

Whenever the Romans faced a crisis, they would consult these books for clues on what to do. Like the Oracle of Delphi, the Sibylline Books gave answers that were somewhat cryptic and ambiguous, thus making it virtually impossible to prove them wrong. One can't help but wonder what was in the six books she burned. Probably just recipes.

A good example of how the Romans used the Sibylline Books occurred when they were faced with a Gallic invasion. The Sibylline Books said Rome must twice be held by enemies. Having been taken once before by the Gauls in 387 B.C.E., the Romans were desperate to avoid a second conquest. The solution was ingenious. They took two Gallic slaves and buried them alive, so they were holding Roman soil, thus fulfilling the prophecy with minimum pain to Rome.

Tales of Roman Honor



Rembrandt's painting of Lucretia killing herself to preserve her honor

A woman's honor. According to Roman legend, the rape of a Roman woman, Lucretia, by Sextus Tarquinius the son of the Etruscan king triggered the revolt against the Etruscans. To prove her sincerity and virtue, Lucretia killed herself after announcing the rape to her kinsmen, who overthrew Etruscan rule to avenge her death. By the way, the name Sextus just meant Sixth, and had nothing to do with his libido.

Lefty. Another story of Roman courage concerns Gaius Mucius. When the Etruscans were besieging Rome, Mucius sneaked into the enemy camp, intent on murdering the Etruscan king, Lars Porsenna. Unfortunately for Mucius, he mistook another official for the king and killed him instead. He was immediately apprehended and taken to the real king. To show his contempt for pain and death, Mucius thrust his right hand into a fire and burned it off. The Etruscan king was so impressed with Mucius' courage that he let him return to Rome. Ever after, Mucius had the nickname Scaevola, meaning "Lefty".

Cincinnatus is the subject of another popular story of Roman civic virtue. When the Volsci had trapped a Roman army, the Senate offered a citizen named Cincinnatus the office of dictator, giving him absolute power for the duration of the emergency. After performing his duty, Cincinnatus gave up his powers and returned to the simple life of a farmer, showing the selfless patriotism that Romans idealized and expected of their citizens. In the early days of the American Republic, patriots wanting to keep alive the ideals of their revolution, founded the Society of the Cincinnati, which still exists.

THE ROMAN CONQUEST OF ITALY (c.400-265 B.C.E.)

In 390 B.C.E. Rome took the important Etruscan city, Veii, on its own without any help from the Latins, thus allowing it to claim this prize entirely for itself. This further established Rome's dominant position among the Latins, seriously weakened the Etruscans in the north, and made Rome the dominant power in Central Italy. Then disaster struck.

The siege of Veii supposedly lasted ten years, just like the siege of Troy, and, also like that siege, ended with trickery. According to the story, an oracle told the Romans to drain a nearby lake from which they dug a tunnel into the city. Just as they were to emerge inside an Etruscan temple, they heard the Etruscan king about to make a sacrifice, saying whoever made this sacrifice would win the war. The Romans burst out and seized the sacrificial knife to complete the ritual, thus taking the city and winning the war.

In 387 B.C.E. an invasion of Celtic Gauls descended on Italy. Having gotten involved with defending the Italian town of Clusium from these invaders, the Romans met the Gauls at the battle of the Allia River with disastrous results. The Gauls' wild charges panicked the Romans who fled to Rome, which the Gauls besieged Rome for seven months before finally being paid to leave. Many of them settled in northern Italy, which came to be known as Cisalpine (this side of the Alps) Gaul. Although they recovered quickly from it, this incident left serious psychological scars on the Romans who from this point feared the barbarian giants from the north. Caesar's conquest of Gaul in the 50s B.C.E. needs to be seen in light of the relief to the Romans that removing these barbarians signified to them. Except for the brief interruption of the Gallic disaster, Roman expansion in Italy was almost uninterrupted in the period 400-265 B.C.E.

Rome's pattern of conquest. It gave much of this land to poor Roman citizens, which set into motion a recurring pattern that would eventually help Rome conquer Italy. Since more Romans had land, they could now afford the arms and armor to serve in the army. This gave Rome a larger army, which meant it could conquer more land, distribute it to more citizens, further increase its army, and so on.

Two other Roman practices came out of this cycle and led back into it to help Rome in its path of conquest. One was the practice of founding colonies to gain and secure their hold on a region. The other was the building of roads to help Roman armies move more quickly and easily than their enemies to threatened areas.

After the fall of Veii, Rome would sweep from one conquest to another, first crushing a revolt by its Latin allies, next conquering the Samnites and Campania in two hard-fought wars, and finally defeating the Hellenistic army of Pyrrhus of Epirus to bring the Greeks in Southern Italy under control. And with each conquest, more Romans would get land, buy arms and armor, and increase Rome's army, conquests, etc.

Rome's campaigns of conquest (387-265 B.C.E.). Rome's recovery from the Gallic invasion was swift. It quickly put down a revolt of the Latin allies and then replaced the Latin League with separate treaties between Rome and each Latin state, thus tying each city to Rome alone.

Rome's victory now got it involved in affairs in Campania. When southern hill tribes, known as Samnites, started threatening the rich cities of Campania, they looked to Rome for help. This touched off the Second Samnite War (326-304 B.C.E.). The Romans quickly ran into serious problems fighting the Samnites in the hills. Up to this point they had used the Greek style phalanx as their main tactical unit. This was ill suited to fighting in mountain passes. An entire Roman army was even captured in a pass known as the Caudine Forks. The Roman, being ever adaptable, copied their Samnite enemies who used more open and flexible formations with soldiers equipped with throwing javelins, swords, and lighter armor. These formations, called *maniples*, were arranged in a checkerboard fashion that allowed the Romans to advance fresh troops into battle and withdraw tired ones through the gaps in the checkerboard. The new Roman legions might bend, but they rarely broke. Not only did they win the Samnite wars and Italy for Rome, but, with a few modifications, they would eventually conquer the entire Mediterranean.

The Second Samnite War was a long, hard fought affair that saw Rome initiate two other policies: road building and colonies. In 312 B.C.E., the Romans built the first of their military roads, the Appian Way, to move troops quickly in times of war. However, the Appian Way and other such

roads would also be highways of trade and commerce in peacetime. Eventually, there would be 51,000 miles of paved roads linking different parts of the Roman Empire together. Rome also founded colonies to cut Samnite supply lines and communications and established firm Roman control in the area.

Because of their military reforms, roads, and colonies, the Romans finally defeated the Samnites in 304 B.C.E. They were lenient with their defeated enemies, but this allowed the Samnites to start a third war (298-290 B.C.E.). However, the Roman system of maniples, roads, and military colonies on their enemies' borders gradually strangled the Samnites into submission once again.

Except for Cisalpine Gaul, only the Greeks in the very south were now free of Roman control. Growing increasingly nervous about Rome's intentions, the most powerful of these cities, Tarentum, went to war with Rome in 280 B.C.E. Tarentum had great wealth, but little fighting spirit. Therefore, it had the unusual habit of hiring foreign kings to fight its wars. In this case, it called in Pyrrhus, a cousin of Alexander the Great and ruler of the kingdom of Epirus, northwest of Greece. For the first time, the Romans were up against a military system more sophisticated than their own, using the dreaded Macedonian phalanx and war elephants. The more flexible maniples fought bravely on the plains of Heraclea and Ausculum, but were beaten. However, Pyrrhus' victories were so costly compared to what he gained that even today we refer to such victories as "pyrrhic". In the face of such defeats Roman perseverance shone forth, the Senate refusing to make peace until every last Macedonian had left Italian soil. Pyrrhus did leave Italy for a while, fighting Carthage, now allied to Rome, for control of Sicily. Although militarily successful, he accomplished nothing lasting and thus returned to Italy. In 275 B.C.E., the Romans beat the Macedonian phalanx at Beneventum by luring it onto hilly or broken ground. Pyrrhus went back to Epirus, and Italy now belonged to Rome.

Conquering a region is one thing. Ruling it is another. And it was here that the Romans showed their true greatness. Instead of ruling like tyrants, they offered various grades of Roman citizenship and the chance to share the benefits of Roman rule with the Italians in return for their loyalty. Newly conquered cities were made allies that had trade and marriage privileges with Romans. As a city gradually proved its loyalty to Rome, it would receive the status of partial, or Latin, citizenship.

Eventually, a city proving its loyalty over a long period of time would be granted full Roman citizenship. All of Rome's subjects were expected to supply troops for war and give up their independent foreign policies. However, Rome did let them keep their local governments and customs, but they tended to resemble those of the Romans more and more with the passage of time. Rome also kept building roads and founding colonies. Colonies with Latin citizenship were especially popular, since they were a bit more independent than full Roman colonies, while still providing Rome with troops.

The value of Rome's system for governing Italy should be obvious. Instead of constantly worrying about rebellions, it had a reliable source of loyal manpower and resources to help increase its power. The greatest test of this was when Hannibal tried to conquer Italy, thinking the Italians would flock to his standard against the Roman tyrant. Instead, most of Italy, especially the parts under Roman rule the longest, stood fast by Rome, despite the fact that Hannibal's army was in Italy for sixteen years. The Romans would continue this policy of offering citizenship to their subjects. In fact, in 212 A.D., the Roman emperor, Caracalla, completed this process by offering Roman citizenship to all freeborn men in the empire.

By 265 B.C.E., Rome had a strong stable government and Italy firmly under its control, secured by the lure of citizenship, a growing network of military roads and colonies, and probably the best-trained and most efficient army of its day. Given such a large, well organized, and energetic power, it should come as no surprise that Rome was ready for further expansion. Across the narrow strait of water to the south beckoned Sicily. Expansion there would mean war with a great naval power, Carthage, and the start of the road to empire.

28.A Rome's wars of Conquest in Italy.

Flowchart 28.A is included for one purpose: to show how Rome was constantly at war during this period, many times on more than one front.

Climate Change and Ancient Rome



The Apennines today

Climate change, including that caused by human factors, is nothing new. For ancient Italy, the roots of climate change seem to lie with inheritance patterns. The Romans and other Italian peoples didn't practice primogeniture (giving all the land to the eldest son). Since they split their lands, family farms got progressively smaller as the population grew, with the size of the average Roman farm bottoming out at between 1.5 and 5 acres. This led to soil exhaustion, causing some people to move into the hills where they would graze sheep and goats. Unfortunately, the sheep and goats would eat the shoots of new trees, causing deforestation. As trees (which transpire water into the atmosphere) died, the climate got hotter and drier. Based on ancient agricultural manuals, planting was moved two months earlier to avoid the hotter drier summers, so that crops previously harvested in August are now harvested in June.

Just to put into perspective how significant forests can be, temperatures over forested areas can be up to twenty degrees Fahrenheit cooler than unforested areas at similar latitudes and altitudes. One cypress tree can transpire 5000 gallons of water into the atmosphere a day.

Disaster at the Caudine Forks (321 B.C.E.)



Samnite soldiers watch Roman prisoners pass beneath the yoke after their capture at the Caudine forks

During the Second Samnite War, a false report that an ally was being besieged led the Romans to march rashly into a mountain pass, known as the Caudine Forks, where the Samnites trapped an entire Roman army and forced it to surrender. After the humiliation of being forced to crawl one by one under the yoke, the consuls negotiated the release of all but 300 prisoners in return for a promise of peace. However, the Roman Senate had to agree to the peace and one of the consuls convinced it to repudiate the treaty, thus condemning the 300 hostages to death. For a society that probably didn't even number one million people at the time, this was a huge sacrifice as well as statement about the Romans' determination to win the war.

It was also the impetus for the Romans to reform their army so it could adapt to rough ground not suited to phalanx warfare.

Rome and the Celts



Supposedly, the Celts entered Italy because a man, wanting vengeance for his wife's rape, lured the Gauls into Italy by giving them wine and telling them there was plenty more in Italy.

More likely, they were lured in to serve as Dionysius of Syracuse's mercenaries.

The Gauls' wild battle tactics (i.e., charging naked except for their jewelry and long hair, waving long swords and screaming blood curdling battle cries) terrorized more orderly civilized armies not used to them. The Romans eventually learned that if they could withstand the Gauls' initial onrush, their energy would diminish and Roman discipline and training could turn the battle around.

However, in their first major encounter at the Battle of the Allia River, the Romans were so panicked that they neglected to shut the gates to Rome. Suspecting a trap, the Gauls cautiously entered the city and came to the Senate house where the senators (from *senes*=old men) were sitting as still as statues. To see if they were alive, one Gaul stroked the beard of a senator who immediately struck him with his cane, triggering a massacre of the entire Senate.

The Gauls then laid siege to the surviving Romans on the Capitoline Hill. At one point, a sneak attack at night up the Capitoline was only detected by the sacred geese of Juno whose honking woke Marcus Manlius. Just in time he knocked the first Gaul back down the steep hill, creating a tumbling effect that took the following Gauls down as well. Finally, the Gauls agreed to leave for 1000 pounds of silver and gold. When the Romans discovered the scales were fixed, Brennus, the Gallic leader, threw his sword on them with the words: "Woe to the Vanquished." The Romans tried to cover up this humiliation with a story about the Roman hero, Camillus, saving the city at the last minute, but that seems quite unlikely.

Unlucky holiday. Since the Battle of the Allia River took place on July 16, the Romans considered that day unlucky and made it a holiday where no business could take place.

The Celts (AKA Gauls)



Among the Celtic Gauls' more curious customs was an obsession with keeping enemy heads, believing they would keep their owners' spirits from coming back to haunt them. Some prominent heads were preserved in cedar oil and displayed to visitors who might even try to buy them to increase their own power. The Celts also believed in reincarnation, being known to burn letters on funeral pyres for the dead and to take out loans that were repayable in the next life.

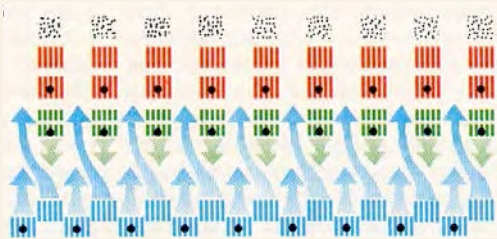
Druids were the priestly class that presided over the Celts' religion. The Romans suppressed them in later centuries and little is known about them. In addition to priestly duties, they also served as judges and scholars. Their religion was both polytheistic and animistic, revering various aspects of nature as the tops of hills, bodies of water, plants (in particular mistletoe) and trees, such as oak and hazel. Fire was regarded as a symbol of several divinities and was associated with cleansing. Ancient writers claimed the druids practiced human sacrifice, although it's not clear whether this is true or just made up for its shock value.

The Roman Way of War



In the aftermath of the disaster at the Caudine Forks, the Romans totally redesigned their army, modeling it mainly after the more mobile and flexible tactics of their Samnite enemies. The main Roman army lined up in three ranks offset

from one another in checkerboard fashion (below). In front of it were lightly armed skirmishers called *velites* (grey) drawn from the poorer classes that could not afford heavier armor. Much like Greek *peltasts*, they would throw their javelins to disrupt enemy formations and protect their main army from similar actions by the enemy.



When they were finished, the *velites* would retreat through the gaps left in the ranks behind them. Next came the *hastati* (red and top), consisting mainly of younger, untried soldiers. Each unit, known as a *maniple*, was divided into two centuries of 60 men each, one arranged behind the other to leave gaps for the retreating *velites*.

Once the *velites* had passed through, the rear centuries of the *hastati* would close the gaps to present a solid battlefront. As they advanced, they would throw their *pila* (javelins) to further disrupt the enemy. They would then close in and fight the enemy, using short swords suited for fighting in close quarters. If the enemy didn't break, the *hastati* would retreat through gaps left between the maniples of the next rank (green) of seasoned veterans in the prime of life. These men, known as the *principes*, would close ranks and repeat the pattern of the *hastati*.

If the *principes* failed to break the enemy, they would retreat through gaps left by the third rank, the *triarii* (blue and below). The *triarii* were armed with long spears and still fought as a phalanx. However, their job was usually to cover the army's retreat or let the *hastati* and *principes* regroup to renew the fight.



The manipular system's checkerboard formation solved two problems. First, it let the Romans constantly throw fresh troops against the enemy who were often packed too tightly to relieve their own front line troops as they wore down. Second, its flexibility allowed the Romans to adapt to changing circumstances and rough terrain that could break up the more solid phalanx. It was this system, with some later modifications, that would conquer the Mediterranean for Rome.

Maniple comes from the Latin word *manus*, meaning hand, because the Roman army was flexible like the fingers of a hand.

But the Romans did more than fight battles. They waged war, approaching it strategically in ways that went far beyond the battlefield, in particular in the use of roads and colonies. While the Greeks used colonies to get rid of excess population and gain access to remote resources, the Romans used them to increase the number of citizens available for the army, secure their hold on conquered lands, and serve as staging areas for future campaigns. They especially did this during the Second Samnite War (326-304 B.C.E.), planting colonies just inside Samnite territory to control strategic roads and passes and provide early warnings of impending Samnite attacks. Once Rome had secured control over this new area, it would repeat the process, founding more colonies and further encroaching on the remaining Samnite territory, gradually strangling the enemy into submission. This might take time, but the Romans were nothing if not persistent and in it for the long haul.

The Pyrrhic War (280-275 B.C.E.)



As scary as war elephants were, the Romans quickly learned they could be panicked by showers of spears and forced back to stampede their own troops. They also didn't like fire-pigs, greased pigs set on fire and driven toward the elephants, another tactic the Romans reportedly used.

Tarentum was the only colony founded by Sparta. Apparently, during the prolonged absence of the Spartan men during the Second Messenian War (685 to 668 B.C.E.) a bunch of sons were mysteriously born to the Spartan women. When they grew up, these mysterious young men wanted land of their own, so Sparta sent them to Southern Italy where they founded Tarentum. In time, it became one of the region's most powerful and prosperous Greek poleis.

An impolite gesture. The Pyrrhic War had its roots in Tarentum's nervousness at the Roman conquest of Thurii (282 B.C.E.), which ironically was a colony of Sparta's arch-rival, Athens. Shortly afterwards, when the Romans sailed illegally into Tarentine waters with ten ships, the Tarentines sank five of them and then drove the Romans from Thurii. When a Roman envoy demanded justice, one of the Tarentines urinated on him, which was apparently as rude then as it is now. The Roman vowed to wash out the stain with blood, and the war was on.



Pyrrhus of Epirus (above) was a distant cousin of Alexander the Great. His ambition was to conquer an empire in the West to rival that of the Macedonian king. He got his opportunity when Tarentum offered to buy his services in their war against Rome. He was a good, if not brilliant general, who brought the full panoply of Hellenistic warfare, including war elephants, to Italy. His perseverance and constancy of purpose might be questioned, since, after beating the Romans twice in battle, he went to Sicily for several years to fight the Carthaginians. This gave Rome a chance to regroup and eventually defeat him when he came back.

Prize winning "cattle". When the Romans first encountered war elephants, they called them Lucanian oxen, apparently thinking the cows in Southern Italy were really big and weird looking. As terrifying as these beasts were initially, the Romans quickly learned how to panic them by showering them with javelins and flaming arrows, often sending them rampaging back into their own ranks.

Nerves of steel. That's how one might describe Gaius Fabricius, an envoy sent to ransom Roman prisoners from Pyrrhus. After failing to bribe him, Pyrrhus supposedly sneaked an elephant up behind Fabricius (a good trick in itself) and had it trumpet in his ear to test his nerves. Fabricius didn't flinch. When Pyrrhus' doctor approached Fabricius offering to poison his king for a price, Fabricius turned him over to Pyrrhus, apparently being as incorruptible as he was unflappable (or deaf).

Pyrrhus' death came a few years later during a street fight in Argos when an old woman threw down a roof tile that hit him in the head and killed him.

[Back to flowchart](#)

AN OVERVIEW OF ROMAN EXPANSION IN THE MEDITERRANEAN (264-133 B.C.E.)

Introduction: pattern of conquest. Just as Rome got caught up in a cycle of expansion that led to the conquest of Italy, it experienced another such cycle that led to their dominance of the Mediterranean. In this case, what triggered the pattern was the mere fact that each new conquest brought Rome into contact with a new set of neighbors. This would lead to new opportunities for conquest, but also mutual fears and suspicions on each side. Either way, Rome would get drawn into a new set of wars, which it would eventually win with new conquests. This, of course, would present Rome with some more new neighbors and the pattern would repeat itself until Rome had conquered the Mediterranean.

The first phase of this expansion involved Rome in two desperate wars against Carthage (264-241 & 218-201 B.C.E.). Initially, this struggle was over Sicily, since it was rich, very close to Italy, and Rome had to protect the trade of its Greek subjects in Southern Italy against Carthaginian encroachment. Rome's victory in these wars made it a major naval power controlling Sicily and dominating the Western Mediterranean. Feeding back into the cycle of expansion, this also led to contact and conflict with new peoples in the Eastern and Western Mediterranean.

In the West, Rome got involved in wars with Carthage and the Celts in Spain, both of whom Rome feared from previous wars. Therefore, Rome conquered and destroyed Carthage in 146 B.C.E. and the Spanish Celts by 133 B.C.E., both of them in rather brutal and treacherous fashion.

In the East, Rome was more reluctantly drawn into wars against Antigonid Macedon and Seleucid Asia by two main factors. For one thing, Macedon, suspicious of Rome since it had crushed the Illyrian pirates close to Macedon's shores, had declared war on Rome during its darkest days of the Second Punic War. While nothing much came of this First Macedonian War (215-205 B.C.E.), Rome was naturally suspicious of Macedon. Feeding this suspicion was the second factor, various Greek states running to Rome for protection, at first against Macedon and the Seleucids, and later against each other. As Rome was drawn increasingly into affairs in the East, its frustrations grew until it annexed Macedon (149 B.C.E.), Greece (146 B.C.E.) and Pergamum in Asia Minor, which was willed to Rome by its king in 133 B.C.E.

By 133 B.C.E., Rome was the dominant power in the Mediterranean. Unfortunately, having an empire would put stresses and strains on Roman society, including the creation of ambitious generals looking for new opportunities for conquest, plunder, and glory. Therefore, the Roman tide of conquest continued after 133 B.C.E. In the West, an ambitious general named Julius Caesar would push the barbarian threat even further north by conquering the Celts in Gaul. Eventually, the rest of North Africa would fall under Roman rule to round out control of the Western Mediterranean. Meanwhile, in the East, Mithridates of Pontus attacked Rome's provinces in Asia Minor. Rome won both of these Mithridatic wars, and its generals, most notably Pompey, progressively annexed the rest of Asia Minor, Syria, Palestine, and Egypt. Thus by the early Christian era, the entire Mediterranean was firmly under Roman rule.

However, this empire would bring serious problems that would plunge Rome into bloody civil strife.

How to declare war Roman style.

The Romans, being very religious and superstitious, had a strict ritual for declaring war that involved *fetial* priests who would demand restitution for some injustice from a neighbor. They would then wait up to thirty-three days for an answer before returning to Rome. If the neighboring state refused Rome's demands, the military assembly, known as the *Comitia Centuriata* would vote on war. Formal declaration of war required the fetial priests to return to the neighboring territory, wearing sod on their heads for the magical protection of their own soil, make a ritual speech and throw a charred spear of cornel wood into enemy territory. Roman armies could not move until all this had been done.

When Rome started fighting overseas enemies, the time and distances involved in carrying out this ritual became cumbersome. To solve this and keep the gods happy, the Romans took slaves from the land they wanted to attack, gave them land in Rome that they could declare the enemy state's territory, and planted the charred spear there.

ROME VERSUS CARTHAGE: THE PUNIC WARS (264-201 B.C.E.)

Rome's struggle with Carthage (264-201 B.C.E.).

Rome's first overseas wars were against Carthage on the coast of North Africa, the largest, most prosperous, and aggressive of the Phoenician cities. The prize they fought for was the island of Sicily, which for centuries had been a constant battleground between Carthage and various Greek colonies. Neither side had won a decisive victory, and when Rome got involved, the island remained divided between Carthage in the western end of the island and the Greeks in the east. Rome's relations with Carthage down to 264 B.C.E. had been friendly. The two powers had even allied around 500 B.C.E. against the Etruscans. By this treaty Rome recognized the Mediterranean as Carthage's sphere of influence, and Carthage even claimed a Roman could not wash his hands in the sea without its permission. As long as Rome was just a land power preoccupied with conquering Italy, this arrangement was fine. However, in 264 B.C.E., with Italy firmly under control, the Romans first got involved in Sicilian affairs.

There were several reasons for this war. For one thing, both Rome and Carthage saw Sicily as a natural extension of their respective territories. Similarly, the Greeks in Southern Italy felt Sicilian trade and resources were rightfully theirs to exploit and probably put pressure on Rome to protect their interests there. The immediate cause of this war was a group of Italian mercenaries called the Mamertines ("Sons of Mars") who had seized the strategic port of Messina just across from Italy. The Romans, seeing the port as vital to the security of Italy, helped the Mamertines when Carthage moved to take the city, and this led to war.

The First Punic War (264-241 B.C.E.) resembled the Peloponnesian War between Athens and Sparta, in that each conflict pitted a land power against a sea power where one side would have to attack the other side's strength. In each case, it was the land power that built a navy. Roman experience with a navy up till now had been limited, which seems surprising considering how much coastline Italy had to defend. However, probably with the help of

Greek shipwrights in the south, the Romans built a fleet with which to challenge Carthage.

The Romans realized they could not match Carthage's centuries of experience in naval warfare. As a result, they adapted an Athenian device left over from the siege of Syracuse in 413 B.C.E. It was a 36-foot long boarding bridge that swiveled on a pivot to come down on its intended foe. The spike for locking the ships together reminded the Romans of a crow's beak, so they called it the crow (*corvus*). The idea was that even if the Romans got rammed, they could swivel the *corvus* around to slam down on the enemy deck, storm across and take their ship. To further ensure success, the Romans added 80 soldiers to the usual complement of 40 marines. In essence, the Romans were turning a sea battle into a land battle. As ridiculous as it seemed, it worked. Time and again, Roman fleets crushed Carthaginian fleets and were steadily sweeping Carthage from the seas. However, Rome had one very powerful enemy that evened things out: Mother Nature. It seemed that for every Carthaginian fleet the Romans destroyed, a storm would rise up to demolish a Roman fleet. Thousands of lives were lost on each side with neither Rome nor Carthage making any headway or willing to quit.

For twenty years the war dragged on, bleeding each side white. Finally, in 241 B.C.E., the Romans mounted one last supreme effort to build a fleet, this time without the heavy *corvus* to weigh down the ships. As luck would have it, they caught the last Carthaginian fleet loaded down with supplies and destroyed or captured most of it. Carthage had had enough and sued for peace. Rome took 3200 talents (211,200 pounds) of silver and three-fourths of Sicily, leaving its ally Syracuse with the other quarter. Sicily became Rome's first province, having little prospect of Roman citizenship since, in Roman eyes, the Sicilians were too different to be able to share in the benefits of Roman rule.

Rome was quite active in the years after the First Punic War. To the north, it conquered the Gauls in Northern Italy, known as Cisalpine Gaul ("Gaul this side of the Alps"), thus extending Roman rule all the way to the Alps. To the east, the Romans crushed the Illyrian pirates operating in the Adriatic

Sea. Although this was done mainly to protect the shipping of the Greeks in Southern Italy, the Macedonian king, Philip V, viewed it as an act of aggression by Rome in his home waters. Another power getting concerned about Roman power was Syracuse, which found itself hemmed in by Roman rule in most of Sicily.

Then there was Carthage. In 238 B.C.E., when Carthage was still weakened from the First Punic War, Rome seized Sardinia and Corsica, two islands off the west coast of Italy that it saw as a threat if they remained in Carthaginian hands. However, the Carthaginians were a resilient people who were not about to accept Rome's victory for long. Soon after the war, Carthage's most capable general, Hamilcar Barca, set off for Spain to carve out a new empire for his city. Over the next twenty years, Hamilcar, his son-in-law Hasdrubal, and Hamilcar's own son Hannibal, brought most of Spain, with its plentiful silver and mercenaries, under Carthaginian rule.

As Carthaginian power revived in the West, Rome became increasingly nervous. Finally, war broke out when Hannibal attacked the Spanish city of Saguntum, which was an ally of Rome. The Second Punic War (218-201 B.C.E.) would be an even more desperate struggle than the first war with Carthage.

The Carthaginian general, Hannibal, was a brilliant commander who figured the best way to beat Rome was to invade Italy so Rome's subjects would desert to his side. Since the Roman navy was too strong for him to risk an invasion by sea, Hannibal took the only remaining route, over the Alps. This march, which involved taking some 40,000 men and 37 war elephants through hostile Gallic territory and treacherous mountain passes, certainly ranks as one of Hannibal's most remarkable achievements.

Only some 25,000 men and one elephant survived this march, and the Romans immediately moved north to finish off Hannibal's sick and exhausted army. However, it was Hannibal who, over the next two years, dazzled the Romans with an array of tricks and strategies that trapped and destroyed one army after another. The most devastating of these battles, Cannae (216 B.C.E.), was a masterpiece of strategy using a collapsing center to draw the

Romans in and then envelop their flanks. The ensuing slaughter cost Rome 35,000 men.

Cannae unleashed a virtual avalanche of problems on Rome as other states, nervous about Roman power, flocked to Hannibal's standard. Syracuse joined the Carthaginian side. Philip V of Macedon, fearing Roman encroachment in the Adriatic, also allied with Hannibal against Rome. In Italy, both the Gauls in the north and the Greeks in the south defected to Carthage's side. However, Hannibal was disappointed that the overwhelming revolt against Rome never took place. Instead, the central core of Italy stood fast by Rome, producing more armies as Rome pursued new strategies.

In their darkest hour after Cannae, The Romans displayed incredible spirit and determination. They defiantly refused to ransom soldiers who had surrendered at Cannae and forbade any talk of peace or even public mourning that might lower morale. They quickly put Syracuse under siege, found allies in Greece to keep Philip V of Macedon too busy to be able to help Hannibal in Italy, and raised armies to invade Spain and deprive Carthage of its main resource base. In Italy, Roman armies gradually pushed Hannibal into the South, while being careful not to test his wizardry in open battle. Instead, the Romans, using superior manpower and resources, gradually wore Hannibal down while chipping away at his supports elsewhere.

It was a slow exhausting strategy that required remarkable perseverance. But in time it bore fruit. Macedon was neutralized. Syracuse fell after an epic two-year siege. Spain was gradually stripped from Carthage's grasp. And two relief armies sent to Hannibal's aid were destroyed in the north before reaching him. Hannibal managed to hang on tenaciously in southern Italy as he saw even his Italian allies melting away under growing Roman pressure. Finally, the Romans mounted an invasion of Africa that forced Hannibal to return home. At Zama, the brilliant Roman general, Scipio, used Hannibal's tactics against the old master to crush his army and bring Carthage to its knees. Rome deprived Carthage of Spain, most of North Africa, 10,000 talents (660,000 pounds) of silver, all its war elephants and all but ten warships. Its African lands went to Rome's ally Numidia, while Spain remained

to be conquered. The quarter of Sicily around Syracuse also fell to Rome. Rome had arrived as the dominant power in the West.

Carthage: Early History and Legend



A map and view of how Carthage probably looked, showing how it was nearly surrounded by water and how its naval harbor was protected by a very narrow approach.

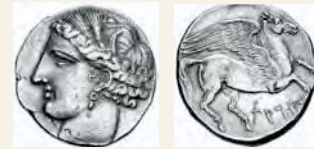
By all accounts, Carthage was founded by a woman. The Jews knew her as Jezebel. To the Romans, she was Dido. In Carthaginian accounts she was Elissa who led her people into exile from the Phoenician city of Tyre. When she found an ideal spot in North Africa, the natives said she could have as much land as she could cover with a cowhide. Supposedly, Elissa cut a cowhide into thin strips and laid them end-to-end to encompass the land she wanted. Carthage was born.

The Romans said Dido killed herself over a broken heart when the Trojan hero, Aeneas, left her to pursue his people's destiny to found Rome. The Carthaginians also said she committed suicide, but for a very different reason. When a native chief wanted to marry Elissa to seal peace between the two peoples, Carthaginian nobles, scared to tell her the real proposal, said they had been asked to marry local women for the same reason, but that they didn't want to.

When Elissa scolded them for not being willing to do that for the good of Carthage, they told her the truth, that the local chief

wanted to marry her. Trapped by her own words, but unwilling to go through with the proposed marriage, she made a pyre of all her possessions, set it on fire, and threw herself on it.

As with other Phoenician cities, Carthage's main sources of wealth were trade and manufacture. However, it is hard to identify Carthaginian workmanship since they, like other Phoenicians, made cheap copies of other cultures' goods that allowed them to undersell the competition. They were especially influenced by the Greeks, as seen in this coin depicting their goddess, Tanit.



One of the more persistent (and spurious) stories the Romans, a very hostile source, liked to tell was how the Carthaginians cruelly sacrificed infants to their god Moloch.

Carthage ruled the coast of North Africa, southern Spain, and the western end of Sicily. Control of that strategic island would have secured the markets and riches of the Western Mediterranean, but the Carthaginians faced a race of sailors and merchants just as determined as they were to control Sicily: the Greeks.

Over the centuries, a pattern of wars emerged where Carthage would mount a huge offensive and nearly conquer Sicily, until a leader, usually from Syracuse), would emerge to save the Greek cause. Then each side would recover for a few years and start all over again. Thus a series of Syracusan leaders Gelon (480), Dionysius (early 300's), and Agathocles (late 300's), and Pyrrhus of Epirus (270's), a king from north-western Greece, each saved the Greek cause in turn. Ironically, a people

with little or no experience at sea, the Romans, would be the winner.

Carthage also clashed with the Greeks and Etruscans in the waters around Italy. In 535 B.C.E., the Carthaginians and Etruscans defeated the Greeks at Alalia, allowing Carthage to drive the Greeks from Sardinia, Corsica, and Spain. However, the Etruscans and Carthage were also rivals, as seen in early treaties of alliance (c.500 and 348 B.C.E.) between Rome and Carthage, to fight the common Etruscan enemy.

One major difference between Rome and Carthage was how they fought their wars. While Rome was a land power whose citizens filled the ranks of its army, Carthage was a sea power, with Carthaginians rarely serving in the army. Instead, it relied on mercenaries recruited from North Africa, such as Numidian horsemen (below right) and Libyan spearmen. Carthaginians rarely served in war except in the cavalry and the navy, which was their real source of strength. The two soldiers to the left also show Greek influence on Carthage.



Rome Takes to the Sea



Rome's naval background. While the Romans liked to claim they had no prior naval experience, there is some evidence to the contrary. For one thing, colonies of 300 Roman citizens dotted the coastline, leading to speculation that each of these was meant to supply and man one warship. In 310 B.C.E., a fleet of twenty Roman ships was sent, without success, against pirates near Pompeii. In 280 B.C.E., Rome's war against Tarentum and Pyrrhus started when the Tarentines sank five of ten Roman warships that had sailed into Tarentine waters. Given their naval record up to the First Punic War, maybe one could say the Romans were starting from scratch.



A Roman quinquireme with the corvus (boarding bridge) at the front of the ship.

The main ship-of-the-line then was the quinquireme, meaning there were five rowers per vertical bank of oars. Such a ship would either have three levels with two rowers each on the top and middle oars and one rower on the bottom row or two levels of oars with three rowers on top and two on the bottom.

In combat, sails and masts would be lowered, since, with all the turning and maneuvering, what was a beneficial wind at one point could be an adverse wind a few minutes later.

How to build a fleet really fast. When the Romans finally decided to build a navy they did it in a uniquely Roman way. Supposedly, they didn't have a single warship on which to model their navy until a Carthaginian ship chasing a Greek merchant ship carelessly ran aground and was captured. Using this as a template, the Senate ordered that a fleet of 120 warships modeled on it be built in 60 days. As the Greek historian, Polybius put it, *"Thus a nation that possessed not a single warship without any resources at all, and without having ever entertained an idea of naval war was called upon to build 100 quinquiremes and 20 triremes within 60 days."*

Somehow, they did it, if not in sixty days, at least very quickly. But how?

Marine archaeologists may have found the answer: parts of Carthaginian ships marked with what seem to be part numbers. Apparently ancient states would mass-produce warship parts and quickly put together fleets using an assembly line process. In addition, Greek shipwrights in Southern Italy could help Rome build a navy.

For trained crews, the most essential ingredient in becoming a naval power, the Romans supposedly drafted some 30,000 Italian farmers and trained them to row in time by using mock rowing decks set up on dry land. However, even with such training, they still would be no match for Carthage's trained crews. They needed something to quickly give them an edge. They found it in Syracuse, although it was apparently a leftover Athenian invention from their siege of the city in 413 B.C.E.

It was a 36' long boarding bridge that swiveled on a pivot to come down on its intended foe. The spike for locking the

ships together reminded the Romans of a crow's beak, so they called it the crow (*corvus*). The idea was that even if they got rammed, they could swivel the *corvus* around to slam down on the enemy deck, storm across and take their ship. To further ensure success, the Romans added 80 soldiers to the usual complement of 40 marines.

The first test of this new tactic came when the Romans encountered a Carthaginian fleet of 130 ships at Mylae in 260 B.C.E. At the sight of these bulky warships, crammed with troops and unwieldy top-heavy devices, the Carthaginians must have laughed. Seeing the Romans as sitting ducks, they swept down on them like pirates, not even forming a battle line.

That was a mistake.

The Roman consul, G. Duilius, determined to make this a land battle, headed straight into center of the enemy fleet and, as the Carthaginian galleys struck, the *corvuses* descended, crashing onto Carthaginian decks like giant fists, locking ship to ship in a hail of javelins and arrows. Then the Roman legionaries stormed across, two by two with shields locked, onto the enemy decks, overwhelming the lightly armed, shocked, and bewildered Carthaginians. As the historian Polybius described it: *"Some of the Carthaginians were cut down, while others surrendered in bewildered terror at the battle in which they found themselves engaged."*

It was exactly like a land fight, which suited the Romans just fine.

The Carthaginians reeled back, losing 30 ships, including the admiral's ship. They then regrouped and advanced, this time in order, trying to outflank the Romans. But the Romans, now with the numerical

advantage, formed a double line so the second line struck the enemy as they struck the first line. Once again, the corvuses crashed down and the legionaries charged across. The Carthaginians fled, losing 44 ships and 10,000 men.

Keeping with custom they crucified their admiral for losing a battle.

The Romans were so proud of their victory they nailed the captured prows (*rostra*) of enemy ships as trophies to the speaker's platform in the Roman forum. Our word for a speaker's platform, *rostrum*, still reflects the Romans' first naval victory at Mylae in 260 B.C.E.

The Carthaginians figured it was just a fluke. It wasn't.

In 258 B.C.E., the Romans beat Carthage again....and once again the next year.

But then things started going wrong.

Disaster and Deadlock (255-242 B.C.E.)



"It is a peculiarity of the Roman people as a whole to treat everything as a question of main strength; to consider that they must of course accomplish whatever they have proposed to themselves; & that nothing is impossible that they have once determined upon...But to contend with the sea & sky is to fight against a force immeasurably superior to their own." —Polybius, Greek historian

"Hide we away these painful gifts of the lord Poseidon"

--Greek sailor's epitaph

In 256 B.C.E. after several stunning naval victories, the Romans felt confident enough to invade North Africa with a fleet of 250 warships accompanying 40,000 soldiers on 80 transports. At Ecnomus they met a fleet of 240 Carthaginian blocking their way. In the ensuing battle the Romans captured 64 ships and sank 30 more, while losing only 24.

With the road to North Africa now open, the Roman consul, Regulus, landed with 25,000 infantry and 500 cavalry. After defeating a Carthaginian army, he made outrageous demands for peace, which Carthage refused. Instead it hired a Spartan mercenary captain, Xanthippus, to train their army in the latest Hellenistic tactics.

The next spring (255 B.C.E) Xanthippus led out the refurbished Carthaginian army, which, with war elephants and eight times as much cavalry as their foes, caved in the Roman flanks and massacred their army. Only 2,000 Romans escaped, while Regulus and 500 others were captured. A Roman fleet coming to rescue the surviving Romans sank 16 and captured 114 more Carthaginian ships in another crushing victory. However, the fortunes of war at sea now took a dramatic turn.

Having rescued the 2000 Romans, the fleet set out with 464 ships (including captured ones), which probably were undermanned by Roman sailors and over-packed with soldiers. Despite the advice of his Greek pilots, the Roman commander insisted on sailing along the harborless southern coast of Sicily. As he had been warned, a storm struck off the craggy coast of Camarina, washing soldiers and sailors off the decks and flooding the oarsmen below.

Aggravating the problem were the corvuses, which made the ships front and top-heavy, causing violent pitching and

rolling. Other ships were dashed against the rocks "where they went to pieces and filled all the seaboard with corpses and wreckage." The captured Carthaginian ships probably suffered even worse since they were undermanned. Scores of transports, 384 out of 464 warships, and some 100,000 Romans were lost, making this one of history's worst sea disasters.

With dogged perseverance, the Romans built 140 new ships and methodically proceeded to reduce Sicily's coastal towns (254-3 B.C.E).

Then another storm struck (253) destroying three-fourths of their navy along with 1000's more men.

In 250 BCE, with both sides bled white by the war, Carthage sent a peace proposal by way of their prisoner, Regulus, who promised to return to captivity if Rome refused Carthage's terms. After delivering the proposal, Regulus persuaded the Senate to reject its terms. Then, true to his word, he returned to Carthage and certain death.

And the war dragged on.

By 250 BCE, the Romans had built 120 more ships and were besieging the Sicilian town of Lilybaeum. Inspired by the speed of a Carthaginian blockade-runner, they had made their new ships sleeker and without the cumbersome corvuses. However, the next year when they met a fleet of 100 Carthaginian ships at Drepanum, everything went wrong for them.

First of all, when the sacred chickens wouldn't eat (a bad omen), the Consul said let them drink and then threw them overboard, much to the horror of the superstitious Roman rank and file.

Then, as battle was joined, the Carthaginians drew the Romans into one harbor entrance and out the other. As they emerged from the narrow harbor entrance, the Carthaginians swooped down on their disordered line. Lacking both the corvuses and the Carthaginians' skill at seamanship, they fell easy prey to the enemy's skillful ramming and clipping tactics.

Although the consul escaped, the sacred chickens weren't so lucky. Neither were 97 of their ships and crews.

Furthermore, the Carthaginians intercepted another 120 Roman ships, drove them against the shore as a storm approached and took shelter in a cove while the storm destroyed the Roman fleet.

Once again, Carthage ruled the seas.

Rome would build no new navy for five years.

Victory at Last (241 B.C.E.)



Even without a navy, the Romans continued to reduce Sicilian cities until only two remained. However they faced a new problem: a Carthaginian general, Hamilcar Barca, who waged relentless guerilla warfare from Mt. Eryx while being supplied by the Carthaginian navy. As long as he was being supplied, the Romans couldn't bring down his mountain fortress.

So the Romans decided to build one last fleet of 200 ships, financed by private loans that would only be repaid if Rome won. As

luck would have it, they intercepted 170 Carthaginian ships loaded down with supplies giving their ships, now without corvuses, the advantage of speed and mobility. In the ensuing battle, the Romans sank or captured 120 ships.

Carthage, unable to produce any more ships, sued for peace, agreeing to evacuate Sicily, return all prisoners, and pay 2200 talents of silver over the next 20 years. However, the Comitia Centuriata, the Roman Assembly that decided matters of war and peace, raised this to 3200 talents over 10 years.

Rome also took three-fourths of Sicily, leaving the rest to its ally, Syracuse. However, rather than making their Sicilian subjects fight in Roman armies and work for citizenship, Rome ruled Sicily as its first province, charging taxes instead of military service. At first, Roman government of Sicily was fair and kept the Sicilians loyal through the Second Punic War. Later, that would change drastically.

Truceless War, Bloody Peace (241-218)



Hamilcar Barca, Hannibal's father who crushed the mercenary revolt after the First Punic War and conquered much of Spain to revive Carthage's power.

The "Truceless War" (241-238 B.C.E.) The end of the First Punic War only brought Carthage new troubles in the form of the "Truceless War" a brutal revolt of 20,000 unpaid mercenaries along with native Libyans and Numidians. When the rebels tortured 700 Carthaginian prisoners to death, the revolt degenerated into a war of barbaric severity.

To aggravate the situation, some Italians were supplying the rebels. When Carthage protested this, Rome did clamp down on the Italians providing aid to the mercenaries. However, when North Africa was pacified and Carthage prepared to move against rebels in Sardinia, the mercenaries there called on Rome for help. Seeing Sardinia as too close to Italy for a foreign power to hold, the Romans declared war on Carthage, forcing it back down.

After a difficult pacification campaign Rome turned Sardinia and Corsica into its second province, exploiting Sardinia's lead mines in an operation that became infamous for its brutality.

Rome and the Gauls (again). Rome was busy on other fronts as well. In northern Italy, the threat of a Gallic war sparked a census across Italy to see how many men were available for military service. According to the census, Rome had 250,000 citizen infantry and 23,000 cavalry along with 350,000 allied troops available.

The Romans, always concerned about the northern barbarians, consulted the Sibylline Books for advice on how to deal with this crisis. The books said Rome must be held two times by a foreign enemy. Hoping to thwart another Gallic conquest while fulfilling the prophecy, the Romans buried two Gauls and a Greek alive so they were indeed holding Roman land while still alive.

The final showdown with the Gauls came in 225 B.C.E. at the Battle of Telamon. Roman discipline and strategy prevailed over the wild Gallic tactics as the Romans caught the Gauls from two sides, forcing them to fight back to back. In the ensuing massacre, the Romans killed 40,000 Gauls and captured 10,000 more. By 218 B.C.E., the Romans had finally subdued Cisalpine

Gaul, just in time for another epic war with Carthage.

Meanwhile, pirates from Illyria (modern Yugoslavia) were preying upon Greek and Italian shipping and then hiding in Illyria's coves and rocky coasts. However, when they made the mistake of raiding southern Italy and killing a Roman envoy, Rome sent 200 ships to crush the pirates. However, Philip V of Macedon, seeing Roman forces operating so close to his kingdom, started looking for an opportunity to strike back at Rome.

Carthage resurgent in Spain. Needing new lands to exploit after the loss of Sicily, Carthage sent its old general, Hamilcar Barca, to conquer Spain with its silver & mercenaries. Hamilcar took his 9-year old son, Hannibal with him, supposedly making him swear on the altar of Moloch that he would never be a friend to Rome. Whether or not the story is true, Hannibal would remain true to that oath and be a scourge, both real and imaginary, to Rome for decades. Roman mothers would even scare their children into behaving with threats that Hannibal would get them at night.

Under Hamilcar's brilliant leadership, the Carthaginians gradually conquered Spain and founded several cities, including Barcino (modern Barcelona). When Hamilcar was killed while crossing a river (228 B.C.E.), his son-in-law, Hasdrubal, took over and continued expanding Carthaginian power, largely through peaceful means such as marriage (228-221).

At first, Rome had been willing to see Carthaginian activity in Spain, since it would help pay the war indemnity. However, it was getting increasingly nervous about a resurgent Carthage. In 226 B.C.E. the two sides signed a treaty limiting Carthaginian expansion to the Ebro River and guaranteeing the safety of

Rome's ally, the city of Saguntum, 80 miles south of the Ebro.

In 221 B.C.E. Hasdrubal was assassinated, and Hamilcar's son, Hannibal, took over. Two years later he attacked Saguntum. As the city was about to fall, some of the Saguntines burned themselves and their possessions rather than let them fall into Carthaginian hands.

Meanwhile, a Roman embassy had gone to Carthage to demand it recall, or at least rein in Hannibal. When the Carthaginian senate said it couldn't do such a thing, the Roman held out two folds of his toga, saying one fold represented War, the other for peace, and that the Carthaginians should choose. When the Carthaginians told him to choose, he threw down the fold representing war.

"So be it; we welcome it," the Carthaginian senators said. Once again, Rome and Carthage were at war.

If the First Punic War had been Rome's first test as a big power, the Second Punic war would be its life and death struggle.

Hannibal crosses the Alps (218 B.C.E.)



At the start of the Second Punic War, Rome seemed to have an overwhelming advantage with some 600,000 men of military age and 220 ships against Carthage's 80,000 men and 100 ships. Assuming Roman rule was as oppressive to the Italians as Carthage's rule was to its neighbors, Hannibal figured he could beat Rome by invading Italy and raising the Italians in revolt. However, Rome's control of the sea left only one,

uninviting, route open to Italy: over the Alps.

The army Hannibal took was an extremely diverse one that he and his father had welded into an extremely loyal and effective fighting force. Hamilcar and Hannibal, besides conquering many Spanish tribes, had also won their trust through stern, but fair treatment making their Celtiberian Spanish troops among their most loyal followers. Spanish infantry had javelins made entirely of iron, which the Romans would apply to their own pila in modified form. They would also adopt the Spanish short sword that was better for close quarters cutting and thrusting than longer, more cumbersome models.

A major advantage Hannibal had over Rome was superior cavalry from Spain and Numidia in North Africa. Numidians rode bareback without reins, using knee and leg pressure to control their horses. Supposedly, they could throw their javelins with either hand. Not until Scipio enlisted the aid of his own Numidian cavalry could Rome fight on even terms with Carthage.

Hannibal took 37 elephants with him. In order to get them to board rafts for crossing the Rhone River, he had his men spread sod over the rafts to make them look like dry land. Only one elephant, named Cyrus, survived the crossing of the Alps, and he died soon afterwards. As a result, elephants played only a minor role in the Second Punic War.

When confronted with large boulders blocking their path, Hannibal had his men burn piles of wood around the boulders to heat them up and expand. He then poured vinegar on the boulders, causing them to contract and crack. Making Hannibal's feat even more remarkable was resistance from local tribes to his passing through, even

trying to stop him with avalanches of boulders.

Of the 35-40,000 soldiers Hannibal led out of Spain, only 26,000 survived. Furthermore, the survivors that made it into Italy were tired and sick. Expecting to have the element of surprise on his side, Hannibal was in turn surprised to find a Roman army had doubled back 1000 miles from Spain to protect Italy.

At the resulting Battle of the Trebia River (December, 218), the Carthaginian cavalry feigned retreat in a skirmish to draw the Romans into the river's icy waters. When the freezing and hungry Roman troops emerged from the river they found Hannibal's whole army waiting. The Carthaginians' superiority in cavalry helped them cave in the Roman flanks, while another force of 2000 men hiding in nearby hills emerged to attack the Roman rear.

Of 30,00 Romans only 10,000 were able to cut their way out, convincing the Gauls, recently conquered by Rome, to join Hannibal, thus replenishing his depleted ranks. For all intents and purposes, Cisalpine Gaul (northern Italy) was lost.

Disaster Heaped Upon Disaster (217-216 B.C.E.)



To face Hannibal's invasion after the defeat at the Trebia River, Rome raised 11 legions in 217 B.C.E.: four in N. Italy, five as reserves around Rome, and two in Spain. They also abandoned N. Italy, which was

already lost anyway, relying on the hillier terrain in Central Italy to neutralize Hannibal's advantage in cavalry. Despite that, Hannibal entered Central Italy, hoping to raise revolts there as he had among the Gauls in Northern Italy.

Although Hannibal had lost the sight in one eye after the crossing of the Alps, it was the Romans who traveled blindly, not having adequate cavalry for scouting ahead. Consequently, the consul Flamininus walked into a trap at Lake Trasimene, where there was only a narrow defile between the lake and surrounding hills. That, plus a morning fog made this the perfect place for an ambush.

First came a barrage of javelins and lead sling bullets.

Then the rest of Hannibal's army rushed down from the hills and out of the fog against the bewildered Romans. Hannibal by then had closed off both ends of the road along the lake, trapping the Romans who were cut down by the thousands.

Two entire legions were wiped out along with an advance guard of 4000 men.

Having suffered two major disasters, the Romans figured it best not to meet Hannibal in open battle. Therefore they made Quintus Fabius Maximus dictator, an office bestowing absolute power for six months on one man during an emergency. If the emergency persisted, it might be renewed for another six months.

Fabius' strategy, which earned him the nickname Cunctator (the Delayer), was to harass Hannibal while avoiding pitched battles. It was a sensible strategy, but it would take time and a lot of patience for it to take full effect. Even today, we use the term Fabian tactics to describe a strategy of stalling for time.

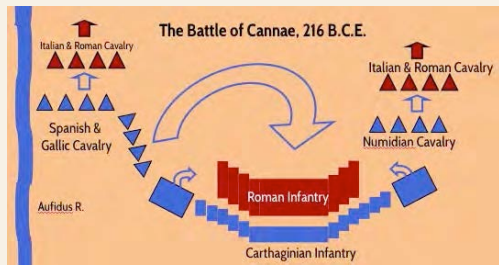
One story at this time concerned a critical pass held by Fabius that Hannibal needed to get through. To draw the Romans off his path, Hannibal put torches on the horns of 2000 oxen and drove them off in one direction while he escaped the other way. Supposedly, Hannibal also spared Fabius' estate to make him look like a traitor, which fuelled a growing clamor for an attack on Hannibal.

Therefore, in 216 B.C.E. Gaius Terentius Varro led a huge Roman army of 50,000 men to crush Hannibal once and for all. Command of the army alternated daily between the two consuls: the cautious Paulus and the reckless Varro. Hannibal even abandoned his camp and possessions to make it look like he had fled, while waiting in ambush in the hills above. He even left campfires burning. But scouts said it looked too contrived, with silver lying all about.

The Romans caught up with Hannibal at Cannae. Despite bad omens (a beehive over the consul's tent and the sacred chickens' refusal to eat again), Varro got his way and attacked.

Being heavily outnumbered, Hannibal laid a trap drawing the bulk of the Roman infantry into a collapsing center, while the flanks of his infantry held, thus hemming the Romans in on three sides.

Meanwhile the Carthaginian cavalry on the flanks beat the opposing Roman cavalry, then swung around to hit the exposed rear of the Roman line, thus surrounding the main body of Romans on all sides. From that point on, it was just a massacre.



In the ensuing slaughter Roman soldiers were packed in so tightly they had no room to raise their arms to defend themselves. So great was the potential for killing that Hannibal's cavalry would cut the tendons of Roman soldiers and leave them lying helpless until they had the time to come back and finish them off.

Some 25,000 Romans fell at Cannae, while another 10,000 were captured. 15,000 Romans fought their way out. Carthaginian losses were about 5700, a cost not easily made up this far from home. Among the Roman survivors was Varro, the consul responsible for this disaster. The Senate thanked him for not despairing of Rome and killing himself.

And even darker days still awaited Rome.

Avalanche: Rome's Darkest Hour...and Comeback (216-212 B.C.E.)



A fanciful painting of an Archimedes claw capsizing a Roman ship during the siege of Syracuse.

"Never, never, never surrender."--Winston Churchill

The disaster at Cannae brought an avalanche of misfortunes down on Rome:

- The Greeks, Samnites and Campanians in Southern Italy rebelled.
- So did Sardinia.
- Philip V of Macedon, worried about Roman power in the Adriatic, declared war on Rome.
- Syracuse turned on Rome when its king, Hiero, died in 215 B.C.E.
- And in Spain Hannibal's brother, Hasdrubal launched an offensive against the Romans.

However, against Hannibal's expectations, Central Italy stayed loyal to Rome. And that was the basis for one of history's great comebacks.

Even more amazing was how Rome responded to this crisis:

- They never considered the possibility of peace & forbade even discussing it.
- They prohibited public mourning for loved ones since it brought morale down.
- The Senate even refused to ransom Romans captured by Hannibal.
- By the war's end, the number of legions in service would increase from 8 to 25.

To the Romans, failure was not an option....ever. Bit by bit, they started to come back, starting in Sardinia where they drove off Carthaginian reinforcements for the rebels and crushed the revolt.

Macedon seemed to be a less imminent threat, especially after the Romans swept the Macedonian navy from the Adriatic, depriving Philip V of any practical way to invade Italy. As a result, they were content to ally with the Aetolian League and other Greeks to keep Philip V tied down. The First Macedonian War (215-205), as it is called, fizzled out when Rome's Greek allies, probably frustrated that Rome gave them no effective help, made a separate

peace with Philip in 206 BCE. The following year, Rome followed suit by signing the Peace of Phoenice. However, Rome did not forget what it saw as Philip's treachery and would deal with him in due time.

Spain, Carthage's primary resource base in the war, has always been a forbidding land where "large armies starve and small armies are beaten." Fighting there successfully required three things:

- 1) Command of the sea;
- 2) Control of the coast road; and
- 3) A good supply base.

Napoleon, the greatest general of his day, lost big time for failing all to attain all three of these. He called it the "Spanish Ulcer", since it constantly ate away at his army, gradually draining its strength much as an ulcer does to a human being. The Romans would come to understand that in the years to come.

Publius Cornelius Scipio the elder was the general in charge of depriving Carthage of its primary base of power. In 217 B.C.E., the combined fleets of Rome and Massilia beat a larger Carthaginian fleet, thus depriving Hannibal of reinforcements from Spain. Later, at the battle of Ibera, when Hannibal's brother, Hasdrubal, tried to copy the tactics of Cannae, his center collapsed before he could turn the Roman flanks and his army was badly beaten. As a result, instead of sending badly needed reinforcements to Hannibal, they went to save Spain.

In 212 B.C.E., the Romans took Saguntum, thus giving them a supply base. However, the next year, Hasdrubal defeated the separate Roman armies and killed Scipio. Only disagreement over what to do next kept the Carthaginian generals from exploiting this victory. So the fate of Spain continued to hang in the balance.

Syracuse's defection (215 B.C.E.) to the Carthaginian side was another blow to Rome. However, an energetic Roman general, Marcellus, using an army partly made up of the disgraced survivors of Cannae, drove the Syracusans into the city and started a siege that would last two and a half years.

The siege of Syracuse was an epic event matching Roman perseverance against one of history's most brilliant and innovative mathematicians and engineers: Archimedes. Time after time Marcellus' land and sea assaults were repulsed by catapults that covered every square inch in front of the city walls, making the area a deadly killing field. For defending the sea walls, Archimedes designed grapnels that stood ships on end and dropped them. Legend had it that he even created giant mirrors that would concentrate the sun's rays on enemy ships and set them on fire.

The Romans quickly learned to keep their distance and just wear the city down. Luckily for them, the Carthaginian fleet failed to even try to relieve Syracuse, while Carthaginian soldiers in the city were decimated by disease. Then one night, during the drunken revelry of a festival, the Romans stormed the heights of Epipolae overlooking the city. Supposedly Marcellus wept, both for joy at his achievement and in sorrow for the Syracusans' fate. Despite orders to spare Archimedes, Roman soldiers, probably caught up in the frenzy of sacking the city, killed him when he yelled at them for disturbing his sunlight while in the middle of a math problem.



Roman perseverance. In Italy the Roman strategy was to retake the Greek cities with half their army while hemming in Hannibal elsewhere to slowly strangle him.

This would take a lot of time and a lot of legions. But Rome was determined to win, no matter the cost in men, money, and time. So it raised the number of its legions from 14 to 20. When Rome couldn't afford to pay its sailors, rich citizens assumed the burden. At one point Rome auctioned off the land where Hannibal was encamped. It went for the full value of real estate; so sure and determined were they that they would take it back.

They even enlisted slaves to fill their ranks. To prove they had fought well, Gallic slaves fighting for Rome would cut off the heads of defeated enemies and run back in the middle of battle to show them to the Roman general.

In 215 BCE, Hannibal tried to relieve the siege of Cumae, only to be repulsed by Romans entrenched in their siege-works.

So he struck at Nola only to be repulsed by another Roman army there.

Hannibal's attempt to march into Campania was driven back.

A Roman fleet beat Hannibal in a race to seize Tarentum.

In 212 B.C.E. the Romans besieged Capua (second only to Rome in size), building a double line of fortifications with one line of trenches facing in, the other facing out against any relief force. When Hannibal was repulsed at the outer trench, he marched on Rome, hoping the

Romans would raise the siege of Capua to rescue their capital. But the Romans at Capua stayed put while the Roman Senate manned their walls with boys and old men. Rome stood and Capua soon fell.

When Hannibal divided his army to meet these multiple threats, the Romans seized the opportunity and crushed the force led by Hannibal's lieutenant, Hanno.

Like a pack of wolves after a stag, the Romans would keep nipping at their prey until he dropped from exhaustion.

Bit by bit Hannibal was being pushed out of Italy.

However, it was events elsewhere that would prove decisive.

Scipio and Spain (210-206 B.C.E.)



Scipio's decisive victory for the conquest of Spain at Ilipa (206 B.C.E.) by Igor Dzis

After the death of Scipio the Elder, Roman holdings in Spain shrank behind the Ebro River. However, in 210 BCE, Claudius Nero repulsed a Carthaginian attack. And the next year, a new leader emerged, son of the recently killed general, Publius Cornelius Scipio

The younger Scipio was a natural leader, a man of action with an almost mystical

charisma that inspired his men with the confidence they would need to defeat Hannibal. At the age of 25, he became the first private citizen of Rome ever given proconsular imperium (power)

Like Hannibal, he was a master of the unexpected.

Instead of waiting for the enemy to move, he attacked Cartagena, Carthage's main base in Spain. Just then, all three Punic generals were away, never expecting such a move from such a young commander. Besides, Cartagena, being well fortified and surrounded on three sides by water, should hold out long enough for help to come.

Scipio began his attack on one side to draw attention from lagoon side during a storm that drove away the water there. Before the Carthaginians knew what had happened, Scipio had stormed the undefended wall, seizing the city and the Punic treasury.

In 208 BCE Scipio beat Hannibal's brother, Hasdrubal, who nonetheless slipped out of Spain and followed his brother's route into Italy. The Carthaginians left in Spain used Fabian tactics to hold off Scipio until the news of Hasdrubal's death in Italy drove them to challenge Scipio to a showdown.

It came at Ilipa in 206 BCE. For several days both armies came out with their best troops in the center, but didn't fight. Then, one day Scipio sent his cavalry to draw out the Carthaginians who emerged again in their old formation only to be met by Romans with their best troops on the wings. The Romans outflanked the Carthaginians and cut them to pieces.

Scipio had taken Spain from Carthage.

North Africa now beckoned.

Hannibal at Bay (208-203 B.C.E.)



In 208 BCE, Marcellus, one of Rome's best commanders was killed in an ambush. Hannibal buried him with full honors, but kept his signet ring to gain entry into the town of Salapia.

The Salapians let in 600 Carthaginians, but then dropped the portcullis, massacring Hannibal's troops now trapped in their town.

The next year, Hannibal's brother, Hasdrubal slipped out of Spain, crossed the Alps into Italy, and recruited enough Gauls to bring his army up to 30,000 men.

In response Rome raised the number of legions from 21 to 23, using 1 army to hold Hannibal and another to meet Hasdrubal before he could join up with his brother. By chance, the Romans captured Hasdrubal's dispatch rider, so they knew his plans while Hannibal didn't.

Claudius Nero rushed North with 6000 troops and joined the other consul, concealing their rendezvous by the two armies sharing tents. Not until the next morning, when a double bugle signaled the presence of 2 consuls, did Hasdrubal realize what he was up against.

By then it was too late.

Hasdrubal and his army met their fate at the Metaurus River. As the Romans panicked the enemy elephants, the mahouts (elephant drivers) had to drive spikes into the skulls of the beasts to keep them from trampling their own army.

Hannibal got news of his brother's death when a Roman threw a bag containing Hasdrubal's head into his camp.

In 205 BCE, another of Hannibal's brothers, Mago, landed in Northern Italy hoping to recruit the Gauls. However, few Gauls joined him, feeling abandoned by Hannibal, whom they hadn't seen for ten years, and less confident in Carthage after Hasdrubal's defeat and death at the Metaurus.

Two years later, Mago's army of 30,000 men was defeated.

Soon afterwards, Hannibal left Italy upon news of Scipio's invasion of Africa.

Scipio vs. Hannibal



The climactic battle at Zama in 202 B.C.E

Having destroyed Carthaginian power in Spain and confined Hannibal to Southern Italy, a political fight now erupted in Rome between old time Fabians, who only wanted Hannibal out of Italy but didn't want to get Rome involved in the world beyond, and Scipio who wanted to take the war to Africa and break Carthage for good. In a compromise, Scipio only got 2 legions and the still-disgraced survivors of Cannae who were eager to redeem their honor. In addition he raised 7000 volunteers and got ships & supplies from various Italian cities. With these elements, he trained a first class army of 30,000 men.

The next year, Scipio sailed for North Africa where he gained an ally in the Numidian chief, Masinissa. For the first time, the Romans would have cavalry able to match any the Carthaginians could field.

When confronted by superior forces, Scipio launched a surprise night attack on the enemy camp by setting it on fire and cutting down the Carthaginians in the confusion. Scipio destroyed another army of 20,000 men by suddenly showing up w/12,000 men and using his Hastati for cover while pulling his second and third ranks out to attack the enemy flanks.

After this, Carthage sued for peace and even ratified a treaty stripping it of Spain, Gaul, 5000 talents of silver, and all but 20 ships. However, Hannibal and Mago returned with their armies and war resumed. Scipio and Hannibal met for a parley, but were unable to agree on terms of peace. The decisive battle took place at Zama.

For once, the Romans had the advantage in cavalry, their Numidian allies defeating the Carthaginians on the flanks and chasing them off the field. After panicking Hannibal's elephants with trumpets, the battle then turned into a desperate brawl between the opposing infantries until the Numidians returned from the pursuit and hit Hannibal's army from behind. By the end of the day, Hannibal's army was gone and Carthage had no alternative but to surrender.

The resulting treaty was not kind.

- Carthage lost all but its local territory, including Numidia, all its elephants & all but 10 ships.
- It had to pay an indemnity of 10,000 talents silver over the next 50 years.
- It also lost its independent foreign policy, even having to ask Rome for permission

to defend itself against attack.



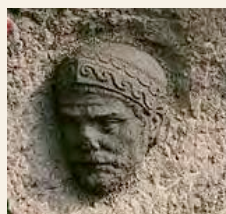
**Copy of the treaty ending
the Second Punic War**

Rome was now the supreme power in the Mediterranean and poised to extend its reach for empire.

Hannibal's fate. After the war, Hannibal assumed control of Carthage (which he hadn't even seen in forty years. He proved to be as brilliant an administrator as he was a general, reviving Carthage's prosperity so quickly that it paid off the war indemnity in 10 years instead of 50.

It was that prosperity that proved his final undoing, since Rome's bitter memories of the recent war made it extremely paranoid of a resurgent Carthage led by Hannibal. As a result, when Rome ordered him turned over, he fled to the Seleucid monarch, Antiochus III, whom he advised until the Romans defeated him at the battle of Magnesia in 189 B.C.E.

Once again, Hannibal had to run for his life. Finally, as Roman troops were closing in on him in Bithynia in Asia Minor, he took poison rather than fall into their hands. His tomb (below) is still there.



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ROME IN THE MEDITERRANEAN (201-133 B.C.E.)

Further Roman expansion (201-133 B.C.E.) Like it or not, (and many Romans did not), Rome was now a Mediterranean power. This involved it in an ever-widening circle of affairs that it found itself less and less able to avoid contact with. As a result, the next seventy years saw Rome's power and influence growing throughout both the Western and Eastern Mediterranean.

Much of Rome's expansion was tied in with the nature of Roman politics, which were both highly competitive and expensive. A Roman's public career consisted of rising through a tight mixture of military and civil offices, with success in war being the most important factor. Military victories brought a Roman glory, status (which heavily affected his success in politics), and money (which helped him pay for his political career). Therefore, after 200 B.C.E., when Romans found themselves outside of Italy and far from the control of the Roman Senate, they were often tempted to attack foreign peoples to gain the money and glory needed to continue their careers back home. Although Romans might be eager to win fame and riches, they were generally reluctant to conquer new lands, since that would involve the trouble and expense of actually ruling those new provinces. Therefore, while Rome's power was clearly dominant in the Mediterranean by 133 B.C.E., a map of the Mediterranean at that time would hardly reflect that power as the Romans during this period often passed up opportunities for conquest.

Despite the harsh treaty imposed in 201 B.C.E., Carthage bounced back to regain its prosperity, although not its power. This still worried some Romans who recalled the trials and tribulations of two previous wars with Carthage. One of these Romans, Cato the Elder, was so fearful of Carthage that no matter what the topic of his speech in the Senate, he always ended it with "Carthage must be destroyed." Finally, in 149 B.C.E., the Romans listened to Cato, and tricked the Carthaginians into disarming before demanding the complete destruction of their city. This was too much, and the Carthaginians somehow managed to rearm and put up a furious defense. The resulting siege of Carthage, known as the Third Punic War, lasted three years (149-146 B.C.E.). In the end, the Romans stormed Carthage's walls and leveled it to the ground. This destroyed Rome's most dangerous enemy, but also put a serious blotch on its record for fair play. However, Rome still left most of North Africa to Numidia rather than taking it for

itself, showing it was probably motivated against Carthage more by fear than greed.

Rome's wars with Celtic tribes in Cisalpine Gaul (Northern Italy) and Spain were also brutal. However, it was largely cultural differences, especially over their respective concepts of the state, that triggered disastrous misunderstandings between Rome and the Celts. The Romans saw the state as being the totality of the people in a society, as expressed in their motto "The Senate and the Roman People" (SPQR). Therefore, any treaty signed by legal representatives of the Roman state was considered binding on all Romans. On the other hand, Celtic peoples, especially those in Spain, were much more loosely organized into tribes. And even if a tribe's leaders signed a treaty with Rome, other members of the tribe, especially those with their own war bands personally loyal to them, might not agree with it and continue fighting. In the Romans' eyes, this was a clear violation of the treaty and merited retaliation. Unfortunately, since the Romans could not tell who was guilty or innocent, they often struck against tribesmen who were abiding by the treaty, seeing them all as equally guilty since they were all bound by the same treaty. Naturally, the wrongly accused Celts would strike back, confirming Roman opinions of them and triggering a cycle of hatred and violence that was very hard to break.

Therefore, the Roman conquests of Cisalpine Gaul and Spain were especially brutal, involving ambushes, massacres, and broken treaties by both sides. It took the Romans half a century to pacify Cisalpine Gaul and nearly seventy years to conquer most of Spain. The final conquest of north-western Spain would not be finished until 19 B.C.E.

Roman involvement in the East was more reluctant, especially after two exhausting wars with Carthage. However, Rome had already been involved there in suppressing pirates in Illyria and in the war that Macedon had declared on it during the struggle with Hannibal. To some powers, such as Macedon and the Seleucid kingdom, the rising power of Rome seemed a threat. But to others, such as Rhodes and Pergamum, it seemed like salvation from aggression by Macedon and Seleucid Asia. When they appealed to Rome for help, they portrayed their enemies as a threat to Rome as well, pointing out how Philip V had attacked Rome in the midst of its life and death struggle against Hannibal.

Reluctantly, the Roman people agreed to declare what is known as the Second Macedonian War (201-196 B.C.E.). After a slow start, the Romans finally met the Macedonian phalanx at Cynoscephalae. As

in the war against Pyrrhus a century before, the legions' flexibility proved decisively superior to the phalanx's rigidity, and Rome won the war. Rome's settlement shows its reluctance to get involved in the East beyond securing Italy's flanks. Rome took no land and only 1000 talents (66,000 pounds) of silver to cover the costs of the war. Either as a generous move or in order to further weaken Macedon, Rome declared all Greeks free from foreign intervention, and by 194 B.C.E. its own troops were gone from Greek and Macedonian soil.

However, Rome's troubles with Macedon and the Seleucid Empire were far from over. The Greeks, as always, kept squabbling with each other. This opened the way for the Seleucid king, Antiochus III, to invade Greece. Appeals from various Greeks and the advance of Antiochus' army into Greece led to the Syrian War (192-189 B.C.E.). The Romans turned Antiochus' defenses at Thermopylae Pass, drove him from Greece, and tracked him into Asia Minor. For the first time, Roman troops crossed into Asia. After crushing Antiochus' phalanx and army at Magnesia, Rome made peace, claiming no land for itself, but taking 15,000 talents of silver to pay for the war and giving land to its ally, Pergamum.

Of course, Rome's involvement could not end that easily. More squabbling between Macedonians and Greeks led to the Third Macedonian War (171-167 B.C.E.) with the same basic result. Again, the legions tore up the Macedonian phalanx. And again, Rome took no land, but it did break Macedon into four separate and weak states. By now, Roman patience was at an end. A revolt in 149 B.C.E. led to Rome finally annexing Macedon as a province. And more Greek quarreling led to war, the sack of Corinth, and turning Greece into a Roman province in 146 B.C.E.

In 133 B.C.E., the king of Pergamum died and willed his kingdom to Rome, probably thinking annexation was only a matter of time. Two other kingdoms, Bithynia and Egypt, would also be willed to Rome in the next half-century, showing the dominance of Rome in the Mediterranean. Even those areas not directly under Roman rule increasingly felt its presence and would eventually fall. However, as remarkable as the rise of Roman power was, it also brought serious problems that would plunge Rome into bloody civil strife.

Rome's "Vietnam": The Iberian Wars



Rome's wars in Spain, much like America's war in Vietnam, were especially vicious. For example, when an Iberian chieftain named Viriathus successfully led a revolt, the Romans assassinated him. This led to the Numantine War (154-133 B.C.E.), during which Rome broke two treaties and committed two more massacres. Adding to Rome's frustrations was its army's poor training, morale, and leadership.

The most notorious event in the Numantine war was the capture of an entire Roman army in 137 B.C.E. The Roman general, Mancinus, accepted terms of peace for the release of his army. However, the Roman Senate revoked the treaty and returned Mancinus naked and in chains. Finally, Scipio Aemilianus, the conqueror of Carthage, whipped the army into shape and besieged Numantia, which fell and was destroyed in 133 B.C.E. Rome's final conquest of Spain wouldn't be completed until 19 B.C.E. during the reign of the emperor Augustus.



An Iberian warrior

Three Battles that brought down the Hellenistic East



The Battle of Cynoscephalae (197 B.C.E.) started when advance units of the Roman and Macedonian armies inadvertently stumbled upon one another and a full-blown battle developed. The Roman legions could make little progress going head to head with the Macedonian phalanx's solid wall of pikes (below). However, when the Macedonian elephants were driven off, a Roman military tribune pulled several maniples out of line to circle around and hit the exposed Macedonian flank. Once again, the flexibility of the Roman legions proved superior to the rigidity of the Macedonian phalanx.



Heavily armored cavalry, known as *cataphracts* that would be a mainstay of cavalry in the Near East for centuries to come.

At Magnesia (190 B.C.E.) an army of 30,000 Romans and their Pergamene allies faced a force possibly twice its size under the Seleucid monarch, Antiochus III. Antiochus opened with a charge of scythed chariots, a nasty weapon with curved blades attached to the axles in order to cut up opposing troops. However, the charge seems to have gone awry and disrupted Antiochus' left flank more than it did the Romans.

Antiochus led a cavalry charge that routed the Roman right, but then pursued them off the field in a vain attempt to take and loot the Roman camp. It was really the Pergamene king,

Eumenes, who saved the day, attacking the Seleucid left already disrupted by its own chariots. This allowed the Romans and Pergamenes to surround Antiochus' phalanx and destroy it, exposing the right wing of his phalanx, which was arranged 32 men deep with war elephants between every 10 columns.

By the time Antiochus returned, his army was lost. Two years later, in the Peace of Apamea, Rome stripped him of Asia Minor, leaving its ally, Pergamum, the main power there while giving the Romans an opportunity for further intervention in Seleucid affairs.

At Pydna (168 B.C.E.) the Romans once again squared off against the Macedonian phalanx under its king, Perseus. The Roman general, Lucius Aemilius Paullus described the approach of the enemy phalanx as the most terrifying sight he had ever witnessed. Unable to get under the wall of pikes or hack off their ends, the legions executed an orderly retreat onto uneven ground that broke up the tight Macedonian formation. Able to get at close quarters using their longer swords and big shields, the legionaries cut the phalanx to pieces. Out of 40,000 men, the Macedonians lost 32,000 in the ensuing panic.



A true show of power. In 167 B.C.E., the Roman envoy, Popilius Laenus, armed only with the news of Rome's recent victory over Macedon at Pydna, confronted the Seleucid ruler, Antiochus IV with the Roman Senate's demand that he turn back from invading Ptolemaic Egypt. Drawing a circle around the king, Popilius demanded he give his answer before stepping out of it. Antiochus was so taken aback by this lone Roman's brazenness that he turned back.

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THE PROBLEMS OF EMPIRE

Success often carries with it the seeds of its own destruction, and that was certainly the case with the Roman republic by the late second century B.C.E. "Superpower" status wrought far-reaching changes affecting all levels of Roman society. Unfortunately, the conservative Romans had great difficulty adapting to such rapid changes. The result was a century of political and social turmoil during which Rome kept trying to patch up these new problems with the same old solutions. Fortunately for Rome, it was still dynamic and energetic enough to survive and even expand during this period of social decay and political and military turbulence. Rome faced serious problems in three areas: the fate of its peasants, the government of its provinces, and its army.

For Rome's peasants, the fruits of empire were bitter indeed. The Second Punic War against Hannibal had devastated many fields in Italy. The other wars of the third and second centuries B.C.E. had left many fields ruined by years of neglect while the farmers were off campaigning. When the farmers came home, two things came with them. First of all, thousands of prisoners of war flooded Roman slave markets. This influx of cheap slave labor let rich Roman senators set up huge estates that competed with the free peasants already struggling to revive their farms. Added to this was an influx of cheap grain from Sicily (also from estates worked by slaves). Faced with such competition, thousands of peasants lost their farms and migrated to the cities, especially Rome.

Life in the cities was little better. Slaves there had also taken many of the jobs the peasants might have hoped for. Thus the dispossessed peasants became an idle urban mob dependant on various politicians for food and rent in return for political support. This led to untold squalor and the occasional cheap spectacles of gladiatorial fights and chariot racing, the proverbial "bread and circuses" of ancient Rome. Because of this, Roman politics became corrupt, violent, and split into two factions, the *Optimates* who drew their support from the Senate and other nobles, and the *Populares* who relied on the Tribal assembly and mob for support.

Provincial government was no better. The root of the problem was that Rome was trying to rule a large empire with an amateur city-state government. At first, extra praetors (judges), and later pro-consuls (ex-consuls) and pro-praetors (ex-praetors) were created to run the provinces for terms of one year. However, one year was not nearly enough time to learn about a foreign culture and how to govern it. Therefore, such governors were untrained, unsupervised, and unpaid. Being unpaid forced them to cover their expenses through corruption. Being unsupervised let them get away with almost anything they wanted. Being untrained meant they were usually incompetent. Even the creation of permanent extortion courts to try corrupt ex-governors only encouraged more corruption so they could bribe the jurors who were also their senatorial colleagues who hoped for similar leniency in the future when they were tried for corruption.

In addition there were no professional Roman bureaucrats to run the daily machinery of provincial government. Instead, governors brought personal friends and slaves. Tax collection was done through tax farming, a system where rich businessmen, known as *equites*, bought the right to collect the taxes of a province, paying the state the agreed sum and then over-taxing the provinces to cover their expenses and more.

These problems with dispossessed peasants and corrupt provincial government led to two problems with the army. For one thing, Rome's army of peasant militia had been fine when Rome's wars were close by and campaigns ended in time for harvest. However, long terms of service in overseas wars had ruined many farms through neglect, leaving fewer recruits able and willing to go to war, lowering the army's morale and efficiency. Second, the yearly turnover of governors led to inexperienced generals who suffered frequent military defeats.

This led to two reforms. First, generals created a long-term professional army by recruiting the dispossessed peasants, promising them land after the war as an inducement to enlist. They also had to supply them with their equipment since the Senate

still felt only those who could afford to equip themselves should serve in the army. Therefore, the soldiers were more loyal to their generals than to the state (probably seeing little distinction between the two). The second reform was to extend the terms of provincial governors from one year to as many as five. This resulted in a few experienced, ambitious and rival generals.

These reforms triggered a vicious cycle where those few governors with armies had more scope for long-term campaigns and outright conquest of new lands. This upset the balance of power in the Roman Senate, between a small number of rich and powerful men and the majority of senators who had few opportunities for glory and riches. The combination of all these social, economic, administrative, and military problems bred a century of political turmoil, administrative unrest, and civil wars between rival generals.

State Contracts and Clientes



In addition to auctioning the right to collect taxes to the equites, Rome also auctioned off the right to carry out various other state functions, such as running state-owned mines and minting its coins. Equites who bought the contract for minting coins for a particular year typically put their names and/or some picture identifying them on the coins. The coin above bears the name of Lucius Flaminius who had the state contract for minting Rome’s coins for the year 106/105 BCE.

The denarius below was struck by Sextus Pompeius Fostlus, an eques who had the contract for minting coins in 137 B.C. Since Fostlus claimed descent from Faustulus, the shepherd who raised Romulus and Remus as his own sons, the reverse shows Fostlus’ ancestor finding the she-wolf nursing the twin founders of Rome.



***Clientes* were urban poor who sold their votes and political support to rich politicians in return for food, rent, and cheap entertainment, the proverbial “bread and circuses.” Part of a client’s duties involved showing up at his patron’s home in the morning to greet him and follow him with the other clientes in a virtual parade to the Roman forum. Whoever showed up with the largest parade won.**

Roman Blood Sports



Leon Jerome's 19th century painting of how people imagined ancient gladiatorial games.

Gladiators. If there is one thing Hollywood has imbedded in our collective impression of ancient Rome, it is gladiators. Indeed this was a major form of public entertainment from c.100 B.C.E. to c.200 C.E., although its origins go back several centuries before this period, and they continued even under Christian emperors, the last games being performed shortly before 500 C.E.

Older traditions ascribed the origins of gladiatorial matches to Etruscan funeral games to honor a dead noble or king. However, recent evidence points to Campania, south of Rome, since that is the site of the first gladiatorial schools and the earliest depictions of gladiators on fresco paintings. The first Roman gladiatorial games, involving three pairs of gladiators, were held in honor of a dead Roman noble, Brutus Pera, in 264 B.C.E., the first year of the Punic Wars. Over time, such games involved progressively larger numbers of gladiators: twenty-two in 216 B.C.E. and 120 in 183 B.C.E. In addition, there were numerous smaller private games given in honor of dead nobles.

However, in 105 B.C.E., Roman consuls put on the first state-sponsored games. From that time this became a popular way of currying favor with the mob, each politician trying to outdo his competitors in the lavishness of the games and number of gladiators involved. In 65 B.C.E., a rising politician, Julius Caesar, put on games with 320 pairs of gladiators in silvered armor. He wanted more, but the Senate, still shaken by

the Spartacus revolt (73-70 B.C.E.) and leery of popular young politicians like Caesar having private armies in Rome, limited his games to 320 pairs.

Even with the graphic simulated violence increasingly watched in video games, movies, and TV, we still have a hard time figuring out the appeal or justification for such games. From the Romans' point of view, it was supposedly to harden their sons to the sight of death and violence in preparation for real war.

There were three main sources of gladiators: prisoners of war, slaves condemned of certain crimes, and free volunteers. Such volunteers may have made up half or more of Rome's gladiators, despite the fact that they had to give up their free status to participate. However, for the poor, being a gladiator offered the possibility of fame and fortune, regardless of their low status. Those condemned to the arena for their crimes, but not considered fit to fight as gladiators, might be put in the "warm-up" games pitting them against wild animals, which the animals usually won.

Gladiators typically used arms and armor representing armies from various regions. The Romans liked to pit "armies" of different nations against one another to see who would win such a war, sort of an ancient version of fantasy sports leagues. The most popular types of gladiators were the "Samnites" and "Thracians", whose teams inspired devoted fans from all social classes, including emperors.

In the early empire, as demand for gladiators exceeded supply, there was a tendency to show mercy, especially to gladiators popular with the mob. One factor keeping the death toll of these matches down was the high cost of training gladiators, which made those in charge of putting on (and paying for) the games reluctant to indiscriminately slaughter every gladiator unlucky enough to lose his match. Contracts with gladiators' owners would even stipulate compensation if any of their gladiators were

accidentally killed. Of course, gladiators might secretly agree to put out less than their best efforts to kill each other. In the BBC production of *I Claudius*, a great fictionalized account of court intrigue during the early empire, the empress Livia gives a stirring “pre-game pep talk” to the gladiators she has hired, warning them against such nonsense, including the old pig’s-blood-in-a-bladder trick. This clip can be viewed on Youtube, but the whole series is well worth watching.

There were also female gladiators (*gladiatrix*, plural *gladiatrices*). Although Roman law forbade women from families of equites and higher status participating in such matches, there is evidence that upper class women volunteered for such events, probably as a form of thrill seeking. The emperor Nero staged the earliest attested such match. He also supposedly used children in his games in 66 C.E. as well as wives of senators forced into the arena, although it is not clear if they fought. The emperor Domitian reportedly liked to stage torch-lit matches between dwarves and women.

Canopies were hung from the posts along the outer edge of the arena to provide shade for the crowd. Our word *arena* comes from *harena*, the Latin for sand, which would be spread around to soak up the blood from the previous matches.

Animal fights, involving both different animals (e.g., lions, tigers, bears, and ostriches) against one another and humans against animals were another popular form of public entertainment. The Romans were constantly looking for more bizarre twists on their spectacles. In one case, they constructed a fake whale and brought it into the Coliseum filled with fifty hungry bears who were unleashed against whatever opponents were waiting outside.

Roman NASCAR: Chariot Racing



A slightly over-the-top scene from the classic chariot race in the movie *Ben Hur*. One thing to keep in mind: chariots had no shock absorbers.

Roman chariot racing was a rough and tumble sport with deadly accidents and pileups taking place, especially at the hairpin turns. Such *naufragia* (shipwrecks) rarely if ever exploded like their modern counterparts (although if you freeze-frame the DVD of *Gladiator* in the fight between “Rome” and “Carthage” you can spot some sort of smoke generator under the chariot that might have some potential for pyrotechnics).

The Romans adopted chariot racing from the Greeks, who ran such races as an Olympic event. However, there were significant differences. The drivers in Roman races were usually slaves who, instead of the owners as in Greece, were awarded a laurel wreath. They also earned prize money, with which they might buy their freedom. Greek races were twelve laps long, while Roman races were seven or five laps, so they could fit more races (typically twenty-four) into one day. This allowed more betting to take place. Roman races took place in a huge elongated track known as the Circus Maximus, which could hold 150-180,000 spectators.

Unlike Greek drivers who held their reins, Roman drivers had the reins wrapped around them, putting them in much greater danger in case of a wreck or the horses breaking away from the chariot and taking the driver with them. As a precaution, they wore a knife to cut themselves loose in such a case. Even so, chariot drivers typically had short careers.

There were four racing teams: reds, whites, blues, and greens. Several chariots from each team might compete in one race and cooperate to cut off opposing chariots, in particular, ramming them against the center median to wreck them, much like modern Roller Derby. That was all right, although it's unlikely the spiked axles used in the famous chariot race in the movie *Ben Hur* would have been legal.

In the late empire, the Greens and Blues emerged as the two main teams. Their fans developed what may have been history's greatest sports rivalry with heavy religious overtones, the Greens favoring the Monophysite version of Christianity and the Blues following the state-supported Orthodoxy. In 532 C.E., the two factions joined forces and tried to overthrow the emperor Justinian I in what is known as the Nike Riot (from *nike*, the Greek word for victory). By the time it was finally suppressed, up to 30,000 people may have died. After that chariot racing declined in importance, which is what happens when you kill off your fans.

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THE FLOW OF POWER IN ROMAN GOVERNMENT IN THE LATE REPUBLIC

Many of the problems of the late Roman Republic came from how a small number of powerful men were able to manipulate power and turn what looked like a somewhat democratic government into an effective oligarchy. In a broader sense, it serves as a lesson about how power can be manipulated in any supposedly democratic constitution.

At the center of power was the Senate, an advisory body of 300 ex-office holders whose decrees (*senatus consulta*), while not technically laws, carried the virtual force of law, unless they specifically contradicted a law passed by the assembly. The Senate especially had jurisdiction over officials' budgets, the technical legality of treaties and laws, and assigning tasks to magistrates (e.g., which ex-officials ruled which provinces and for how long). A ruling principle for the senatorial oligarchy as a whole was to maintain its power as a group without letting any individual members gaining too much power. In addition, the Senate exercised control over three main areas of Roman government: popular assemblies, ex-officials, and religious and traditional ceremonies and procedures.

There were two popular assemblies that the Senate needed to maintain control over. The Comitia Centuriata was originally a military assembly that elected the top officials in Rome (consuls, praetors, and censors) and voted on war and peace. It was originally organized into 193 bloc votes known as centuries, with the rich making up more centuries and thus given more votes. This was to reflect the heavier burden the rich, who could afford full armor, faced in battle. The tribal assembly (*Comitia Tributa*), which actually passed laws, could only vote on bills proposed by officials, who were also members of the Senate. In both assemblies open ballots where senatorial nobles could keep tabs on how their dependents (clientes) voted.

The primary means of control the Senate had over officials was the fact that after their one-year terms of office, ex-officials all returned to the Senate. This made it unlikely they would go against the

wishes of their fellow senators. Therefore, the Senate controlled what laws were proposed and voted on through the consuls and praetors. Even the ten tribunes, who were supposed to protect the rights of the poor through the right to veto laws, had to go back and face the Senate after their year in office.

The Romans were religious, even superstitious people who placed great value on omens and doing things by the exact right procedure to keep the favor of the gods. It just so happened the Senatorial nobles also controlled the priestly offices, and virtually all government procedures involved religious rituals that could block or negate government actions. Reinforcing this was the *cursus honorum* (ladder of honors) that dictated the minimum age, number of times, and order one could hold offices. Every five years, the Comitia Centuriata chose two censors, whose job was to expel unworthy senators and fill empty senatorial seats. Naturally, only senatorial nobles served as censors, making sure that the exclusive club of the Senate contained maintained the purity of its membership and control of the state.

Senatorial Fun Facts



Ancient priests known as augurs trying to tell the future through observing the flights of birds.

***Senility.* The word senate comes from the Latin word *senes*, meaning old man, referring to the common custom of traditional societies being guided by the collective wisdom of their elders. Ironically, we get the word senile from it, although there is little evidence of senility in traditional cultures where the elders still have a function and command respect.**

Augury. For the Romans, who were very religious and legalistic, any public acts had to be preceded by a priest, known as an augur, reading the flights and actions of birds to determine if the gods favored business that day. We have already seen the impact of the failure of the sacred chickens to eat on two battles in the Punic Wars (chapter 29A). The very location of Rome was based on the legend of Romulus and Remus fighting over such omens, Remus first seeing six vultures (a good sign) followed by Romulus seeing twelve.

Our own word *inaugurate* derives from Roman practice, although we rarely consult the actions of pigeons on the Mall before swearing in a new president. Caesar's fellow consul for the year 59 B.C.E., Bibulus, was no match for his wily colleague. After the humiliation of having a basket of dung dumped on him, he stayed indoors, each day declaring the omens were bad, so there could be no government business that day. Thus most of the laws passed by Caesar that year were technically invalid. Not that anyone was paying close attention during what was popularly known as "the consulship of Julius and Caesar."

If nothing else, priests might stir up a flock of pigeons at a critical time, declaring bad omens. Even now, most people and public statues consider pigeons bad news.

The original filibuster. Senatorial meetings began at sunrise and ended by nightfall. Whatever issues brought up that day had to be resolved by the end of the day and could not carry over to the next day. Senators spoke in order of seniority, but every senator had the right to speak before a vote was taken, so opponents of a bill could discuss it until nightfall, and thus kill it. A bill could also be vetoed, usually by a plebian official known as a tribune. Bills of minor importance were voted on by a show of hands or voice vote. More important bills called for a physical division of the senators for and against the bill.

THE FALL OF THE ROMAN REPUBLIC (133-31 B.C.E.)

"The city's life is for sale, and it would kill itself if it could find a buyer"-- Jugurtha of Numidia

Pattern of decline. Rome's failure to adapt its city-state style government to ruling an empire triggered a century long pattern of events that would eventually lead to fall of the old oligarchy led by the Senate. Either out of genuine concern for reform, desire for personal gain and glory, or a combination of the two, an individual politician or general would introduce new, but also disruptive practices. These would weaken Roman customs, traditions, and institutions, especially the Senate. That would create the need and open the way for new figures to rise up that would introduce even more disruptive practices, and so on. Thus the cycle would keep repeating until the old order was destroyed. There were five main figures this process brought to the forefront of Roman politics and who in turn perpetuated the cycle, allowing the rise of the next figure: Tiberius Gracchus, Gaius Gracchus, Marius, Sulla, and Julius Caesar. Not until Caesar's nephew and heir, Octavian, seized power would the cycle be broken and a new more stable order established in place of senatorial rule.

First attempts at reform: the Gracchi. In 133 B.C.E., Tiberius Gracchus became tribune. He saw that many of Rome's troubles revolved around the decline of the free peasantry who were flocking into the cities. Therefore, he proposed a bill to give land to the idle mob and re-establish them on their own farms. The land he proposed using was public land owned by the state that, unfortunately, was controlled by rich and powerful senators who most likely would be reluctant to give it up.

Seeing that the Senate could well be hostile to his plan, Tiberius did several rather unheard of things. Although not necessarily illegal, his actions certainly flaunted the deep-seated traditions by which Roman government had operated for centuries. For one thing, Tiberius by-passed the Senate and went directly to the tribal Assembly where his bill had a better chance to pass. When the Senate bribed another tribune to veto the bill, Tiberius took the radical step of impeaching the

man. With that done, the land bill passed despite the fury of the Senate. In order to get money to start the peasants on their new farms, Tiberius had the assembly appropriate the treasury of Pergamum, which had just been willed to Rome. Financial and foreign matters were both the realm of the Senate, but Tiberius and the assembly just shoved that aside as well. Tiberius then tried to do away with one more tradition by running for re-election as tribune. This was too much, and in the discussion of its legality, a riot broke out that ended with the death of Tiberius and 300 of his followers. Civil violence was starting to be used to decide an issue in Roman politics.

Despite his good intentions, Tiberius' methods hastened the decline of the Republic more than they helped it. For one thing, he made the Tribal Assembly, which controlled the Urban Assembly, a major factor in Roman politics. Likewise, he weakened the senatorial nobles who had traditionally run Rome. This gave rise to factional politics of the Optimates and Populares, often causing Roman politics to degenerate into little more than bribery contests and street fights to win power. However, Tiberius' reforms also had some positive results as some 75,000 people were put back on farms in the decade after his death. However, there was still a lot of work to be done, and in 123 B.C.E. Gaius Gracchus, Tiberius' younger brother, became tribune.

An ardent reformer like his brother, Gaius passed a law guaranteeing cheap grain for the urban poor. Later politicians would make that grain free at state expense. Another move to weaken the Senate and gain allies was to give the *equites* (rich businessmen) control of the juries in the courts that tried Roman governors for corruption. While this prevented corrupt senatorial governors from relying on their senatorial friends to acquit them in the extortion courts, it hardly reduced corruption. Now equites who had bought the right to "farm" a province's taxes could threaten the governor with conviction in the extortion courts if he did not let them take all they wanted from the provincials. This also made the equites a new force in Roman politics, symbolized by special seats at the games and the right to wear distinctive rings. At the same time, it further weakened the Senate.

The Senate was understandably nervous about how far this new Gracchus would go, and tried to outbid him for popular support. Unfortunately, Gaius overstepped himself by proposing citizenship for the Italian allies. This was unpopular with the mob, which jealously guarded their citizenship as the only thing they had left to make them feel special. As a result, a riot broke out (probably with some help from the Senate), and Gaius was killed much as his brother had been.

Marius and the Roman army. The next issue facing Rome was a war in North Africa against the Numidian king Jugurtha. The war in itself was not too important except that it showed the further corruption of Roman politics, first by Jugurtha against his rivals, and then an ambitious man of equestrian rank, Gaius Marius, in a series of intrigues against his general, to get a leave of absence to get elected consul. He then had the Tribal Assembly give him command of the war in place of his former general, Metellus. Marius and an ambitious junior officer named Sulla finished off Jugurtha and Marius got the credit. This set him up for the next big step in his career.

For several years, the migrations of some Germanic tribes known as the Cimbri and Teutones had been wreaking havoc in the north. When they turned on Rome in earnest and mauled a Roman army in Gaul in 105 B.C.E., panic set in and Rome looked for a savior. That man, of course, was Marius, the conqueror of Jugurtha. He was elected to an unheard of six straight consulships to prepare the army for the northern menace.

Marius' main legacy was a long overdue reform of the army. Rome's extended campaigns required a long-term professional army to replace the reluctant and inefficient peasant draftees Rome had used till now. Marius took the final steps of making it just that, with volunteers serving instead of peasants hauled off their farms. Marius' recruits came largely from the unemployed mob lured by the promise of land after their service was over. This had three main effects. For one thing, since these recruits were too poor to supply their own equipment, the state had to supply it, thus making equipment and training more regular and the army

more efficient. Along these lines, professional soldiers could devote all their time to training which, combined with the proverbially tough Roman discipline, also made for a very effective army.

The third effect had to do with getting recruits. The main inducement to serve was that after his term of service, a veteran would receive a plot of land on which to start his own farm. However, since each general had to get a separate land bill passed by the Senate for his particular army, the soldier looked to his general for a land settlement. Therefore, the troops' loyalty tended to belong to the individual generals rather than the Senate. This meant that a new element, generals backed by their own armies, had become a factor in Roman politics.

However, Marius' recruiting and tactical reforms created a much more efficient and professional army, which is what Rome needed at this time. In Marius' sixth consulship, the Cimbri and Teutones finally got around to invading Italy after a leisurely rampage through Spain and Gaul. The newly reformed legions cleverly maneuvered the invaders into a bad position and then destroyed them under the hot Italian sun. Marius was the hero of the hour and acclaimed the Third Founder of Rome after the legendary Romulus and Camillus.

Marius may have been a good general, but he was a mediocre politician. When his ally, the tribune Saturninus, tried to seize power, a riot broke out. Marius thus found himself in the difficult spot of having to suppress his own rioting supporters. He did his duty, killed many of his followers, and lost most of his popularity as a result. After this, he retired from politics, waiting for a new opportunity for military glory.

Sulla and the First Civil War. For some time, one of the hot issues of the day in Rome was citizenship for the Italian allies. While the Romans had previously been fairly liberal in granting different allies full citizenship, lately they had been satisfied to grant only second class, or Latin, citizenship. Unfortunately, the Italian allies were not nearly as satisfied with this and were agitating for full rights. We have already seen how this issue cost Gaius Gracchus his life. When another Roman, Marcus

Livius Drusus, proposed full citizenship and was assassinated, Italian frustration boiled over into open rebellion. This revolt, known as the *Social War*, or war of the allies (91-88 B.C.E.), saw Rome faced with a formidable Italian enemy trained in Roman tactics. In fact, it was so formidable that the Senate did the one thing it could to defuse the rebellion: it granted full citizenship to any Italians who remained loyal or immediately laid down their arms. This clever move stripped the rebellion of much of its support. The Senate then called on two of its ablest generals, Marius and Sulla, to finish the job. In the end, the rebellion was put down, but the Italians had gained full citizenship, definitely a step forward for Rome and Italy.

The Social War had brought a poor, but very ambitious senatorial noble to the forefront of Roman politics, Lucius Cornelius Sulla. Always on the lookout for the opportunity for power and glory, he found it right after the Social War in the form of a new war in the East against Mithridates, king of Pontus on the Black Sea. Seeing widespread resentment against Rome for its corruption and mistreatment of the provincials in Asia Minor, Mithridates, stirred up a revolt that supposedly massacred 80,000 Italians in Asia Minor in one day. With Rome still preoccupied with the Social War, Mithridates overran Roman Asia and then crossed into Greece (90 B.C.E.). However, once the Social War was over, Rome was ready to tangle with the king of Pontus.

The problem was: which of Rome's generals, Marius or Sulla, should get command of the war? Sulla, who was the consul at this time, legally had the right and initially got it. But as soon as he set out for the port of Brundisium, Marius' followers seized power and gave Marius the command. Sulla then took the unprecedented step of marching on Rome with Roman troops to drive Marius' followers away in flight. However, once Sulla had left again for the East, Marius returned to Rome and seized power again. He was now a bitter old man who started a reign of terror so bloody that his own followers had to put an end to it. Several days into his seventh consulship, Marius died, but his followers remained in power and sent an army to relieve Sulla in the East.

Meanwhile, Sulla had been driving Mithridates from Greece. After two desperate battles and a long terrible siege of Athens, Mithridates fled to Asia Minor. Luckily, the Roman army and general sent to relieve Sulla concentrated more on Mithridates and let Sulla track him into Asia. Mithridates sued for peace and Sulla gladly granted it so he could turn on his enemies in Rome.

What followed was the First Roman Civil War (83-82 B.C.E.). Sulla's tremendous energy and drive made short work of his enemies, and he entered Rome in triumph. His first act was to massacre any of his enemies, including some 90 senators and 2600 rich equites. Among those narrowly escaping Sulla's wrath was the defiant young son-in-law of Marius, Julius Caesar. Sulla then became dictator, and reformed the government to put the Senate back in firm control of the state, just like in the good old days. A year later, Sulla abdicated his powers and retired to the luxury of his villa where he died soon afterwards (78 B.C.E.).

Sulla's settlement did little or nothing to solve Rome's real problems. And after his strong hand was removed, political turmoil returned in full force. The first man to take advantage of this situation was Pompey, one of Sulla's young army officers. Pompey's early rise to power was the result of some drive and energy, but also a good deal of luck. He held several military commands before holding public office. That was illegal, but apparently of little account anymore in Rome. Quite a bit of luck accompanied Pompey as he destroyed Marius' supporters holding out in North Africa and Spain. Also, by chance, as he returned to Rome from Spain, he encountered and mopped up the remnants of a great slave revolt led by a gladiator named Spartacus. Another of Sulla's former officers, Crassus "Dives" (the rich), had actually broken the back of this slave revolt that had terrorized Italy for two years. Nevertheless, Pompey claimed partial credit.

Nerves were on edge as the two potentially hostile Roman generals and their armies were poised on the outskirts of Rome. Luckily, Pompey and Crassus made their peace and together became consuls for 70 B.C.E. Pompey's star just kept rising. Soon afterwards he received an extraordinary command

to clear the Mediterranean of pirates who had infested its waters for years and were even threatening Rome's grain supply. After sweeping the seas clear of these pirates in an amazingly short time, Pompey received another important command. This time he was sent to fight Mithridates of Pontus who had revived his struggle against Rome. Once again luck was with Pompey, because another general, Lucullus, had already done most of the job. Still, it was Pompey who finally crushed Mithridates (who then committed suicide), and it was Pompey who got the credit and triumphal parade. He then spent the next few years marching through the Near East and reorganizing it along lines more favorable to Rome by creating new Roman provinces in Asia Minor and Syria (where he put a final end to the decrepit Seleucid dynasty) and establishing client kings loyal to himself and Rome in Asia Minor and Judaea. In 61 B.C.E., Pompey finally returned to Rome, but this was where his star began to wane.

The rise of Julius Caesar. Pompey, like Marius, may have been a good military man, but he was not much of a politician. Trusting in the power and glory of his name alone, he disbanded his army before he got a land settlement for his veterans from the Senate. When the Senate refused to help him out, Pompey found two allies with whom he formed the *First Triumvirate*, an informal political alliance designed to control Roman politics. One of these was his old colleague, Crassus the Rich. The other was a popular young politician, Julius Caesar. With Pompey's military reputation, Crassus' wealth, and Caesar's popularity with the mob, the Triumvirate should and could rule Rome effectively.

The first order of business was to elect Caesar as consul for 59 B.C.E. Once elected, he had a wild term of office where he ran roughshod over the Roman constitution. Using a good deal of intimidation, he got Pompey's troops their land and himself a lucrative military command in Gaul (modern France) where he was determined to gain a military reputation equal to Pompey's.

Caesar had little military experience before going to Gaul. However, one would never have known it by looking at the masterful way he brought it under Roman control in a mere ten years. We can hardly

imagine the sense of relief to the Romans now that the menace of the northern tribes was further removed from Rome. The Roman conquest of Gaul was also an important step in the process of civilizing Western Europe. Although Gaul was already showing major steps in that direction, the Roman conquest made it heir to the high cultures of the ancient Near East and Greece by way of Rome. It should be noted that, as in the case of Alexander, the glory of Caesar's victories obscured the butchery of countless thousands of innocent people and blurred the distinction of who was civilized and who was barbarian.

During his ten years in Gaul, Caesar also built up a highly efficient and intensely loyal army that could brag of exploits to rival and even surpass those of Pompey's army. Naturally, this caused jealousy and suspicion on Pompey's part. Crassus, whose influence helped keep the Triumvirate together, was killed fighting the Parthians, nomadic tribesmen who had taken much of the old Persian Empire's Asian lands from the now extinct Seleucid dynasty. The death of Julia, Caesar's daughter and Pompey's wife, removed another bond holding the two men together. Day by day, tensions grew as rival political gangs disrupted the streets of Rome with their clashes and the Senate started to back Pompey in opposition to Caesar. Caesar, fearing for his life after he gave up his army, led his troops into Italy and started another civil war (49-45 B.C.E.).

Pompey was no match for Caesar's quick, decisive, and brilliant generalship, and was crushed at the Battle of Pharsalus in Greece in 47 B.C.E. He fled to Egypt where Ptolemy XII who feared the wrath of Caesar murdered him. Soon afterwards, Caesar showed up in Egypt where he spent the next year supporting Ptolemy's sister, Cleopatra, in a civil war against her brother. He then set out to meet Pompey's other allies and followers. In a whirlwind series of campaigns in Pontus, North Africa, and Spain, Caesar crushed the Pompeian forces. By the end of 45 B.C.E., Caesar was the undisputed master of the Roman world and was appointed dictator for life.

Unfortunately, the problems plaguing Rome were too complex to be solved by mere military victories. Caesar did carry out several reforms. He extended

citizenship outside of Italy for the first time. He also changed the old Roman lunar calendar to the more efficient and accurate Egyptian solar calendar, which we still use today with some minor adjustments. However, even Caesar seemed to be at a loss for finding solutions to the deep-seated problems plaguing Roman society and instead planned a major campaign against Parthia. The prospect of Caesar gaining more military glory and becoming even more of a dictator worried a number of senators who formed a plot against his life. On March 15, 44 B.C.E., the eve of his setting out on his campaigns, the conspirators surrounded Caesar in the Senate house and brought him down with twenty-three dagger wounds. Ironically, he fell at the foot of the statue of Pompey.

Octavian, Antony, and two more civil wars (44-31 B.C.E.). Unfortunately, Caesar's death didn't solve Rome's problems as there were always new generals waiting to follow in the footsteps of Marius, Sulla, Pompey, and Caesar. In this case, two men emerged in that capacity: Marc Antony, one of Caesar's most trusted officers, and Octavian, Caesar's 19-year old nephew and chosen heir. Octavian was young, inexperienced in politics and military affairs, and somewhat sickly. No one much gave him much of a chance to survive in the vicious snake pit of Roman politics. Surprisingly, he proved himself quite adept at politics, playing the Senate off against Antony while the Senate thought it was using him in the same way. He then did an about face and allied with Antony and another general, Lepidus, to form the Second Triumvirate.

The first act of the new triumvirate was to clear its enemies out of Rome in a bloody purge. Among the victims was the great Roman statesman, orator, and philosopher, Cicero. We still have many of his speeches and letters that tell us a great bit about life and politics in the crumbling Republic. After this purge, there were still several of Caesar's murderers to contend with in Greece where they were building an army. In the third Roman civil war in less than 50 years, Antony and Octavian tracked down the conspirators, Brutus and Cassius, and destroyed their forces at Philippi (42 B.C.E.).

This put the Second Triumvirate in undisputed control of the Roman world. Lepidus was gradually

forced out of the picture, leaving Antony and Octavian to split the spoils. Antony took the wealthier eastern provinces and got involved in his famous romance with Cleopatra of Egypt. Octavian took the less settled West along with the Roman homeland and recruiting grounds of Italy. As one might expect, tensions mounted between the two men and finally erupted into another civil war. At the battle of Actium in 31 B.C.E., Octavian's fleet crushed the combined navies of Antony and Cleopatra. After a desperate defense of Egypt, both Antony and Cleopatra committed suicide, leaving Octavian as sole ruler of the Roman Empire. It seems ironic that a non-military man should emerge as the final victor in these civil wars and bring them to an end. However, as a non-military man, Octavian saw that the solutions to Rome's problems involved much more than marching some armies around. It would be Octavian, known from this point on as Augustus, who would bring order to Rome and inaugurate one of the most long lasting periods of peace and prosperity in human history: the Pax Romana, or Roman Peace.

The Jugurthine War (112-106 B.C.E)



Coin depicting Jugurtha

When Micipsa, king of Numidia in North Africa, died in 118 B.C.E., he divided his kingdom three ways between his two sons, Hiempsal and Adherbal, and his nephew, Jugurtha. In the inevitable quarrel that followed Jugurtha murdered Hiempsal and drove Adherbal from power. When he appealed to Rome, the resulting commission, after substantial bribes, gave the lion's share to Jugurtha, who then attacked Adherbal and besieged him in Numidia's capital, Cirta. However, when the city surrendered, Jugurtha's troops also massacred a number of Italian merchants there, leading to war with Rome.

Nothing daunted, Jugurtha bribed the Roman general sent against him to make peace, prompting the Senate to summon Jugurtha to Rome to account for himself. While there, he

bribed a tribune, had his rival to the throne killed, and smuggled out the murderer. It was here that he uttered his famous statement about Rome: *"The city's life is for sale, and it would die if it could only find a buyer."* The next year (110 B.C.E.), Jugurtha defeated a Roman army and forced it to pass under the yoke and leave Numidia.

While Marius was the one who pretty much won the Jurgurthine War by creating a new style Roman army and leading it to successive victories, it was one of his lieutenants, Lucius Cornelius Sulla, nicknamed Felix ("Lucky"), who ended it by getting Jugurtha's father-in-law, Bocchus, to betray the Numidian king to him.



Coin portraying Jugurtha's father-in-law, Bocchus (L.) betraying the Numidian king (r.) to the Roman general Sulla (seated)

Marius' "New Model Army"



One of "Marius' mules"

Rome's new professional legionaries were known as "Marius' mules" for the 65 pound load of equipment they had to carry on the march including armor, weapons, several pila, at least three days' field rations, mess kit, cooking spit, cooking pot, cup, spare clothes, water gourd,

section of 6-man tent, and either spade, saw, or sickle, and sometimes a load of firewood. Though burdensome, this eliminated the need for most pack animals, making the Roman army much more mobile.

Roman soldiers trained with double-weighted weapons to improve their strength and agility with such weapons during real battles. They were taught to use their shields as weapons, either as battering rams to knock enemies off balance or to slam down on an opponent's foot. Roman training was so tough that legionaries were said to beg their commanders to lead them into battle to avoid more drill and march. As the Jewish historian, Josephus, would put it: *"Roman drills were bloodless battles; their battles bloody drills."*

Roman legionaries were trained to march 20 miles a day with full gear on their backs. This made the Roman army both very mobile and physically fit. Even after basic training, Roman soldiers underwent four hours of daily training in formation, creating the most efficient army of antiquity. The cadence of the march itself created psychological bonds between legionaries that helped them stand their ground well beyond the point when opposing soldiers would break and run.

Roman discipline was legendary for its harshness, with the whip being used for what would seem to us minor offenses. Theft was punished by cutting off the culprit's hand. A unit running in battle was decimated, meaning one of every ten of its members was chosen by lot and executed by his comrades. Even a soldier caught sleeping on guard duty or building fortifications without wearing his armor and keeping his weapons nearby faced the death penalty.

Roman legionaries were as adept with the pick and shovel as the sword and pilum. At the end of each day's march, they built a fortified camp with streets laid out in a rectangular grid. During the Empire, when the legions were

guarding permanent frontiers, their camps attracted other settlers (merchants, women, retired veterans, etc.) and became the basis for permanent towns, also laid out in militarily precise rectangular grids. In Britain, town names ending in -chester or -caster (from *castra*, the Roman word for camp) reflect their origins as legionary settlements.

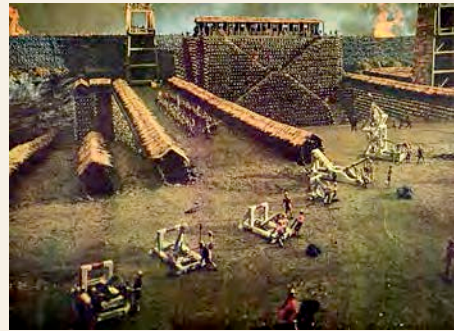
The smallest unit of the Roman army was the *contubernium*, a group of 8 men who carried and shared the parts of a 6-man tent, with two men always on guard duty.

Of course, it was in battle, that Roman legionaries really proved their worth. Their training and fighting in concert as a virtual gave them a huge edge in combat over enemies who fought as individual warriors. So did their ability to switch ranks at the sound of a trumpet so that fresh troops could always be brought to the front every twelve minutes, the amount of time they were at their fighting peak. Supposedly, since they covered each other's unshielded right side so well, at a signal, they could all stab at the opponent to their front and right's unshielded side, bringing down the enemy's entire front line in one stroke. One can only imagine the demoralizing effect of such a maneuver on the other side.



A Roman century on the attack. The first two ranks have thrown their pila and are closing in with their swords while the next two ranks throw their pila to cover the first two ranks' approach. The back ranks may throw their pila later or use them as thrusting spears.

Sieges. Although tedious, time consuming, and costly, siege warfare was something the Romans also excelled in. Combining Hellenistic siege machinery with their native perseverance, the Romans rarely started a siege without finishing it, and their enemies knew it. Each legion was equipped with various torsion-powered catapults to use against enemy fortifications. They might also be used to open a regular battle to disrupt and terrify the enemy. The Jewish historian, Josephus relates how, during the siege of Jotapa, a stone fired from one of these machines took off the head of a defender and carried it across the town.



Cities under siege had until “the ram touched the wall” to surrender without being sacked. Even before beginning the siege, Roman priests might perform a ritual called *evocatio* (calling out), where they would invite the enemy's gods to leave the doomed city and join their side. This was only offered to foreign gods that were deemed safe, not ones who were worshiped in wild orgiastic rites, like those of the Syrian sun god, Elagabal. As Philip Matyszak, author of the highly informative and entertaining book *Legionary* puts it, only the Romans would subject foreign religions to what amounts to a job interview.

Sulla and Friends



Left to right: Lucius Cornelius Sulla, Mithridates VI of Pontus, and Marcus Licinius Crassus

Mithridates VI of Pontus was one of a number of Hellenized kings who emerged in Asia Minor in the late Hellenistic period. As a child, he had to avoid all sorts of murder attempts, even by his own mother. To protect himself against poisoning, he experimented with various poisons, testing them on unwilling subjects and reportedly even taking small doses to build up his immunity to them. At the end of his life as Roman soldiers were closing in on him, he supposedly took poison he kept in a ring. Unfortunately, it didn't work, so he had to have a slave run him through.

Roman fire sales. Among the beneficiaries of Sulla's purges was Marcus Licinius Crassus, nicknamed Dives (the rich), who got much of his property at cut-rate auctions selling off the property of Sulla's victims. After all, who would bid against Sulla and his friends? Crassus also got property from Roman style fire sales. Since Rome had no public fire department, Crassus formed a private one manned by slaves. When a fire broke out, he would show up and offer to buy the burning property at an extremely cheap price. If the owner refused, Crassus would watch it burn a while and then lower his price. As bad as it was for the owner, the sooner he sold out, the better.

Spartacus and Slave Revolts in General



Typically, slave and peasant revolts were extremely desperate affairs that followed a remarkably similar pattern down through history. Since they were spontaneous and unplanned, the authorities were caught off guard, allowing the revolt to spread rapidly across the countryside and defeat what local forces were sent after them.

A lot of pent up anger translated into atrocities being committed against anyone who happened to get in the rebels' way, thus terrifying the local populace who fled to the cities. Eventually, the authorities would gather their forces and crush the rebels who typically were not professional soldiers and therefore were easily panicked. Retribution against the defeated rebels was every bit as savage as the rebels had been.

Spartacus' slave rebellion (73-70 B.C.E.) wasn't the first such affair the Romans faced, there being two massive servile wars in Sicily in the previous sixty years (135-132 and 104-100 B.C.E.). Spartacus' revolt began when he and about seventy gladiators escaped from the gladiatorial school in Capua. This immediately attracted thousands of slaves from surrounding *latifundia* (plantations). When it crushed two hastily assembled forces of militia sent against it, Spartacus' ranks swelled even more, possibly to as many as 70,000, although a number of these must have been women and children.

The goals of the rebels are not clear to us today, and may not have even been clear to them, since they first moved north and could have escaped across the Alps, but then turned south,

plundering along the way. Their numbers must have forced them to keep moving just to get enough to eat, and that may have dictated their erratic movements.

After losing two small forces, Rome took the revolt seriously, entrusting its richest citizen, Marcus Licinius Crassus, with a force of eight legions (40-50,000 men). After whipping this force into shape with particularly harsh discipline, Crassus penned up Spartacus' army in southern Italy and eventually destroyed most of it. However, a rival general, Pompey, mopped up the last of the rebels on his way back from Spain and claimed partial credit.

As a warning to any other potential rebels, the Romans crucified 6,000 survivors from Spartacus' uprising along the Appian Way.

Pompey "the Great"



Pompey "the Great" was a title Sulla bestowed by Sulla on the young Gnaeus Pompeius for defeating Marius' followers in Sicily and North Africa. Pompey repaid Sulla's favors and compliments with the snooty remark that more people worship the rising sun (i.e., him) than the setting sun (i.e., Sulla).

Pompey was often more *felix* (Latin for lucky) than great, profiting from situations others set up for him, notably mopping up the remnants of the Spartacus rebellion and taking over the Second Mithridatic War after Lucullus had paved the way to victory. Similarly, he crushed the revolt in Spain led by Marius' follower, Sertorius, through bribery of a follower to

murder him rather than generalship. (Sertorius, who had a white fawn that supposedly gave him advice from the goddess Diana, had a loyal following among the Spaniards and was reputedly unbeatable in battle.)

The Cilician Pirates were a problem going back to the second century B.C.E. when the Greek island state, Rhodes, angered Rome, its former ally. Therefore, Rome spitefully wrecked Rhodes' trade, especially in slaves, by making the nearby island of Delos a duty free port. Not only did this cripple Rhodes' economy, but also its ability to maintain a navy that had largely kept piracy down in the Eastern Mediterranean. The result was the growth of piracy, starting in Cilicia on the southern coast of Asia Minor, and eventually spreading throughout the Mediterranean. By 70 B.C.E., pirates were threatening Rome's grain supply and even marching 50 miles inland to take slaves.

At Rome, this led to the Gabinian Law giving some unnamed person (whom everyone knew would be Pompey) complete command of the sea and an area 50 miles inland all around the Mediterranean, 120,000 men and 500 ships for three years. Food prices fell back to normal even before Pompey was named. In a matter of months, he had divided the Mediterranean into 13 districts, each with a naval squadron, and then swept eastward through the Mediterranean crushing the pirates. He settled those who surrendered in inland colonies.

The Second Mithridatic War. Somehow, in all the confusion of Rome's civil war Sulla's treaty ending the First Mithridatic War had never been ratified, which naturally worried Mithridates about Rome's intentions. When his neighbor, Nicomedes of Bithynia, willed his kingdom to Rome (74 B.C.E.), Mithridates' worries only grew more, so he moved in to claim Bithynia as his own. Sulla's lieutenant in Asia, Lucullus, easily defeated Mithridates who fled to his brother-in-law, Tigranes of Armenia, with Lucullus in hot pursuit. However, Lucullus, a

strict disciplinarian, wouldn't let his soldiers or the equites with their tax farming contracts plunder Asia freely. So they used Lucullus' unpopularity with the troops to pass a law replacing him with Pompey who had just finished off the pirates.

Still, it was Pompey who finally crushed Mithridates (who then committed suicide), and it was Pompey who got the credit. He then spent the next few years marching through the Near East and reorganizing it along lines more favorable to Rome by creating new Roman provinces in Asia Minor and Syria (where he put a final end to the decrepit Seleucid dynasty) and establishing client kings loyal to himself and Rome in Asia Minor and Judaea.

Client kingdoms had the advantage of acting as a buffer against the Parthian Empire to the East without costing Rome anything to defend. A half century later, Augustus would directly annex these client kingdoms, thus completing Rome's conquest of the entire Mediterranean.

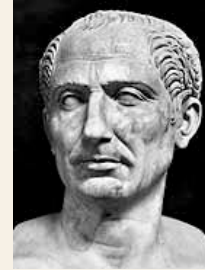
Felix no more. When in Judaea, Pompey insisted on visiting the Holy of Holies in the Temple, which was supposed to lead to instant death for whomever violated it. Although he walked out intact, the Jews were quick to point out that Pompey's fortunes went down from this point forward. Indeed, when Pompey finally returned to Rome 61 B.C.E., his star began to wane.

Catiline's conspiracy. In 63 B.C.E., during Pompey's absence in the East, a Roman noble, Catiline, conspired to overthrow the government and seize power. The lawyer and orator, Cicero, who was consul at the time, exposed the plot in a series of stirring speeches known as the Catilinarian orations. Cicero convinced the Senate to execute Catiline and four others without a trial during the emergency. The most prominent dissenting voice was that of Julius Caesar. Cicero's less than legal actions later got him briefly exiled thanks to the actions of the tribune and mobster, Clodius, who had a personal grudge against him for his testimony in a sacrilege trial.



According to Cicero, as his oration against Catiline progressed, all the members of the Senate left him sitting alone, not wanting to be affiliated with his conspiracy.

Caesarian Legends



"Many a Marius". One man who refused to knuckle under to Sulla during his reign of terror was Marius' nephew, the young Julius Caesar, a brash young politician with a gift for public speaking and popular with the common people. When Sulla ordered him to divorce his wife, the daughter of Cinna, one of Marius' main followers, Caesar refused and had to flee Rome to save his life. Eventually, Caesar's friends got Sulla to pardon him, the dictator supposedly remarking that he saw many a Marius in Caesar.

Caesar and the pirates. One of the best-known stories about Julius Caesar is when he was captured as a young man by Cilician pirates and held for ransom. However, instead of acting scared during his captivity, he treated the pirates like servants, ordering them around, demanding the best quarters, and even forcing them to sit and listen to him read poetry. The pirates, amused at such bravado, put up with this treatment. One day they asked Caesar what he planned on doing after he was released. He

replied that he was going to get some men and ships, come back and crucify them. While the pirates thought this was funny, when Caesar was ransomed, he proved to be true to his word: he got some men and ships, came back, captured the pirates, and crucified them.

Lucky at love. As a member of the Julian clan, Caesar was supposedly a descendant of Venus, the goddess of love, and it showed, as he had affairs with the wives of a number of the prominent politicians in Rome, thus supplying him with a lot of valuable inside information about his opponents that he used freely.

Put this on a family tree. When he married Caesar's daughter, Julia, Pompey became Caesar's son-in-law, even though Caesar was actually five years younger than Pompey.

Caesar's Conquest of Gaul



Caesar accepts the surrender of Vercingetorix, leader of the most serious revolt he faced during this campaigns in Gaul. He was kept prisoner in Rome for several years, waiting to be dragged in chains in Caesar's triumphal parade and then executed.

Caesar the forest ranger. Originally, the Senate had assigned Caesar the "hills & forests of Italy" for his proconsulship, basically making him a forest ranger. However, with a little arm-twisting, he got it changed to Gaul where he could win military glory.

Gaul at the time of Caesar. By Caesar's time the Gauls had changed considerably from their days as wild naked warriors, living

now in more settled and fortified hilltop communities and wearing pants on a regular basis. In fact, part of what gave Caesar the opportunity to intervene in Gaul would be pleas for help against more barbaric German tribes from east of the Rhine.



The Celts were splendid horsemen, something Caesar quickly recognized, recruiting them for his cavalry. Graves of Celtic nobles typically had horse trappings such as bridles, bits, harnesses, and spurs, showing the importance of the horse in their culture.

Among the Gauls' more curious customs was an obsession with keeping enemy heads, believing they would keep their owners' spirits from coming back to haunt them. Some prominent heads were preserved in cedar oil and displayed to visitors who might even try to buy them to increase their own power. The Celts also believed in reincarnation, being known to burn letters on funeral pyres for the dead and to take out loans that were repayable in the next life.

Caesar had little military experience before going to Gaul. However, one would never have known it by looking at the masterful way he brought it under Roman control in a mere ten years. Caesar's first major test as a general was at Bibracte in 58 B.C.E. where he turned back the Helvetian tribes trying to migrate through Gaul. Their assault broken, the Helvetians retreated to their wagons where the women reinvigorated the surviving warriors by joining the defense. It wasn't until midnight that Caesar could claim his first great military victory.

A master psychologist. Caesar also faced Ariovistus and his Germanic tribes from across the Rhine. Seeing his men were scared of the huge Germanic warriors, he said they could go home and he would just take the Tenth Legion (his favorite) and they alone would fight the invaders. The other legionaries' military pride being hurt, insisted to go, saying it was the junior officers (mostly politically appointed as officers to gain military experience) who were afraid.

Caesar's influence over his soldiers was so great that he once put down a mutiny with one word: addressing his soldiers as "civilians",.

Burning his bridge behind him. After beating Ariovistus, Caesar's men built a bridge over the Rhine, finishing it in 14 days, an engineering feat that alone must have overawed the Germans. After raiding their lands for several days, he returned to Gaul, burning his bridge behind him.

The legions stand fast. One of Caesar's closest calls in Gaul was a surprise attack by the Nervii while his army was building a camp. Caught completely off guard, the Roman legionaries showed their training by falling into line with other units. Although pressed so tightly in some places they could barely fight, they gradually gained the upper hand and routed the Nervii. That explains why legionaries always had to wear their armor.

In one siege, Caesar's men, trying to undermine the enemy walls, inadvertently tapped into their well, flooding their tunnel, but also mysteriously depleting the city's water. The Gauls, unable to explain this, thought it was a sign of divine disfavor and immediately surrendered.

Britain. In 55 and 54 B.C.E., Caesar invaded Britain, a place many Romans even doubted was real. Supposedly, no one wanted to be the first to land in the face of the fierce Britons waiting for them, until the aquilifer (eagle or standard bearer) plunged in. As a point of honor, wherever the eagle, which was sacred to the legion, went the legionaries followed. Besides being able to claim that he had invaded what (to the Romans) were the ends of the earth, Caesar accomplished little in his two invasions of Britain.



The Celts Caesar faced in Britain still fought from old fashioned two-man chariots. A warrior would throw his javelins from the chariot, then dismount to fight while the driver waited to pick him up when needed.

Vercingetorix' Revolt. Caesar's greatest challenge in Gaul was a major revolt led by Vercingetorix. The revolt climaxed at the siege of Alesia where Caesar's men constructed a massive double line of siege-works around Alesia to keep the defenders penned in and a relief army out. It had eleven miles of walls, ditches, spikes, and camouflage pits, and involved moving an estimated 2,000,000 cubic meters of earth.



A reconstruction of Caesar's fortifications at the siege of Alesia

The Caesar cipher was a simple code Caesar used that substituted a letter for one three letters later in the Latin alphabet.

Disaster at Carrhae (53 B.C.E.)



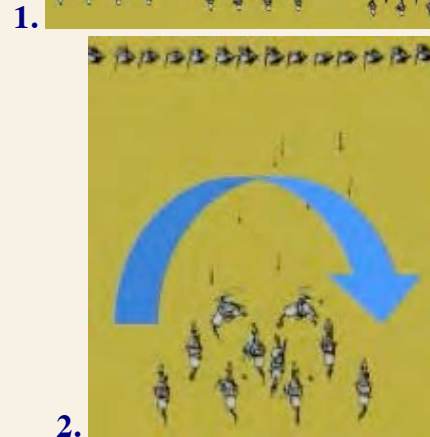
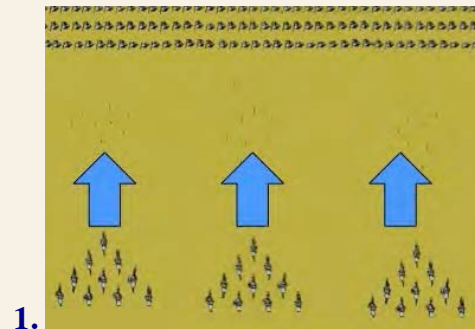
Parthian cavalry wheel around while maintaining a constant rate of fire against the more static Roman infantry at Carrhae.

During his ten years in Gaul, Caesar also built up a highly efficient and intensely loyal army that could brag of exploits to rival and even surpass those of Pompey's army. Naturally, this caused jealousy and suspicion on Pompey's part. In 53 B.C.E. the Triumvirate suffered a blow when Crassus, whose influence helped keep the Triumvirate together, was killed fighting the Parthians, nomadic tribesmen who had taken much of the old Persian Empire's Asian lands from the now extinct Seleucid dynasty. Traitorous scouts had led the Romans to where the heat and flat terrain created perfect conditions for the Parthians' style of warfare.

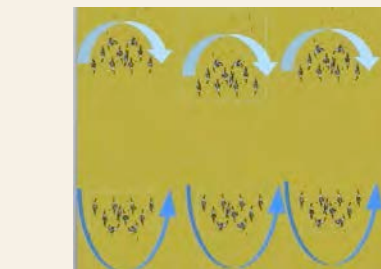
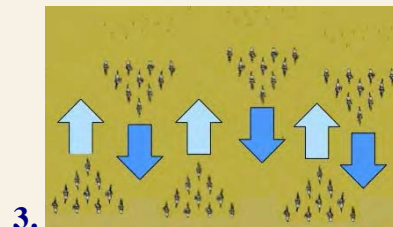
The Parthian army's core consisted of horse archers armed with the composite bow, a powerful weapon with a range of up to 250 meters and able to pierce bronze armor. The rider would control the horse with knee pressure, thus freeing both hands for using the bow. He could even fire an arrow while withdrawing from his enemy, a tactic, known as the Parthian shot although it was used by mounted nomads across Eurasia.

Nomadic tactics. Carrhae was typical of how nomads across Eurasia fought. They would charge the enemy in small groups, firing arrows as they approached (1). At 30-40 meters from the enemy, they would whirl to the right, continuing to pour arrows into the enemy ranks (2 and top picture). They would then retreat, still firing "Parthian shots" behind them. Meanwhile, new groups of horse archers would be charging forward to take

the first groups' place and keep the enemy under a constant hail of arrows (3).

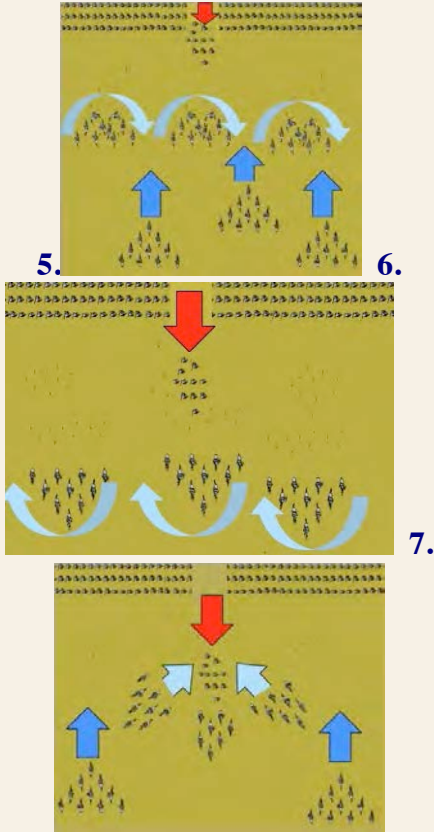


This pattern would keep repeating as those returning from the fight would regroup for new attacks (4). In order to maintain this attack pattern all day, the Parthians had brought extra arrows on a camel train, which they displayed openly to demoralize the Romans.



This tactic was also meant to draw inexperienced enemies (5, red arrow) from their ranks in pursuit of the retreating cavalry. However, this was the worst thing to do, because the Parthians would quickly circle around (6), some of them

cutting off the pursuing enemy (7) while others (dark blue arrows) would keep attacking the main body of the enemy to keep them from rescuing their comrades. This is how the Roman cavalry, led by Crassus' son, died at Carrhae.



Cataphracts. The Parthians also had heavily armored cavalry known as *cataphracts* that would wait until the enemy seemed disrupted and charge headlong into their broken ranks and ride them down. For the Romans, this presented a serious dilemma. They could maintain a more open formation to minimize damage from the Parthian horse-archers, but leave themselves open to the massed charge of the cataphracts. However, if they kept a tight formation for repelling the cataphracts (horses don't like charging headlong into tightly packed lines of spears), they made an easier target for the horse-archers.



Throughout the day, the Roman legions maintained discipline and kept their ranks intact until Crassus was forced by his decimated army to attend a parley with the Parthians, who treacherously murdered him. Supposedly they killed him by pouring molten gold down his throat, saying he had thirsted for gold all his life, so he should drink his fill.

The exhausted remnants of his army surrendered along with their eagles (legionary standards). There was no greater disgrace to the Romans than to lose their legions' eagles, and the issue of retrieving Crassus' those standards from the Parthians was a major focus of Roman policy in the East for decades.

Politics as Usual in Rome



The body of the gang leader, Clodius, is brought to the Roman Senate, which his followers burned as his funeral pyre.

You can't make this stuff up. Since Caesar was Pontifex Maximus (high priest of Rome), his wife was responsible for hosting the rites of the Bona Dea (Good Goddess), a women-only event where they even covered male statues and supposedly drove out any male mice. In 62 B.C.E., as a practical joke, a degenerate patrician, Clodius, who was rumored to be having an affair with Caesar's wife, infiltrated these rites dressed as a woman. However, he was discovered, triggering a big scandal, which caused Caesar to divorce his wife, saying Caesar's wife must be above suspicion.

A Short History of Our Calendar



At the sacrilege trial, Clodius claimed he was out of town the day of the festival, but Cicero shot his alibi to pieces by saying he had seen Clodius in Rome that very day. Although Clodius was acquitted, he was furious at Cicero, whom he taunted with his acquittal despite Cicero's testimony. Cicero replied that at least his jurors trusted him while Clodius' jurors demanded payment in advance, which further embarrassed and angered Clodius, who was now bent upon revenge.

Clodius decided to run for tribune, but he was a patrician (noble) and only plebians could hold that office. So he found some old plebian whom he paid to adopt him, thus making him a plebian, got himself elected tribune, and passed a law exiling anyone who had ever illegally killed another Roman citizen. Everyone knew this referred to the Catilinarian conspiracy when Cicero as consul had executed several of Catiline's co-conspirators without a trial. As a result, Cicero lost his property and went into exile until he could get the law repealed and return to Rome.

This was all done with Caesar's blessing, because Caesar had made his peace with Clodius and hired his services as a politician and gang leader to keep things stirred up in Rome while he was conquering Gaul.

Clodius' end. During Caesar's absence in Gaul, Roman politics degenerated into virtual street warfare between Caesar's gang leader, Clodius, and Pompey's thugs led by Milo. When Clodius was killed in a fight between the two gangs, his followers took his body to the Senate house and burned it down as Clodius' funeral pyre.

Fixing the calendar. The old Roman calendar was a lunar calendar consisting of 12 lunar months and an intercalary month of 22 or 23 days inserted every 2 years to get in line with the solar cycle. Romans called the first day of each month *Kalendae* or *Kalends* from the Latin word *calare* (to announce solemnly or call out). Our word calendar comes from this word. As pontifex maximus (high priest) it was Caesar's job to keep adjusting the calendar. However, thanks to all his campaigns and political activities, he had neglected this duty and the Roman calendar had fallen behind by eighty days, nearly a whole season. In 46 B.C.E., Caesar added the lost days making that "the Year of confusion" since it had 445 days, probably the longest year in history.

Then Caesar adopted the Egyptian solar calendar, which is basically the same as our Gregorian calendar with one bit of fine-tuning. A year isn't quite 365.25 days long, so that by the 1500s people noticed the calendar seemed to be several days off. Therefore the new Gregorian calendar (named after pope Gregory XIII who oversaw its implementation) does not have a leap year three out of four century years. For example, 2000 was not a leap year, but 2100, 2200, and 2300 presumably will be, although I don't plan on being around to confirm it.

It took several centuries for different countries to adopt this modification. For example, Russia by 1900 was a full 14 days off from everyone else's calendar, which is why what they call the October Revolution occurred on November 7th on our calendar. After the Revolution, the Bolsheviks adopted the Gregorian calendar, possibly the only thing they ever did to cooperate with the West.

In 153 B.C.E., the Romans moved the first of the year from March 1st (when military campaigns start) to January 1st (when the new officials took office), but didn't change the months' names. This explains why September, our ninth month, means seventh month in Latin; October, our 10th month means eighth, and so on.

However, not everyone started their year on January 1st. For example, some people in medieval France started the year on April 1st. Others thought this was foolish: thus April Fools Day.

The Romans made February the shortest month of the year because, of course, it's so unlucky.

Octavian vs. Antony (44-31 B.C.E.)



The Battle of Actium (31 B.C.E.) was almost anti-climactic, as Cleopatra quickly deserted Antony with her Egyptian squadron through a gap in the enemy center, followed by Antony soon afterward. With his desertion, the rest of his fleet's effort collapsed and Octavian found himself undisputed master of the Roman world.

In the chaos following Caesar's death, most people probably would have bet on his former commander, Marc Antony, as the winner in the coming power struggle. He was an experienced soldier, brave in battle, and popular with the troops. But he was also impetuous, over-confident, and prone to wasting time and opportunities with too much partying.

By contrast, his main opponent, Octavian, was only nineteen years old with no political or military experience. He did have an unusually quick and perceptive mind and would prove incredibly adept at outmaneuvering Antony time and again. Also, as the late dictator's

chosen heir, he had Caesar's name. Although historians typically refer to him as Octavian, he always made a point of being called Caesar, as a constant reminder of his ties to Julius Caesar. As it would turn out, Caesar's choice of heir may have been his greatest legacy to Rome and history.

Cicero's Philippics. Antony wasn't the only one to underestimate young Octavian. The orator and statesman, Cicero, thought he could take him under his wing and guide him along. Thinking he had Octavian and his legions on his side, Cicero gave a series of scathing speeches against Marc Antony, known ever since as *Philippics*, after Demosthenes' speeches against Philip II of Macedon. Unfortunately, when Octavian did an about face and allied with Antony in the Second Triumvirate, Antony's proscription list included Cicero. The famous orator tried to escape, but bad winds drove him ashore, so he met death bravely. Antony's wife supposedly put Cicero's head on a pedestal and stuck pins in the tongue that had delivered the *Philippics*.

After crushing Caesar's assassins at Philippi (42 B.C.E.), Antony took the empire's eastern half. There he took up with Cleopatra, who bore him twins, and largely squandered his resources and opportunities, even portraying himself as the god Dionysus. After his lieutenant, Ventidius Bassus, repelled a Parthian invasion of Syria, Antony decided to win some glory for himself at the Parthians' expense and also avenge the humiliating defeat at Carrhae. Matters started well enough, with Antony taking Jerusalem and installing Herod as king of Judaea.

However his invasion of Parthia in 36 B.C.E. proved almost as disastrous as Crassus' campaign fifteen years earlier. Despite leading a huge force, he was beaten in battle, thwarted in trying to take Parthian strongholds, and deserted by his Armenian allies. In the long winter retreat that followed, he lost a quarter of his army and was lucky not to lose it all.

In a later campaign, he did save some face with a successful invasion of Armenia, which he celebrated in a mock Roman triumph in Alexandria. He then announced the Donation of Alexandria (34 B.C.E.), a document whereby Antony gave the provinces of Syria, Cyprus, Cilicia, Cyrene, and Armenia to Cleopatra's children, including Caesarion, her son by Caesar whom Antony had adopted. This especially angered most Romans, since he was giving away Roman provinces to foreign royalty, thus providing Octavian with great propaganda material against him. Octavian was also irked because Antony's adoption of Caesar's son gave him a claim as Caesar's heir. This provided the final break between Octavian and Antony and led to a fourth Roman Civil War in less than fifty years.

Largely thanks to the insistence of Cleopatra, whose forces he needed in addition to his own legions, Antony fought the decisive battle at sea of the Greek coast near Actium (31 B.C.E.). Cleopatra's rapid desertion with the Egyptian squadron, followed by Antony's desertion, turned the battle into a fiasco, and Octavian emerged as the sole ruler of the Roman world.

[Back to flowchart](#)

. AUGUSTUS' NEW ORDER: THE PRINCIPATE

Octavian's victory over Antony and Cleopatra ended a century of civil turmoil and decay. When he returned to Rome in triumph in 29 B.C.E., everyone anxiously wondered how he would use his victory. The Roman people and Senate heaped all sorts of honors on him: triumphal parades, political offices, and titles, including that of Augustus ("revered one"), by which title he has been known ever since.

Augustus saw that there were two basic needs he had to satisfy in order to avoid the pitfalls of the past century. For one thing, the civil wars and turmoil of the last century clearly showed the need for a strong one-man rule backed by the army. Second, the traditional and conservative nature of the Romans made it mandatory that he make any reforms at least *appear* to be like the good old days of the Republic with its elections and many political offices. Satisfying these two needs required a politician cleverer than Marius, Sulla, and even Caesar himself. Luckily for Rome, it had such a man in Augustus who founded a new order known as the Principate after his honorary title of *princeps* (first citizen).

Augustus' solution was to take the army and law-making powers and disguise them with harmless sounding Republican titles. Out of all the Republican offices he took only two main offices, or more properly powers without the offices: those of tribune and proconsul (provincial governor). Having special tribunician powers allowed him to propose laws to the Senate and assembly. Being just a tribune, one of the humblest offices in Rome, made Augustus look like a man of the people and their protector. However, his title of princeps gave him the right to speak first before all other officials instead of having to wait his turn like other tribunes.

Proconsular power gave Augustus all the strategically placed provinces with armies, thus giving his tribunician powers the clout to pass any laws he wished with a minimum of resistance. In order not to appear too greedy, Augustus gave the Senate control of the non-military provinces. In

fact, one or two of these even had a legion with which the Senatorial governors could play soldier. In such a way Augustus took effective control of the laws and army while leaving the Republic intact, at least on the surface.

Although his own position was secure, Augustus still had to provide for a smooth succession so his system would continue peacefully after he died. He needed to appoint a successor much like a king would, but once again, make it look like the Republic. He solved this with typical Augustan shrewdness by having his chosen successor assume the powers of tribune and proconsul while he was still alive. Therefore, when Augustus died, the new emperor would already hold the important offices to guarantee a smooth transition of power. Over time, the memories of the Republic would fade and it would be taken for granted that the emperor's son or chosen successor should be the next emperor, even if he did not already hold the appropriate powers.

Having secured his own position, Augustus still had to provide for three things in order to rule the empire effectively: honest and efficient provincial governors, an honest and efficient bureaucracy to help them, and a loyal and efficient army to defend the frontiers instead of making trouble in Rome. He did two things to ensure honesty and efficiency in his governors. First, he paid officials regular salaries instead of leaving it up to them to make up for their own losses at the expense of the provincials. This at least eliminated the more blatant need for corruption. Augustus also had his own personal agents, called *procurators*, to keep an eye on officials in the provinces. Any corrupt governors would be tried by the Senate. However, it was unlikely that a governor's fellow senators would be so lenient with him as before, because Augustus kept a close eye on these proceedings to ensure justice. Together, these reforms gave Augustus the efficient and honest governors he needed.

Augustus ensured more efficient governors by reviving the old *cursus honorum* (ladder of honors), whereby aspiring senatorial politicians would gain necessary experience and training by serving in the army and then holding a sequence of old Republican offices. At the same time, it maintained

the fiction that the Republic was still functioning by making good use of the old Republican offices.

He obtained trained middle level officials from the rich business class of the equites. They had their own *cursus honorum* to go through before being eligible for various lucrative positions such as command of the fleet, Rome's grain supply and fire brigades, the Praetorian Guard (the emperor's own personal regiments), and the governorship of Egypt (kept as Augustus' private domain).

Augustus also needed trained bureaucrats to do the daily work of running the empire. Previously, senatorial governors would take their friends and slaves to fill these positions, which led to all sorts of inefficiency and corruption. Augustus replaced this system with a professional class of tax collectors and record keepers who held their jobs for extended periods. He also ended tax farming, where the government auctioned off the right to collect the taxes. This had been one of the worst sources of abuse under the Republic. These reforms provided the provinces with a more honest, efficient, and stable government.

There were two issues to resolve with the army: its loyalty and expense. In terms of loyalty, since Augustus' proconsular powers gave him control of the provinces and the armies within them, there was technically only one commanding general (imperator) of nearly all the Roman armies: himself. Obviously, any emperor, especially a non military man like Augustus, would have to appoint men to lead at least some of the troops spread out along Rome's vast frontiers. However, the troops stayed loyal to Augustus, not their immediate generals, for one good reason. It was Augustus now, not the generals, who paid soldiers their regular pay and pension, generally with coins that bore the emperor's image as a constant reminder of who took care of the troops. The central government, meaning Augustus, once again had control of its armies. Occasionally, the troops would rediscover the fact that they held the key to power and would revolt to put their own generals on the throne. For the most part, they stuck to the business of guarding the frontiers and left governing to the emperors in Rome.

Finally, in order to increase efficiency and cut costs, Augustus reduced the army from 60 legions to 28. He generally placed these along the frontiers most threatened by invasion: the Rhine and Danube Rivers in the north and the Euphrates River in the east. An equal number of auxiliaries (light infantry and cavalry) were also maintained there. The total number of troops Rome had amounted to roughly 250-300,000 men defending an empire of possibly 50,000,000 people. Such a small force for so large an empire had to be efficient, and it was. The Roman legions during the Principate comprised the most tightly disciplined and efficient army of antiquity, and everyone knew it. It was their reputation as much as their swords that defended the frontiers and gave the Mediterranean two centuries of peace. Rome was also lucky in two ways at this time. First it faced no major threats on its borders. Second, the Mediterranean, as the central geographic feature of the empire, allowed much faster communications and reaction time during emergencies.

The Empire after Augustus. Augustus died in 14 C.E., but his work lived on long afterwards. For nearly two centuries, the Roman world would experience peace such as it had never known before or since. Its government was well trained, efficient, and honest, while its legions kept the frontiers and interior provinces secure. Roman political history during this time is not very exciting, because relatively little happened besides a few palace scandals in Rome.

The empire expanded very little during this time, just rounding out its control of the Mediterranean and invading Britain and Dacia north of the Danube. Occasional wars would flare up in the East with the Parthians and in the north with various Germanic tribes, but there were no serious threats to the Empire. The vast majority of people in the empire never experienced war and invasion. Even the troops on the frontiers often saw so little action that they were kept busy and in shape by building the vast network of roads Rome is so famous for. Peace and prosperity brought trade, both within the empire's borders and beyond with such exotic places as India and China far to the east. Merchants traveled the legionary roads and the Mediterranean free from fear. Peasants harvested their crops

undisturbed by war. And the legionary camps on the frontiers grew into permanent cities.

This was certainly a golden Age for civilization. However, even times of peace and prosperity can carry within them the seeds of their own decay. That was true of the Roman Empire in the second century C.E., although few if any people recognized the problems within their society. At the same time, pressures were starting to mount against the northern frontiers. Together, these internal problems and external pressures would combine to destroy the Roman Empire and begin the transition from the ancient world to the Middle Ages.

Establishing One-Man Rule



Statue of Augustus, emphasizing his military prowess, although he wasn't much of a soldier and left military matters to his right-hand man, Marcus Agrippa.

The powers Augustus needed to establish one-man rule over the empire were all constitutionally available, but traditionally spread out over a number of offices held by a variety of men to prevent one man establishing a dictatorship. In order to avoid the appearance of being a dictator, Augustus had to be careful to take only the most essential offices while leaving the rest to others (usually his appointees anyway). The Republic's major offices and duties in ascending order of importance were:

- Quaestors (finance officials) *or*
- Tribunes who proposed laws and posed as protectors of peoples' rights

- Aediles who supervised public works and games
- Praetors who were the main judicial officials
- Consuls: Rome's top officials who ran Rome and proposed laws, but no longer had armies since Sulla's reforms
- Proconsul (ex-consuls) who ran provinces and commanded their armies. It was mainly as ex-consuls with armies that generals had risen to power during the turmoil of the last century. However, while pro-consular powers and armies had been the key to success, it was the office of consul had offered the most prestige.
- Pontifex Maximus was high priest of Rome's state religion, still a position of high prestige among Romans. It always helps to be able to tell people they will suffer divine wrath if they don't do what you say.

The Senatorial Cursus Honorum ("ladder of honors"). Of course, Augustus needed qualified help ruling the empire. For upper level positions he restored the sequence of Republican offices that a noble Roman would have to go through to qualify for the most prestigious provincial governorships and military commands. This would give his governors valuable experience and make the Republican offices actually worth something. It went as follows:

- Military service, usually as *tribuni militum*
- Lesser city magistrates such as city engineers or police commissioners for one year
- Quaestors: finance officials, some of whom served outside Italy. This office also earned a seat in the Senate
- Aediles who ran public works and the games; or tribune who protected the poor
- Praetors (judges)
- Various praetorian posts in provinces
- Consul (age 33, though most wait till 42)

For those wanting to qualify for high-ranking "middle level" positions there was the Equestrian *cursus honorum*:

- Military service for 10 years), first as commander of a cohort (around 500 men); next as a military tribune; and finally as

- commander of auxiliary cavalry
- Procurators who served either as the emperor's fiscal agent/spy (like the Persian king's ears) or as governor of a minor province (e.g., Pontius Pilate, who tried Jesus Christ, was the procurator of Judaea)
 - Prefects who were in charge of such things as Rome's traffic, grain supply, and fire brigade (*vigiles*), as well as the fleet, the Praetorian Guard, and the governorship of Egypt. This was the emperor's private domain that even senators needed the emperor's written permission just to enter.

Upper level equestrian posts were so lucrative that many eligible for senatorial careers followed this *cursus honorum* instead

Vigiles Urbani (watchmen of the city, from which we get the word *vigilant*) were cohorts established by Augustus to provide much-needed public police and fire protection in Rome. They were meant to replace the system of private fire departments, such as that of Crassus, but were also paramilitary units stationed inside Rome to keep order there. This technically stayed within the law forbidding an army inside Rome's sacred *pomerium* (boundary)

Emperors as gods. In 13 B.C.E. Augustus dedicated the *Ara Pacis* (Altar of Peace) to his own *pietas* (piety) and the *Pax Romana* he had established. Its relief sculptures were done in the style of Periclean Athens in the fifth century B.C.E., an era that Augustus and his age unquestionably emulated. In the center was Augustus, his head covered to indicate his role of *pontifex maximus* (high priest) and his special relationship with the gods.

Along these lines, Augustus had his adoptive father, Julius Caesar, deified. This opened the way for himself and all succeeding emperors to be deified as well, an important factor in ensuring the loyalty and obedience of all Roman subjects.



This is especially seen on coins, which started portraying emperors instead of traditional gods on the obverse side. Julius Caesar seems to have started this, and Marc Antony followed suit, also associating himself with the god Dionysus on the reverse (above left). Augustus' coins used the phrase *divi filius* (above right), meaning son the deified one, instead of *dei filius* (son of god). This left it open as to whether or not he was claiming to be a god. It also left it open for the Senate to declare him a god when he died, and that set the tone for all succeeding emperors. It is doubtful that Augustus took himself seriously as a god, but it was very useful for propaganda purposes, especially since that let him and succeeding emperors put their images on coins, the one form of mass propaganda in the ancient world.

Dynasties and Inbreeding (27 B.C.E.-161 C.E.)



The Teutoburg disaster. In 9 C.E., three Roman legions commanded by Publius Quinctilius Varus were ambushed and massacred by Germanic tribesmen in the Teutoburg Forest. This disaster convinced Augustus that the empire had reached its furthest practical limits at the Rhine, Danube and Euphrates Rivers, and he advised his successors against any further expansion. Supposedly, he would wake up at night screaming "Varus, give me back my legions."

Imperial inbreeding. The difficulty Roman aristocrats had in producing healthy sons to succeed them during the late Republic and Empire highlights a more general problem often faced by ruling classes: inbreeding. Typically, royalty and nobles only want to marry within their own narrow class. However, over time, the pool of eligible candidates gets increasingly narrower as their bloodlines are all mixed together and they start marrying relatives, a bad idea if one wants to produce healthy offspring, or any offspring at all. Roman nobles often dealt with this by adopting other nobles' sons, which provided heirs in the short run, but didn't address the long-term problem.

One of the best-known examples of this in more recent times was the Hapsburg Dynasty whose habit of marrying first cousins and aunts finally produced Charles II of Spain (1661-1700), whose aunt was also his grandmother. Charles could not talk until age four and was eight years old before he could walk.

Following is a brief rundown of the emperors of the Pax Romana.

The Julio-Claudian Dynasty. Finding Augustus' successor turned into a virtual soap opera, best covered by Robert Graves' fictionalized account of the early emperors, *I Claudius* and the BBC television adaptation of it. At first Augustus used his old general and son-in-law, Agrippa, to help rule with shared powers until Agrippa's sons, Gaius and Lucius, were grown. After Agrippa died, Augustus used Tiberius, his wife Livia's son (from a previous marriage), to help rule with shared powers while he groomed Gaius and Lucius for the succession.

Tiberius, feeling passed over as second best, got disgusted and retired from public life. However, after both Gaius and Lucius died young, Augustus once again turned to Tiberius, who took over as sole emperor when Augustus died. By this time, he was somewhat bitter and left a reputation as something of a madman, although we should remember that our main source,

Tacitus, was hostile to the emperors in general. Whatever the truth about Tiberius, the government of the empire continued smoothly during his reign (14-37 C.E.).

Gaius (37-44 C.E.) was Tiberius' successor, nicknamed Caligula ("little boot") by the troops from when he was a little boy. Ancient historians branded him a total madman. Considering that he supposedly made his horse a consul, they were probably right.

Claudius (44-54 C.E.). After the murder of the worthless Caligula, the Praetorian Guard found his cousin, Claudius, hiding behind a curtain and declared him the new emperor. Supposedly Claudius had played dumb to escape notice (and execution) in the unpredictable world of court politics. In fact, he was well educated in literature, and the empire continued to prosper under his rule. During his reign, Rome finally conquered Britain, the next to last province to come under Rome's rule, and second to be abandoned.

Nero, emperor from 54-68 C.E., came to the throne at age 17. He was initially a good ruler, but later on turned into something of a tyrant. Among Nero's antics was taking part in the chariot races in the Olympic Games, which, of course, he won. After his death, officials at Olympia purged the record of this travesty. One of his better tricks was a collapsible boat designed to murder his overbearing mother, Agrippina. Unfortunately for Nero, the "accidental" shipwreck didn't work and his men had to finish off Agrippina the messy way with their swords.

During Nero's reign a massive fire destroyed much of Rome (64 C.E.). Archaeologists have found an iron gate melted down by the heat of the blaze. Tacitus, a very hostile source, tells us that many people suspected Nero of setting the fire, so he deflected blame on a new religious sect, the Christians. While he did persecute the Christians, as Hollywood emphasized in the 1950s, there were too few of them in Rome or the

empire to amount to much at the time. The really serious persecutions did not take place until the late third century.

After Rome's great fire, Nero rebuilt his palace, christening it the Golden House. It was said to be so luxurious that rose petals would drop from the ceiling onto partiers below, causing Nero to exclaim "At last I can live like a man."

Nero also fancied himself quite the artist, supposedly forcing people to listen to him sing and play the lyre. Tacitus wrote that they would jump to their deaths from the top row of seats rather than endure this punishment, possibly inspiring Douglas Adams' digression about Vogon poetry in *The Hitchhiker's Guide to the Galaxy*. When rebels led by the general, Galba, were closing in on Nero, he committed suicide, exclaiming "What an artist in me dies." Despite his little quirks, imperial government ran smoothly during his reign.

The Year of Four Emperors (69 C.E.). Nero's death marked the end of the Julio-Claudian dynasty and triggered a 4-way struggle for the throne. In quick succession, Galba, Otho, and Vitellius (an obese glutton who ate four banquets a day) rose and fell. Finally, Vespasian, (ruled 69-78), a general of the eastern legions, seized power and established the Flavian Dynasty, re-establishing strong stable rule for the empire.

The Jewish Revolt. In 66 C.E., the Jews rebelled against Rome. After a desperate three-year siege, Jerusalem fell to the Romans who sacked and burned the Second Temple (the first being destroyed by the Babylonians in 586 B.C.E.). The Roman general in charge of putting down the revolt, Vespasian, left early to claim the throne after Nero's death. His son, Titus, finished the siege and took Jerusalem. He displayed the plunder from the temple in his triumph at Rome.

Titus (78-80 C.E.) is mainly remembered for the building of the Roman Coliseum.

Domitian (80-96), Titus' successor, was especially hated by Tacitus, who claimed he was so sadistic that he would spend his time catching flies and pulling off their wings.

Nerva (96-98) was the first of the so-called "Five Good Emperors" who were chosen for their ability and appointing their successors on the same basis. The last of these emperors, Marcus Aurelius (161-180), finally broke the pattern by having his son, Commodus, succeed him with unfortunate results.

Trajan (98-117), Nerva's chosen successor, conquered Dacia north of the Danube River. It was the last province to come under Roman rule and would be the first province to be lost when the legions abandoned it during the anarchy of the third century. Trajan's Column in Rome, with its imposing spiral relief sculpture depicting his Dacian campaigns, is one of our best sources of information about the Roman army's campaigns, tactics, and equipment during the Pax Romana.

Trajan also defeated the Parthians. By now, the Romans had adapted to the Parthian horse-archer tactics, using a combination of hidden pits to trip the enemy horses and light infantry armed with javelins to finish them off. By his death, Trajan had defeated the Parthians and added Mesopotamia to the empire, briefly bringing it to its greatest extent.

Hadrian (117-138), thinking Trajan had overextended the empire, quickly gave up Mesopotamia and concentrated on securing the empire's borders. He is probably best remembered for Hadrian's Wall, the line of fortifications he built across northern Britain to keep out the Celtic Picts.

Antoninus Pius (138-161) continued to oversee the Pax Romana, with nothing dramatic happening during his reign. However, his successor, Marcus Aurelius (161-180) would see what would prove to be the beginning of the end for the Roman Empire.

THE SPREAD OF ROMAN CIVILIZATION IN WESTERN EUROPE DURING THE PAX ROMANA

One of the greatest legacies of the Pax Romana was the spread of Roman culture to Western Europe. Roman rule in the semi-civilized areas of Western Europe (Gaul, Britain, and Spain) and Augustus' establishment of peace during the Pax Romana meant that there were Roman troops permanently stationed in the provinces. This helped Romanize and civilize the provinces in the West in three ways. First, as the legionary camps became permanent settlements, merchants, families, and other sorts of camp followers settled down around them. In time, these army camp settlements became towns and cities, whose military origins are still reflected in Britain in such place names as Winchester and Lancaster (from the Latin word for camp, *castra*). After they were discharged from the army, legionaries, who were Roman citizens, and auxiliaries (non-citizen soldiers who received Roman citizenship after their terms of service) would often settle in these towns, marry local women, and raise their children as Roman citizens.

Along these lines, the peaceful conditions brought on by the Pax Romana, promoted the growth of native towns into cities. Those cities whose leading citizens copied Roman styles of dress, language, architecture, and local government would earn Roman citizenship for their towns. The poorer citizens would then follow the leading citizens' leads, thus encouraging the spread of Roman civilization that way. Finally, with extended periods of peace, the Roman army spent much of its time building an excellent system of some 51,000 miles of paved roads stretching across the empire. While these roads' original purpose was to facilitate the rapid movement of Roman troops to trouble spots, they also promoted trade and the influx of Italian merchants into the towns of the western provinces.

In these three ways, the western provinces saw the heavy Romanization of their towns and also nobles on country estates who felt they had some incentive to copy Roman ways for personal advancement. However, there were limits to Romanization. For one thing, it only happened to any great extent in Gaul, Britain, and Spain where there was no long

established civilization in place before the Romans came. By contrast, the Eastern provinces were already heavily influenced by Greek culture in the cities and native cultures in the countryside. In a sense, the Roman Empire was a bi-cultural empire, with Greek language and culture dominant in the East and Roman language (Latin) and culture and dominant in the West. (Coins in the East were even struck with Greek inscriptions.) In both East and West, the influence of these respective cultures was mainly limited to the cities and barely touched the countryside.

However, despite the serious decline of cities in the West during the Middle Ages, Roman culture would survive in the Eastern Roman (Byzantine) Empire and thanks to the efforts of monks in the West who copied many works of Roman literature. As a result, there would be a resurgence of Roman culture during the Italian Renaissance where it would reassert itself as the foundation of Western Civilization.

Roman Cities



The city of Arles in Gaul (modern France) as it appeared during the Pax Roman

The Romans were nothing if not great city builders, founding many cities, especially in Italy and the less urban western provinces. Whether they started out as colonies or were outgrowths of Roman military camps, they typically were planned with Roman thoroughness and shared certain features. First of all, much like Hellenistic cities and Roman camps, they were laid out in a rectangular grid with a main North-South street called the *Cardo* and East-West street called the *Decumanus* meeting near the center of the city. Aerial photographs of farmland on the site of one a Roman city in

Britain, Silchester (below), still show its old grid pattern of streets even after centuries of farming.



Founding a Roman city started with a dedication ritual where a priest cut a furrow for the sacred *pomerium* (boundary) of the city walls with a plow drawn by white bull and white cow. Since it was a sacrilege to cross the *pomerium*, the priest lifted the plow where the city gates were to be.

The Romans set aside space for a public forum, amphitheater, theater, and markets. Probably the most impressive aspect of a Roman city was an excellent system of aqueducts, corner fountains, public baths, and sewers to provide it with an adequate water supply and drainage.

In order to ensure adequate sunlight, building codes stipulated that no buildings were to be more than twice as high as the street's width. However, all owners of buildings on main streets also had to build shelters over the sidewalk from the sun and rain. The Romans would also put the taller apartment blocs, known as *insulae* (from the Latin word for island) in the northwest corner of the city to block the cold winter winds from that direction.

Human squirrel cages. Building stones were lifted out of a quarry by a crane powered by men walking inside a big wheel that turned an axle.



Roman speed bumps. Roman streets often had stepping-stones for pedestrians at intersections. These also could serve to discourage speeding in a cart or chariot. Ruts worn in the pavement between such bumps at Pompeii suggest Roman vehicles were built with a standard axle gauge. Otherwise, they wouldn't all be able to fit over the bumps. Interestingly, the Romans' standard gauge was four feet and 8.5 inches, the same gauge for British and American Railroads and even the width of the Space Shuttle's booster rockets. But that's another story.



Fast food Roman style. Roman cities didn't have MacDonalD's, but they did have street-front stalls where one could buy bread and wine. Unlike our bread, Roman bread was baked in flat round loaves. Presumably that would take less time to bake and save fuel.

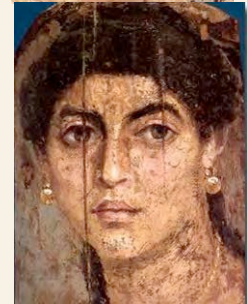


While poor people lived in large apartment blocs called *insulae* (islands), middle class shop owners typically lived in two-story buildings with their living quarters upstairs, their shops below, and a courtyard in back for working.

Visitors to a rich Roman's home would first enter the atrium. A hole in the roof, the *compluvium* let in light and had a basin below it to catch rainwater, which was fresher than that from aqueducts. Street-front rooms might be rented out as shops or be used as the kitchen and bathroom to insulate residents from street noise. In the back was the *peristyle*, an open area often with a garden to provide some sense of being outside. Columns around it were painted red because the Romans liked red and it would alert playing children to keep them from crashing into them and doing brain damage. Surrounding the peristyle were the bedrooms, which might also be painted with idyllic scenes of the countryside to help relieve the stress of urban living.



Roman painting, like that of the Greeks, was highly accomplished and seems to have mastered perspective, a technique lost in the middle ages and rediscovered during the Italian Renaissance. Unfortunately, besides some striking portraits preserved from Roman Egypt, we have few examples of Roman painting. However, many Roman mosaics have survived, which also exhibit amazing levels of technical virtuosity.



The city dump. Archaeological finds keep producing more evidence of the gigantic scale of production and trade during the Pax Romana. Mt. Testaccio in Rome is a mound made up entirely of discarded broken oil amphorae from southwestern Spain during the 100s and 200s C.E. It is 50 meters high and contains an estimated 53,000,000 amphorae that collectively could hold 6,000,000,000 liters of oil.

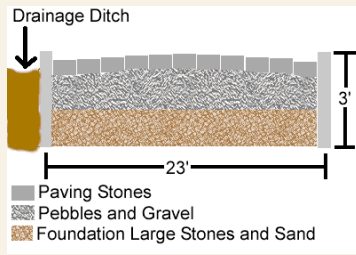
Roman Roads and Bridges



Roman bridge in Alcantara, Spain

Roman roads, which had to be built 16-24 feet wide, were surveyed using an old Etruscan instrument, the groma. This was a pole four feet high with a horizontal cross on top from which were hung lead-weighted strings (known as plumb lines from *plumbum*, the Latin word for lead, chemical sign Pb). When all the plumb lines were parallel to the groma, the engineers

knew it was perpendicular to the ground and they could accurately survey the road.



The Romans then dug two rows of ditches into which they set curbstones. Next they dug a deeper ditch between the curbs and filled it with various grades of stone, topping it off with flat, carefully fitted stones and filling the spaces in between with smaller stones or scrap metal. Like our modern streets and roads, the middle of the Roman road was slightly raised for drainage off to the sides.

The Roman term for building a road was *munire viam*, literally meaning to fortify a road, reminding us of both their original military use and the fact that they were built to last. Some stretches of Roman roads have survived centuries of wear and tear from nature and humans stripping them of their materials for other building projects. One major difference between Roman and modern roads is that Roman roads followed a much straighter path between cities. This is because they were designed for foot and animal traffic that can climb a much steeper gradient than modern cars and trucks, which can only climb a 6° gradient.

Roman bridges were another engineering marvel. The first step in building a Roman bridge was constructing pontoon bridges to provide platforms from which men worked. Their pile drivers combined muscle power and pulleys to raise stones and then drop them onto piles made from tree trunks to drive them into the riverbed. A tight circle of these piles, called a cofferdam, would be drained and sealed to provide a dry place in the middle of the river from which the bridge's piers could be built. Piers were made from rough-cut stones and mortar mixed together, except for nicely cut outer facing stones, and built to a height ten meters over the

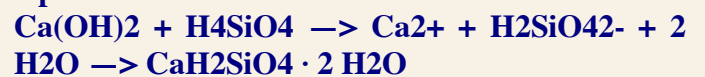
river. Pre-fab arches were hoisted up into place between the piers. Next, a wooden road was nailed to the arches and then covered with dirt. The finished bridge was twenty meters above the river to provide clearance for sailboats.

Particularly busy Roman bridges would have more permanent stone arches and roadways constructed on them, many of them surviving into the twentieth century. Unfortunately, during World War II, the German army retreating through Italy, blew up a number of these bridges to slow the advance of pursuing allied troops

Roman concrete. Much of the key to the durability of Roman engineering was they had a formula for concrete that, like modern concrete, could set under water, making it possible to build bridges and harbors. The key to this was a volcanic ash called pozzolana. Concrete, being both lighter and stronger than limestone, also made possible such innovative monuments as the dome, most notably that of the Pantheon in Rome, which has a diameter of 43.3 meters (142 ft). If it were extended to a full sphere, it would just touch the floor.



For anyone interested, the chemical notation for a pozzolanic reaction is:



Unfortunately, the secret of Roman concrete was lost during the middle ages and not rediscovered until the nineteenth century.

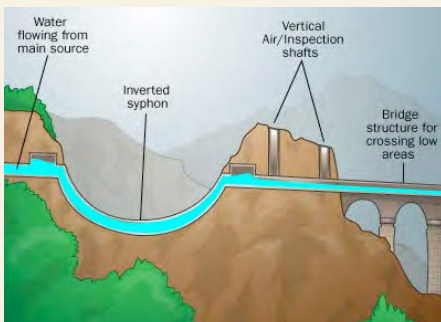
Roman Hydraulic Engineering



Roman aqueduct near Arles France, one of the best preserved examples of Roman hydraulic engineering

Roman aqueducts were probably the most impressive of their engineering achievements. Running from hill and mountain springs, they had to be high enough to reach their destinations just from the force of gravity. This involved knowing the natural viscosity of water, which the Romans figured to be a drop of at least one meter for every 200 meters in length.

While our image of Roman aqueducts is of massive arched bridges for spanning gorges, such as the Pont du Garde in France, recent research indicates a different, even more ingenious way to accomplish this by channeling water down into the valley and back up the other side. Before entering the valley, the water was funneled into nine separate lead pipes, because, if all the water were kept in one pipe, it would burst from the water pressure at the joints where the water turned at the bottom of the valley. As long as the source side of the valley was higher than the receiving side, the water would make it up the other side and keep flowing.



On average, about 80% of an aqueduct's length was built under ground. If a hill or mountain were in the way, the Romans would tunnel through it. First they would survey the land to

make a profile map, then sinking shafts from different points on the hill or mountain to the desired depth. Workers operating from one shaft would dig according to the profile map to meet crews working from different shafts. There's no information on how often they missed, but they must have been pretty accurate, since the aqueducts are still there as evidence.

Rome, with a population of up to one million, had eleven aqueducts totaling 359 miles in length and capable of supplying the city with 25-50,000,000 gallons of water a day. When the water reached the city, it would be stored in big reservoirs for later distribution. An ongoing maintenance problem was silt brought in with the aqueduct water. This would build up in the reservoir and require occasional cleaning. Reservoirs often had holes at ground level that may have been to slow the build-up of silt in the reservoir by allowing silt-laden water to slowly drain from the reservoir. This would leave drier silt with a smaller volume, thus requiring less frequent dredging.



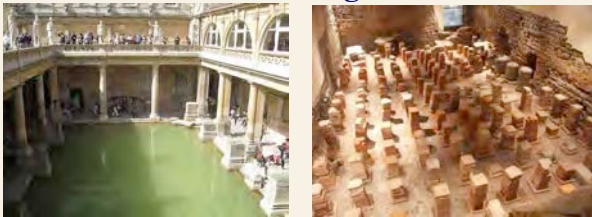
A model of ancient Rome showing the Claudian Aqueduct working its way through the city

There were three main uses of this water: corner fountains to supply the people with basic needs, public baths, and water running to private homes for an extra charge. During water shortages, private homes would be cut off first, and then the baths. One could find a water tower and adjacent fountain at every corner of Rome's more pre-planned cities. The water would run continuously, the excess draining into the

extensive sewer system below street level. Similarly, the water for toilets in private homes would run continuously.



The public baths might also be massive monuments. Taking a bath Roman style first involved taking a hot bath in the *caldarium*, then a warm bath in the *tepidarium*, and finally a cold swim in the *frigidarium*. Air channels, known as *hypocausts* (below right), ran under the floors from the furnace to heat the successive stages of bathing and keep the building warm in winter. The bath house was a popular meeting place, often having a library, a *palaestra* for exercising, an outside pool for cleaning and cooling off, and porticoes where teachers might hold classes.



Bringing in all that water also required getting rid of much of it, so Roman cities had sewers and drainage systems to meet that need as well. The streets, like the roads, were sloped down from the middle to take rain and wastewater to gutters that fed into sewers under the streets. There were also manholes for workers to do repairs beneath the city streets. The sewers would lead to larger sewers that would typically empty into a nearby river or stream. In Rome the main sewer that fed into the Tiber River was the Cloaca Maxima (Great Sewer). It supposedly was big enough that one could sail a ship in it, but I wouldn't want to.

Roman Trade with the East



Roman merchant ships plying the Mediterranean and Arabian Seas all the way to India had square sails and bowsprits for fine-tuning their courses

Roman trade links reached all the way to India and China. Trade with India for spices and gems especially flourished when sailors learned how to navigate the monsoons in the Arabian Sea. Trade with China was harder and more expensive because of the distance overland along the Silk Road and the numerous middlemen who each raised prices to cover the previous middleman's profits. Rome and the Han dynasty ruling China finally established direct contact in the mid second century C.E., just as both civilizations were about to go into decline, ironically because of firmer contacts across Eurasia that could spread disease.

Another negative effect of Rome's trade with the East was the drain of gold and silver from the empire. Romans paid for silk with its weight in gold. To spread the supply, they would unravel the silk and re-weave it into a much looser, nearly transparent material that the Chinese would hardly even recognize. The cumulative effect of the drain of gold and silver for this precious cloth would contribute to economic problems for the empire in the third century and help lead to its decline and fall.

Defending the Empire During the Pax Romana



Hadrian's Wall, which guarded Rome's northernmost frontier in Britain

Except during emergencies, all Roman soldiers during the Pax Romana were volunteers. Citizens, who served in the heavy infantry known as legions, served for 25 years. Over time the number of non-Italian citizens in legions grew. During the Pax Romana, there were few major wars disturbing the frontiers, although there might be local raids and skirmishes with tribes to the north. Many legionaries might serve a full term of enlistment without any serious fighting. To keep busy, they built roads and bridges.

In the first century C.E., legionaries received 75 denarii upon enlistment and earned 300 denarii per year, while centurions earned 450 and senior centurions earned 600. Members of the elite (and pampered) Praetorian guard earned 900 denarii a year along with bonuses upon the accession of new emperors and at other times just to keep their loyalty. For example, they got 75 denarii from Augustus and Tiberius, five years' pay from Marcus Aurelius and ten years' pay from Claudius and Nero.

Legionaries were trained to fight in various formations depending on the situation: single and double lines, wedge, circle, square, and the *testudo* (tortoise), a siege formation, with overlapping shields used for approaching enemy walls (below). Supposedly, an officer would test its strength by driving a chariot on top of it.



Non-citizen auxiliaries (light infantry and cavalry), served for 25 years, earning only half the legionaries' pay. However, at the end of their term of service, they were also awarded Roman citizenship.

As the frontiers became stationary and permanent, the legionary camps evolved into permanent stone forts. The most notable set of Roman fortifications was Hadrian's Wall, which ran along an east-west path for eighty-four miles and cut across Britain at one of its narrowest points. Although not the Great Wall of China, it was still an impressive structure.

Rome's prosperity and safety during the Pax Romana relied on keeping a small, tough and highly disciplined army. Throughout the Pax Romana, Rome never faced a large two-front war. Therefore, if a major threat appeared, Rome could pull troops from the other quieter frontiers, hoping they wouldn't erupt into trouble as well. During the Pax Romana, Rome was just plain lucky it didn't have to fight any major two-front wars, largely because the Northern barbarians weren't organized enough to coordinate such attacks on a large scale.

Not until the late second century C.E. did Rome face such a threat, and that would be the beginning of the end.

[Back to flowchart](#)

THE NEAR COLLAPSE OF THE ROMAN EMPIRE (161-284 C.E.)

"Enrich the troops...Nothing else matters"-- Advice from the dying emperor, Septimius Severus, to his sons

Why a society goes into decline and eventual oblivion is one of the most complex, interesting, and important questions one can ask in history. The decline and fall of the Roman Empire has especially fascinated historians down through the centuries. How could the most powerful empire in antiquity just come apart at the seams and disintegrate? While historians have focused on various causes ranging from barbarian invasions and moral decadence to the influence of Christianity and lead poisoning, the fact is that many factors combined to lead to the downfall of Rome and open the way into the Middle Ages. Furthermore, these different factors fed back on one another to aggravate the situation and also to make the process of decline more complex to trace.

Mounting problems (161-235 C.E.). The first signs of trouble came in the reign of Marcus Aurelius (161-180 C.E.), the last of the so-called "Good Emperors". When he came to the throne, the Roman Empire still seemed to be experiencing a golden age. The government was efficient, fair, and honest. The army secured the frontiers from invasions. And the economy was healthy in both the countryside and cities. However, during Marcus' reign things started to fall apart. There were five major problems feeding into Rome's decline.

Two problems were of an especially long-range nature dating back to the time of Augustus. One was that few new provinces were added to the empire during the Pax Romana, thus providing Rome with few new sources of revenue. Another drain on the economy was the growing volume of trade with the East for such luxury goods as silks and spices. Silk came all the way from China through a multitude of middlemen and cost its weight in gold, causing a tremendous amount of gold and silver to leave the empire to pay for these luxuries.

A third problem was a devastating epidemic spread throughout the empire by victorious legions returning from a war with the Parthians in the East. Historians then, having little understanding of such phenomena, concentrated mainly on individual people rather than on larger forces, such as disease, affecting history. Therefore, we have little information on what this plague was (possibly smallpox), what its symptoms were, and how many people were affected. If the plague destroyed a significant part of the population, say 10% or more, then it may have been an important factor in the decline of the Roman Empire. Since this was not a mechanized society, most of its labor and energy came from people. If many of those people were lost, society was in trouble. The greater number of labor saving devices such as waterwheels being used from this time on seem to indicate there was a serious population loss. Disease would be a major candidate for its cause.

The fourth major problem Marcus Aurelius faced was barbarian invasions. Apparently population pressures were building among the various nomadic and semi-nomadic tribes beyond Rome's frontiers. At the same time, extended contact with Rome had taught many of these tribes how to combine into larger more effective confederations for fighting Rome. The result was a massive invasion by a tribe known as the Marcomanni across the Danube frontier, with some of these invaders even making it all the way into Italy. The problems of defense were complicated by the fact that the legions were weakened by sickness. The effort to drive the invaders out was so desperate and recruits were so hard to find that even slaves were enlisted. Eventually, the frontier was restored, broken through again several years later, and restored again. By Marcus Aurelius' death in 180 C.E., the empire's population, army, and economy were exhausted by the tremendous efforts of the past two decades. Although the frontiers were restored, pressure from the tribes on the frontiers continued to grow. This required a larger army to defend the frontiers, more taxes to support that army, more bureaucrats to collect those taxes, and even more taxes to support those bureaucrats.

A fifth problem was that, after Marcus Aurelius' death in 180 C.E., men unworthy of the throne

generally ruled Rome. For example, there was Marcus Aurelius' son, Commodus, who spent most of his time racing chariots and fighting gladiators in the arena instead of facing the important problems of ruling. Most of these emperors met violent ends, either through court intrigues or military mutinies. One common and unfortunate pattern these emperors followed in order to keep their thrones was to give ever increasing bonuses to the army to keep it happy, thus heaping another huge burden on the Roman economy. Despite all this, the illusion of eternal Rome persisted in people's minds.

The third century anarchy (235-284 C.E.). So many drains on the economy left the Roman government short of money. Therefore, it raised taxes and started debasing the coinage (i.e., decreasing its gold and silver content). This led to inflation, causing the soldiers to demand more pay to meet their expenses. The government thus faced more money shortages, leading to more taxes and coinage debasements, and so on. To make matters worse, this process triggered an even more serious cycle that left the empire in chaos for fifty years.

At the center of this new cycle were rebellious troops who would overthrow an emperor and put their own generals on the throne in order to get a raise in pay. While some criticism for the troops' actions is justified, we should keep in mind that coinage debasement and the resulting inflation were destroying the buying power of their salaries. They felt they had to do something to protect their incomes. However, the resulting civil wars stripped the frontiers of troops as they marched to Rome to put their general in power. This in turn invited invasions by the tribes to the north and Persians to the East. The resulting civil wars and invasions would further ruin the economy. This, of course, made it hard to pay the troops who therefore rebelled again, leading to more invasions, more economic problems, and so on. Complicating all this was a new epidemic (possibly measles) that hit the empire around 250 C.E. Meanwhile, all this would feed back into the ongoing cycle of coinage debasement discussed above, which then generated more revolts, civil wars, invasions, etc.

The fifty-year period starting with the reign of Maximinus the Thracian in 235 C.E. was one of the

most turbulent and chaotic periods in history, making it extremely difficult to discuss in any detail. At one point, eighteen different men were each claiming they were the emperors of Rome. At the low point of these troubles, the Emperor Gallienus controlled no more than Italy, Greece, Illyria (modern Yugoslavia), and North Africa.

Many of the invaders crashing across the frontiers were new tribes, such as the Goths, whom growing population pressures had forced to migrate toward the Roman Empire. Since these newcomers had little or no prior contact with Rome, they looted and plundered with incredible ferocity, murdering thousands of helpless people whose only crime was being in the path of conquest. Parts of the empire that had seen no wars for centuries were subjected to devastating raids while the army was largely busy making and unmaking emperors. To the East, a new and more aggressive neighbor, Sassanid Persia, had replaced the Parthians. The Persians probably would have overrun the whole eastern half of the Roman Empire, except that the independent oasis city of Palmyra stopped them and then basically ruled the East for itself.

Luckily, a series of remarkably tough and capable emperors emerged from Illyria to restore the Roman world's boundaries. The most important of these emperors, Aurelian (270-275), attacked and destroyed Palmyra and its famous queen, Zenobia. This restored the eastern frontier. Aurelian then reclaimed Gaul, Spain, and Britain to restore the Western frontiers as well and earn himself the title: "Restorer of the World". Despite the remarkable accomplishments of Aurelian and the other Illyrian emperors, they were all murdered by their own troops. Finally, in 284, an even more remarkable emperor, Diocletian, came to the throne and started to put the empire back on its feet. It was this emperor who put an end to the half-century of anarchy that had come close to destroying the Roman Empire.

A Wealth of New Problems



A major change in the warfare of the third century was the Sassanid Persians' use of heavy cavalry encased in armor from head to foot and known as *clibinarii* (literally “oven men” because they would bake in the hot sun). The Romans would soon adopt this type of soldier as a major part of their army as well. The Persians also revived the use of war elephants.

Why the Roman Empire fell is a problem that has fascinated historians for centuries. Typically, contemporary biases have influenced different historians' opinions. For example, Edward Gibbon, the eighteenth century author of the monumental *Decline and Fall of the Roman Empire* and a man very hostile to the Church, blamed the empire's fall on the rise of Christianity. Others have focused on the barbarian invasions or poor leadership. Today, we realize that it wasn't just one particular factor, but rather a combination of factors that brought down Rome. Below are listed some of the major problems that the Romans found themselves especially faced with starting in the mid second century.

Falling temperatures. There is evidence of a cooler climate in Northern Europe, which could have lowered harvests or available pastures and led to more intertribal fights for land. This could trigger a chain reaction, where losers would have to migrate, thus hitting other tribes, causing them to migrate, and so on until they hit the Roman Empire. Colder temperatures would have hurt crop yields inside the Empire as well, thus leading to malnutrition and greater susceptibility to disease.

Some of the evidence of falling temperatures comes from ice core samples taken in Greenland. Each year a new layer of ice would grow on top of the older ones. The colder the year, the more ice that would build up. Scientists will take a vertical sample core of ice that gives them a record of relative temperatures through the centuries. They can even get an idea of the level of production of lead pipes in the Roman Empire by measuring trace amounts of lead that got into the atmosphere from furnaces and later came back down with the snow much further north.

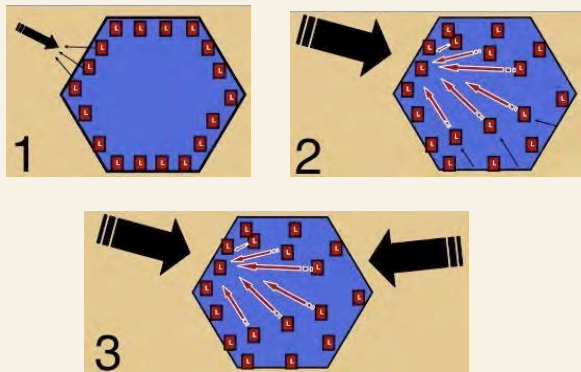
New diseases. Since microbes mutate so quickly, it's nearly impossible to positively identify a disease that struck 1800 years ago. We think smallpox and measles were the new diseases that struck in the second and third centuries because we have no previous records of diseases with these types of symptoms.

Over the generations, populations will develop some resistance to a new disease, since the lucky individuals with natural resistance will survive to pass that resistance on to the next generation. For example, smallpox (now declared an “extinct” disease except for some samples kept in labs), was still killing one in thirteen people in Europe until Jenner introduced a primitive form of vaccination in 1796. While that was bad enough, consider the horrific impact of smallpox on Native Americans when they were first exposed to it after 1492.

On the other hand, measles, which we think was probably one of the new diseases that hit the empire at this time, is not considered a “children's” disease that is generally harmless to children who then develop immunity to it. However, it can be much more serious if one doesn't get it until adulthood. It used to be that when a child developed measles, neighborhood mothers would send their children to visit that child and get the measles so that it wouldn't hit them really hard as adults. I wish my mother had done that with me, because I got measles as an adult, and that is the sickest I've ever been.

Other childhood diseases that are supposedly much worse if contracted as adults are mumps and chicken pox. However, even if one has had chicken pox as a child, it leaves the virus for shingles, which typically hits older adults and is very painful.

Inflation. Rising prices, caused by the drain of gold and silver for Eastern luxuries, was a major problem afflicting the Roman Empire starting during the Pax Romana. For example, inflation drove the price of wheat up 200 times between 150 and 300 C.E. Silver content in coins went from 90% silver in Nero's time, to 75% under Marcus Aurelius to virtually nothing more than a copper coin with a thin wash of silver that easily rubbed off by the height of the anarchy of the third century.

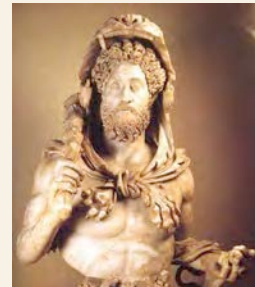


Growing strains on the frontiers. During the Pax Romana, Rome's legions were spread out along the frontier. Usually, any outside threats were small enough for local frontier troops to handle (1). If a major threat did appear, help could be brought in from other unthreatened frontiers (2). However, in the third century, threats arose simultaneously on multiple frontiers (3), forcing emperors to strip one frontier, thus inviting invasions elsewhere.

The greatest single threat to Rome's frontiers came from a revived Persia. In 224, The Persian dynasty of the Sassanids replaced their Parthian overlords with a revived Persian Empire (224-651). Harkening back to their first empire under the Achaemenid Dynasty (c.550-33-B.C.E.), they claimed the Roman provinces of Egypt, Palestine, Syria, and Asia Minor as part

of their ancient heritage. In 253 C.E., and again in 260, the Persians sacked Antioch, also capturing the Roman emperor, Valerian during that invasion. The replacement of a weak Parthian with a well organized and aggressive Persian Empire put much more pressure on Rome's eastern frontiers, adding to its budget problems and contributing to its decline.

The Beginning of the End (161-235 .C.E.)



Marcus Aurelius' son, Commodus (180-192), liked to pose as Heracles wearing a lion skin and carrying a club. He preferred taking part in chariot racing and gladiatorial matches to the serious business of government. Fittingly, after a reign of terror, he was murdered by a wrestler.

Following is a brief description of the emperors from Marcus Aurelius to the beginning of the third century anarchy



Marcus Aurelius (161-180) the last of the so-called Good Emperors, was a Stoic philosopher whose reign saw the first major signs of trouble for the empire: Germanic invasions from the north and a devastating epidemic. Despite his desire for a peaceful philosophical life, he stoically did what he thought was his duty and served as emperor. His book, *The Meditations*, is still in print today.

Commodus (180-192), Marcus Aurelius' son, was the first emperor in nearly a century to succeed his father rather than being groomed for the

throne (largely because the four previous emperors had no sons of their own). Instead of the serious business of government, he preferred taking part in chariot racing and gladiatorial matches. He imagined himself the reincarnation of Heracles and liked to pose wearing a lion skin and carrying a club. He would pretend he was slaying giants by clubbing unfortunate victims who had lost their feet and been tied together in the arena.

Commodus also liked to fight in the arena as a gladiator, amazingly never losing a match. He was reputedly an excellent archer and one day killed 100 lions. He also killed ostriches, elephants, and even a giraffe. In addition, he named Rome, the Senate, the Roman people, the legions, and even months of the calendar after himself. Supposedly, some senators hired an assassin who, as he drove his dagger home, said, "The Senate sends its greetings." Unfortunately, he missed his target, which initiated a reign of terror until Commodus was finally murdered by a wrestler.

Pertinax (12/31/192-3/28/193), Commodus' successor, seems to have been a capable emperor whose strict discipline and economizing measures quickly got him murdered by the Praetorian Guard only 87 days after ascending the throne.

Didius Julianus (3/28-6/1/193) was a Roman millionaire to whom the Praetorian Guard auctioned off the imperial throne. His authority barely extended outside of Italy, and even the Praetorian Guard that had put him on the throne murdered him. after a reign of 66 days in favor of a military revolt led by Septimius Severus.



Septimius Severus (193-211) was a capable emperor, but his annexation of the troubled lands in Mesopotamia and increasing militarization of the Empire through doubling

the troops' pay would help lead to the anarchy of the next century. Although he brought peace to the empire, his reputation suffered from the bloody methods he used to gain and maintain control of the throne. His dying words to his sons were supposedly "Enrich the troops. Nothing else matters."



Caracalla (211-217), son and successor of Septimius Severus, reportedly murdered his brother and co-emperor, Geta (211) in the arms of their mother. Caracalla's main claim to fame was the *Constitutio Antoniniana* in 212 C.E., giving Roman citizenship to all free men in the empire. This was probably done so everyone would have to pay the 5% inheritance tax that only citizens paid. He also increased the financial burdens on the Empire by raising the troops' pay by another 50%. The story is that someone sent Caracalla a letter revealing a plot against his life, but he was too busy watching the games and gave the letter to his trusted praetorian prefect, Macrinus, the ringleader of the plot that killed him.

Macrinus (217-218) was the first emperor not from a senatorial family. His lack of connections and lowering the pay of new recruits to maintain the raises Caracalla had given veteran troops got him overthrown and murdered by supporters of Elagabalus, the great-nephew of Septimius Severus' wife.

Marcus Aurelius Antoninus (218-222), was also known as Elagabalus after the Syrian sun god, Elagabal, of which he was a priest and devotee. He was only fourteen when he came to the throne and, as might be expected of a teenager, took full advantage of his position, such as having hills built from mountain snow in the summer.

Some of his crazier antics as an all powerful emperor who couldn't be refused reportedly

included giving dinner guests dead dogs or jars of flies, frogs, scorpions as gifts, or serving them desserts of wood, ivory, wax, marble, or clay. Sometimes hung-over guests would wake up next to old toothless lions or leopards. He might give a pile of valuable gifts to a mob and watch them fight over it. He also liked to hold races with chariots drawn by tigers, lions, camels, deer, dogs, or naked girls. His extravagant lifestyle supposedly included cushions stuffed exclusively with feathers from the underside of partridge wings, a golden potty chair, and beds made of rose petals (below).



How much of this is true is anyone's guess, but the fact that such stories were told suggests what the public impression of court life was. Elagabalus' reign does seem to have been repeatedly marked by one scandal after another, until, despite the protests of local florists, he was murdered by his cousin and adopted son, Alexander Severus.

Alexander Severus (222-235) also came to the throne at a young age and was dominated by his mother during his reign. Despite some apparently honest efforts at ruling well, he was overthrown and murdered by the army, thus marking the beginning of military rule and real problems for the empire in the next half-century.

Emperors of Anarchy (235-284 C.E.)



A famous relief sculpture shows Shapur using the captive Roman emperor Valerian as a footstool to mount his horse. Christians were also quick to point out how this enemy of their faith ended his days.

Following is a brief rundown on the emperors of the period to give a better sense of the futility of trying to rule the Roman Empire. Some of them, especially later on, were remarkable leaders who, against tremendous odds, managed to stitch the Empire back together.



Maximinus the Thracian (235-238) was the first of a half-century of "barrack" (i.e., military) emperors. He could reportedly rip a tree apart with his bare hands and knock out a horse by punching it between the eyes. Unfortunately, these remarkable skills didn't solve the empire's deeper problems, and Maximinus' humble birth and lack of connections eventually got him murdered and replaced by a senatorially supported candidate.

Pupienus and Balbinus (238 A.D.) were senatorially supported co-emperors set up to overthrow Maximinus. Unfortunately, they had a falling out, so the Praetorian Guard murdered them.

Gordian I and his son Gordian II were recognized as emperors by the Senate, but their revolt in North Africa against Maximinus was crushed in only three weeks. Luckily there was another Gordian.

Gordian III (238-244), grandson of Gordian I and nephew of Gordian II, was only 13 years old when he became emperor. He, or more properly, his praetorian prefect, Timestheus, seems to have run the empire well. Gordian spent most of his reign defending the empire's frontiers and died while campaigning against the resurgent Persian Empire under the Sassanid dynasty. His successor, Philip I is widely suspected in having a hand in the young emperor's death.



Philip I "the Arab" (244-249) presided over the 1000th anniversary of Rome's founding in 248 A.D. Besides that, he seems to have accomplished little of note and was defeated and killed by the rebellious general, Decius. Note the new type of radiate crown, projecting a more military and authoritarian image of the emperor.



Decius (249-251) who overthrew Philip the Arab, tried to unite the empire behind its pagan gods by instituting the first great persecution against Christianity. He had the dubious distinction of being the first emperor to die in battle against a foreign enemy, in this case, the Goths. His Christian enemies were quick to tie his fate to his persecutions.

Gallus (left) and Volusianus (251-253) saw an epidemic ravage the empire. They were soon murdered by their own troops, but that didn't seem to stop the epidemic.

Valerian (253-260), another persecutor of the Christians, had the dubious distinction of being the only Roman emperor to die in captivity, being taken prisoner by the Sassanid king, Shapur I. Sassanid kings liked to emphasize their skill as warriors, even claiming to decide battles by individual duels with opposing leaders.

While a cameo shows Valerian captured in a duel with Shapur, more likely he was captured treacherously during a parley with the Persian king.



Gallienus (260-268), Valerian's son, had the misfortune of ruling over the empire during the worst of the anarchy, with some fourteen other men claiming the throne at one time. Gallienus' effective control barely extended beyond Italy, the Balkans, and N. Africa. In the West, another general and self-proclaimed emperor, Postumus (260-9), controlled Gaul, Spain, and Britain. Even after Postumus was murdered, his realm lasted until his successor, Tetricus surrendered it back to Aurelian in 274.

In the East, Odenathus, ruler of the desert oasis city, Palmyra, drove back the Persians and then claimed the eastern half of the empire for himself. Meanwhile, the Goths invaded Asia Minor and the Balkans, sacking Athens, Delphi, and other Greek communities in 267. Supposedly they spared the library in Athens so the Athenians would spend all their time reading instead of training for war, making them an easy target the next time around.

As if things weren't bad enough, Gallienus' reign saw a new type of epidemic ravage the empire for the first time. It was said that 5,000 people were dying a day in Rome, while two-thirds of Alexandria Egypt's population was also afflicted.

Despite these problems, historians now view Gallienus as a good emperor fighting valiantly against overwhelming problems. His efforts and reforms, such as creating a more mobile army to respond more quickly to invasions, laid the foundations for the empire's later recovery, but that didn't stop his troops from murdering him.

Quintillus (270) reigned only 77 days before he was most likely murdered.



Claudius Gothicus (268-70). As the honorific title Gothicus indicates, he defeated the Germanic Goths, and at least temporarily secured the Danube frontier. He was probably the only emperor in the century between Septimius Severus and Diocletian to die a natural death, succumbing to an epidemic before his troops could get to him.



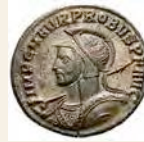
Aurelian (265-270), more than any other emperor, was responsible for reuniting the empire. Thanks to his nearly superhuman efforts, the breakaway provinces in the East under the Palmyrene queen, Zenobia, and Postumus' realm of Gaul, Spain, and Britain were brought back under Roman rule. For this feat, he was rewarded with the title "Restitutor Orbis" (Restorer of the [Roman] World) and later murdered by his own officers rather than face punishment for some minor infraction.

Zenobia, the Palmyrene queen, was the most renown of Aurelian's opponents. Having been brought back into the empire, Palmyra rebelled again, so Aurelian, this time destroyed the oasis. Zenobia was brought back to Rome for Aurelian's triumph, and lived out her days in Italy, married to a Roman senator, a fate supposedly worse than death.

Despite his Herculean efforts, Aurelian abandoned the province of Dacia to establish a more defensible position south of the Danube River. Thus the last province to be added to the empire was also the first one to be given up some 150 years later.

Tacitus (275-6) was senatorially elected and accepted by the army. After he and his half-brother, Florianus, defeated a tribe known as the Heruli, Tacitus died either from fever or assassination. Florianus succeeded him, but only

ruled 88 days, being quickly murdered by his troops when faced by the more experienced general, Probus.



Probus (276-82) was another one of the capable military emperors from Illyria (modern Yugoslavia) who helped restore order to the empire's frontiers. His troops celebrated his victories by murdering him.

Sol Invictus (Unconquerable Sun) was a god highly favored by the Illyrian emperors. Its radiate crown would be adopted in Christian iconography as the halo.

Carus (282-3), *Carinus (283-4)*, and *Numerian (282-3)* were all murdered by their troops.

Diocletian (284-305) finally put an end to the anarchy and propped the empire back up, allowing it to survive another 200 years.

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THE GROWTH OF THE GERMANIC THREAT TO ROME BY c.160C.E.

Unfortunately, that was only the beginning of centuries of such conflict.

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“To ravage, to slaughter, to usurp under false titles, they call empire; and where they make a desert, they call it peace.”— Calgacus, British chief, as quoted in Agricola, by the Roman historian, Tacitus

The invasions of the Roman Empire by Germanic tribes starting c.160C.E. seems in hindsight like a sudden eruption of a brand new threat. However, the growth of these tribes spanned two centuries before they were able to successfully challenge Rome. There were three main lines of development in this regard, two of them amounting to aggressive policies on the Romans' part. The most blatant of these was a policy of mounting continuous attacks on the Germanic tribes bordering the empire not just in order to keep them at bay, but also to keep the legions busy and to win glory for the emperors. Naturally, this provided incentive for various Germanic tribes to unite in bigger confederations. The first notable example of such a confederation was that of the Marcomanni who broke through the Danube frontier defenses in the 160s and occupied so much of Marcus Aurelius' reign. Another Roman policy was to subsidize some tribes and turn them against others to keep them all weak and divided. In the long run, this sometimes backfired, because it gave some Germanic leaders the wealth to attract followers and build up their own power. In additions to wars, there were other points of contact between the Germanic tribes and the richer Roman civilization. Trade was the most obvious, but there were men who crossed the frontier to fight in the Roman army, as well as others who were taken as slaves by the Romans and made their way back home. Through these contacts they learned Roman military and diplomatic techniques, which helped them unite in bigger confederations and fight more effectively against the legions.

Eventually, all these factors encouraged Germanic leaders to attack Rome for a variety of reasons. One was to keep their own warriors busy. Another was to win plunder with which they could reward their warriors and attract new ones to their standards. Finally, such raids into Roman territory would hopefully keep the Romans off balance and preempt Roman attacks on their territories. By the mid second century, we can see various Germanic tribes coalescing into several large confederations and peoples: the Marcomanni, Franks, Goths, and Alemanni. Pressure kept building up between and behind these peoples, unleashing the first of their invasions, that of the Marcomanni, in the 160s.

· DIOCLETIAN'S REFORMS AND THEIR IMPACT (284-395)

When Diocletian took the throne in 284, he found an empire in shambles from 50 years of civil wars, invasions, and plague. The population was decimated and demoralized. Many of the peasants had become serfs tied to the soil for local lords in return for protection. Large sections of the empire's agriculture and trade were wrecked. The coinage was debased to the point of being almost worthless. The frontiers were under constant pressure. And the army was in serious need of reforms. Everywhere he looked Diocletian saw serious problems, while the means to solve those problems were horribly damaged. Therefore, he concentrated on three issues: defense, creating a more efficient government, and protecting the emperor against revolts and assassination.

Turning to the army, Diocletian saw two needs that worked against each other: the need for efficient defense against the growing threats on his frontiers, and the need for insurance against revolts. The larger the army he created, the more potential there was for revolt. But too small an army meant invasions, which was even worse. Therefore, he increased the army to twice its size under Augustus. And since there were now simultaneous threats on several frontiers, Diocletian also split this army into two parts: stationary frontier militia who could stop small invasions and slow down big ones, and mobile legions, increasingly made of cavalry, that could rush to any trouble spots that the militia could not handle.

Unfortunately, the Roman populace, unused to military service after the Pax Romana and reduced in numbers by the recent anarchy, could not provide the number and quality of recruits that were needed. As a result, the government resorted more and more to recruiting Germanic tribesmen who were willing to fight for Rome for a price. While these recruits were warlike enough, they were generally unwilling to submit to the level of discipline and training that had made the Roman army so effective through the centuries. As a result, the Roman army, especially in the West where roughly half the recruits were Germanic, decayed to a pathetic shell of its former greatness.

However, this larger army further increased the danger of revolts by powerful generals. Diocletian did three things to protect himself against this. First, he broke the army into smaller commands for each general, while keeping part of the mobile legions under his personal command. Second, he split the control of each province between civil and military authorities. This made it harder for a rebellious general to command such resources as food and money needed for a successful revolt. However, it also meant that civil governors and generals might not cooperate against invasions. Finally, Diocletian isolated himself with elaborate court ritual similar to that of the Persians. Not only did this physically separate him from potential assassins, it also gave him a semi-divine status that made attacking the emperor seem like a sacrilege.

Finally, the empire needed a more efficient government than it had had in the calmer days of the Pax Romana. For one thing, the empire was much too large for one emperor to defend, especially now that several frontiers would come under attack at the same time. Therefore, Diocletian split the empire between the Latin speaking West and the Greek speaking East, with an emperor, known as an Augustus, and separate administration in each half. Technically, there was still one Roman Empire, but more and more it functioned as two independent and, at times, competing empires. Overall, splitting the empire aggravated the natural split between Greek East and Latin West and prevented cooperation when it was most needed.

Unfortunately, a larger army, bureaucracy, and elaborate court required heavy taxes. This merely stifled people's initiative to work hard. In order to ensure a stable tax base, people and their descendants were tied to their stations in life. Not only did a shoemaker, soldier, or farmer have to remain in his profession for life, but his sons had to follow in his footsteps, as did their sons after them and so on. This plus the high taxes reduced people's incentive to work hard and helped create a stagnant economy. The depressed economy meant a lower tax base to draw taxes from, which forced the government to further raise taxes, thus catching Roman society in a vicious feedback cycle similar

to the one that triggered the anarchy of the third century.

The Roman Empire under Diocletian presents a depressing picture, with its frontiers under constant pressure, oppressive taxes, and people stuck in their positions in society. However, it was more secure from invasion, which did allow trade and agriculture to revive some. One might doubt whether Roman security was worth the price paid for it. However, Diocletian did accomplish one thing of importance for later civilization. He propped the Roman Empire back up for two more centuries, allowing the new tribes along the northern frontiers to become more accustomed to Roman civilization through trade, raiding its borders, and serving as mercenaries in its army. When the western half of the empire finally fell by 500 C.E., these tribes were more willing to try to preserve Roman civilization and pass its heritage on to the Middle Ages and eventually to our own culture.

New Solutions to New Problems in a New World



The dragon standards Roman troops carried into battle and the Roman army's growing reliance on Germanic formations such as the shield wall reflected the growing barbarization of the army.

The threats and problems that Diocletian and his successors faced constituted a very different world than the one Augustus had faced three centuries earlier, forcing them to virtually reinvent the empire they ruled. Symbolic of this was the colossal scale statues of emperors in the later empire, which were meant to overawe the populace, indicating a shift from the *Principate*,

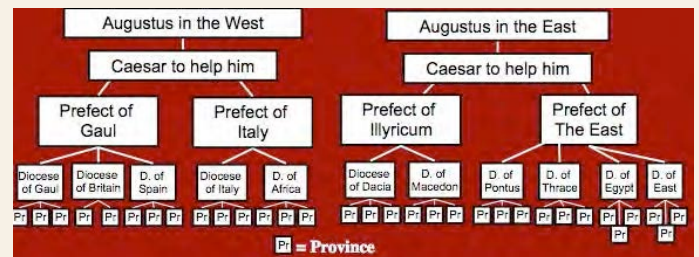
when the emperor was seen as first citizen, to the *Dominate*, when he was an absolute lord.



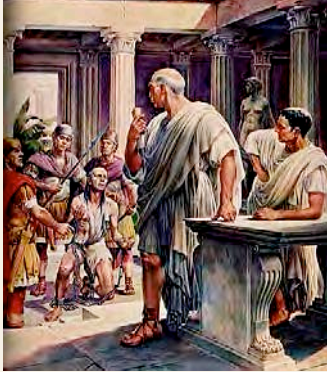
Rome's growing need to meet threats on multiple fronts meant a growing reliance on cavalry, in particular *cataphract* (above)s, which could function as both heavy cavalry charging with lances or as mobile horse archers. However, this also reduced reliance on infantry trained with the drill-and-march, the real key to the cohesion and success of Roman armies through the centuries.

Barbarian raids. In many or most cases, giving generals smaller commands may not have been that risky to the empire's safety, because, when the barbarians breached the frontier, they either started out as small raiding parties or, in the cases of larger groups, typically spread out into smaller bands to maximize each man's plunder and avoid the problems of supplying one big war band. Therefore, a larger number of smaller armies would probably be better suited to clearing out all the individual war bands scattered across a province.

The multiplication of threats and problems on multiple fronts also forced Diocletian to create a new administrative structure that looked something like this:



Hard Times in the Later Empire



A Roman *colonus* (serf) is forcibly returned to his master after trying to escape to freedom. The repressive measures of Diocletian and other later imperial rulers forced them to freeze everyone in their family occupations in order to guarantee a stable tax base.

Signs of a shifting economy. The fourth century saw a temporary improvement of the economy as evidenced by the restoration of the silver coinage and creation of a new gold coin, the *solidus* by Constantine. However, appearances can be deceiving. Restoration of the silver coinage was a temporary phenomenon that was gone by the fifth century. It was probably sparked by the favor Constantine showed Christianity, thus allowing him to plunder pagan temples for a lot of gold and silver.

The gold *solidus* remained the most stable coinage in Mediterranean for centuries. However, it was so valuable that it could only be used for large transactions, especially by the government. It remained out of reach for most people, so the predominant coinage used in daily transactions was bronze. The virtual disappearance of silver coinage after 400 indicates a large gap between rich and poor, especially in the Western Empire, with few people of moderate wealth in between, not the sign of a healthy economy.

Hard times even for tax collectors. According to the Theodosian Law Code, civic officials, known as *decurions*, were expected to make up any shortfalls in tax revenues from their cities out of their own pockets. If they were caught moving

to another city with lower taxes to assume the *decurionate* there, they were held personally responsible for the taxes from both cities. *Decurions* would even run off to join the army to avoid the burdens of their office and had to be dragged back to their cities. Apparently, the duties of the *decurionate* were so burdensome that men who chopped off fingers to avoid military service were sentenced to become *decurions*.

Infanticide, also indicative of hard times, was more common in the late Empire, judging from a law requiring local officials to restrain parents from killing their babies. The state also provided support for raising such children, another sign of concern over depopulation.



An extensive waterwheel system from the fourth century near present day Arles, France was capable of milling enough grain to feed 80,000 people. The waterwheel was a Hellenistic Greek invention that found little use while there were adequate labor supplies to do the work. Therefore, increased efforts such as this to exploit waterpower suggest depopulation from war and pestilence in the later empire.

Three Emperors of the Fourth Century



This giant head of Constantine is all that remains of a colossal statue of the 4th century emperor. Such large-scale statues in the later empire were meant to overawe the populace and indicate the shift from the Principate to the Dominate.

Three emperors of the fourth century, Constantine I, Constantius II, and Julian, while each having their quirks, were generally capable rulers who kept the Empire together through much of the fourth century.

Constantine I (324-37) reunited the empire after a period of civil wars following Diocletian's voluntary abdication in 304. Besides murdering most of his family, Constantine did two things of especial note for the Empire. First he moved the capital to Byzantium, rebuilding it as Constantinople, thus recognizing the shift in wealth and power to the East. Secondly, he converted to Christianity, which set in motion the conversion of the whole empire to that faith.



Constantius II (337-60) was one of Constantine I's three surviving sons. After exterminating his brothers and a couple of cousins to boot, he ruled as sole emperor. Although a capable ruler, he was unable to solve the religious controversy still raging in the Church as a result of the Arian Heresy.

Julian (360-63), one of the few relatives that Constantius II didn't kill, was made Caesar in the West to deal with Germanic invaders in Gaul. Although by nature a philosopher, Julian proved to be an excellent general who cleared Gaul of its invaders at the Battle of Strasbourg

(below). When Constantius called for some of Julian's units in Gaul to join him in the East for a war against Persia, the troops rebelled and declared Julian emperor. Luckily for Julian Constantius suddenly fell ill and named Julian as his successor before he died. Julian was the last pagan emperor of Rome. He died on campaign in Persia after a short reign of only three years, a fate Christian writers of the time tied to his hostility to the Church.



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THE FINAL COLLAPSE OF THE ROMAN EMPIRE IN THE WEST (395-c.500)

Why the West? For the century since Diocletian, generally capable and energetic emperors had ruled the empire. However, the death of Theodosius the Great in 395 C.E. marked a turning point in Roman history as the Western half of the empire steadily slipped into oblivion. There were several reasons why the West fell and the East survived. First of all, the East, with its older civilizations and more established trade routes, was considerably richer than the West, so it could buy off the barbarians until it found the strength to fight them.

The second factor was the barbarization of the Roman army. Depopulation and centuries of peace made it hard to get enough qualified recruits for the army. As a result, the Romans had turned more and more to enlisting Germanic tribesmen in their ranks. In the East, there were still areas where good native recruits could be found to balance out the number of barbarians. The West, having few good native recruits, relied more heavily on Germanic recruits. By 400 C.E., they made up an estimated half of the Roman army in the West and ruined its effectiveness by refusing to submit to Roman discipline. Not only that, but the high military commands were also often held by men from these tribes who spent much of their time intriguing for political power rather than defending the empire.

A third factor was that the West had two large frontiers, the Rhine and Danube, to guard against the barbarians, while the East had only the Danube. Granted, the Eastern Empire also had to deal with Persia, but it was often preoccupied with threats on its own borders, in particular from the Huns. Finally, the East had fairly capable emperors after 450 C.E., while the West never had a good emperor after Theodosius I's death in 395.

How and why the barbarians took over. Popular imagination tends to see the final collapse of the empire in the West as a cataclysmic wave of Germanic tribes overrunning the Roman world. In fact, it was more a case of barbarians infiltrating a civilized society and destroying it from within. The century between the military disaster at Adrianople and the final collapse of the empire in the West did

not see a single major victory of barbarians over a Roman army. Instead, in some cases, the Romans freely let in individuals or even whole tribes, which was the case with the Visigoths in 376. In other cases, tribes just walked in when legions were pulled from a frontier to revolt or meet an invasion or revolt elsewhere. That is how such tribes as the Angles, Saxons, Jutes, Visigoths, and Alans got into the empire.

Once inside the empire, the tribes would loot and pillage, but they were also anxious to gain legal status and Roman titles. In the case of a few exceptions, such as the Saxons who had little previous contact with Roman civilization, the invading tribes wanted to become a legal part of the Roman Empire, not destroy it. Long after the Empire in the West was gone, the legal fiction of its existence persisted, both at the Eastern Empire's court in Constantinople, and among the peoples who settled in the West. In fact, the idea of the Roman Empire was so strong among these people that in 800 C.E., three centuries after its fall, the imperial title was revived in the West. The Holy Roman Empire, as this revival of Roman grandeur was called, lived on at least as an idea for 1000 years. Finally in 1806, Napoleon declared the Holy Roman Empire dead, largely to make room for his own imperial ambitions with Roman style titles and military standards. The idea of Rome did not die easily.

The end of the empire in the West started with the Visigoths. In 376, they had been let into the Eastern Empire to escape an even more ferocious people, the Huns. When the Roman authorities failed to adequately care for these refugees, they revolted and destroyed an entire Roman army and the emperor Valens at the battle of Adrianople in 378. Theodosius I managed to settle them down in the Balkans until 395 when he died and his weak sons, Arcadius and Honorius, took the thrones of the Eastern and Western empires respectively. The Visigoths' king, Alaric, who wanted Roman titles and lands for himself and his people, took the opportunity to cause trouble again. The Eastern Empire managed to divert the Visigoths into Italy, thus shoving the problem onto the Western Empire, which responded to this threat by pulling troops from the Rhine frontier.

This triggered a pattern of events much like the cycle of anarchy in the third century C.E., only this time, no Aurelian or Diocletian emerged to save the Empire. Once a tribe was in the empire, it would loot and pillage, wrecking the empire's economy and lowering its tax base. The increased military burden and decreased means to meet it would weaken the empire's ability to provide an adequate defense, causing more tribes to break in and repeat the pattern. Thus the Visigoths, Vandals, Saxons, Huns, and Franks in turn would benefit from this cycle and also perpetuate it, allowing the next people to come in, and so on.

The Visigoths who started this cycle managed to sack Rome in 410. Pulling troops from the Rhine frontier to meet this threat allowed the Vandals and other tribes to invade Gaul, Spain, and eventually North Africa. The loss of North Africa meant the peace and unity of the Mediterranean were disrupted, further stretching Rome's dwindling defenses and resources. In 455, the Vandals sailed to Italy and sacked Rome in much worse fashion than the Visigoths had. Meanwhile, all this turmoil plus an attempt by a rebellious general, Constantine, to seize the throne had stripped Britain of its legions, and the Angles, Saxons, and Jutes started crossing the Channel. At this point, Britain virtually dropped from the sight of recorded history.

By 450, the Western Empire's material resources were so depleted that there was little or nothing that could save it. When Attila the Hun demanded a huge tribute from the Western Empire, Rome did manage one final military victory in alliance with the Visigoths and other tribes against the much more dangerous Huns. Attila's death soon afterward led to the break-up of his empire, which unleashed his subject tribes against Rome. While Germanic generals in Italy intrigued against one another, setting up puppet emperors in rapid succession, the decrepit remains of the Western Empire came crashing down, and various tribes came pouring in to carve out new kingdoms on its ruins. The last and, as it would turn out, most important tribe, the Franks, now started to make its move to carve out its own kingdom in northern Gaul. As it turned out, the Franks would be the

tribe to contribute the most to the transition from the ancient world to Western Civilization.

The last legally recognized emperor of the West, Julius Nepos, died in exile in 480. Although the eastern emperors in Constantinople claimed that they now ruled over the whole empire, for all intents and purposes the Roman Empire in the West was gone. The "Dark Ages" would descend upon the West, while the Eastern Roman, or Byzantine, Empire managed to survive, revive, and attain new heights of its own in the centuries ahead. The heritage of antiquity would live on, but a new era in history was dawning: the Middle Ages.

The Huns Change the Rules of War



The Huns were a nomadic tribe that stormed out of Central Asia c.370 C.E. A previously popular theory, now discounted, identified them with the Xiongnu, a nomadic tribe that threatened China's northern borders 300 years earlier. The Romans imagined the Huns to be inhuman monsters who would even scar their baby boys' faces to make them look fiercer to enemies.

The symbiotic relationship between a Hun and his horse was such that they (like other nomads) might resort to opening a vein in the horse's neck to drink its blood for sustenance. In typical nomadic fashion, they taught their boys to ride almost as soon as they could walk. Roman sources claimed they were so bow-legged from being in the saddle that they could barely walk. All these tales added to the mystique and fear of a people who do seem to have been particularly savage to their enemies.

The Huns, like other nomads, were divided into tribes that were as likely to fight each other as attack their neighbors. The Romans regularly

used Hunnic mercenaries in the fifth and sixth centuries. The Huns also gave the Sassanid Persians a hard time, thus inadvertently helping maintain the balance of power in the Middle East.

While civilized empires and kingdoms had encountered mounted nomadic horse archers (e.g., the Parthians who nearly massacred an entire Roman army at Carrhae), they had never encountered a threat on the scale of Attila's Huns. And scale changed everything.

Whereas nomads in the steppes of Eurasia were typically divided into small clans and tribes preoccupied with their immediate neighbors, Attila's genius had united a large number of clans into one fighting force, thus creating a new sort of threat that Europe and China on the fringes of the steppe would face for the next 1000 years. What gave these armies such an advantage was speed, on both the tactical and strategic level.

We have already seen how the Parthians' hit and run tactics with the composite bow created such problems for slower armies, such as the Romans' heavy infantry. Strategically, Attila's army also had the advantage of traversing large distances at remarkable rates of up to fifty miles per day compared to fifteen miles per day for civilized armies.

Two factors made the Huns and other nomads much faster: traveling lightly compared to their civilized counterparts and bringing up to a dozen horses per man to disperse the burden of carrying him and what few supplies he had. Therefore, not only could they travel several times faster than civilized armies in one day, they could maintain that pace for several days in a row, while civilized armies had to give their horses, pack mules, and oxen every other day off to keep from wearing them out.

What this meant was that Attila's Huns were usually messengers of their own arrival, giving even fortified cities no time to prepare

adequately for an attack and forcing them to surrender to nomadic armies that didn't have siege engines. For example, from 441-447 Attila took all the major fortified cities along a 600-kilometer front in the Balkans.

Even after the Hunnic empire disintegrated after Attila's death, there was a seemingly endless series of new nomads to take their place throughout the Middle Ages: Avars, Bulgars, Magyars, Patzinaks, Pechenegs, Mongols and Turks. Stemming the tide of many of these successive waves of invasions would be the Eastern Roman (aka, Byzantine) Empire, which would survive through a combination of adroit diplomacy and adapting its warfare to meet the nomads largely on their own terms. Not until the invention and efficient application of gunpowder after 1500 would civilized empires regain the advantage over the nomads.

Sacking Rome



An older depiction of the sack of Rome by the Visigoths in 410 may inadvertently be somewhat accurate. While the artist at the time wanted to depict the shock value of the event, he also couldn't shock the sensibilities of the reading public of the time by being too graphic. The resulting compromise in a sense reflects historians' changed perceptions of what the sack in 410 was really like.

The sack of Rome in 410 was easily avoidable. Stilicho, the Germanic general commanding Germanic and Roman troops defending Italy, had successfully repulsed Alaric and his Visigoths on two separate occasions. However,

for some reason, he had let them escape, possibly since they were *foederati* (allies) with legal status in the Empire. Also, for some unknown reason, the Western emperor, Honorius ordered the massacre of the innocent families of 30,000 of the Germanic mercenaries defending Italy for him. Not surprisingly, those mercenaries deserted and joined the Goths, leaving Rome open to attack.



J. W. Waterhouse's painting, *Honorius' Favorites*, suggests how weak and ineffective the Western emperor was, being more interested in feeding his pigeons than defending the Western Empire. Even the sack of Rome was of little interest to him, since in the 400s Western emperors ruled from Ravenna, which was more defensible than the capital.

In 410, the Goths sacked Rome. While bad enough, this was hardly the barbaric atrocity of popular imagination. For one thing, the Goths were Christians with orders from Alaric to spare the churches. There is even the story of how a Goth entered a church and demanded any valuables its nuns had. When they brought out some Christian relics, the Goths decided to escort these treasures to a safer locale. Other people joined this procession and it became a full-scale parade of Goths and Romans singing hymns.

Very likely, most of the Goths sacking Rome weren't so kind or religious, but this story puts the Goths in a somewhat different light from that of popular imagination. Very likely, the worst acts of violence may have been carried out by slaves seeking vengeance against their masters. However mild the sack of Rome may have been, just the fact that Rome had been sacked sent shock waves through the empire.

By contrast, the sack of Rome by the Vandals (from which we get our word *vandalism*) in 455 was much worse than the one by the Visigoths in 410, as was the sack of Rome by Charles V's Christian troops in 1527.. This was largely due to the length of exposure the two different peoples had experienced with Roman civilization. The Visigoths had much longer contact, having lived within the Empire since they had been let in as refugees from the Huns in 376. Therefore, most of them had lived in contact with the Roman civilization all their lives. While this may not have made them love the Romans, it must have at least softened their attitudes toward them. The Vandals, however, were relative newcomers and probably much more hostile to their hosts' culture.

The fall of the West (c.450-476)



Odovacer, a Germanic leader with the title of Roman general, overthrows the last emperor of the West, Romulus Augustulus, in 476. The former emperor, a mere boy at the time, was given a pension and lived out his days on an Italian villa. Odovacer, would rule as king of Italy, although technically in the name of Rome, until the Ostrogothic king, Theoderic, sent by the Eastern emperor, overthrew him in 490. Half a century later, another Eastern emperor, Justinian, would send an army to reclaim Italy for the Empire in reality as well as in name.

Largely because of poorer record keeping and declining literacy, the final days of the Western Roman Empire are partly shrouded in uncertainty, leaving room for various legends to fill in the gaps.

Attila's invasion of the West. When Attila turned his attention against the Western Roman Empire after 450, his pretext was supposedly a ring sent to him by Honoria, sister of the weakling emperor, Valentinian III. After a failed attempt to assassinate her brother, she had been driven from the palace and forced to marry an old Roman senator. Being a fun-loving girl, she sent money and a ring to Attila asking for his help. Attila chose to interpret this as a marriage proposal and demanded half the Western Empire as Honoria's dowry. When Valentinian refused to agree, Attila invaded the West to claim his dowry.

In 452, Attila invaded Italy, but mysteriously withdrew when it seemed he had Rome within his grasp. According to legend, it was a plea by Pope Leo that persuaded the Hunnic leader to spare Rome. More likely, it was the outbreak of disease in his camp along with a Roman army from the East threatening his line of retreat that convinced him to exit Italy. The next year, he died on one of his many wedding nights, the victim, in one version, of another jealous wife.

Attila's invasion of Italy led to a number of refugees fleeing to a marshy area in the northeast and starting what would become the city of Venice.

King Arthur. Britain at this time was the most likely setting for the historical King Arthur, a Romano-Briton who led the defense of his land against invading Angles, Saxons, and Jutes. His efforts, or those of some other leaders, were temporarily successful in driving the invaders from Britain. However, just as in the Arthurian legend, Britain eventually succumbed to the rising pressures from its enemies. The Anglo-Saxon invasions seem to have been particularly destructive, as little evidence of Roman civilization survived them. At this point, Britain virtually dropped from the sight of recorded history.

A dreary list of "emperors." The last twenty years of the Western Empire saw a virtual revolving door of emperors being made and un-made by unscrupulous politicians and generals. Just for the record, here are their names and dates:

Maioresanus (457-61)
Liberius Severus (461-5)
Anthemius (467)-72
Olybrius (472)
Glycerius (473-4)
Julius Nepos (474-5; 480)
Romulus Augustulus (476)

Even their coins reflected imperial decay in the fifth century.



The last emperor in the West, according to popular belief, was Romulus Augustulus (above), a boy who was relieved of duty in 476 and sent to live on a country estate. The popular appeal and irony of Romulus Augustulus' name is that it combined the names of the founder of Rome and the founder of the empire (Augustulus meaning "Little Augustus"). Technically, the officially recognized emperor of the West was Julius Nepos who lived in exile until his death in 480.

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THE RISE OF THE CHRISTIAN CHURCH (c.30-323 C.E.)

"Render unto Caesar that which is Caesar's and unto God that which is God's"—Mark 12:17

If one is to understand Western Civilization, one has to understand Christianity and the history of the Christian Church. No single faith or institution has had a more profound impact on Western Civilization than Christianity. However, many of its influences may not be so readily apparent because they are so deeply rooted in our past and therefore are harder to recognize. One example is the work ethic that traces its roots back to medieval Christian monasteries. Other examples abound, but suffice it to say that the Christian heritage is a significant part of our culture today, whether or not we belong to the Christian faith.

During the Middle Ages, the influence of Christianity was much more obvious. In fact, Christianity played such a dominant role in medieval life and culture that we still refer to this era as the Age of Faith. During that time, the art and architecture were primarily religious in nature. The calendar was the Church calendar whose holidays (holy days) were those of the Christian faith. The daily lives of the people, even their diets, were largely controlled by Christian dictates. And politics were tightly interwoven with religion and the Church. Christianity, which traces its beginnings all the way back to the time of the Roman Empire, is still thriving as one of the world's great religions. Therefore, it is a major bridge linking the ancient world and its civilization to the medieval world and ultimately our own.

In its basic form, Christianity is a simple religion centering around the brief life of a humble Jew, Jesus Christ. According to Christian dogma, Jesus was the Son of God, but miraculously born in human form to a virgin named Mary. For several years he performed various miracles as proof of his divinity and preached a simple but profound doctrine of love and forgiveness, faith in God, and penitence for our sins. At the age of 33, he was brutally executed on a cross because of his teachings. However, on the third day after his execution, he supposedly rose from the dead, seen as further proof of his divinity. Forty days later, after appearing to other disciples and followers, he ascended into Heaven. He said that sometime in the future he would return for a final judgment day

whereby the dead would be resurrected and go either to Heaven or Hell according to their faith.

Christianity is a monotheistic religion (i.e.-believing in just one god) that is derived from Judaism. The God of the Jews in the Old Testament is also the God of Christianity. However, there is one aspect of Christian theology that has confused people down through the ages and led to untold controversy and even bloodshed. That is the belief that the god of Christianity is a triune god or Trinity. In other words, there are three aspects to God, but all are parts of one united god. They are: God the Father and creator; Jesus Christ, his son who came to earth as a human in order to save us from our sins by giving up his life on the cross; and the Holy Spirit which inspires us with faith. Through the years, people have disagreed, at times violently, over the exact nature of each of these aspects and how they relate to one another. All the various points of view and the arguments to support them are too subtle, involved, and often confusing to relate here, although they would emerge from time to time with tremendous impact.

Early history (c.30-311 C.E.). Christ's ministry left two things of vital importance to the later success of Christianity. One was an appealing message of love, forgiveness, and eternal salvation for all people. The other was the mission for Christ's apostles and all Christians to spread this new faith. After Christ's departure, his followers started spreading his message in order to win new converts to the faith. At first, preaching this message was confined to Jews, and the ruling Romans saw it as merely a sect or offshoot of the Jewish religion. But a critical turning point in Christianity came with St. Paul of Tarsus, who saw Christianity as a religion for all peoples: Jews and Gentiles (non-Jews). Therefore, he started spreading the word of Christ throughout the Roman world.

Thanks to its message and this preaching, the Christian religion grew in popularity slowly but steadily during its first century and a half (c.30-180). Hollywood and popular imagination have romanticized and exaggerated the persecutions of the Christians during this period. The truth is that Christianity during this time was still a relatively minor religion that drew little attention from the Roman authorities. There were occasional persecutions in these early years, not so much for the Christians' religious beliefs as their refusal to worship the Roman emperor and state gods. Such worship was more like a pledge of allegiance than a religious act to most Romans, and refusal to do it

was seen as an act of treason. The Christians could have freely practiced their religion if they would only have paid the empire this worship.

However, unlike most other ancient religions where the religion was intimately tied up with the state and society as a whole, Christianity was a very personal religion that drew a sharp distinction between what one owed to the state on the one hand and to God on the other. Therefore, Christians refused to worship the state gods, which was where they got into trouble. During the Pax Romana, the persecutions were few and intermittent, and most Christians could practice their religion with little or no interference. Times were good and the authorities saw little harm coming from the odd habits of this minor sect. In the third century all that changed.

The great persecutions. The third century was a time of intense anarchy. Civil wars, barbarian invasions, and plague wracked the empire from end to end and threatened its very existence. This affected Christianity in two very different ways that both worked ultimately toward one end. First of all, the widespread troubles of the time led many people to question the truth of their old pagan religions whose gods did not seem to be protecting Rome anymore. Consequently, people started turning to new, more emotionally satisfying salvation religions to comfort them in such troubled times. Christianity was just one such religion that gained converts during this turmoil. Other cults worshipping the Persian Mithra, Asia Minor's earth goddess Cybele, and Egypt's Trinity of Isis, Horus, and Osiris also gained in popularity.

The second effect of the third century anarchy was more intense persecutions of Christians. As long as the Empire was peaceful and prosperous, the Christians' refusal to pay homage to the emperor and state gods was usually overlooked. However, when things started falling apart, many Romans blamed the Christians for abandoning the old gods who in turn abandoned Rome. The late third and early fourth centuries saw the most intense periods of persecutions, the worst coming under Diocletian and his successors from 303 to 311 C.E. Ironically, the persecutions helped the Christian Church, because they gave the Christians publicity that won them widespread sympathy and many new converts. Consequently, right on the heels of its darkest hours of persecution came the Church's greatest victory: legalization and acceptance as the virtual state religion of the Roman Empire.

Constantine and triumph of the Church. The man who gave Christianity its big break was the emperor Constantine. Legend has it that on the eve of a major battle against a rival for the throne, Constantine saw a vision of a cross in the sky with the words: "In this sign conquer". Taking this as a message from God, he placed a Christian emblem on his troops' shields and then won the battle. However true this legend may be, the fact is that in 311, Constantine declared toleration for Christianity in the Western half of the Roman Empire. When he took over the eastern half in 323, he also legalized it there. From this point on, the Christian Church quickly became the dominant religion in the Roman Empire, largely from the favor bestowed upon it by Constantine and his successors.

The question arises as to why Christianity triumphed over other competing salvation religions. Besides strong state support, there are five main reasons. First of all, it was exclusive. Unlike most ancient religions which tolerated other faiths, Christians said a person could belong to only one faith, Christianity, and be saved, which scared many people away from other competing faiths. Secondly, Christianity actively sought converts. Most other religions were there for other people to accept, but did not go out of their way to gain new members. In sharp contrast to this, Christianity did seek new members, which gave it a decisive edge. Third, Christianity was secretive and treasonous. As seen above, this led to persecution, which led to publicity and popularity. Fourth, from the reign of Constantine onward (with the brief exception of Julian's reign), the Church received strong state support that put increasing pressure on pagans to convert until Theodosius I shut down all pagan temples in 393. Finally, Christianity was well organized much along the lines of the Roman Empire. As the faith spread across the empire, it especially caught on in cities. Consequently, each city, which was already a center of Roman administration, became a Christian center as well under a bishop. Each province, besides having a governor to rule it, also had an archbishop to rule the affairs of its bishops in the different cities. Diocletian had divided the empire into four large districts called prefectures. The Church, similar to this, had five main centers where Church patriarchs resided. Four of these centers (Constantinople, Jerusalem, Antioch, and Alexandria) were in the East, reflecting where Christianity's main strength was then.

The fifth patriarchal center, Rome, would become the most influential for several reasons. First of all,

it was the capital of the empire, giving it a good deal of prestige. Second, Peter, Christ's most influential disciple, had started Rome's first Christian congregation, which also gave Rome prestige. Finally, after 600 C.E., Rome was free from the control of the Eastern Roman (Byzantine) emperors. This made life more dangerous for Rome's popes (patriarchs), but it also gave them more freedom to expand their influence when more peaceful times came after 1000 C.E.

The Life of Christ and the Christian Religion



Sandro Botticelli (1445-1510), *The Annunciation*, (1489-90)

No topic has aroused or continues to arouse more controversy than religion. For example, in America the concept of separation of church and state still sparks fierce differences of opinion on the role of religion in public schools. Consequently, textbooks often just shy away from the topic of the role of religion in history, thus leaving a huge gap in our understanding of the past, including our calendar, popular sayings, and dominant themes in Western art. With that in mind, following is a brief rundown on the basic Christian beliefs about the life of Christ and the Christian religion.

The life of Christ. The story of Christ begins with the annunciation by the archangel Gabriel to the Virgin Mary that she would give birth to the Messiah, the Jews' long awaited savior. Christians have long used the miraculous virgin birth as evidence of Christ's divinity. The Magi (AKA, Three Wise Men) were Zoroastrian priests from Persia whose journey to see the Christ child has been used by Christians to show their religion is for all people, not just the Jews.

For centuries, the Jews had awaited the coming of a messiah (savior) who would deliver them

from captivity, much as Moses had led them from Egypt in the Exodus. Therefore, many expected this deliverance by a messiah as a physical, even military, liberation from the Romans. Naturally, this made the Romans extremely nervous about anyone claiming to be the messiah. Therefore, even though Christ led a peaceful, non-violent movement, his association with the messiah made him an obvious target for the Roman authorities.

Christ's first miracle took place at the wedding at Cena where he turned water into wine. Christians have used this as evidence that drinking alcohol *in moderation* is not sinful. Although Muslims see Christ as the last of the five prophets preceding the greatest prophet, Mohammed, Islam forbids drinking alcohol.

Other miracles included restoring a blind man's eyesight, helping a lame child walk, walking on the waters of the stormy Sea of Galilee, and even raising a man named Lazarus from the dead.

Christ taught largely through parables, allegorical stories that carried a moral message. In one of his most famous parables, that of the Prodigal Son who, despite his previously sinful life, is welcomed back by his father, he illustrated God's unconditional love for us as being like parents' unconditional love for their children.



Rembrandt van Rijn (1606-69), *Prodigal's Return*.

In the story of the widow's mites, Jesus sees a widow offering two mites (small coins) at the synagogue, and uses this to teach a lesson in humility to the *pharisees* (the somewhat self-righteous priest class), saying that God views the

widow's humble sacrifice much more favorably than he does the large donations the rich make, since it sincerely comes from her heart.

The Good Samaritan was another of Christ's parables. A man is waylaid and badly beaten by brigands and left lying on the road. Several people just pass him by, until a Samaritan stops to help him. Since the Samaritans were looked down upon by most Jews, Jesus' point was that what is in one's heart, not bloodline, is what matters most to God.

Jewish law prescribed death by stoning for women caught in adultery. When such a woman is brought forth, the Pharisees challenge Jesus to cast the first stone to test his commitment to the law. Instead, he says let whoever is without any blame cast the first stone. Since no one wants to make such a claim for themselves, they drop their stones and leave, thus saving the woman. Once again, Christ's message of love and forgiveness is a central theme of Christianity.



Nicolas Poussin (1594-1665), *Christ and the Woman Taken in Adultery*

Mary Magdalene was a woman of ill repute who became one of Christ's most ardent followers. Despite her background, he is kind to her as an object lesson to his disciples about how God accepts all people for what is in their hearts rather than their social background or past.

The Last Supper. Judas Iscariot, one of Jesus' disciples arranges to have him betrayed to the authorities. At the Last Supper, Jesus shocks his disciples by revealing that he knows one of them will betray him. He then passes around bread and wine (representing his body and blood) as a way of remembering him. This ceremony, known as communion, becomes one of

the main sacraments (sacred actions) in the Christian service and religion in the coming years.

Christ's crucifixion and resurrection. Later that night, Judas betrays Jesus to the authorities, identifying him by a kiss on the cheek. When the apostle Peter defends Jesus and cuts off one of the soldiers' ears, Jesus tells him to stop and even heals the soldier's ear.

Judas' reward for betraying Jesus was 30 pieces of silver. Even now the term "30 pieces of silver" indicates one's price for betraying a friend or cause. Similarly, the term "the kiss of Judas" indicates an act of betrayal.

On what Christians refer to as Good Friday, Jesus was brought before Pontius Pilate, the procurator (governor) of Judea, for trial. Although he saw Jesus as having done no wrong, he allowed him to be whipped and mocked by the mob. When he offered the crowd the choice of freeing Jesus or a real criminal, Barabbas, the crowd freed Barabbas. Later, Pilate would wash his hands, as if this would clear him of any guilt in Jesus' execution. Similarly, we today talk of washing our hands of a crime.

As Jesus was marched to the hill known variously as Calvary or Golgotha, the mob put a crown of thorns on him to mock his descent from king David. On Calvary he was crucified, a slow and agonizing way to die that was generally reserved for the worst criminals.

The central event in the Christian faith, celebrated on Easter Sunday, is Christ's resurrection, the belief that he rose from the dead three days after his execution, thus proving his divinity.

When Christ appeared to some of his disciples after his resurrection, one of them, Thomas, wanting proof it was indeed Jesus, wanted to see the wounds from the crucifixion and even poked his finger into the wound where Christ had been pierced by a spear. Even today, we use the term a *doubting Thomas* to describe someone who is particularly skeptical.



Caravaggio (1573-1610), *The Doubting of St. Thomas*.

According to Christian doctrine, Christ only remained on earth for forty days after his resurrection before ascending into Heaven. At some future time he will return for a final judgment day, where those judged worthy will spend eternity in Heaven and those not judged worthy will be condemned to an eternity in Hell. Judgment Day and the fear of eternal damnation in Hell became two of the most pervasive themes of Christian thought and art in the Middle Ages.

The Pentecost, occurring 50 days after Christ's transfiguration, was another crucial event in the history of the Church. Supposedly, all the surviving apostles were gathered together when tongues of fire appeared on their heads without burning them. At the same time, inspired by the Holy Spirit, the third part of the Trinity and symbolized by the dove, they started speaking in various languages. This was a sign they should go out and preach the Gospel to all nations.

Possibly the most confusing aspect of Christianity is that of the Trinity, the idea that the one god has three different aspects: the Father who created the universe, the son (who is both divine and human) who died and was resurrected for our sins, and the Holy Spirit (commonly represented by the dove) which inspires us to faith. Christians are adamant that there is only one god, but having these three aspects. Muslims consider this heresy, especially the idea that Christ, a man, was also divine. To them, he was a great prophet, but only human.

Among the more controversial and frightening aspects is the last book of the Bible, "Revelations", which describes in highly symbolic language the final days before the second coming of Christ.

Christian symbolism



An early Christian epitaph of a Roman named Atimetus in the catacombs of St. Sebastian in Rome is flanked by two Christian symbols, an anchor and a fish.

Given the two facts that so many of their early followers were illiterate and that, for much of its first three centuries, their faith was an outlawed religion, Christians developed a number of symbols, in some cases to connect people to their religion, and in other cases as a secret code of identification.



Iota, eta, and sigma were the first three letters of the Greek spelling of Jesus.



Chi Rho: a monogram of the first two letters, Chi (X) and Rho (P), of the Greek word for Christ.



Alpha and Omega: The first and last letters of the Greek alphabet which signify that Jesus is the beginning and the end of all things. (Revelation, chapter 1, verse 8)



The Fish: a secret sign used by the early persecuted Christians to designate themselves as believers in Jesus.

ΙΧΘΥΣ

The initial letters for the Greek words for "Jesus Christ, God's Son, Savior", spell the Greek word for fish (I Ch Th U S)



Similarly, all five of these letters can be found in this seemingly innocuous symbol.

Portability and Persecution



"The blood of the martyrs was the seed of the Church." While many Christians did recant their faith under torture or threat of death, others faced death with incredible courage, inspiring many spectators to sympathize with the victims in the arena and, in many cases, join this new religion.

Portability: It works for iPods and it worked for Christianity. One thing that gave Christianity an edge over other religions and also sparked persecution was portability. In other words, while most pagan religions were identified with a particular place, the Christian god was portrayed as a universal god whose power and rules applied everywhere. Pagan peoples generally did not identify themselves in terms of their gods (e.g., *Zeusists*). Christians carried that identity wherever they went. Not that they were the first. The Jews were also identified with their god, which is what made them and the Christians seem so odd and difficult to deal with.

Saul of Tarsus (aka, St. Paul) was an ardent enemy and persecutor of Christians until he was temporarily blinded on his way to Damascus and experienced a dramatic conversion to the new faith. From then on, Paul, as he was now known, became the most important advocate for spreading Christianity to the gentiles (non-Jews).



Caravaggio (1573-1610), *The Conversion of St. Paul on the way to Damascus.*

The Diaspora. Rome's suppression of Jewish revolts in the 1st and 2nd centuries led to the Diaspora (scattering) of the Jews away from Palestine for the next 1900 years. Since most of Christianity's first converts were Jews, its earliest areas of concentration corresponded to areas of Jewish settlement during the Diaspora, typically cities, such as Rome, where they could carry on trade. While peoples of the Middle East in general were just as engaged in trade and banking, the Jews' mercantile activities did stand out more in Western Europe, which had fewer cities and less trade. This, and the fact that lending money for interest was later frowned on by the medieval Church, led to the unfortunate myth of all Jews being money-grubbing bankers.

Early treatment of the Christians. While much has been made (especially by Hollywood in the 1950s) of early persecution of the Christians, we should keep in mind that in the first and second centuries, Christians made up a tiny fraction of the empire's population and were barely noticed. However, around 100 CE the emperor Trajan received a letter from Pliny the Younger, his governor in Asia Minor, describing his treatment of the growing sect of Christians. After

describing how he only executed them after giving them numerous chances to renounce their faith and worship the emperor, he asks Trajan for further instructions on how he should deal with this problem.

“The method you have pursued my dear Pliny, in sifting the cases of those denounced to you as Christians is eminently proper...No search should be made for these people; when they are denounced and found guilty they must be punished; but where the accused party denies that he is a Christian, and gives proof...by adoring our gods, he shall be pardoned...Information without the accuser’s name subscribed must not be admitted in evidence against anyone.”

In the late second century dialogue, *Octavius*, Minucius Felix, an early apologist for Christianity, relates the typical charges pagans made against Christians.

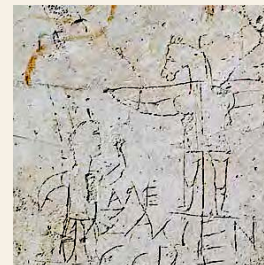
“Is it not deplorable that a faction ... of abandoned, hopeless outlaws makes attacks against the gods? They gather together ignorant persons from the lowest dregs, and credulous women, easily deceived as their sex is, and organize a rabble of unholy conspirators, leagued together in nocturnal associations and by ritual fast and barbarous foods, not for the purpose of some sacred rite but for the sake of sacrilege-- a secret tribe that shuns the light, silent in public but talkative in secret places. They despise the temples as if they were tombs, they spit upon the gods, they ridicule our sacred rites. Pitiably themselves, they pity... our priests; half-naked themselves, they despise offices and official robes. What amazing folly! What incredible arrogance! They despise present tortures yet dread uncertain future ones; while they fear to die after death, they have no fear of it in the meantime; deceptive hope soothes away their terror with the solace of a life to come.

“Already... decay of morals spreads from day to day throughout the entire world, & the loathsome shrines of this impious conspiracy multiply. This plot must be completely rooted out & execrated. They recognize one another by secret signs &

tokens; they love one another almost before they are acquainted...I hear that in some absurd conviction or other they consecrate and worship the head of a ass, the most repulsive of beasts--a religion worthy of the morals that begat it...Whether this is false I know not, but suspicion naturally attaches to secret and nocturnal rites. To say that a man put to death for a crime and the lethal wooden cross are objects of their veneration is to assign altars suitable for abandoned and impious men the kind of worship they deserve.” (Omitted are descriptions of the Christians’ cannibalism and wild feasts.)

“Furthermore, they threaten the whole world & the universe itself with fire, & work for its destruction...Not content with this insane notion, they add to and weave old wives’ tales: they say that they are reborn after death from the cinders & ashes, and with unaccountable confidence believe in each other’s lies...”

“...But you [Christians]... abstain from wholesome pleasures; you do not attend the shows; you take no part in the processions; fight shy of public banquets; abhor the sacred games, meats from the sacrificial victims, drinks poured in libation on the altars.”



A crude graffito from the Palatine Hill in Rome is apparently making fun of a Christian, Alexamenos, who is praying to a crucifix with a donkey's head, presumably because Jesus rode into Jerusalem on a lowly donkey instead of a more dignified horse. This is one of the oldest representations of the crucifixion, dating between 200 and 250 C.E.

Shopping for demons. While the original message of Christianity was a positive and uplifting one, Christian apologists, in reaction to attacks on them, threatened their persecutors with eternal

punishment in Hell if they failed to convert. Not having a demonology of their own, Christians borrowed images from other cultures, notably the Etruscans and Babylonians, providing us with ideas about Satan and demons that continue today.

Below: Pazuzu, the Babylonian demon king of the winds



commemorating the feast held by Mithras and the sun god, Sol.

Another deity popular in the empire was Isis, an ancient Egyptian goddess who assumed more universal aspects during the Roman era, as seen in this passage from the second century novel *The Golden Ass* (i.e., donkey) by the author Apuleius:

“You see me here, Lucius, in answer to your prayer. I am nature, the universal Mother, mistress of all the elements, primordial child of time, sovereign of all things spiritual, queen of the dead, queen of the ocean, queen also of the immortals, the single manifestation of all gods and goddesses that are, my nod governs the shining heights of Heavens, the wholesome sea breezes. Though I am worshipped in many aspects, known by countless names ... the Egyptians who excel in ancient learning and worship call me by my true name...Queen Isis.”

Through a process of syncretism (combining the attributes of several deities), Isis became associated with other goddesses such as Ceres, Venus, and Artemis. After the triumph of Christianity as the state religion of the empire in the fourth century, competing cults soon died out, largely from state-backed pressure from the Church.

Constantine's Conversion



Constantine's vision of the cross

Constantine's conversion. There are two popular versions of Constantine's conversion, both taking place in 312 right before the decisive battle of the

Mithraism and other Salvation Cults



Mithra slaying the sacred bull

Christianity was by no means the only salvation religion promising an afterlife to its followers. A number of other cults challenged the traditional position of Rome's state gods by offering a deeper spiritual experience.

One cult especially popular with the soldiers, possibly derived from Persian Zoroastrianism, was Mithraism, which saw life as an ongoing struggle between good and evil. Mithra was a god of light and truth who, upon the orders of the sun god, reluctantly slew a sacred bull. As the bull died, the world came into being and time was born. From the bull came all life, the four elements, and the seasons, while Mithra's cloak became the heavens with all the stars and planets. Mithra's followers, as in most salvation cults, had to follow a strict code of conduct and a secret initiation to earn an afterlife. Most notable among their practices was a sacred banquet

Milvian Bridge against his rival in the West, Maxentius, and neither being written down until some 60 years later. In one he was told in a dream to paint the monogram of the first two letters of Christ's name, the Greek chi and rho on his soldiers' shields.

In the other version he saw a vision of a cross in the sky with the words, "In hoc signe, vince" ("By this sign, you will conquer.") Some have speculated that he saw a conjunction of Mars, Saturn, Jupiter and Venus, an astronomical event that would have disturbed most people then.

Whatever he saw, after his victory, Constantine issued an edict of toleration for Christianity in the Western Empire which he extended to the whole empire when he also won control of the East in 324. From that point on, with the exception of the reign of Julian (360-363), the Empire would favor Christianity.

Just how Christian was Constantine? This is still a matter of controversy among historians. Following are some signs that he was Christian, although in his mind he might not have been exclusively Christian.

- He gradually dropped pagan insignia from his coins & his duties as *pontifex maximus* & showed increasing favor to Christians
- Declared Sunday a holiday, although it was also sacred to the sun god.
- Although he dedicated Constantinople with pagan rites, he forbade pagan worship in his new capital,
- He passed laws favorable to the Christians such as restricting the grounds for divorce, prescribing harsher penalties for rape and adultery, and ending gladiatorial shows
- Forbade magic & pagan sacrifices in private homes (318), though public temples still made sacrifices. However, he did little to enforce this.
- He gave his sons a Christian education
- He was baptized on his deathbed, a common practice then to make sure all one's sins were washed away before dying.
- He confiscated temple treasures, thus

procuring supplies of gold and silver to restore the coinage and to pay for his new capital, Constantinople, and numerous Christian churches.

Christian holidays. Christians often adapted pagan holidays to Christian ones to draw in more converts. For example, Christmas coincided with the winter solstice festival, known as the Saturnalia, even though we think Jesus may have been born in the springtime. Easter (from *Ishtar*, the Babylonian goddess of love, fertility, and rebirth) originally coincided with celebrations of spring and fertility rites on March 25th. However, the Church changed it to the week after the Jewish Passover, occurring on the first Sunday after the first full moon after the spring equinox.

Church and State. A major event in the relations between Church and state occurred in 390 when St. Ambrose, bishop of Milan, forced the emperor, Theodosius the Great, to do penance for a massacre. Throughout the Middle ages in Western Europe, the struggle between Church and state would remain unresolved.

"On this rock (petra) I will build my church." Catholics believe Jesus especially favored Peter and gave him the keys to heaven. Since Peter founded his church and died in Rome, Catholics claim this is the center of the church. Peter supposedly insisted he be crucified upside down, since he was unworthy to die like Jesus had. St. Peter's Basilica in Rome is built on top of where Peter was supposedly buried.

Just how Christian was the Roman Empire in 312?



A map of the empire at the time of Constantine showing largely Christianized areas in orange

Just how Christian was the Roman Empire in 312? Given the wide diversity within something as huge as the Roman Empire, this is something that defies one simple answer and needs to be broken down according to social classes and regions of the empire.

The peasants, representing 90% of population at the time, were barely touched by this new religion, but this is to be expected. Our word *pagan* comes from the Latin word *pagus*, meaning rural, since peasants were the last ones to be exposed to and to adopt any new ideas, including Christianity. A century after Constantine John Chrysostom and Augustine were complaining about the large numbers of pagan peasants, and there were still mass conversions of peasants taking place as late as Justinian's reign (527-65). And even then, conversions were largely forced and superficial, with pagan rites continuing as late as the 1100's in some parts of the East.

So much for 90% of the population, but they didn't matter anyway, at least politically.

As far as other social classes were concerned, artisan and merchant classes were largely Christian and relatively mobile, which helped spread their faith. Scholars were mainly pagan, but state support of Christianity would gradually lead more and more of them to switch. The army was mainly pagan, with pockets of

Christians depending on their geographic origins, but since it moved around more than most people then, Christians in its ranks also helped spread this new religion. The emperor and court, being strongly Christian, spread its acceptance downward level by level.

Regionally, Greece and the Balkans didn't start converting until c.400 C.E. Northern and Western provinces were also still mainly pagan, although Mediterranean cities were likely to have strong Christian populations. Similarly, most cities in the West (except Rome) and frontier regions were pagan.

Eastern cities were a mixed story. Alexandria was split three ways between Christians, pagans, and Jews, leading to occasional religious riots that burned the temple of Serapis in 385 and part of its famous library in the 400's. Antioch was also divided, but not so turbulent as Alexandria. Asia Minor's cities were mostly Christian. However, neighboring cities might be radically different. For example, Gaza was pagan, but its port, Maiuma, was mostly Christian. Edessa was Christian, but nearby Carrhae was pagan.

Constantine who spent most of his time in the East, mainly saw Christians in Eastern cities, probably giving him a distorted view of Christian numbers and strength.

Double duty. Christian priests often held pagan priesthoods, which was seen as all right since these were considered civic offices.

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**THE PROBLEMS OF SUCCESS:
RELIGIOUS HERESIES AND THE RISE OF
MONASTERIES (C.300-500 C.E.)**

"The city is full of mechanics and slaves, who are all of them profound theologians and preach in the shops and in the streets. If you desire a man to change a piece of silver, he informs you wherein the Son differs from the Father; if you ask the price of a loaf, you are told by way of reply that the Son is inferior to the Father; if you inquire whether the bath is ready, the answer is that the Son was made out of nothing."-- Gregory of Nyssa

The favor Constantine and his successors showed the Christian Church increasingly made it the state religion of the empire until 393, when the emperor Theodosius ordered public worship in the pagan temples to be ended throughout the empire. Christianity had triumphed, but success would also bring its problems.

The root of the Church's problems lay largely in the heavy persecutions of the third century that did two things. For one thing, they created a more decentralized Church by driving into hiding Christians who had lost contact with one another. On the other hand, the persecutions also helped lead to the triumph of Christianity as the virtual state religion by giving it publicity that attracted converts. In addition, as Christianity gained popularity, formerly pagan intellectuals joined the Church in greater numbers and started grafting pagan, especially Greek, philosophies onto Christianity. These factors would contribute to two very different lines of development in the history of the Church: the spread of religious disputes and heresies and the rise of monasteries.

Religious disputes and heresies. One of the more confusing aspects of Christianity was the nature of the Trinity of Father, Son, and Holy Spirit and the relation of the three parts to one another. During the persecutions, communities of Christians isolated from one another had developed different ideas on the Trinity. Christianity's legalization meant these different congregations that persecution had forced underground (literally in some cases) now could come out into the open, only to find they had very different ideas on this point. Added to this was the growing number of intellectuals joining the Church who, instead of just accepting Christianity as a simple religion, saw various subtle interpretations of the concept of a triune god. Confounding the

confusion was the vague wording of the Bible itself, which also led to different points of view.

The most serious of these disputes centered on the relationship of the divine and human natures of Christ. The first of these, the Arian dispute, flared up soon after Constantine had legalized Christianity. The issue was whether Christ, being the begotten son of God the Father, was co-eternal with the Father, and thus fully divine. An Egyptian priest, Arius, said he was not co-eternal with the Father, and the Arian view, as it was called, spread widely throughout the Roman world, causing heated arguments and even violence. Therefore, instead of creating a unifying factor for his empire by legalizing and favoring Christianity, Constantine had unleashed a wholly new type of controversy that threatened to tear the empire apart. Given the Church's close relationship now with the state, Constantine and later emperors felt they could not tolerate religious disputes and heresies.

These religious disputes typically followed an unfortunate pattern to that made a correct solution practically impossible to achieve. A new interpretation of Christianity would pop up and gain converts. This would lead to arguments and at times bloodshed. A church council, backed by the emperor, would denounce the new belief as a heresy (wrong belief) and either exile the heretics or persecute them within Rome's borders in order to preserve the public peace. Unfortunately, this tactic usually backfired much as imperial persecution of Christianity had backfired a century earlier.

Today, many people may wonder why people and governments got so emotionally involved in these disputes. The answer revolves largely around Christianity's exclusiveness. Since it was seen as the only true religion and path to salvation, people believed they had to have exactly the right belief in order to be saved, and even the slightest deviation from that belief could mean eternal agony in Hell. Similarly, the Roman government believed it must support the exact right belief to ensure God's favor and protection. Tolerating heresies could lead to God's disfavor, and any military defeats or natural disasters were often interpreted in that light. Also, since the Empire had tied its fortunes securely to the Christian Church, its religious and political policies were tightly interwoven, so that tolerating religious heresies was seen as the same as tolerating treason. Therefore, from the later Roman Empire to the early modern era (c.300-1700), religion and politics went hand in hand, and a decision in one realm generally had serious implications in the other realm as well.

The histories of the Arian and Monophysite heresies especially show this mentality and its results.

In the case of Arius, Constantine called a council of Christian bishops together at Nicaea in Asia Minor in 325. Arius was logically shown to be wrong, his beliefs were declared a heresy, and he himself was exiled. Arius then went to the northern tribes whom he converted to his brand of Christianity. A century later, when these tribes conquered the Western Roman Empire, they did it as Arian Christians, turning the tables and persecuting their predominantly Roman Catholic subjects.

Another heresy, the Monophysites, was suppressed in Egypt, Syria, and Palestine, which led to strong undercurrents of resentment and even rebelliousness against the Roman government. When the more tolerant Arab Muslims invaded these provinces in the 600's, instead of meeting stiff Christian resistance, they found the populace oftentimes welcoming them against Roman oppression.

Poverty, chastity, and obedience: the rise of monasteries. The success and favored status of Christianity also brought other problems. When Christianity was an outlawed religion, the motives and sincerity of its members were rarely in doubt since there was nothing to gain and plenty to lose by joining the Church. When Christianity became the favored religion of the Roman Empire, all that changed. There was an influx of new members joining for reasons of social, political, or material advancement. Also, the influx of intellectuals who grafted pagan philosophies upon the Christian faith was complicating the religion almost beyond recognition. The purity of the Church's membership was becoming seriously diluted.

This upset many of the more devout members of the Church, and they wanted to purge it of such worldliness. Since they could not drive the new members from the Church, they retreated into the desert to live pure Christian lives away from worldly temptations. In order to cleanse themselves of their sins, some of these men performed incredible feats of endurance nearly to the point of self-destruction. One such feat was to sit on the top of a pillar for years at a time. Another was abstinence from food almost to the point of starvation. As word of these "super-hermits" spread, other devout Christians moved out to the desert to be near them and share in their holiness. Soon the desert was so crowded with these people that they had to be organized into communities

called monasteries. In the East, St. Basil was the man who established the first monastic rule.

The Benedictines. In the West, it was St. Benedict who established a regularized monasticism. After a fairly sinful and dissolute youth, this man launched a career of violently trying to purge himself of his sins. At last, he arrived at a more moderate concept of Christianity and formed a monastic order known as the Benedictine Rule. The Benedictine Rule reflected its founder's more moderate views, though it was still strict by modern standards. A new monk took three vows: poverty (no material possessions), chastity (clean living), and obedience (to God and his superiors in the monastery). The day was divided into roughly equal parts of prayer, work, and rest. Incredible acts of self-torture or self-denial were not expected. Instead the monk worked around the monastery and in the fields, the belief being that idle hands are the devil's playground. Our own modern work ethic is directly descended from this idea.

The moderate expectations of the Benedictine Rule led to the spread of their monasteries all over Western Europe. As the orderliness of the Roman Empire gave way to the anarchy of barbarian rule, monasteries and monks would provide the one shining light of civilization in the West. These quiet and vigilant men bravely carried the word of their religion beyond the frontiers of the old Roman Empire, thus spreading civilization to new areas as well as preserving it in old ones. Monasteries were also the main centers for any kind of social and economic relief in the Dark Ages. The poor and destitute looked to them for food, shelter, and protection. The sick looked to them for hospital care. And travelers looked to them for safe havens on their journeys.

Another important and somewhat ironic aspect of monasteries was that many of the pagan intellectuals whom the hermits had originally tried to avoid were now showing up in the monasteries in an effort to flee the growing anarchy of the times. These men, who had received pagan classical training brought their love of that pagan culture with them and devoted much of their time to copying pagan works of literature. Thus ironically, monasteries, which started as a somewhat anti-intellectual movement, were the primary agents for preserving ancient pagan culture during the Middle Ages.

Throughout the Middle Ages, the contributions and monasteries and of the Church overall were

immensely important to our culture. The early Church was very much a part of Roman Civilization and absorbed a good deal of it into its own theology and ritual as shown by keeping the mass in Latin all the way to the 1960s. As the Roman Empire faded from history, the Christian Church survived to carry on the Roman heritage along with its own unique contributions to Western Civilization.

growing differences between Christians in the Latin West and Greek East, culminating with the final schism (split) between the Roman Catholic and Greek Orthodox Churches in 1054.

Heresies in the Later Roman Empire



St. Ulphilas, who brought the Arian version of Christianity to the Goths

The illegal status and underground nature of Christianity during the first three centuries of the Christian era led to a lot of isolated Christian communities that naturally developed many of their own ideas about their religion. Following is a brief summary of the most important of these heresies (outlawed beliefs).

Donatism stated that sacraments administered by priests who handed over Christian texts to Roman authorities during the persecutions were not valid. After Christianity was legalized and made the virtual state religion of the empire, the Church ruled that those sacraments were valid. Donatists, who were especially numerous in North Africa, disagreed vehemently, triggering the first major split in the Church.

Arianism held that Christ was begotten at a point in time, thus making him inferior to the Father who existed before the beginning of time. This was popular with Germanic tribes whose old gods and religion were typically patriarchal. When those tribes conquered the Western provinces of the empire, they often persecuted their mainstream Roman Catholic subjects who believed the Son was equal to the Father. This was one reason for the failure of many of the Germanic kingdoms founded on the ruins of the Western Empire. It would also contribute to



A copy of the Gothic translation of the Bible that Ulphilas used to convert the Goths to the Arian version of Christianity

Monophysitism: Christ's human and divine natures are indivisibly fused into one nature. This was particularly popular in Egypt, Syria, and Palestine, thus creating a lot of dissension against the Roman government in those provinces. When the Arab Muslims came in during the 600s, the largely Monophysite population in this region offered little resistance to the new regime, since it was more tolerant of their beliefs than was the Christian regime in Constantinople. Shortly before this, the emperor Heraclius had tried to bridge the gap in beliefs with what he called **Monothelism**, the idea that Christ had two separate natures, but they were fused into one will. It didn't catch on.

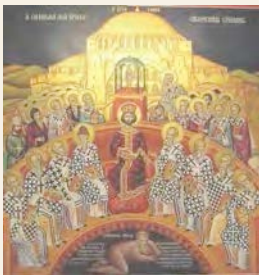
Nestorianism: Christ's human and divine natures are completely separate. Outlawed by the Council of Chalcedon in 451, many Nestorians fled eastward into Persian and points beyond. As a result, there were Nestorian Christian communities scattered across Asia, even as far as China. Reports/rumors of these fellow Christians and their legendary king, Prester John, would be one of the inspirations for the age of Exploration 1000 years later.



A wall painting from a Nestorian Church in China (7th-8th centuries)

Gnosticism is a term for a variety of beliefs based largely on books rejected by the Church Fathers as not worthy of being included in the New Testament, of which there wasn't even a definitive version agreed upon by most of the Church fathers until the third century. Probably the best known of these books was the Gospel of St. Thomas. Gnostics drew heavily from Plato's dualistic view of separate material and spiritual worlds. Thus some believed that creation of the material world was evil, and God who created it was an evil demi-urge from Wisdom. Following this logic, the Serpent was a savior and the fall of Adam and Eve was a liberation. Likewise, all the prophets who followed God (e.g., Abraham and Moses) were evil, while Cain, the first murderer, was good. Since matter is evil, Christ had no body and was not human, making his very existence an illusion.

Constantine as Religious Ruler: The Council of Nicaea



A medieval portrayal of the Council of Nicaea with Constantine presiding as both secular and religious ruler

Instead of creating a unifying factor for his empire by legalizing and favoring Christianity, Constantine had unleashed a wholly new type of controversy that threatened to tear the empire apart. Given the Church's close relationship now with the state, Constantine and later emperors felt they could not tolerate religious disputes and heresies. Constantine's attitude toward the Arian heresy and theology in general is revealed in this message to the disputants:

"...The cause seems to be quite trifling and unworthy of such fierce contests. You, Alexander

[Patriarch of Alexandria] wished to know what your priests were thinking on a point of law, even on a portion only of a question in itself entirely devoid of importance; and you Arius, if you had such thoughts should have kept silence...these are silly actions worthy of inexperienced children, and not of priests or reasonable men."

The Nicene Creed as Presented in the Traditional Tridentine (Latin) Mass:

"I believe in one God, the Father Almighty, Maker of heaven and earth, and of all things visible and invisible. And in one Lord, Jesus Christ, the only begotten Son of God. Born of the Father before all ages. God of God, Light of Light, true God of true God. Begotten, not made, of one substance to the Father. By Whom all things were made. Who for us men and for our salvation came down from heaven.

And He became flesh by the Holy Ghost of the Virgin Mary and was made man; He also was crucified for us, suffered under Pontius Pilate, and was buried. And the third day rose again according to the Scriptures. He ascended into heaven and sits at the right hand of the Father. He will come again in glory to judge the living and the dead. And of His Kingdom there shall be no end.

And I believe in the Holy Ghost, the Lord & Giver of life, who proceeds from the Father and the Son. Who together with the Father & the Son is adored and glorified; and Who spoke through the Prophets. And one holy, Catholic, and Apostolic Church. I confess one baptism for the remission of sins. And I await the resurrection of the dead. And the life of the world to come."

The most controversial part was in the last paragraph describing how the Holy Ghost "proceeds from the Father and the Son [*filioque*]", indicating Christ the son is equal to the Father. The Filioque Clause, as it was known, would be the source of centuries of religious disputes between the Western Roman Catholic and Eastern Orthodox Churches throughout the Middle Ages, culminating with the tragic sack of Constantinople by the Fourth Crusade in 1204.

Challenges to Secular Authority by the Church



Detail from Anthony van Dyck's painting of the emperor Theodosius I doing penance as ordered by St. Ambrose.

While emperors like Constantine took it for granted that they could rule the Church as a department of state, many Church leaders saw it the other way, that the kingdom of God should rule the temporal kingdom on earth.

The most notable challenge to imperial authority came from Ambrose (340-397) (aka, St. Ambrose), archbishop of Milan. While the emperor Valentinian I was Arian, Ambrose was staunchly Catholic and resisted government efforts to change. His most notable challenge to imperial authority came in 390 when he barred emperor Theodosius I from entering the cathedral of Milan until he had done penance for the massacre of 7,000 opponents. Surprisingly, Theodosius, the last powerful ruler of the entire empire, submitted, providing a powerful precedent for the Western Church in its struggle with the state throughout the Middle Ages over whose authority should prevail on earth. St. Ambrose would be revered as one of the Four Fathers of the Church, along with St. Augustine, Pope Gregory I, and St. Jerome, who would translate the Bible into its definitive Latin Vulgate version.

St. John Chrysostom ("Golden Mouth") (345?-407) was one of the most powerful and influential religious figures of his day. He backed down to no one in his pursuit of religious purity, even publicly rebuking the empress Eudoxia for her immodest behavior (below). Unlike Ambrose, Chrysostom paid for his defiant behavior, being replaced as patriarch of Constantinople and dying in exile. Reportedly,

on the day of his exile, an earthquake rocked Constantinople.



Several of Chrysostom's more famous quotations follow:

"A comprehended god is no god."

"Poor human reason, when it trusts in itself, substitutes the strangest absurdities for the highest divine concepts."

"Music withdraws our minds from earthly cogitations, lifts up our spirits into heaven, makes them light and celestial."

St. Augustine Lays Down the Law on War and Sex



Saint Augustine (354-430) probably had more influence on medieval Christian thought than any other man. In his autobiography, *The Confessions*, he describes how, after getting a strong classical education, he spent his early years in a wanton and sinful life. After searching for inner peace through different philosophies, he achieved sudden conversion to Christianity when he heard a child singing "Tolle lege" ("Take up and read"), causing him to open the New Testament to the thirteenth chapter of Romans.

Drawing upon St. Paul, Augustine saw humans as so thoroughly corrupted by the fall of Adam that only the grace of God can save them. Even our virtues are so tainted by desire for personal

gain that healing by God's grace is not complete and sin remains with us to the grave. Augustine's views on sex and marriage especially bear this out. Sex was all right as long as it was only for propagation of the species and within marriage. Outside of marriage it was a sin. If it was for pleasure within marriage, it was still a minor sin, thus leaving even the most decent couples plagued by some guilt. To Augustine and many after him, celibacy (staying unmarried) was the best way to avoid the taint of sin. Augustine's ideas on sex have had a profound influence to the present day.

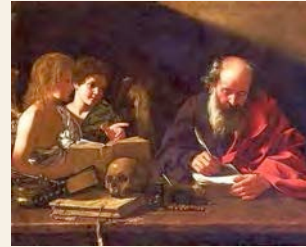
Augustine's thoughts on history, the state, and war were also vital in Western thought. He saw all empires, including Rome, as being born from a lust for power, and therefore deserving destruction. This brought up the question of should Rome be defended from the barbarians? Augustine said yes, because Rome did embody a certain good by allowing the spread of Christianity, securing the peace, and administering law fairly.

This raised the question of whether a Christian can rightly take up arms. Here Augustine drew upon the Roman philosopher, Cicero, who said war can be legitimate under the guidance of the state if it is a just war, meaning one that restores or protects order and justice and is fought fairly by showing good faith to the enemy and respecting prisoners and hostages. Augustine added two more conditions. First, the motive for war must be love, which is possible since killing the body does not kill the soul. Second, for a war to be just, the other side must be wrong. This led to the concept of war guilt whereby one side might blame everyone on the other side for a war, which in turn could lead at times to justifying massacres and even genocide. Augustine had three codes of conduct in war: one for the ruler who determines the justice of the war and directs it, one for the subjects who fight under the command of their rulers (but never elsewhere), and one for priests and monks who abstain entirely from war.

By grafting Christian morals onto the state, Augustine effectively fused Church and State

closely together, since each contained both saints and sinners. The issue that emerged (and flared at times into full scale war) was which partner, Church or State, would be the dominant power. That conflict would rage on and off for over a millennium.

Some Other Notable Saints



St. Jerome, who translated the Bible into Latin

St. Jerome (c.347-420), who translated the Bible from Hebrew and Greek into Latin to make it more accessible to Christians in the West, became the patron saint of scholarship. In the Middle Ages, the Church would later declare Jerome's Latin Vulgate [common people's] Bible the only proper version of the Bible. Since by then the only ones who were literate and able to understand Latin were church clerics, this made Christianity virtually incomprehensible to the vast majority of people, just the opposite of what Jerome had intended.

Besides just copying words, some monks also turned their books into artistic objects by creating elaborately decorated letters at the beginning of a chapter. Irish monks especially excelled at this, applying elaborate Celtic designs to their work. The most famous of these was the Book of Kells.

St. Patrick (early 400's) is given credit for converting the first of the non-Roman lands, Celtic Ireland, to Christianity. The story of Patrick purging Ireland of its snakes reflects the fact that the mass conversions of pagans often followed a missionary performing a miracle (or perceived miracle) such as purging snakes, victory in war, or healing sickness. Patrick's work was important since Ireland suffered no barbarian invasions and thus preserved a purer Latin language and culture that it passed back to

Western Europe after the turmoil of the barbarian upheavals.

Pope Gregory the Great (590-610) became pope at a difficult time of plague and war. With virtually no support from the Eastern Roman Empire, he was forced to assume responsibility for defending Rome, feeding its people, and providing justice. The Church's extensive lands in such places as Sicily allowed Gregory to relieve his people's hunger. Under Gregory the Papacy started to become an independent power as it fought for its very life against the invading Lombards. Afterwards the papacy sought to extend its religious (and at times political) influence over the rest of Europe. However, it would be centuries before the religious leadership of the popes was recognized throughout Western Europe.



The Castel d'San Angelo (above) especially symbolized the transition from the City of the Caesars to the City of the Popes. During Gregory the Great's reign a vision of the Archangel Michael appeared on top of the tomb of the emperor Hadrian (117-138) during an epidemic. The epidemic subsided and Hadrian's Tomb became known ever after as the Castel d'San Angelo.

The "Superhermits"



St. Anthony (251-356), the first and most famous of the "super-hermits," lived in the desert near the Red Sea. He ate little and seldom washed, but still lived to 105. At the age of 90 he walked into Alexandria to debate Arius. His exploits in the desert, in particular his resistance to the temptations of the world have been a common theme for artists ever since. One contemporary described Anthony as follows:

"...He subjected himself to an even greater and more strenuous asceticism, for he was always fasting, and he had clothing with hair on the interior and skin on the exterior that he kept until he died. He neither bathed his body with water for cleanliness, nor did he wash his feet at all, and he would not even consent to putting them in water unless it was necessary. Neither did anyone ever see him undressed-- indeed, no one saw the body of Anthony naked, except when he died and was buried."

St Anthony's example inspired a growing number of other would-be hermits who seemed to compete to outdo one another with their feats. One of these, Macharius, couldn't stand to be outdone. If other hermits ate no cooked food for Lent, he did it for 7 yrs. If some maintained a 7-day sleepless vigil, He did it for 20 days. Once he remained standing all through Lent, eating only a few cabbage leaves a week.

Another time he slept in a marsh for 6 months with poison flies all around. Other hermits specialized in specific types of feats of endurance. One stayed in the bottom of an abyss with barely room to sleep. Others specialized in vows of silence, carrying heavy

weights wherever they went, chaining themselves to rocks, or binding their limbs with iron bracelets or chains. Others roamed the hills of Syria eating grass or avoided the sight of women's faces for years.

Most lived on very slim diets. Macharius, when ill, was given some grapes. He passed them on to another hermit and they made the rounds all the way back to him without being eaten.

Hermits considered cleanliness hostile to godliness and many never washed. One convent of 130 women finally gave in to the stench and washed. Old timers longed for good old days of pure dirt.

Many went mad when they gave in to temptation after years of austerity. One even jumped into a furnace to cool his desires!

Another famous hermit was Simeon Stylites (390-459) who maintained a continuous vigil for thirty-seven years on top of a 60-foot high pillar, the remains of which can still be seen. People would come from far and wide to hear him preach. Such was his influence that barbarians were converted to Christianity by his words and moneylenders were shamed into lowering their interest rates from 6 to 12%.

To keep from falling off the pillar, Simeon had a railing and rope tied around his waist. Over time the rope imbedded itself in his skin which putrefied. It is said that when a worm feeding on this skin fell off, Simeon put it back saying, "Eat what God has given you."

One day people noticed Simeon had been in the same prayerful position for an unusually long time. When someone went up to check on him, they found he had died in that position and stayed there until rigor mortis set in.

Stylites set a trend for sitting on pillars that lasted 1200 years. It was a common sight for visitors to Constantinople to see one or more of such hermits engaged in such prolonged vigils. In a somewhat similar vein, in the 1920s flagpole sitters became the rage again, although for

personal publicity rather than to save their souls or anyone else's. In the early 1980s H. David Werder claimed to have sat on a pole for 439 days, 11 hours, and 6 minutes as a protest against high gas prices.

Even after organizing into monasteries, monks typically would try to settle away from the dangers and corrupting influences of mainstream society. Mt. Athos in Greece covers the eastern-most peninsula of the Chalcidice in the Aegean. The entire area is devoted to monastic life, with twenty monasteries here still practicing the monastic discipline laid down centuries ago. Some monasteries could be so inaccessible that supplies and even visitors had to be hauled up in a basket.

St. Benedict and the Birth of Western Monasticism



St. Benedict "cooling off" in a bed of thorns

In the West, it was St. Benedict who established a regularized monasticism. After a fairly sinful and dissolute youth, this man launched a career of violently trying to purge himself of his sins. At last, he arrived at a more moderate concept of Christianity and formed a monastic order known as the Benedictine Rule. The Benedictine Rule reflected its founder's more moderate views, though it was still strict by modern standards. A new monk took three vows: poverty (no material possessions), chastity (clean living), and obedience (to God and his superiors in the monastery). The day was divided into roughly equal parts of prayer, work, and rest. Incredible acts of self-torture or self-denial were not expected. Instead the monk worked around the monastery and in the fields, the belief being that idle hands are the devil's playground. Our

own modern work ethic is directly descended from this idea.

Better than a cold shower. Following is an account of how Benedict cured himself of temptation:

“A greater temptation of the flesh than he had ever experienced overtook the holy man. For the evil spirit brought back before the mind’s eye a certain woman whom he had once seen. So intensely did the Tempter inflame his mind by the sight of that woman that he could hardly control his passion. He was overcome by sensuality, & almost considered leaving his solitary retreat. Then suddenly God graciously looked upon him & he returned to himself. Since he saw that thickets of nettles & thorn bushes were growing nearby, he stripped off his garments and flung himself naked upon those stinging thorns and burning nettles. He rolled about there for a long time, and came out with his whole body wounded by them. So through the wound of the skin he drew out from his body the wound of the mind by changing his lust to pain. Although he burned painfully on the outside, he had put out the forbidden flame within.”

The Benedictine Rule, while mild compared to what hermits like St. Anthony were doing, was still strict:

“Idleness is the enemy of the soul. Therefore, the brethren should be occupied at certain times in manual labor, and again at fixed hours in sacred reading...”

“And if the circumstances of the place or their poverty should require that they themselves do the work of gathering the harvest, let them not be discontented; for then are they truly monks when they live by the labor of their hands, as did our Fathers and the Apostles. Let all things be done with moderation, however, for the sake of the faint-hearted.”

“Therefore, since the spirit of silence is so important, permission to speak should rarely be granted even to perfect disciples, even though it be for good, holy, edifying conversation; for it is written, ‘In much speaking you will not escape sin,’ and in another place, ‘Death and life are in the power of the tongue.’

“But as for coarse jests and idle words or words that move to laughter, these we condemn everywhere with a perpetual ban, and for such conversation we do not permit a disciple to open his mouth.”

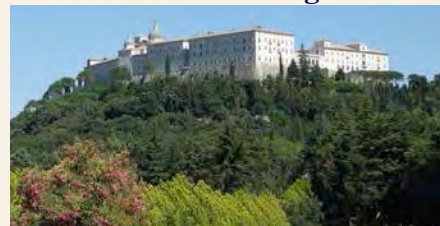
The typical daily schedule for monks went as follows:

- Rise at 2AM for Matins prayers and then sleep for 3 hours
- Other daily prayers were Prime (6 AM), Tierce (9AM), Sext (12PM), Nones (3PM), • Vespers (6PM) and Compline (7PM in winter; 8PM in summer).
- Interspersed with these prayers would be work and other religious devotions.
- After Compline, monks went straight to bed.

Noon. Originally, monks got only one meal per day at 3 PM, which by the Roman way of reckoning time was the ninth hour (nones) from the beginning of the day at what we call 6 AM. However, after six hours of hard work, they would be hungry, so the meal was moved to 12 PM, Aka Sext, the sixth hour. However, mealtime continued to be known by the old time, nones, and still is referred to as noon.

Sign language for the silent meals had 127 different signs. Here are a few:

- Would you like some wine: two fingers as if uncorking bottle
- Pass the butter: Stroke the inside of one’s hand with three fingers.
- Pass the pepper: Knock one index finger on the side of the other
- Pass the salt: Shake three fingers.



Monte Cassino in Italy, was the site of the first monastery in the West. Unfortunately, the allies bombed the original monastery into rubble during World War II.

THE TRANSITION TO THE MIDDLE AGES IN THE WESTERN MEDITERRANEAN (c.500- 700 C.E.)

Introduction: the “Dark Ages”. The disintegration of the Roman Empire in the West left a patchwork of Germanic kingdoms founded on its ruins. The Germanic general, Odovacer, ruled Italy. The Visigoths held Spain and southern Gaul. North Africa was the realm of the Vandals. Britain was divided between the Angles, Saxons, and Jutes, known to us simply as the Anglo Saxons. And the rest of Gaul was starting to fall under the sway of what would eventually become the most successful of these tribes, the Franks. In addition, there were various minor tribes scattered throughout the West trying to carry on an independent existence: Alemanni, Burgundians, Lombards, Heruls, Gepids, Alans, Sueves, and so on.

Traditionally historians have described the centuries immediately following Rome’s fall as a barbaric and chaotic period known as the Dark Ages. However, recent historical research shows a much more gradual transition to the Middle Ages, especially in the Western Mediterranean where Roman influence was more deeply rooted and contact continued with the Eastern Roman (AKA Byzantine) Empire.

Converging interests. To a large extent the fall of the Western Empire saw the interests of the Germanic rulers in the West and Byzantine emperors in Constantinople largely converging. This was largely because of the attitudes that the Germanic tribes and emperors in the Eastern Roman Empire had toward the situation and each other.

From many of the barbarians’ point of view, rather than coming to destroy the empire, they had been looking for new lands within the empire and Roman titles to go along with those lands. For example, the Visigoths originally entered the empire as allies of Rome. Throughout their wanderings, they continued to see themselves as such allies, and occasionally acted accordingly. They settled in Gaul and Spain as part of a deal with Rome where they would clear other tribes out of those provinces for the empire. Many of them also fought at Rome’s side against a much more deadly common enemy, the Huns. When dividing their new lands between themselves and their Roman subjects, they even tried to follow an old Roman custom known as *hospitalitas*, where the conquerors would take one-

third of any conquered lands and leave the other two-thirds for the natives.

Therefore, the Germanic kings wanted Roman titles for two basic reasons. For one thing, even if they had contempt for their unwarlike subjects, they still stood in awe of the Roman achievement with its vast empire, network of roads and incredible system of aqueducts and wanted to carry it on, although ultimately they failed. Secondly, holding Roman titles made the Germanic rulers look more like legitimate rulers to the Roman natives under them. This was doubly important since most of these tribes were Arian Christians facing the hostility of their Roman Catholic subjects.

At the same time, the emperors in Constantinople still wanted to keep their legal claim to the lands in the West until they were strong enough to take them back. Therefore, they granted Roman titles to the new Germanic rulers to maintain the legal fiction that the Empire was still alive in the West and owed allegiance to the one emperor in Constantinople. This way, they could bide their time until the Eastern Empire was strong enough to reclaim the West in reality as well. Until that time came they would have to follow other strategies.

One such strategy was to play different tribes off against one another. This was especially tempting in the case of the Ostrogoths (cousins of the Visigoths) who were troubling the Eastern Empire. The Byzantine (East Roman) emperors decided to kill two birds with one stone by diverting the Ostrogoths into Italy, giving them the legal right to settle there. This way, they would be rid of the Ostrogoths while weakening them and Odovacer in the fight for Italy, hopefully, opening the way for eventually reclaiming it for themselves. Therefore, in 487, the Ostrogothic king, Theoderic, led his people into Italy, which they soon conquered.

Theoderic's rule in Italy is a perfect example of how well some of the Germanic tribes had absorbed Roman culture during the last 200 years. While his army consisted solely of Ostrogothic warriors, Theoderic was smart enough to keep the Roman civil servants in charge of day-to-day government operations. And even though the Ostrogoths were Arian Christians, Theoderic showed tolerance for his Roman Catholic subjects who made up most of the population. He also had swamps drained, harbors dredged, and aqueducts repaired. As a result of this enlightened rule, Italy, which had been a parasite on the rest of the empire for centuries,

was self-sufficient for the first time in 500 years. However, trouble was looming on the horizon.

Justinian and the reconquest of Italy. In 527, Justinian I became emperor in Constantinople. He has been called the last of the Roman emperors, since he spoke Latin and was clean-shaven. After him, the emperors spoke Greek, wore beards, and are generally called Byzantines rather than Romans. Justinian also saw things from a Roman point of view and worked to restore the old boundaries of the empire. Therefore, he turned the Eastern Roman Empire's resources toward reconquering the West.

His first campaign against the Vandals in North Africa was a quick and resounding success. Easy living had sapped the Vandals' vitality, and the Catholic population resented persecution by their Arian rulers. From North Africa, the Byzantine forces moved north against the Ostrogoths. Sicily and Southern Italy fell almost without a fight, and it seemed Justinian's dream of a reunited Roman Empire might come true. Then trouble hit as the Ostrogoths regrouped and counterattacked. What ensued were twenty years of warfare raging up and down Italy. Rome was besieged three times and, for a while, became a virtual ghost town.

In the end, Justinian conquered Italy, but it was a costly victory for both the Eastern Empire and Italy. The cost of his wars in the West, tribute to keep the Persians to the east quiet, and a devastating epidemic (probably Bubonic Plague) left the Eastern Empire exhausted. This opened it up to 200 years of invasions from all directions, which nearly destroyed it.

As far as Italy was concerned, three years after Justinian's death in 565, a new tribe, the Lombards, invaded from the north and conquered about half of the peninsula. Pope Gregory I even had to lead Rome's defense since the Byzantines were unable to defend it any longer. Rome had passed from the city of the Caesars to the city of the Popes, while Italy would remain fragmented into a number of warring states for 1300 years until its final reunification in 1871.

A gradual transition. As stated above, historians have revised their traditional view of a sudden collapse of civilization in Western Europe during the early Middle Ages, seeing instead a gradual transition to medieval civilization. This was especially true for the areas surrounding the Mediterranean that were reclaimed by the

Byzantines or were ruled by tribes strongly influenced by extended contact with Rome before taking over. However, this period was a mixed bag, showing signs of continuity with the Roman Empire in some ways, but decline or change in others.

There were several areas of continuity and even revival. For one thing, both the Byzantines and Germanic rulers maintained Roman law codes for their Roman subjects. Justinian's codification of Roman law reinforced this trend in areas of Byzantine rule (N. Africa, Italy, and S. Spain). The Church, which maintained its own courts, also used Roman law, spreading its influence among the Frankish, Lombard, Visigothic, and Celtic realms.

The social structure of the old Roman lands largely continued as before. Although the old Roman nobility had been expelled by the Vandals and Lombards in North Africa and parts of Italy, they remained influential in Spain, Southern Gaul, and Central Italy, having fled to their country estates to avoid religious persecution and tax collectors in the cities. Over time, many of these nobles would intermarry with the ruling Germanic nobles, blending into a new ruling class that by 700 had even replaced their tripartite Roman names (e.g., Gaius Julius Caesar) with Germanic forms. By the same token, the late imperial trend continued where peasants sought protection from nobles in return for their freedom.

After the turmoil of the invasions subsided, agriculture revived somewhat as peasants abandoned marginally productive lands in favor of more fertile ones. This involved dispersal of the population from the safety of the estates to more rural areas where some peasants could maintain or reclaim their freedom from nobles. An abundance of coin hoards indicate trade also continued to thrive across the Mediterranean as Byzantine silks, Egyptian papyrus and natron (for making glass), and Chinese and Indian spices were traded for Western products such as grain, pitch, pottery, and slaves. Likewise, Germanic kings and a large number of local mints issued gold, but not silver or bronze, coins according to Byzantine standards. However, the huge purchasing power of gold made trade on a small scale difficult, leading to a gradual deterioration of the gold coinage to conform to real trade conditions. It remains a mystery why the Germanic rulers failed to issue silver and bronze coins.

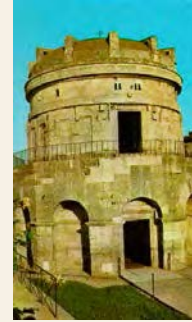
However, areas of decline and change existed alongside those of continuity and revival. One

unfortunate policy of continuity was the oppressive tax system of the late empire and the self-perpetuating bureaucracy needed to run it. However, as rulers tried to squeeze as much as they could from the economy, their subjects often revolted or fled the tax collectors, letting themselves become nobles' serfs in return for protection from the government. As a result, tax revenues diminished, causing a gradual break down of the old Roman administration.

Cities overall in the Western Mediterranean went into decline, ceasing to function as centers of either production and consumption or centralized administration as Roman central government broke down. Wars seriously damaged some cities, such as Milan, Trier, and Arles. Rome especially suffered, with its population declining from an estimated 800,000 in the 300s to 25,000 after the turmoil of the Byzantine re-conquest. However, other cities, such as Pavia and Ravenna in Italy, Toulouse and Paris in France, and Toledo and Barcelona in Spain, revived as centers of local government, trade, or church administration. Such cities were always walled and, if the seats of royal government, mimicked Roman imperial cities with palaces, palace staff, and royal retinues. More often they were centers of trade and local administration with a count (from the late imperial *comes*) and/or a bishop over-seeing local administration, justice, and commerce. Bishops were an especially new factor, since they ran their own courts, hospitals, and hostels for travelers. As agriculture (and church revenues from its lands) revived, bishops became the primary patrons of new buildings. Thus the landscape of early medieval cities saw Roman secular monuments give way to more religious buildings such as churches and bell towers.

The armies of these new states differed greatly from the professional Roman armies of old. For one thing, Germanic rulers usually used only their own people for military service, excluding the Roman population. Also, as government funds declined, soldiers were typically paid with land instead of money. In partial compensation, kings, nobles, and even bishops typically kept their own private armies of retainers, known then as *bucellarii* (Latin for "biscuit eaters"). Thus we see the beginnings of the more private feudal armies of a later age.

Trying to Do as the Romans Did



Theoderic's mausoleum, showing how he consciously copied the Romans, most likely using Roman artisans.

One of the common myths about the Germanic peoples who took over the Western Roman Empire was that they came in to destroy it. Granted, their first contact with Roman civilization (e.g., the Goths in the third century) was generally hostile. But as time went on and they became more familiar with Rome's cities and culture through trade, serving as mercenaries, or even as slaves or hostages, they came to appreciate the Roman achievement, especially its material comforts. In that particular sense, Diocletian had done his job well, buying the empire two centuries to get its northern neighbors to get used to and absorb at least some of its culture.

Not that it worked perfectly. There was something of a sliding scale based on length of exposure that largely determined how well the new rulers in the West absorbed the older civilization they now were in charge of. Italy, having the oldest and most deeply rooted cities along with maintaining more contact with the Byzantines in the East, fared the best and was the first to revive. Gaul and Spain also did fairly well in maintaining the old culture, as seen even today by their languages, which we still refer to as Romance languages because of their Latin roots. This can largely be attributed to the fact that their new rulers, the Franks and Visigoths respectively, had experienced prolonged contact with Rome before finally taking over.

At the other end of the spectrum was Britain, the last province to be conquered and civilized by Rome and the first to be abandoned in the West.

The new owners, the Angles, Saxons, and Jutes, having little previous contact with Rome, had little appreciation for its accomplishments and were much more destructive than their cousins across the Channel. Thus English is a Germanic language (with a strong Latin influence thanks to the later invasion by the Norman-French in 1066), and no Roman monuments survive comparable to the aqueducts and theaters one finds in France and Spain.

Still, the Germanic rulers' success in keeping Roman civilization running was limited by their incomplete understanding and appreciation of how it worked, in particular bureaucracies for collecting taxes to finance the building and maintenance of such things as roads and aqueducts. The physical magnificence and value of public monuments was much more obvious and appealing than was the need to sit in schools learning to read, write, add, and subtract. However impressed the Franks and Goths may have been by the sheer size of Roman aqueducts and theaters, they probably had more contempt for the sedentary people they found in charge of them. Not that it was a one-way street. The Romans looked down their noses at the barbarians and their culture as well, even passing a law forbidding their citizens to wear Germanic trousers. Thus the blending of these cultures into something new and dynamic would take centuries.



Above left: a coin of Romulus Augustulus, the last Roman emperor in the West.
Center: a coin of Theoderic (493-526), in the name of the Eastern emperor Zeno
Right: a Visigothic coin from a century later, showing how the ability and willingness to maintain Roman standards gradually declined

Justinian's Italian Wars (535-55)



The Byzantine general, Belisarius, commanded mostly a mixture of mercenaries, including Huns whose hit-and-run tactics were very effective against the less mobile Ostrogoths.

In 526, the Ostrogothic king of Italy, Theoderic, died and was succeeded by an able and intelligent offspring, Amalasutha, who unfortunately was a woman. Facing opposition from the Ostrogothic (and Arian) nobles, she sought support from the Roman Catholic populace, which made the nobles even madder. Looking for some security, she married her first cousin, who murdered her in 534, giving Justinian the excuse to reclaim Italy, as well as protecting the Roman Catholic population.

Justinian's general, Belisarius, who had just conquered Vandal North Africa, sailed to Sicily, which he took without any serious resistance. From there he crossed to South Italy and marched virtually unopposed until he reached Rome. That was when his problems began.

The First Siege of Rome (December 537-December 538). Initially, the Goths abandoned Rome upon Belisarius' approach, supposedly evacuating through one gate as Belisarius entered through another. However, they soon returned to retake the city, leading to the first of three sieges of the old imperial capital.

Since Rome was too big to surround with their forces, the Goths built seven fortified camps to command the exits, still forcing Belisarius to defend the entire wall with a force of only about 5000 men. Gone were the days when the Romans could field forces of 60,000 men or more.

The siege was a classic game of move and counter-move. For example, when the Goths cut water to Rome's aqueducts, Belisarius blocked them off to keep the besiegers from sneaking in to the city. Since the aqueducts had also provided power for milling the city's grain, Belisarius compensated for their loss by putting boats fitted with mills in the Tiber River. When the Goths threw logs and dead bodies into the river to break up the mills, Belisarius countered by putting a chain across the Tiber to stop any floating debris.

In one assault on the city, Hadrian's mausoleum (Aka Castel d'San Angelo) was defended by pushing statues ringing it down on the Goths. For another assault, the Goths supposedly used siege towers drawn by oxen, which Belisarius just laughed at and shot, stranding the towers and dead oxen in the middle of a field.



This raises the question of whether the Goths were indeed as "dumb as oxen" and so clueless about siege warfare, or whether the pro-Byzantine source, Procopius, wanted to portray them as ignorant barbarians to enhance the reputation of his hero, Belisarius. The Goths certainly had been in contact long enough with the Romans to see siege towers in action and that hauling them with oxen was a dead end solution to attacking a fortified city.

During the siege much of Rome's population left the city due to diminishing supplies and the fact that the Goths couldn't guard all the city's exits. The Goths had effectively cut off Rome's grain supplies from the sea by taking its harbor, Portus. By June hunger was hurting both the population inside and the Goths outside Rome.

Eventually, Roman ships broke through to the Tiber and resupplied Rome, forcing the Goths to retreat. Although Rome had been saved, the destruction to its aqueducts during the siege ruined its water supply for 1300 years.

Stalemate (538-545). After this, the Goths were driven to Northern Italy and besieged in their capital, Ravenna. Meanwhile, Justinian, needing peace in the West due to war with Persia, signed a treaty with the Goths dividing Italy between them in the North and the Byzantines in the South. Despite this treaty, Belisarius, seeing how close the Goths were to surrendering persevered with the siege of Ravenna until it surrendered. This, and the story that the Goths would only surrender to Belisarius aroused the suspicions of the emperor, who recalled his general and divided his part of Italy between several generals who also mistreated and alienated the population. Therefore, in just a few months, the Goths regained ground they had lost over the previous five years.

This led to a second siege of Rome (545-546), which was defended by a garrison of only 3000 men led by a corrupt general, Bessus, who profited by selling grain at exorbitant prices to his hungry subjects. Starvation and death raged till Bessus allowed people to leave Rome. Unfortunately, many who left, were captured and killed by Gothic patrols.

Several attempts were made to break through the Goths' blockade of the Tiber. Even the pope, staying in Syracuse sent grain ships that fell into an ambush because, when the garrison at Portus waved and signaled to *warn* them off, the crews thought they were *welcoming* them and sailed into the trap.

At this point, Belisarius, sent to retrieve the situation, tried to relieve Rome up the Tiber. The Goths had a wooden boom across the river with a tower at each end and an iron chain reinforcing it further down stream. To attack this, Belisarius bound together two broad boats, each with a tower on top of which he put boats loaded with pitch, sulphur, resin, and other

combustibles. As the boats approached the blockade, they lit and dropped the boats, burning the towers and 200 Goths. However, a rumor that Portus and his wife had been captured caused Belisarius to return, allowing the Goths to reblock the river.

independently of the Byzantines, he made peace with the Lombards, marking the growth of an increasingly independent Papacy.

[Back to flowchart](#)

In the end, Isaurian mercenaries, mad over being unpaid, betrayed Rome to the Goths. By this time, the city, which once had a population of one million, had only 500 people left, and the Goths killed 60 of them. Instead of trying to hold Rome, the Gothic king, Totila, destroyed parts of the wall and gates and abandoned the city, which Belisarius reoccupied and tried to repopulate by re-establishing the grain markets and encouraging surrounding people to move into deserted homes.

A desultory war of sieges followed with nothing much accomplished. Belisarius, who never had adequate forces or support from Constantinople, was again recalled. Rome even endured a third siege (549-550), which it endured by planting crops in its deserted areas. However, the city was once again betrayed by Isaurian mercenaries bitter over no pay. By this time, only a few strongholds remained in Byzantine hands, the Goths even being able to ravage Sicily.

At this point, the war took another unlikely turn. In 551, Justinian sent a new general, Narses, who was 70 years old, and had little or no military experience. He also turned out to be surprisingly talented. By 555, Narses had defeated the Goths in a series of battles, retaken Rome (again), and had regained all but a few strongholds. After twenty years of grueling warfare, Italy was once again part of the Roman Empire, but at a heavy cost.

And its troubles weren't over yet. In 568, only three years after Justinian died, a new people, the Lombards (Longobards), invaded Italy and took large parts of it.

Rome only escaped Lombard (and Arian Christian) rule, thanks to Pope Gregory I (590-604) who organized its defense and provided relief services food for the poor. Finally, and

THE RISE OF THE FRANKS (c.500-814 C.E.)

Much of Europe's destiny would be tied in with a new Germanic power, the Franks. This tribe had played a minor role in the breakup of the Roman Empire. In fact they had occasionally served as loyal allies, defending Rome's Rhine frontier against the invasions of the Vandals in 406 and the Huns in 451. However, after 451 when the Western Empire was coming totally unraveled, the Franks made their move and started taking northern Gaul. It was at this time that the first of their great kings, Clovis, emerged.

Clovis was only fifteen when he came to the throne in 481. Despite his youth, he was an ambitious and capable ruler, who made a shrewd and far-reaching move of converting to Catholic Christianity. The story goes that in a desperate move to influence the course of a battle against another tribe, the Alemanni, he prayed to the god of the Christians to give him victory in return for his conversion. For whatever reason, the Franks prevailed, and Clovis kept his promise and became a *Catholic* Christian like his Roman subjects. While most other Germanic tribes were Arian Christians, often persecuting and alienating their Roman Catholic subjects, the Franks could count on more loyal support from their Catholic subjects, allowing the Franks under Clovis and his immediate successors to expand rapidly at the expense of the Arian Christian kingdoms around them. By 600 C.E., this factor of Frankish rulers and Roman subjects united by the Catholic faith made the Frankish kingdom the largest and most powerful of the Germanic states to succeed the Roman Empire in the West.

Unfortunately, the Frankish kings shared the other Germanic tribes' concept of the state as the king's property and, as a result, split the kingdom between their sons when they died. Not surprisingly, civil wars and turmoil followed, plaguing the Frankish realm from the death of Clovis in 511 to the early 700's, leaving the Franks split into three kingdoms: Austrasia, Neustria, and Burgundy. All were ruled by weak "do nothing kings" that let their kingdoms degenerate into further turmoil.

Luckily, new officials, called mayors of the palace, emerged to rebuild the Frankish state. One of them, Pepin of Heristal, reunited the Frankish kingdom and laid the foundations for one of the greatest dynasties of the Middle Ages, the Carolingians. Several factors helped in the resurgence of the Franks under the Carolingians. One was the decline of the neighboring Germanic kingdoms because of the anarchy and decay generated by their poor understanding of the Roman state they had inherited.

Another factor was the Frankish adoption of the stirrup for warfare. While the Frankish kingdom had been wrecking itself in civil wars and palace intrigues, a dynamic new power had been rising in the East: the Muslim Arabs. United and inspired by their new religion, Islam, the Arabs had swept both to the east and west with incredible speed. A century after the death of the prophet, Mohammed, Muslim armies had conquered North Africa and Spain and were raiding into southern Gaul. In 733, the Frankish mayor of the palace, Charles Martel, turned back an invading Muslim force at the Battle of Tours.

Historians have argued whether this was the defeat of a major invasion or just a large raid. Either way, it apparently saw the dramatic introduction of the use of the stirrup in battle and the rise of mounted knights as shock cavalry that would rule the battlefields of Western Europe for centuries. Since the Franks were the first to adapt the stirrup for this purpose, they gained a decisive military edge over their enemies and a reputation as the fiercest fighters in Western Europe. Writers of the period would typically refer to any warriors from that region as Franks because of that reputation.

The third factor helping the Franks was the natural alliance of rulers with the Church who often needed each other's help. This especially held true for the Franks and the pope. Charles Martel and his son, Pepin the Short, continued to rebuild the Frankish state to its previous status as a great power. However, they did this as mayors of the palace, while the "do nothing" Merovingian kings they served did nothing useful except ride around in a cart from estate to estate. Pepin wanted the crown as well as the power and authority, and in 752 he

got it thanks largely to the Lombards who were hard pressing the popes. Pepin helped the pope against these enemies in return for his blessing to take the Frankish crown for himself. Soon afterwards, Pepin shaved the king's long hair (the symbol of royalty), packed him off to a monastery, and had himself declared the new king, thus officially establishing the Carolingian dynasty as the ruling family of the Franks.

Archaeological evidence points to a fourth factor helping the Franks at this time: money. Although the Germanic kingdoms were not producing much silver coinage at the time, the Arab Muslim caliphs to the east were. Much of this money was making its way through Russia and the Baltic Sea to the Franks in return for such things as furs and slaves. This increased silver supply gave the Franks the means to expand and consolidate their power and helped pave the way for the greatest ruler of early medieval Europe: Charlemagne.

Charlemagne (768-814). Possibly the most legendary figure in the medieval period was Pepin the Short's son, Charles, known to us as Charles the Great or Charlemagne. As is true of any legend, there was some factual basis for certain stories surrounding this remarkable man, but there was also a good deal of fantasy. Physically he was a big man, which in the simple world of the eighth century helped him assert his authority among those around him. He was also a strong willed man, which was necessary for holding together an empire under such primitive conditions as existed then. There were three aspects of Charlemagne's reign that were especially important: his conquests, his attempts to revive Roman culture in what is known as the Carolingian Renaissance, and the revival of the Roman imperial title.

Charlemagne was an extremely energetic king who spent a large part of his reign campaigning on his empire's ever widening frontiers: in Italy against the Lombards, in Spain against the Muslims, in the east against the Avars, and in Germany against the Saxons whom he forcibly converted to Christianity at the point of the sword. By the end of his reign, Charlemagne's empire contained most of Western Europe: France, Germany, Austria, half of Italy, the

Low Countries, and Denmark. The size of his empire was the primary basis for his later legend.

Charlemagne did his best to rule his empire efficiently, but there were too few trained officials with which to rule and too many lands for them to administer effectively. As a result, he also had to delegate a good deal of power to local nobles who ruled in his name. Although the king's officials did travel around to periodically check up on the nobles and Charles himself was a strong enough king to inspire most men to keep in line, he failed to set up a lasting government that could function under less exceptional kings. As a result, when Charles was gone, his empire fell apart.

People have argued over whether Charles was a barbarizing or civilizing influence on Europe. On the one hand, he did spend a lot of his reign fighting, and occasionally used some brutal methods, especially in converting the Saxons to Christianity. On the other hand, he patronized culture and the arts in what came to be called the Carolingian Renaissance. This was a self-conscious revival of Roman culture, which people then looked back upon as a golden age. There was very little that was original in this revival, but it did manage to copy a large number of Roman books. As a result, 90% of the oldest versions of Roman texts we have come from the Carolingian Renaissance.

The most celebrated event of Charles' reign was his being crowned Roman emperor by the pope on Christmas day, 800 AD. There has been endless debate about the motives of Charles and the pope and just exactly what this revived title meant three centuries after the end of the Roman Empire in the West. The revival of such a title does show how much of a grip the memory of the golden age of Rome had on the medieval imagination. The real importance of this revived title would fade somewhat after Charlemagne's death and not regain its luster until 961 when the ruler of Germany, Otto I, was crowned emperor by the pope. For some 850 years, Germany would be known as the Empire, or the Holy Roman Empire. Despite the glory it invoked, this title would ultimately be a source of tremendous problems for Germany. In later years, it was said that it was neither holy, nor Roman, nor

empire, but we can see that it represented a powerful idea.

Succeeding generations would look upon Charlemagne's reign as a golden age. Indeed, his realm did encompass most of Western Europe in a larger and relatively peaceful empire. It also tried to revive the grandeur of Rome's empire and culture. And a powerful energetic king did rule over it. Therefore, even though his empire collapsed soon after his death, Charles' reign did have lasting and profound effects. Frankish political institutions, in particular feudalism, and military tactics (the mounted knight) would dominate Western Europe for centuries. In fact, the predominance of Frankish culture and customs was so overwhelming in Western Europe that the Byzantines and Muslims typically referred to anyone from Western Europe as a Frank.

Possibly the most significant sign that Charlemagne's reign was a turning point in history was the fact that for the first time scholars referred to a unified culture and realm known as Europe. After Charlemagne, Western European culture would no longer be a cheap imitation of Roman culture. Rather, from now on, it would define its own institutions and culture in its own terms. Western Civilization was being born.

The disintegration of the Carolingian order (814-c.1000). Charlemagne's death seemed to be the signal for every thing to go wrong at once. Indeed, a number of factors did combine to send Western Europe into some of its darkest centuries ever. For one thing, the money coming from the Arab Muslims that helped make possible the palace and cathedral that Charles had built in his capital at Aachen dried up as the caliphs in Baghdad lavishly spent themselves into bankruptcy. This led to a decline of trade that caused a reversion to a land-based economy and a weaker government. This in turn hurt the Vikings in the north and Arabs in the south who had relied on Arab silver and trade. As a result, they turned to raiding and piracy, which further weakened the Frankish economy and state, causing more raids, and so on.

Along these same lines, the growing dependence on mounted knights for defense also meant a growing

dependence on nobles to provide those knights. Since there was no money to pay these nobles, the king had to give them land, which regenerated wealth in the form of crops, making the nobles independent of the king's authority and therefore more rebellious. Rebellions also invited invasions, which encouraged more revolts, etc.

Finally, there were problems within the ruling family. Charlemagne's successor, Louis the Pious, was a weak king who let matters get out of control. He also followed the old Germanic custom of dividing the state among his three sons as if it were personal property rather than a responsibility. This division led to civil wars that ended with splitting the Frankish realm into three states: West Frankland (roughly corresponding to modern France), East Frankland (roughly modern Germany), and Lotharingia, (modern Lorraine) in the middle. Because of its position between France and Germany, Lorraine would remain a source of conflict between its neighbors into the twentieth century. Civil wars also forced the kings to give away more and more royal lands for military support. Soon those lands were parts of virtually independent states. And, as with the independent nobles and weakened economy, turmoil at court also invited invasions.

These invasions came from three directions. From the south came the Muslims who devastated parts of Italy and southern France with their raids. From the east came the Magyars, nomadic horsemen related to the Huns. Eventually they would be defeated and would settle down to found the kingdom of Hungary. Worst of all, from the north came the Vikings whose raids and invasions tore a good part of the Frankish state to pieces and nearly overwhelmed England. In 911 C.E., the Viking chief Rollo gained recognition from the French king to rule what came to be called Normandy in return for military service to the crown. Of course, the Vikings, or Normans, were their own men and lived under the king's rule in name only. By 1000 C.E., France was a hopeless patchwork of some 55 virtually independent principalities. The king was the nominal ruler of all this, but in reality just the head of one of these many states. As a result, a new political order would emerge: Feudalism.

Clovis and the Rise of the Franks



Medieval tomahawks and mohawks. The Franks supposedly got their name from the distinctive type of throwing ax, the *francisca*, which they used in battle. They also wore distinctively striped clothes and hair that was shaved around the sides and backs of their heads, leaving only a tuft of hair on top.

Clovis' conversion to Catholic Christianity was probably the most far-reaching act of his reign c.(466-511). But it wasn't easy. Clovis' wife was a Burgundian princess, Clotilda, who was also a Catholic Christian. In deference to his wife, Clovis allowed their first son to be baptized, but he soon died, a common enough occurrence until very recently. However, it was only after much persuading that Clotilda got her husband to agree to have their second son baptized. As luck would have it, he also fell sick, and only recovered after intense praying by his mother, which made his recovery seem like a miracle. It was soon after this that Clovis' famous conversion in the midst of a battle with the Alamanni in 496 occurred.



Clovis' baptism

Such conversions often took place in the wake of perceived miracles, in particular military

victories, thus creating the perception of Christ as a god of war. This would particularly appeal to warlike tribes such as the Franks. In addition, some 400 of Clovis' closest followers also converted, which would have the likely "trickle down" effect of other Franks of lower status also converting.

The conquest of Visigothic Gaul (507). At the time, the Visigoths were a much larger and more prestigious people than the Franks. But being Arian, they had to worry about the loyalty of the 80-90% of their population who were Roman Catholic. This plus a decisive defeat at the hands of the Franks in 507 drove them out of Southern Gaul, thus confining their power to Spain. After a series of mostly weak kings and years of instability, the Visigoths finally converted to Catholic Christianity in 586, too late to save their holdings in Southern Gaul.

Paris first became the capital of the Franks under Clovis, and would continue to be on and off under the Merovingian Dynasty. A permanent capital was seen as a sign of the transition from barbarism to civilization. However, the transition was only partial for some time, since it was so hard to transport supplies across country to support a large court at a central location. It was more common for kings to travel from one estate to another, making it easier for the country to support them, as long as they kept moving. In the absence of any mass media, it was also useful for people to get a first hand look at their king to reassure them that he did indeed exist.

Just family politics. Clovis was king of the Salian Franks, but not the Riparian Franks. In 509, the son of the Riparian king, convinced by Clovis that he would support him, murdered his father to seize the throne. But Clovis immediately denounced the son as a murderer, "avenged" his father's death, and took control of the Riparian Franks for himself.

The tradition of vicious family politics continued after Clovis' death. And it wasn't confined to the men. In particular, a blood feud between Queen Brunhilde and a servant girl, Fredegunde, led

to the latter having both the queen and her sister murdered, leading to a round of civil wars that tore the realm apart.

The old empty chest of relics trick. Even the Church got dragged into this nastiness.

According to one story, Martin, a friend of Pepin of Heristal, was trapped in a church. His enemies lured him out by swearing over a chest of holy relics they would not harm Martin. However, when he came out, he found the chest had been empty, so his enemies could kill him without feeling guilty.

Wamba the Visigoth. The Franks weren't the only people involved in family intrigue. Take, for example, Wamba, the Visigothic king (672-680) who was deposed in a most peculiar way. According to one version, Erwig, a rival for the throne administered a sleeping potion so that the king lay apparently dying. As was common right before death, his servants dutifully shaved his head and dressed him as a monk to make him more holy. When he woke up, he was now a monk and, according to Visigothic law, could no longer be king, leaving the way for Erwig to take the crown. Wamba, being especially devout, supposedly was happy to give up the throne, which he never wanted, and ended his days in religious contemplation.

After Wamba, the Visigothic kingdom went into decline and fell to the Arab Muslims in 711.

Frankish Revival and the Birth of the Papal States (687-768)



The Frankish army at Tours consisted almost entirely of infantry. The core of it was seasoned veterans of Charles Martel's wars since 717. They were the ones who withstood the Moors cavalry charges. The

rest of the army was made up of untrained peasant militia who would have been virtually worthless in the battle, since they generally would panic at the first charge of enemy cavalry.

By 650, the Merovingian monarchy had degenerated into meaningless figureheads known as "Do Nothing Kings", wandering around in carts from estate to estate showing off their long hair that symbolized their privileged position. Meanwhile, officials, known as mayors of Palace (Sp. *Major Domo*), who originally just ran the palace while kings were away at war, took over running the whole government.

In 687 Pepin II of Heristal, Mayor of the Palace for Austrasia, succeeded in reuniting the Frankish realm. When Pepin died in 714 and his legitimate son was assassinated, his illegitimate son, Karl (Charles) Martel took power. The name Karl (English churl) originally denoted the lowest class of peasants, but soon came to have regal associations. His nickname, Martel, meant hammer, possibly referring back to the late biblical figure, Judas Maccabee, and Charles' own showdown with a Moorish invasion of the Frankish homeland.

The Battle of Tours (732). Arab forces from Spain had been raiding Southern France for several years before 732, having established a base at the city of Narbonne on the Rhone River. In 721, Count Odo of Aquitaine had surprised and defeated an invading force besieging Toulouse, which served as a temporary setback for the Moors, who soon renewed their incursions into the Frankish lands. After crushing Odo's army near present day Bordeaux, they continued north and were surprised to find Charles Martel waiting with a sizable force in north-central France near Tours.

The core of his army was a force of infantry seasoned by years of campaigning with him and drawn up in a rectangular shield wall at the top of a hill. While the Moorish forces largely consisted of cavalry, the Franks had little or none. However, as long as they held formation, they were able to repulse the repeated enemy attacks. (Horses don't like charging into tightly

packed masses of angry men armed with spears.) This was one of the few battles in medieval Europe where infantry defeated cavalry. Being late in the season, the Moors retreated to Southern France.

The significance of the Battle of Tours is still being debated. While it's now clear that heavy shock cavalry using the stirrup was not part of the Franks' success, it does seem that contact with Moorish cavalry using the stirrup was an inspiration for the revolution in shock cavalry that soon swept Western Europe.

More immediately, Charles Martel followed up his victory by gradually reconquering Southern France from the Moors. His son and successor, Pepin the Short would complete the process by taking the Moors' main base, Narbonne, in 759. Whether Tours was a decisive battle or just showed the extreme limit of how far Muslim forces could advance into Europe, it marked a turning point in history.

A special place in Hell. Relations between the Frankish rulers and Church weren't always so smooth. For one thing, in 732, Charles Martel confiscated large tracts of Church lands to pay for the army that repulsed the Arab Muslims (aka, Moors) at the battle of Tours. In the eyes of the Church, this, and his failure to help the popes against the Lombards, earned him a special place in Hell. More likely, Martel's army helped save Europe and the Church from continued Muslim invasions and maybe even conquest. However, the jury is still out among historians on the significance of the Battle of Tours.

It was Martel's son, Pepin the Short (741-68), who would make the Carolingian family the legal as well de facto rulers of the Franks. The key to this was the Pope, who was under constant attack by the Lombards. In return for agreeing to help the Pope, Pepin sent an innocent-sounding letter in 751 asking the hypothetical question of whether a person without authority should be king, or should it be the one with the authority. The Pope answered that the one with the authority should be king, leading to Pepin

shaving king's long hair and packing him off to a monastery. After that, Pepin was crowned by a French bishop with the words "by the grace of God."

However, when the Pope asked for further help against the Lombards, Pepin made him come to Frankland and redo the coronation. This led to an ongoing dispute throughout the Middle Ages of who had more authority: the popes who spiritually ruled Christianity or kings and emperors who defended it.

The birth of the Papal States. About this time, Pepin donated to Pope Steven III (768-772), the provinces of the Byzantine Exarchate and lands recently taken from Astolfo, King of the Longobards (749-756). Thus was born the Papal States, the defense of which would constantly keep the popes distracted from their spiritual duties for centuries.



Pepin the Short's legate Fulrado, Abbot of Saint-Denis, donates Italian lands taken from the Byzantines and Lombards to the Papacy, thus establishing the Papal States.

The Donation of Constantine. To further boost its power, the papacy came up with a document whereby Constantine I had donated the entire western half of the Roman Empire along with Judea, Greece, Asia, Thrace and Africa to Pope Sylvester I for instructing him in Christianity and curing him of leprosy. Throughout the Middle Ages Popes would use this document to support the claims of the Church against those of secular authorities, especially those of the German rulers of the Holy Roman Empire.

One problem: the document was a forgery from the eighth or ninth century. Although suspected as such, it was finally proven in 1440 by the Italian humanist, Lorenzo Valla, who showed that it was written in Medieval Latin, not the classical Latin of Constantine's day.

A Portrait of Charlemagne



Physical description and character. Based on his skeleton, which was exhumed in 1861, Charles was 6' 3.5", a huge size for back then, which he most likely got from his mother, Bertha of the Big Feet, not his father, Pepin the Short. Supposedly, the length of Charles' foot set the standard for the measurement, the "foot". He was the product of *friedelehe*, a looser form of Germanic marriage the Church considered polygamy. While the Church considered Charles illegitimate, in Frankish eyes he, along with his grandfather, Charles Martel, and son Pepin, all products of *friedelehe*, were legitimate.

According to his biographer, Einhard, Charles was a big eater but light drinker, unusual for back then, and hated drunks. He was easy going and so sociable he even liked people to hang around during his baths. He would invite anyone to dinner and was accessible to all. He had a bell at his capital, Aachen, with which anyone could summon him. He was also a doting father for his daughters whom he encouraged to have affairs at court rather than to marry and move away. However, he had his sons raised away from court to encourage independent action.

Charles was also vain and egotistical, which is typical of great men, and especially loved flattery about his religious and philosophical wisdom. He was religious in the superstitious manner of his day, going to church several times a day and having a large collection of religious relics. He studied astronomy/astrology (back then the same thing) to divine the future in the stars, plot his course of actions and calculate the time of movable feast days. At his death he left only one twelfth of his treasury to his heirs and the rest to the Church for it to pray for the salvation of his soul.

Charlemagne's Wars



A Carolingian manuscript showing the Frankish army at the time of Charlemagne, much of which no consisted of cavalry equipped with stirrups, a radical change from the army of his grandfather, Charles Martel, at Tours

Charlemagne spent much of his reign in the saddle and on campaign. In addition to his conquests, Charlemagne also quelled a rebellion in Aquitaine (769) and two more in Brittany (786-88 and 799), returned to fight in Spain (793 and 795), and fought the Byzantines in Italy (802-12) until they recognized his imperial title.

In 772, Charles invaded Saxony to convert it by the sword after the murder of several missionaries there. Saxons resistance melted away into the woods, allowing the Franks to destroy their sacred tree, Irminsul, and set up several churches and monasteries. After Charles went home, the Saxons retaliated by attacking the monasteries and churches.

Thus began the Saxon campaign, which followed a dreary pattern of Frankish invasions and Saxon revolts over the next thirty years (774-78, 782-85, 799, & 804). In the process, Charlemagne practically depopulated Saxony with a policy of massacres and forced expulsion of the Saxon people, leaving a blight on his reputation. However, Saxony became the most Frankish of Charlemagne's conquests since its population mainly consisted of Franks who moved into this virtually empty land.

Charlemagne also waged several wars against the nomadic Avars (791 & 796) and various Slavic tribes to the east (803). Already weakened

by a new group of nomadic warriors, the Bulgars, the Avars, were so thoroughly defeated that there is still a Russian expression, “to vanish like an Avar,” indicating something has suddenly and completely vanished.

Charlemagne’s eastward expansion against the Slavs would be continued for centuries by his East Frankish successors (AKA Germans) in a movement known as the *Drang nach osten* (drive to the east). When Hitler invaded Russia in 1941, the codename for the invasion was *Barbarossa*, the name of a medieval German ruler especially remembered for his eastward expansion against the Slavs.

In 773, Charlemagne entered Italy to protect the pope against the Lombards. After a nine-month siege, the Lombard capital, Pavia, fell and Charles assumed the Lombard crown. The region of Italy the Lombards ruled is still known as Lombardy.

In 778, Charlemagne went into Spain to help rebels against the Muslim ruler there and supposedly to avenge Muslim raids into Frankland. However, while besieging Saragossa, news came of a major Saxon revolt that forced him to leave Spain. Despite two more campaigns in Spain, all he accomplished there was to set up a military frontier, the Spanish March, to guard against further Muslim incursions.

The Song of Roland. One of the most legendary incidents in Charlemagne’s reign was the ambush and massacre of his rear guard by Basque tribesmen (below) during his army’s return from Spain in 778. Because the massacre took place on the well-traveled pilgrimage route to Santiago de Compostela, the story was constantly retold. It eventually grew into the medieval epic, *The Song of Roland*, in which Muslims replaced the Basques as the villains and Charlemagne played a prominent role in the fighting even though in the poem he was 200 years



In *The Song of Roland* the hero, Roland, sounds his horn, Oliphant, to alert Charlemagne of the treacherous attack on his rear guard. Although, for heroic reasons, Roland waited until it was too late to save his troops and himself, it allowed Charlemagne to play the proper role of a lord who avenges the wrongful death of his feudal vassal.



Charlemagne’s elephant. The expansion of Charlemagne’s power into Italy and Spain involved him in the complicated diplomacy of the Mediterranean. Since the Abbasid Caliph in Baghdad, Harun al-Rashid, was also at war with the Byzantines and the Umayyads in Spain, he saw the Franks as natural allies, despite their religious differences. To help seal their friendship, the Muslim caliph sent a number of gifts to Charlemagne, including an elephant. Although this may sound quaint to us, the sight of their ruler traveling with such a huge creature must have filled Charles’ subjects with an even greater sense of awe. Keep in mind that people then believed Egypt had ants the size of dogs and red hens that would spontaneously burst into flames.

The Church and Christianity under Charlemagne



Aerial view of Aachen cathedral, Charlemagne's most prominent architectural monument. Built between 796 and 804 it was modeled after the circular Byzantine church of San Vitale at Ravenna.

Since the Church owned so much land and clergy could not have legitimate heirs, most bishops, abbots, and higher clergy in the Middle Ages came from the noble class. To keep from splitting their lands, a noble would leave his oldest son the estate and try to find a lucrative church office (or, barring that, a place in a monastery) for his younger sons. However, since the business of nobles was fighting and politics, these newly appointed bishops and abbots were still very much a part of the military establishment for the realm.

Charles himself had a secular view of the Church as a virtual department of state, appointing higher clergy at will and taking the pope's approval for granted. He even left offices vacant for years. (e.g., the archbishopric of Metz for 27 years), in the meantime collecting its revenues. Or he might appoint particularly trustworthy subjects to multiple bishops' *sees* (from the Latin word *sedes*, meaning seat or throne). Likewise, he treated higher clergy as royal vassals who had to attend court and couldn't leave without permission.

The lower clergy. This raises the questions of how well supervised and educated were the lower clergy (i.e., parish priests and monks). In a

word: poorly. The lower clergy of the 700s were still sacrificing animals to pagan gods and spirits (typically identified with Christian saints), living with women, and taking part in drinking bouts. Most nobles appointed serfs as their own proprietary priests, whose duties included tending the lord's hunting hounds and serving his table. They were often beaten for disobedience or incompetence, being dismissed and replaced by another serf who would hopefully do a better job.

In the monasteries, monks, many of whom were unruly sons of nobles, commonly resisted Church discipline by running away on "pilgrimage," becoming vagabonds or brigands, and sometimes even founding their own "monasteries". Making matters worse, in the absence of an organized prison system, criminals were often made monks rather than being imprisoned.

Even for those who might want to be good priests, abbots, and bishops, the unsophisticated cultural level of Western Europe at this time led to a general inability to read the Bible or relate to written literature on Christian behavior. Such widespread illiteracy led to a need for concrete examples of the religion at work, which led in turn to the popularity of saints (or living figures often seen as saints) and holy relics: physical remains of body parts (bones, skulls, hair, vials of blood) and objects (clothes, shoes, or instruments of torture, such as pieces of the true cross) associated with Christ and the saints and popularly believed to have magical (especially healing) powers. People still sacrificed to the spirits of trees, rocks, and springs, and baptized bells against demons, though those practices were gradually waning.



A crystal reliquary in the form of jewelry talisman reputedly holding some of the Virgin's hair and a piece of the True Cross

The popularity of relics triggered a lively trade in what were purportedly the bones or other remains of saints. Monasteries would even steal saints' remains from other monasteries, in one case, planting a mole who worked his way up in a monastery's hierarchy until he had access to its saints' remains and could steal them.

Supposedly, Thomas Aquinas, who all agreed would be canonized as a saint after he died, had to escape a murder plot by monks who wanted to boil his body to get the bones as relics.

Naturally, there were also plenty of scams. It was said there weren't enough cows in all Lombardy to produce what were being touted as vials of the Virgin Mary's milk, or enough trees to match what were being sold as pieces of the true cross on which Christ was crucified. In one case in Scotland, a purveyor of vials of the blood of Christ and the saints was caught beheading chickens and pouring their blood into vials.

This preoccupation with saints wasn't seen as polytheism, but rather as a reflection of the earthly hierarchy from kings down through nobles to peasants. Just as peasants were too lowly to directly petition a king, we are too lowly to directly petition God, thus leading to saints and the Virgin Mary to intercede to God on our behalf.

Over the centuries, a virtual multitude of saints were canonized, so that there is a patron saint for nearly every profession, activity, ailment, and danger. Here is a select list of saints and what they patronize:

- **St. Adrian the patron of soldiers**
- **St. Agatha the patron of bell founders and breast diseases**
- **St. Agnes and Saint Dymphna- patrons of rape victims**
- **St. Anne patron of grandmothers, mothers, women in labor & horse riders**
- **St. Anthony, patron of lost items, the poor,**

- amputees & cemetery workers**
- **St. Appollonia the patron of dentists**
- **St. Augustine, Bishop of Hippo the patron of theologians**
- **St. Barbara patron of ammunition workers, architects, builders, miners, storms and sudden death**
- **St. Bernadine the patron of advertising**
- **St. Bernadino the patron of impulsive and uncontrolled gambling**
- **St. Bernard the patron of the alps, mountain climbers, skiers and jewelers**
- **St. Catherine the patron of philosophers, secretaries, spinsters**
- **St. Denis the patron of France and headaches**
- **St. Christopher the patron of bachelors, drivers, travel and travelers**
- **St. Clare of Assisi the patron of television**
- **St. Francis of Assisi patron of animals, birds, fire, merchants & solitary death**
- **St. Francis Xavier patron of the Orient, missionaries, navigators & sailors**
- **St. George the patron of England, chivalry and soldiers**
- **St. Gerard the patron of pregnant women and those falsely accused**
- **St. Germaine the patron of child abuse**
- **St. John the Baptist the patron of baptism, conversion and tailors**
- **St. John the Evangelist the patron of book sellers, art dealers and printers**
- **St. John the patron of heart ailments and orators**
- **St. John Vianney the patron of pawnbrokers and priests**
- **St. Joseph the patron of Belgium, carpenters, married couples & pioneers**
- **St. Joseph/Saint Anne the patron of Canada**
- **St. Jude the Patron of desperation and hopeless causes**
- **St. Julian Hospitaller, patron of hospitality, innkeepers, travelers, & boatmen**
- **St. Lawrence the patron of fire and banks**
- **St. Leonard the patron of prisoners, captives, and slaves**
- **St. Lidwina the patron of skaters**
- **St. Louis the patron of child death**
- **St. Louise the patron of orphans and widows**
- **St. Lucy, patron of the poor, cutters, eyes,**

- peddlers, saddlers & salespeople
- St. Lucy/Saint Lawrence the patrons of blindness
 - St. Luke, patron of artists, doctors, jewelers, sculptors & surgeons
 - St. Margaret Mary the patron of polio
 - St. Margaret of Antioch patron of women in childbirth
 - St. Margaret the patron of homelessness
 - St. Mark the patron of Venice, glaziers and stained glass workers
 - St. Martha the patron of housewives, domestic workers and servants
 - St. Martin the patron of vintners and alcoholics
 - St. Martin de Porres the patron of Negroes
 - St. Mary Magdalene the patron of frail and penitent women
 - St. Maurice the patron of infantrymen, cramps and swordsmiths
 - St. Maximilian Kolbe the patron of drug addiction
 - St Michael: battles, Germany, grocers, police officers, radiologists, seafarers
 - St. Monica: alcoholism, bakers, brewers, children, coopers, Greece and peace
 - St. Swithin - weather

Largely because of a near obsession with keeping a balanced symmetry between Heaven, Earth, and Hell, the medieval imagination also supplied Satan with his own hierarchy of demons. In fact it was believed Satan was an ever-present force and the very air itself was full of demons doing his dirty work, such as throwing mud on travelers' clothes and interrupting conversations. There was even a legend of a demon taking a break after a busy day of mischief who was accidentally eaten when a nun ate the cabbage on which he was resting.

“Organizing” one’s salvation. For those not fluent in the tenets of their faith, actions, not motives, seemed more essential to salvation. As a result, many believed their sins could be quantified into specific penances. For example, the sin of usury could be worked off by here years on bread and water.

Along those lines, many believed they could ensure their salvation by having as many people

as possible pray for them so that they could force their way into Heaven by the sheer force of numbers of prayers said for them. Therefore, priests had to pray for their lords (whether nobles or upper clergy), and sometimes for their lords’ overlords as well. One archbishop had 300 monks and 100 clerics organized in continuous prayer shifts for Charles, two-thirds of them praying all the time. In addition Charles left three-fourths of his treasury specifically to support such prayers.

Those not rich or powerful enough to command such services would organize themselves into special prayer confraternities in which, upon one member's death, survivors owed up to 100 masses or psalters apiece for his soul. Such fraternities dotted the map of France and spread to Spain and England as well.

Originality: a real career killer. In the medieval view, the world was near its end; the Greeks and Romans represented the peak of civilization, everything else was inferior, and the world was hurtling toward imminent destruction. Therefore, there was little or no room for original ideas not based on classical culture. For example, Alcuin, one of the great scholars of his day, was famous for his knowledge and compilation of the ideas of his predecessors. By contrast, there was a churchman at a synod who was cornered into admitting his views weren't based on the Bible or Church fathers, but just his own ideas. Verdict: end of his career.

The carmina figurata was a unique popular literary and artistic device during this time. On a manuscript page there would be a painting or several pictures. Superimposed on the pictures would be text arranged in a square grid. In addition to the overall text on the page, the letters over certain images would spell out another message. For example, in the manuscript portrait of Louis the Pious below, The letters in the halo spell “*You Christ crown Louis*” while The letters in the cross spell “*The true victory and salvation of the King are all rightly in your cross, Christ.*”



The Cathedral houses many relics, including the four "Great Relics," namely, the cloak of the Blessed Virgin, the swaddling-clothes of the Infant Jesus, the loin-cloth worn by Our Lord on the Cross, and the cloth on which lay the head of St. John the Baptist after his beheading. They are still displayed every seven years and venerated by thousands of pilgrims.

However, by the end of Charles' reign, a new spirit was starting to take over which looked beyond empty deeds as the key to salvation. In 813 Charles decreed that sins of thought should be confessed as sins, marking the turn to an age of more internalized religion and moral reform in the Church. Christian art from this point on reflected this more emotional (and terrifying) approach to Christianity, as seen in the depictions of the Judgment Day placed over the entrances to churches.

Charles' later years (800-814)



Aachen cathedral. The one major architectural monument created under Charlemagne, Aachen cathedral, was based on older Roman and Byzantine lines. As with many medieval churches, Aachen cathedral when finished was a conglomeration of parts built over a broad stretch of time spanning the 700s, the 1100s (the enormous corona of lamps over the spot where Charlemagne is buried), the 1300s (the upper choir), the 1400s (the fourteen statues of the Mother of God, the Twelve Apostles, and Charlemagne), and the 1800s (the gothic high altar and gold mosaic on the interior of the dome). The main feature of the eighth century church was its octagonal dome (below) that has a sixteen-sided circumference of 120 feet, and a height of 124 feet.

Although the disintegration of the Frankish empire can be seen as partly due to lack of strong rulers, it was starting to become apparent in Charles' later years. Famine, pestilence, and a cattle epidemic disrupted the empire, while Charles' own youthful vitality left him and the tide of conquest started turning. There was growing social disorder in reaction against the burdens of Charles' wars as nobles and bishops forced peasants to serve in the king's army on the one hand and enserfed them on the other. At the same time, there was increasing pressure on the frontiers, in the north from the Vikings, the sight of whom supposedly moved Charles to tears over what they would do to his realm.



Making the future look even more grim, Charles' two most capable sons, Pepin and Charles, died, leaving only Louis the Pious who had already proven incompetence in war. Even Charles' elephant, which he took with him wherever he went, died. As living conditions declined, growing numbers turned to brigandage (which they often called "pilgrimages"), while many more were forced turn to local nobles and abbots, trading their freedom for protection. The court poet, Theodulf of Orleans, captured the growing spirit of malaise in Charles' later years when he wrote:

"The walls which in our youth stood fast, artistically painted, are full of cracks, the sign of coming dissolution. Just as it irks an old man to sing & make merry, so all sweetness has left the aging world & nothing remains of its former strength."

Charles even attempted to avert disaster by ordering a three-day empire-wide fast, a practice he himself had frowned upon before. Finally, on January 28, 814, Charles, who himself was fasting to stop attacks from fever, died. His empire didn't long survive him. His legacy would.

In 881, a Viking raid damaged Charles' cathedral at Aachen, and within decades no one could remember where he was buried. However, the legend lived on and continued to grow. The Song of Roland would grow into one of the great medieval epics, with Charles portrayed as 200 years old, but still capable of engaging in hand-to-hand combat, and winning. In 1165, the German emperor, Frederick I Barbarossa, oversaw Charles' canonization as a saint. A century later, German rulers were referring to their realm by a new name: the Holy Roman Empire.

Disintegration (814-c.1000)



Coin of Louis I the Pious under whom the Frankish realm started coming apart

Louis the Pious (814-840) was the only surviving legitimate son of Charlemagne, his older and apparently more capable brothers dying before their father. Except for a passion for hunting which he shared with his father, Louis was different from the old king in nearly every other way. While his father was gregarious and fun loving, Louis supposedly "never showed his white teeth in a smile" according to one

contemporary. While Charles enjoyed the presence of women at court, even if that meant putting up with his daughters' open love affairs, Louis had most of the women banished from court. Louis did continue Charles' patronage of letters and reforming of the Church, but with an apparently deeper inner piety than his father's. His nickname "the pious" was well deserved since, even though his father had him crowned co-emperor with him in 813, Louis voluntarily had the pope redo the ceremony after Charles' death, despite the fact the pope was desperately in need of his help at the time.

It was Louis' family life that especially created problems for Charlemagne's empire in the centuries to come. Louis had three sons: Lothair, Pepin, and Louis. In accordance with older Frankish custom, which saw the kingdom as the king's personal property, he planned to split his inheritance three ways. Louis would get East Frankland (roughly corresponding to Germany), Pepin would get West Frankland (roughly corresponding to France), and Lothair, the eldest would get the imperial title and land in middle. So far, so good.

Unfortunately, in 818 Queen Irmingard died, and Louis remarried a Bavarian princess, Judith who gave birth to a fourth son, Charles, in 823. Naturally, Judith wanted a kingdom for her son, so in 829 Louis agreed to carve out another kingdom for Charles, leading his elder three sons to revolt, capture the king, Judith, and little Chuckie, and pack them off to different convents, which doubled as prisons.

However, this little family drama was hardly over, as Louis escaped and restored his position. In 833 he disinherited Pepin and gave his lands to Charles, triggering a second revolt by his sons. Unfortunately for the king, Lothair controlled Italy, and with it the pope, whom he "persuaded" to join his cause. When the two armies met, the king's men refused to fight the pope and deserted Louis, who was forced to admit to horrible crimes and abdicate.

This left Lothair in charge, whose domineering behavior alienated his younger brothers, driving

them to rejoin their father and have a group of bishops reinstate him once again as king. “Luckily” Pepin died in 838, leading to an agreement to give West Frankland to Charles and finally restoring some degree of order and family harmony. Two years later Louis died after a long and ignominious reign and then the real “fun” began.

Almost immediately, civil war broke out between Lothair and his two brothers. In 841 the opposing forces met in a bloody battle at Fontenoy. The level of carnage from this battle was shocking even to contemporaries who were hardened to the sight of bloodshed. As one survivor described it:

*“Wars call. On all sides, a terrible battle is born.
Brother kills brother, the uncle his nephew;
The son now shows his father no respect.*

...

*On Charles’ side, On Louis’ side as well,
The ground grows white with shrouds to cloak
the dead,
Just as in autumn, when fields grow white with
birds*

*The battle owns no praise; it is not fit for song.
May east, and south, and west, and north
Lament the men who died in so much pain*

*Cursed be that day. Let it be numbered not
In any calendar, but expunged from all
remembrance
Unlit by the sun, unlit by creeping dawn.*

*That night—that dire night—and the day after—
That night, tears and sorrow mixed,
And some men died and others groaned, forlorn.*

*O Mourning, lamenting: Naked are the dead
The vulture, crow, and wolf consume their flesh
Their corpses, vacant, stiffen; they have no
tombs.”*

The Treaty of Verdun in 843 giving Louis the nucleus of Germany, Charles the nucleus of France, and Lothair the untenable strip in between, was sworn by Charles’ troops in old French and Louis’ troops in old German,

indicating the growing development of those two nations.

Italy in turmoil. The interrupted flow of money from Baghdad also had drastic consequences in the Mediterranean. As trade dried up (FC4.4A), Arab sailors turned to raiding and piracy, a situation made worse by the weakened state of the Byzantine navy due to the turmoil generated by the Iconoclastic controversy (FC6.1).

A civil war at the western end of the Mediterranean in Spain also played a role, as 15,000 Muslim refugees seized Alexandria, Egypt, only leaving after a huge bribe, and went on to Crete, which they seized in 826 and used as a base for piracy for 150 years.

Meanwhile, in Sicily a Byzantine governor aspiring to the throne called in Muslim mercenaries who seized power for themselves in 827 and began the gradual conquest of the island. Although the Byzantines held on to part of the island till 965, the Muslims stayed in power 250 years until being overthrown by Norman invaders.

From Sicily, Arab raiders continued to Italy, sacking Naples in 837, capturing the ports of Bari and Taranto three years later, and establishing bases at the mouth of the Rhone River from which they could raid into France. Muslims even threatened Rome in 846, part of which Leo IV fortified, that district still being known as the Leonine City. In 871, the Franks drove the Arabs out of Bari and Italy, although it was the Byzantines who benefited, getting Bari for the Franks’ efforts. Incidents such as this would be at the center of growing tensions between the Byzantine East and Latin West.

Pope Joan, the only woman pope? The turbulence in Italy is reflected in the story of Pope Joan, the only woman pope. According to the story, Joan was an Englishwoman whose love of a monk and books led her to follow him to France, Italy, and finally Athens where her boyfriend died. She then returned to Rome where she established a reputation for learning and was elected as Pope John VIII, no one suspecting her sex... at least

until she was overcome in the middle of mass by labor pains which killed her (either that or being stoned by an outraged crowd).

As unlikely as this story may be, there is possibly some credence to it because, since then, new popes were ordained in a chair with a hole in the seat, presumably to check his (or her) gender. Also, for whatever reason, the route of papal procession was changed at this time.

Viking raids. Because of the Vikings' mobility and ability to strike suddenly from the sea, their raids over-stretched the ability of Charlemagne's successors, especially in West Frankland (AKA France), to defend their realm. As a result, the responsibility to combat these raids fell to local authorities, such as the Frankish noble depicted below. However, such nobles also used this as an opportunity to claim more independence from the king. By 1000 CE, France had fragmented into 55 virtually autonomous principalities, many of them stronger than the king himself.



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Muslim Trade Links and the Rise and Fall of the Carolingian Empire (c.800-1000)

The Pirenne Thesis. In the 1920s, a Belgian historian, Henri Pirenne, challenged the commonly accepted notion that the end of the Western Roman Empire around 500C.E. signaled a catastrophic collapse of Roman civilization itself. His theory, known as the Pirenne Thesis, claimed that Roman civilization continued until the Muslim Arabs broke up the unity of the Mediterranean in the seventh century. Elements of the Pirenne thesis have come under attack since then, although historians have learned to take a more balanced look at the fall of Rome and the start of the Middle Ages thanks to Pirenne.

Archaeological evidence has provided an interesting twist to the link between the Arab Muslims and the Frankish dynasty of the Carolingians, but in the eight and ninth centuries rather than the seventh. It starts at the height of the Arabs' power when they were carrying on trade as far away as India, Central Asia, North Africa, Spain, and also present day Russia, where they would exchange silver for furs and amber. Viking merchants from Russia would then sail by way of the Baltic Sea to the Franks' realm and trade Muslim silver for Frankish goods. Archaeologists have found evidence of a good deal of this silver in the Frankish realm, which would go a long way toward explaining the sudden resurgence of the Franks in the 700s, and early 800s, and in particular their cultural activities: trying to revive learning, copying ancient Roman manuscripts, and building projects such as Charlemagne's cathedral at Aachen.

Unfortunately, just as Muslim silver from Baghdad helped make Frankish power and prosperity possible, the lack of it helped bring down Charlemagne's successors. The reason was apparently overspending by the caliphs on building projects. When, for whatever reasons, their money ran out, so did trade through Russia, thus cutting off the Franks' source of silver and much of their power. Then everything started going wrong.

When Arab traders in the Mediterranean and Vikings in the Baltic and North Seas saw their trade drying up, they turned to raiding to supplement their

incomes. This, of course, was destructive to the overall economy, thus weakening the Franks' ability to trade and marshal the resources necessary, thus allowing more Arab and Viking raids, and so on. By 900, the Frankish empire had disintegrated into various pieces, leaving the way for new powers and institutions to take over.

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Economic Collapse After The Fall Of Rome (C.500-700 C.E.)

Introduction: the “Dark Ages”. The disintegration of the Roman Empire in the West left in its wake a patchwork of Germanic kingdoms founded on its ruins. The Germanic general, Odovacer, ruled as king of Italy over a hodgepodge of tribes. The Visigoths held Spain and southern Gaul. North Africa was the realm of the Vandals. Britain was in the process of being divided between the Angles, Saxons, and Jutes, known to us simply as the Anglo Saxons. And the rest of Gaul was starting to fall under the sway of what would eventually become the most successful of these tribes, the Franks. In addition, there were various minor tribes scattered throughout the West: Burgundians, Lombards, Heruls, Gepids, Huns, and so on.

Traditionally historians have described the centuries following Rome’s fall as a barbaric and chaotic period known as the Dark Ages. However, recent historical research has rekindled the debate on this issue. While it is clear that most of the Germanic tribes wanted to enjoy Roman civilization rather than destroy it, archaeological evidence seems to indicate they failed. As the historian Bryan Ward-Perkins put it, they may not have murdered Roman civilization, but they could still be charged with manslaughter for inadvertently killing it.

The physical evidence. While most types of evidence from this period have disappeared by now, there are a few that have survived, most notably pottery, coins, and roof tiles. Evidence from the Pax Romana shows a large quantity and wide variety of high quality pottery made on pottery wheels. Just as significant is the wide geographic distribution of different regions’ pottery, suggesting a highly sophisticated and specialized system of production, transportation and distribution. Apparently, people from one province could get and afford specialized goods from the far-flung provinces of the empire. Similarly, coinage was plentiful in gold, silver, and bronze. The large numbers of bronze coins suggests money was widely used even by the poor. Especially telling is the fact that a significant number of these coins were found lying around in a casual manner, the sign of prosperous times, as opposed to all of them

being hidden in hoards, which was typical of hard times and economic decline. The plentiful remains of ceramic roof tiles produced elsewhere, even in the ruins of peasant houses, is another sign of the high standard of living and sophisticated economy of the Pax Romana.

This changed radically starting in the fifth century. Pottery remains and coins, especially bronze ones used by the poor become scarce. There are virtually no surviving ceramic roof tiles from this period, suggesting the use of thatch, which can leak and harbor insects. The question is: how did this happen?

Conditions of prosperity. First, we need to understand the sorts of conditions that made the highly specialized and interdependent economy of the Pax Romana possible. Overall, it relied on a combination of five factors:

- 1) A skilled specialized labor force able to mass-produce excellent but cheap goods;
- 2) A sophisticated network of transportation and trade to move and distribute goods;
- 3) An imperial government that minted enough coins and maintained the roads to sustain the economy;
- 4) An influx of money from the central government to pay the thousands of soldiers and bureaucrats in the less developed frontier provinces, thus tying them into the larger empire-wide economy; and
- 5) A large and widespread consumer market.

Process of decay. Rome’s highly interdependent economy and trade was similar to today’s global economy, although on a much smaller scale. Despite that difference, its decay and collapse hold a cautionary lesson for us today. In each case, the high degree of inter-dependence of all the regional economies of the empire on the other regional economies carried the danger that, if one regional economy collapsed, that weakened the whole economy and its individual parts needing that area’s goods and markets. That, in turn, would lead to the collapse of one or more other regional economies, weakening the rest of the economy, and so on. Therefore, rather than collapsing all at once, the Mediterranean and Northwestern European economy went in stages, the northern frontier

provinces going first by 500, the western Mediterranean economy next in the 500s, and finally the Aegean area after 600.

The first region to go was the northern frontier, especially Britain, in the 400s. This part of the empire was the most recently civilized region of the empire, with less deeply rooted cities than other regions around the Mediterranean. Two major factors wrecked its economy. First of all, being on the frontier, it bore the brunt of the violence and destruction wrought by the Germanic invasions. Secondly, its economy was especially dependent on the imperial government for money to pay the legions. Therefore, as the empire declined, the government was increasingly unable to pay its soldiers, thus undercutting the whole regional economy as well its ability to defend the empire, further wrecking the economy, and so on.

After the final demise of the Western Empire (c.500 C.E.) the Western Mediterranean went into a steady decline. Three main factors brought this about. For one thing, there was no longer an imperial government to maintain roads and protect trade. Also, the markets and resources the Mediterranean economy had depended on were gone. So were any imperial revenues that helped fuel the economy. As personal accounts from the time indicate, trade continued during this time, but became increasingly difficult. Most pottery found from this period was primitive compared to the wheel-thrown pots of the Pax Romana. The small number of high quality pots suggests they were made exclusively for the rich. Similarly, bronze and silver coinage, the mark of a broadly based consumer economy, disappeared, while the gold coinage was crudely made compared to its predecessors. Clearly, money-based trade had taken a nosedive.

Starting in the late 500s, invasions by Slavs and Avars in the Balkans, Persians, and then the Arab Muslims in the Eastern provinces, and the first outbreaks of bubonic plague combined to send the economy of the Aegean into precipitous decline. Aggravating this were two other factors: the loss of trade and markets in the Western Mediterranean as its economy collapsed, and the loss of taxes and revenue from Syria, Palestine, and Egypt when they fell to the Arabs. Cities in the Balkans and Asia

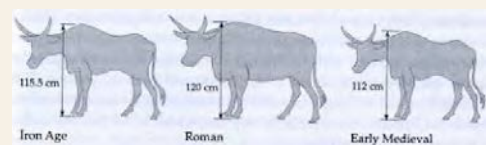
Minor either disappeared or shrank dramatically in size, not being able to recover for 200 years or more.

Aftermath of the collapse. The economic collapse of most of the Roman Empire had several results. For the Eastern Roman, or Byzantine, Empire difficulties continued as it bore the brunt of successive waves of nomadic invaders in the north and constant pressure from the Arabs to the south. However, by 750, the Byzantines had weathered the worst of these troubles and would begin a prolonged period of recovery and expansion.

By contrast, the economies of Syria, Palestine, Egypt, Mesopotamia, and Persia prospered, since those areas fell rapidly to the Arabs with minimal material damage and disruption, seem to have suffered less from the Plague than the rest of the Mediterranean, and were able to plug into the new “global” economy being created by the Arab Empire that stretched from India to Spain. Therefore, this area entered upon an economic and cultural golden age that also expanded across North Africa and into Spain.

Italy and the frontier regions of the Roman Empire (Britain, Gaul, and Germany) would experience a brief revival under the Carolingian Franks, thanks largely to an influx of silver and trade from the Muslims via Russia and the Baltic. However, overspending by the Caliphs in Baghdad would bring an end to this prosperity soon after 800, triggering new rounds of raids and invasions by the Arabs in the Mediterranean and Vikings in the North. Political order in Western Europe would then collapse, to be replaced by feudal anarchy for two centuries.

Rome’s “Modern” Economy



The rise and fall of the Roman cow. Comparing cattle remains at 137 different sites, archaeologists have determined that in the Iron Age before the rise of Rome, the average height of a cow was 115.5 centimeters. During the

Roman era that figure increased to 120 centimeters, but in the early Middle Ages it fell to 112 centimeters.



The remains of Monte Testaccio Rome's trash heap for broken amphorae

Monte Testaccio. Trade and manufacture were at such high volumes during the Pax Romana that it was considered cheaper to bust up amphora (a type of large pottery holding 70 liters) after olive oil deliveries than carry them back to Spain and North Africa for refills. The result was a virtual mountain of broken pottery in Rome that was over 35 meters high and a kilometer in circumference, holding the remains of an estimated 59,000,000 amphorae. Rather than being just a haphazard waste dump, it was supervised by state officials who had it terraced using intact amphorae. Amphorae were brought by Donkeys from the nearby harbor, broken up, the pieces (*testiae*) being laid out in an orderly manner to conserve space and the stability of the terraced mound. Lime was probably sprinkled over the shards to keep down the odor of rancid olive oil.

Excavation of the mounds tells us a lot about the high level of organization involved in the oil trade, since many of the amphorae were painted (*tituli picti*) or stamped with the weight and origin of the oil, along with the names of the owners and those who weighed and documented it. The mound fell out of use when harbor facilities were moved sometime after 260. For whatever reason, there are no corresponding mounds of amphorae for grain or wine.

Roman quality control. The Romans also had strict quality controls for their pottery. At one site in Southern France, Gruafesenque, archaeologists have found a refuse pit 3 meters deep and 2.3 meters in diameter full of discarded pottery that presumably was rejected as substandard.

Political Anarchy, Economic Decline, and the Failure of the Germanic Kingdoms in the Early Middle Ages (c.500-1000 C.E.)

As we have seen, most of the Germanic tribes that took over the lands of the Western Roman Empire had absorbed at least some respect for Roman civilization and a desire to maintain it. However, in the end, most of those Germanic kingdoms failed to establish strong long lasting states despite their efforts to carry on Roman traditions. The root of this failure lay in the fact that, despite their best intentions, the Germanic tribes still had a poor understanding of the Roman heritage they had taken over. This created problems in two ways.

First of all, no matter how much they may have admired Roman government and technology, the Germanic rulers had, at best, an imperfect understanding of how such things worked. Occasionally a ruler, such as Theoderic in Italy, would be lucky enough to still have Roman technicians and bureaucrats and smart enough to use them to run his state along Roman lines with some success. But that was the exception to the rule. More often, the barbarian kingdoms were loosely knit states with local nobles ruling their lands and sometimes following their kings in war. As the economy declined, the few trained Roman bureaucrats that were left became scarcer with each generation. Bit by bit, orderly Roman rule gave way to a more casual kind of order, veering more and more toward anarchy. Taxes went uncollected; roads, bridges, and aqueducts remained in disrepair; and public order broke down, sending towns and trade into decline.

The second problem, which tied in with the first, was the Germanic concept of the state, or lack of it. The Romans saw the state as an abstract concept that encompassed all the people. The Germanic concept of the state was that the crown and the loyalty of the subjects were the personal property of the king. A warrior had no loyalty to a state, only to his chieftain or king, and that was a very personal matter. This went back to a time when leaders of warrior bands gained followers by promising and giving them plunder, which then was in the form of movable wealth, not land. Since the kingdom was

the personal property of the king, he divided it between his sons after he died much as we today will split our estates among our various children. These sons were naturally jealous of their brothers' shares, and civil wars often resulted.

Together, these civil wars and the breakdown of the old Roman economic and political order bred even more economic decline and the passing of money from circulation. This had two serious results. First of all, schools closed down without money to run them, and the trained Roman bureaucracy gradually died off without anyone to replace them. Second, with money disappearing from circulation, land was becoming the main source of wealth. These two factors forced the kings to rely more and more on local nobles to administer their kingdoms. And since money had virtually disappeared from circulation, kings had to pay their noble supporters with land. This was where their troubles really started to mount.

The problem with land as the main source of wealth was that it regenerated wealth in the form of crops. Giving nobles land that kept producing crops meant the nobles no longer needed the king. Therefore, they became more independent and started defying royal authority. For the king to bring these rebels under control, he would need an army. Unfortunately, he needed to pay his armies, and the only thing he had to pay them with was land, which started the whole vicious cycle over again. In such a way, kings in early medieval Europe saw their power continually disintegrating.

Two other factors led into this feedback process. One was the cycle of Church corruption and reform where people would donate land to the Church in hopes of saving their souls. This would make the Church rich and corrupt, which would trigger a new round of reforms by devout church members. The reformed Church would thus attract more donations of land, and the cycle would start over.

As a result, the Church had large amounts of land, making it a major source of wealth and power in the early medieval state. This created the problem of local nobles fighting and scheming to control Church lands. Typically, they would give their younger sons the offices of bishop or abbot (head of

a monastery) while passing the family lands on to the older sons. However, putting a bishop's robes on a young noble did not usually change his wild and warlike ways, and we find bishops and abbots engaged in drinking bouts and fighting in the front ranks of battle along with the most unruly of the other nobles. The problem of these ambitious nobles trying to gain control of Church lands also fed into the vicious cycle of land regenerating wealth, making nobles more independent, and so on.

Naturally, this situation did little for the piety of the Church. Also, as a result, the lower clergy were largely unsupervised, illiterate, and ignorant of the religion they were supposedly in charge of, while carrying on fairly lax lifestyles themselves. This is not to say there were not any good pious Christians at the time. One of the remarkable things about the history of the medieval Church is the fact that pious individuals did exist and occasionally prevailed against the corruption that constantly plagued the Church. Still, the view we get of the early medieval Church is not a very pretty one.

The Church naturally wanted to maintain its independence and often looked to kings for protection from the nobles. The kings in turn looked to the Church for land (or at least support from the land), spiritual support to make them popular, and monks to provide what few educated officials there were. One striking example of this mutual support was when the German monarch, Otto I, went into Italy in 961, roughly 75% of his troops were supplied from Church lands. This made it critical for early medieval monarchs to control the elections of bishops and abbots, which would give them control of the Church's extensive lands and wealth. If they could do this, they were in a good position for ruling their states. In later centuries, when both kings and popes became powerful independently of one another, there would be trouble between church and state. However, in the chaos of the early medieval world, church and state often relied heavily upon one another out of necessity.

The other factor contributing to the decline of the early medieval state was the spread of a simple invention that would revolutionize medieval

warfare and, to a large extent, medieval society: the stirrup (see **FC41.2A**). The main function of the stirrup was to hold the rider more securely in the saddle. This allowed him to use the impetus of his charging horse to drive a lance through an opponent without himself being thrown from the saddle. The success of this new *shock cavalry* forced defeated enemies to adopt the stirrup if they were to survive. This led to the further spread of shock cavalry until it had become the dominant form of warfare in Western Europe.

Such shock tactics, as they are called, required a large warhorse, lance, heavier armor, and professional troops trained in riding a horse and using a lance. However, such an army was expensive, especially given the economic and political decay of the time. The Frankish leader Charles Martel's confiscation of large amounts of church lands in 732, the year before the battle of Tours, suggests he was building up an army of this new type of cavalry, paying them land in order to support them while they trained and fought. Unfortunately, weaker rulers after Charlemagne couldn't confiscate land in such a way. Rather, they had to give their own lands to nobles in return for military service. However, those lands were virtually worthless unless someone worked the fields for their owners, and, since there were few peasants willing to give a noble two or three days a week of free work to that noble, the peasants had to be tied to the land as serfs to serve their overlord. Out of this came a social order divided into three classes: those who pray (i.e., clergy, those who fight (nobles) and those who work, (the other 95% of the people who had to work the land in order to keep the other 5% of the population alive).

The cycle of Western Europe disintegrating into anarchy as local nobles rebelled against their kings and fought each other in their own private wars didn't stop there. It also encouraged raids and invasions by such peoples as Vikings from the north, Arabs from the south, and nomadic Magyars from the east. Such raids and invasions would only encourage more turmoil, which would bring in more invasions and so on. To aggravate matters even further, this cycle of anarchy and invasions would also feed back into the original cycle involving land as a source of wealth. And so it would go, as these

mutually reinforcing cycles of decline, anarchy, and invasions would continue to feed into one another, dragging Western Europe down into further chaos. Not until money came back into circulation could the nobles' stranglehold be broken. This was because money did not regenerate itself, thus keeping nobles and officials constantly dependent on the king.

Feudalism. Out of this chaos there emerged a new political order, known as *feudalism*. This was a decentralized political order where a king or lord would give his nobles land worked by serfs (peasants bound to the soil) in return for military and other forms of service. Each of those dukes and counts wanted his own army. Therefore, they *subinfeudated* (subdivided) their lands, giving them to lower nobles in return for service from them. Those nobles in turn might subinfeudate to get their own armies from loyal followers. And so it would go until the whole kingdom was split up into dozens of little states. A petty noble who owed service to his overlord, and probably was owed service by vassals beneath him ran each of these. Theoretically, every noble owed allegiance to the king, but in reality he dealt mainly with his immediate overlords and vassals. What resulted were innumerable little wars that usually amounted to little more than border raids that burned some crops, inflicted few if any casualties, and added greatly to the confusion already plaguing Western Europe.

Manorialism was the economic counterpart to feudalism. As the name implies, Western Europe's economy centered on isolated agricultural manors worked by the local lords' serfs. Because of its isolation, the manor had to be virtually self-sufficient. It had agricultural land divided into two or three fields (one always fallow), wasteland which was the lord's private preserve for hunting, a peasant village, a church, a mill, and the lord's manor house or castle (generally made of wood until the 1100's).

The feudal order was an extremely localized and decentralized arrangement. States were so small and poor, and terms of service were so short (in France, usually only 40 days a year) that no one was able to build up much power. However, in the

absence of a strong central government, feudalism did provide some degree of defense against the constant raids and invasions then besetting Europe. By 1000 C.E., things would settle down and a certain amount of stability had been established as the Viking, Muslim, and Magyar raids died down. This stability set the stage for a revival of civilization in Western Europe known as the High Middle Ages. Out of that civilization would evolve our own modern Western Civilization.

Battling Bishops



Nobles who held higher Church positions continued to live and act like nobles. Charles' biographer, Alcuin, described bishops at court with splendid garments, golden baldrics (belts) from which hung daggers inlaid w/precious stones, and their spurs clanking at their heels. Bishops and abbots had banquets with lots of wine, largely a carryover of old German sacral drinking bouts and adapted to occur on saints' days. Some nobles owned monasteries outright, while most parish churches were controlled by local nobles, who would appoint and dismiss priests at will.

And they didn't give up fighting either. Bishops loved jousts and hunting and even carried on blood feuds (which Charles at least momentarily curtailed). Most importantly, bishops and abbots made up an essential part of the royal army. This makes sense when one considers the Church owned so much land, and land was crucial to supporting the new shock cavalry being developed. Supposedly, one abbot loved his war chargers so much that he converted a church into a stable to house them.

Not only did bishops and abbots hunt and play at war, they also fought in the front ranks. In *The Song of Roland*, Archbishop Turpin leads one of the charges and kills his first opponent. This sparks the comment: “Our good bishop defends us well with his crook,” the shepherd’s crook being a double entendre referring both to the bishop role as spiritual leader of his flock and its defender against external enemies. For most people then, there was no inherent contradiction between the two roles.

Time after time, bishops would lead the defense against incursions of Vikings from the north and Magyar nomads from the east. In one account, a bishop lost an ear and was left for dead on the battlefield after a fight against the Magyars. As he recovered, he was confronted by a personal enemy whom he had to kill before making it home to a triumphal parade held by the grateful town. At the battle of Hastings in 1066 (top), William the Conqueror’s half-brother, Odo, bishop of Bayeux, was in the front ranks bashing in Saxon skulls with his war club, the belief being that if a bishop or abbot killed an enemy with a concussion without actually drawing blood, it wasn’t a sin.

Feudal Warfare



Just as feudalism existed on a small local scale, so did feudal warfare with invading forces probably having less than 100 men. Wars mainly consisted of surprise hit-and-run raids to destroy the enemies’ crops and villages while the peasants ran for cover. Pitched battles were probably rare, since the defenders often had no warning or time to prepare for an attack. Following is a contemporary account of feudal warfare and its cost to society.

“They start to march. The scouts and the incendiaries lead; after them come the foragers who are to gather the spoils and carry them in the great baggage train. The tumult begins. The peasants, having just come out to the fields, turn back, uttering loud cries; the shepherds gather their flocks and drive them toward the neighboring woods in the hope of saving them. The incendiaries set the villages on fire, and the foragers visit and sack them. The distracted inhabitants are burnt or led apart with their hands tied to be held for ransom. Everywhere alarm bells ring, fear spreads from side to side and becomes general. On all sides one sees helmets shining, pennons floating, and horsemen covering the plain. Here hands are laid on money; there cattle, donkeys and flocks are seized. The smoke spreads, the flames rise, the peasants and the shepherds in consternation flee in all directions... In the cities, in the towns, and on the small farms, windmills no longer turn, chimneys no longer smoke, the roosters have ceased their crowing and the dogs their barking. Grass grows in the houses and between the flag-stones of the churches, for the priests have abandoned the services of God, and the crucifixes lie broken on the ground. The pilgrim might go six days without finding anyone to give him a loaf of bread or a drop of wine. Freemen have no more business with their neighbors; briars and thorns grow where villages stood of old.”

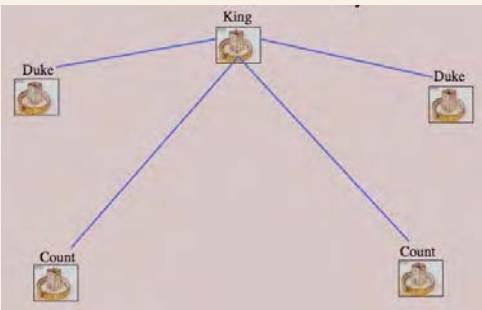


Evolution of a Feudal Hierarchy



This is a highly idealized account of how a feudal hierarchy could evolve. Over time, these hierarchies got increasingly messier, as lands were conquered in war or traded in marriage alliances, reverted back to the lords when vassals died without heirs, etc. Further complicating matters would be such things as vassals owing allegiance to different (often competing) lords for different manors acquired at different times. Keeping that in mind, the following should provide some idea of how the feudal order developed.

1. The king needs armies to defend his kingdom, but has no money with which to pay them. Therefore, he divides the kingdom into five parts, keeping one for himself and giving the other four as *fiefs* to *vassals*, who defend their fiefs and owe him five knights each for 40 days a year.

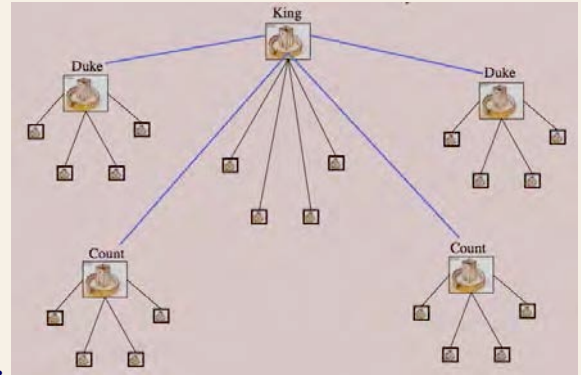


1.



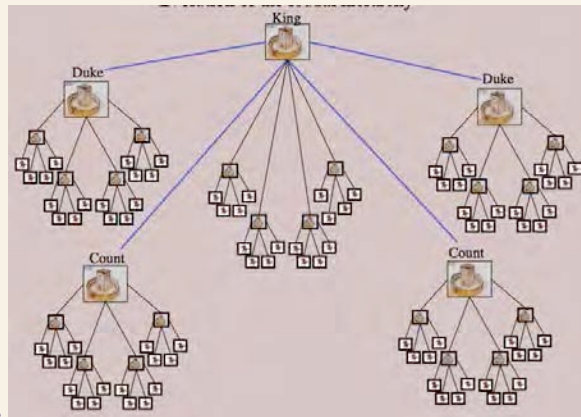
=Fief with one or more manors-> Can support at least 1 castle & enough men-at-arms to defend it

2. However, each vassal duke and count needs knights to give to the king and for his own army. Therefore, they each *subinfeudate* (subdivide) their respective lands into 5 parts, keeping one to live on and giving the other 4 as fiefs to rear *vassals* who owe their lords 3 knights each for 40 days a year for his wars.



2.

3. To meet his obligations and needs, each rear vassal *subinfeudates* (subdivides) his fief into five fiefs, each with one small manor able to support one knight. He keeps one for himself and gives the other four to vassals who personally owe him 40 days of service a year for his wars.



3.



= Fief & 1 small manor -> can support only 1 knight

Feudal Rights and Obligations



Key to security against surprise attacks by Vikings or hostile neighboring nobles in the early Middle Ages was the wooden motte (hill) and bailey castle. Such castles were easy to build and defend. In 1066 the Normans even brought a pre-fab castle with them when they invaded England. By 1100 they had built 500 such castles there to hold down the Saxon population. After 1100 stone castles, modeled on fortifications Crusaders had seen in the East, started to replace wooden ones.

Feudalism was a highly personal political system. The ceremony central to the relationship between a vassal and his lord, *homage*, from *homme*, the French word for man, shows the highly personal nature of this system. The vassal would kneel before his lord, place his hands between those of his lord, and promise to be his man. In return, the Lord would give his vassal a clump of land to signify the fief he received for his services. Despite wide variations between individual feudal contracts, most, if not all, contained certain types of rights and obligations.

Military aid was the most important type of obligation. First of all vassal and lord owed each other mutual defense whenever attacked. In addition, each vassal owed his lord a certain number of knights for a certain number of days of campaigning each year. In France, this was typically 40 days a year, but the terms could vary greatly from contract to contract. After that, the vassal could go home or stay if his lord paid him. All this made for very unstable armies, so that

any noble with a castle and several household troops could defy his lord, wage his own wars, and build his power base like any other independent ruler.

For example, the Count of Champagne, whose vassals owed him 2039 knights, owed the king only ten. No wonder that French kings during this time could hardly make their authority felt beyond the immediate vicinity of Paris. Not until the revival of towns and a money economy in the 1100s could kings and upper nobles replace vassals with mercenaries who would fight full-time. Along these lines, vassals would typically elect to pay their lord *scutage* (literally: shield money) in lieu of their own personal services. This would accelerate the process where the king could establish more stable nation states.

Court Service. Vassals were expected to attend their lord's court either at set times of the year or whenever they were summoned. Vassals attending a lord's court performed several duties. They would settle any disputes between two other vassals or between a lord and one of his vassals. Before the lord could attack one of his vassals for some alleged wrong, the vassal must first be tried by his peers. This could be somewhat risky, since it might involve a trial by combat between the accused and one of the vassals who rendered judgment against him. The belief was that god would give victory to the righteous party. *The Song of Roland* describes such a trial by combat between the main villain, Ganelon, and a champion chosen to represent Charlemagne. The king's champion, although not a great warrior, defeats the more imposing Ganelon, thus reinforcing this idea of divine intervention to ensure justice.

A lord's vassals would also give advice on matters of concern to all, such as whether to go to war, which marriage would bring him the best dowry, etc. In addition to these duties, vassals would attend court for special occasions to enhance lord's prestige. Foremost among these would be the knighting of his son and the marriage of his daughter.

Economic obligations were another common duty imposed on vassals. The most important of these, called *relief*, was a payment to renew the feudal contract upon the death of the former lord or vassal. This usually equaled one year's income from the vassal's fief and at first was paid in kind. However, when towns and trade revived, payment increasingly took the form of money. Relief paid for an ecclesiastical fief, such as an abbey or a bishop's see, was referred to as an *annate*. Other financial burdens facing a vassal were paying ransom money if the lord was captured in war, a payment known as *aid* when the lord's son was knighted or the his daughter was married, and optional contributions to the lord for special occasions such as going on crusade or pilgrimage.

Miscellaneous feudal obligations & privileges.

Typically, a vassal had to get his lord's permission for his daughter to marry since her dowry came from the lord's lands. If a vassal died with only a daughter or wife to succeed him, the lord could select a husband or regent for her. If a vassal failed to perform his feudal obligations or wronged his lord somehow, the lord could seize his land. The death of a vassal without an heir led to his fief going back to the lord by *escheat*. The highly personal nature of feudal contracts might occasionally contain some peculiar obligations. In one case, a Kentishman had to hold the king's head when crossing a river in a boat. Another vassal, for each Christmas, had to perform for his lord "a leap, a whistle, and an audible gaseous expulsion (*bumbulum*)."

Obligations of Serfs to their Lords



Part of a medieval calendar showing different seasonal activities peasants typically worked on

Most of the peasants working the fields in the centuries after Charlemagne were serfs bound to the soil and owing a number of obligations to their lord. Most importantly, they would work the lord's fields 2 or 3 days a week. In addition to owing him part of the produce from their fields. Every year they had to spend several weeks working on the lord's walls, moat, roads and bridges, an obligation known as the *corvee*. Other obligations commonly owed to the lord were carting his wine casks or sacks of grain, feeding and chasing after his hunting hounds, and fighting in the lord's army.

Serfs owed their lord a share of fish from the village fishpond, and had to use the lord's mill and oven, paying his miller one out of twenty bags that were milled. They also had to endure various indignities such as the *captaineries* allowing the lord to hunt through serfs' fields and the *ius primae noctis* ("right of the 1st night") with a serf's bride. Serfs could not hunt in the lord's woods, but did have the right to pick up dead wood from the ground and let their pigs forage there. They could also graze their sheep in the common pasture. Upon a serf's death his heir must pay a death tax (*main morte*) giving the lord his best beast and his second best animal to the priest. If he couldn't pay this, he must give his best clothes, brass cauldron, or bed.

A contract between a villein and his lord, 1307.

While most of the tenants on a manor were serfs bound to the manor for life, others, called *villeins*, were legally free but subject to the lord's authority. Each *villein* had a contract with his lord spelling out his rights and duties. Eventually lords wrote these contracts down in account books so that everyone would know what the duties were. Following is one such contract. Keep in mind that, as with feudal contracts between lords and vassals, there were no standard contracts laying out the obligations of serfs to their lords.

John of Cayworth [villein] holds from his lord one house and thirty acres of land. For his right to this land, he must pay the lord two shillings a

year at Easter and Michaelmas. At Christmas he must give the lord one rooster and two hens worth four shillings.

He must harrow [cultivate] the lord's land for two days during Lent at sowing time with his own horse and harrow. He receives from the lord each day that he harrows three meals.

He must carry the manure of the lord's animals for two days using his own two oxen. He receives from the lord three meals each day that he carries the manure.

He must carry wood from the lord's forest to the manor house for two days in summer. He receives from the lord three meals each day that he carries wood.

John of Cayworth may not allow his daughters to marry without the consent of the lord or the lord's bailiff. Neither may he permit his sons to enter the clergy without the lord's consent. He may not cut the timber growing on his land without the consent of his lord or the bailiff, and then only for the purpose of building.

After his death, his survivors will pay to the lord the best animal that he had, unless he has no living beast, and then the lord will receive no payment.

And if his sons or daughters wish to continue holding his house and thirty acres after his death, they must make a payment to the lord equal to the entire rent for one year, and continue paying the rent as set down in this contract.

Stirrup Fun Facts



While cavalry couldn't train in the tightly coordinated infantry maneuvers of the drill and march that had given Roman armies such an edge, they could practice charging together in closely packed lines. Since infantry by this time had also lost the Roman drill and march, they were easier to panic with just the sight of massive cavalry bearing down on them. Not until the 1400s, probably starting with the Swiss pikemen, would infantry revive the drill and march and be able to withstand the charge of shock cavalry.

The stirrup apparently has its origins in India in the first century C.E. At that point it was just a toe stirrup, which was fine in the region's hot climate. The stirrup's most revolutionary effect occurred when it moved north to Central Asia where nomadic herders expanded it to fit the whole foot, which freed the hands from having to control the horse. That, in turn, allowed the nomads more effective use of the composite bow, making them an even more potent force and threat to civilized armies in both Asia and Europe.

It was in Western Europe that riders relied more on bracing themselves against the horse to use the full impetus of its charge to drive home a lance without being thrown from the saddle by the shock of the collision, leading to the term "shock cavalry."

At first, all freeborn Frankish men were liable for military service as infantry. However, by the end of Charlemagne's reign, growing reliance on expensive cavalry was increasing the gap between the *miles* (soldier of the cavalry class) who fought on horseback and the peasants who just supported him. By the high

middle ages, this gap would solidify into the classic medieval social order of nobles who fought as mounted knights ruling over impoverished serfs. One aspect of this professionalization of the military was holding contests between rival leaders' cavalry where they would practice maneuvers and display their prowess. The average peasant couldn't afford the equipment or time off for such activities.

Another example of a widening gap in the social order is the housing that the peasant and the *miles* had. While peasants homes typically had thatched roofs and only one room for the whole family, a *miles* would have a house with a wooden roof, but not yet a majestic castle as in later centuries.

Interestingly, for centuries European knights would fail to take full advantage of the stirrup's potential by couching the lance under their arms to use the force of the horse's momentum to run through or unseat an opponent. The Bayeux Tapestry depicting the Battle of Hastings in 1066 shows Norman knights more often striking with an overhand thrust.



However, when they did perfect these shock tactics, the charge of a line of such cavalry would prove virtually irresistible and rule the battlefields of medieval Europe for centuries. Another innovation along these lines would be the high-backed saddle to further stabilize the rider at the moment of impact.



Before the stirrup, one way of mounting a horse was by vaulting over its rear end.

The Vikings and Their Impact (c.800-1000)

"Deliver us O Lord from the wrath of the Northmen."—Medieval prayer

For nearly two centuries there was hardly a church in northern Europe that did not echo with the above prayer. While other peoples, notably the Arabs from the south and the nomadic Magyars (Hungarians) from the east, also raided and plundered Europe, it was the Vikings who wreaked the most havoc in the short run, but may have had the most positive long term effects on Europe.

Various forces launched the Vikings in their raids and voyages of exploration. Two of these factors we have already seen: the decline of the Frankish Empire after Charlemagne's death, which invited raids, and the overspending by the Arab caliphs, which wrecked trade in the Baltic Sea and forced the Vikings to seek their fortunes through more violent means. Another factor was a growing population of landless younger sons looking for fortune and adventure caused by a good climate (allowing more children to survive), and the Viking customs of polygamy (having more than one wife) and primogeniture (leaving the entire inheritance to the oldest son).

Two other remarkable factors were the Vikings' ships and their navigation techniques. There were various classes of Viking ships ranging from the typical longship and the larger dragonships (*drakkar*) to the stouter oceangoing *hafskips* (half ships). However, they shared certain common characteristics that made them quite versatile. They could hold up to 200 men in some cases, yet be sailed by as few as 15 sailors. They were strong enough to handle rough seas, but were also light enough to sail up inland rivers and even be carried around river defenses. Likewise, Viking navigation techniques, which were basically the product of a centuries' long oral tradition of sailors' lore, got them safely across open waters that other peoples of the time would never dream of sailing. In our eyes, the Vikings were remarkable and fearless sailors. In the eyes of many of their contemporaries, they were downright mad for making the voyages they did, which only added to their mystique.

Starting around 800 C.E., wave after wave of Vikings set out from Scandinavia either to raid their neighbors or explore new and more distant lands for the purpose of trading and settling there. Viking raids created a feedback cycle by weakening their

victims while also winning plunder and status, which encouraged more and larger raids, and so on. As raiding parties increased in size, the Vikings would grow bolder and strike further inland by sailing up inland rivers or even seizing local horses to carry them and their plunder. As repeated successes further increased the size of the raiding parties, the Vikings would establish winter bases rather than return home to Scandinavia for the winter. Eventually these winter bases might become permanent settlements and the basis for the eventual conquest of the region.

Viking raids and conquests were accompanied by a good number of atrocities that reflected the Vikings' rough character, but were also designed to intimidate their victims. The Vikings showed no special respect for Christian churches and monasteries. In fact, those were generally their first targets, since the Church owned so much of the wealth in Western Europe at the time. However, the Vikings were also great traders, not seeing trade and plunder as mutually exclusive, and combining these activities according to what the situation dictated or allowed. As a result, they opened up trade routes, which helped start a revival of Europe's economy.

Ironically, considering all the chaos and destruction the Vikings brought with them, they founded some of the best-organized and most dynamic states in Western Europe. In 911 C.E. they founded Normandy as a virtually independent state in western France. Having established a well-run government there, they spread out to conquer England in 1066, laying the foundations for that modern nation. They also gradually conquered Southern Italy and Sicily in the eleventh and twelfth centuries and set up strong state there just as they had in Normandy and England. Some of these Normans later joined the First Crusade and conquered Antioch in Syria, holding it for nearly two centuries.

Other Vikings (known as the Rus) struck eastward and founded the first Russian state centered around Kiev. From there, they raided the Byzantine Empire. Later, Byzantine missionaries followed them back to Russia, bringing with them Christianity, Byzantine architecture and the Cyrillic alphabet, all of which became vital elements of Russian culture.

The Vikings were also fearless explorers. To the west, they founded a state in Iceland, continued across the Atlantic and discovered Greenland and

North America. However, Greenland's climate proved to be too harsh to support even the Vikings, while attacks by Native Americans called "*Skraelings*" (screechers) made settlements there also short-lived. However, the rest of Europe was not ready to absorb these new discoveries, and they were forgotten for nearly 500 years.

Viking Ships and Navigation



Viking ships were a breakthrough in nautical technology for their day as seen by several specimens unearthed in graves. They laid planks down in the overlapping clinker style, fastened them with iron rivets, and then sealed the ship by forcing woolen string coated with tar into the spaces between the planks. While the clinker built style limited the ships to a length of one plank, Scandinavia's tall trees allowed for ships over fifty meters in length.



Norse shipwrights favored oak because its branching structure gave its planks a natural curve suited to framing the hull. They could bend up to one inch in rough seas and draw less than three feet in shallow waters. They were light enough that they could be dragged around fortifications or other obstructions in the water. When confronted with a giant chain blocking Constantinople's harbor, Vikings used rollers to haul their ships overland and drop them in the unprotected harbor behind it. (Five hundred years later, the Ottoman Turks would use the same tactic to help them take the city.)

Sails were woven from the wool of Norse sheep, which had straighter and larger outer hairs than their modern counterparts, making it both much stronger and lighter, while its natural coating of lanolin made the sail water resistant. The ship's rotating sail and steering oar made quick raids and getaways much easier, despite the wind's direction. The steering oar (*styr*), mounted on the right side, is the source for the word "starboard". The rigging was made from horsehair or, if available, walrus hide. Modern reconstructions of Viking ships have attained speeds of 17 knots (~13 MPH). Their fabled prow ornaments of animal images were supposed to ward off evil spirits.

Although lacking navigational tools such as the compass and sextant, Vikings were excellent sailors, relying on the North Star at night and the sun at sunrise and sunset, measuring the length of shadows each day to figure out how far north or south they had gone. Navigation in the day by the sun was more difficult than by the more constant North Star at night. However, they had three ingenious devices to help with that:

- *The sunboard* was a board with a bearing dial in the center and compass points radiating out. By taking a reading every sunrise or sunset and making sure the shadow was always on the same compass point, Vikings knew they were on a steady course.



- *The sunstone* was a calcite crystal called cordierite with the remarkable property of turning from yellow to dark blue when held at a right angle to the sun. What made it so valuable was it worked on cloudy and foggy days, so that even then one could set a bearing on the sun at noon and maintain a fairly steady course
- *The sun shadow board* was a wooden disc marked with concentric circles roughly

equivalent to lines of latitude. In the center was a vertical shaft that could be moved up or down depending on the time of year. (e.g., when the staff was set for the sun's declination in mid August, its shadow at noon would fall on a particular circle and should fall on that circle day after day. It was kept level by floating it in a dish of water

Scandinavia was a good starting point for sailing because its length meant different points were due east of various destinations: Iceland, Shetlands, Greenland. The Vikings measured speed by dropping a wood chip in the water and counting how long it took their ship to pass it.

Vikings also used a wide body of sailor's lore compiled and transmitted orally through the generations: what sorts of clouds, wind changes, currents, waves, color of water, birds, fish, and vegetation they would encounter at certain places.

- They knew they were approaching the Faroe Islands by the swell over the Banks surrounding them.
- They knew Greenland by the abrupt change in water temperature upon entering the Polar Current and the change of the water from blue to green due to the reflection of the ice in the sky.
- They knew how to use the Norwegian Current to get to Iceland and from there the Irminger Current to get to Greenland and eventually North America.

Viking Raids and Invasions



Although Charlemagne's empire was progressively disintegrating after his death in 814, local authorities did emerge that could occasionally counter Viking raids such as the one being surprised here by the forces of a local Frankish noble.

Most Viking raids involved two or three boats, each with 40 to 50 men armed with spears, swords, axes, and daggers and protected by helmets, round shields, and, if they were rich, chain mail. Shields were made of wood and covered with cowhide.

Most expeditions involved quick hit-and-run raids to get plunder and leave before local forces could gather against them. Only later, when they launched full-scale invasions, were they interested in battles against local authorities. Despite popular perceptions and their fearsome reputation for fierceness and cruelty (which they promoted), they lost a good number of such head-to-head fights.



Testing a Viking shield wall

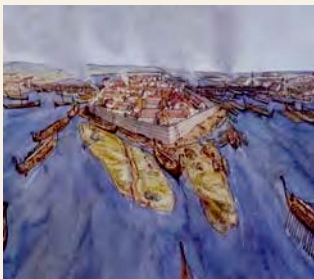
Much like the Greek phalanx, Vikings in battle formed a shield wall although with less emphasis on thrusting spears as the primary weapon. Such tactics also reflected a similar social order of equal or nearly equal warriors as opposed to a noble hierarchy led by mounted knights then emerging in much of the rest of Europe.

Horned and winged helmets. Contrary to common belief, the Vikings did not wear horns and wings on their helmets, although some leaders had elaborate helmets. Many Vikings also had colorful and descriptive nicknames:

- Harold Bluetooth
- Eric Bloodaxe
- Halfdan the Generous-with-Money-but-Stingy-with-Food
- Ragnar Hairy Breeches
- Ivar the Boneless,
- Einar Jingle Scale (an Icelandic musician)
- Eyvind the Plagiarist (a Norwegian poet)

Starting around 800 C.E., wave after wave of Vikings set out from Scandinavia either to raid their neighbors or explore new and more distant lands for the purpose of trading and settling there. Viking raids created a feedback cycle by weakening their victims while also winning plunder and status, which encouraged more and larger raids, and so on. As raiding parties increased in size, the Vikings would grow bolder and strike further inland by sailing up inland rivers or even seizing local horses to carry them and their plunder. As repeated successes further increased the size of the raiding parties, the Vikings would establish winter bases rather than return home to Scandinavia for the winter. Eventually these winter bases might become permanent settlements and the basis for the eventual conquest of the region.

Sometimes places were sacked more than once. The port of Dorestad was destroyed and depopulated six times. Vikings sacked Tours six times between 853 and 903. The Irish monastery at Armagh was plundered five times, three times in one month alone. Paris (below) was one town that especially suffered from Viking raids, being besieged four times, sacked three times, and burned twice. In 886 it was besieged by “40,000 Vikings in 700 ships,” but after a heroic defense of almost a year, the invaders were bought off.



Becoming “civilized”. Eventually, many Viking invaders settled down and married local women, who naturally raised their children in the old civilized ways and language. Supposedly, only one generation after settling down, the duke of Normandy couldn’t find a tutor who knew the old Norse language until he went to Bayeux, 100 miles away, where the most recent Viking immigrants were.

Most Vikings converted to Christianity, but their level of commitment was suspect. One Viking chief was baptized twenty times, since for each baptism he received a white linen robe to symbolize being cleansed of his sins. After a while, word got around and so many Vikings were converting that the Church ran out of robes and had to give lower quality robes or just patches of cloth. As a result, many Vikings said forget it and went back to their old gods.

Hrolf the Walker (Aka Rollo), the first duke of Normandy converted to Christianity. But, to play it safe, on his deathbed, he ordered large sums of gold given to the Church along with a human sacrifice to the Norse god, Thor.



In 872 the would-be king of Norway, Harald Harfargi, defeated a coalition of landowners in the Battle of Hafrsfjord (above). Although fought at sea, it resembled a land battle where both sides tried to board the enemy ships. Harald won the battle, establishing himself as king of Norway. The losers, rather than live under Harald’s rule, left Norway and settled in a new home, Iceland.

Duck Feathers & Unicorn Horns: Viking Trade



The fool on the left is doomed if he thinks he can tame a unicorn that way. It's well known that only young virgins can tame these crafty beasts.

The Vikings tied together a trade network with a number of forts and towns, many of which they had sacked several times before: Dublin, Limerick, Cork, York, Rouen, Kiev, Norvgorod, and Birka (in Sweden).

Birka had a population of 1000 transients and inhabitants at the height of the trade season. It consisted of wattle and daub houses and timber buildings caulked with clay and moss. It had timber boardwalks to protect feet from the mud. It was typically a wild and noisy scene of Greek's, Arabs, Spaniards, Slavs, Irish, Anglo-Saxons, Franks, and Frisians jostling each other in the streets, haggling over prices and quality, and sometimes just enjoying a good drunken brawl.

Foreign visitors to Birka enjoyed equal protection under the law, in return for which the local ruler had the right to buy any choice quality imports three days ahead of anyone else. There was little trade in bulk goods, especially since Viking ships could carry little.



A Rus (Viking) settlement on Lake Ladoga in northern Russia. An Arab traveler, Ibn Fadlan, left an account of the Rus in the 10th century, remarking especially on their heavy drinking and how filthy they were.

Local trade items included bars of smelted iron, salt, amber (fossilized resin that was valued like diamonds and was magnetic when rubbed), furs, horsehides, goatskins, sword hilts, duck feathers, walrus ivory for holy objects, walnuts, hazelnuts, acorns, reindeer horns for combs and sword mounts, which were traded for Byzantine brocades, Frisian woolens, Anglo-Saxon embroideries, Chinese silk, Arab harnesses, leather belts from Persia, two-handled ceramic jars with wine from the German Rhineland, tinted Frankish glass, slaves, and anything gold or silver.

One particularly prized commodity was unicorn horns (actually narwhale horns) traded to unsuspecting customers who ground them up for love potions and as an antidote for epilepsy, poison, and even diarrhea.

Catching a unicorn, according to medieval folklore, involved either of two methods:

- 1) Stand in front of a tree and taunt it (i.e., the unicorn, not the tree) until it charges and, at the last second, step aside so the unicorn crashes into the tree and gets its horn imbedded into the tree. Before it can extricate itself, chop off his head.
- 2) Put a beautiful virgin (unicorns love virgins) in its path. When it prances up and lays its head in her lap, jump out from behind the tree and hack off its head.

Supposedly, to escape you, a unicorn will even jump off a cliff and land on its horn, which absorbs the shock. How the unicorn pulls itself out of the hole it's imbedded into is unknown. Probably magic.

The Far Ranging Normans



Norman forces led by Roger de Hauteville land in Sicily in 1071

Having adapted at least a smattering of civilization, especially shock cavalry tactics, the Vikings proved to be dynamic state builders. One group, the Normans (from *Northmen*) conquered Northwestern France (aka, Normandy), and, branching out from there, extended their power to Britain and across the Mediterranean to Sicily and even Syria.

Normandy was founded in 911 by the Viking leader, Hrolf the Walker, called that because presumably no horse was big enough to carry him and he always had to walk. The treaty recognized him as the legitimate ruler of the area in exchange for defending it against further Viking raids. He also had that rough sort of Viking sense of humor. As he knelt before Charles the Simple's throne, he grabbed its front legs and tipped it over.

Hrolf, or Rollo, could be brutal in typical Viking fashion. When some peasants petitioned him for the right to hunt and fish in his woods, he had a hand and foot of each petitioner cut off, apparently his way of saying no.

He was also shrewd as seen in his conversion to Christianity and rebuilding churches and monasteries, winning him the support of the Church and the only educated men in Normandy. Because of his policies and those of his successors, Normandy was one of the best-run feudal states in Western Europe. In 1066, Hrolf's descendant, William the Bastard (later known as the Conqueror) crossed the Channel and conquered England, the last successful invasion of that island.



The primary type of armor worn by the Normans and other knights through a good part of the Middle Ages was chainmail. Wire would be wrapped tightly around a stick and then cut off into individual rings. Each ring would be linked with four other rings and then riveted shut. Such armor was flexible and mainly effective against slashing cuts, not so much against a stabbing point, and even less so against blunt force trauma. The invention of the crossbow (which the Church tried to outlaw as inhumane) made knights more vulnerable, so chainmail was gradually replaced by stronger plate mail. Then came gunpowder.

The Normans in the South: the Kingdom of the Two Sicilies. In 1016 several Norman pilgrims returning from Palestine through Southern Italy were approached by Melo, a Lombard noble who enticed them with stories of the vast wealth to be made as mercenaries in Southern Italy.

Like their Viking ancestors, the Normans had many landless younger sons, growing numbers of whom drifted south, willing to fight for anyone and even against each other. One of these was William de Hauteville, the eldest of twelve sons, most of whom would eventually follow him to Italy. Fighting first for the Byzantines in Sicily, he won fame for his prowess by killing the Arab ruler of Syracuse, earning him the title, "Iron arm." He then went on to earn the title count of Apulia, which lured his younger brothers Robert and Roger to join him from Normandy. Robert ravaged Byzantine Apulia so thoroughly and escaped his enemies so cleverly, that he was called "Guiscard" (cunning).

William Iron Arm's death led to such destructive civil wars that Pope Leo IX allied with the Byzantines against the Normans, who promptly united and thoroughly crushed papal forces at Civitate in 1053. The people of Beneventum, terrified of Norman reprisals, rather than giving

the pope refuge, turned him over to Normans. Surprisingly, the Normans, being “devout” Christians, fell to their knees and kissed the sandals of their captive. However, they still refused to let him go and kept him captive for nine months until he recognized their rule in South Italy. Later, as the Pope Gregory VII’s allies, they would drive the German emperor’s forces from Rome and then celebrate by thoroughly sacking the city. The Normans continued the conquest of Southern Italy, taking the last Byzantine stronghold, Bari, in 1071.

In the same year, Robert Guiscard’s brother, Roger, took Syracuse, thus beginning the conquest of Sicily, which he would control by 1100. Pope Nicholas II offered the Normans recognition of their control of Sicily in return for an oath of loyalty to Rome, so that the Catholic Church replaced Greek Orthodoxy as the dominant Christian faith in Sicily.

After conquering Sicily, Roger left Muslim governors in office and let them administer Muslim law, making him popular with the local population. Norman rulers would wisely continue to follow this policy. In 1130, Roger II was crowned king of the Two Sicilies (Sicily and Southern Italy), which would be one of Europe’s best-administered states and continue variously as one unified and two separate states (Sicily and Naples) until Italy’s unification in 1861.

From Sicily, Normans wandered farther east, first serving as mercenaries for the Byzantines and later conquering the Syrian city, Antioch, in 1098 during the First Crusade. Antioch would remain in their hands until the early 1200s.

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ANGLO-SAXON ENGLAND (c.500-1066)

England followed a somewhat different course of development from the countries on the continent. Being separated from the rest of Europe by the English Channel certainly made it harder to keep in touch with the continent, especially during the Dark Ages. By the same token, the Channel generally has also made it harder to invade England, although that did not seem to be the case against Viking raids and invasions.

After the departure of the Roman legions in the early 400's, the Romano-British population probably carried out resistance against the invading Angles, Saxons, and Jutes (known collectively as the Anglo-Saxons). This resistance is very likely reflected in the legend of King Arthur. However, the Anglo Saxons eventually conquered Britain by 600 and split it into 7 competing kingdoms known as the Heptarchy. For a brief time, one kingdom or the other might have the upper hand in trying to unite Britain, but the other kingdoms would gang up on that kingdom and restore the balance of power. By 700, the Anglo-Saxons had been converted to Catholic Christianity, and English scholars, led by such men as the Venerable Bede, were in the forefront of European scholarship. However, the advent of Viking raids in the ninth century would radically alter all that.

England especially suffered from the Vikings. Being divided into seven independent kingdoms made it an irresistible target, and Viking raids on England were merciless. Six of the seven Anglo-Saxon kingdoms were overrun, with only Wessex in the south, led by Alfred the Great (871-99), holding on grimly against the Northmen. Alfred did three things to defend his realm against the Vikings. First of all, he kept a standing army, with half of its soldiers on guard at any given time while the other half could tend their crops. Second, he built a navy to head off Viking invasions and raids before they could even reach English shores. Finally, Alfred established fortified centers, known as *burhs*, to protect his people and their property from the Vikings.

These measures saved Wessex from Viking conquest, and Alfred and his successors were gradually able to take the offensive and reclaim a good part of England. Ironically, the Viking raids were good for Anglo-Saxon England in two ways. For one thing, they forced the Anglo-Saxons to build a strong state in self-defense. For another

thing, the Vikings eliminated the six Anglo-Saxon Kingdoms Wessex had been competing with before. As a result, as Wessex retook one part of Britain after another, a single strong united kingdom replaced seven separate ones. Also, it could more easily impose its own laws and customs on other Saxons, since the Vikings had eliminated the other Saxon kingdoms' laws and customs. Probably reinforcing that trend was the Saxons' fear of the Vikings returning, thus making them more likely to submit to the rule of a strong king. Therefore, the Saxon kings of Wessex could establish a much stronger state than would previously have been possible.

Besides their defensive measures, Alfred and his successors did three other things to build a strong English state. First of all, they set up royal officials, known as *thegns* and *reeves*, to administer the king's justice throughout his realm. The second thing was to extract a loyalty oath from all Saxon freedmen under their rule. In an age when oaths were taken especially seriously, this was important, since it made loyalty to the king more important than loyalty to any other lord or official. Finally, the Saxon kings collected a permanent tax known as Danegeld. This was originally tribute paid to the Vikings to keep them from raiding. Later, it was used as a defense tax to support the army and navy, thus keeping England safe from attack.

In 973 C.E., a century after Alfred came to the throne, the Church anointed his descendant, Edgar, with oil as God's chosen king of all England. Although the Vikings still controlled much of England under what was known as the Danelaw, this act showed the progress Wessex had made and the ambitions it had toward uniting all of England. Also, by anointing the king as God's chosen, it marked the king as someone special in society and laid the foundations for the later doctrine of Divine Right of Kings.

These measures kept the Saxon state strong until Ethelred "the Unready" (literally "No plan") came to the throne at the age of ten. This triggered renewed Viking raids until the Danish king, Knut, conquered all of England. As luck would have it, when Knut died, his sons fought for the throne, which allowed the Saxons to regain their independence and give the crown to another Saxon king, Edward the Confessor.

However, England was never far from some sort of Viking intervention. In this case, it was the Norman duke, William, who, as a cousin of the childless

Edward the Confessor, claimed the English throne when the Saxon king died. When the Saxons chose another Saxon, Harold of Wessex, to succeed Edward, William gathered an army, crossed the channel, and crushed Harold's forces at the Battle of Hastings in 1066 in what would prove to be the last successful invasion of Britain. Despite this, the Anglo-Saxon heritage would continue as the Normans would adopt many of the policies and institutions the Saxons had used to build their state in times of crisis.

The Real King Arthur and Anglo-Saxon Britain to c.900

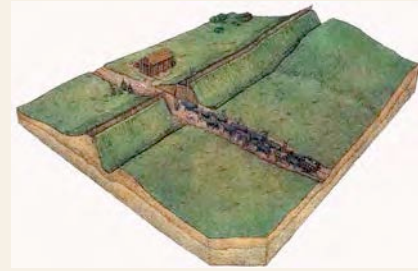


The end of Roman Britain. In the early 400s, Roman forces left Britain to support their general, Constantine (not the famous one), in a bid for the throne. The rebellion failed, but Roman forces never returned to defend Britain, leaving the Romano-Britons to defend themselves against mounting Anglo-Saxon incursions.

If there really was a King Arthur, he probably lived in the 5th or 6th centuries, organizing the Romano-Briton population against the Saxon invasions. Over the ensuing centuries, the story grew into the legend we have today.

It does seem that the Romano-Britons did hold back the Anglo-Saxons for a time. However, in the 600s, their defensive efforts finally collapsed under continued pressure from the invaders. The Anglo-Saxons, being less familiar with Roman culture, were especially destructive to the civilization they took over in Britain, leaving hardly any standing monuments compared to what survived in Italy, France, and Spain. Britain was then fragmented into seven kingdoms known as the Heptarchy. *The seven kingdoms of the Heptarchy* and the tribes who

formed them were Kent (Jutes), Northumbria (Angles), Mercia (Angles), E. Anglia (Angles), Essex (Saxons), Sussex (Saxons), and Wessex (Saxons).



Offa's Dyke, built in the 9th century along the border between Mercia and Wales. While it is unlikely it could stop enemy raids and invasions, it would make it much harder for raiders to escape with livestock.

England's conversion to Christianity involved competition between the Irish and Roman Churches. The Irish, who had never suffered barbarian conquest, contended their Christianity was purer than that in other parts of Europe where it had been corrupted by the various Germanic tribes. The two churches especially disagreed over when to celebrate Easter and how the tonsure (monks' haircut) should look. The Roman Church thought monks should shave the tops of their heads to symbolize the crown of thorns Christ wore on the cross. The Irish thought it should be the reverse.

The conflict came to a head when Irish monks and missionaries working their way from the North met Roman monks preaching their version from the South. To settle the matter, king Oswy held the Synod of Whitby in 664. The deciding factor was when the Romans told Oswy that Christ had entrusted the keys of Heaven to St. Peter, something the Irish had to admit. Feeling he couldn't afford to offend the gatekeeper of Heaven, whose representative lived in Rome, Oswy went with the Roman Catholics.

Clearing the air. In 597, King Ethelbert of Kent met missionaries in the open air so the wind would blow away any spells they might try to cast on him.



England, along with Ireland, remained a center of learning and culture, which heavily influenced the Carolingian renaissance.

Above: Gospel Book of Lindisfarne, England, late 7th Century: St. Matthew.

Norse influence on the English language is seen in the following words: thrive, die, ill, bread, eggs, take, call, window, husband, sky, anger, low, scant, loose, ugly, wrong, happy

By the same token, the closeness of Old English and Norse can be seen in the following sentences:

Old English: Haefst thu hors to sellenne?

Norse: Hefir thu hross at selja?

OE: Ich haebbe tu hors ac (but) an is eald

Norse: Ek hefi tvau hors enn einn er aldr

Place name endings also say a lot about England's history:

Anglo-Saxon place endings: *ham* (Durham), *stead* (Hampstead), *stowe* (Felixstowe), *ing* (Reading), *ton* (Kingston)

Norse place name endings: *thorpe* (Scunthorpe), *toft* (Lowestoft), *scale* Windscale

Danegeld. Payments in silver could take the form of coins, but ingots and so-called *hacksilver* (silver objects such as plate or jewelry cut up for reuse), were also common. Many of the weights for measuring the tribute had coins, or small pieces of jewelry inserted into the top.



Lead weight used to weigh out silver, both for trade and probably also for the division of plunder. While payments in silver could take the form of coins, ingots and *hacksilver* (silver objects such as plate or jewelry cut up for reuse), were also common. Many of the weights had coins, or small pieces of jewelry inserted into the top. This one, of Ethelred I, king of Wessex (reigned AD 865-71), was made of silver of a poor quality, and the pin holding the coin to the weight is actually made of finer silver than the coin.

Alfred the Great and Anglo-Saxon Revival (871-c.1000)



Coin of Alfred the Great (871-899)

Alfred the Great is the only English monarch known as the Great. However, his reign started off ominously. After a surprise attack by the Vikings Alfred went into hiding in the local fens and marshes. According to one story, he was hiding in a cave from enemies and was saved by a spider quickly spinning a web over the entrance to make it look like no one was there.

Alfred managed to gather a new army with which he defeated the Viking leader, Guthrum (below), and established a stable frontier

between the Saxon kingdom of Wessex in the south and the Danelaw in the north. The defeated Viking leader, Gunthrum, also agreed to convert to Christianity.



Alfred also built a navy of flat-bottomed ships that rode higher than Viking ships and could avoid rocks in coastal waters. Although it did destroy 20 Viking ships and their crews in 896, the English navy seems to have had little long-term effect against Viking sea raids. The navy was also expensive, taking 300 peasant holdings, known as hides, to support one ship.



In addition to spending much of his reign just defending his realm, Alfred also supported Church reforms and promoted learning and the arts. Among other things, this made him a close ally of the Church, which supported and sanctified the rule of the Wessex kings as being ordained by God.

The Anglo-Saxon army consisted of three elements: the royal guard (*huscarls*), nobles (*thegns*), and peasants (*fyrð*). Since the stirrup and shock cavalry tactics didn't catch on in Saxon England, the army fought as infantry in a shield wall, much like the Vikings did. Since they could afford protective armor, the thegns and huscarls fought in the front ranks, with the huscarls gathered in the center around the king. Their primary weapon was a long two-handed

battle-axe. By the Norman invasion in 1066, many nobles had adopted the chainmail hauberks (knee-length shirts) and kite-shaped shields then in use on the continent.

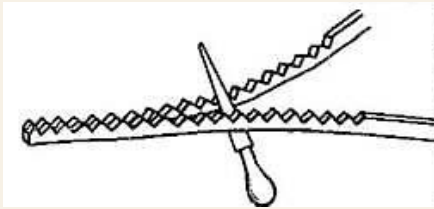
The peasant fyrð behind them mostly fought with spears, many or most of them having round wooden shields. A few might have bows or javelins, but there seems to have been no concentrated missile fire developed by the Saxons. After the Norman conquest, the predominance of shock cavalry and the Saxon peasants' hatred for their overlords would drastically reduce the role of the peasant fyrð.



Saxon Burhs. Reconstruction of a typical Saxon Burh, many of which had evolved into towns with markets, churches, and bridges by the 11th century. In this case, the original wooden fortifications are in the process of being replaced by more durable and defensible stone. Note also the multiple defensive ditches to slow down attackers. In some cases, the Saxons revived older Roman towns with their fortifications and rectangular grids of streets. They also established a network of beacon fires to quickly warn of invading armies.

Royal coinage was another feature of the Saxon monarchy. There were around 70 royal mints, many of them run by local jewelers or goldsmiths subcontracted by the state. Mintmarks allowed the coins to be traced to a specific mint to ensure weight and quality. Issuing light or impure coins led to chopping off the minter's hand and hanging it in the mint as a warning to his successors. Saxon coins were recalled every two or three years to be melted down for reminting. The state gave only eight or nine new coins in exchange for every ten old ones.

Saxon accounting. In an age of limited literacy and record keeping, the Saxons kept accounts on what were known as *tally sticks*. A notch was made on a stick for each sum of money being counted in a transaction. Then the stick was split down the middle, giving each party half with identical notches and a record of the transaction.



The Last Anglo-Saxon Kings (968-1066)



Alfred's measures kept the Saxon state strong until Ethelred (968-1016) "the Unready" (literally "No plan") came to the throne at the age of ten. This triggered renewed Viking raids that would last until the Danish king, Knut, conquered all of England by 1016.

Unlike Alfred, Ethelred tried to buy off the Vikings, which only led to more raids and heavier demands, climbing from 10,000 pounds of silver to 16,000 pounds to 24,000 pounds to 36,000 pounds. Supposedly when told of a pending Viking attack, Ethelred had his men take off their armor and shoes and march around a church. It didn't work.

Viking atrocities included tying the captured archbishop of Canterbury to a pole and pelting him to death with stones and severed cow parts.

The nursery rhyme, "London Bridge is Falling Down" supposedly comes from a Viking raid in

1011 when they tore down London's bridge with grappling hooks.



Knut, who reportedly killed someone over a chess game, is remembered for his legendary arrogance by placing his throne on the seashore and commanding the sea to recede, which it apparently did not do. Despite these stories, Knut's rule seems to have been fairly temperate.



Edward the Confessor was supposedly so pious he refused to sleep with his wife, which made it hard to produce children. (His widow may have perpetrated this story to defend her failure to produce an heir to the throne.) There is controversy over how ineffective Edward was as a king, some historians saying he was quite active and effective in the early part of his reign. However, his reputation did get him canonized as a saint in 1161 by Pope Alexander III, his saint's day being October 13. He was regarded as the national saint of England until being replaced by St. George around 1350.

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ROME IN THE EAST: THE BYZANTINE EMPIRE (c.500-1025 C.E.)

Introduction: the "Second Rome". When we study the Middle Ages, we tend to focus on Western Europe, since it became the center of Western Civilization during the Italian Renaissance around 1400. However, this gives us a distorted view of medieval history, for Western Europe was little more than a backwoods frontier compared to the real centers of civilization further east. It is here that we are concerned with one of those eastern cultures, Byzantium, and its contributions to civilization. Cities provide the central focus of civilization, and no civilization seemed to center on a city more than Byzantine civilization did on Byzantium, or Constantinople as it was known after its refounding by Constantine in 330 C.E.

Constantinople's location at the narrow juncture between the Aegean and Black Seas was ideal for controlling trade between those two bodies of water as well as the trade routes that converged there to link Asia and Europe. The city itself was blessed by nature, with water bordering two of its three sides, providing it with both an easy defense and an excellent harbor known as the Golden Horn. The natural advantages of the city were further enhanced by human ingenuity. The harbor was protected from invasion by a massive chain stretched across its entrance. The landward side had a huge triple set of walls to protect it. Down through the centuries, when all else failed, that chain and set of walls kept Constantinople safe from invasions. Many times all that seemed to remain of the empire was Constantinople itself. But as long as the city survived, the empire also survived to bounce back and recover its old territories.

Inside its walls, Constantinople contained some of the most marvelous sights in the civilized world. Many of these reflected the Roman heritage that the Byzantines were carrying on: aqueducts, sewers, public baths, and street planning. Other sights, in particular some 100 churches, reminded one that Constantinople was a very Christian city. Still other sights reflected oriental influences: the bustling markets offering goods from all over the civilized world, the palace complex of the Boucoleon with its

reception halls, mechanically levitating thrones, imperial gardens, and silk factories. Much of the Byzantines' success in dealing with their less sophisticated neighbors was due to their ability to dazzle visitors with such wonders.

Turmoil, crisis, and the transition from Roman to Byzantine Empire (527-717 C.E.). While we refer to the Byzantine Empire, people in the Middle Ages still called them "Romans," never losing sight of the fact that this was the eastern half of the Roman Empire that had survived the barbarian invasions of the fifth century C.E. Both the terms *Byzantine* and *Roman* have some truth to them. They were the direct heirs of the Roman Empire and did carry on the remains of that empire for some 1000 years after the fall of the western half of the Empire. However, for all intents and purposes, it became a predominantly Greek empire and culture as the Middle Ages progressed. Its subjects spoke Greek, worshipped in what came to be the Greek Orthodox Church, and wore beards in the Greek fashion. They even argued and fought over religion in much the same way the ancient Greeks had argued and fought over politics.

The turning point in this transition from Roman to Byzantine civilization came in the reign of Justinian I (527-565). We have seen how this "last of the Roman emperors" tried to reclaim the Western empire. In the process, he virtually wrecked the eastern empire with the high cost in money and manpower for his wars and tribute to keep the Persians quiet in the east. Two other factors merely added to the damage: persecution of Monophysite heretics in Syria, Palestine and Egypt which alienated much of the population against the central government and bad luck as the Bubonic plague made its first appearance and devastated the empire's population. When Justinian died, the empire may have looked strong on the map, but in reality it was exhausted and in desperate need of a rest. Unfortunately, rest was the last thing the empire would get.

The next two centuries would see the Byzantines constantly beset by waves of invaders coming from the north, the east, and the west. The very fact that the Empire survived at all seems a miracle considering the troubles it endured. In the West, the

first wave of invaders, the Lombards poured into Italy in 568, only three years after Justinian's death, and set off centuries of fighting between themselves, Byzantines, Franks, and even Arabs. The Byzantines did manage to hold onto Ravenna and Venice in the north and southern Italy and Sicily to the south, gradually losing them by 1100. However, except for those outposts, the Roman Empire in the West was gone.

A more serious threat to the empire's existence came from the east. Around 600 C.E., the chronic hostility between Byzantines and Persians erupted into a titanic life and death struggle that would last a quarter of a century. The Persians overran Syria, Palestine, and Egypt while the nomadic Avars in the north rampaged through Greece and the rest of the Balkan Peninsula. At the low point of the war, Constantinople was virtually all that remained of the empire in the east, and even it had to withstand a siege by the combined Persian and Avar armies. Fortunately, the stout walls of Constantinople held fast against the enemy assaults, and a new hero, the emperor Heraclius, emerged to save the empire. Leaving Constantinople to defend itself, he struck deep into Persia to draw its armies away from his capital. In a series of resounding victories, the Persians were crushed and the Byzantine Empire saved. However, in the process, both empires had been thoroughly exhausted.

Unfortunately, right on the tail of this war a much more serious threat suddenly appeared. The Arabs, newly united and inspired by Islam, swept in like a desert storm, toppling Persian and Byzantine resistance like a house of cards. The Persian Empire was subjugated in its entirety while the Byzantines watched as Syria, Palestine, Egypt, and North Africa all fell to the Arabs. Not content with these conquests, the Arabs pressed on through Asia Minor toward the coveted prize of Constantinople itself. Once again, the city's fortifications held out, and after a four-year siege, the invaders were driven back. One reason for this victory was the use of a new secret weapon, Greek Fire, which sent the Arab ships into wild uncontrollable flames. This chemical would be a mainstay of the Byzantine defense and a highly guarded state secret for centuries to come. We still do not know exactly

what was in it, although it was probably some sort of petroleum compound.

In 717 C.E., a new emperor, Leo III, from Isauria in southern Asia Minor, came to the throne. The empire's situation at the time was not very hopeful, for another huge Arab army was descending on Constantinople. As in times past, Byzantine fortifications and Greek Fire took their toll, and by the following spring, the Arabs were in full retreat. This was the last time the Arabs would besiege Constantinople, and the end of this siege symbolized the beginning of a period of stabilization for the empire's frontiers and internal development. Fighting would continue with the Arabs, but mainly in the form of sporadic border raids rather than massive invasions.

The Byzantines also faced serious threats in the north from Asiatic nomads and their Slavic subjects whom they drove in front of them. Two of these nomadic tribes, first the Avars, and later the Bulgars, waged relentless warfare on the Byzantines, mercilessly devastating the Balkan Peninsula in their raids. The Balkans virtually dropped out of Byzantine control and the light of history for nearly two centuries as they were inundated with Slavic invaders. To the north, a powerful Bulgar kingdom proved to be nearly as serious a threat as the Arabs for the next 350 years. Eventually, they would settle down, adopt Christianity, and even briefly be conquered by the Byzantines. But for now, they were one more major problem to be overcome.

By 750 C.E., thanks to some astute diplomacy that turned their enemies against one another, perseverance in the face of disaster, and the fortifications of Constantinople, the Byzantines had survived, often against incredible odds, both foreign invasions and internal religious strife. However, they had been stripped of all their lands except for Asia Minor, part of Thrace around Constantinople, Sicily, and parts of Italy. And they were still surrounded by very aggressive neighbors. No longer was it a Roman Empire in anything but name and a few Italian holdings. From this point on, it was truly a Byzantine Empire.

Unfortunately, just as outside pressures from the Arabs were starting to ease, a cloud of religious controversy descended upon the empire. The new issue, *Iconoclasm*, concerned the icons (religious images) the Church used to depict Christ and the saints. The iconoclasts thought that the use and veneration of these images was idolatry. The iconodules said icons were needed to instruct the illiterate masses in the teachings of Christianity. Leo III and several of his successors were iconoclasts and moved to abolish this form of idolatry by seizing the icons and destroying them.

As one might expect in an era when religion was such a vital issue to both the individual and the state, Iconoclasm touched off some violent reactions from people attached to the icons. Riots swept through the cities of the empire. Relations were strained with the Church in Western Europe, which also defended the icons. Palace intrigues and murders centered largely on the icon issue. When an iconodule empress, Irene came to the throne (blinding her own son in order to seize power), she disbanded several of the best regiments of the army since their troops were mainly iconoclasts. This, of course, damaged the empire's ability to defend itself and invited raids from its neighbors. After over a century of this turmoil (726-843), the images were restored and the empire could pursue a more stable course undisturbed by major religious controversies.

The imperial centuries (c.750-1025). The disturbances of the seventh and eighth centuries left a very different empire from the one that Justinian had ruled. The most noticeable difference was that the empire was much smaller, having been stripped of Syria, Palestine, Egypt, and North Africa. While this deprived the Byzantine government of valuable revenues, it also made the empire much more compact and easier to defend since it was now confined mainly to Asia Minor and the Balkan Peninsula.

The recent turmoil also made the Byzantine Empire a more ethnically, culturally, and religiously united realm. The largely Aramaic speaking peoples and Monophysite "heretics" of Syria, Palestine, and Egypt were now under Muslim control. This left a predominantly Greek speaking populace more or less united by the same religious views once the

Iconoclasm struggle had settled down. The empire may have been smaller, but it was also more cohesive.

The upheavals caused by two centuries of foreign invasions forced the Byzantines to adapt their society, government, and defenses to what seemed to be a continuous state of crisis. There were five main factors that helped the empire revive. First of all, after 750 C.E., the pressure from invasions let up somewhat, although it was still an ever-present menace. Second, the Byzantines pursued an active policy of repopulating Asia Minor that had been devastated by the wars of the previous centuries. The main policy they followed to this end was to take hundreds of thousands of the Slavic people who had overrun the Balkans and resettle them on the empty lands in Asia Minor. These people were hard working industrious folk who became loyal subjects and excellent soldiers for the Byzantine state. No single policy probably did more to revive the fortunes of the Byzantine Empire than this resettlement policy.

A third factor aiding Byzantine revival had to do with the administration and defense of the empire, which needed serious overhauling. Back in the third century, Diocletian had created separate civil and military officials in his provinces to cut down on the possibility of revolt. However, the constant threat of invasions faced by the Byzantines forced them to abandon Diocletian's system and create military provinces called *themes* run by military governors (*strategoi*). The emperors did cut down on the possibility of revolt somewhat by having the tax collectors answer directly to them. This still left the governors enough power and freedom to defend their provinces. The governors needed professional help in running the provinces, which was provided by an excellent civil service, possibly the best of any medieval state.

Given the high priority that claimed, it should come as no surprise that the Byzantine army also carried on the ancient Roman tradition of excellence. However, the nature of the warfare the Byzantines faced, (usually quick hit and run border raids), differed considerably from the Roman style of warfare. As a result, the army's core consisted of highly mobile and versatile regiments of cavalry

known as *cataphracts*. The cataphract was heavily armed and could rely on shock tactics similar to those of western knights to drive back the enemy. But he was also armed with a bow and could function as a horse archer when necessary. The Byzantines also fielded light cavalry plus heavy and light infantry who were useful in different types of terrain, especially hills and mountains. Recruitment was done according to village, each village being responsible for supplying a quota of peasants armed and ready for service. This system was superior to that of Western Europe where the more troublesome and ambitious nobles were responsible for and in control of defense.

Another important aspect of Byzantine defense was the navy, since the empire contained so much coastline. At its height, the Byzantine navy consisted of some 200 ships of the line called *dromons*. These were galleys armed with rams as well as catapults or siphons for launching the deadly Greek Fire. Unfortunately, the high expense of maintaining a fleet and the rebellious nature of the sailors caused the Byzantine government to neglect the navy from time to time. Such periods of a weak navy allowed the resurgence of piracy and enemy navies, in particular those of the Arabs.

The fourth factor helping the Byzantines was their diplomacy and the fact that they were the only people of the Middle Ages who made a systematic study of their enemies' military tactics. They produced several military manuals detailing precisely what formations, maneuvers, and tactics to use against the heavy knights of Western Europe as opposed to the mobile light cavalry used by their enemies to the north and east. The Byzantines had to be more scientific in these matters because they were usually outnumbered by their enemies and had to rely on every trick or stratagem possible.

The first goal they generally pursued was to avoid a war if at all possible. As a result, the Byzantines were very skillful in diplomacy, especially against the less sophisticated cultures to the west and north. The first principle of Byzantine diplomacy was to turn two neighbors against each other and let them fight for Byzantine interests even though they might not realize they were doing just that. Naturally the neighbors who were duped into this kind of

behavior would be somewhat bitter about it. Byzantium's neighbors, especially those in Western Europe, denounced the Byzantines as cowards for their strategies. Even today the word "byzantine" is used to denote vicious intrigue. However, looking at the Byzantines' situation, we can understand why their behavior and concepts of war and heroism differed so much from those of Western Europe. When they had to fight, they did so very well. But they were masters of conserving their meager human resources and relying on other methods to attain their goals.

Finally, such a well-run empire with a highly trained civil service, army, and navy, required a healthy economy to support it. The invasions of the seventh and eighth centuries severely damaged the Byzantine economy. Most of its cities were reduced to little more than fortified strongholds to protect the surrounding peasants. In spite of this, Byzantine wealth was legendary, especially to the relatively simple peoples surrounding the empire. Such contemporary writers as Liutprand of Cremona tell of being thoroughly dazzled by the wealth and splendor of Constantinople. The capital city was the crossroads of much of the trade of the civilized world at that time.

A ten per cent toll on all imported goods from this trade raised sizable revenues. The government also kept monopolies on such goods as silk, grain, and weapons. Furthermore, it kept tight control on all the craft guilds, strictly regulating their quality of workmanship, wages, prices, and competition. As stifling to their economy as these measures may seem, they did protect the somewhat fragile industries and trade in the unstable period of the early Middle Ages. As a result of this protection, Byzantine industries flourished and its goods were among the most highly prized and sought after in the Mediterranean. Later, when trade and industry revived elsewhere, strict Byzantine controls would work against its people in more competitive markets.

The firm foundations of administration, defense, and economy laid by the Isaurian and Amorian dynasties (717-867) bore fruit under the Macedonian dynasty, which took the Byzantine Empire to the height of its power. The century and a half from

867 to 1025 saw a succession of generally excellent emperors who maintained the stability of the empire internally while expanding its borders. In 863, a major Arab invasion was annihilated at Poson, which set the stage for the steady advance of Byzantine armies against the Muslims. Antioch, one of the five original patriarchates of the Church lost to the Muslims in the 600's, was recovered. The Byzantines even had their eyes set on retaking the Holy Land and Jerusalem. In the north, the emperor Basil II waged relentless warfare against the Bulgarians, eliminating their kingdom entirely, and earning the title "Bulgar slayer". By Basil's death in 1025, the Byzantine Empire's borders extended all the way to the Danube River in the north and the borders of Palestine in the south. The Byzantines were definitely the super power of the Near East, but after Basil II's death everything started going wrong.

Our debt to the Byzantines. Byzantine civilization created little that was new or unique, being largely absorbed in religious matters or copying the literary forms of ancient Greece. However, in such an age of violence and confusion, the Byzantines did make invaluable contributions to civilization. First of all, Byzantine missionaries spread Greek Orthodox Christianity and civilization northward. Eastern Europe, especially Russia, was heavily influenced by Byzantine architecture, religion, and the Cyrillic alphabet. For example, the "onion domes" atop many Russian Churches testify to Byzantine influence. Orthodox Christianity has also had a profound and lasting impact on the Russian people down through the centuries to the present day, even surviving and outlasting official discouragement from the communist regime that held sway for nearly 75 years.

Second, the Byzantines passed Greek civilization, in particular its math and science, on to the Muslim Arabs. They in turn took the Greek heritage, added their own ingenious touches (such as the invention of algebra), and passed it on to Western Europe by way of Muslim Spain. This helped lay the foundations of our own scientific tradition.

Finally, the Byzantines directly passed much of ancient Greek culture to Western Europe during the Renaissance. Also, just by holding back so many

nomadic invaders from the East through the centuries, they allowed Western Europe's culture survive and develop in relative peace. Many writers from the West, hostile to the Byzantines for historical reasons discussed above, have downplayed and criticized the role the Byzantines have played in the history of our civilization. This is unfortunate, since, during the Early Middle Ages in particular, the Byzantines did more than their share in the preservation and advance of civilization.

Constantinople: The New Rome



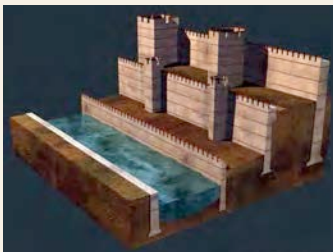
A second foundation myth. Much as the creation of the original city, Byzantium, was said to be the result of divine guidance when the Oracle of Delphi told its founders to build their city across from "the blind men," so its second founding was allegedly the product of supernatural inspiration, this time in the form of a dream. Constantine's original plan was to build his new capital on the site of ancient Troy, having personally laid out its boundaries and seen its gates hung. But then God came to him in a dream and led him to the new location.

Constantinople's location at the narrow juncture between the Aegean and Black Seas was ideal for controlling trade between those two bodies of water as well as the trade routes that converged there to link Asia and Europe. The city itself was blessed by nature, with water bordering two of its three sides, providing it with both an easy defense and an excellent harbor known as the Golden Horn. The natural advantages of the city were further enhanced by human ingenuity. The harbor was protected from invasion by a massive chain stretched across its entrance. The landward side had a huge triple set of walls to protect it. Down through the centuries, when all else failed, that chain and set of walls kept Constantinople safe from invasions. Many times

all that seemed to remain of the empire was Constantinople itself. But as long as the city survived, the empire also survived to bounce back and recover its old territories.

The Golden Horn. The sixth century historian, Procopius described the Constantinople's harbor, the Golden Horn this way: "*The whole bay is about 5 miles long & all of it is a harbor, so that when a ship anchors there the stern rides on the sea while the prow rests on land, as if the 2 elements rivalled each other in their desire to be of greatest service to the city.*"--

Constantinople's walls were legendary to its neighbors. Supposedly, Mohammed had promised paradise to the first Muslim to breach them and take the city. A 60' wide and 20' deep moat could be flooded or drained at will. Behind that, a low wall shielded archers trying to block passage over the moat. The 2nd & 3rd walls were the main lines of defense with 192 towers staggered for maximum covering fire. The third wall's towers were 70' high with 25' thick walls.

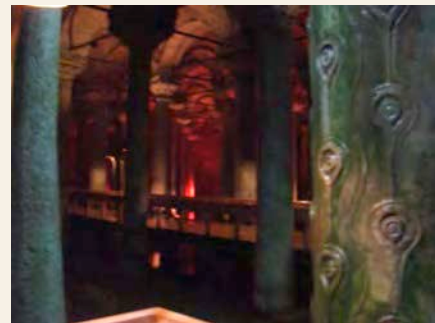


The two levels of the towers were entirely separate, with the lower room entered from the city and the upper part from the battlements. This made it harder for anyone breaching one section of the walls to spread out beyond it.

Inside its walls, Constantinople contained some of the most marvelous sights in the civilized world. Many of these reflected the Roman heritage that the Byzantines were carrying on:

aqueducts, sewers, public baths, and street planning. Its array of some 100 churches, in particular the spectacular dome of the church of the Hagia Sophia, reminded one that Constantinople was a very Christian city. Still other sights reflected oriental influences: the bustling markets offering goods from all over the civilized world, the palace complex of the Boucoleon with its reception halls, mechanically levitating thrones, imperial gardens, and silk factories. Much of the Byzantines' success in dealing with their less sophisticated neighbors was due to their ability to dazzle visitors with such wonders.

Hydraulic engineering. The emperor Valens' aqueduct, completed in 368, was one of 8 aqueducts supplying the city with water. As with other Roman water systems, it led to reservoirs, which in turn supplied corner fountains. Likewise, there was an intricate sewage system of drains under the streets leading out to the sea. There were also 8 public and 153 private baths open to men and women at different times. Beneath the city lay enormous cisterns supported by hundreds of columns for storing water against times of drought or siege (below).



Besides water, church and state combined to supply food to the needy, supposedly feeding 80,000 people a day, while state medical officers tried, with limited success, to keep the city clean and free of disease. Along those lines, although the city had been laid out in a rectangular grid in Roman style, earthquakes and fires had realigned the streets in a less orderly manner. There were also great public gardens kept up at municipal expense to provide some green space

Among the treasures looted to adorn Constantine's new capital, in particular the Hippodrome, where the chariot races were held, were an Egyptian obelisk, and the tripod dedicated to Apollo in thanks for the Greeks' victory over the Persian Wars.

The Hippodrome (literally "where the horses run") was the major sports complex in Constantinople for the chariot races. The influence of Christianity had gotten blood sports of the Coliseum (gladiators, animal fights, animal hunts, etc.) outlawed, leaving chariot racing as the only remaining major public spectacle sport. By the 500s, the red and white teams were also gone, reducing the number of chariot teams/factions to the Greens and Blues, whose rivalry resembled modern sports rivalries, except that the fans brought knives to the stadium. In one disturbance, a gang of Blues sewed a Green into a leather bag and tossed him into the sea.

Adding to the intensity of the competition was the fact that Greens and Blues largely represented socio/political/religious factions as well, the Greens largely being from the poorer classes and Monophysite in faith, the Blues being richer and against the Monophysite heresy. Blues and Greens were also networked across the Empire, so a disturbance between them in one city could trigger trouble in others. This call and response cheer by the Blues shows how religious factionalism entered sports by emphasizing Jesus' divinity over his humanity.

"Who was crucified for us?"

"Holy God, Holy and mighty, holy and immortal"

Circus day was an all-day event for which businesses shut down and fans waited all night before to get good seats. The highlight of opening ceremonies was the entrance of the emperor, who had a special causeway from the palace to his box, which itself was elevated on pillars to protect the imperial family from angry sports fans. Similarly, railings and a moat surrounding the track protected the drivers. In the interest of public order, the emperor would

choose the race days, the drivers, and the leaders of the factions.



Races were 10, 15, or 20 laps usually lasting around 15 minutes, often with bloody pile-ups at the ends of the tracks with their hairpin turns. In the stands there was both heavy betting and praying. This Byzantine sports fan's prayer reflects the fans' intense loyalty, especially in the absence of a real political voice: *"O God, protect the emperor, protect the magistrates, protect our masters, protect our empress and her children, protect Anatellon! (driver?) Give them victory. Grant victory to the Veneti! Mother of God, let them be victorious that the empire may be filled with joy, that we may dance the dance of triumph! Jesus is our protector! Victory for the Blues! We win, and the emperor and his armies will gain victories, there will be abundance in the towns of the Romans. May the divinity eternally grant triumph and glory to the Blues! Victory to the Autocrator, to the empire, to the Veneti!"*

Another fan was so devoted to the races that, when he refused to sell certain property to the emperor, he was thrown in jail within earshot of the Hippodrome so he could hear the crowd, but not attend. The torture worked and he sold out at a ridiculously low price.

After the fourth race, marking the end of the morning's competition, there were various entertainments to keep the fans pacified: clowns, dwarves, spectators racing chariots pulled by other spectators, dogs that could pick out the most greedy or vicious people, men leading around gilded crocodiles, and gymnasts performing dangerous feats, one troupe of gymnasts losing half its members on one tour.

Too much testosterone? A recent theory about fan violence at soccer games may help explain the volatile nature of Byzantine chariot fans as well. At least in some places, male soccer fans pack the stadium so there is standing room only. They also tend to drink a lot of alcohol...which means they have to go to the bathroom...but they don't want to give up their spots by leaving...so they urinate on the floor where they are standing...which releases testosterone...which can help trigger violence.

It's a theory, but it could explain a lot. After all, the chariot races were all-day affairs where fans brought their own food so they wouldn't have to give up their spots. They also brought wine. Most theories agree that people throughout history have had to go to the bathroom.

That may also help explain the fans' impatience to get the afternoon races started, which didn't begin until the emperor returned to his box. To hurry the emperor along: fans would chant songs of increasing disrespect, such as: "Arise oh Imperial Sun. Arise and come forth", which was their way of saying: "Come on, you've had too many bottles already. You're already seeing double."

Apparently the fans weren't the only ones with short tempers. After one such round of chants, the emperor Phocas, already known for his mean disposition, unleashed his guards on the crowd, cutting off heads, noses, and ears with great slaughter.

The Nike ("Victory") riots (532) were probably the worst sports disturbance in history, although, as mentioned before, sports were tied up with politics and religion. What united the two factions was anger by everyone (including the poor, who supported the Greens) at government corruption and Justinian's raising taxes on the rich (who generally supported the Blues, like he did).

Therefore, after one riot at the Hippodrome, he ordered seven ringleaders, from both factions executed. However, two of them, one Green and one Blue, escaped after two botched attempts

(due to broken ropes and the collapse of the scaffold) and took refuge in a church, which imperial troops put under siege.

The emperor announced new games several days later to defuse the situation. This was where the cry of *Nika* came in. Normally each faction would yell *Nika* (victory to) and the name of their favored driver. This time however, the Greens and Blues joined forces in the thunderous victory chant against the watching emperor. He retreated to the palace and the crowd poured out into the streets to start a huge riot that nearly toppled the throne.

Putting down such riots was particularly difficult, because the narrow streets made it possible for rebels to barricade them and resist imperial troops while other rioters, including women, could hurl roof tiles, bricks, and even flower pots on the enemy from above. The object of one such uprising in later centuries was killed by such a flowerpot, while Pyrrhus of Epirus in the third century B.C.E died from a roof tile thrown down by an old woman joining the uprising.



A mosaic of Theodora and her court. This and the accompanying mosaic of Justinian are the most famous mosaics in Byzantine history.

Meanwhile, rioters set fires that spread throughout the city, even burning a hospital with all its inhabitants. By this time, Justinian was ready to go into exile when the empress, Theodora, entered to bolster his nerves. Determined not to go back to the life of poverty she was raised in, she told the emperor, "As for me, purple makes the best burial shroud."

Taking courage, Justinian sent his top general, Belisarius, who caught and slaughtered some 30,000 rioters trapped in the Hippodrome. In the aftermath, nineteen senators were executed, their palaces torn down, and their bodies dumped into the sea. Surviving nobles paid with their purses to the emperor's vengeful tax collectors.



Reconstructed view of the Hagia Sophia as it appeared during the period of the Byzantine Empire.

The Hagia Sophia. However, the riot's widespread destruction also gave Justinian the opportunity to pursue an ambitious building program. The most famous of these monuments still stands today: the church of Hagia Sophia. It was the most spectacular Church in the Christian world for centuries. Its dome, which was 100 feet across and 180 feet high, was the largest of any Church until the completion of Santa Maria del Fiore in Florence, Italy in 1436. As the historian Procopius put it: "*It seems not to rest upon solid masonry but to cover the space beneath as though suspended from Heaven.*" Its surrounding windows bathed it in what seemed an unearthly light by day, while thousands of candles would make it a shining beacon by night. Amazingly, it was completed in only five years. Because of earthquakes, the dome had to be rebuilt or restored in 558, 989, and the 1860's.

The Palace of the Boucoleon, a mile-long complex of buildings overlooking the emperor's private harbor, was the virtual nerve center of the empire. Some 20,000 people worked here: soldiers, sailors, bureaucrats, courtiers, priests, and entertainers. The palace's factories manufactured high-grade weapons and dyes. It was also the site of the state silk factories, one of the empire's most profitable monopolies.

The secrets of silk weaving supposedly reaching the Byzantines by way of two monks who smuggled silk worms and mulberry leaves out of China in hollowed out bamboo canes. For centuries people from Europe, the Muslim world, and Russia clamored for Byzantine silks since they were the only source of this precious commodity outside of China. In 1147, the Normans captured Thebes and Corinth with their silk factories, and silk manufacture spread to Italy and the rest of Europe.

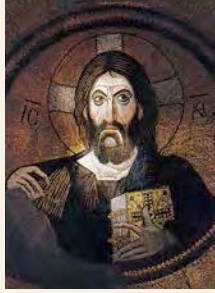
The Gynaecium (women's quarters) was where the empress held sway. After the empress Theodora died of cancer in 548, Justinian went through her quarters and found a Monophysite priest she had hidden from him for twelve years.

One peculiar Byzantine custom was an empire-wide beauty contest to choose the emperor's bride. Given the stakes, families competed fiercely to get their candidate chosen as the new empress, even trying to sabotage rival candidates with knockout potions and poisons.

Byzantine wealth was legendary, especially to people in the less sophisticated West and North. One bedroom in the palace was floored with marble strips radiating out from a central medallion that framed a mosaic peacock. At the foot of each wall was a mosaic eagle with outstretched wings. The walls above these were covered with multicolored glass that shimmered like a field of flowers. Above those mosaic portraits of imperial family members raised their hands toward a brilliant green cross on the ceiling. The Imperial gardens of the palace had shaded walks and fountains, one expelling wine through a golden pineapple into a silver basin full of almonds and pistachios. Wandering among the shrubs & flowers were exotic birds such as ibis and peacocks.

The Blachernae Palace on the Golden Horn, built by the emperor Theophilus (829-42), became the main palace as the empire declined, since the Boucoleon was too big and expensive to run.

The Kingdom of Christ on Earth



The Kingdom of Christ on Earth. The biggest distinction between the old and new Rome was that New Rome was very much a Christian city and its empire the realm of Christ on earth. Byzantines saw themselves as subjects of Christ *Pantokrator*, ruler of all, and the emperor who was his representative on earth. Coins bore the image of Christ Pantokrator wearing the imperial diadem on the obverse and the emperor holding a cross on the reverse.



Psalms to “Christ the Conqueror” were sung in military parades. Next to the emperor’s throne was a second throne with a copy of the Gospels as a reminder of who the real ruler was.

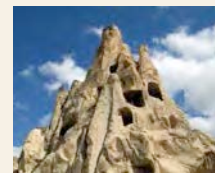
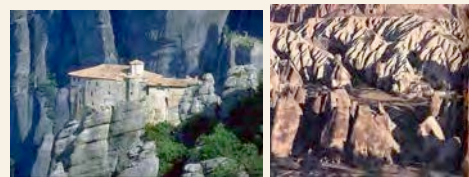
The emperor was largely an actor in a spectacular passion play, with himself representing Christ. His daily life was strictly defined by ritual acts, each carrying religious significance. He was even dressed more as an icon than a human with his crown bearing a cross. His garments, supposedly divine gifts from the angels to Constantine, were kept in a Church. Meals were allusions to the Last Supper with twelve tables facing the emperor’s, each with twelve couches. Similarly, the palace was more like a church hung with relics. Imperial receptions resembled divine revelations more than just audiences. Officials announced the emperor as "Equal of the Apostles" while those

in attendance shielded their faces from his divine brilliance.

Visitors to the throne room were greeted by mechanical birds twittering in trees and bronze lions that roared and beat their tails. After falling to their faces in *prokynesis*, they would look up to see the throne elevated forty feet above them. Of course, all this was to overawe the empire’s subjects and, even more, its neighbors who found themselves faced with the imperial grandeur of Rome and the very power of god itself.

The monastic tradition was another important part of Byzantine civilization, so important that at times it may have drained the empire of some of much needed manpower. However, just as monasteries in the West preserved Roman literature through the chaos of the Middle Ages, Byzantine monasteries did the same for Greek literature.

Many monasteries, such as those at Meteora and Mt. Athos (below left), were nearly inaccessible, protecting the monks from both invaders and the corrupting influences of secular society. Visitors and supplies had to be hauled to the top by means of a rope attached to a basket. Other Christian ascetics took refuge in Cappadocia in present day Turkey (below center and right) where they carved churches out of its soft volcanic tufa. The desert was another popular refuge for escaping the evils of the world. Mt Sinai Monastery, in the desert where Moses supposedly saw the burning bush, was a particularly important center for art.



Justinian I: "last of the Roman Emperors"



The famous mosaic at Ravenna, Italy of Justinian and his court

While we refer to the Byzantine Empire, people in the Middle Ages still called them "Romans," never losing sight of the fact that this was the eastern half of the Roman Empire that had survived the barbarian invasions of the fifth century C.E. Both the terms *Byzantine* and *Roman* have some truth to them. They were the direct heirs of the Roman Empire and did carry on the remains of that empire for some 1000 years after the fall of the western half of the Empire. However, for all intents and purposes, it became a predominantly Greek empire and culture as the Middle Ages progressed. Its subjects spoke Greek, worshipped in what came to be the Greek Orthodox Church, and wore beards in the Greek fashion. They even argued and fought over religion in much the same way the ancient Greeks had argued and fought over politics.

If any emperor marked the dividing line between the Roman and Byzantine eras, it was Justinian I (527-565). He was clean-shaven in the Roman manner, the last emperor to speak Latin instead of Greek, and was responsible for having Roman law codified. His law code would become the basis for most Western European law codes today.

Law Codes. While states have systematic ways of passing laws, those laws are not generally made in any systematic order, but rather as needed to meet certain situations as they come up. In addition, there are often the courts and judges that have to interpret those laws: where and how they are applied. So in addition to the laws

themselves, there are often legal opinions from specific court cases that are used as precedents in deciding new court cases. However, many of those cases don't exactly match previous cases, so new opinions based on older opinions but also adapted to the new cases are made. The result is a growing mountain of laws and legal decisions based on those laws that judges must consult as the basis for their current cases. After several centuries, this can be an overwhelming mass of material to absorb and use, much of it either contradictory and/or redundant as it cites older decisions. Therefore, periodically some one needs to sort through this mountain of material and distill it down to a law code that is manageable enough in size for judges to use efficiently and effectively.

For this task, Justinian chose Tribonian, a brilliant lawyer and virtual walking encyclopedia of Roman law. The latter quality was especially important since, without printed books, there was no one central collection of written decisions, the best option being one brilliant mind, probably with a photographic memory. Tribonian completed this monumental task in a mere fourteen months.

Justinian's law code has served as the basis for most European law codes, but not those of England and the United States, which were based on English Common Law. This is largely because, thanks to the Vikings who eliminated six of the seven Anglo-Saxon kingdoms, Wessex was able to establish one unified legal system over all England. Meanwhile, continental Europe, was fragmented into hundreds of separate political and legal jurisdictions (700 in the Low Countries alone), so that when nation states pulled together in the High Middle Ages, they drew upon the one European-wide institution (the Church) and its law codes based on Roman law to create a unified legal system for the whole country.

One problem with Justinian's Code in the Byzantine Empire was that it was in Latin, the use of which virtually died out to be replaced as Greek as both the daily and literary language among Byzantines. Therefore, some three

centuries later, the emperor Leo VI (886-912) presided over a new codification of the laws, this time into Greek, being condensed into only six volumes. It was for this accomplishment that Leo was called “the Wise”.

Justinian was also very Roman in his desire to reclaim the Western Roman Empire. In 535, he sent his best general, Belisarius to take North Africa from the Vandals and Italy from the Ostrogoths.

Belisarius, commanded a mixture of mercenaries, including Huns whose hit-and-run tactics were very effective against less mobile enemies. At first the conquest of Vandal North Africa and Ostrogothic Sicily and Southern Italy went smoothly. However, when the Ostrogothic king, Totila, rallied his forces, a prolonged struggle over Italy ensued.

Unfortunately, Justinian distrusted Belisarius and gave him inadequate forces for finishing the conquest of Italy. Consequently, the Byzantines often had to remain on the defensive, even enduring three sieges of Rome by the Ostrogoths.

Finally Justinian replaced Belisarius with a 70-year old eunuch named Narses who had little or no prior military experience. Surprisingly, Narses proved to be a brilliant commander who completed the conquest of Italy. However, after 20 years of warfare, Italy was a wreck and Rome a mere shell of its former self, with only 500 inhabitants left.



The Byzantine Empire at Justinian’s death had recovered much of the West, but at huge cost and leaving it with long borders that over-stretched its defenses.

Eunuchs, men who had been castrated as they young boys so they could serve as court officials,

were an institution of several Eastern courts, including that of the Byzantines. Since they could not produce any children to succeed them and were seen as unfit for the throne themselves, they were not a threat to the ruling family. Therefore, they typically served as very loyal civil servants and, on rare occasions, such as that of Narses who completed Justinian’s conquest of Italy, as generals. In times of turmoil at court, they were often heavily involved with intrigues as power brokers behind the scenes, making and unmaking emperors. Aristocrats often had their younger sons castrated as eunuchs in order to promote them to lucrative palace careers. As relations between the Greek East and Latin West deteriorated over the centuries, this institution would be the source of much Western propaganda against the Byzantines as effeminate and decadent.

While Justinian’s efforts to reclaim the Western empire exhausted the eastern empire with the high cost in money and manpower for his wars and also tribute to keep the Persians quiet in the East, two other factors added to the damage. One was persecution of Monophysite heretics in Syria, Palestine and Egypt, which alienated much of the population against the central government.

Day of the rats. The other problem was Bubonic plague, which made its first appearance in history at this time. While the most famous outbreak of Bubonic Plague (Aka, Black Death) occurred in the mid 1300s, its initial, and equally damaging appearance came in the 540s in the middle of Justinian’s reign with its expensive wars and building projects.

Since the pneumonic variety of the disease kills its victims so quickly, it needs a large population to sustain it and spread it quickly. The Asian black rat was the ideal agent on both accounts, since it exists in large burrowing populations and also thrives on ships, which travel quickly, up to 100 miles per day. Therefore, before the Plague could kill off all the rats on one ship, it could spread to rats at the next seaport. Some of those rats could replace the ones who had died on

board the ships and make it to the next port, and so on.

Meanwhile, as the rats died, the fleas carrying the plague would have to find new hosts, those being sailors and people in the seaports. Some sailors would die along the way, but could be replaced by new recruits in seaports before they were infected. Or some sailors and merchants would have immunity and survive the entire voyage. Even if *most* crews died at sea before reaching port, it only took one ship to complete the voyage from India up the Red Sea or the Persian Gulf to spread the disease.

Therefore, the areas most affected would be those reached by water: the Byzantine Empire clustered around the Mediterranean, and the Persian Empire, especially Mesopotamia. The decline of the irrigation systems in Mesopotamia starting before the Arab invasions in the 640s indicates the Bubonic plague had hit there as well, setting the Persians up for their rapid collapse much like that of the Byzantines. Conversely, the Arabs being an inland people, were not affected by Plague in the 540s, while the Persian and Byzantine worlds were still recovering a century later.

Plague also devastated the Byzantine empire's population, supposedly killing 10,000 people a day in Constantinople and leaving so many dead that the bodies were piled into a castle, until they overflowed its walls. When Justinian died, the empire may have looked strong on the map, but in reality it was exhausted and in desperate need of a rest. Unfortunately, rest was the last thing the empire would get.

The word "plague". Since translators of the King James Bible in the early 1600s knew the Black Death as the only serious epidemic disease, they naturally interpreted any Biblical epidemic as "plague", even though it didn't burst upon human scene until much later. Thus our own somewhat generic use of the term for any epidemic, even though technically it refers just to one specific disease.

The Empire's Trial by Fire (565-c.800 C.E.)



A depiction of the Byzantines' secret weapon: Greek fire

The two and a half centuries after Justinian's reign would see the Byzantines constantly beset by waves of invaders coming from the north, the east, and the west. The very fact that the Empire even survived seems a miracle considering the troubles it endured.

In the West, the Lombards poured into Italy in 568, only three years after Justinian's death. According to one version, this invasion was the result of an insult to the eunuch, Narses, who had brilliantly finished the Byzantine conquest of Italy for Justinian. Like Belisarius, he was tactlessly recalled from Italy. The wife of Justin II, Justinian's successor, in order to mock the old man's status as a eunuch, sent him a golden distaff with the message, "Since you are not a man, go spin wool with the women." In revenge, he invited the Lombards into Italy in 568, thus undoing Justinian's work only three years after his death.

Whatever the cause of the invasion, it triggered centuries of fighting in Italy against the Lombards, Franks, and even Arabs, with the Byzantines managing to hold onto Ravenna and Venice in the north and southern Italy and Sicily to the south. After the Arabs overran North Africa in the 600s, these were the only remnants left of Justinian's conquests in the West.

A more serious threat to the empire's existence came from the east. Around 600 C.E., the

chronic hostility between Byzantines and Persians erupted in a titanic life and death struggle that would last a quarter of a century. The Persians overran Syria, Palestine, and Egypt while the nomadic Avars and their Slavic subjects rampaged through Greece and the Balkans. At its low point, Constantinople was almost all that remained of the empire in the east, and even it had to withstand a siege by the combined Persian and Avar armies.

Fortunately, the stout walls of Constantinople held fast against the enemy assaults, and a new hero, the emperor Heraclius, emerged to save the empire. His first task was to remove the unpopular emperor, Phocas (602-10), who was one of the worst emperors Byzantium produced. Having a beetle brow that met in the middle of his forehead and lit up bright red when he was angry, he seems to have been a lot less pleasant than he looked. Being constantly preoccupied with keeping his throne, his reign was a reign of terror that supposedly initiated the Byzantine practice of torture and mutilation of political prisoners. Blinding someone or chopping off his ears and nose made him unfit to rule in the eyes of the Byzantines, although Justinian II “the slit nose” (685-95; and 705-11) did regain his throne despite such mutilation.

Heraclius’ main foe, Chosroes II of Persia (590-628), who blinded his own father after overthrowing him, was also known to be less than pleasant when he didn’t get his way. He had the Arab ruler, Nu’aman III, crushed by elephants for failing to cooperate with him. His general, Shahin, to avoid this kind of treatment, committed suicide after being defeated in battle rather than face the wrath of his king. Nevertheless, Chosroes had the body packed in salt (to preserve it) and brought to the Persian court where he scourged it beyond recognition. Another defeated general apparently got off lightly, just being sent a dress to commemorate his defeat.

Jerusalem also suffered the wrath of Chosroes. At first, its patriarch, Zacharias, had arranged for the city’s peaceful surrender. However, rioting broke out in the city between Jews (whom

Phocas had forcibly converted) and Christians, leading to the expulsion of the Persian garrison and Jews. The Persians, joined by Jewish refugees, came back with a vengeance, undermined and collapsed the walls, and proceeded to massacre the city’s Christian population. The Persians also carried off the city’s holy relics, including the pieces of the true cross on which Christ supposedly was crucified.

Because of this, the war between Persia and the Byzantines assumed the status of a crusade with Heraclius being remembered by some as the first crusader. Supposedly at the height of the climactic battle in the war, Heraclius defeated the opposing Persian general in single combat (below). This idea of holy war would be revived nearly 500 years later in what we know as the Crusades.



The cost of the prolonged war with Persia was horrific, especially to Syria and Palestine. Hundreds of churches had been destroyed and thousands of Christians massacred by their Jewish neighbors and the Persians. Because of that and the rapid conquest by the Arab Muslims a few years later, Christianity in this region never recovered.

Unfortunately, right on the tail of this war a much more serious threat appeared. The Arabs, united and inspired by their religion, Islam, swept in like a desert storm, toppling Persian and Byzantine resistance like houses of cards. The Persian Empire collapsed, while the Byzantines saw Syria, Palestine, Egypt, and North Africa fall to the Arabs.

The Arabs then pressed on through Asia Minor toward the coveted prize of Constantinople itself. Twice (674-678; 717-18) the city's fortifications repulsed epic sieges by the Arabs. One factor aiding the Byzantines was a new secret weapon, Greek Fire, which, when fired from Byzantine ships sent the Arab fleet into wild uncontrollable flames. Greek fire even burned on water and supposedly could only be extinguished by sand, vinegar, or urine. However, because of its volatility, it could only be safely transported by water without exploding.

Greek Fire became a mainstay of Byzantine defenses for centuries to come. It was kept a highly guarded state secret by cutting out the tongues of the chemists who put it together. Therefore, we still do not know exactly what was in it, although it was probably some sort of petroleum compound similar to napalm.

Even after the introduction of Greek Fire, the first Arab siege of Constantinople lasted three more years before the Arabs finally retreated. Not only was their fleet destroyed, but their retreating army of 30,000 men was caught and massacred by the Byzantines. Despite the scale of this defeat, the Arabs were only temporarily checked in their advance against Byzantium.

"The Years of the Locusts" (685-717). Even during this reprieve, the Byzantines continued to see things go from bad to worse with a string of awful and/or incompetent emperors during a period they referred to as "The Years of the Locusts." The most notorious of these emperors was Justinian II (685-95), whose reign started off well enough, but was ruthless enough to lead to his overthrow and mutilation, earning him the nickname "Slit-nose."

But that wasn't the end of old "Slit-nose", who managed to slip into the capital and regain power for six more years (705-11). He may have left as a tyrant, but he returned as a homicidal maniac, killing all his enemies and their followers. When the men charged with the execution of the entire population of the city of Cherson overlooked the children, Justinian sent another expedition to finish the job. When word

came back of that expedition's shipwreck, he reportedly roared with laughter and sent another one. Not surprisingly, he was assassinated, only to be followed by a succession of weak emperors for the next six years.

In 717 C.E., a new emperor, Leo III, from Isauria in southern Asia Minor, came to the throne. This was just as another huge Arab army was descending on Constantinople. The second Arab siege of Constantinople (717-8) followed much the same pattern as the first, with Greek fire devastating the Arabs' fleet while hunger during the winter decimated their army and disease from all the rotting corpses did the same after the spring thaw. Less than half the Arab army and only five ships survived the siege and retreat from Constantinople.

According to one apocryphal story, Leo III sent a message to the Arab leader that he wanted to betray the city, and that the Arabs should pile all their grain and burn it as a sign that they were determined their next meal would be inside Constantinople after this coming assault. The logic supposedly was that by burning their own grain, the Arabs would scare the city into surrendering. It didn't work. Constantinople held on while the Arabs went hungry... if they really did fall for such a trick, which is unlikely.

This was the last time the Arabs would besiege Constantinople, marking the beginning of a period of stabilization for the empire's frontiers and internal development. Fighting with the Arabs would continue, but mainly in the form of sporadic border raids rather than massive invasions.

The Byzantines also faced serious threats in the north from Asiatic nomads and Slavic tribes. Two of these nomadic tribes, first the Avars, and later the Bulgars, mercilessly devastated the Balkans in their relentless warfare on the Byzantines. This area virtually dropped out of Byzantine control and the light of history for nearly 200 years as it was inundated by Slavic invaders.



After the Bulgarian khan, Krum, defeated and slew the Byzantine emperor, Nicephorus in 811, he had the emperor's skull lined with silver and made into a drinking cup, from which he forced visiting Byzantines diplomats to drink.

Even after converting to Greek Orthodox Christianity, the Bulgars remained a major problem for the Byzantines. After one particularly devastating raid, people rushed to the tomb of Constantine V, the one emperor who had successfully fought the Bulgars, begging him to come back to life, despite the fact that he was a hated iconoclast nicknamed "Copronymous", meaning "called from dung."

The Bulgars would be a major threat to the empire until their destruction by the Byzantine emperor, Basil II in 1018. Eventually, they would settle down, adopt Christianity, and even briefly be conquered by the Byzantines. But for now, they were one more major problem to be overcome.

By 800 C.E., thanks to perseverance in the face of disaster, Constantinople's walls, and some astute diplomacy that turned their enemies against one another, the Byzantines had survived, often against incredible odds. However, the empire had been stripped of all its lands except for Asia Minor, part of Thrace around Constantinople, Sicily, and parts of Italy. And it was still surrounded by very aggressive neighbors.

No longer was it a Roman Empire except in name and a few Italian holdings. From this point on, it was truly a Byzantine Empire.

The Iconoclastic Dispute (727-843 C.E.)



Mosaic icon of St. Agnes, typical of those the Iconoclastic emperors wanted to destroy

Unfortunately, just as outside pressures from the Arabs were starting to ease, a cloud of religious controversy descended upon the empire. The new issue, *Iconoclasm*, concerned the icons (religious images) the Church used to depict Christ and the saints. *Iconoclasts* said the use and veneration of these images was idolatry. *Iconodules* said icons were needed to instruct the illiterate masses in the teachings of Christianity. Leo III and several of his successors were iconoclasts and moved to abolish this form of idolatry by seizing the icons and destroying them.



Leo III the Isaurian and Constantine V (joint reign 720-741) who started the iconoclastic dispute

As one might expect in an era when religion was such a vital issue to both the individual and the state, Iconoclasm touched off some violent reactions from people attached to the icons. Riots swept through the cities of the empire, while relations were strained with the Church in Western Europe, which defended the icons.

Palace intrigues and murders centered largely on the icon issue. When an iconodule empress, Irene came to the throne (blinding her own son

in the process), she disbanded several of the army's best regiments since they were mainly iconoclast. Similarly, Iconoclast emperors disbanded parts of the navy, since most sailors were iconodules. The resulting damage to the empire's defenses invited raids and invasions that people saw as divine displeasure with whatever side was in power.



Iconoclastic & Iconodule Arguments

Iconoclasts, citing the Commandment that prohibited pictures of God, claimed icons were idolatrous and sinful.

Iconodules refuted this with several arguments:

- 1) Since that Commandment was given before Christ was incarnate as man, it was no longer valid.
- 2) They also used a Neo-Platonist line of reasoning: saying that since we live in an imperfect sensory world, icons are essential, but transitory, stepping stones toward knowing the absolute truth of God.
- 3) Since Christ's incarnation as man was the first indispensable step in raising men's souls toward God, denying the value of an icon to the soul was like denying the value of Christ's humanity.

Iconoclasts replied that if Christ was of two natures, human and divine, coalesced into a single, if unconfounded, union, how can we depict this?

- 1) If you are trying to depict his whole nature in one image, you are claiming to describe the indescribable, which makes you Monophysite heretics.
- 2) However, if you are claiming to depict only his human side, you are splitting Christ's indivisible nature, which makes you Nestorian heretics.

Iconodules refuted this by saying the icon was not consubstantial with Christ, but merely a Platonic imitation of him, not having any

importance in itself except it partook of the divine form to help elevate the soul up to that divine form.

Just as Christ's likeness was describable, such as the Holy towel of Edessa made by his own divine emanation, so icons did much the same.

Therefore, taking on the flesh did not degrade Christ, it sanctified the material icon and made it holy.

After over a century of this turmoil (726-843), the images were restored and the empire could pursue a more stable course undisturbed by major religious controversies. However, by then many works of religious art had been destroyed.

The Imperial Centuries (c.800-1025 C.E.)



Basil II (976-1025) who brought the Byzantine Empire to the height of its power

The disturbances of the seventh and eighth centuries left a very different empire from the one that Justinian had ruled. The most noticeable difference was that the empire was much smaller, having been stripped of Syria, Palestine, Egypt, North Africa, and most of Italy. While this deprived the Empire of valuable revenues, it also made it more compact and easier to defend since it was now confined mainly to Asia Minor and the Balkan Peninsula.

All this also made the Empire more ethnically, culturally, and religiously united. The largely Aramaic speaking peoples and Monophysite "heretics" of Syria, Palestine, and Egypt were now under Muslim control. This left a predominantly Greek speaking populace more or less united by the same religious views once the Iconoclasm struggle had settled down. The

empire may have been smaller, but it was also more cohesive.

Two centuries of upheaval had forced the Byzantines to adapt their society, government, and defenses to what seemed to be a continuous state of crisis. There were five main factors that helped the empire revive. First of all, after 750 C.E., the pressure from invasions eased somewhat, although not completely.

Second, the Byzantines repopulated Asia Minor, devastated by the wars of the previous centuries, by taking hundreds of thousands of the Slavs who had overrun the Balkans and resettling them on empty lands in Asia Minor.

The Slavs were hard working industrious people who became loyal subjects and excellent soldiers for the Byzantine state. No single policy probably did more to revive the Byzantine fortunes than this resettlement policy.



Part of the Byzantine resettlement of the Slavs was converting them to Christianity.

Third, the Byzantines overhauled the empire's administration and defenses. In the third century, Diocletian had separated civil and military offices to reduce the chances of revolt. However, constant threat of invasions forced the Byzantines to abandon this system and create military provinces called *themes* run by military governors (*strategoi*).

Having the tax collectors answer directly the emperor did reduce the likelihood of revolt while still leaving governors enough power to defend their provinces. An excellent civil service, possibly the best of any medieval state also helped in running the provinces.

Given their defensive needs, the Byzantines continued the Roman tradition of military excellence. However, their enemies' quick hit and run tactics and border raids forced them to rely more on highly mobile and versatile cavalry known as *cataphracts*. These were heavily armed to use shock tactics similar to those of western knights, but they were also armed with a bow and could function as horse archers when necessary. The Byzantines also fielded light cavalry plus heavy and light infantry who were useful in different types of terrain.

The backbone of this army consisted of peasants who served as cavalry in return for land to support them. Recruitment was done according to village, each supplying a quota of peasants armed and ready for service. This reduced the nobles' ability to challenge their ruler, in sharp contrast to situation in Western Europe. Every theme had several *drungi*, each able to supply about 1000 cavalry.

Although peasant soldiers usually presented no direct threat to the emperor, local nobles did frequently use them to rebel. To counter this threat, the emperor Constantine V (741-45) created the imperial *tagmata* (regiments). These were also peasant-farmers, but settled close to Constantinople and given more pay and equipment by the government, thus keeping them more tightly under the emperor's control. This gave the emperors both more security against revolts and a very effective field army for defending the empire.



Left: Thematic (provincial) cavalry
Right: Tagmatic (imperial) cavalry

The Byzantines were the one people who made a systematic study of their enemies' tactics thus giving their generals professional advice on how to avoid head-on charges by the heavy cavalry of Western Europe and escape ambushes and hit-and-run tactics of the Arabs and nomadic tribes from the north and east.



In addition to the cataphract, the Byzantines also developed super heavy cavalry called *klibanophoroi* (literally “oven men” since they virtually baked under the hot sun in their heavy armor), whose shock tactics could be used to match those of West European knights as well as being effective against more lightly armed enemies if caught in the open.

The Byzantines also employed mercenaries. Possibly the most renowned regiment in the Middle Ages was the Varangian Guard originally made up of Norsemen who had first come down from Russia to raid the Byzantines. The Varangians (meaning “men of the pledge”) were also renowned for their loyalty to the emperor. Making service in the Varangian Guard especially lucrative and popular was the custom of letting them each take as much gold as he could carry from the treasury upon the death of an emperor. Later, they also drew recruits from Anglo-Saxons who were dispossessed by the Norman conquest of England and also adept in the use of the battle-ax.

With so much coastline to defend, the navy was also important, consisting of some 200 galleys called *dromons* (below) armed with rams as well as catapults or siphons for launching the deadly Greek Fire. However, the high cost of maintaining a navy plus the sailors' rebellious nature caused the Byzantines to neglect the navy from time to time, allowing resurgence of piracy and enemy navies, in particular those of the Arabs.

Byzantine Diplomacy. The Byzantines also excelled at diplomacy, especially against their less sophisticated neighbors to the west and north, whom they would dazzle with the wealth of the imperial treasury, the magical powers of the imperial collection of holy relics, and the otherworldly splendor of the imperial court. In 949, the Westerner, Liudprand of Cremona, went on an embassy to Constantinople and gave this account of the court:

“Before the emperor’s throne stood a tree, made of gilded bronze, its branches filled with birds also gold, uttering different cries, depending on their species. The throne was so marvelously fashioned that at one moment it seemed a low structure, and at another it rose high into the air. It was immense and guarded by lions made of bronze or of wood covered over with gold who beat the ground with their tails and gave a dreadful roar with open mouths and quivering tongues ... I three times made obeisance to the emperor with my face upon the ground.”

However, the first principle of Byzantine diplomacy was to turn two neighbors against each other so they would unwittingly fight for Byzantine interests. For example, in 871, they used the Franks to besiege Bari in S. Italy while convincing the Arabs to surrender to them.

Naturally, anyone duped by these tactics would be somewhat bitter about it, and Byzantium's neighbors, especially those in Western Europe, denounced them as cowards for such tricks. Even today the word "byzantine" is used to denote vicious intrigue. However, given the Byzantines' situation, we can understand why their behavior and concept of heroism differed so much from that of Western Europe. When they had to fight, they did so very well. But they were masters of conserving their meager human

resources and relying on other methods to attain their goals.

The Byzantine economy. A highly trained civil service, army, and navy, required a healthy economy to support it. The invasions of the seventh and eighth centuries had severely damaged the Byzantine economy, reducing most of its cities to little more than fortified strongholds. In spite of this, Byzantium, being at the crossroads of much of the trade of the civilized world, was legendary for its wealth, especially to its less sophisticated Northern neighbors.

Byzantine payday. The Western chronicler, Liutprand of Cremona, gives an eyewitness account of the annual payday at the Byzantine court, telling how various governors, generals, and other officials would be loaded down with bags of gold so heavy it took several slaves to drag them out. No doubt this method of payment was done as a spectacle to impress visiting dignitaries.



Byzantine coins, in particular its gold *nomismas,* were literally the gold standard throughout much of the Middle Ages, being the primary medium of exchange throughout much of the Mediterranean, setting the standard for stability for centuries. Such coins also constantly reminded people of the enduring power of Rome.

A ten per cent toll on all goods passing through Constantinople raised sizable revenues. The government also kept monopolies on such goods as silk, grain, and weapons. Byzantine customs agents would board trade ships armed with long needles with which they would impale what were supposedly bags of grain. This way they could detect anything solid or tear any precious fabrics merchants might be trying to smuggle into the city. Foreign merchants could only stay for three months. Any unsold goods were confiscated by the city prefect and sold for them, the money, the

money from those sales given to them when they returned next year.

Byzantine guilds. Each industry in Constantinople had its own state-run guild. Everyone engaged in that industry had to belong to that guild and one could belong to two guilds. The guild as a whole bought all raw materials and distributed them to its members who sold the finished products in a designated public market at a price fixed by the city prefect. Bakers and butchers, being vital to the public welfare, were especially restricted by forcibly low prices, even during times of famine.

No middlemen were allowed into the process and there were severe restrictions against buying up and cornering a market. Offenses against guild regulations led to expulsion from the guild and sometimes even mutilation. Guilds were often responsible for unpaid public services. In addition, the belief that idleness bred crime led to mandatory work for the unemployed in public utilities or charities.

As stifling as these measures may seem, they did protect the somewhat fragile industries and trade through some unstable times. They also made Byzantine goods among the most highly prized in the Mediterranean.

Later, however, when trade and industry revived elsewhere, strict Byzantine controls would work against its people in more competitive markets. But for now they helped protect their trade.

The firm foundations of administration, defense, and economy laid by the Isaurian and Amorian dynasties (717-867) bore fruit under the Macedonian dynasty, which took the Byzantine Empire to the height of its power. The century and a half from 867 to 1025 saw a succession of generally excellent emperors who maintained the stability of the empire internally while expanding its borders. In 863, a major Arab invasion was annihilated at Poson, which set the stage for the steady advance of Byzantine armies against the Muslims. Antioch, one of the five original patriarchates of the Church lost to the Muslims

in the 600's, was recovered. The Byzantines even had their eyes set on retaking the Holy Land and Jerusalem.

In the north, the emperor Basil II waged relentless warfare against the Bulgarians, eliminating their kingdom entirely, and earning the title "Bulgar slayer". By Basil's death in 1025, the Byzantine Empire's borders extended all the way to the Danube River in the north and the borders of Palestine in the south. The Byzantines were definitely the super power of the Near East, but after Basil II's death everything started going wrong.

Bulgaroctonus. In 969, Basil II, possibly Byzantium's greatest warrior emperor, came to the throne at the age of five. After a stormy childhood and regency, he assumed power in his own right. However, unlike his predecessors, who had concentrated on campaigning in the South and East against the Arabs, Basil turned his attention to the Bulgars in the north.

Basil waged relentless warfare against the Bulgars, destroying their kingdom entirely by 1018. At the climax of this campaign he took 1500 Bulgarian prisoners, blinded 99 of every 100, leaving the remaining prisoner one eye with which to lead the other 99 home. Supposedly, the Bulgarian king, Simon, died of a broken heart upon seeing his sightless army returning home. From then on, Basil was known as *Bulgaroctonus* (Bulgar slayer).

A Scenario of Defending Against a Typical Arab Raid or Invasion.



Waves of Byzantine horse archers burst forth to harass their enemies with volleys of arrows, and then withdraw behind the protection of the more heavily armed

cataphracts, either to regroup and attack again or support their comrades in the melee to follow. In such a way the Byzantines combined the mobility and firepower of their nomadic enemies with shock tactics of the West, thus being able to adjust to different situations as needed.

Most Byzantine warfare consisted of defending the frontiers against various scales of border raids whose main goal was plunder and slaves. Such raids were at times annual events and required a finely tuned rapid response system. This is an idealized version of how the Byzantine thematic system should work in response to Arab raids along the Anatolian (modern Turkey) border.

As raiders entered Byzantine territory, guards in isolated watchtowers placed on high ground along the borders would spot them and alert the local *strategos* (governor) by triggering a series of watch fires to tell him where the incursion was and maybe some idea of its strength. He would send out light cavalry to hang on the outskirts of the enemy, keeping him updated on the situation and harassing foragers to deny them food and water. Meanwhile, thematic infantry would be mobilized and sent to block passes in the path of the invaders as well as their retreat.

Eventually a thematic army of sufficient strength (all eight Anatolian themes together being able to provide 25-30,000 cavalry, if needed) would converge on the invaders. When everything went right in springing the trap, they might catch the enemy exhausted, hungry, thirsty, and loaded with plunder and win a decisive victory that would stop such raids for several years. Such was the case when an Arab army was trapped and annihilated nearly to a man at Poson in 863.

Digenes Akritas, a Byzantine Epic Hero



Digenes Akritas (“Two-blood Border Lord”) was a popular Byzantine epic about a Byzantine warrior, named Basil, defending the Anatolian frontier. The *akritai* were a class of warriors charged with defending the borders. There were several shorter poems about other *akritai*. The term *Digenes* (“Two Blood”) refers to his origins as the son of a Muslim emir who kidnaps and marries the daughter of a Byzantine general, and then converts to Christianity. Their son, Basil, performs all sorts of superhuman feats in hunting (such as killing two bears with his bare hands) and battle against invaders and brigands. After an illustrious career of such heroics, Basil builds a palace by the Euphrates and lives happily ever after. Following is an excerpt describing him in battle:

*They mounted at once and they came to the battlefield.
They hissed like serpents, they roared like lions,
They soared like eagles, and the two clashed.
And then you could see a fight between fine brave youths.
In the heat of the battle they struck continuously,
and from the great clashing and the cut and thrust
trees were uprooted and the sun was darkened
Blood flowed down over their horse-trappings
and their sweat ran out over their breastplates
Constantine’s black horse was speedier,
and its rider was a marvelous young man
He charged at the emir and struck him a blow
with his stick
and then the emir began to tremble and flee*

*A Saracen addressed the emir in his own tongue
"Seize the youngster, my lord, and grab a quick victory
so that he doesn’t take your head off with his sudden turn
He has made a fine attack on you and now he might finish you off
I don’t think, my lord, you are going to do him much harm
but don’t let him boast that he routed an army
When the emir heard this, he withdrew some way from the youth
he threw away his spear and showed him his finger,
and with this gesture said these words
"May you live and rejoice, young man, for victory is yours."
--from Escorial manuscript, lines 32-54, by E.M. Jeffreys (pp. 241–2)*

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THE DECLINE AND FALL OF THE BYZANTINE EMPIRE (c.1025-1453)

The Byzantine Empire, much like the Roman Empire, faced a formidable array of external enemies. However, it was largely internal decay that destroyed both empires. By 1000, the empire's political and economic stability created two lines of development that combined to trigger a pair of interlocking feedback cycles that, in turn, eventually wrecked the empire. First, there were the free peasants upon whom the government depended for taxes and recruits. When the empire had been under constant attack, land had been a poor investment. But once stability started to return in the eighth century, many nobles looked greedily upon the farmlands controlled by the free peasantry. There was a constant battle as the nobles tried to get these lands and enserf the peasants. The government, seeing the free peasantry as the backbone of its economy and defense, did what it could to defend them. Basil II in particular fought long and hard to defend the peasants, but even he was unable to break the power of the nobles.

Secondly, and unfortunately for the peasants, not all emperors were strong or concerned enough to defend the peasants. This was especially true after Basil II's death in 1025 when the empire was at its height and a strong military seemed less necessary. Therefore, a series of weak rulers with little military experience succeeded Basil. During hard times, such as famine, nobles would take the chance to dispossess the peasants. This would lead to the decline of the free peasantry and army, which in turn forced the state to rely more and more on expensive foreign mercenaries. This further increased the tax burden on the peasants, which caused more of them to lose their lands, leading to more reliance on mercenaries and so on.

This vicious cycle weakened the economy and tax base to the point where the Byzantines could not even afford to maintain their navy. Therefore, they asked such rising Italian city-states as Venice and Genoa to fight their naval battles for them. The price they paid was to lower and eventually eliminate the 10% import tolls the Venetians and Genoese would normally pay. This allowed them to undersell Byzantine goods, which lowered government revenues from trade as well as ruining the tightly run guilds of Byzantine artisans and craftsmen. The even lower revenues forced the Byzantines to rely even more on the Italians, who

then got an even tighter stranglehold on the Byzantine economy, thus repeating the cycle.

This also fed back into the first feedback cycle as the loss of money from lower tolls forced the government to raise taxes further and create an even greater burden for the peasants. The combined effects of these cycles led to growing internal decay within the empire and growing tensions with the Italian city-states who were taking over more of the empire's trade.

Along with these processes, events elsewhere were closing in on the Byzantines in the tenth and eleventh centuries. By 1070, a new and more aggressive enemy, the Seljuk Turks, had replaced the Arabs as the main Muslim threat to the Byzantines. In 1071, at the battle of Manzikert, the Byzantines found out that, besides being expensive, mercenaries can also be unreliable. The result was a disastrous defeat when their Norman and Turkish mercenaries abandoned them without even fighting, leading to the loss of part of the Balkans and most of Asia Minor, the very heart of the empire. This, along with the declining economy described above, generated steady internal decay for the empire.

Desperate for help, the new emperor, Alexius I, made a plea to Western Europe for mercenaries. What he got instead was the First Crusade, a religious war with the goal of taking Palestine and Jerusalem from the Seljuk Turks. Alexius skillfully handled this wave of half civilized Westerners as they passed through his empire on the way to Palestine. He even managed to use them to recover part of Asia Minor. Alexius and his successors, John I and Manuel I did manage to stabilize the empire's frontiers and recover some ground. Unfortunately, in 1176, Manuel and his army were ambushed and severely defeated by the Turks at the battle of Myriocephalum. The lands regained over the last century were lost once again, showing how hollow the Byzantine recovery actually was.

All the while, contact with the West kept growing, and with it friction between the two cultures. As the Italian city-states' stranglehold on the Byzantine Empire's trade grew, so did hostility against Italian merchants, who numbered some 60,000 in Constantinople alone. Cultural differences, such as how the two cultures carried on war and diplomacy, and a religious schism that split the Roman Catholic and Greek Orthodox Churches permanently in 1054, just added to the mutual animosity. In the late 1100's riots broke out in various Byzantine cities, with thousands of Italian merchants being massacred.

A major backlash came from Western Europe in 1204 when Venice directed the soldiers of the Fourth Crusade to Constantinople, which they stormed and brutally sacked. A short-lived Crusader state was set up, but the Byzantines recaptured Constantinople in 1261. However, irreparable damage had been done. The Venetians still held strategic Aegean islands, and the Crusaders still controlled parts of Greece. Furthermore, much of the wealth and splendor of Constantinople had been hauled off to Venice and Western Europe.

The energy and resources the Byzantines used in recovering from this blow would have been better spent in meeting a potent new threat from the East: the Ottoman Turks. From 1300 onwards, the Ottomans steadily encroached on Byzantine lands in Asia Minor. In 1345 they crossed into Europe never to leave. The Byzantine state crumbled piece by piece into a pathetic remnant of itself. Finally in 1453, Constantinople, the last remnant of the old Roman Empire, fell to the Turks after a desperate and heroic siege. With that siege went the last remnants of the Roman Empire.

Final Schism Between East and West (1054)



The Schism of 1054 largely centered on one Latin word, *filioque*, meaning “and the son.” The context was the Nicene Creed of 325 that spoke of the Holy Spirit emanating only from the Father, with no mention of it also emanating from the Son (Jesus). And so it remained until the late 500s when the Roman Catholic Church in Visigothic Spain added *filioque* to the creed, indicating the Holy Spirit emanated from the Father *and the Son*. The purpose was to emphasize Christ’s divinity to the Arian Visigoths.

Even though the Eastern Church, which also opposed the Arians, may have agreed with the idea behind *filioque*, it saw it as heresy because no Church council had officially endorsed it. And the Western Church remained silent on the topic, with Pope John VIII posting the Nicene Creed with the original wording (i.e., without *filioque*) as late as 880. However, at some point, the Popes started including “*filioque*” and the patriarchs in Constantinople would brand them heretics during times of tension between the two branches of the Church.

In 1054, in response from the Byzantine emperor Constantine IX for an alliance against the Turks, the pope sent the worst possible choice for a diplomat, Cardinal Humbert, who hated the Byzantines and wasn’t afraid to let them know it. The Greek patriarch, Cerularius, wasn’t much better behaved, refusing Humbert an audience while keeping him virtually under house arrest. He denied Humbert permission to leave when the pope died, making the Cardinal’s mission pointless. Finally, on July 16, 1054 Humbert solemnly left a bull of excommunication in the Hagia Sophia for the Patriarch, something he had no authority to do, since his sponsor, the pope was dead. But that didn’t stop Cerularius from returning the favor by excommunicating the Western Church.

And so began the Schism which has split the two branches of the Church ever since. There had been schisms before, and they had always been healed. So everyone figured this would be healed as well, but it never was. So as the Byzantines faced dark days ahead, they would have to do it with the hostility rather than the support of the West.

Disaster at Manzikert (1071)



The cost of letting the nobles oppress the peasants finally became apparent nearly a half century after Basil II’s reign at the Battle of

Manzikert against the newest nomadic threat to the empire: the Seljuk Turks. The Seljuks, like so many other nomadic tribes, started out small and were deemed by the Byzantines as a minor threat but a major irritant because of all their plundering raids. The Byzantine emperor, Romanos IV, tried to catch them several times and finally forced them into battle in 1071 at Manzikert in what is now eastern Turkey. The Seljuk leader, Alp Arslan, was heavily outnumbered and tried to negotiate a peace, but Romanos was determined to have it out then and there.

Unfortunately, forty-five years of neglect by the government and oppression by the nobles had taken their toll on the quality of the Byzantine army. Infantry reportedly showed up without regular weapons and cavalry showed up without horses. Therefore, in addition to the poorly equipped peasant militia, Romanos had to rely on what turned out to be very unreliable Turkish and Norman mercenaries along with a personal enemy, Andronikos Doukas, who commanded his rear guard. In fact, the Turkish mercenaries seem to have deserted before the battle even began.

Accounts vary about what happened in the battle itself, but apparently the fighting lasted most of the day and was inconclusive as the Seljuk horse archers harried the Byzantines while staying clear of a head-to-head melee that would play to their disadvantage. Toward the end of the day, Romanos ordered part of his army to return to camp. Unfortunately, the rest of the army mistook this for the emperor being killed, which prompted a general retreat. Andronikos Doukas could have saved the day with the rear guard, but used this as an excuse to desert, so the retreat turned into a rout that the Seljuks took full advantage of, massacring most of the Byzantine army.

Romanos kept fighting until his horse was killed from under him and he finally surrendered. Alp Arslan treated Romanos much better than his own court did, and released him after the promise of a ransom. Unfortunately, Andronikos Doukas and his allies had pulled off a coup and

blocked Romanos' return. (Apparently, Romanos' efforts to cut expenses and discipline the army had made him many enemies at court.) The emperor finally surrendered to Doukas after a promise of a safe passage to a monastery. However, Doukas reneged on the deal and had Romanos blinded. The wounds became infected and he died soon afterward.

The results of Manzikert were equally bad for the empire. With the army largely destroyed, the Seljuks swept through Anatolia and controlled all but the west coast by 1081 when a new emperor, Alexius Comnenus, came to the throne and bolstered what was left of the empire. Alexius and his successors did regain part of Anatolia, using the First Crusade at one point to help in their efforts, but the overall verdict of Manzikert proved to be permanent, as more and more Turkish tribesmen moved in, turning the region into what we now know as Turkey.

The Tragedy of the Fourth Crusade (1204)



The tragedy of the Fourth Crusade began when leaders of the crusade contracted Venice to build a fleet to take them to Egypt, rather than the Holy Land, the theory being they could trade Egypt for Jerusalem. As the Sixth Crusade would show later, it wasn't such a bad idea, but when the rank and file crusaders heard of this plan, many of them stayed home or found other ways to the Holy Land. As a result, instead of the planned for 30,000 crusaders, only 10,000 showed up, and they couldn't pay the Venetians, who had invested an entire year of their economy preparing for the crusade. At first they used the crusade to take the city of Zara on the Dalmatian coast (modern Croatia) as payment. Then they directed the crusade to Constantinople to restore a deposed emperor to his throne in return for money and support for the crusade.

The Siege and Fall of Constantinople (1453)



During the ensuing siege, Venetian galleys rammed through the chain blocking the harbor, exposing the weaker sea walls along the Golden Horn to attack and stretching the Byzantines' defenses. This convinced the emperor in Constantinople to abandon his throne and flee for safety.

However, when the restored emperor couldn't come up with the money he had promised Venice and the crusaders, they resumed the siege. Soon afterwards they stormed the exposed sea wall and proceeded to sack the city.

The sack of the city was much more brutal than that by the Ottoman Turks in 1453, as the drunken Crusaders indiscriminately slaughtered men, women and children, raped nuns, and plundered and defiled churches supposedly of their own faith.

The crusaders never continued on to Palestine.

The Byzantines never recovered from this blow.

Venice and the Crusaders split Byzantium's European and island possessions. While Venice would maintain a strong presence in the Aegean for centuries, the Crusaders' Latin Empire never coalesced into a strong state.

In 1261, the Nicaean ruler, Michael VIII, Paleologus recovered Constantinople and established the last dynasty to rule the Byzantine Empire, the Paleologi.

However, it never became more than a local power, facing ongoing threats of new Crusades from the West and the growing power of the Ottoman Turks in the East.

By 1328, the Ottoman Turks had nearly pushed the Byzantines out of Asia Minor.

In 1345, they would cross into Europe to intervene in a Byzantine dynastic dispute.

They never left.

By 1384, Ottoman advances had reduced the Byzantine Empire to little more than Constantinople and a few scattered outposts in Greece. Only a devastating defeat in 1402 at the hands of the last of the great nomadic conquerors, Timur the Lame, delayed the fall of Constantinople for another 50 years. But the empire was clearly living on borrowed time.

In 1422, during a Turkish siege of Constantinople, people saw an apparition of the Virgin Mary, whom the Byzantines had always thought especially protected their city. Indeed the city did survive this attack.

During the final siege in 1453, an icon of the Virgin fell over during a religious procession, seeming to portend the fall of the city. Unfortunately, once again the Byzantines would be right.

In 1453 the Turkish Sultan, Mohammed II, closed in for the final kill. What ensued was one of history's epic sieges. Central to the sultan's plans to demolish Constantinople's walls was a new technology, artillery. In particular he pinned his hopes on a huge cannon with a bronze barrel that was 26' 8" long, 8" thick & 2' wide. It could fire a 600 pound cannonball a full mile, imbedding it 6' underground. This monster could only be loaded and fired seven times a day, but each shot had devastating effects on Constantinople's walls.

Another Hungarian crafted siege gun, which was over 16 feet long, had an internal caliber of 42 inches, and fired cannonballs weighing 1200 lbs.

However, despite the odds and the lack of help from the West, the Byzantines put up a spirited defense. Time and again, they thwarted the sultan's attempts to get over, under, or through their walls. Several night assaults were all driven back with heavy casualties.



Mohammed then filled a section of the moat and brought a massive siege tower, bristling with guns, up against the city walls. At the end of the day it brought down a tower, leaving the city wide open to assault. However, with Mohammed absent, no one dared move without his orders. By dawn, the Byzantines had burned the siege tower, cleared their moat, and restored their walls to a defensible level.

When the Turks tried to undermine the walls, the Byzantines located each mine and destroyed it.

When four lone Christian ships appeared, a rag-tag Turkish force of ships swarmed out to meet them. Time and again Turkish crews were unable to storm the larger Christian ships, which cut through the Sultan's fleet to the safety of the Golden Horn and the cheers of the jubilant city.

Unfortunately, that was all the help the West would send.

Mohammed II, furious over this humiliation, had 70 ships hauled overland around Galata and dropped into the Golden Horn, thus threatening the city on all three sides, just as had happened during the Fourth Crusade.



Other things started going wrong for the Byzantines. As the continuous bombardment kept taking its toll, both physically and psychologically, news came that there was no more help coming from the West and bad omens were started appearing. One morning, the Byzantines awoke to find the city enshrouded in a mysterious and unseasonal fog. Even the icon of the Virgin Mary fell over to everyone's horror during a religious procession.



Soon after midnight on May 29, 1453 the Ottomans launched their final assault on Constantinople. At one point, Urban's cannon scored a direct hit on a section of restored fortifications, causing it to come crashing down. As Mohammed's troops closed in, the emperor and the general Giustinianni led a counterattack that threw back the enemy.



After several desperate hours of fighting, the Turks' elite troops, the Janissaries, finally

stormed the crumbling walls, soon followed by thousands of their comrades. Constantine XI died fighting on the walls fulfilling a prophecy that the Byzantine Empire, which began with Constantine I, would end with the death of another Constantine on the walls where it had all begun. His body was hacked to pieces by the triumphant Janissaries, only being identified by its crimson imperial slippers.

On the morning of May 29, 1453, Muhammed II rode triumphantly into the city and the Roman Empire was gone at last.

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MOHAMMED, ISLAM AND THE RISE OF ISLAM

“O Mankind! We [God] created you from a single pair of a male and a female, and made you into Nations and tribes, that you may know each other. Verily the most honored of you in the sight of God is [he who is] the most righteous of you”-- Koran (XLIX, 13)

Arabia. If the middle Ages were an age of faith for Europe, they also were an age of faith for the lands to the south and east. Just as Christianity largely defined European culture, so the Near East came to be identified with another new religion: Islam (meaning submission to god's will). This dynamic new faith would soon stretch from the Atlantic shores of Spain and Africa eastward into India and to the very frontiers of China. It remains to this day one of the major religions in the world. However, since its followers have often competed with Christians in Europe for converts and power, it has been subject to a number of misinterpretations that still contribute to misunderstandings and hostility between the Arab world and the West.

As with most other religions, Islam's beginnings were quite humble, originating in the hot deserts and caravan towns of Arabia. Since the days of the earliest Near Eastern empires in the third millennium B.C.E., the Arabs had inhabited the fringes of civilization, absorbing their cultures as allies, enemies, mercenaries, and traders. Their caravans formed a vital link in the region's overland trade, while their ships sailed the Indian Ocean and beyond in search of spices and other luxury goods that the civilizations of the Near East and Mediterranean always hungered for.

Politically, Arabia was a buffer zone between the warring empires of the north, in particular Rome (later Byzantium) and Persia. Neither empire considered the Arabian Desert worth the effort of outright conquest. However, maintaining some influence there through allies, client kings, and Arab mercenaries was a cost effective way of securing their southern flanks against each other's attacks.

Before the seventh century C.E., Arabia had never been unified under one power. Instead, it was a patchwork of various tribes led by sheiks, some of who ruled tens of thousands of square miles of desert. These tribes jealously guarded their territories and independence, thus preventing unification and allowing manipulation by outside powers such as Rome and Persia. Even today, that tribal organization survives with the Saudi tribe ruling Saudi Arabia and the Hashemite tribe ruling Jordan.

Most Arabs were nomads, herding their sheep, goats, and camels from one grazing spot or oasis to the next. Being close to nature, they worshipped numerous tribal gods and natural forces and objects. The major center of worship was and still is the Kaaba in Mecca, a square building with a black meteorite that pilgrims visited and kissed because Abraham had started the building with that stone. Roman and Persian influences were especially strong in Mecca, with many Arabs being converts to Judaism, Christianity, and Persian Zoroastrianism. It was in this atmosphere of mingling cultures and religions that the new religion, Islam, would be born and inspire the Arabs to greatness.

The Prophet. The founder of Islam was Mohammed (c.570-632 C.E.). A wealth of details about Mohammed's life are preserved, including such things as names, ages and nicknames of his friends and cousins, where his house stood, who his neighbors were, personal problems he had with his uncle and aunt, and even the jokes he told. He was a member of a minor branch of the ruling clan of Mecca, the Quraysh. As a young boy he was orphaned and raised by his uncle. At the age of 25, he married a rich widow, Kadija, and became a merchant, traveling the trade routes of the Near East and coming into contact with its various cultures.

The turning point in Mohammed's life came in 610 C.E. While meditating in a cave outside Mecca, he had a vision of the archangel Gabriel who declared him the final prophet of God. It was three years till his next visions came, laying down the basic precepts of Islam and telling Mohammed to go out and preach the word of God.

In 613 C.E., Mohammed began preaching that there was one God, Allah, that all men are equal before God, and that the rich must share with the poor. Such doctrines did not set well with the ruling class of Mecca, seeing it as a threat to their social position, wealth, and the lucrative tourist trade from all the pilgrims coming to worship local idols and visit the meteorite in the Kaaba. As a result, they persecuted Mohammed, who fled Mecca and found a new home in Medina. This event, the *Hejira* (flight), is one of the critical events in Islamic history, and the Muslim calendar starts at this date (622 C.E.).

Mohammed was accepted at Medina and soon became its head of state. Over the years, new visions revealed the *Quran*, Islam's holy book. In addition to laying down the basic religious beliefs of Islam, it also dealt with conduct and all major aspects of living. Islam was more than a religion. It was a total way of life and continues to be today. Such a society ruled by religious principles is known as a *theocracy*.

Raids on Mecca's caravans led eventually to a war that ended with Mohammed's triumphant return to Mecca. A general amnesty and his lenient policies re-established peace there. By Mohammed's death in 632, the influence of Islam had spread across Arabia and was ready to burst upon the civilizations to the north.

The religion. Islam is a simple religion and therein lies much of its appeal. Its major tenets can be summed up in what are known as the Five Pillars of Islam.

Faith. A Muslim must believe in what are referred to as the Six Pillars of Faith. First of all, there is one God, Allah, the all-powerful creator of the Universe. He has no beginning or end and is indefinable (i.e., has no specific form, such as that of a human). As big and powerful as he is, Allah is described as closer to us than our jugular veins, a description that makes the faithful take heed of his power. The second belief is that Mohammed is the last in the line of the major prophets, following Adam, Noah, Abraham, Moses, and Jesus. They each brought us God's word, but each time people strayed from it. Since they see the Bible as a Holy

book, Muslims respect Christians and Jews as peoples of the Book, although their faith has been somewhat corrupted. Mohammed provides a true path to God by an example of living for all to follow. The third belief is in the final judgment day when we each will face God alone and be judged based on our deeds. Everyone shall be punished for every bad deed and be rewarded ten times over for every good deed, although God may forgive one's sins if he so chooses. The other pillars of faith are that Muslims should believe in angels, the *Quran* as the revealed word of God, and that anything that happens is the will of Allah and in his plan.

Prayer is the second Pillar of Islam. There are five specified times a day when the faithful pray toward Mecca. Prayers follow a specific format and take about two to three minutes to complete. Prayer reminds the faithful of their submission to God and humility in his eyes.

Pilgrimage to Mecca. This should be done at least once in a Muslim's lifetime, if possible. It is done at a particular time of year according to a certain ritual, and reinforces the idea of the unity of God and the Muslim community.

Alms to the poor. This amounts to 2.5% of the excess of one's income not used in the previous year. It reinforces the Islamic principle that we are all equal in the eyes of God.

Fasting. This involves taking in no food or drink from dawn to sunset during the lunar month of Ramadan, although one may eat and drink after dark. Islam, being a reasonable religion, makes exception for such people as the aged, very young, pregnant women, nursing mothers, travelers, and the ill. The basic idea behind fasting is one of sacrifice for the community and submitting to God's will.

The appeal of Islam. Several factors gave Islam wide appeal and contributed to its success. First of all, it is a simple religion that lays out in a very clear and straightforward manner what the faith is and what is expected of the faithful. Becoming a Muslim involves nothing more than declaring: "There is no God but Allah and Mohammed is his prophet." There is no hierarchy of priests, for all

are seen as equal in the eyes of God. Community worship on Fridays is optional and may or may not involve a sermon by the *imam* (prayer leader).

Equality of all before God and the idea of social justice also gave Islam wide appeal. Women especially gained higher status thanks to Mohammed's preaching, being better treated and had more rights than before Islam. Slaves and the poor also gained in status thanks to Islam.

One aspect of Islam and a common source of misunderstanding is the *jihad*. Meaning "striving", but typically mistranslated as "holy war", *jihad* more properly refers to the struggle against any corrupt system that keeps people from the free choice of religious beliefs. The *Quran* specifically says there should be no forcible conversion to Islam and that Muslims should deal kindly and justly with those who are kind and just with them. Only when faced with those who fight them for their faith and try to drive them from their homes, does the Koran sanction fighting. Unfortunately, those sorts of situations would lead to centuries of hostility between Muslims and Christians.

The sweep of Empire (632-750 C.E.). The death of Mohammed shocked many Arabs who had attributed divine qualities to the prophet. In order to ease their doubts, one of Mohammed's chief followers, Abu Bakr, addressed the crowd gathered in Mecca: "Whichever of you worships Mohammed, know that Mohammed is dead. But whichever of you worships God, know that God is alive and does not die." Then he quoted a passage from the *Quran*: "Mohammed is a prophet only; there have been prophets before him. If he dies or is slain, will you turn back?" Their nerves soothed and their reassured, the Arabs struck out on a path of conquest almost unparalleled in its scope and speed.

The civilizing influences filtering into Arabia from Rome and Persia had two effects combining to give the Arabs the dynamic energy for conquering an empire. For one thing, those influences made Arabia fertile ground in which Islam could take root. Second, they helped the Arabs to unify and expand outward, especially when inspired by Islam, whose warriors believed that death in a holy war for

the faith led to being transported instantly to Paradise. Add to this very capable leaders armed with the lightning fast tactics of the desert, and Islam's armies became the most potent forces of their day.

Two other outside factors also made the Arabs' rapid expansion possible. First, there was the degree of support, or at least non-resistance from the many Aramaic speaking peoples under Roman and Persian rule, since they felt much closer kinship to the Arabs than to their rulers. Also the Muslims were tolerant of Christians and Jews, charging only a special tax instead of forcing them to convert. This contrasted sharply with the harsher Byzantine policies against the Monophysite Christians in Egypt, Syria, and Palestine. The second factor was timing. Both the Byzantine and Persian Empires were worn out from years of prolonged warfare against each other. Likewise, Visigoth Spain was suffering internal decay and was thus ready for a fall.

The Arabs' first victims were the Byzantines and Persians. At the Yarmuk River in Palestine they were facing a large enemy force when a sandstorm blew up in the Byzantines' faces. Taking this as a sign from God, the Arabs charged and destroyed the Byzantine army. Syria and Palestine, along with Jerusalem, a city Muslims also revere, fell into the Arabs' hands. The Patriarch of Jerusalem, resplendent in his finest robes, had to meet this rag tag army of desert nomads and personally lead their leader's horse into the city. Nothing could better symbolize the contrast between the wealthy civilized subjects and their new masters fresh out of the desert.

The Arab advance continued northward into Asia Minor toward Constantinople, a particularly prized goal for Muslims. Despite their desert origins, they rapidly built a navy (with the help of their newly conquered Syrian and Palestinian subjects) with which they twice besieged Constantinople (674 and 717). In each case, the Byzantines' dreadful new weapon, Greek fire, helped save the city and empire. The Byzantines held fast, and a fairly stable frontier between Christianity and Islam gradually took shape in Asia Minor.

Sweeping westward the Arabs took Egypt with an army of only 4,000 men, following quickly with the conquest of North Africa. In 711 C.E., a small Muslim force crossed into Spain, where the Visigoth kingdom also crumbled before its onslaught. Storming into southern Gaul (France), the Arabs were finally stopped by the Franks at the Battle of Tours (733). Eventually a stable frontier formed in northern Spain between the Muslim and Christian worlds.

The Arabs also advanced eastward into Persia, which, also exhausted by prolonged war with the Byzantines, collapsed like a house of cards in 651. However, Persian culture would re-emerge as a major influence on Islamic civilization as it developed. In 711 C.E. (the same year Muslim forces entered Spain), the Arabs entered northwestern India and started to establish their power there. They also extended their rule into Central Asia and beat a Chinese army in a battle near the Talas River, which helped establish Islam as the dominant religion in Central Asia and brought the Arabs a new type of product, paper. Thus, by 750 AD, after little more than a century, the Islamic Empire stretched from Spain in the west to north India and the frontiers of China in the east, the most far-flung empire of its day.

Adapting to empire. In the year 640, a messenger brought news to the Caliph Omar in Medina that his forces had taken Alexandria with its 4000 villas, 4000 baths, and 400 places of entertainment. To celebrate this victory, Omar had the messenger share a meal of bread and dates with him, the simple fare of desert nomads. However, as ill suited to ruling such an empire the Arabs may have seemed, contact with their civilized Persian and Byzantine subjects allowed them to adapt quite quickly. They had three things to do: decide who was to rule, set up a system of government to rule the empire, and absorb and adapt the older cultures they ruled to Islam.

The ruler. The first problem was who should be *caliph*, the secular successor to Mohammed. The first four caliphs were elected by a tribal council of elders and are referred to as the Orthodox Caliphs, ruling from 632 to 661 C.E. However, as the empire grew, this form of government became

increasingly inadequate. In addition, tribal and clan jealousies continued. Of the four Orthodox Caliphs, only one, Abu Bakr (632-634) died a natural death. Finally, the Umayyad clan took over and established the Umayyad Dynasty (661-750). From now on, the dynastic principle of one family choosing the caliph would dominate.

However, not everyone saw the Umayyads as rightful rulers. Some known as *Shiites* felt that only descendants of Ali, the last Orthodox Caliph and a member of Mohammed's family, should be caliph. Those who felt any Arab could be caliph were known as *Sunnites*. The Sunnite-Shiite split is still one of the major factors dividing the Muslim world today.

In 750 C.E., a revolt led by Abbas, a governor of Persia, overthrew the Umayyads and established the Abbasid Dynasty (750-1258). Abbas was a ruthless man who worked to exterminate the Umayyad clan to a man. He even invited eighty Umayyads to a banquet and had them murdered at the table, then covering the bodies so he could finish his meal in peace. One member of the clan did survive, Abd-al-Rahman, who barely escaped Abbasid agents to make his way across the Mediterranean through the use of disguises and trickery. He arrived in Spain and founded an independent Umayyad dynasty. This was the first crack in the unity of the Islamic state. It would never be unified again.

Ruling the empire. From the start, the Umayyads saw that they must adapt Byzantine and Persian techniques for ruling their empire. Therefore, they instituted some major changes. They moved the capital from Medina to a much more central location, Damascus in Syria. They created the first Muslim coinage. They also adapted Byzantine and Persian bureaucratic methods as well as the Persian system of relay riders for faster communication of news from the further parts of the empire.

The Abbasids continued Umayyad centralizing policies. Consequently, more and more Persians, Greeks, Jews, and other non-Arabs gained positions of responsibility, since they had the training and experience necessary for running the government. This signified more equality and less distinction

between the Arab conquerors and their subjects, especially for those non-Arabs who converted to Islam. Even the Abbasid caliphs had less and less Arab blood in them, since few of them married Arab wives.

Nothing better shows these changes in Muslim government than the position and status of the caliph himself, which was modeled after the Persian concept of kingship. Although he still tried to advertise his religious functions by wearing the tattered robe of Mohammed upon occasion and styling himself as the "Shadow of God on earth", he was no longer a simple man of the people. Just getting an audience with him involved dealing with a multitude of officials. Upon approaching the throne, one prostrated himself, while the caliph remained out of sight, speaking to people through an elaborate screen that hid him from view. An executioner with drawn sword reminded one of the need to behave according to the strictest rules. This contrasted sharply with the Caliph Omar sharing his bread and dates with a messenger.

Exalting the caliph and keeping him hidden from view also isolated him from his people and the problems of his empire. As a result, the *vizier*, or prime minister, assumed more power and became the power behind the throne for the generally weak or disinterested caliphs. Later, *mamelukes*, slave bodyguards, also gained increasing power, virtually holding the caliph as a prisoner in his own palace.

Symbolic of the great changes going on in Muslim government and culture was the new capital the Abbasids built: Baghdad. Just as Constantinople was the crown jewel of the Christian world, so Baghdad became the same sort of gem for Islam. Its site in Mesopotamia was flanked by the Tigris River and various canals, thus making it easy to defend. Its central location also put the government in closer communication with the empire's far-flung provinces.

The form of the city shows the growing influence of Persian culture at court. Its layout was round in the Persian style, and had three sets of surrounding walls. The middle wall was the tallest, supposedly being 112 feet tall, 164 feet thick at the base, and 46 feet thick on top! Two highways split the city into

four quadrants, each with a central market. A great mosque and the caliph's palace, which was made of marble with a golden gate and a massive green dome 120 feet in diameter, dominated the central part of the city. On top of the dome was a statue of a lancer. According to legend, this statue would point toward parts of the empire where there was trouble. Baghdad was supposed to be inhabited mainly by the caliph, his court, and government officials, but such a capital drew a large population from all over the empire, its population reaching, according to some estimates, as high as one and a half million.

At first, all these expenditures stimulated trade with Western Europe, which helped both the Arab and Frankish empires. Unfortunately, continued heavy spending by the caliphs on expensive palaces, court ritual, adorning such cities such as Baghdad, and patronizing culture and the arts drained the treasury, which in turn wrecked trade with Europe. With trade so disrupted, Vikings in Russia and the Baltic Sea and Arabs in the Mediterranean turned increasingly to raiding and piracy in the ninth and tenth centuries. This brought the Dark Ages to their lowest point in Western Europe.

The development of Islamic Civilization. The period of roughly 750-1000 C.E. is known as a cultural golden age for Islam. During this period, the vigorous desert tribesman from Arabia assimilated the older cultures of the Near East and Mediterranean and infused new life into them.

The basis for such a golden age was the orderliness and resulting prosperity that Arab rule brought the empire from India to the Atlantic. The Arabs flourished as middlemen in a trade that involved silks and porcelains from China, gems and spices from India, slaves and gold from Africa, and slaves and furs from Europe. The stability and range of this trade are seen by a custom of writing letters of credit that would be honored in other cities of the empire. The Arab word for this, *sakk*, is the origin for our word "check". The Italian city-states would adopt these practices to become the premier centers of business in Europe in later centuries.

There were three main cultures the Arabs assimilated and fused into what we call Muslim

civilization: Indian, Persian, and Greek. From India, the Arabs picked up two concepts essential to the evolution of mathematics: the place value digit and zero. Both of these were vital to being able to do much more complex calculations than the old system of using letters represent numbers.

From the Persians, the Arabs inherited the full scope of Near Eastern cultures that extended back to the early days of Sumer. Much of Muslim art and literature was heavily influenced by Persia. The classic *One Thousand and One Arabian Nights*, with such tales as Sinbad the Sailor and Ali Baba and the Forty Thieves, dates from this period. Poetry also flourished, although it should be noted that the Arabs already had a strong poetic tradition before the conquests. Even such games as Backgammon, Chess, and Polo came to Islamic civilization by way of Persia.

The Greeks also contributed substantially to Muslim culture in the fields of philosophy, math, science, and architecture. Mohammed had said nothing wastes the money of the faithful more than building. However, the Muslims were great builders who owed much of their architectural skill and style to the Greeks. It takes little imagination to see the relationship between the dome of a Moslem mosque and the dome of a Byzantine church such as the Hagia Sophia.

Arab rule and civilization had important results in the way of providing economic stability and the spread of civilization. In time, it would pass many of its ideas to India, modern Islamic culture, and even Western Europe where they would be instrumental in the flowering of culture known as the Italian Renaissance.

The Setting for Mohammed: Arabia, Camel, Date Palms, and Mecca



Artist's conception of how Mecca, with the Kaaba in the middle, may have looked in Mohammed's time.

Mohammad's homeland consists of over one million square miles of sand wastes, gravel flats, and lava fields. An L-shaped rim of mountains on the south and west coasts produce moderate rainfall and agriculture there. However, there can be years between rains in the Nafud Desert in the North or Rub al-Khali (Empty Quarter) in the South. There is not a single permanent river in Arabia, just dry riverbeds punctuated by flash floods.



Date palms (above) are known as "the mother and aunt of the Arabs", being used for food & fermented beer. Their crushed pits serve as camel feed, while baskets and building materials are made from palm fronds.

The camel can carry 400 pounds, cover 60 miles a day in the desert and go three days without water. Its milk and flesh serve as food for Bedouins, while its hair is woven into tents and ropes, its hides are tanned into leather, and its dung is used for fuel. Camels are used as a unit of exchange for dowries or payment to end blood feuds.

Mecca was where Abraham supposedly built the Kaaba with his son, Ishmael, who was also considered the common ancestor of all Arabs. Therefore, Arabs, like the Jews, trace their lineage back to Abraham. It was also the site of the Zamzam well that sprang from where Ishmael's heel hit the ground while his mother, Hagar, was frantically searching for water. By Mohammed's time, the Kaaba (below) was a major religious/tourist attraction housing a sacred meteor and where Hubal and 360 other gods were worshipped.



Life of the Prophet

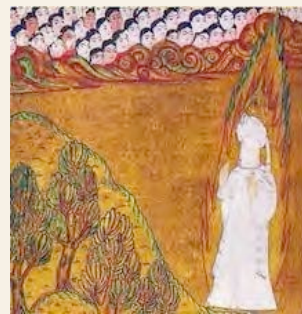


Note: As explained to me by Muslim friends, it is permissible to portray the Prophet as long as his face is not shown. Using paintings from Muslim tradition, this is the guideline I have used out of complete respect for Islam. If I have erred in my assumption, please let me know. My intention here, as with any culture, is to give as positive view of that culture in the promotion of better peace and understanding in the world.

Birth of the prophet. As with Christ's nativity, a rich array of stories surrounds the birth of

Mohamed. Before he was born in 570 C.E., the year of the Elephant, a host of angels visited Mohammed's mother and told her she would bear the Prophet and she should name him Mohammed ("highly praised"). Just before his birth an Abyssinian army on elephants tried to destroy the Kaaba but the elephants refused to attack the shrine. Next came a cavalry attack, but a flock of birds stopped them by dropping stones from above. For his birth, angels (top) brought a mattress and coverlet for his mother's comfort. When Mohammed was an infant, they came with a pitcher, basin and towel for the ritual ablutions that Muslims still perform before prayer.

Mohammed's first visions. At age 40 (610 C.E.) he had his 1st vision while sleeping in a cave where the archangel Gabriel appeared to him. Mohammed thought he was possessed by demons and was about to jump from a cliff when Gabriel appeared again (below). Wherever he tried to turn he saw Gabriel's face. At last the angel told him: "O Mohammed! Thou art the apostle of God and I am Gabriel." After a long time Gabriel appeared in a second vision telling Mohammed to arise and call men to God. In subsequent visions he instructed Mohammed in the Muslim faith.



Night journey to Paradise. One night, angels appeared to take Mohammed on a tour of Paradise. First Gabriel took him to the Dome of the Rock in Jerusalem (making Jerusalem the third holiest city in Islam), where he slit Mohammed's body down to the waist, removed his heart to wash and purify it, and filled his body with faith and wisdom. To get there,

Mohammed rode the Buraq (below), a fantastic creature with a woman's face, mule's body, peacock's tail and fantastic leaping abilities. Supposedly the Buraq had taken other prophets to paradise.



Mohammed passed through the seven heavens and even experienced the joys of God's unveiled face. In Paradise he led the angels and Old Testament patriarchs in prayer. He described Moses as "a ruddy faced man", Jesus as "freckled and of medium height." Of Abraham he said: "Never have I seen a man more like myself."

Even when Mohammed demonstrated God's power by bringing forth a spring, his enemies denounced it as the Devil's work. Eventually he had to flee Mecca to Medina. At one point, to elude his pursuers, he hid in a cave where God had a spider spin a web to make it look like no one had been there recently. He found shelter one night with Bedouins who had a dry ewe until Mohammed miraculously made it give milk. When he arrived in Medina there were many offers of a place to stay. Mohammed let his camel decide and it stopped at house of a poor man.

In Medina many Arabs converted to Islam and gave up their tribal feuds in favor of a wider religious unity. Mohammed made an effort to win over the powerful Jewish faction by adopting some of their customs such as fasting on the Day of Atonement and praying toward Jerusalem. But the Jews saw him as a threat and opposed him. Therefore, he changed fasting to the whole month of Ramadan and prayer toward

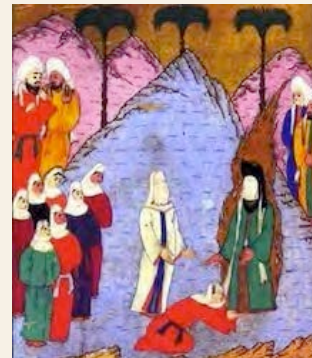
Mecca. Even kissing the black stone in the Kaaba was authorized.

There was also the story that Mohammed was going to call the faithful to prayer with a Christian bell or Jewish horn, but Gabriel appeared and told him to use the human voice.

The Muslim calendar originally started in 610 C.E., the date of Mohammed's first vision, but was changed by the Caliph Umar to 622 C.E.

Mohammed's death. Supposedly Gabriel appeared to Mohammed and offered him the choice of eternal life on earth or in Paradise. He chose Paradise and died in 632 C.E.

Mothers of the Faithful: Mohammed's Wives



Mohammed and his wife Aisha free the daughter of a tribal chief

Much has been made of the fact that Mohammed had nine wives, even though Islam restricts a man to four as long as treats them properly and equally. In fairness to the prophet, most of them were widows, marriage to whom was largely an act of mercy. Several of them, either through learnedness or remarkable memories, would be major sources for sayings and details of the Prophet's life. Their lives and relationships to Mohammed teach us a lot about his and Islam's attitude toward women.

Khadijah, Mohammed's first wife, though older than him, was probably dearest to him, since she was his first convert and stuck with him through the hard period of persecution before the Hegira. He would marry all his other wives after Khadijah's death and his flight to Medina. After an intense period of mourning, Mohammed agreed to marry two women Sawdah and Aisha.

Aisha was only six when betrothed and ten when married to Mohammed, who at the time was fifty-four. While today, this is seen as inappropriate, even child molesting, it was common then when marriages were also for the purpose of sealing marriage alliances, and contemporary Muslims make no issue of the age of the Prophet's wives. That being said, Mohammed allowed her to enjoy her childhood, including her toy ponies, and was said to even join in some of her games.

After Khadijah, who had died before the Prophet took any other wives, Aisha seems to have been Mohammed's favorite wife. Despite their age difference, she was intensely jealous of several of his other wives, especially the young and pretty ones. Her jealousy would be a major source of the fracture lines that would lead to the Sunni-Shia split in later years after the Prophet's death.

Despite his favoring Aisha, Mohammed was careful to treat his wives equally. Each had her own hut surrounding a central court, and he visited each one's hut in a strict order night by night. Only when he was dying of fever, did he asked for permission from his other wives to break the schedule and spend his final days in Aisha's hut.

Sawdah was a middle-aged widow who was chosen by Khadijah for her ability to run a household, watch over Mohammed's daughters, and in a sense serve as a stepmother to the younger Aisha. She was also skilled at weaving fine dyed leather strips into mattress straps, fancy harnesses, and wind curtains.

Such leather goods were the primary source of income in Mohammed's household at Medina before tribute came pouring in. Even then, Mohammed gave away almost his entire share of the tribute, one-fifth of the total, to the poor, widows, and orphans. At one point, his wives even complained they would like to enjoy some of that wealth. Mohammed's reply was any of them could have her share now and leave or wait for it in paradise. They got the point and chose to wait.

Hafsah, Mohammed's next wife, was the daughter of Umar and widow of a soldier fighting for the faith. She had little in the way of charm and a temper to boot. Both Uthmann and Abu Bakr rejected Umar's offers of marriage. To defuse any difficulties this may involve, Mohammed offered to marry her.

Hafsah was both extremely devout and literate, and has served as a role model for Muslim women ever since. She also had an inquisitive mind that engaged Mohammed on serious religious and moral topics. She was a prime source for recalling many of the sayings of the Prophet and, according to some traditions, had the very first written copy of the Koran, even before the definitive version compiled by Uthman.

Zaynab bint Khuzayah was another war widow whom Mohammed married about a year after Hafsah. She was pious and renowned for her charity to the poor, but sadly died only a year after her marriage.

Umm Salamah joined Mohammed's household in 626. She was also a widow of a warrior fighting for Islam by whom she had children and was also quite beautiful, which created some tension within the household, especially with Aisha. Like Aisha, she also had a remarkable memory, making the two of them important authorities on the Prophet and his sayings after his death.

However Umm Salamah's experiences as a widow and responsibilities as a mother made her more serious minded than Aisha and she formed a special friendship with Mohammed's daughter, Fatima, also renown for her piety. Their friendship and that of Aisha and Hafsa created two rival axes around which Mohammed's wives would gather as part of the fault line that would later split Islam.

Raihanah and Safiyah were Jewish war captives whose husbands and families had been executed. Raihanah, who had a meek demeanor, chose to remain a concubine instead of a free Muslim wife and existed quietly in the Prophet's household until her death five years after her arrival. Safiyah was only seventeen, thus arousing Aisha's jealousy. However, her age and personality meshed well with Aisha's and she became part of her faction of wives. Although she converted to Islam and was quite devout, she still kept the Jewish Sabbath and donated liberally to her impoverished relatives.

Umm Habiba and Maymunah were both essentially married to Mohammed to seal political alliances.

Women and early Islam



Mohammed giving his daughter, Fatima, in marriage to Ali, the fourth and last Orthodox caliph. Since no other children of Mohammed survived childhood, all descendants of the Prophet came from her line as well. Fatima has been revered as model of upright behavior for Muslim women, as indicated by how the artist has enshrouded her head in a veil and divine fire (albeit smaller than Mohammed's)

Women and early Islam. The baseline attitude rooted in traditional Arabic culture can be summarized by what in the West is called chivalry. Stories about behavior toward women by Mohammed and his contemporaries repeatedly show extreme discretion and politeness toward women. For example, when escorting women they weren't married to, men were careful to walk in front of them so as not to be distracted and tempted by their sight. The current custom of women being in the back of the mosque is based on this same principle.

Similarly, the head coverings and veils worn by women in public are to protect their virtue and reputation. Until recently, women in the West also protected their modesty by keeping their hair covered or pinned up. Only when letting loose, presumably in privacy, would they "let their hair down." Granted, this "protection" of women also reflects their lower status in traditional cultures, both East and West, as virtual property. Modern issues of gender equality are just that, modern issues, and one must be extremely careful in using contemporary values to judge traditional societies.

Muslim Prayer



Muslim prayer involves a set ritual as follows:

- 1) The one praying ensure that his (or her) body & place of prayer are clean, performing ablutions (washing) if necessary. And then making the intention to perform the obligatory prayer. If water is not available for the ablutions, one can even use dust to symbolize spiritual cleansing.

Pilgrims' Progress during the Hajj

- 2) Standing, he raises hands up and says "*Allahu Akbar*" (God is Most Great).
- 3) Standing and with hands folded over chest, he recites the first chapter of the *Qur'an* in Arabic & any other verses he would like.
- 4) The worshipper raises up his hands up, saying "*Allahu Akbar*," then bows, reciting three times, "*Subhana rabbiyal*" (Glory be to my Lord Almighty).
- 5) He next rises to standing while reciting "*Sam'i Allahu liman hamidah, Rabbana wa lakal hamd*" (God hears those who call upon Him; Our Lord, praise be to You).
- 6) Again he raises his hands, saying "*Allahu Akbar*." Then, prostrate on the ground, he recites three times, "*Subhana Rabbiyal A'ala*" (Glory be to my Lord, the Most High).
- 7) Rises to a sitting position, saying "*Allahu Akbar*," then prostrates himself again in the same manner.
- 8) Rising to a standing position, he recites "*Allahu Akbar*."
- 9) This concludes one *rak'a* (prayer cycle) and he begins again from Step 3 for the second *rak'a*.
- 10) After two *rak'as*, one remains sitting after the prostrations and recites the first part of the Tashahhud in Arabic.
- 11) If the prayer is to be longer than these two *rak'as*, he now stands up and begins again to complete the prayer, sitting again after all *rak'as* have been completed.
- 12) Recite the second part of the Tashahhud in Arabic.
- 13) Finally, he turns to the right and then the left, each time saying "*Assalamu alaikum wa rahmatullah*" (Peace be upon you & God's blessings).

This concludes the formal prayer. Of course, in addition to the five obligatory prayers a day, one can make more informal prayers as the need or desire arises.



Muslim pilgrims pray on the Mountain of Mercy outside of Mecca during the Hajj.

The Hajj is a four-day process during which the pilgrim progresses through several rituals. Upon arrival in Mecca, one performs a ritual washing of the body and hair and dons two seamless white sheets. During the pilgrimage, one must not cut one's hair or nails. The pilgrim then runs seven times around the Kaaba and then seven times between two hills symbolizing Hagar's frantic search for water for her son Ishmael, through whom Arabs claim descent from Abraham.

The pilgrims then walk to Arafa, the scene of Mohammed's last sermon, along the way throwing rocks at a pillar that represents Satan. Upon return to Mecca, the pilgrim buys a goat for a blood sacrifice, which can be performed by a third party. The meat is distributed to the poor as a reminder of how all are equal before God.

Upon completion of the pilgrimage, one earns the title *Hajj* (pilgrim), which is a great honor among Muslims. Some people save up all their lives to take the pilgrimage to Mecca. If, because of poverty, they still cannot make the trip but have tried to save up for it, they are considered to have fulfilled their obligation.

Muezzins, Mosques, and Friday Worship



The Blue Mosque in Istanbul

Muezzins, who call the faithful to prayer, were the first salaried religious officials in Islam. As the empire and the number of Muslims grew, so did the number of muezzins needed to call them, with up to three of them on a balcony or tower (minaret) calling in all directions. The Great Mosque in Damascus employed seventy muezzins. The muezzin first called in the direction of Mecca, then to his right and then his left. Since their high vantage point allowed them to spy into courtyards and forbidden quarters, some mosques either blindfolded them, swore them to secrecy, or employed blind or people with impaired vision. Today, loudspeakers mounted at the top of minarets are typically used.

The mosque is the common place of worship for Muslims, analogous to the Christian church or Jewish synagogue. Its basic form is modeled after Mohammed's house in Medina: a main building, a portico around a courtyard where the huts of Mohammed's wives were placed, a fountain for the ablutions, and a tower (minaret) from which to call the faithful to prayer. Just as Mohammed's house served as a community center for Muslims to gather for meetings and prayers, so the modern mosque serves a lot of the same functions. Mohammed said there was no greater waste of the believers' money than building, but, not surprisingly, mosques became the supreme architectural expression of Islam.

Friday is the customary day for community prayers, but, unlike the Jewish Sabbath or Christian Sundays, it is not obligatory to go. After community prayer, the *imam* (prayer leader) will typically give a talk to the faithful.

Armies of the Arab Conquests (632-c.750)



A late Sassanid cavalryman (left), such as those who joined the Arabs after the conquest of Egypt, and a Bedouin warrior, more typical of the early armies of conquest right after Mohammed's death.

Arab armies of 600s fought mainly in tribal units. Their minimal command structure allowed them to keep fighting despite loss of generals. They traveled on horseback or camels, but generally went to battle on foot. Without the fully developed stirrup, it was still awkward and dangerous to fight from horseback except in flanking maneuvers and pursuit. And camels were too valuable for transport to risk in battle. Therefore, contrary to popular perception, Arabs fought mainly as infantry, although horses and camels did give their armies great mobility.

That being said, they fought using hit and run tactics to gradually wear down an enemy, darting in to pick off a few opposing soldiers, retreat hoping to lure the enemy out of formation and wear them down in pursuit, regroup, and attack again. As one Arab put it: "*Fight the enemy in the desert. There you will be victorious, or, even if defeated, you will have the friendly and familiar desert at your backs.*" The ebb and flow of these battles explains how long they lasted, such as Qadisiya in 637 against the Persians, which went on for four days.

Up till now, the Arabs had no skill in sieges, choosing instead to sidestep cities to destroy enemy armies while raiding the cities' trade and

supporting countryside. Merchants, being more concerned about business than politics, would typically surrender when there was no sign of deliverance, hoping to save their trade. As one Egyptian sage put it, “*the art of towns [surviving] is not to take sides*”

However, having conquered an empire, they quickly adopted more standard ways to fight and to besiege cities.

Early Arab Conquests (634-c.750)



The Arabs celebrate their conquest of Alexandria, Egypt in 639

One of the most celebrated feats in the Arab wars of conquest was the Arab general Khalid’s legendary 200-mile march across the Syrian Desert in 634 to join his comrades fighting in Syria. Supposedly, Khalid took three times the normal number of camels and engorged them with water before the march, killing them one by one along the way to water their horses from their stomachs. A more apocryphal version had Khalid constructing a pipeline of goatskins to pump water across the desert.

Sandstorms combine oppressive heat, high humidity, and high winds spitting fine red dust that gets everywhere, making it hard to eat without swallowing mouthfuls of grit and nearly impossible cook, draw water, or light fires. The sandstorm at Yarmuk, which lasted three days, also cut off the Byzantine chain of command and communications, making it even harder to react

in a concerted manner to the Arabs’ hit-and-run tactics.

The fall of Egypt was largely the work of the Christian patriarch/Byzantine governor, Cyrus. First he surrendered Central Egypt in return for letting his garrison and himself escape. Having somehow survived a trial for treason, he returned as governor of Alexandria, which he agreed to surrender in a year if the Arabs would let him leave in peace. Even without these betrayals, Cyrus helped the Arab cause by persecuting the Coptic Christians in Egypt, many of whom then welcomed the Arabs as liberators.

In 641 a Byzantine seaborne expedition briefly recovered Alexandria to the accolades of the Greek speaking population. When the Arabs retook it they sacked the city for betraying them. The last part of the famous library of Alexandria was destroyed now (part having been burned in 47 B.C.E. when Julius Caesar had been defending Cleopatra against rivals, and another part burning as the result of a religious riot in the 300s). The role of the Arabs is not clear. One apocryphal story has the Arab general burning it, saying any books with no mention of Islam should burn and others mentioning it weren’t needed. Most likely it burned in the confusion of the sack.

The Pharos Lighthouse of Alexandria, one of the Seven Wonders of the Ancient World, did no better. A series of earthquakes wrecked its lantern around 700, its octagonal tower in 1100, and everything else down to the foundations in the 1300s.

The Colossus of Rhodes, toppled by an earthquake nearly 900 years earlier, had lain in ruins in Rhodes’ harbor ever since the Arabs took the island in 672. Finally, an enterprising Arab merchant smelted down the bronze and sold it for a fortune. It was said that it took 900 camels to cart it off.

Fighting the Persians. As at the Battle of the Yarmuk against the Byzantines, a sandstorm blew up at the Battle of Qadisiya in 637 against the Persians. After three days, in what would be known as the “night of fury”, the Arabs launched a series of reckless night attacks on the Persian camp. Despite suffering heavy losses, they finally broke the Persians, leaving Iraq at their mercy.

Conquering Persia was a bit harder and longer, taking the Arabs twenty years to complete. In one battle, when confronted by a Persian war elephant, the Arab commander led a squadron of cavalry to bring it down with a javelin in its eye. In another battle against elephants, the Arab general, Abu Ubayd, led the attack, telling his men to go for the vulnerable trunks. Unfortunately for him, he was plucked from the saddle, thrown to ground, and trampled to death.

Yezdigird III, the last ruler of the Sassanid Persian dynasty fled eastward, begging in vain for help from the Byzantines and Chinese. He met an ignominious end as a refugee at the hands of a servant who killed him for his jewelry.

The Orthodox Caliphs (632-661))



The investiture of Ali as the fourth of the Orthodox Caliphs in 656.

Abu Bakr (632-4). In the confusion after Mohammed’s death in 632, one of his followers, Umar, threatened to cut off the hands and feet of

people who were in hysterics at the Prophet’s passing. More significantly, Abu Bakr calmed the crowd with a speech on how Mohammed was only a prophet and that God was still alive. A subsequent meeting of the Islamic community’s leaders chose Abu Bakr as Caliph, from the Arabic *Khalifat Rasul Allah*, meaning successor to the Messenger of God.

Abu Bakr was modest, pious and conscious of carrying on as Mohammed had. As a young man, he had been rich, but as a Muslim had given away nearly all his wealth to the poor. As Caliph, he would still patrol alleys in the evening to make sure there were no homeless or hungry widows or untended orphans. Similarly, he lived as the first among equals, only wearing an old cotton tunic and woolen cloak, unlike later Caliphs who would live in luxury and claim to be the “shadows of God on earth”.

Most of his short reign was spent suppressing a revolt in Arabia known as the Ridda and reestablishing Muslim control over the peninsula. In a particularly bloody battle called the “Day of the Garden of Death”, thirty-nine of Mohammed’s companions from the old days in Medina were killed. After that, Mohammed’s Companions were kept back for praying in order to save the collective memory of the early days. As he was dying, Abu Bakr had the Companions agree on Umar as the next Caliph and arranged to have himself buried next to Mohammed in the hut of Aisha, his daughter.

Umar (634-44) was a remarkable, but extremely severe leader, making him impossible not to respect, but also nearly impossible to love. Under Umar, Arab armies conquered Syria, Egypt, Palestine, and Iraq. When the Patriarch Sophronius would only surrender to Umar, he came up from Medina.

Umar was a puritanical man who allowed himself two garments a year and berated anyone he found wearing fancy clothes. When traveling, he didn’t use a bed, mattress or tent, but slept on

the ground covered by his well-patched cloak. He was just as hard on others, coming harshly punishing any public drunkenness, gambling, or improper dress. He even had his own son given the prescribed 80 lashes for drunkenness, killing him in the process. In the spirit of purity, Umar kept Muslim garrisons in separate towns away from the corrupting influence of native customs.

While Mohammed confessed an obvious love of women, Umar severely restricted their behavior, even trying to stop them from taking part in the Hajj and worshipping in mosques. It is to Umar that we can trace the more restrictive attitude toward Muslim women up to today.

However, Umar respected Christian holy places, since they were “people of the Book.” In that spirit, for centuries there was a custom at Easter when everyone in Jerusalem would douse their fires and then the Muslim governor would accompany the patriarch into the Holy Sepulchre, emerging with a new flame from which all the flames of the city would be rekindled. Umar also strictly banned forced conversions and insisted on offering enemies the chance to convert or submit to negotiated terms before attacking them.

Umar was murdered by Abu Lulu, a Persian slave he had refused to free. Before he died he was relieved to learn that his murderer was not a Muslim. A committee of six Companions appointed by Umar overlooked what seemed to be the obvious choice, Mohammed’s son-in-law and cousin, Ali, and chose instead the quiet, but also less strict Uthman who was seventy years old at the time.

Uthman (644-56), although from one of the richest Meccan clans, donated liberally to the poor like his predecessors had. However, he loosened Umar’s sumptuary restrictions, which attracted many richer Arabs to the faith, and even built himself a palace. (His wealth apparently didn’t help protect his eldest son who

was pecked to death by a rooster at the age of two.)

Uthman is still mainly remembered for his piety. Along with this charity, like Umar before him, he kept improving and expanding the facilities in Mecca to accommodate the rapidly growing number of Muslim pilgrims. He created a new level of administrators to handle the growing empire, established the rate of mandatory alms (zakat) at 2.5% of one’s excess income, made muezzins the first paid Muslim officials, and introduced a second call to prayer at noon on Friday to emphasize that as the time for the communal gathering of Muslims.

But Uthman’s greatest contribution to the faith was creating the definitive written version of the Quran in 650. Mohammed had dictated his revelations to his companions (known as *Sahabas*) who had written them down. Abu Bakr, the first caliph, had these verses compiled into one book, which was entrusted to Hafsa (Mohammed’s wife and Umar’s daughter). Uthman borrowed that text, had several thousand copies made, and invalidated any other versions.

Uthman’s version is the one standard version of the Quran, and it is commonly agreed that is the same as the original compiled by Abu Bakr. The fact that it was done within living memory of Mohammed has eliminated controversy over what should be in the Quran. Therefore, there is no difference between the Sunni Quran and Shiite Quran. Compare that to the final version of the New Testament, which wasn’t compiled for a couple centuries after Christ and is still the subject of controversy among some Christians, especially in reference to the so-called Gnostic Gospels that were not included. However, this has not stopped endless disagreement on interpretations of the Quran.

The finished product consisted of 77,000 words and 6211 verses arranged into 114 chapters known as *suras* (rows). They are classified either

as Meccan and Medinan suras, depending on where and when they were revealed to Mohammed, who kept receiving revelations until his death in 632.

Devout Muslims follow a strict protocol when handling the Quran. It should be stacked higher than all other books, wrapped in cloth when traveling, held above the waist, and opened only by those in a state of ritual cleanliness.

Uthmann was murdered in a dispute with the powerful Ummayyad clan, his cherished copy of the Quran being drenched in his own blood. According to a prophecy by Mohammed: *“Verily the Lord has a sword sheathed in a scabbard as long as Uthman lives, and when Uthman is slain that sword shall be drawn and it will not be sheathed until the day of resurrection.”*

The realm of Islam (Dar al-Islam) has been divided and often at war with itself ever since.

Ali (656-661) the last Orthodox Caliph, was married to Mohammed’s daughter, Fatimah and was the father of the prophet’s only male successors. He was Mohammed’s first cousin, adopted son, first male follower, closest disciple, a hero warrior of Islam, and the principal expert on law and understanding of the *Quran*.

Some believed Mohammed had imparted to Ali and Fatimah prayers, practices and concepts deemed too demanding for others. For these reasons, Shi’ites have believed that only Ali and his descendants were worthy of being Caliph. Unfortunately, Ali’s reign was plagued from the start with turmoil and challenges to his authority.

Despite the fact that Ali had tried to arbitrate a dispute with mutineers on Uthman’s behalf and posted his sons to guard his house, propaganda by Mohammed’s wife, Aisha, made him out as one of Uthman’s murderers. In 656 at the Battle of the Camel, after Aisha’s champions died one by one protecting her in a camel litter covered

with armored panels, she surrendered and Ali pardoned her followers. He then moved to replace Muawiya, the Umayyad governor.

Helping Muawiya’s position in the ensuing civil war was the fact that Ali had appointed one of Uthman’s murderers, Amr, as governor of Egypt. However, as Ali was winning a major battle, Muawiya had his men tear out pages of the Quran and stick them onto the tips of their spears, stopping Ali’s men in their tracks and forcing Ali to agree to a truce that got Muawiya off the hook.

In 661, three men, disgusted with the civil strife between Muslims, plotted to kill Amr, Muawiya, and Ali on same day during Friday prayers, when all three leaders would be most vulnerable while leading prayers. However, Amr didn’t attend prayers and Muawiya was saved by a quick-witted guard, but Ali was struck down, allowing Muawiya to seize the office of caliph and establish Islam’s first dynasty: the Umayyads.

Mohammed, Abu Bakr, Umar, and Ali all died at age 63.

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THE SUNNI-SHI'ITE SPLIT IN ISLAM AND ITS IMPACT

“Verily the Lord has a sword sheathed in a scabbard as long as Uthman lives, and when Uthman is slain that sword shall be drawn and it will not be sheathed until the day of resurrection.”—Words attributed to Mohammed

Beginning of the rift. Soon after Mohammed's death in 632 C.E., the Islamic world suffered a religious/political schism that still constitutes the major divide among Muslims today: the Sunni-Shi'ite split. What made this so serious is the theocratic nature of Islam that combines religion and politics, where religious law, especially the *Quran*, rules state and society. This affected the Muslim world in three ways.

Two of them had to do with the Muslim Arabs' mission to spread Islam, resulting in the rapid conquest of a vast empire stretching from India to Spain. This, in turn, had two effects. One was the sudden accumulation of great power and riches by Arab leaders, who in many cases became corrupt and oppressed poorer Arabs and non-Arab converts to Islam. These conquests also brought the Arabs into increasing contact with and influence from Christianity, Zoroastrianism, and Judaism, all religions with belief in a future savior.

Meanwhile, a split had arisen between followers of Abu Bakr, one of Mohammed's first converts, and Ali, the prophet's very pious cousin and son-in-law over who should succeed as Kalifa (AKA caliph, literally *deputy*). Abu Bakr (632-634) was chosen over Ali, followed by the puritanical and severe Umar (634-44). When a Christian slave murdered Umar, Ali was again passed up in favor of Uthman from the powerful Umayyad clan. As was accepted custom, Uthman appointed many of his relatives to high posts in the rapidly expanding empire. When complaints about one of those relatives' corruption came to him, a dispute broke out which ended in Uthman's murder by an angry mob. In the aftermath, Ali was chosen caliph. However, Muawiya, the governor of Syria, led Uthman's Umayyad relatives in revolt. In 661 Ali, last of what were known as the four Orthodox Caliphs, was murdered, and Muawiya founded the Umayyad dynasty (661-750) in his place.

However, the dispute was far from over, because many Muslims believed Mohammed had designated

that only his son-in-law, Ali, and his descendants should rule as *imam* (he who walks in front or guides). This, combined with growing discontent over Umayyad corruption and oppression, became the basis of the Sunni-Shi'ite split. Shi'a is the shortened form for *Shi'atu Ali*, meaning followers of Ali, while Sunni comes from *Ahl as-Sunnah wa'l-Jam ā 'ah* meaning "people of the example (of Muhammad) and the community".

Two events in the decades after Ali's death intensified the dispute. In 680 C.E., a revolt by Ali's son, Husayn, was put down when he and seventy other members of his family were massacred in the present-day Iraqi city, Karbala, making this the Shi'ites' holiest city after Mecca and Medina. Only one son of Husayn, Ali, survived this massacre. Five years later, Ali's oldest son, Hasan, failed in an attempted revolt against the Umayyads. Twelvers, the dominant branch of Shi'a Islam, believe that Ali, his two sons, Hasan and Husayn, and a succession of nine of Husayn's descendants are the Twelve Imams. Many Shi'ites believe the twelfth and last of these imams, Muhammed ibn al-Hassan, is still alive and hidden by God until his chosen time, when he will return as the *mahdi* (rightfully guided one) with Jesus to restore just rule to the earth. Shi'ites believe the imams possess supernatural knowledge directly from God and thus are infallible. Sunnis reject this claim.

The deaths of Husayn and Hasan have also given Shi'a Islam a theme of suffering and expiation. This has justified in many Shi'ites' minds a long pattern of revolutions centered on the *da'l*, preachers of the imams' message who lead their followers to victory or martyrdom. These have given rise to more radical groups, some with beliefs far removed from mainstream Islamic beliefs. At least one group incorporated local beliefs, such as reincarnation, into their own. Others have gone so far as to deify the imams, attributing to them miraculous powers. Some Shi'ites, by rejecting all, especially Sunni, law have justified such things as murder and assassination, which has been the cornerstone of beliefs for a number of terrorist groups. One of these groups, known as the Assassins, targeted Sunni Muslims and crusaders in the twelfth and thirteenth centuries, murdering anyone who refused to pay them tribute. Our word, *assassin*, comes from *hashish*, which this group's followers would supposedly smoke before carrying out their political murders.

This is also the basis for present day resistance groups who, rightly or wrongly, are labeled terrorists. For example, Hezbollah (“Party of God”) in Lebanon, which started out as a resistance group without a solid base, has over the years come to provide many of the social services, such as schools and hospitals for many Lebanese Shi’ites. Ironically, the main terrorist group and nemesis of the West since the 1990s, Al Qaeda, is Sunni. Today, Sunnis make up about two-thirds of the Muslim world, but Shi’ites predominate in Iran, Iraq, and Lebanon. Most Shi’ites are known as Twelvers, believing in the twelve imams, but there are various splinter groups, such as the Ismailis and Zaydi (Fivers) who believe in a different line of succession for the imams. Both Shi’ites and Sunnis revere the Quran as the revealed word of God.

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MOORISH SPAIN (711-1492)

The coming of the Moors. In the seventy years after the death of Mohammed in 632, the Arab Muslims had conquered an empire that stretched from the borders of India in the East to the Atlantic coast of North Africa in the West. In 711, an Arab general, Tariq, was sent into Spain with a force of unruly North African Berbers (from the Roman word for barbarians). Tariq, after whom the Rock of Gibraltar was named (from *Jebel al-Tariq*, the Rock of Tariq), decisively defeated the Visigoth king Roderic in 712, after which the Moors, as the Arab-led Berbers were called, overran most of the peninsula by 720.

Several factors aided the rapid Muslim conquest of Spain. First, despite Spain's hilly and fragmented geography, the Romans had succeeded in creating a tightly knit and Romanized province (both politically and culturally). Rome's Visigothic successors carried on these traditions, thus giving the Moors a fairly unified state whose government largely fell into their hands after one decisive battle, much as England fell to the Normans after the Battle of Hastings in 1066. A very different, but complementary factor was the de-centralized nature of Roman (and Visigothic) rule, where local nobles who copied Roman culture and showed loyalty to the empire, were allowed to run their cities or regions for Rome. By confirming these local officials in their positions in return for their loyalty the Moors avoided prolonged sieges. Therefore, it is likely that few people even noticed a change of management at the top.

By the same token, the Moorish conquest and its aftermath to c.800 seem to have been a fairly destructive and chaotic period in Spanish history for several reasons. First, there was some resistance by Visigothic leaders who lost their lands to Tariq's followers. Secondly, the Berbers who made up the bulk of the conquering army, were still unruly tribesmen and, for the most part, only superficially Muslim. Thus they often plundered and destroyed at will. Finally, while all Muslims were supposedly equal, the Arab

rulers and officers treated the Berbers as second-class citizens, taking the lions' share of land and plunder for themselves. This triggered a Berber revolt and period of turmoil (c.740-90).

This anarchy allowed the survival of the Christian states in the north, the most prominent of which would evolve into Portugal and Leon in the west, Castile in the middle, and Aragon in the east. Likewise, the Franks, who had turned back the Moors at Tours in 733, entered northern Spain in 778 under Charlemagne, supposedly to help the city of Saragossa. Although this expedition failed, Charlemagne's son, Louis I established a more permanent Frankish presence and military frontier, the Spanish March, in the northeast. This helped knit strong cultural ties with Catalonia, centered on Barcelona, which has maintained its own Catalan culture and language (a mixture of French and Spanish) and still harbors designs for political independence, much like the Basques do in the northwest.

The Umayyad Caliphate of Cordoba (c.800-1008). During this time, Abd al-Rahman, the lone survivor of the Umayyad Dynasty in the East after the Abbasid Dynasty's bloody coup, had escaped to Spain and gradually extended his control there (756-88). The Umayyads always had trouble maintaining firm control of their frontier regions, which were remote, turbulent, less wealthy and sparsely populated. This forced them to give more freedom and power to their military governors so they could defend the frontiers against the constant raiding that created a virtual no-man's-land between the Christian and Moorish realms.

However, under Abd al-Rahman III (912-61), al-Hakem II (961-76) and the viziers al-Mansur and his son Abd al-Malik ruling for the weak Hisham II (976-1009), the Umayyads established some degree of control over the frontiers and presided over the height of Muslim power in Spain. In 929, they even took the title of Caliph, spiritual and secular ruler of the Islamic world, most likely in reaction to the Shiite Fatimids in North Africa, claiming that title by right of descent from Mohammad's daughter, Fatima. The Umayyads also moved their capital from the old

Visigothic center, Toledo, to Cordoba, where they built one of the Islamic world's most splendid mosques and a magnificent palace complex. This palace had 140 Roman columns sent from Constantinople, a menagerie, extensive fishponds, and a room with a large shallow bowl of mercury that, upon shaking, reflected light wildly around the room like lightning in order to impress and terrify visitors. The court was also a flourishing center of culture, especially after the renowned Arab musician, Ziryab was attracted there from the East, bringing with him the latest in fashionable foods, clothing, and personal hygiene, most notably toothpaste. Cordoba was famous for its extensive library with 400,000 books and may have had a population of 100,000, making it one of the most splendid cities in the world at the time.

At this time, increasing numbers of Christians started coming from Northern Europe to absorb the growing body of knowledge stored in Cordoba, taking back such things as the abacus, astrolabe, Arab math and medicine, and translations of Aristotle. This transmission of Arab learning from Spain would be the basis for the revival of learning in Western Europe in the following centuries.

By 950, the population of Moorish Spain was largely Muslim, since as many as one million Berbers may have migrated to Spain and many Spanish Christians converted to Islam, either out of conviction, the influence of friends and family, or the improved opportunities such conversion might bring. Evidence for these conversions comes from the large number of Arab genealogies, which often show a point where Christian names are replaced by Arabic ones, indicating their conversion to Islam. Another source of converts was slaves, largely Slavs brought from Eastern Europe by Viking traders. These were often converted to Islam and trained as slave bureaucrats or bodyguards (although slaves with much higher status than the average subject). The caliphs in Cordoba had as many as 60,000 such recruits in their army, which largely freed them from dependence on unreliable Berber recruits.

Maintaining such a splendid court, capital, and army required a vibrant economy, which seems to have recovered in general across the Mediterranean after 750 and particularly in Spain after the turmoil of the 700s. Spain's agriculture especially flourished, from such new crops as rice, hard wheat for pasta (which required less water and stored better as a result), sorghum, sugar cane, cotton, oranges, lemons, limes, bananas, pomegranates, figs, watermelon, spinach, and artichokes. Figs, which were a Byzantine monopoly, supposedly reached Spain by smuggling seeds wrapped in a book past the customs agents. Making this "green revolution" possible were extensive irrigation and waterwheel systems copied from Syrian models, the largest being around Valencia, with reportedly 5000 waterwheels along the Guadalquivir River alone by 1200.

Better agriculture produced a healthier and more numerous population, which allowed the government to lower tax rates, which in turn promoted more innovation, thus creating even better agriculture, and so on. This, of course, allowed and encouraged urban growth and more industries, such as metals, ceramics, glass, silk, ivory carving, paper and book making, woolens, and dyeing with dyes imported from as far away as India. One indication of Moorish Spain's prosperity at this time was government revenue, which reached 6,500,000 gold dinars a year.

Fall of the Caliphate of Cordoba and rise of the Taifa, or "Party kings" (1008-c.1080).

After the death of the powerful vizier, Abd al-Malik, a period of civil wars and strife known as the *Fitnah* broke out (1008-31). Various claimants to the throne had to rely on Berber mercenaries, who claimed lands and provinces for their services. As a result, a string of weak caliphs rapidly followed one another, one supposedly reigning for only forty-seven days. In 1013 Cordoba was sacked and its library destroyed by Berber troops who, resenting their inferior status under the Arabs, saw no reason to preserve their culture. While the government disintegrated at the center, Christian princes in the north raided and conquered Muslim lands or extorted tribute from local rulers.

This chaos led to a fragmentation of power into some three-dozen city-states known as the *Taifa* (literally party or factional rulers, although our other meaning for party might also apply). Gradually, the smaller taifas were gobbled up by the larger ones, leaving six main ones: Seville and Granada in the south, Badajoz, Toledo, and Valencia in the middle, and Zaragoza in the northeast. Once affairs settled down and stabilized, there was a rapid revival of the economy and culture. However, rather than being concentrated at one central court, culture was dispersed and localized in a number of taifa states. Taifa rulers' status, much like that of princes in Renaissance Italy, rested as much on which scholars and artists they could attract to their courts as it did on warfare and conquest.

The richest of the taifa states was Seville in the lower valley of the Guadalquivir River, specializing in its olive oil, crimson dye made from a beetle, sugarcane, and musical instruments. Its rulers, al-Mu'tadid (1042-69) and his grandson, al-Mu'tamid, took Seville to the height of its cultural prestige and political power (even recapturing Cordoba from the Christians in 1069), and were themselves accomplished poets.

Meanwhile, the Christian states of Aragon-Catalonia in the east, Castile-Leon in the middle, and Portugal in the west were attacking and extorting tribute from various taifa states. Such tribute was a major, if not the main, source of revenue for these princes who, in turn, passed it on to their soldiers, nobles, churchmen, and merchants, making it a vital part of their economies. Joining in this were Muslim and Christian mercenaries who would fight for either side, depending on the pay and circumstances. The most famous of these was Rodrigo Diaz, known as El Cid (from the Arabic word for boss). During his very active career, Diaz served Castile (until he was exiled from there), the Muslim ruler of Saragossa (fighting both Christians and Muslims), and Castile again until another falling out with its ruler. Having built up his own fortune, reputation and following, he fought, plundered, and extorted tribute from both

Christians and Muslims until he took Valencia in 1094, where he ruled until his death in 1099.

Islamic resurgence from North Africa: the Amoravids and Almohads (1080-1250). Just as the Moors had originally come from North Africa and constantly drawn upon its Berber tribesmen for settlers and soldiers, so they drew renewed strength from two more North African groups to stem the tide of Christian conquest. The first of these, the Almoravids, were led by ibn Yasin, who had founded a *ribat*, a frontier religious community with a strong military character since it must be able to defend itself, and spread Islam through preaching and charity. As ibn Yasin's movement grew, it came to be called the Almoravids (from *al-Murabitun*, meaning people of the ribat). They founded Marrakech as a base in 1060 and took over Morocco by 1083.

They then moved on the taifas in Spain, which they saw paying tribute to non-Muslims, not recognizing the authority of the caliph in Baghdad, and failing to abide by the Muslim ban on drinking wine. In 1085 when the ruler of Castile took over Toledo, several alarmed taifas called the Almoravids into Spain for help. In 1086, the Almoravids crushed Castile's forces and embarked on a series of campaigns (c.1100-1125) to recover lands recently lost to the Christians. If the Almoravids were intolerant of any breaches of Islamic law by fellow Muslims, they were even less tolerant of Jews and Christians. From this point on we see growing hostility between Christians and Muslims who used to tolerate each other. Add to this aggressive Christian princes desperate to recover the lost revenue from tributes cut off by the Almoravids and a Church reform movement that wanted to channel the military energies of Europe's nobility into campaigns, such as the wars in Spain and the Crusades, to serve its own interests, and one can see a growing strain of intolerance that would plague Spain for centuries.

Arrogance toward other Muslims, growing indulgence in the very luxuries they had originally condemned, and the re-emergence of Berber tribal loyalties led to Almoravid decline after 1125. However, a new group of North

African reformers emerged to take their place, the Almohads (from al-Muwahhidun, upholders of divine unity). Founded by Muhammad ibn Tumart, their career seemed to parallel that of the Almoravids, starting with a ribat and winning over the local tribes with their own brand of religious fervor. One major difference between the two movements was that the Almohads believed in a more mystical unity of God in which all of us are immersed. In 1121, ibn Tumart was declared the *Mahdi* (rightly guided one) by his followers to restore righteousness in the final days before the Last Judgment. At this time, the Christian princes were taking advantage of a new period of turmoil (sometimes referred to as The Second Fitnah) by conquering more lands. In 1146, Alfonso VII of Castile briefly took Cordoba before losing it again. The following year, Alfonso I of Portugal took Lisbon with the help of an English navy, marking the start of a long friendship between those two countries. Consequently, a Sufi leader, ibn Qasi, called in the Almohads who took over the Almoravids and attacked the Christian states, inflicting a crushing defeat on them at Alcaros in 1195. This served as a wakeup call to the Christian states, which united against the Almohads and stopped them decisively at Las Navas de Tolosa in 1212.

In the next forty years (1212-52) nearly all the Iberian Peninsula came under the three Christian states of Portugal, Aragon, and Castile. Fernando III of Castile took Cordoba in 1236 and Seville in 1248 after a grueling siege. In the latter case, he ejected the surviving population and replaced it with Christians. A later elegy on the fall of Seville by the poet ar-Rundi seemed to bemoan the fate of Muslim Spain in general:

*Ask Valencia what became of Murcia,
And where is Jativa, or where is Jaen?
Where is Cordoba, the seat of great
learning,
And how many scholars of high repute
remain there?
And where is Seville, the home of mirthful
gatherings
On its great river, cooling and brimful with
water?
These cities were the pillars of the country:*

*Can a building remain when the pillars are
missing?
The white wells of ablution are weeping with
sorrow,
As a lover does when torn from his beloved:
They weep over the remains of dwellings
devoid of Muslims,
Despoiled of Islam, now peopled by infidels!
Those mosques have now been changed into
churches,
Where the bells are ringing and crosses are
standing.
Even the mihrabs weep, though made of cold
stone,
Even the minbars sing dirges, though made
of wood!
Oh heedless one, this is fate's warning to
you:
If you slumber, Fate always stays awake.*

Nasrid Granada and the end of Moorish power in Spain (c.1250-1492). By the mid thirteenth century, Moorish power in Spain was confined to a thin mountainous strip of land in the south that was never more than sixty miles wide. In the 1230s and 1240s, Muhammad ibn Yusuf ibn Nasr established a state centered on the city of Granada, thus giving his name to its ruling dynasty (Nasrid). Granada's strength was undercut by two main factors. First of all, it suffered from a good deal of internal disunity caused by tribal divisions, the ever-troublesome Berber mercenaries from North Africa, and an influx of Muslim refugees from the north. Second, it had a weak economy caused by its poor soil, forcing it to import much of its food, while Genoese merchants largely controlled its trade. Also, heavy tribute to the Christian states in the north forced the emirs (rulers) of Granada to charge high taxes, which made them unpopular.

Granada's survival depended on several factors: an excellent army consisting largely of Berber light cavalry, an extensive system of castles every five or six miles along its frontier and as many as 14,000 watchtowers scattered across the countryside, strong support from the Merinid dynasty in North Africa, generally capable rulers until the early 1400s, and some luck, such as the

intervention of the Black Death (1349), Castilian involvement in the Hundred Years War in the 1300s, and turmoil both within and between the various Christian states.

Despite its problems, culture flourished in Nasrid Granada, especially in the fields of poetry, architecture, and art. The most remarkable example of this is the Alhambra, probably the best surviving example of a medieval Muslim palace. Much of its beauty lies in its elegant gardens, fountains, and courtyards that provided a serene setting for meditation, reading, or romance. The rooms of the palace itself show Islamic decorative art at its peak, with intricate geometric designs gracing the walls, doorways, and ceilings. According to the poet, Ibn Zamrak:

*"...The Sabika hill sits like a garland on
Granada's brow,
In which the stars would be entwined,
And the Alhambra (God preserve it)
Is the ruby set above that garland.
Granada is a bride whose headdress is the
Sabika, and whose adornments are its
flowers."*

In the 1400s, Granada's luck ran out in several ways. Genoese control of its trade tightened, which further aggravated resentment caused by the high tax rates (three times that paid by the people in Castile) to pay tribute to the Christians. The Merinids in North Africa went into decline and could no longer provide Granada their support. Tribal strife within Granada increased while the Christian states of Portugal, Castile, and Aragon resolved their own internal problems. In 1469, Ferdinand of Aragon and Isabella of Castile married, thus uniting Spain into one powerful state when they ascended their respective thrones in 1474. The only missing piece of the puzzle, in their minds, was Granada, which they attacked in 1482. The war boiled down to a series of sieges, as one city after another fell to the Christian artillery. In 1492, after an eight-month siege, Granada fell to Ferdinand and Isabella, who accepted the surrender dressed in Moorish clothes. After nearly 800 years, Spain was again united under Christian rule.

For Spain's Jewish and Moorish subjects, Christian rule was anything but pleasant. Almost immediately, the Jews were expelled from Spain, thus depriving it of some of its most productive population. Despite Ferdinand and Isabella's promise to tolerate Islam, Muslims were forced to convert to Christianity or leave Spain in 1502. Since emigration was so costly, most converted in name while secretly maintaining their own beliefs and practices. In 1568, Philip II, increasingly concerned about his image as a strict Catholic monarch and the support Moriscoes (Moors supposedly converted to Christianity) might give to the Ottoman Turks and his other Muslim enemies, tried to stamp out their Muslim customs, which triggered a revolt. After brutally suppressing this uprising Philip dispersed the Moriscoes across Spain. However, since they still refused to assimilate into Christian society, Philip III took the final step of expelling some 300,000 Moriscoes from Spain in 1609. Aside from the suffering this caused, it also substantially hurt Spain by ridding it of much of its most productive population just when its power and wealth in other quarters were going into decline. This only accelerated Spain's decline into the rank of a second rate power by the mid 1600s.

Moorish Spain's legacy. As discussed previously, many Christian scholars during the Middle Ages came to Spain to absorb its learning, helping trigger a revival of learning in Europe. This was probably the single most important legacy of Moorish Spain to Europe. One of its most significant contributions came from the philosopher, ibn Rushd (known in Europe as Averroes), who devoted his life to reconciling faith and reason (in particular that of Aristotle). The Christian philosopher, Thomas Aquinas, whose *Summa Theologica* similarly reconciled faith and reason, quoted ibn Rushd no less than 503 times in his works. It was Aquinas' work that laid the foundations for the Renaissance and the birth of Western science in the centuries to come, but in a very real sense, it was the work of an Arab scholar, ibn Rushd, that was the real foundation.

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ARAB MATH AND SCIENCE

The flow of history sometimes takes some devious twists and turns in its course of events. Such is the case with our own modern science, which received its legacy of Greek science and math not directly from the Greeks, but by way of Islam. Indeed, one of Islam's greatest cultural legacies was the preservation of Greek philosophy, math, and science, coming from Islam and the rise of the Arab empire in two ways. First of all, rather than rejecting ancient Greek learning, Muslim culture remained quite open to it. The story goes that the caliph al-Ma'mun had a dream where the Greek philosopher Aristotle assured him that there was no conflict between reason and faith. This revelation led al-Ma'mun to start gathering the works of the Greek philosophers. Second, the rise of their empire directly exposed the Arabs to Byzantine and Persian cultures that still carried on ancient scholarship. Therefore, the Arabs were both willing and able to absorb Greek math and science.

There were three things the Arabs needed to do: get copies of the Greek texts, translate them, and provide funding for these endeavors. As far as getting the books was concerned, many of them had fallen into Arab hands through conquest. However, there were still many texts that they needed. Sometimes they would negotiate with the Byzantines for copies of these books. At other times, raids into Byzantine territory would actually be aimed at seizing such works along with more material plunder.

Once these works had been gathered, the Arabs needed to translate them into Arabic. Luckily, Islam attracted a large number of converts, among them many scholars educated in Greek. However, since the *Koran* at that time was written only in Arabic, new converts had to learn that tongue in order to read Islam's holy book. As a result, Islam's appeal created a number of brilliant translators.

Funding largely came from the caliphs themselves. Caliph Ma'mun founded a palace learning center known as the House of Wisdom where many of the most brilliant minds of the age were gathered to translate Greek works and then add to this knowledge. The budget for the House of Wisdom

was 500 gold dinars a month, with fifty-seven translators working there at one point. The translator, Hunayn, was supposedly paid the weight of his translated books in gold.

All this led to a level of scholarship unsurpassed in its day. Since books were hand written, and thus prone to a growing number of mistakes as each generation of books was copied, the translators would gather as many copies of a particular book as they could and then compare them to see which was probably closest version to the original text. Just compiling such critical texts alone was one of Islam's greatest legacies to us.

Starting with this excellent base of Greek knowledge, the Arabs made their own advances in the fields of Mathematics, medicine, and physics. Since Islam also encompassed part of India, its math was assimilated into the larger body of mathematical knowledge and passed on to us. The Indians came up with two very valuable concepts that simplify math for us immensely: place value digits and zero. As brilliant as Greek math was, it did not have these two tools, thus severely limiting what it could accomplish, since any math using Roman numerals is extremely cumbersome. Because of such limits, Greek math excelled in geometry, which could function better than other branches of math without place value digits and zero. Even proofs in non-geometric math were done with the brilliant use of geometric figures to illustrate problems. The Muslims embraced Greek geometry wholeheartedly. One need only look at Islamic art and architecture to see their fascination with various geometric shapes and the ingenious things they could do with them. The religious ban on portraying the human figure certainly spurred Muslim art to excel in this direction.

However, the Muslims did not just slavishly copy the Greeks. Rather, they made their own original contributions in the fields of mathematics, medicine, and physics. Equipped with the Indian place value digits and zero, they developed trigonometry and first clearly defined sine, cosine, and cotangent functions. They further developed algebra (from the Arabic, *al-jabr*, which means "the missing"). The mathematician al-Khwarizmi wrote the first textbook on algebra and was probably the

first to solve quadratic equations with two variables. In future centuries his textbook would be the basis for European algebra. It has been said that science is always pushing against the frontiers of math. If that is true, then the Muslim mathematicians certainly allowed those frontiers to be expanded considerably.

As advanced as Islamic math and science were for their day, we should keep in mind that scientists then were not specialized in the way scientists today are. For example, the translator Qusta ibn Luqa wrote on such topics as politics, medicine, insomnia, paralysis, fans, causes of the wind, logic, dyes, nutrition, geometry, astronomy, etc.

The Arabs also excelled in medicine. The great physician al-Rhazi, or, as he was known in Europe, Rhazes (865-923), correctly differentiated between the symptoms of small pox and measles and showed that diagnosis on the basis of examining a patient's urine was not very useful. He also used animal gut for suturing wounds and developed mercurial ointments for treating skin and eye diseases. Keep in mind that the accomplishments of Muslim science were done without the microscope. Not until that was invented in the 1600's would scientists be able to see microbes and understand the real causes of most diseases. This makes Muslim medicine seem all the more remarkable.

Al-Rhazi also knew how to use psychological treatment. It is said that he was once commissioned to cure a caliph stricken with paralysis. He took the caliph to a cave and threatened him with a knife. The enraged caliph got up and chased al-Rhazi out of the cave and into exile. Al-Rhazi later sent a letter explaining that was the treatment, and the caliph subsequently rewarded him.

Muslim scientists also made advances in physics and optics, anticipating later European theories on specific gravity and developing formulae for figuring specific and absolute weights of objects. They calculated the size of the earth to an unprecedented degree of accuracy, though they still followed Aristotle in their belief in the geocentric (earth centered) universe. Muslim scientists disproved the Greek theory that light emanates from the eye to the object perceived. Ibn al-Hathan

showed this theory was wrong by studying how light is refracted through water.

Muslim civilization peaked around 1000 C.E. But, as with other civilizations, a higher level of culture tended to make the Arabs soft and open to attack. Also, Arab civilization was also running into problems of internal decay that opened it to several waves of invasions. First came the Seljuk Turks out of Central Asia. Although they did adopt Islam and restore some of its unity, the arrival of these Asiatic nomads initially had a somewhat disruptive effect on Arab culture and its attitudes toward the outside world. Even more upsetting in this respect were the Crusades, wars of conquest waged by Christians from Western Europe to recover Palestine for their faith. Unlike the Turks, the Crusaders were not about to convert to Islam and were much more hostile toward and destructive of Arab civilization, especially in the early years of the crusading era. Finally, the most physically destructive invasions of all came from the Mongol onslaught in the 1200's. The wholesale massacres of populations and destruction of cities that they committed dealt a terrible blow to Islamic civilization. These invasions were such a shock to the Arabs that Muslim culture became much more resistant to new ideas and foreign influences, making it more conservative and inward looking.

This helped cause a religious reaction against putting too much emphasis on science and reason and too little emphasis on faith. Except for the House of Wisdom, science and learning were largely supported by religious institutions and thus subject to their conservative influences. Also there arose a mystical movement known as Sufism, which discredited learning and reason, believing in a more direct and mystical experience with God. From this point on, Muslim science and math started to stagnate.

However, Islamic science spread to Western Europe and survived. By the 1100's, translations of Arabic texts were making their way from Muslim Spain into European universities. These Arab texts stimulated the growth of Western science, which is the dominant scientific tradition today. We should never lose sight of the fact that our own science today rests squarely on the accomplishments of

Muslim science, which, as a result, is still very much alive.

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THE RISE OF THE SELJUK AND OTTOMAN TURKS (c.1000-1600)

The Seljuk Turks. Although Islam experienced a golden age under the Abbasids, the empire gradually fell apart as the Arabs became less warlike and one province after another broke away. Weak caliphs under the power of mameluke bodyguards, the size of the empire, and the disaffection of Shiites and various ethnic groups all led to this disintegration. Fortunately for Islam, a new people came in to revitalize it: the Seljuk Turks.

Various Turkish tribes had been known for centuries from the borders of China to the borders of Islam. Fortunately, the Persians and the Arabs had held them in check. Instead of overwhelming the empire, these Turkish tribesmen, infiltrated it, coming in as mamelukes (slave soldiers) and mercenaries whom the Arabs relied on more and more, much as the Romans had relied on Germanic troops. An even more interesting parallel is between the most successful Germanic tribe in Europe, the Franks, and the most successful Turkish tribe in Islam, the Seljuks.

The Seljuk Turks, named after a semi-legendary leader and founder, were the first Turkish tribe to convert to Sunni Islam, thus gaining the favor of the civilized population in much the same way as the Franks' conversion to Catholic Christianity had made them more popular with their subjects. The Seljuks also came to the aid of Islam's spiritual leader, the caliph, who was under the thumb of a Shiite dynasty known as the Buwayids, much like the Franks under Pepin and Charlemagne had protected the Pope from similar difficulties. And in each case, the spiritual leader granted his protectors the title and responsibility for defending the faith. In the case of the Seljuks, their leader Toghril was made king, or *sultan*, of the East and West in 1058 with the job of restoring the political and religious unity of Islam.

Because of their dual mission to unify Islam and expand its frontiers, the Seljuks turned against the Shiite dynasty of the Fatimids in Egypt and Palestine and also against the Christian Byzantine Empire (much as Charlemagne had waged

campaigns for Christianity in Spain and Saxony). One reason for these wars was to divert the ever-growing number of wild Turkish tribesmen away from destroying fellow Sunni Muslims and towards waging the holy war outside its borders. Because of their ongoing decline, the Byzantines were the ideal target, although the Shiite Fatimid dynasty in Egypt was also a useful target. In each case Seljuk victories triggered a backlash.

In 1071, the Seljuks and Byzantines met in the Battle of Manzikert. The result was a resounding victory for the heavily outnumbered Seljuks who then proceeded to take over most of the Byzantine heartland in Asia Minor, settling it so thoroughly that we still call that land Turkey, even though it is a long way from the Turks' original homeland in Central Asia. The Byzantine emperor, Alexius I, called for mercenaries from Western Europe to help him reclaim Asia Minor from the Turks. Instead, he got the First Crusade, which took much of Syria, and Palestine for the Christian faith.

At the same time, the Seljuks were expanding against the Shiite Fatimids, which brought them up against a fanatical Shiite sect known as the Assassins. This group was centered in a mountain fortress and led by Hassan-ibn-al-Sabah, also known as the Old Man of the Mountain. Determined to stop the advance of the Sunni Seljuks, he launched a campaign of political terror and murder that has become legendary. Hassan's followers operated under the influence of the drug, hashish, from which we get the word *assassin*. They showed remarkable determination and ability to infiltrate the most tightly guarded palaces and reach their intended victims with their poison daggers. Among those victims was the Seljuk sultan, Malik Shah, in 1092. His death combined with the First Crusade and the Seljuk custom of dividing their realm between all their sons (much as the Franks had done), created enough turmoil in the Seljuk realm to allow the Crusaders to take Palestine. Despite these setbacks, the Seljuks did manage to restore their power in Asia Minor. Their state, the Sultanate of Rum (Rome), thrived throughout the 1100's. However, much like the Franks with the Vikings, The Seljuks had their own nemesis: the Mongols.

In the early 1200's, a leader known to us as Genghis Khan united the various Mongol tribes in Central Asia into the most fearsome war machine known to history up to that point. Striking at incredible speed (up to 100 miles a day), they burned a path of destruction from China to Europe and the Muslim world unsurpassed until the wars of the twentieth century. Cities daring to resist them were methodically destroyed and their populations put to the sword. The defiance of the Assassins brought the wrath of the Mongols upon the Muslim world. In 1245, the Mongols annihilated the Seljuk army at Kose Dagh. In 1258, they sacked Baghdad and killed the last in the line of Abbasid caliphs. The Egyptian sultan Baibars finally halted the Mongols' relentless advance in 1260, so they eventually settled down and even adopted Islam in the Muslim areas where they ruled. However their rampage had far reaching effects on the Turks and the Islamic world.

Rise of the Ottoman Turks. On the frontier between the Turks and the Byzantines were various warlike groups, known as *ghazis* (holy warriors) for their efforts against the Christians. While the Sultanate of Rum was intact, these bands were largely held in check, since their wild ways were often as disruptive to the Seljuks as to the Byzantines. With the shattering defeat at Kose Dagh, however, these ghazi bands were freed to raid at will. Among them was a leader of particular renown, Osman, who gave his name to the greatest of the Turkish states, the Ottomans.

Osman's leadership in battle attracted many Turkish warriors to his standard and made him the most successful of the ghazi states attacking the Byzantines and neighboring Muslims. His successes brought conquests and plunder which attracted more ghazis to his standard. This would trigger more campaigns against the Ottomans' enemies, which would bring more conquests and so on.

There were various reasons for the Ottomans' success. First of all, their army was the best in Europe and the Middle East. In addition to swarms of tough Turkish cavalry, the sultans also had the age's best artillery and its most dreaded regiment: the *Janissaries*. These were originally young boys

taken from the homes of the sultan's Christian subjects and raised in his service as devout Muslims. Technically, the Janissaries were the sultan's slaves, but slaves with very high status. Trained to a peak of high efficiency, they would rule the battlefields from Persia to Eastern Europe for centuries.

Ottoman government was also well organized. Much of the bureaucracy was a class called *ghulams*, also originally Christian boys taken from their homes by the sultan's men. Like their counterparts in the army, the Janissaries, they were also known for their loyalty and efficiency. At the top of the government was the sultan, who had received "on the job" training as a boy, ruling provinces with the aid of experienced ministers. Upon the death of a sultan, his sons would typically fight for the throne. Such struggles were usually to the death, but, along with the training of the sultan's sons, did tend to produce the toughest and ablest rulers.

The Ottoman sultans also emphasized their religious position to claim leadership of Islam. For one thing, they were ghazis fighting for the faith. Later, they also controlled the holy cities of Mecca and Medina, as well as the last shadowy claimants to the Abbasid caliphate. However, for a number of years, the Ottomans were seen as just one of a number of ghazis. Then, in 1345, they took the opportunity to intervene in a Byzantine civil war in Europe. And once they had crossed into Europe, they were there to stay.

By 1400, the Ottomans had subdued the other ghazis in Asia Minor and were poised to take that long sought prize of the faithful, Constantinople. Then disaster struck when the last major eruption of nomadic tribes from Central Asia burst upon the scene. Their leader was Timur the Lame, whose path of conquest and destruction ranged from India to Russia. In 1402, he destroyed the Ottoman army, captured the sultan, Bayezid, and dragged him around in a cage for the rest of his days as a monument to his triumphs. However, Timur's intentions were to loot and plunder, not to build a lasting state. As a result, his empire disintegrated upon his death, and the Ottomans were able to reassert their control in Asia Minor and Europe. By

1453, they were at the walls of Constantinople, finally ready to claim that prize.

The siege of Constantinople was the last heroic stand of the Byzantine Empire in one of the most desperate and hard fought struggles in history. It saw the destructive power of the newly emerging gunpowder technology being used alongside old style siege towers, galleys, and crossbows. In the end, the defenders were overwhelmed, and the Byzantine (and Roman) Empire passed into history.

For Europe, the fall of Constantinople meant that the old trade routes to the Far East were shut off by the Turks and new ones had to be found. This helped spur Portuguese exploration around Africa and Columbus' famous voyage to America. The fall of Constantinople also caused a number of Greek scholars to flee to Italy where they helped to stimulate the Italian Renaissance, one of the great cultural periods in history. In that way the Byzantines still lived on. For Islam, the victory meant that the Ottoman Turks had arrived as a major power. For the next century and a half, their very name would terrorize the Christian world.

The century from the fall of Constantinople in 1453 to the death of Suleiman the Magnificent in 1566 saw the Ottoman juggernaut roll to an almost unbroken series of conquests against both Christians and neighboring Muslim states. Mohammed II (1451-1481), the conqueror of Constantinople, continued his path of conquest, bringing the Balkan Peninsula south of the Danube River under his control.

Selim I (1512-1520), known to history as "the Grim", concentrated on his Muslim neighbors. To the east was a revived Persia under the Shiite dynasty of the Safavids. In 1514, Turks and Persians met at Chaldiran. Turkish superiority in artillery and firearms proved decisive as the Persian cavalry were swept away by the Ottomans' massed gunfire. However, the Persians, learning from this, changed their strategy, laying waste the land before the Ottoman advance so the invaders would have nothing to sustain them. This proved effective, and a stable, if uneasy, frontier emerged between the Persian and Turkish realms. Selim was more successful against the Mameluke dynasty centered

in Egypt. At the battle of Dabik (1516), the Ottomans once again used their firepower with terrible effect and, this time, with more lasting results. The unpopular Mameluke rule quickly collapsed and Ottoman rule extended into Palestine, Egypt, and Arabia, thus giving the sultan control of Islam's holiest places.

The reign of Suleiman the Magnificent (1520-66) was the high point of Ottoman expansion. His energies were directed mainly in the holy war against the Christians, driving northwest into Europe and due west across the Mediterranean. In 1526, at the battle of Mohacs, Turkish firepower proved its superiority once again, this time against the Hungarians, who left their king and most of their nobility dead on the field. The road to Vienna lay open, and it was here that the Ottoman advance into Europe ground to a halt. The siege of Vienna was the Turks' first major defeat. In its wake, a new frontier emerged between Christian and Muslim worlds, guarded by a complex and expensive series of fortresses on each side.

The Ottoman drive across the Mediterranean also was eventually stopped in two desperate clashes between Turks and Christians. The first was a titanic siege of the Knights of St. John on the strategic island of Malta in 1566. After four months of bitter fighting, a Christian relief force drove the battered Turkish army away. An equally desperate battle was fought at sea at Lepanto in 1571. The fact that there was no place for soldiers to retreat in a sea battle made the hand to hand fighting especially ferocious. After this, the Ottomans' fleet was severely crippled, their tide of victories and conquests pretty much ceased, and their empire entered a long period of steady decline.

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THE DECLINE OF THE OTTOMAN EMPIRE (c.1600-1919)

In the late 1500's, the Ottoman Empire started going into decline as a result of both internal and external factors. Internally, the Ottomans suffered from three major problems. First of all, after Suleiman's death, the sultans were less capable and energetic, being raised and spending their time increasingly at court with all its harem intrigues. Without the sultan's strong hand at the helm, corruption became a major problem. Second, the Janissaries became a virtually hereditary caste, demanding increasingly more pay while they also grew soft and lazy. Finally, the size of the empire created problems. The sultan was expected to lead the army, setting out with it each spring from the capital. This meant that as the frontiers expanded, it took the army longer to reach the enemy, thus shortening the campaign season to the point where it was very hard to conquer new lands. This especially hurt the Turks at the siege of Vienna in 1529. They did not reach the city until September, and winter set in early with disastrous results for the troops not used to European winters. Because of these factors, the Turks made few new conquests after 1565 and, as a result, gained no significant new revenues and plunder.

Two external economic factors also hurt the Ottomans, both of them stemming from the Age of Exploration then taking place. For one thing, the Portuguese circumnavigation around Africa to India had opened a new spice route to Asia. Therefore, the Turks lost their monopoly on the spice trade going to Europe, which cost them a good deal of much needed money. The other problem came from the Spanish Empire in the Americas that was bringing a huge influx of gold and silver to Europe. This triggered rampant inflation during the 1500's, which worked its way eastward into the Ottoman Empire. This inflation, combined with the other factors hurting the empire's revenues, led to serious economic decline.

That economic decline hurt the empire militarily in two ways that fed back into further economic decline. First of all, after 1600, the Turks lost their technological and military edge. While European armies were constantly upgrading their artillery and firearms, the Ottomans let theirs stagnate, thus putting them at a disadvantage against their enemies. Also, as Turkish conquests ground to a halt, a stable frontier guarded by expensive fortresses evolved, which drained the empire of

even more money. At the same time, Europeans were reviving the Roman concept of strict drill and discipline to create much more efficient and reliable armies. However, the Turks failed to adapt these techniques and, as a result, found themselves increasingly at a disadvantage when fighting against European armies.

Second, the tough feudal Turkish cavalry that had been the backbone of the army in the mobile wars of conquest were less useful to the sultans who now needed professional garrisons to run the frontier forts. Without wars of conquest to occupy and enrich them, they became restless and troublesome to the central government. That combined with the problems from the Janissaries, caused revolts that further disrupted the empire. (By 1825, the Janissaries would become so troublesome that one sultan would have to surround and massacre them.) Both of these military problems, the failure to keep up with the West and the increasingly rebellious army, fed back into the empire's economic decline, which further aggravated its military problems.

The following centuries saw the Ottoman Empire suffer from steady political and economic decay. By the 1800's, its decrepit condition would earn it the uncomplimentary title of "The Sick Man of Europe". Finally, the shock of World War I would destroy the Ottoman Empire once and for all, breaking it into what have become such Middle Eastern nations as Turkey, Iraq, Saudi Arabia, Jordan, Lebanon, and Israel.

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THE DEVELOPMENT OF INDIAN CIVILIZATION (c.1500-500 B.C.E.)

"There was neither the realm of space nor the sky which is beyond. What stirred?...There was neither death nor immortality then. There was no distinguishing sign of night nor of day...Darkness was hidden by darkness...Whence was [the universe] produced? Whence is this creation?...The one who looks down on it, in the highest heaven, only he knows---or perhaps he does not know."--Vedic hymn

Aryan society and the Vedic Age (c.1500-1000 B.C.E.). It is hard to imagine that the same warrior society that took over the Indus River civilization could also compose such philosophical speculations as those quoted above. However, it was these Aryans who would create the core and essence of Indian civilization while they themselves were being transformed by elements of the older Indus River culture they had replaced. Several things distinguished early Aryan society, as seen in the series of four sacred texts, the *Vedas*, our main source of information on this period. For one thing, they were a warlike society of nomadic herders closely associated with the Persians until the two peoples parted ways around 2000 B.C.E. They were organized into tribes ruled by a king and a priest. The Aryans measured their wealth in cattle, which was a standard unit of trade in the absence of coinage and the primary cause of wars and raids. Even today, the cow is still highly revered in Indian society. Aryan society was strongly patriarchal, giving women an inferior status. However, women probably had a say in who they married, could attend public ceremonies, and could remarry when widowed. Some women even attended the priestly schools, composed hymns, and were considered sages.

Another important aspect of Aryan society was its religion. The Aryans worshipped thirty-three gods in human form who were divided into three groups corresponding to the heavens, the sky, and earth. The most frequently summoned god was Indra, a god of war carrying a lightning bolt who ate, drank and lived with gusto. This reflected a similar joy of living in Aryan society that enjoyed music, dancing, gambling, drinking, and chariot racing. Possibly the most distinguishing feature of Aryan society was its powerful priesthood, the Brahmins. Although the Aryans had no temples or images of their gods, just open air sacrificial altars, their priests were the only ones who could perform the highly ritualized and elaborate sacrifices that their religion demanded.

The Later Vedic Age (c.1000-500 B.C.E.)

Around 1000 B.C.E. the Aryans started expanding into the Ganges River valley to the east. Several factors aided them in this. One of these was the use of iron that could cut through the Ganges Valley's thick rain forests and clear the way for settlement. A second factor was the cultivation of rice that has the highest calorie content of any grain, thus supporting large populations. These combined with the renewal of sea borne trade with Mesopotamia in the 700's and the introduction of coinage by the Persians two centuries later led to the creation of powerful kingdoms in the Ganges Valley characterized by three features. First they were heavily populated, thanks to the rice agriculture. Secondly, they were highly centralized under the rule of powerful kings who were needed to supervise the irrigation systems vital to the cultivation of rice. And third, there was a thriving urban culture with a large middle class involved in trade.

These new cities and kingdoms caused the center of power to shift from the more sparsely populated Indus River Valley in the West to the heavily populated kingdoms and cities of the Ganges. However, in addition to this shift in the center of power, the structure of Aryan society was being radically changed. Kings assumed more power for directing the irrigation projects and their wars against neighboring non-Aryans. Also as many Aryans settled from herding cattle into rice agriculture or moved into the growing cities, they had more daily contact with the non-Aryan population. The more complex society that was evolving led to mounting concerns among ordinary Aryans about losing their superior status over the non-Aryans.

Meanwhile, as time passed, the *Vedas*, which had been composed in an archaic form of Sanskrit, became increasingly vague in their meaning to the majority of people. This left the Brahmins as the only ones who could read and interpret them and properly perform the elaborate rituals needed to influence the gods. And that gave the Brahmins an even higher status in society. These changes in society, along with the probable resurgence of many pre-Aryan beliefs, triggered two of the most important developments in Indian history: the caste system and India's unique religious and philosophical ideas.

Caste. Before their entry into India, Aryan society was divided into three loosely defined classes: nobles (who chose king), Brahmins (priests), and the ordinary tribesmen who tended cattle. At that time, there were no restrictions on diet, intermarriage, or occupations. When they took over the Indus River

Valley, the original inhabitants, whom the Aryans had complete contempt for, were lumped together into one class. At first, this simple arrangement had worked for the Aryans until the changes mentioned above made them more defensive about their traditional place in Indian society. The result was a rigid stratification of Indian society known as the caste system. Simply put, a caste is a social group often sharing the same occupation and among whose members intermarriage and dining can exclusively take place.

Justification for the caste system came from commentaries on the *Vedas* known as the *Brahmanas* which defined four divinely ordained castes corresponding to various parts of the body: the *Brahmins* (mouths), *Kshatriyas* (warriors and rulers) who were the arms, *Vaisyas* (productive members) who were the thighs, and the *Sudras* (feet) who performed the humblest tasks, especially those carrying some sort of religious stigma. The first three castes were composed of Aryans, while the non-Aryan *Sudras* were, according to the *Brahmanas*, "fit to be beaten" and could be "slain at will".

Caste defined the boundaries of an Indian's social world, outside of which he could do little. As Indian society became more complex, literally thousands of castes evolved. Newcomers, such as the British, would be excluded from other castes and thus became castes of their own. The caste system fragmented Indian society in such a way as to make political unification very difficult. As a result, the state has had less power and influence over India's history than its counterparts in other societies. Instead, the more unifying forces in Indian history have come from its religious and philosophical ideas.

The evolution of India's religious ideas. As we have seen, the archaic Sanskrit used in the *Vedas* made the Brahmins the only ones who could interpret them and perform the intricate sacrifices they required. As a result, they claimed and assumed a higher place than ever in society. In fact, their commentaries on the *Vedas*, the *Brahmanas*, played down the power of the Vedic gods and exalted their own since their sacrifices could manipulate the powers of the universe. This exalted status plus the growing vagueness of the *Vedas* caused many Brahmins to engage in some wild speculations on the meanings of these texts and the rites they performed.

Not everyone blindly accepted the Brahmins' claims and the value of the rigid rituals they performed. Instead, a number of Indians went to the forest to live as

ascetics who, much like the early Christian hermits centuries later, performed various feats such as walking on nails or sitting close to fires in the hot sun to mortify the flesh and thus gain enlightenment. Many of these hermits were nobles whose status had been cut down by the rising power of kings. Whereas in most cultures such nobles would stage a rebellion, in India it was common for such men to seek higher knowledge as hermits. Taking a cue from the Brahmins themselves, these hermits also engaged in philosophical speculations. From these speculations came another series of treatises, the *Upanishads*. Although these works were unsystematic and varied greatly in their conclusions, they all shared a common belief in a more mystical and personal religious experience.

The *Upanishads* introduced several key concepts of Indian philosophy. One was a vague universal and spiritual entity known as *Brahman*. Although the various gods still existed, they were mere manifestations of *Brahman*. This would be a key unifying factor in Hinduism that worshipped thousands of gods, all of which were seen as aspects of the one spirit, *Brahman*. Another important idea was *reincarnation*, the belief that we are reborn over and over again in forms that reflect our *karma*, the sum total of our good and bad deeds. The better our *karma*, the higher the form of life we are reborn as. Finally, there is *dharma*, the duty that we are obligated to carry out in our present station in life. If we carry out our *dharma*, our *karma* is improved so we can be reborn in a higher form. Ironically, this belief in *karma* and *dharma* both justified the rigid caste system of India and offered people the hope of rising up from their present station in life to a better one in the next.

Our ultimate goal, according to the *Upanishads*, is not the old Aryan goal of prosperity and good health in this life. Rather it is to shed our *karma* and ego to become one with *Brahman* like a river flowing into and merging with the sea. Since these somewhat obscure and esoteric ideas mainly appealed to intellectuals, the Brahmins were willing to accept them as long as people also paid them honor. As fragmented as India might be politically and socially, these ideas of *Brahman*, *reincarnation*, *karma*, and *dharma* would provide a unifying thread between India's main religions, in particular Jainism, Buddhism, and Hinduism.

Jainism and Buddhism. The radical departure that the *Upanishads* took from the traditional Brahminic religion opened the way for new beliefs that totally rejected the authority of the Brahmins. Two of these

were Jainism and Buddhism. Jainism was founded around 500 B.C.E. by a prince Vardhamana known also as Mahavira ("great hero") and Jina ("conqueror"), which gave Jainism its name. After twelve years of severe austerity and meditation as a hermit, he attained enlightenment and spent the rest of his life sharing his insights with others. Mahavira accepted the Upanishads' principles of Brahman, karma, and reincarnation.

However, rather than seeing karma as an abstract principle, he viewed it as a material substance that clings to us and weighs us down. Thus our goal is to cleanse our souls of karma so we can cease to be reborn. Since nearly every act produces impurities, the ideal life is to retire to a monastery and do nothing. Even rocks and streams were seen to have souls that it is terrible to kill, causing some Jain monks to sweep paths before them and wear masks to avoid inadvertently killing the tiniest life forms. Since even plowing the land can turn over the soil and kill worms, agriculture was frowned upon, causing many Jains to become merchants. The ideal death was seen to be starving oneself, which Mahavira himself did at the age of 72. Jainism was fairly popular since it made karma more concrete and understandable while offering hope for a better existence to its followers.

Buddhism was founded by Siddhartha Gautama who, like Mahavira, at first led the sheltered and privileged life of a prince. A prophecy supposedly foretold that Siddhartha would either unify all India or spiritually redeem the world. His father, wanting him to be a great king, tried to shelter him from seeing any of the troubles of the world. However, this strategy backfired, because when Siddhartha finally did come across humans suffering, he was so shocked that he ran off to live the life of an ascetic. After six years of this severe lifestyle, he left the forest and found enlightenment while sitting under a fig tree. From this he became known as the Buddha (Enlightened one). The basic ideas of Buddhism are found in its four noble truths.

- 1) **Life is sorrow.**
- 2) **Sorrow arises from craving (especially for individual fulfillment).**
- 3) **The stopping of sorrow is the complete stopping of craving.**
- 4) **A noble eightfold path exists to stop sorrow and which we should follow in order:**

- 1) Right belief or knowledge- renouncing worldly things & dedication to humanitarian faith;
- 2) Right resolve- one should aspire to the achievement of Nirvana;
- 3) Right speech- lets one serve as a model for others to

follow;

- 4) Right conduct- acknowledges the sanctity of life (Do not kill animals, be unchaste, drink intoxicants);
- 5) Right livelihood- life of service, not selfishness, preferably monk;
- 6) Right effort- helps one keep his inner self-free of evil thoughts;
- 7) Right mindfulness- constant awareness that craving is pointless; and
- 8) Right meditation- lets one be selfless in thought & acts.

Eventually, following this noble eightfold path should break the chain of reincarnations, and lead to the attainment of Nirvana, a state of bliss where one's ego will melt away and merge with Brahma like a drop of water is lost in the ocean. In its purest form, known as Hinayana ("smaller vehicle"), Buddhism technically is not a religion with rites for such things as birth and death or a developed theology. Instead, one must rely on his or her own efforts to attain Nirvana. However, later versions known as Mahayana ("Greater vehicle") more closely resembled more traditional religions with various rites and reliance on Buddha for salvation.

Buddhism bore some striking similarities to Christianity. Both were egalitarian, treating women and children as equally important as men. Both had a savior god bridging the gap between humans and god. The main goal in each religion was salvation of the soul, not earthly wealth or power. Each of them demanded ethical behavior and had networks of monasteries to spread their respective messages. Both also made room for the invocation of lesser beings. In the case of Christianity, those beings were saints and angels. In Buddhism they were the *bodhisattvas*, people who were on the verge of attaining Nirvana, but chose to stay behind to help others in their spiritual efforts. One major difference between the two was that Christianity was an historical religion with certain defining events, such as the Exodus, Christ's life, etc. In contrast, Buddhism was cyclical in nature, believing that the universe goes through an endless number of cycles of creation and destruction.

Although Buddhism would spread its influence across south and East Asia, it would nearly die out in its homeland of India. This was because the Brahmins would adopt many of Buddhism's ideas and fuse them with their own practices and the pre-Aryan polytheistic beliefs of the people. The result would be that unique synthesis known as Hinduism, a religion that would unify India by taking its many cults and gods and interpret them all as manifestations of the same religion.

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INDIA FROM THE MAURYAS TO THE GUPTAS (C.325 B.C.E.-711 C.E.)

The Mauryan Empire (c.325-200 B.C.E.). As we have seen, various factors such as climate, topography, and disease made India very difficult to unify. By the same token, we have also seen how India's religious and philosophical ideas were flexible enough to act as a unifying influence. After 400 BC, the combination of these opposing influences has allowed a succession of states to unify India briefly, only to come apart again.

The first empire of note was that of the Mauryan Dynasty. Its founder, Chandragupta Maurya (325-299 B.C.E.), was the ruler of Maghada, then the largest state in northeastern India. By 315 B.C.E. he had expanded into the Punjab and Indus River valley where he clashed with the Macedonian general, Seleucus. Being preoccupied with the struggles for power following Alexander the Great's death, Seleucus surrendered his Indian lands to Chandragupta in return for 500 war elephants. (Those elephants would play a crucial role in the battle of Ipsus and the subsequent emergence of the Hellenistic Kingdoms).

Chandragupta and his son, Bindusara, extended Mauryan rule over northern India and the Deccan to the south. Their rule was strict, reputedly having an army of some 700,000 men and 9,000 elephants. In the words of the *Arthashastra*, the political manual written for Chandragupta, "Government is the science of punishment." On the other hand, also following the *Arthashastra's* advice that a king's good is what is good for his subjects, Chandragupta and Bindusara built and maintained roads, bridges, and irrigation systems.

Bindusara's successor and one of the most remarkable rulers in history was Ashoka (269-232 B.C.E.). A bloody struggle for the throne and the even bloodier conquest of Kalinga in 261 B.C.E. upset him so much that he embraced the Buddhist concept of non-violence and renounced war, gave up the hunt, and outlawed the killing of any animals not used or eaten. Throughout his reign, Ashoka continued to rule in the spirit of Buddhism (which he may also have seen as a unifying force for his empire). He sent out officers of righteousness to ensure the just rule by his officials. He codified Buddhist laws and principles. And he worked for the welfare of his subjects by digging wells, building rest houses and planting banyan trees for shade, medicinal herbs, and mango trees. Unfortunately, Ashoka's policy of non-violence also undermined his army's efficiency, which allowed revolts, invasions, and the fall of the Mauryan Empire by 185 B.C.E.

The fall of the Mauryan Empire allowed the expansion of the Greek kingdom of Bactria (modern Afghanistan) into northwestern India around 150 B.C.E. The Greeks probably influenced Indian culture in a number of fields: medicine, astrology, drama, and sculpture. There is even a philosophical work, *The Menander*, where the Greco-Bactrian king, Menander has a dialogue with a Buddhist monk.

The Kushans (78-c.300 C.E.). From about 50 B.C.E. to 78 C.E. a succession of Asiatic tribes pushed into northwestern India. One of these tribes, the Kushans, united the others behind them and established a kingdom that encompassed northern India from the Indus to the Ganges valleys and possibly to the Himalayas and the Silk Road. This period also saw the rising influence of a middle class of merchants and craftsmen who took full advantage of their central position for trade. Therefore, the Kushan capital of Purushapura in the rich province of Gandhara became the hub of a lively trade between Rome, India, and China. Indian merchants especially profited from their middleman role of getting spices from South-east Asia and silk from China for Roman traders. The large number of Roman coins circulating in India at this time indicates how extensive and profitable this trade was for India and likewise how costly it was for Rome, being one of the causes for its decline and fall.

India exported and imported more than material goods at this time. Buddhism was especially popular with Indian merchants, since it was one occupation that could stay clear of killing people, animals, and even small creatures in the soil. As a result, merchants spread Buddhism to Southeast and Central Asia and as far away as China. Indian culture was so influential in the emergence of civilization and kingdoms in Southeast Asia that this region along with India has been referred to as Greater India. Buddhist ideas may have even influenced such religious groups in the Roman Empire as the Manicheans, Gnostics, and Neo-Platonists.

By the same token, foreign ideas also influenced India. Greek influence was seen in the Gandharan style of sculpture, which portrayed Buddha with curly hair and made its way as Far East as China. Also the Kushan rulers adopted the Chinese title "Son of Heaven." Even more striking was the influence Christianity might have had on Buddhism, in particular the idea of Maitreya Buddha, the suffering savior who would redeem us through his own pain.

Mahayana and Hinyana Buddhism. Although Buddha himself had resisted any attempts to deify him, such attempts started soon after his death. By the first century C.E., this had created a split in Buddhism. The old belief of each of us being responsible for our own salvation was known as *Hinyana* Buddhism ("the Lesser Vehicle") since we each must strive for salvation on our own. The newer belief was called *Mahayana* ("the Greater Vehicle") since Buddha saves all of us together. One spin-off of this idea was that of the *Bodhisattvas*, people who have earned Nirvana but have chosen to stay behind in this world to help other people attain Nirvana. Over time, various branches of Mahayana would emerge, some having innumerable Bodhisattvas inhabiting complex hierarchies of heavens as stages leading to Nirvana. Hinyana Buddhism would be the dominant form of Buddhism in Sri Lanka, Burma, and Southeast Asia. Mahayana would prevail in India, Central Asia, Tibet, China, and Japan.

The Guptas (c.300-500). The Kushan realm remained a center of culture until its demise in the late third century at the hands of a new power rising in the West, the Sassanid Persians. However, a new native dynasty, the Guptas, emerged in the fourth century to take the Kushans' place. Its founder, Chandra Gupta I (319-335), although from an obscure family in Bihar in the northeast, made a favorable marriage that helped him control the Ganges River Valley by his death. His successors eventually brought Northern India under their rule while states in the Deccan and Sri Lanka agreed to become the Guptas' vassals.

The Gupta period is seen as a golden age of Indian culture. Indian astronomers came up with the idea of a round earth rotating on its axis. Indian mathematicians developed such concepts as Pi, negative numbers, a decimal system with place value digits, zero, and quadratic equations. Unfortunately, these ideas remained the preserve of a select group of individuals. Not until the Arabs came into India and adapted these concepts for their own uses were they made generally available. This is reflected by our still referring to them as Arabic numerals. In literature, India's two greatest epic poems, the *Ramayana*, and *Mahabharata*, which itself contains possibly the most revered work in Indian literature, the *Bhagavad Gita*, were written down in their final forms. India's greatest playwright, Kalidasa, flourished at this time. Unlike Greek drama, the point of Indian drama is to delight the audience and leave it with a serene and peaceful feeling. Both Buddhist and the emerging Hindu art and architecture also thrived. Once again, Greek influence can still be seen in the simplicity and serenity of Buddhist art. Hindu temples were

modeled after caves, which Indians always considered sacred and were decorated with sculptures.

During this time, a major shift took place in the religious climate of India. The Guptas, like many rulers before them, had been active supporters of Buddhism. This, and their popularity among the rich middle classes, led to large contributions to Buddhist monasteries, which became quite wealthy, much like their counterparts in Christian Europe. Besides theological disputes and the corruption such wealth and influence at court might bring, Buddhists tended to move their monasteries away from populated areas. Meanwhile, the Brahmins were renewing contact with the people and winning many converts to their religion, which at this point had evolved into what we now call Hinduism. In the following centuries, Hinduism would replace Buddhism as the major religion in India, although it continued to spread across Asia.

Hinduism. Of the world's great religions, Hinduism is especially unique, since it has no historical founder who had some revelation at some point in time. It has no fixed set of worship, with some people praying, others making sacrifices, and still others meditating. Although it is polytheistic, recognizing millions of gods, it is somewhat monotheistic in that it sees these various gods as manifestations of the one unifying god, Brahma. It is this flexibility that has made it so popular and such a unifying force in India.

While there are millions of gods, there are three that most people worship one or the other of: Brahma, Vishnu, and Shiva. Brahma is seen as the supreme being of creation who put into motion a constantly repeating cycle of destruction and rebirth. Although seen as the supreme god, who all others are reconciled to, Brahma has not been as popular as Vishnu and Shiva. Vishnu is the kind and merciful preserver of Brahma's creation who has appeared in various manifestations, known as *avatars*, to help humanity. The most popular of his manifestations has been Krishna, who as a child was full of mischief and as an adult a great lover and a mighty warrior, qualities once associated with Indra. Shiva combined the attributes of various Harappan and Aryan gods, being at once a god of destruction and rebirth, mercy and wrath, and constancy and unpredictability.

Hinduism maintains the old Brahmanic and Buddhist principles of karma, dharma, and reincarnation. Unlike the old Brahmanic religion, it puts more emphasis on personal devotion to a god than on sacrifices performed by the Brahmins. This made Hinduism especially popular in India and it has dominated India ever since.

However, the coming of Islam in the eighth century offered a new challenge to Hinduism's dominance.

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EAST MEETS WEST: ISLAM IN INDIA (711-C.1700 C.E.)

Introduction. Until 711 C.E., India had faced many invaders, but no substantial challenges on both a military and cultural level. The Persians and Greeks had confronted India with highly developed civilizations, but also had reached the limits of their expansion by the time they arrived there. The various nomadic peoples who entered India between the second century B.C.E. and eighth century C.E. may have been more potent military threats, but their cultures were thoroughly absorbed by India. However, in 711 C.E., India faced for the first time a vital people with a culture and religion both as sophisticated and powerful as its own: Islam.

Much of the relationship between Islam and Hinduism hinged on a battle that took place at the Talas River in Central Asia in 751 C.E. between the expanding empires of the Arab Muslims and T'ang China. The Arab victory in that battle not only stopped the T'ang dynasty's expansion to the West; it also led to the triumph of Islam over Buddhism as the prevailing religion in Central Asia. As a result, although India continued to face a succession of invaders from the North, all those invaders had Islam as the common defining element of their cultures, a religion that in its own way was as appealing as Hinduism.

Pattern of development. For 1000 years following the entry of the Arab Muslims into India, a basic pattern of development emerged. Muslims would come into North-western India and expand to the south and east. Eventually, India's environment would slow them down, as Islamic and Indian civilizations would leave their marks on each other. Then another group of Muslims would come in and repeat the process. This pattern repeated itself in three successive waves: the Arabs in the eighth century, various Turkish peoples starting around 1000 C.E., and the Mughal dynasty that entered India in 1526. This cycle may have continued repeating itself except for the intrusion of the British who would present India with a new cultural challenge.

Arabs and Rajputs (711-c.1000 C.E.). The Arab Muslims entered India in 711, the same year their religious compatriots in the West entered Spain. They conquered the area known as Sind in the Indus River valley (modern Pakistan). It is hard to imagine two religions and civilizations so different in their outlooks as Islam and Hinduism. Whereas Islam saw all people as equal before God, India's rigid caste system presented a highly stratified social structure sanctioned by religion. On the other hand, while Hinduism was incredibly

tolerant of a multitude of gods, Islam was strictly monotheistic. For better or worse, the two cultures have co-existed, though not always peacefully, since the Arabs arrived until the present day.

Arab expansion was stopped by various feudal Indian princes known as the Rajputs who themselves may have been descended from invading Huns two centuries earlier. While theoretically loyal to a king, they functioned as virtually independent rulers. As trade increased, so did competition for the control of that trade. As a result, the Rajputs often spent as much time fighting each other as they did resisting foreign invaders. Their warfare was highly ritualized and regulated by an elaborate code of behavior, much like the codes of chivalry and Bushido regulated the fighting of elite nobles in medieval Europe and Japan. Our modern game of chess, originating in India, reflects this ceremonial way of fighting wars. Unfortunately for the Rajputs, this also kept them from adapting to changes in warfare and hampering the Muslim advance across Northern India.

Arab rule was fairly tolerant of Hinduism. They even preserved the temple of a Hindu sun god in Multan, which also prevented Hindu attacks on the city that might damage this holy spot. Although the Arabs only conquered the northwestern part of India, their tolerant rule won many converts to Islam in that region which remains Muslim to this day. This provided a solid base for further Muslim expansion into India.

Turkish invaders and the Sultanate of Delhi (c.1000-1526). By 1000 C.E., the Abbasid Caliphate and Arabs' grip on their empire were in decline because of the empire's vast size, weak caliphs, and the split between Sunni and Shiite Muslims. Like the caliphs in Baghdad, the Arabs in Afghanistan relied increasingly on slave bodyguards drawn chiefly from neighboring Turkish tribes. Eventually these Turkish warriors asserted their independence and took over from the Arabs. From this base in Afghanistan, they launched raids into India, thus resuming Muslim expansion in the subcontinent.

Compared to the Arabs, Turkish raids into India were much more ruthless and destructive. The first of these raiders, Mahmud of Ghazni, earned the title of "the Idol Smasher" for the damage he did to Hindu Temples, while the ruler, Ala al-Din, similarly came to be called "the World Burner." These raids and invasions especially hurt Buddhism, as kings in East India were no longer able or willing to patronize Buddhist monasteries. This led many Buddhists either to convert to Islam or flee to Tibet and Southeast Asia. As a result, Buddhism

virtually died out as a religion in India although its influence elsewhere continued to spread.

The Mongol invasions in the twelfth and thirteenth centuries seriously disrupted Muslim civilization, especially in Central Asia. As a result, Muslims left on their own in India built an independent kingdom, the Sultanate of Delhi (1206-c.1500). Also, many Muslim scholars fleeing the Mongol onslaught came to India. This, along with an active sea-borne trade with Southeast Asia, East Africa, and the Middle East led to a flowering of Muslim culture in India. The Sultanate of Delhi witnessed a gradual blending of Muslim and Hindu cultures. Many Hindus learned Persian and Muslim bureaucratic procedures. Helping this process was the introduction of paper, which made record keeping easier, thus, enhancing the Sultan's control over his realm. Islam gained a number of converts from lower castes, especially from such castes as elephant trainers, weavers, and butchers who worked for the Muslims and saw this as a way to improve their station in life.

Muslims also absorbed Indian Culture, with caste distinctions starting to appear among them, Muslim men marrying Hindu women, and a mystical branch of Islam, Sufism, developing that used Hindu techniques such as meditation. Altogether, these developments paved the way for the next wave of invaders: the Mughals.

The Mughal Dynasty (1526-c.1700) was founded by Babur the Tiger, an Afghan leader claiming descent from both Genghis Khan and Timur the Lame. His original intention was the reconquest of Timur's Central Asian empire. However, when the Safavid Dynasty in Persia thwarted this plan, he turned toward India. Using a combination of firearms, artillery, and nomadic cavalry, he defeated the Sultan of Delhi's much larger army at Panipat in 1526 and beat an even larger army of Rajputs the next year. By his death in 1530, Babur had established the basis for over a century and a half of Mughal expansion that would encompass all but the southern tip of India.

The greatest of the Mughal rulers was Akbar the Great (1556-1605). Coming to the throne at the age of thirteen, he soon proved himself a firm and shrewd ruler who quickly crushed any revolts in his inherited lands and expanded Mughal power into the Deccan. However, it was Akbar's talents as a ruler, not a conqueror that earned him the title, "the Great." Instead of trying to rule the stubborn Rajputs by force, he allied with them, using them as his officers and government officials to keep his unruly Muslim nobles in line. He tolerated

Hinduism, married Hindu princesses, and held scholarly discussions on any and all religions each Friday. He even founded his own religion, Din Ilahi, a simple monotheistic faith that would not survive its founder's death.

Akbar looked out for his peoples' welfare by holding a land survey to ensure fair taxes. He would even overrule his own Muslim judges, the ulema, in order to secure justice and prosperity for his subjects. Akbar was also a patron of the arts, encouraging both Hindu and Muslim artists, poets, and musicians.

Akbar established a strong and stable state that allowed his three successors, Jahangir (1605-27), Shah Jahan (1628-58), and Aurangzeb (1658-1707), to keep expanding the Mughal realm. During this time, India experienced another flourishing of the arts with the fusion of Persian and Hindu styles. In painting, Mughal artists combined the Persian tradition of colorful painting with the looser and more natural style of Indian artists. Architecture especially reflected Muslim influence as seen in the Taj Mahal, a mausoleum for Shah Jahan's wife and still considered one of the world's most beautiful buildings. In music, the sultan, Aurangzeb's ban on music caused Muslim musicians to flee to the countryside where they blended their style of music with Hindu folk music to create a style of music still known as Mughal music.

Decline of the Mughals. It was during the reign of Aurangzeb that two major seeds of Mughal decline were sown. One was the over-extension of his empire in the conquest of all but the southern tip of India. The other was his persecution of Hindus, a reversal of the traditional Mughal policy of tolerance. Together, these bred disaffection among the people and drained the empire's resources. After Aurangzeb's death in 1707, the Mughal Empire went into rapid decline, allowing a new people with a new culture, the British, to take over.

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EARLY CHINA FROM THE SHANG DYNASTY TO CONFUCIUS (c.1500-500 B.C.E.)

"With harmony at home there will be order in the nation. With order in the nation there will be peace in the world."-- Confucius

The geographic factor. Far to the east of the civilizations developing in Egypt and Mesopotamia another great hydraulic civilization, China, was evolving. As with Egypt and Mesopotamia, geography heavily influenced the development of Chinese civilization. For one thing, the eastward flow of the rivers from the mountains in the west also meant that China's most fertile land was in the coastal lowlands in the east. Even today, 80% of China's population lives in the eastern third of the country. Throughout its history, this factor has given China a vast concentrated reservoir of human resources to draw upon for its wealth and power.

Secondly, China is largely isolated from the rest of the world by rain forests to the south, some of the highest mountains in the world to the west, the Pacific Ocean to the east, and vast grasslands (steppe) and deserts to the north. Direct contact with other civilizations would be rare, although occasional influences have passed back and forth between China and the rest of the world with profound effects. For the most part, however, China evolved largely in isolation and saw itself as the "Middle Kingdom", both unique and superior to other cultures. This attitude would create difficulties, especially in the modern era when growing contact with the outside world forced China to deal with different cultures.

Another dominant feature of China's geography has been its rivers, in particular the Huang He (Yellow), Yangtze, and Xi Jiang. The Yellow River valley in the north was particularly important as the birthplace of Chinese civilization, because its irregular rainfall and devastating floods forced the Chinese to organize massive irrigation and flood control projects. Such organization required a strict hierarchy of authority, which influenced subsequent Chinese history.

The Shang Dynasty (c.1500-1028 B.C.E.). By 1500 B.C.E., China's geography helped lead to one of history's early hydraulic civilizations in the Yellow River Valley under the Shang, the first of the dynasties into which Chinese history is traditionally divided. The Shang and various local nobles who ruled in their name combined both government and priestly functions. As a result, no distinct or elaborate class of priests emerged in China as happened in other early civilizations such as Mesopotamia and Egypt.

China saw several technical developments during the Shang period in the way of silk textiles, carving in ivory and jade, and especially bronze technology. Bronze artifacts from the Shang period are some of the finest examples of metalworking found in any Bronze Age culture. Among those artifacts were bronze arms and armor which, along with the horse drawn chariot, gave Shang armies an edge over their enemies and allowed the expansion of Chinese civilization.

Another advance during this time was writing. Contrary to popular belief, Chinese writing is phonetic, not ideographic, being based on sounds rather than pictures or abstract ideas. The misconception about it being ideographic seems to go back to Spanish and Portuguese missionaries who saw the complexity of the script and assumed it must be ideographic. Chinese intellectuals may have further encouraged this myth to impress Europeans with the uniqueness of their writing. Since then, the ideographic myth has become so engrained in the popular imagination, that most Westerners still believe in it. However, being based on syllables rather than individual phonetic sounds still means Chinese script requires memorizing many more, making it harder to read and restricting the number of literate people.

The pattern of Chinese history. A basic recurring pattern has repeated itself throughout Chinese history. A new dynasty would take over and revive Chinese civilization in two ways. First, it would restore the army, the Great Wall, government and bureaucracy. It would also lower taxes, redistribute land to the peasants, and rebuild the irrigation and flood control systems. Together, these would create a strong and prosperous society until lazy emperors

took over and neglected their duties, allowing corrupt officials, high taxes, powerful nobles who took the peasants' lands, and the decay of the army and Great Wall. This would lead to peasant revolts from within and raids and invasions from without that together would weaken the government, causing more corruption, high taxes, military decay, and powerful nobles oppressing the peasants. Eventually, a new dynasty would seize power and start the cycle over again.

One concept combining religion and politics that was central to this process and China's political thinking was the *Mandate of Heaven*. This said that a ruling dynasty had the mandate or approval of Heaven to rule as long as there was peace and prosperity. However, natural and man-made disasters were signs that the dynasty was not doing its job and that the mandate had been withdrawn and passed to a new dynasty. Thus the Mandate of Heaven was a double-edged sword, justifying the power and rule of a successful dynasty on the one hand, but also justifying revolution when things went wrong.

The Zhou Dynasty (1028-256 B.C.E.). The Shang Dynasty prospered until weak rulers allowed the realm to fragment into various warlord states. Eventually, this situation enticed nomadic tribes from the North-west to come in. One of these tribes, the Zhou, eventually assumed power as the next dynasty to rule China.

By 700 B.C.E., the Zhou had succumbed to the temptation of the softer cities in the East and gone into decline. Powerful warlords carved out their own principalities while giving the Zhou emperors only nominal allegiance. Naturally, these warlords turned on each other with increasing ferocity in a period known as the age of "the Warring States" (481-221 B.C.E.). However, despite this turmoil, Chinese civilization continued to spread and advance thanks to several innovations. First of all, the use of gold and copper coins replacing such things as shells and rolls of silk as the primary mediums of exchange made trade much easier and put more wealth into circulation. Secondly, the use of oxen to draw plows and the introduction of iron farm implements enabled Chinese peasants to clear

more land, produce more food, and raise China's population and wealth dramatically.

Confucianism and Taoism. Still, this was a turbulent period which sparked a good deal of intellectual ferment, leading to two very different philosophies that together would become essential parts of Chinese culture: Confucianism and Taoism.

Kung Fu-tzu (known to the West as Confucius) was born in 551 B.C.E. He started his career as a government official, but later became a traveling teacher who attracted many students. He saw the key to China's stability in a strict observance of rituals and traditions. Among these rituals was ancestor worship, which had been an integral part of Chinese religion for centuries. However, Confucianism was not a religion, but rather a systematic philosophy for maintaining peace and harmony in this world. (Confucius himself said that he knew too little about this world to even begin worrying about the next. That would have to take care of itself in due time.) Central to Confucius' philosophy was a strict hierarchy of relationships, the five most important being those between ruler and ruled, father and son, husband and wife, older and younger brother, and friend and friend. As long as the proper conduct and respect took place in these relationships, overall harmony would prevail. As Confucius saw it, a harmonious society rested firmly on a harmonious family structure. Confucius also advocated a civil service that got its positions through merit (in particular education and knowledge of the classics) rather than through birth or personal connections. Although not too popular in his own day, Confucius' ideas later had a profound impact on Chinese government and society that carry on to the present day.

Lao-tze (600's B.C.E.) founded the other great Chinese philosophy of the day, *Taoism*, which differed from Confucianism much as night differs from day. Whereas Confucianism provided a very strict framework for dealing with civilized society, Lao-tze advocated escape from that society and a return to our natural state through contemplation of the *Tao* (the Way), the cosmic principle through which the harmony of the universe was maintained. He saw everything in nature and the universe as being balanced between two complementary forces:

the active male *Yang* ("sunlit") and the passive female *Yin* ("shaded"). Rather than seeing one as superior to the other, Lao-tze saw a truly healthy and harmonious person or society as being perfectly balanced between the active Yang and passive Yin. An example of this is the Chinese martial art, Tai Chi, which strives to use an opponent's own strength and force to knock him off balance. Lao-tze saw disease, floods, famines and wars as the result of an imbalance in nature, often caused by human actions. By the same token, any attempts to conform to strict government or personal codes of discipline were artificial and deformed human nature. Taoist ideas would strongly influence Chinese art, especially landscape painting, medicine with its idea of keeping a body in balance, and even Sun-tzu's *Art of War* that advocated dexterity and balance in conformity with nature rather than merely the use of brute force.

As different as Confucianism and Taoism were, they each had a profound impact on Chinese culture. Later, with the addition of Buddhism, the three philosophies would be known as the Three Doctrines. However, rather than competing with one another, each philosophy would fulfill a particular need in China's culture. Together they would give it a balance that would make it uniquely Chinese.

China's Sorrow: the Yellow (Huang He) River



The Yellow (Huang He) River, birthplace of China's civilization, gets its name from loess, the yellow wind-blown soil from the Gobi Desert that gets trapped in the river's channel. This makes it the most sediment-laden river in the world, with silt raising its riverbed as much as one inch per year. As a result, the Huang He has

flooded some 1500 times since 600 B.C.E., often with catastrophic results.

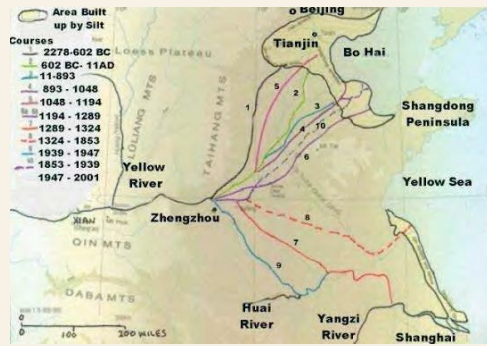
The response to silting has been to build levees to contain the river. However over the centuries, the riverbed achieved a height of as much as 10 meters over the surrounding flood plain, precariously held in by levees that were 20 meters high. It was a disaster waiting to happen...and it has happened many times.



In order to prevent or minimize such catastrophes, China has needed a strong central authority to coordinate massive flood control projects such as this hillside, terraced to conserve rain and protect against soil erosion and flooding.

Such a disaster especially took place in 1887 when unusually heavy melting snow and spring rains broke the levees and killed thousands from flooding and an estimated one million more in the resulting famine. In 1931, another flood killed between 850,000 and 4,000,000 people, making it the single worst natural disaster in history. Two years later, another flood killed 20,000 more. And in 1938, the Huang He's levees were dynamited to slow the progress of the Japanese army. Between 1887 and 1943, drowning, flooding and disease triggered by the Yellow River's floods claimed an estimated 10 million lives.

No wonder the Yellow River is called China's Sorrow.



A map showing how the Huang He has shifted its channels many times over the last 2600 years

The Sanmexia Dam was one modern response to the Yellow River. It was built in the 1950s by the Soviets who, unfortunately, had no experience with the heavy volume of silting that afflicts the Hung He. As a result, the whole reservoir was silted up within a few years, forcing a massive reconstruction project that took until 1978 before any benefits were realized from the dam.



Tourists watch water flush out of the sluice of the Xiaolangdi Dam on the Yellow River in Central China's Henan Province.

Another natural force plaguing China through the ages has been earthquakes, the most recent being the disastrous Sichuan earthquake in 2008, which killed an estimated 69,000 people. Probably the most devastating, although not the strongest, earthquake in China's history was the Tangshan earthquake in 1976, which registered 8.0 on the Richter scale for two minutes, totally devastating an area of twenty square miles. The city Tangshan was built on a five-mile section of the fault line, the west side of which moved five feet north, literally tearing one hotel in half so that its inhabitants had to escape by jumping from one half of the building to the other in order to reach the stairway and escape. The earthquake killed an estimated 655,000 people and injured 780,000 more.

Rice



Rice is the most widely grown and consumed grain on the planet. (Corn is more widely grown, but used largely for other purposes besides direct human consumption. It has the highest calorie content compared to other grains grown in the Eastern hemisphere through most of history, which helps explain the dense populations found in East and South Asia. Research indicates that all strains of domestic rice come from one strain first domesticated in China between 8,200 and 13,500 years ago. From there it spread across East and South Asia and then to Western Asia, Africa, and Europe.

The traditional method for cultivating rice starts with flooding the fields either while or after planting the young seedlings. Although this involves a good deal of planning and labor at the front end of the process, it drowns less robust weeds and pest plants and deters vermin. Flooding is not necessary to cultivate rice, but it avoids a lot of labor in the form of weeding and irrigation later in the process.

Despite that, rice farming is a very labor intensive activity, since the rice seedlings are first planted, and then some 25 days later the rice shoots are transplanted in neat rows in the rice paddy. This, in turn, requires preparing the fields twice, once for the initial planting and again for transplanting.



Women transplanting the rice shoot

Chinese Dragons and other early legends



The Chinese Creation Myth relates that the first man, Pan Ku, emerged from an egg. Each day he grew ten feet taller, the sky ten feet higher, and the earth ten feet thicker. When he died at the age of 18,000 years, his head split into the sun and moon; his body and limbs became the five famous mountains of China; his blood (or tears in another version) filled the rivers and seas; his hair became the forests and meadows; his sweat became the rain, his breath the wind and his voice thunder. Fleas became our ancestors and the two parts of the egg became yin and yang.

Chinese dragons. The first dragon appeared to the mythical emperor Fu-Xi, and filled the hole in the sky made by the monster Kung. Its waking, sleeping and breathing determined day and night, the seasons and weather.

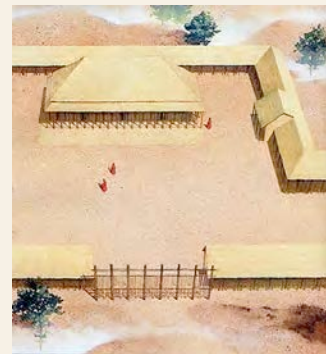
The Chinese dragon consists of a camel's head, a demon's eyes, a cow's ears, a stag's horns, a snake's neck, a clam's belly, a tiger's paws, an eagle's claws, and 117 scales of a carp to cover its body. It is commonly portrayed playing with a flaming pearl, which is believed to be the source of its power.

Unlike the West, where dragons have been seen as evil, the Chinese have seen dragons as benevolent spirits and divine bringers of rain and good weather as long as we behave. The common belief has been that the worst floods have been caused when a mortal has upset a dragon. As bringers of the seasons, dragons rise to the skies in the spring and plunge into the waters in autumn.

Most Chinese dragons have four claws, but the Imperial dragon, representing the emperor has five. Anyone other than the emperor using the 5-claw motif was put to death. Some Chinese emperors even claimed descent from the dragon.

Chinese Pharmacy, according to legend, stems from Shen Nung (about 2000 B.C.), an emperor who sought out and investigated the medicinal value of several hundred herbs. He reputedly tested many of them on himself, and wrote the first Pen T-Sao, or native herbal, recording 365 drugs. Still worshiped by native Chinese drug guilds as their patron god, Shen Nung conceivably examined many herbs, barks, and roots brought in from the fields, swamps, and woods that are still recognized in Chinese pharmacy today. Medicinal plants include podophyllum, rhubarb, ginseng, stramonium, cinnamon bark, and ma huang, or Ephedra.

The Xia Dynasty, according to some accounts, was actually China's first dynasty, predating the Shang. However, by 2000 B.C.E. archaeological evidence shows that many aspects of Chinese culture were in place, including the solidarity of family, ancestor worship, the calendar, and the classic Chinese house design with a peaked roof supported by pillars, with the walls giving no support.



Artist's concept of the Xia dynasty's palace and courtyard at Erlitou (c.2000 B.C.E.).

Fu Xi was the first of three noble emperors, supposedly ruling for 116 years from 2952-2836 B.C.E. According to legend, he taught many arts, such as music, the use of fishing nets, the breeding of silk worms, and the taming of wild animals. Fu Xi is said to have invented the 100 Chinese family names and decreed that

marriages may only take place between persons bearing different family names.

Fu Xi's most original invention is the development of BaGua, the eight trigrams (below) that order the world according to eight principles: Sky, Earth, Thunder, Mountain, Water, Fire, Marsh and Wind. These trigrams are an abstract vision of the world and its changes and are used as a template for Feng Shui, which literally means "wind" (Feng) and "water" (Shui).



Also referred to as "Geo-mancy" or "Earth Wisdom, it is an ancient method of constructing and optimizing residences to bring about happiness, abundance and harmony. It includes architecture, urban planning, interior design, garden design, and placement of objects in our environment. It also involves the layout, framework, materials and colors of building structures.

Bronze Age China: the Shang Dynasty



A Shang era bronze wine vessel

Shang era bronze. Bronze artifacts from the Shang era are some of the finest examples of metalworking found in any Bronze Age culture. Among these were bronze arms and armor, which, along with the horse drawn chariot, gave Shang armies an edge over their enemies and allowed the expansion of Chinese civilization. During this period, bronze objects became symbols of status and power. At first the owners

just engraved their own names on them, but over time the inscriptions became more elaborate with detailed statements and even the texts of treaties.



Shang era shells and bronze implements used as an early form of money to make trading easier and more efficient.

The horse and chariot. As with other Bronze Age armies, the Elite troops of Shang armies were horse and chariot units. Shang chariots held three men and were typically drawn by two horses. Unlike other cultures' chariots, which typically had six spokes, the wheels on Chinese chariots had up to 18 spokes.

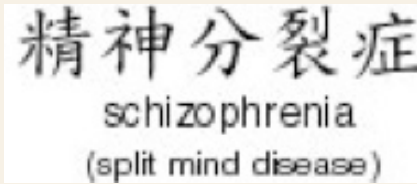


War elephants were used in early Chinese armies, although not trained ones. Instead, they would be panicked with torches and driven toward the enemy ranks in the hope of disrupting their ranks and trampling a bunch of them to death.

Human sacrifice, usually of prisoners, was practiced in Shang royal burials, one of the less pleasant aspects of the Shang Dynasty.

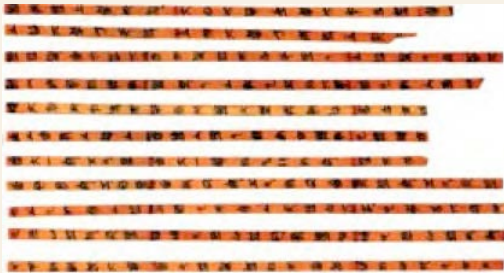


The Chinese Writing System



An example of how the Chinese have adapted their traditional script to words borrowed from other cultures

Early Chinese writing. The earliest examples of Chinese writing we have are oracle bone scripts (c.1600-1100 BCE) inscribed on turtle shells and ox bones, while another early Chinese script developed during the Shang era that was inscribed on bronze pots. Before the invention of paper, Chinese writing was typically done on bamboo strips such as this one from the 4th century BCE.



The number of written symbols has grown steadily throughout Chinese history from 3,300 during the Qin Dynasty (c.220 B.C.E.), to 9,353 by the end of the Han Dynasty (220 C.E.), and 22,561 during the Tang dynasty (618-906). By 1915, that number had jumped to 47,000, while one dictionary of the Chinese language compiled in 1971 listed 49,888 characters.

But this only tells half the story, because there is a long history of simplifying the Chinese script, both in complexity of the script and number of characters. Most people associate this simplification with the Communist regime, starting with efforts in 1956 to reduce the system to about 1700 simplified characters. This was later revised upward in 1964 to 2,238 characters and remains the official script used in mainland China.

However, efforts at simplification, as seen in non-official documents such as personal letters and diaries, date in some cases back to the Tang Dynasty (618-906), and form the basis for the vast majority of the current simplified script. The Communist regime in China does deserve credit for spreading the simplified system through public education in its efforts to raise literacy rates in China. Globalization and the internet have only accelerated this process in recent years as China's need to communicate and interact with the outside world has mushroomed. Cultural purists and political opponents outside of the mainland (e.g., Taiwan) have resisted adopting this system. Shop signs and advertisements in China also often use the more complex traditional script for aesthetic reasons.



Despite the different dialects of Chinese spoken across China, everyone can still read the same script and communicate with one another by writing.

Confucius



A portrait of Confucius from the early 8th century, some 1300 years after he lived. No known contemporary portraits of him exist.

Kung Fu-tzu (known to the West as Confucius) was born in 551 B.C.E. He started his career as a government official, but later became a traveling teacher who attracted many students. He saw the key to China's stability in a strict observance of rituals and traditions. Among these rituals was ancestor worship, which had been an integral part of Chinese religion for centuries. However, Confucianism was not a religion, but rather a systematic philosophy for maintaining peace and harmony in this world. Confucius himself said that he knew too little about this world to even begin worrying about the next. That would have to take care of itself in due time.

Central to Confucius' philosophy was a strict hierarchy of relationships, the five most important being those between ruler and ruled, father and son, husband and wife, older and younger brother, and friend and friend, the last being the only one between equals. As long as the proper conduct and respect took place in these relationships, overall harmony would prevail. As Confucius saw it, a harmonious society rested firmly on a harmonious family structure.

Confucius also advocated a civil service that got its positions through merit (in particular education and knowledge of the classics) rather than through birth or personal connections.

Although not too popular in his own day, Confucius' ideas later had a profound impact on Chinese government and society that carry on to the present day.

Although generally associated with a stiff and formal way of running society, Confucius also extolled the value of music and dance, since they brought people together harmoniously.

The wisdom of Confucius. As with many great philosophers, Confucius was not greatly appreciated in his own day. As one contemporary described him: *“Wagging his lips & clacking his tongue, he presumes to be a source of right and wrong in order to delude the masters of Under Heaven.”*

The heart of the Confucian teaching was 'morality'. *Rin* was the key virtue, meaning the qualities of benevolence, humanity and love. It was the duty of governments, parents and teachers to cultivate *rin* in all its aspects. Other Confucian virtues were:

Li: rituals, ceremonies and how to behave. The best influences were ritual & music

Yi: duty or righteous behavior.

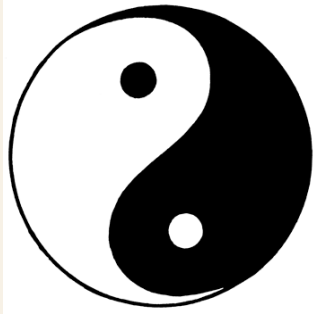
Chi: wisdom, derived from both history and experience.

Chung: Reciprocity. *“What you do not want done to yourself, do not do to others.”*

Confucian sayings:

- *“We know so little about how to live in this life that there is no point in worrying about what may happen to us after death. First let us learn to live in the right way with other men and then let whatever happens next take care of itself.”*
- *“With harmony at home there will be order in the nation. With order in the nation there will be peace in the world.”*
- *“A gentle man blames himself, while a common man blames others.”*
- *“Repay kindness with kindness, but repay evil with justice.”*
- *“A great person seeks to be slow of speech, but quick of correct action.”*
- *“The superior person thinks of virtue, the small person thinks of comfort.”*

Lao Tzu and Taoism



The Taoist Symbol for Yin/Yang

Lao-tze saw everything in nature and the universe as being balanced between two complementary forces: the active male *Yang* ("sunlit") and the passive female *Yin* ("shaded"). Rather than seeing one as superior to the other, Lao-tze saw a truly healthy and harmonious person or society as being perfectly balanced between the active Yang and passive Yin.

An example of this is the Chinese martial art, Tai Chi, which strives to use an opponent's own strength and force to knock him off balance. Taoism saw disease, floods, famines and wars as the result of an imbalance in nature, often caused by human actions. By the same token, any attempts to conform to strict government or personal codes of discipline were artificial and deformed human nature. Taoist ideas would strongly influence Chinese art, especially landscape painting, medicine with its idea of keeping a body in balance, and even Sun-tzu's *Art of War* that advocated dexterity and balance in conformity with nature rather than merely the use of brute force.

Wu wei is another concept central to Taoism. Translated as "do nothingness" or creative quietude, it combines supreme activity with supreme relaxation. The basic idea is that the conscious mind is not creative, being more obsessed with sorting and arranging things. True creativity comes when the forces of the subconscious or subliminal self are released. We have all experienced those moments of being "in the zone" where we seem to effortlessly perform, whether in sports, music, dancing, typing, or whatever. That is *wu wei*.

The Tao of water. Water especially epitomizes Tao with its effortless motion and its ability to support heavy weights and wear down rocks. Infinitely supple, it is infinitely strong. Another quality of water, especially still water, is its clarity. Just as water needs stillness to maintain its clarity, we need quiet away from the sensory world to attain clarity of mind and spirit.

Yin and yang animals. Taoists saw everything, including different animals, as being primarily, but not exclusively, yin or yang. For example, the partridge, which flies south toward the warm South wind is yang. Likewise, the horse is yang, because it rises front first, while the camel, which rises rear first, is yin.

Yin and yang time. From midnight to noon is Yang as the sun rises, and noon to midnight is Yin as it lowers. Similarly, summer and fall are yin, because the sun is declining, while winter is yang since it is rising.

Some of Lao-tze's sayings from *Tao Te Ching*:

- *"Those who know don't say. Those who say don't know."*
- *"The way to do is to be."*
- *"The ax falls first on the tallest tree."*
- *"The five colors blind. The five tones deafen. The five tastes cloy"*
- *"When goodness is lost, it is replaced by morality."*
- *"The usefulness of a pot comes from its emptiness."*
- *"The best people are like water, which benefits all things and does not compete with them. It stays in lowly places that others reject. This is why it is so similar to the Way."*
- *"When people see some things as beautiful, other things become ugly. When people see some things as good, other things become bad."*
- *"Try to change it and you will ruin it. Try to hold it and you will lose it."*

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54. THE QIN AND HAN DYNASTIES (256 B.C.E.-202 C.E.)

"You won the world from horseback, but can you rule it from horseback?"-- Minister to Liu Pang, founder of the Han dynasty

The Later Zhou (772-221 B.C.E.) The early period of the Zhou dynasty, known as "Spring and Autumn" (722-481 B.C.), saw relative stability and the growth of trade, towns, and a middle class of merchants and artisans. However, this prosperity contained the seeds of the Zhou's decline, since it gave local princes in the provinces the resources to do three things. First, they built canals which themselves had three effects. For one thing, they further increased trade, thus giving the princes more tolls and taxes. They also improved transportation of grain, allowing them to feed their cities, armies, and bureaucrats better. And finally, they led to the cultivation of new lands that the princes could claim for themselves. Together, these effects gave the princes more wealth and power that they could use to develop more canals and so on.

Secondly, princes and local nobles started appointing their own agents to collect taxes instead of doing it indirectly through local village leaders, as had been the custom. Finally, the princes started arming peasants and using them in their armies alongside the traditional feudal levies supplied by their vassals. This especially reduced the distinction between the Zhou emperors and their princely subjects in the provinces.

Together, these developments gave the princes more control over their own local nobles and establish more tightly centralized states. This in turn led to increased warfare between the princes who now had much greater resources for waging war than before. With larger armies using peasant levies as well as noble warriors, the intensity of fighting increased and the old courtesies of warfare and diplomacy that had governed relations between princes and nobles disappeared. The resulting chaos, known as the age of "Warring States" (481-221 B.C.E.), generated a good deal of intellectual ferment that provided the background for such philosophers as Confucius concerned about the decay of values.

Qin Dynasty (256-202 B.C.E.) By the third century B.C.E., seven major warlord states had emerged. Among these was the Qin Dynasty in the north, which built up a powerful state through sweeping internal reforms and the creation of a powerful army using horse archers modeled after those used by their nomadic enemies. By 221 B.C.E., the Qin ruler, Shih Huang Ti, had replaced the last Zhou emperor, and ruled all of China. In fact, his title, Shih Huang Ti, meant *first universal emperor*, while his dynasty's name (also spelled Ch'in) came to represent all of the people of the Middle Kingdom which we today still call China.

Shih Huang Ti was a harsh, but efficient ruler who brought China under a single autocratic rule. He lowered taxes and restored canals and irrigation systems. He also redistributed land to the peasants in an attempt to break up the nobles' power. Along these lines he broke up China's old provinces and loyalties and created new ones ruled by non-hereditary governors who could not build their power up in one place over several generations. Shih Huang Ti also created a unified law code, tax system, coinage, and system of weights and measures so that government and commerce could proceed smoothly.

The Qin emperor had numerous building programs, among which were roads and canals to promote trade as well as the swift movement of armies, a huge capital at Hsien Yang where all the most powerful families of the realm were required to move, and a fabulous tomb guarded by 6000 larger than life terra-cotta soldiers in full battle order armed with bronze weapons, chariots, and terra-cotta horses.

However, the most famous and far-reaching of Shih Huang Ti's building projects was the Great Wall built to contain the nomadic horsemen from the north. In fact, previous generations of warlords had built several local walls to protect their realms from the nomads and each other. Shih Huang Ti, in a mere seven years, connected them into one continuous defensive system 25 feet high, 15 feet thick, and stretching some 1850 miles through mountains and deserts. The cost in human lives was staggering, as thousands died from exposure to the

elements, hunger, and exhaustion, causing Chinese peasants to call the Great Wall "China's longest cemetery."

Manning the entire wall was beyond the means of even the Chinese. However, it was built more against the nomads' horses than the nomads themselves. As long as the wall was kept in repair and the intermittent forts and towers were manned, the nomads would be held at bay by two factors. First, they lacked siege engines for attacking manned forts. Second, they would not scale the unmanned sections, since that would involve leaving their horses behind. Only when the wall was in disrepair and unmanned during times of weak government and turmoil, could the nomads break (or bribe their way) into China. Otherwise the Great Wall served its purpose as succeeding Chinese dynasties would repair, modify, and expand it as the real and symbolic boundary between civilization and the nomads.

Shih Huang Ti's reforms may have unified China into one empire and people, but of the heavy burden in taxes and labor needed to support his building projects made him very unpopular. Another source of resentment was the emperor's refusal to tolerate any dissenting ideas, especially those of the Confucianists who preferred the traditional feudal structure of government to his more impersonal bureaucracy. Therefore, he ordered the burning of all works of philosophy that in any way contradicted his policies. He even had some 460 dissenting scholars executed, supposedly by burying them alive. Although some scholars tried to entrust these works to memory so they could be written down later, there were certainly mistakes in the recopying, and there is no telling how much was lost. This purge also deprived the emperor of good advisors and poisoned the atmosphere at court, making it difficult to create sound policies. Therefore, his death in 210 B.C.E. triggered a number of revolts and civil wars that led to the rapid fall of the Qin Dynasty and the rise of the Han Dynasty.

The Han Dynasty (202 B.C.E.-220 C.E.). Liu Pang, the founder of the Han Dynasty, found China worn out by civil strife and heavy taxes and also facing threats from the northern nomads. Liu Pang

(also known as Kao Tsu) and his successors tackled each of these problems and laid the foundations for one of China's true golden ages. Although the Han reversed the more repressive aspects of the Qin dynasty, they also built upon many of their other policies. In that sense, the Qin and Han dynasties should be viewed together as forming the basis of Chinese imperial power and cultural influence in East Asia.

For one thing, the Han rulers reduced Shih Huang Ti's more excessive demands by eliminating forced labor, lowering taxes, and restoring the Classics, although the accuracy of that restoration is still in dispute. However, they did uphold the Qin Dynasty's more enlightened reforms, especially redistribution of land to the peasants, making them much more popular than the Qin and the foundations for one of the high points in Chinese history and civilization.

In government, the Han ended the Qin policy of using non-hereditary governors and reverted to the older practice of using royal family members instead. However, they continued and expanded the Qin use of professional bureaucrats to run the day-to-day machinery of government. This was the result of growing influence of Confucianism at court, since the Han dynasty saw its emphasis on ritual and tradition as a valuable justification and support for their rule. Therefore, it instituted the civil service exams that determined applicants' potential as bureaucrats by testing their knowledge of Confucian teachings, now the official state philosophy. Although modern civil service exams test supposedly more practical skills, such as math and reading, to choose bureaucrats, the idea of hiring government officials on the basis of ability rather than birth or personal connections traces its roots back to the Chinese civil service exams of the Han dynasty. Despite China's varying fortunes, the Chinese civil service was generally the best in the world until the 1800's.

The backbone of the Chinese bureaucracy was a class of scholars known as the civil gentry who would run Chinese government and administration until the early 1900's. Since gaining admission into this class depended on knowledge of Confucianism rather than birth or connections, many middle class

families advanced their sons' fortunes in society by investing heavily in their education. Even after the demise of the civil service exam system, this emphasis on education has remained a powerful factor in East Asian societies, helping to account for their high literacy rates and rapid economic development in recent history.

Finally, there was the ever-present threat of the northern nomads. The Han emperors, here also continuing the work started by the Qin, maintained and expanded the Great Wall and a huge army to bring the nomads under control. Although Han armies met frequent defeats, their persistence did establish a semi-civilized buffer zone in the north.

However, especially in times of turmoil, semi-civilized nomads would often prove to be even more dangerous to China, since they combined both their own restless nomadic energies with knowledge of Chinese civilization in order to organize powerful states that could conquer China. But, as always, such invaders would eventually be absorbed by Chinese civilization. As the historian, Fernand Braudel put it, China let in such invaders and then shut the door behind them.

For nearly four centuries, Han reforms and rule provided a strong empire which expanded its political and cultural influence southward into the rice growing regions of Southeast Asia, northward into the nomadic regions, and northeastward into Korea and Manchuria. Internally, the Han provided a period of peace and prosperity that largely resembled the Roman Empire then flourishing at the opposite end of Eurasia. Science and technology flourished, making China the leading culture in those fields for centuries. The invention of paper (made from rags), the sundial, water clocks, and surgery using acupuncture were some of the main accomplishments of this period. New forms of literature, especially, history, poetry, and diaries, were developed.

Buddhism started gaining influence in China at this time despite initial resistance from the Confucianists and government. However it gained popularity and became the final part of the Three Doctrines of Confucianism, Taoism, and Buddhism. Whereas the three religions of Judaism,

Christianity, and Islam would compete, sometimes violently, for adherents, the Chinese were able to incorporate all of the Three Doctrines into their culture since they fulfilled various needs, Confucianism being a very practical and structured way to run one's daily life and career, Taoism being a more natural way to enjoy life outside of work, and Buddhism being a preparation for what lies beyond this life. As many Chinese saw it, one is Confucianist during the day at work, Taoist in the evening when relaxing, and Buddhist at night when going to bed.

Trade also prospered as never before, both within China and with other cultures. The most renowned example of this foreign trade was the fabled Silk Road that carried silk, furs, cinnamon, iron, and rhubarb westward across Central Asia through any number of middlemen and eventually to Rome. Silk was a luxury in Rome that was literally worth its weight in gold. In order to stretch it out, the Romans wove silk into a very loose gauze-like fabric that the Chinese would hardly have recognized. Interestingly enough, the Romans and Chinese did not meet face to face until 166 C.E. when a Roman envoy finally made it to China. Unfortunately, both civilizations were on the verge of their respective declines, and contact was lost soon afterwards.

As powerful and prosperous as Han China was, it had an inherent weakness, namely that it was based on a huge army and bureaucracy that put a tremendous strain on the economy. This had two main results. First of all, the peasants, who bore the brunt of the taxes, increasingly lost their lands to nobles whose power grew in opposition to the central government. This caused revolts both by oppressed peasants and power hungry nobles. Secondly, as the economy faltered under the strain of heavy taxes, nomadic raids stepped up, which hurt the economy even more, triggering more raids, and so on. Together, these raids and revolts weakened the Han Dynasty, forcing it to increase the army and taxes, and so on. Finally, in 220 C.E., the Han Dynasty fell, ushering in another period of turmoil.

The Great Wall



The Great Wall we see today that snakes its way over the mountains of China was a later creation of the Ming Dynasty (1368-1644). Shih Huang Ti's idea was much more modest and feasible: build his own sections of wall to connect with natural barriers, (e.g., mountains) and walls previously built by independent princes. Supposedly, his original intention was to completely encircle China's land frontiers with a horseshoe shaped wall, but that proved too ambitious even for him.

The bulk of the Great Wall consisted of packed earth, which was contained by two facing walls of stone and brick, at least in the east where stone was available. According to legend, some bricks were hauled by the tails of mountain goats.

Various sources claim up to 1,000,000 workers were conscripted from all over the empire to labor on the wall in the broiling summer heat and winter cold, and that 400,000 of them died in the process, earning the Wall the title of China's "Longest Cemetery". According to one story, there was a prophecy that Shih Huang Ti must bury "10,000 men" under the wall. By chance, he found a man whose name meant "Ten Thousand Men", which turned out to be good news for 9,999 other men.



The Han Dynasty (202 BCE-220 CE) continued the policy of relying on a Great Wall, expanding it westward to protect the vital Silk Road. The Han also colonized the areas of new wall construction with thousands of settlers to add further to its defenses. In the western regions of China where good building stone wasn't available, the Chinese had to rely on packing earth mixed with sticks and branches to provide binding. The signal towers and the outer facing of the wall were covered with a clay plaster that turned bright yellow when dry.

With the fall of the Han Dynasty in the third century C.E. and the ensuing anarchy, the Great Wall was abandoned. Even the Tang Dynasty (618-906), which expanded China's western border to its greatest extent, relied on a strong military and astute diplomacy instead of rebuilding the Wall.

The fall of the Tang Dynasty led to another period of fragmentation between the Khitan (and later Jurchen) kingdom in the North, the native Chinese dynasty of the Sung in the South, and the nomadic Tanguts to the West. The Jurchens did try to restore the Great Wall against the Mongol threat further north, but were only partially successful. Thus the Mongols found their way around the Jurchen defenses, conquering them by 1234, and completing the conquest of Sung China in 1279.

Naturally, the nomadic Mongols had no use for a great wall, so the Yuan Dynasty they founded (1279-1368) ignored it. Thus Marco Polo's account of China at this time makes no mention the Wall. However, the Wall wouldn't have helped the Mongols anyway, since they fell to a native Chinese revolt that gave rise to the Ming Dynasty (1368-1644). After some initial success against the Mongols, the Ming suffered a decisive defeat at Karakorum and gave serious thought to how they could prevent the return of the Mongols. The result was the Great Wall as we think of it today.

The Great Wall of the Ming Dynasty extended for 1850 miles as the crow flies. However, with all its bends, curves, and various spurs, it totaled

3930 miles in length. It had some 25,000 towers, most of which were 40 feet high and 25 feet wide at the base and 15 feet wide at the top. Ideally, they were situated two bowshots apart from each other so they could provide covering fire for the entire span of wall between them. In addition, there were some 15,000 watch towers stocked with four months' provisions and positioned ahead of the wall. They would give early warnings of any attacks with smoke signals made from burning wolf's dung to quickly alert the entire length of the wall.



Where the terrain gets especially steep, steps were inserted that got progressively narrower the steeper the going got. Elsewhere, the ramparts on top of the Wall were wide enough for five men to walk side by side.

The last dynasty, the Qing (1644-1911), came from Manchuria to the northeast, so its realm straddled the wall, making it largely meaningless again. However, it was during this time that growing contact with the West was taking place, and visiting Europeans were naturally struck by the impressive dimensions of the Wall. The Chinese played off this to promote the myth of the Great Wall being a monolithic creation that spanned all of Chinese history. Yes, walls had been a part of Chinese historical efforts to keep the nomads at bay, but the Great Wall as we know it was a much more recent creation.

Fun fact: Despite popular belief, the Great Wall *cannot* be seen from space.

Shih Huang Ti's Terracotta Army



Just a few of the 6,000 larger-than-life terracotta warriors along with horses and chariots that Shih Huang Ti had guarding his tomb

Among the most startling archaeological finds and evidence of Shih Huang Ti's megalomania is his tomb at Xian, which contains an army of over 6,000 larger-than-life terracotta warriors, including horse and chariot units, all there to protect the emperor in the next world. At two meters in height, these soldiers were considerably larger than life-size, making them even more imposing guardians for the emperor's grave. For further insurance against grave robbers, loaded crossbows connected to trip wires were set up. Through painstaking work, scientists have been able to re-create how the terra cotta warriors were painted, making them even more lifelike.



Besides showing us what Chinese soldiers looked back then, their arrangement in Shih Huang Ti's tomb tells us a lot about Chinese military organization back then. Kneeling and standing archers would rain arrows down on the enemy while saddled cavalry and chariots teamed with infantry attacked the enemy's weak points. Standing in reserve would be another force of chariots.

Other building projects that Shih Huang Ti initiated included roads and canals on an unprecedented scale, some roads reportedly 100 meters wide, with the central 10 meters reserved for the emperor's use. He also had a huge central capital at Hsien-yang, where all the most powerful families in his kingdom had to move. He ordered an exact copy of the palace of every prince he had defeated to be built and furnished with that state's dancing girls, musicians, cooks, etc. That way he just had to go outside the city to visit different parts of his realm. His tomb was at the foot of a mountain with a huge bronze relief map of China containing rivers and seas filled with quicksilver and the roof of the cave painted to resemble the night sky.

The Fall of Qin and the Rise of Han



A major defeat of the Qin army in 207 B.C.E during the turmoil following the death of Shih Huang Ti that led to the collapse of the Qin Dynasty.

Shih Huang Ti's Megalomania extended to his personal safety. After three assassination attempts, he had a giant magnet installed at the palace gate with which he could detect any iron weapons being smuggled in.

Fall of the Qin Dynasty (210-202 B.C.E.). When Shih Huang Ti died in 210 B.C.E., they covered up his death by packing his body with dead fish to mask the smell of his decaying body. Unfortunately, that didn't help his successor whose minister assassinated him, set up a new emperor, and was in turn killed by him. However, by then, everything was coming unraveled with revolts and civil wars all over.

One of the rebels was Hsiang Yu, a giant of a man who wore the head of his suicidal wife from his belt. He succeeded in seizing and sacking the capital and burning the last copies of the classics that Shih Huang Ti had stored in his library, an act that some called the true "burning of the classics." He also sacked Shih Huang Ti's mountain tomb, which made him unpopular, leading to four years of civil war finally won by a minor postal official of peasant stock named Kao-Tsu, but mainly remembered to history as Liu Pang.

Sage advice. Having won the throne after a bloody civil war, the humble and poorly educated Liu Pang would sit on the floor and let his followers tear up the palace until one day he was confronted by a sage with the question: "You won the world from horseback, but can you rule it from horseback?" Liu Pang got the point and established a good responsible government that set the stage for one of China's greatest eras.

Han China and the World



A map showing Han China at its height

Diplomacy with the "barbarians". It was often more cost effective to use diplomacy or buy off the nomads than to fight them. One practice that evolved to buy off the nomads while saving face was providing "gifts" in return for accepting "tributary status". Such "gifts" could be very expensive, such as in 25 B.C.E. when the Chinese gave out 20,000 rolls of silk and 20,000 pounds of lower grade silk floss in return for tributary status. At times, "accepting tributary status" could take up ten per cent of the state's revenues. Somehow, this evolved into the idea that any gift given to the Chinese emperor was tribute that recognized China's superiority, even if that was not the intention.

Another strategy that started under the Han Dynasty that must have been a bit cheaper was to marry off Chinese princesses to nomadic leaders. Hopefully, this would help soften their attitudes toward the Chinese and encourage them to adopt civilized ways. Apparently it had at least some effect, because some nomads started building their own walls against other nomadic tribes.

But progress was extremely limited in civilizing the nomads, whose ways seemed incomprehensible to the Chinese, as seen in this complaint:

“If only they had a fraction of our needs, they would become our tributaries. But we have sent them silk costumes; they have torn them to shreds hunting in thickets and then declared that silk was not as good as their sheepskins. We have sent them delicacies to eat; they have found them inferior to their milk and their koumiss [fermented mare’s milk].”

However, even successful campaigns against the nomads could be disastrously expensive in lives and money and prove more costly than diplomacy. Extending the Great Wall further west, maintaining a huge army, often with costly mercenaries, and in particular procuring enough horses for the army from the nomads also ran up the bill. Even after establishing its own horse farms, the Chinese were always desperate for more horses, as seen in Chang Ch’ien’s legendary embassy to the west in search of the Heavenly Horses, which reputedly could travel 300 miles per day. Unfortunately, Chang Ch’ien’s mission failed.



As it expanded westward into more open lands, the Han had to rely increasingly on cavalry to combat their nomadic neighbors.

Expansion to the South was largely the result of millions of peasants fleeing, floods, nomadic attacks and heavy taxes. It was especially difficult because of the dense jungles and tropical diseases. The Chinese, who saw the rice cultivators of the South as reptiles who slithered through the rain forests, used symbols for reptiles or apes to describe them.

However, as the Chinese were adapting to conditions in the South, the Chinese court sent bureaucrats and soldiers to rule and tax both them and the natives. It would take centuries for the Chinese to adapt to the climate and diseases of the South, but when they did, it would become the most populous and prosperous area of China, and the center of Chinese civilization would shift there accordingly.

Indo-China. The Chinese referred to the people of Indo-China further south as the Dog People (i.e., wild animals). According to legend, a king offered his daughter to anyone who brought him the head of a mighty enemy warrior. Surprisingly, a wonderful dog named Pan Hu, succeeded, and the king reluctantly gave up his daughter. The happy couple took up residence in a cave, where they had dozens (or litters) of sons and daughters who became the non-Chinese races of the South. In fact, Pan Hu continued to be revered by some tribes in Vietnam as their ancestor.

The Vietnamese were by nature a cooperative and peaceful people, but also fiercely warlike when faced with invaders such as the Chinese. There was the story of one woman leading a revolt who went into labor during battle, stopped to have the baby, strapped it to her back and went back to the fighting. Down through the centuries the Vietnamese have resisted Chinese expansion, a lesson the United States would have done well to learn before committing itself to an equally fruitless war there in the 1960s. In 1978, soon after their victory in that war, the Vietnamese were again trading shots with the Chinese to the North, using American artillery they had capture several years before.

First contact between Rome and China was not easy, thanks especially to Rome's eastern neighbors, the Parthians, who wanted to continue to profit from their middleman role in the silk trade and thus had a vested interest in preventing the two cultures from meeting. It was only when the Chinese general, Pan Chao, pushed China's borders to the eastern shore of the Caspian and heard of a powerful kingdom (i.e., Rome) to the west that he sent an envoy to make contact. However, the Parthians diverted the envoy from the overland route, saying it would take two years of sailing against bad winds to reach the Romans. So he turned back. Finally, a Roman envoy made it to China to establish direct contact between the two civilizations in 166 C.E., just as the two empires were about to go into decline.



Silkworm cocoons wrapped in silk threads which women unravelled and wove into silk.

The cocoons are heated to kill the pupa inside before it can break through and ruin the silk, then soaked in hot water to loosen the fibers. The silk thread is unraveled, washed with oil or soap, dried, and then twisted, the type of twisting determining the texture of the silk, such as twisting two or more threads together. After that, the end of the silk fiber is threaded through a porcelain eyelet and wound on a wheel.

In order to produce one silk saree, 50,000 silk worms are killed.



Various routes of the Silk Road

The Silk Road was not one particular road, but an ever-shifting route westward across the centuries through whatever nomadic tribes that could be controlled or trusted to maintain safe trade with the West. At times it was relatively safe, such as under the Mongols who kept it so stable that even the Black Death was able to travel along it. At other times it was notoriously dangerous and virtually dysfunctional as a trade route.

As the name implies, the main product that traveled along it during the Han era was silk, which the Romans paid dearly for thanks to the mark-up on the price levied by every middleman between Rome and China. The Romans were so removed from China that they thought silk was

Silk and the Silk Road



Silk worms feeding on mulberry leaves

In the ancient world, silk was one of the most valued trade items in the West, the Romans paying up to its weight in gold. Silk comes from the cocoons of silkworms feeding on mulberry leaves. One silkworm can produce 1000-2000 feet of silk thread. Only the healthiest moths were chosen for breeding, being meticulously tested for infection. Normally, they only breed once a year in the spring, when mulberry trees leaf, but artificial intervention has increased this to three times a year. Women chop up mulberry leaves and feed them to the larvae, which voraciously consume them every few hours for a period of 20 to 35 days, when they are ready to spin their cocoons.

matter combed from trees or animals. They did know it came from some mysterious land to the East they called *Seres*, from the word for silk.

Silkworms and the secret of silk manufacture supposedly reached the West when some monks stuffed a bunch of silkworms and mulberry leaves into the hollow of their bamboo canes and traveled all the way back to Constantinople where they presented their prize to the emperor Justinian. The Byzantines established their own silk industry as a state monopoly, but over silkworms and the secret of how to use them got and spread to Byzantium's neighbors. In later centuries, other highly prized products, such as Chinese porcelain, would dominate its trade, but it would still be known as the Silk Road.

Technical Innovation during the Han Era



Model of a Chinese seismometer from the Han Dynasty period

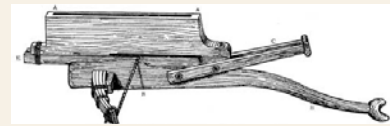
Although technological innovation over the last 300 years has generally been associated with the West, China has actually led the way in that field through most of history. Such things as paper, gunpowder, and clocks that the West has made its own had their origins in China. The period of the Han Dynasty was a period that especially saw technological innovation flourish.

Chinese inventors came up with calipers for making precise measurements, scissors, the crank handle for turning fans to separate wheat from the chaff, and waterwheels for turning gears to operate trip hammers, polish metal, or operate chain pumps for lifting water into raised irrigation ditches. They also developed an odometer that would sound a drum or gong at regular linear intervals.

In navigation, the Chinese were the first to use a stern rudder (mounted behind the ship) instead of a side-mounted steering oar. Since a stern rudder is much less prone than a steering oar to come out of the water in rough seas, this freed Chinese sailors to venture farther into open waters.

In math, the Chinese came up with mathematical proofs for the Pythagorean theorem, a more precise calculation of pi, and negative numbers, something not accepted in the West until the 1500s. In astronomy they calculated the length of a year to a more accurate $365\frac{385}{1539}$ days and the lunar month to $29\frac{43}{81}$ days.

One of the more amazing inventions was a seismometer, invented in 132 C.E. by the court astronomer, Zhang Heng (78-139 C.E.). It could detect the direction of an earthquake hundreds of kilometers away through the use of a highly sensitive inverted pendulum. When disturbed by ground tremors, it would trigger a set of gears that dropped a metal ball from one of eight dragon mouths corresponding to the direction from which the tremor had originated.



Leading the field of military innovations was the repeating crossbow, a weapon with a magazine of 10 crossbow bolts loaded on top (below). After firing one bolt, the user just had to push a lever forward to catch the string and release the next bolt into place, pull the lever back, and he was ready to fire. It could fire four bolts per minute, four times its hand-loaded counterpart. Its main drawback was a limited range of about 60 meters and poor penetrating power. Reportedly, the Chinese would compensate by dipping the tips of the bolts into poison. The repeating crossbow was also popular for defending households, since intruders would be close targets and probably not armored.

55. THE PARALLEL IMPACTS OF DISEASE ON CHINA AND ROME

"In the area south of the Yangtze, the land is low and the climate humid; adult males die young"
-- Ssu-ma Ch'ien, father of Ch. historiography (145-87 B.C.):

By 500 B.C.E., the earliest civilizations on the Middle East had expanded their empires to the limits of the Middle East and a fairly stable balance had been achieved where they had at least partially adapted to the parasitic and infectious diseases of the region and evolved into "childhood diseases" where concentrations of populations allowed them to survive as a chronic, but usually not fatal, nuisance.

However, the newer areas of Eurasia where civilization spread, the Yellow River in China and the Mediterranean in the West, were relatively free of infectious diseases. This was largely because wheat, and barley, the main crops grown there, were native to the regions, thus causing relatively little biological disruption. This contrasted with areas that practiced irrigation for non-native crops, which exposed people to water borne parasitic diseases. Although there was irrigation in the Yellow River area of China, its cooler and drier climate led to considerably fewer problems with parasitic diseases than the earliest hydraulic civilizations encountered. However, when the Chinese spread southward into the Yangtze River region with its hotter and more humid climate, they encountered water and insect borne diseases to which it took centuries for them to adapt.

In the second century C.E., as Rome and China established trade links across Eurasia, they also encountered the older infectious diseases of the older civilizations in between. As a result, these diseases spread to the eastern and western fringes of Eurasia with very similar results.

In the East, small pox and measles, diseases never previously encountered there, hit China in 161, 310, and 322. Such unprecedented disasters led people to question traditional Chinese beliefs and opened the way for the rise of Buddhism. The severe population loss these outbreaks caused also

contributed to the fall of the Han Dynasty and several centuries of turmoil, until the revival under the Sui and T'ang Dynasties. However, in the 600s, the eruption of a new disease, arising from India or Africa, bubonic plague, caused another huge loss of life and probably contributed to the decline and fall of the T'ang Dynasty by 906. After 900, the Chinese had adapted somewhat to this scourge, and China saw its population and towns expand rapidly under the Sung Dynasty.

In the West, the Roman Empire also suffered the initial onset of smallpox and measles in 165 and 251, helping lead to a period of anarchy in the third century and the eventual fall of the Empire by 500. And, like in China, people questioned the old pagan religions, leading the growing popularity and eventual triumph of Christianity. Then, as population and prosperity were recovering, especially in the Eastern Mediterranean, bubonic plague hit in the 500s, allowing the sudden rise of the Arab Muslims in the 600s. By 900, the plague had also subsided in the Mediterranean and Western Europe, allowing the revival of towns and trade.

Unfortunately, these newly revived cities with their concentrations of populations were especially vulnerable to onset of a new strain of the plague in the 1300s, triggering possibly the greatest demographic disaster in history.

Parallels Between Buddhism in China and Christianity in the West



Mt. Wutai, in northeastern Shanxi Province is sacred to Manjusri, the bodhisattva of wisdom. It has 53 Buddhist monasteries and was named a UNESCO World Heritage site in 2009.

Among the more profound parallels between Rome and China was the rising popularity of salvation religions in each empire: Christianity in Rome and Buddhism in China. Looking at them more deeply, the similarities are even more striking.

- Both grew in popularity as their respective empires went through periods of political turmoil and epidemic, causing people to look for more long-lasting spiritual comfort.
- Both gained most of their popularity outside of their original homelands.
- While Buddhism didn't start out as a salvation cult, variations developed, such as the Amida (Pure land) sect which did worship Buddha and believed in a heaven and purgatory.
- Both suffered periods of state persecution, before becoming virtual state religions, although Buddhism's influence wasn't as predominant as Christianity's. In China, there was a more potent adversary in the form of Confucianism, which at various times held sway at court. Among other things, Confucianists objected to the Buddhists' refusal to pay taxes or homage to the emperor and their practices of shaving their heads and cremating the dead, since this deprived one's ancestors of offerings from their descendants. Buddhists replied that praying for the souls of those in purgatory was the utmost act of piety towards one's ancestors.
- Both developed influential monastic movements that served as vehicles for spreading their faith.
- Both had cults of saints or bodhisattvas who served as intermediaries between heaven and the common people.
- Both promoted pilgrimages to holy sites important in the lives of their deities and saints/bodhisattvas. In China, the most famous of these sites was Mt. Wutai, supposedly the abode of the bodhisattva, Manjusri.
- Both even developed the veneration of relics, which, according to legend, transported magically from India to suddenly

appear in a Chinese monastery or in the palm of a Chinese monk's hand. For example, at the Famen Monastery in present-day Shaanxi province, worshippers of a finger-bone relic would burn or sever parts of their bodies as part of their ritual.

- Both were popular with women and promoted a bit more status and freedom. Originally, bodhisattvas were gender-neutral, but some, including the most popular local goddess, Guanyin, attained fully feminine form. Compare this to the rising popularity of female Also, as in Europe, a convent was the one place a woman could escape male authority.



Portrait of Guanyin holding a child, much like paintings of the Virgin Mary and child in Western Christianity. Like the Virgin Mary, Guanyin was associated with mercy and compassion.

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THE FLOWERING OF CHINESE CIVILIZATION: THE SUI AND T'ANG DYNASTIES (220-907)

The Six Dynasties Period (220-581 C.E.). The fall of the Han Dynasty brought in a period of political anarchy known as the Six Dynasties Period. During this time, China was divided into three main kingdoms: Wei in the north where wheat and millet were grown and nomadic pressure was most intense, Shu Han in the west, and Wu in the rice growing regions of the south-east where many Chinese fled to escape the chaos in the north. The kingdom of Wei, which was situated between other nomads in the north and the Chinese in the south, was the first kingdom to successfully combine nomadic culture and Chinese influence. As a result, it was more organized than its nomadic neighbors while still keeping its nomadic energy, making it able to protect Chinese civilization in the south from the wilder nomads in the north. In addition, there were several technological innovations to compensate for labor shortages at this time: the wheel barrow, watermill, and a primitive seed-sower, all of which allowed Chinese culture to prosper more than the Germanic heirs of Rome were able to at this time in Western Europe.

The Sui Dynasty (581-618). After several centuries of various dynasties competing for power, the Sui Dynasty reunited China. Much as the Qin Dynasty had laid the foundations for the Han Dynasty's greatness, the Sui Dynasty, despite the shortness of its reign, laid the foundations for the T'ang Dynasty's accomplishments through several endeavors. The Sui restored the Great Wall and mounted a number of huge expeditions against the northern nomads. They helped restore foreign trade, especially along the Silk Road. Likewise, they restored internal trade by connecting China's main rivers, which all run from west to east, with a north-south channel known as the Grand Canal. As a result, trade and travel between North and South China became much easier. Unfortunately, much as with the Qin Dynasty, these military expeditions and building projects involved a tremendous cost in lives and money. This triggered widespread revolts and the overthrow of the Sui Dynasty by a new dynasty, the T'ang, which would take Chinese civilization and imperial power to new heights.

The T'ang Dynasty (618-906). The T'ang were a military family from the wild northwest frontier and were especially skilled in the use of cavalry. The T'ang, themselves devoted horsemen, bred thousands of horses for their cavalry and imported polo from Persia, which even ladies from court played. Using their cavalry along with large numbers of allied nomadic cavalry and peasant infantry, the T'ang could deal with the Northern nomads and expand Chinese rule in several directions. After stubborn resistance, they conquered Korea in 668 and saw Chinese culture take deeper root in Japan. The T'ang also conquered North Vietnam, then known as Annam (modern Annam), meaning "pacify the South". They drove westward against Turkish tribes in Central Asia, established their power and influence in Tibet, Afghanistan, and India. In 661, Chinese forces even briefly restored the last Sassanid Persian ruler, Peroz, against the rising tide of Arab Muslim conquest. When the Persian king was finally overthrown for good, he found refuge in the Chinese court. Later, the Arabs would defeat a Chinese army at the Talas River in 751 and bring T'ang expansion to a halt.

The unprecedented foreign influences that empire brought into T'ang China were welcomed with a new open-mindedness. Foreign fashions, music, cuisine, art, and religious influences from Central Asia, India, and Persia found favor at the court in China's capital, Ch'ang-an. Islam, Judaism, and Zoroastrianism all found their way to China, while Nestorian Christians, who were branded heretics and exiled by Rome in the fifth century, gained converts across Central Asia and were granted toleration in China as well. Later on, religious persecution (841-45) would eliminate Christianity, although the other religions would survive. Buddhism especially became absorbed into the fabric of Chinese religions, assuming a place alongside Taoism and Confucianism as one of the Three Doctrines which complemented one another rather than acting as competition against each other, as happened between Judaism, Christianity and Islam further west.

Cultural influence worked both ways, however, as Chinese culture and technology spread to Korea,

Japan, and even the tribes in Central Asia. One example of this influence was the spread of rag paper, which was invented, in the early Christian era. Most likely it reached the Muslim world as a result of the Battle of the Talas River in 751, when the victorious Arabs captured Chinese technicians skilled in its manufacture. Eventually, it would spread to Western Europe where it would be combined with another Chinese invention, block printing to create the printing press, one of the most dynamic and important inventions in history. While it is a European invention, its roots lie deep within Chinese history.

Drawing upon these foreign influences and combining them with its own dynamic energy, Chinese culture prospered and flourished under the T'ang Dynasty in three areas: the economy, government, and culture. China's economy prospered largely through trade that thrived both within China and with the outside world. Foreign trade prospered, especially along the Silk Road that maintained commerce and contact with other cultures further west. Although trade certainly thrived, little is known about it, since so much was controlled as government monopolies (e.g., salt, wine, iron, and tea) or interpreted as "tribute" from foreign lands and reciprocal "gifts" going back out. China's internal prosperity was especially reflected in its cities, which were the largest and most populous in the world. Foremost among these cities was the capital, Ch'ang-an with a population of some 2,000,000 people. It was laid out in a rectangular grid five miles wide by six miles long and facing the cardinal directions in accordance with the Chinese concept of the cosmic plan.

One of these monopolies had a profound influence on the history of finance. In the early 800's, merchants selling tea to the government received government notes worth the hard cash value of the tea. These exchange notes, known as "flying money," proved to be popular, since they eliminated the need for carrying heavy coins. The use of credit slips soon spread among Chinese merchants and moneychangers and eventually westward to the Arab world, where they were known as *sakk*, and eventually to Western Europe where the term *sakk* became check. Meanwhile, in 1024, the Chinese

government would expand the use of credit slips by issuing the first true paper currency in history.

Chinese agriculture also prospered under the T'ang Dynasty. For one thing, careful censuses and an equitable system of distributing land and the tax burden among the peasants strived to ensure their prosperity. Second, the system of canals connecting China's rivers meant that relief could be brought to famine stricken areas. Finally, agriculture saw particular progress in the South where new strains of rice and better farming techniques dramatically increased crop yields with resulting population growth. Eventually, under the next major dynasty, the Song, the balance of power and population would shift from the North, where Chinese civilization first evolved, to the South.

Power and prosperity also brought a flowering of the arts in China. Buddhism, coming from India, had an especially profound influence on Chinese sculpture. However, it was in poetry and painting that one could especially see the Chinese genius at work. Both poetry and painting showed a typically Taoist love of nature through their portrayals of flowers, mountains, rivers, and clouds, but rarely the sea, since the Chinese were traditionally a land loving people.

Another development was the further improvement of the civil service exam system and the emergence of the official gentry who had passed these exams as the main bureaucrats of China. This system had been used by the Han Dynasty, but only in conjunction with the older patronage system favoring nobles and political connections. Now the exam alone determined who attained bureaucratic positions in China. However, since education was expensive, only the rich could afford to train one son per family to take the exam. As a result, the officials became a virtually hereditary class. The training and exam stressed Confucianist classics more than mathematics and law, the purpose being to cultivate wisdom and morality in China's officials. In the centuries to come, China's stability and resilience would largely be based on these official gentry.

In 690, the official gentry's fortunes rose further when the only woman to rule China in her own

right, the empress Wu, seized power. Her fear of the T'ang military aristocracy in the Northwest probably spurred her to complete the transformation of the civil service in order to favor a completely civilian class of bureaucrats whose status was based on merit. However, their rise to power meant a corresponding decline of the military nobles, which eventually would weaken China's defenses and help lead to the decline of the T'ang Dynasty.

Fall of the T'ang Dynasty. Several factors led to the fall of the T'ang Dynasty, three of them related to the triumph of the official gentry and the civil service system. For one thing, the government granted the gentry estates, thus taking land from the peasants and increasing their tax burden. This, along with a series of famines partly caused by government corruption and neglect of flood control and irrigation systems, triggered peasant revolts. Secondly, the gentry's dominance of the government caused the emperors to ignore the army and start relying on nomadic mercenaries who were more expensive and much less reliable than native recruits. As a result, T'ang armies suffered a number of defeats, notably at the Talas River against the Arabs in 751, making Islam rather than Buddhism the dominant religion in Central Asia. The weakened army invited invasions from without and revolts from within. Finally, the rise of the official gentry unleashed a Confucianist reaction against foreign influences in China. From now on, China would be more inward looking, sometimes blocking out new ideas that could have been of great use.

Sui Yangdi and the Grand Canal



Emperor Sui Yangdi (604-617),

Sui Yangdi (604-617), son of the founder of the Sui Dynasty, Sui Yendi (581-604), was a tyrant much like Shih Huang Ti of the Qin Dynasty. And like him, he overextended himself with elaborate projects.

His biggest project, something of a counterpart to Shih Huang Ti's building of the Great Wall, was the Grand Canal. Building it was expensive and required 5.5 million workers and 50,000 overseers. Of those, 2 million were lost, most of them probably from desertion.

Also, like Shih Huang Ti's wall, the Grand Canal was largely a continuation of older projects, connecting and extending them to points further north and south. The oldest section, the Hong Gou ('Canal of the Flying Geese', or 'Far-Flung Canal'), probably dates to the sixth century B.C.E. The Han Gou ("Han-country Conduit") connected the Yangtze and Huai Rivers by 483 B.C.E., using intervening waterways and marshes for part of the route.

By the time of the Sui, much of the Hong Gou canal was silted up, thus blocking water traffic between North and South. When construction resumed, much of the old canal was by-passed to avoid further silting. Locks were built to regulate water levels between sections of the canal, while parallel to the Grand Canal there was also an imperial road with courier stations and a long line of trees planted for shade.

The primary purpose of the Grand Canal was to supply grain from the South to the army guarding the frontiers in the North. Previously, soldiers had to serve as part-time farmers to feed themselves. Now they could devote all their time to defending the borders. Besides trade and meeting military needs, the Grand Canal served to tie the northern and southern parts of China more closely together culturally.

Succeeding dynasties continued to maintain and expand the Canal, although the Song Dynasty did destroy part of it to stop the invading Jurchen from the North. The Canal still functions as a major artery of trade, although now it mainly

carries bulk goods like coal, diesel fuel, and construction materials.



The modern canal today, which follows much the same route as the original canal did under the Sui Dynasty

The grand opening of the canal was correspondingly extravagant, with a flotilla of dragon ships one hundred kilometers long taking Sui Yangdi to his capital in the South. Unfortunately his extravagance didn't stop there. In addition to forty palaces built as personal resting places along the Grand Canal, he also had an artificial lake with three islands and sixteen villas built for his favorite concubines. He supposedly stripped whole provinces of their birds to get feathers for his pillows and wives' gowns. When the leaves fell in autumn, he had silk leaves attached to the trees in the imperial gardens and silk lotuses floated in his lake so he could think it was still summer.

His lifestyle while on campaign in the North was also ridiculously expensive, supposedly having a baggage train "300 miles long" and a giant silk screen to surround his part of the camp painted with scenes to remind him of home.

Sui Yangdi's invasion of Korea was as disastrous as it was expensive, as he allowed himself to get bottled up by the opposing Turks. Luckily, he escaped when a small relief army led by the future Tang emperor, Tai Tsung, scared the Turks off with the beating of drums and wild waving of banners to give the impression of a much larger force.

Chang'an: Tang China's Premier City



A map of Chang'an with the palace complex at the north end and main gates facing South. Chinese maps considered south the primary cardinal direction since that was the source of the warm spring winds.

Chang'an ("Perpetual Peace"), had a long history of being China's capital. Under the Ming Dynasty, its name was changed to Xi'an ("Western Peace"), which is what is known by today. Under the Tang dynasty it was probably the largest city in history before the industrial revolution in the nineteenth century, having a population between two and three million people. It covered an area of thirty square miles and was surrounded by a thirty-mile circuit of walls that were 5.5 meters high. These were apparently not that effective in keeping out enemy forces, or even wild animals, since there are records of tigers (in 769 and 782), and a bear (in 830) scaling them. Being close to water, however, city walls also served as flood breaks.

China had two types of cities: government centers and trade and manufacturing centers. Chang'an, like Washington D.C., was an example of the former, with a large number of civil servants, even more underclass to serve their needs, and a large number of foreigners. One law under the Tang Dynasty outlawed Turkic Uighurs from dressing or acting like the Chinese or marrying Chinese women.

Such a huge city required a lot of planning. For one thing, based on the traditional pattern established long before by the Zhou Dynasty, it was laid out in a rectangular grid, although side streets and alleys tended to wind more randomly.

This would influence urban planning in other parts of Asia, notably Japan and Korea. The city was divided into 108 wards, which were the main focus of community pride and spirit. Each ward had a wall roughly three meters in height and a guarded gate.

There were six major roads meeting at right angles and dividing the city into nine districts. The narrowest of these was 25 meters wide, while the main road connecting the palace to the South gate was 150 meters wide. Each of these had three lanes, the outer two for regular traffic and the middle one for government business. Besides, minimizing traffic congestion, such wide avenues created effective fire breaks so that a fire in one district would not spread to another one. Making the city even more pleasant were rows of fruit trees planted along the main avenues.

The closing of the gates at end of each day was announced by 400 drum beats (for the palace) and 600 beats (for the city and wards). Opening the gates in the morning was signaled by 3000 beats. There were strict laws for traveling outside the city or wards past curfew.



The Giant Wild Goose Pagoda in Chang'an, built in 652 C.E.

Shopping. The city had two main marketplaces, one in the eastern part of the city and one in the west. Each of these covered over 466 acres and was divided by roads (each 100 paces wide) into nine sectors marked with signs saying what they specialized in. Commandants enforced standard weights and measures, the quality of goods, and stopped price fixing and monopolies. Weights were sent in every year to be tested and given an

official seal of approval. Prevailing prices were established every ten days. Market commandants were responsible for releasing government grain to keep prices low.

Markets maintained strict business hours from noon to 1.75 hours before dusk, announcing their closure with 300 beats of a gong. However, the government failed in its effort to ban night markets, which were crucial to the lives of the people.

Spare the Rod and Spoil the People: Corporal Punishments in Tang China. Following is a list of how many blows with a rod one received for committing various transgressions.

- 90 blows with a thick rod for climbing ward walls
- 50 blows with a thin rod for speeding in a horse & carriage; 60 blows with a heavy rod if someone is hurt; strangling if someone is killed;
- People rushing w/urgent business (e.g., get a doctor) not fined if no one was hurt
- 90 blows with a thick rod for entering city via canals, the city defenses' weak point
- 70 blows with a thick rod for encroaching on roads (only 50 if you were farming)
- 20 blows with a thin rod for traveling outside wards past curfew without a good reason (e.g., government business, or medical emergency):
- Ignoring watchman led to twang bowstring as warning, shooting a warning shot if that was ignored, shooting the person down if that was ignored

A Cosmopolitan Culture



A sculpture of a horse from the Tang Dynasty, a common motif for artists then and indicative of the foreign influences then active in China

The Tang Dynasty, which was actually descended from Turks along China's northwestern border, were particularly open to foreign influences, making this era probably the most cosmopolitan in Chinese history. The son of the dynasty's founder even wore pigtailed like his Turkish ancestors, lived in a tent he had pitched in the palace, roasted lambs whole, carving them with his sword; and recreated Turkish funeral fit for a Khan by lying down as the Turks rode around him shouting. Adding to this influence, many Chinese nobles had intermarried with foreigners during the turmoil of the Six Dynasties Period (220-581).



A gilt-silver jar from the Tang Dynasty in the shape of a northern nomad's leather bag

There were three main sources of foreign influence in China at this time: military, religious, and trade. Military influence, in particular increased reliance on cavalry, was something the Tang brought with them from the West. Also indicative of outside military influence was the fact that by 751, all China's generals on its northern borders were foreign.



Armored cavalry of the Three Kingdoms period (c.500 C.E.), much like that being used by other peoples across Eurasia at this time, such as various nomads, the Persians and Romans. Notice the wheel barrow in back, a major labor saving invention of this time.

Religious influence came mainly from India in the form of Buddhism, which flourished at this time. In addition to Indian monks coming to China, many Chinese traveled to India to learn Sanskrit texts. Also indicative of the lure of Buddha's homeland was the adoption of zero, elementary trigonometry, and the 360° circle. In addition, three clans from India provided the court with royal astrologers.

Another factor making China more open to the outside world was trade. The stimulus for this was the meteoric rise of the Arab Empire after 650 and the exploration by its merchants and traders of the sea routes from India to China. Canton, China's greatest port, traded silk and ceramics with for perfumes, wood, drugs, dyes, and jewels. Trade also brought new ideas as well, most notably Islam, as Canton had a large community of people from Arabia and Persia, as well as Southeast Asia and India living in special foreign quarters under their own laws. Typically they would show up in the spring and stay for several months until the northeastern monsoon took them home. Archaeologists have even found a cemetery of Nestorian Christians in China from this period. Although Islam and Christianity were tolerated, they didn't make serious inroads into Chinese religious beliefs at this time.

After the Tang, foreign pressures from northern nomads, especially the Mongols, would sour the Chinese on foreign "barbarians and make them more wary of the outside world.

Chinese Society in the Tang Era



A ceramic model of an ox drawn cart, like those used in China

Peasants in China, as in most pre-industrial societies, made up the bulk of the populations and provided the base upon which the privileged few could live. The Chinese state took quite seriously its responsibility to protect the welfare of the peasants. New dynasties typically inaugurated their reigns with land reforms to restore the peasants' prosperity. Conversely, decadent rulers tended to ignore this duty, letting the rich oppress the peasants and take their land. Luckily, Chinese political theory saw this and the resulting problems as a sign that Heaven had withdrawn from that dynasty its mandate to rule and was ready to give it to a new dynasty willing to restore the balance.

The Tang Dynasty took a number of measures to ensure the peasants' well being. They were allowed to have bows, spears, swords and shields for hunting and protection against bandits and wild animals. (Keep in mind that until quite recently lions, tigers, and bears were a very real threat to people, sometimes even scaling the walls of the capital city Changan.) The biggest threat to peasants was starvation from famine, droughts sometimes coming four years in a row and even drying out the wells. Other hazards included hailstorms and plagues of locusts, rats, and even bunnies. (Anyone with a garden knows what I'm talking about.)



The inauguration of animal drawn plows in the Han era allowed dramatic expansion of Chinese agriculture and population

To guard against such disasters, the government annually collected 3.5 bushels from each family to be stored in granaries for redistribution in times of famine. It also established a graduated system of tax remissions during famine. A 40% loss of crops exempted peasants from the grain tax; a 60% loss also eliminated the cloth

(especially silk) tax that the women had to make and pay; and a 70% eliminated the *corvee* (annual forced labor, usually for twenty days, on government projects).

All that being said, peasants in China (and just about everywhere else) had it pretty rough. Fixed taxes not adjusted for deflation might quintuple a peasant's tax load. Meanwhile, the rich were always trying to get the peasants' lands, typically with predatory loans at high rates of interest that the peasants might never repay, thus losing their farms. Then they could become either agricultural laborers, having to accept whatever wages the landlords might offer, or tenant farmers who paid half their crops as rent in addition to interest on loans they might take out for tools and seed. Landlords, like the state, could also impose forced labor on their tenants.

Another ruinous burden occurred when the state conscripted peasants for military duty, usually for three years at a time. This could leave farms untended and allowed to go to ruin. When the Tang resorted to just hiring mercenaries, that might relieve peasants of the burden of military service. However, it also could raise taxes to ruinous levels to pay for the mercenaries. And late in the dynasty, they didn't even do a good job of protecting the peasants from invaders.

For many peasants, the best option was to run away to the South, despite the anguish of leaving their ancestral lands and enduring the uncertain hazards of travel. Of course the attraction of migration was the (often false) illusion of fertile lands and other forms of riches to be had there. One notable example was the "goose poop gold rush" (c.700) when a peasant noticed a glint of gold in some goose poop and tracked the poor birds to where they fed. Two centuries later, peasants were still trying to extract gold from goose poop.



In the absence of pockets, Chinese coins, known as cash, which were strung on necklaces. The next highest denomination was a group of 1000 cash.

Merchants. The traditional Chinese view of society put merchants at the bottom of the social scale, the reason being that they didn't produce anything, but only lived as parasites off the rest of society. Officials were forbidden to deal directly with merchants and high officials couldn't even enter markets where they operated. Merchants were also forbidden to take the civil service exams (although after 803 their sons could).

Still, the authorities figured out ways to make money off the merchants. Extracting forced loans was one method. Another was allocating meager salaries to officials who would have to "loan" money to merchants, who would then loan that out at interest, and then repay the officials with interest.

As time went on, officials, nobles, and even soldiers ignored restrictions on mercantile activity and openly ran shops in the markets. In one case an official made a huge fortune from selling horse manure for fertilizer. In this case, the emperor put a stop to this practice so the Tang wouldn't be remembered as "sellers of horse manure."

Of course, merchants, having money, could live far above their official station in society. On the other hand, instead of investing in new businesses and technologies, they often spent their money on educating their sons to break into the more prestigious class of civil officials. Western Europe in the late medieval and early modern eras would see a similar mindset as enterprising merchants sold off their businesses

to buy noble titles and settle into an idle lifestyle on their landed estates.

Clergy. As in Western Europe, the clergy (i.e., Buddhist monks and priests) were among the most privileged people in society. By 845 there were an estimated 360,000 monks and nuns in China, all of them exempt from taxes and compulsory labor. Many more people would buy fake ordination as monks to get out of paying taxes, while forgoing celibacy.

Also like the West, people donated fortunes to monasteries to avoid the "ten hells of purgatory" and ensure a better reincarnation. Peasants working the monasteries' lands would pay 10 to 20 times the dues to their landlords as free peasants paid in taxes. (According to the principle of *ahimsa* (non-violence) monks didn't work the land since it would involve killing insects.

Monasteries used their profits to invest in such lucrative industrial enterprises as waterwheels operating gristmills or trip hammers. Since waterfront property for tapping into free waterpower was so expensive, monasteries were often the only ones able to buy it. They also built oil presses for sesame seed oil, since monasteries burned oil lamps so much.

Another source of revenue was loan-sharking. Short-term loans for seven months were typically given to peasants for spring planting and repaid at harvest. If a peasant defaulted, the monastery got his movable prop. While tenants of some monasteries were not charged interest, others were charged up to 50%. For high risk loans to officials monasteries would charge up to 120% interest, since if they didn't repay, there wasn't much monasteries could do about it. Some monasteries got up to half their income from interest on loans.

China's Only Female Emperor



dramatically into Central Asia and Korea. Even more telling, China under her rule seems to have continued much as before. Wu promoted men of ability that gave China excellent government for years after she was deposed. Most likely these were men of lower social status who could be little threat to her.

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Wu Zetian (ruled 690-705) was the only woman to rule China in her own right, claiming to found her own dynasty, the Zhou, and taking the title of *huangdi* (“emperor”). She was a concubine of the emperor Taizong and became first concubine or empress of his successor, Gaozong. When he was debilitated by a stroke, she ruled in her own right until he died, overthrew his first son, set up and ruled through his second son for six years, and then overthrew him to establish the Zhou Dynasty and rule in her own right until 705 until she was finally overthrown at the ripe old age of 80.

During this time, imperial princesses reportedly assumed titles, kidnapped people as slaves, sold state offices and had 12,000 Buddhist monks fraudulently ordained. In 710, five years after Wu Zetian’s overthrow, her daughter-in-law, the empress Wei, poisoned her husband and tried to rule, but was overthrown eighteen days later, thus restoring the Tang Dynasty.

As is typical for women in power throughout history, Empress Wu got a lot of bad press from the predominantly male sources, who accused her of carrying on a reign of terror using secret police and torture, and even smothering her own daughter so she could blame a rival consort to the emperor. She supposedly was so vain that she refused to let people say she was as beautiful as a lily or rose. Rather they had to say a lily or rose was as beautiful as her. While she had to be somewhat ruthless to maintain her unique position, we have to be careful not to take such hostile sources too literally.

To her credit, during Wu’s reign, Chinese armies expanded the empire’s borders

THE SUNG DYNASTY (960-1279) AND MONGOL RULE (1279-1368)

The Sung Dynasty (960-1279). The fall of the T'ang Dynasty ushered in a brief period of chaos referred to as the Five Dynasties and Ten Kingdoms (906-960). Despite this turmoil, Chinese civilization maintained itself, especially in the South where many people fled to avoid the northern nomads. Out of this chaos, two new kingdoms emerged.

First of all, the semi-nomadic Khitan built a powerful realm in the North that even encompassed the Great Wall. What made the Khitan so dangerous was that they had partially absorbed Chinese culture, thus fusing their nomadic energy with Chinese sophistication. In the middle Ages, many people mistook the Khitan as the Chinese and referred to China as Cathay (land of the Khitan). Throughout this period, the Khitan kept up pressure against a new Chinese dynasty, the Sung, who brought all but the northernmost provinces and the Great Wall under their control. Sung government was efficient, maintaining the irrigation and flood control projects to ensure economic prosperity. The Sung also weakened the influence of the military in favor of the bureaucratic gentry who were hostile toward the military. This and the lack of pasture for good cavalry horses in the south caused the Sung to pay less attention to maintaining a good native-born military and to rely more heavily on expensive mercenaries and paying tribute to keep their northern enemies at bay. Therefore, when the Sung did finally attack the Khitan, they were no match for their mobile horse archers who forced them onto the defensive.

In the early twelfth century, the Sung called in another nomadic people from further north, the Jurchen ruled by the Chin dynasty, to destroy the Khitan realm. Unfortunately, the Jurchen, proving less civilized and more dangerous than the Khitan, turned against the Sung and forced them even further south after 1126. One advantage of ruling in the South was that its numerous waterways and lack of pasture impeded invasions by any nomadic cavalry, thus keeping Sung China relatively secure.

Despite these pressures, the Southern Sung Dynasty (1126-1279) still flourished with a thriving economy based largely on rice agriculture. This helped create a more urban society, with five Chinese cities reaching populations of one million. Ironically, the more comfortable urban culture hurt the status of Chinese women, since their labor, which was so vital on the farm, was not needed nearly as much in town.

Economically, the Chinese were the first to use paper money, getting the idea from the bills of credit used under the T'ang Dynasty. The advantage of paper money was that it saved the burden of transporting heavy cash (which was all in copper coins), especially taxes, long distances. As its nickname, "flying money", implies, paper money was easy to print (thanks to block printing also invented by the Chinese), and its overuse later on triggered inflation. Even such measures as scenting it with perfume or sewing in threads of silk failed to solve this problem that still bothers governments today.

The Chinese economy, largely blocked from overland trade to the northwest, saw rapid expansion through the vigorous pursuit of sea-borne trade to South-east Asia and into the Indian Ocean. Unlike the northern Chinese, who preferred to remain on land, the Chinese in the South were more at ease with the sea. (Even today, a preponderance of Chinese immigrants to the United States originates from the southern parts of China.) Several technological innovations helped the Chinese in their maritime ventures. First of all there was the Chinese sailing ship, the *junk*, which was faster and several times larger than any European ships then sailing. It also had a sternpost rudder and separate watertight compartments, something European sailing ships would not be able to match until the 1800's. Another invention brought back by Arab traders to Europe that would be vital to later European explorations was the compass. For centuries, the Chinese had used the compass for divination and fortune telling before applying it to navigation. Chinese compasses pointed south, since that was where spring winds came from and was considered the most important direction on Chinese maps.

By 1200, the Chinese had replaced the Arabs as the dominant commercial power in the Indian Ocean, trading books, paintings, and porcelain along with silk, tin and lead. All this trade brought large numbers of foreign traders to China, many of whom settled down in self-contained communities where they could live under their own laws. One of the most prominent of these was a Jewish community that survived into the 1800's.

Two other Chinese inventions deserve mention here: the water-powered clock and gunpowder. The Chinese clock was powered through a complex system of gears and escapements. In addition to keeping daily time, it also tracked celestial time and the movement of the sun, moon, and planets for astrological purposes so the emperor would know the best time to embark upon various projects and ventures. Although it was an imperial monopoly, the clock made its way to Europe where it would be adapted in the later Middle Ages to tracking daily time. Eventually, the clock would heavily influence Western Civilization's concept of time by breaking it into precise and discrete units that still regiment our lives today.

Gunpowder, according to legend, was the accidental result of a Taoist alchemical experiment for replacing salt with salt petre (the active ingredient in gunpowder). Contrary to popular belief, the Chinese did use gunpowder for military purposes in the form of rockets and firing projectiles out of bamboo and metal tubes. Most likely, it made its way westward to Europe thanks to the Mongol conquest of China in the 1200's. Eventually, the Chinese invention of gunpowder would be instrumental in the rise of the nation state in Western Europe and Europe's colonial dominance of the globe in the late 1800's and early 1900'.

The arts, in particular painting, flourished under the Sung Dynasty. Chinese painting heavily reflected Buddhist and Taoist values by emphasizing nature and even empty space. Some painters were so brilliant that they could create a painting that had to be viewed from multiple perspectives. This contrasted greatly with European painting, which

put more emphasis on humans as the center of attention.

The Mongol Empire (1279-1368). Although the overland routes to the West were mostly cut off, the Sung Dynasty did see some trade, largely in the form of superior iron weapons, going north through the semi-civilized Jurchen to the much more dangerous Mongol tribes further north. In the late 1100's, the most remarkable nomadic leader of all time, Genghis Khan (1167-1227), combined the use of Chinese weapons, Mongol fierceness, and his own genius for organization and generalship to launch the conquest of the most far-flung empire in history. He succeeded in conquering northern China, but the large fortified cities, lack of pasture for the Mongol horses, and the vast network of waterways obstructing the way kept him from conquering the Sung Dynasty in the South. Therefore, he left it to his successors to complete the conquest, which his grandson, Kublai Khan, did in 1279. By that time, Mongol conquests spread from the Pacific to Eastern Europe and the Middle East. Although there were several virtually independent Mongol khanates, Kublai Khan was recognized, at least in theory, as the supreme ruler over all.

Mongol rule led to several changes in China and Asia. For one thing, the Mongols protected safe travel across Asia and reopened trade along the Silk Road. Because of this, Western Europe, then recovering from the Dark Ages, re-established contact with China, allowing numerous traders and missionaries to make their way there. Among these travelers was Marco Polo, whose account of his travels and the wonders of the East sparked a growing interest in China which would help stimulate the Age of Exploration some two centuries later.

The Mongols ruled with a brutal efficiency that not only discouraged any criticism of them, but also discouraged innovations in the arts. Among the Mongols' ruling policies was replacing the civil service exam system with the use of non-Chinese governors and officials and even a foreign script. However, in the 1300's, the civil service exam was restored as the Mongols in turn succumbed to the influence of Chinese civilization. Mongol rule was

especially unpopular with the Chinese, who looked for any opportunity to revolt. Two factors helped provide that opportunity, dissension within the Mongol ranks and corruption among their bureaucrats. Finally, in 1368, the Chinese overthrew Mongol rule and established a new dynasty, the Ming, which would once again restore Chinese power and wealth.

Chinese Painting



Loquats and a Mountain Bird by an unknown artist of the Southern Song period

Traditional Chinese painting followed a path completely separate from Western art (at least until the late 1800s). One of the most important differences is how Chinese painting was closely tied to the art of calligraphy, using a brush dipped in black or colored ink rather than oil paints. They were typically painted on paper or silk that could be mounted either on handscrolls or as hanging scrolls.

However, as in the West, Chinese painting went through a number of phases during its long history. From the Han through the Tang periods (c.206 BCE to 906 CE) artists focused mainly on human figures, sometimes depicting court life or daily life of the people, other times emphasizing Confucian virtues, such as a wife's obedience to her husband. During the later Tang Dynasty, landscape paintings became increasingly popular.

During the era of the Five Dynasties and Northern Song (907-1129) the landscape came into its own as a subject, and was seen as the highest form of painting, as it still is in China. This especially reflects the Taoist emphasis on nature, showing humans as tiny specks in a

massive landscape. By contrast Western art after 1500 CE would emphasize humans as the center of the world, for a long time seeing the landscape as an inferior subject.



“Buddhist Temple in the Mountains”

Chinese landscape painting is noted especially for two things: multiple perspective and empty space, which give free rein to the viewer's imagination and emotional reaction to the painting. Also, to provide a sense of depth in these paintings, artists depicted closer objects in striking detail while creating a blurrier effect for such things as mountains in the background. One might compare this to the sfumato (smoky) effect developed by Leonardo da Vinci for such paintings as the *Mona Lisa*.

Under the Southern Song (1129-1279), painting followed the political trend of Neo-Confucianism of focusing on reform from the bottom up. Therefore, one saw more detailed paintings of small subjects, such as birds, without any background.

During this time there was a growing split between professional and amateur scholar-gentlemen. Scholars, who also served as art critics, saw professional artists in the same light as butchers and craftsmen, just making paintings for money, not to express their feelings. They saw painting as one of the Four arts, the others being musicianship (in particular on the *guqin*, a stringed instrument), playing the

strategy game of Go), and calligraphy. One thing they developed was the Three Perfections, combining painting, calligraphy, and poetry, whereby a painting would also have a poem written in the best calligraphy. The poem might inspire the painting or vice versa. The scholar-gentleman, though not as technically proficient as the professional artists, maintained their traditions down through the centuries.



Ma Yuan “*On a Mountain Path in Spring*”.
 The Poem translates:
 “*Brushed by his sleeves, wild flowers dance in the wind,
 Fleeing from him, the hidden birds cut short their song.*”
 To the right is a larger view of his calligraphy

The mixture, known as a slurry, was cooled in a large brick tub where a specialist dipped a silk screen, then extracted it, letting most of the water drain through the silk, leaving a thin layer of slurry. The screens were stacked and allowed to partially dry, after which the slurry, having coalesced into sheets of paper, was dumped from the screens onto a stack of similar sheets. After drying some more, the sheets were hung outside to completely dry, after which they were full sheets of paper.

Chinese movable type. A Chinese inventor, Bi Sheng, actually came up with movable type in the 1040s, carving Chinese characters into uniformly sized clay blocks that he fired. He then arranged them in vertical rows inside a rectangular frame, inked them with a mixture of gum and soot made from burned pine, and pressed a piece of paper over them to get a printed page.

The problem was that storing and cataloging a writing system of literally thousands of characters was extremely tedious and impractical. Bi Sheng tried storing characters in different boxes organized according to how their sounds rhymed. A later system used rotating tables to bring the characters to the typesetter. This was still too tedious, so the Chinese reverted to the simpler technique of carving entire pages of text out of wood, a system devised back in the eighth century. Supposedly, there were 500,000 copies of one Buddhist text printed with this technique.

“*Flying money.*” Chinese block printing made possible the next step: paper money. During the Tang dynasty, the government, instead dealing with the hassle and risk of carrying hard cold cash to pay officials in distant provinces, sent credit slips that could be converted into cash by local bankers and officials. This was known as “flying cash” for its ability to blow away in the wind.

Real paper currency came into being during the Song Dynasty, when bankers started regularly

An Era of Innovation



Chinese movable type

At no time did the Chinese show a greater spirit of innovation than during the Song era, coming up with the spinning wheel, smallpox inoculation, movable type, paper money, clocks, and gunpowder, to name a few.

Chinese paper was made from bamboo stalks that were stripped of leaves from smaller branches, and then boiled in a tub for three days to break them down into thin hair-like fibers.

issuing these paper credit slips during business transactions.

In 1023, the government replaced these banknotes with its own paper money. The crucial thing about paper money is having something of real value to back it up so people will accept it. At times the Sung would try to give it some inherent value by dipping it in expensive perfume or sewing silk threads into it.



Paper money issued in 1160

The Jin (or Chin) Dynasty in the north adopted the practice of issuing paper money, but did little to ensure its value, thus triggering an inflationary cycle.

Marco Polo wrote about Chinese paper money with great admiration, but governments in Europe wouldn't adopt the practice until the 1700s.

"The Cosmic Engine." The first mechanical clock was built during the Sung Dynasty in China around 900 CE. By 1100, a man named Su Song had developed it into a 39-foot high astrological/astronomical clock to mechanically track the motion of the sun, moon, and five known planets at that time (Mercury, Venus, Mars, Jupiter, and Saturn) as well as tell time.

In order to keep accurate time, Su Song's Cosmic Engine, as it was called, had a tank always full of water (for equal pressure) to release water into a scoop mounted on a wheel (below right). After fifteen minutes, the weight of the full scoop would pull it down and turn the wheel, putting the next scoop in place. Each time, this would also beat a drum. The mechanism also turned an armillary sphere that tracked the motions of the known heavenly bodies.



The clock was a royal monopoly to help emperors decide propitious times for acts of state, such as making war, or deciding which son was most favored as heir to the throne. The emperors relied on it so much that, when an ambassador to the north reported that the heavenly bodies were not in line with the clock, the emperor replied that the clock was right and the sky was wrong. When Kaifeng, the northern capital, fell to the Jurchen in 1126, Su Song's clock was dismantled and taken away.

The idea for the clock eventually spread to Western Europe where it was adapted to a system of weights that didn't freeze in winter the way water does. Ironically, a Jesuit priest from Europe would reintroduce the mechanical clock to China in the 1500s, presenting a windup clock to the emperor. However, Ricci kept the key, so the emperor had to give him an audience every week to rewind the clock.

"Fire medicine." Gunpowder may be the invention the Chinese are most famous for. Ironically, it was the result of alchemists trying to find an elixir for immortality. When the lab exploded, the Chinese figured out other uses for this volatile chemical. Besides fireworks displays and a remedy for stomach ailments, gunpowder was applied to warfare. A charge of gunpowder was wrapped in oiled paper at the top of a shaft close to an arrowhead, with an iron weight was attached at the other end of the shaft to provide a balanced flight. Using the wheelbarrow, another Chinese invention, they could transport multiple-rocket launchers to the battlefield able to fire up to 320 arrows at a time.



The Chinese had different kinds of rockets with such colorful names as “Five-tigers-springing-from-a-cave-rocket-arrows” and “Mr.-facing-both-ways-rocket-arrow-firing-basket.” Even if these and primitive bombs encased in bamboo or porcelain weren’t very accurate or lethal, the initial psychological impact of such devices on peoples who had never encountered them before could be devastating.

The Civil Service Exams



Some of the 7500 individual cells in one hall where candidates took the civil service exam

One of the most admired aspects of Chinese civilization for centuries was its system of civil service exams, which ensured possibly the most consistently efficient and honest bureaucracies until modern times. Even today, although exams are no longer based on knowledge of Confucianism, the principle of appointing civil servants on the basis of merit is still very much alive and can trace its roots back to traditional China by way of Enlightenment Europe.

The exams were given about every three years on three levels: provincial, metropolitan, and palace.

The provincial exam was given in each of China's roughly 300 districts to around 10,000 contestants. Each contestant was searched at two

different gates for cheating materials and then placed alone with his own food in a sparse cell to take the test.

- On day one the applicant would have to answer three essay questions on Confucius plus compose a poem.
- On day two, he would answer questions on the Five Classics and repeat part of the previous day’s test to ensure he had indeed written those answers
- On day 3: he would answer a question on some past or present government policy.

There were usually around 10,000 contestants across China taking the exam, of whom 1% or less passed. Even at this level, someone who passed could feel assured of a somewhat secure and comfortable career.

For those who passed the provincial exam and wanted to further advance their careers, there was the metropolitan exam, which was much like the provincial exam. Proctors copied each contestant’s test answers so that the graders couldn’t recognize someone’s calligraphy.

For those wanting to reach the highest positions in government, there was the palace exam, which was taken in the presence of the emperor. There were four tests: two on physique and two on knowledge. The candidate was checked for his physical appearance, calligraphy, and to make sure he didn’t have a foreign accent. Later, he would also write his life history, largely to ensure that his calligraphy matched that on his exam. A typical civil service exam question and answer:

Question: “Confucius said of Zuchan that in him were to be found 4 virtues that belong to the way of the gentleman. What are these virtues? “

Answer: “In his private conduct he was courteous; in serving his master he was punctilious; in providing for the needs of the people he gave them even more than their due; in exacting service from the people he was just. I answer the question with respect.”

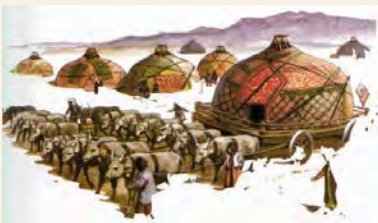
The Mongols



The Mongol Empire by 1279 with the conquest of China. No other empire in history has covered so much territory and touched so many cultures at the same time.

Of all the nomadic tribes that stormed out of the Central Asian steppe to attack the civilizations to the south and west, none inspired more terror and fascination than the Mongols. While they largely fit into generalizations made about other nomadic peoples, such as the Huns, Turks, and Avars, the Mongols seem to have been the extreme example of the most frightening of those generalizations, being especially removed from and untouched by their civilized neighbors. The Persian historian, Tarikh-i Jahangushay-i Juvaini, gives the following description of the Mongols before Genghis Khan united them into a virtually unstoppable force:

“Before the appearance of Genghis Khan they had no chief or ruler. Each tribe or two tribes lived separately; they were not united with one another, and there was constant fighting and hostility between them. Some of them regarded robbery and violence, immorality and debauchery as deeds of manliness and excellence...Their clothing was of the skins of dogs and mice, and their food was the flesh of those animals and other dead things. Their wine was mare’s milk.”



Mongol yurts were basically the first mobile homes: tents that could be put on wheels.

Big ones, such as the double-wide seen here required large teams of oxen to move them to a new trailer park.

The harsh conditions of the steppe made the Mongols particularly tough and vicious. They lived solely off the meat and milk of their horses and flocks of sheep, even being known to open veins in their horses’ necks to drink their blood when in dire need. Coming from the kill-or-be-killed environment of the steppe, they could be especially merciless to defeated enemies. Unlike many of their civilized opponents who fought according to a code of honor or chivalry, the Mongols would ruthlessly pursue any tactics to gain an advantage: ambushes, feigned retreats, even poisoning (which is how Genghis Khan’s father died).

Another thing that made the Mongols so terrifying was the speed of their armies, or more properly, the horses that carried them. Although comparatively small, Mongol horses were also incredibly tough and, in the eyes of civilized commentators, ugly. Unlike horses in civilized lands, steppe ponies didn’t need a cumbersome supply of fodder brought along to feed them, being able to survive solely on grazing. Reportedly, they could survive on the bark and leaves of trees being fed to them and knew how to dig through the snow to find food.



Rumors of the Mongols eating human flesh and their horses eating trees may have had some basis in fact concerning the horses.

They were incredibly hardy and durable, one Mongol supposedly covering 900 miles in six days on one horse, while Genghis Khan’s army once covered 130 miles in two days without a break. Making such a feat possible was the fact that each Mongol had a string of sixteen mounts

that he could keep switching to. Throw in a couple more horses for meat, and a Mongol army could campaign for six months without a supply train.

Possibly the one thing that made the Mongols stand out compared to other nomads was their discipline. For all the nasty qualities their neighbors ascribed to them, they were also noted for their unquestioning obedience to authority. This, and their ability to coordinate the movements of their armies over vast territories came from the unique way the Mongols hunted, a massive annual event that Genghis Khan may have invented, called the *nerge*.

Each year, the entire Mongol army would be mobilized as if for war and arranged in a vast ring that would drive any game toward the center. An unprecedented level of coordination was required to maintain a tightly closed formation among all the parts of the ever constricting ring, and that required highly developed level of communication, since the parts of the ring might start as much as 100 miles apart from one another. Once the animals were enclosed in a tight ring so they could hardly move, the slaughter began. In such a situation, many of those animals would fight desperately, making this a very intense and dangerous struggle, requiring a high degree of cooperation and teamwork. Anyone letting an animal through or showing any hesitation in the fight would be severely punished.

Besides providing meat for the coming winter, the *nerge* also trained and conditioned the Mongol army for war as a single fighting unit, giving it a huge edge over its enemies. In fact, Genghis Khan would even start a campaign against an enemy with a *nerge* to get his army ready for the fight ahead. Once you've fought a wild animal that is cornered and desperately fighting for its life, you're ready for about anything a human army could throw at you.

The *nerge* especially prepared the Mongols for the coordinated tactics they would use against

their various enemies. Their primary weapon, as with other nomads, was the composite bow which, when combined with the horse, gave them an immense amount of mobile firepower. While a Mongol army would have a small force of heavy cavalry, they weren't used until the enemy formations had been broken up either by a continuous firestorm of arrows or some variation of the feigned retreat to draw their opponents out into the open. The feigned retreat could either be short-term to lure the enemy into a prepared ambush or longer to wear out and break up their formations in pursuit.

Once opponents caught on that they couldn't beat the Mongols in the open field, they typically retreated into strong fortified cities, the thought being that the Mongols were ill prepared for long sieges. Initially, they were right, but the Mongols adapted quickly, mainly by sparing captured technicians skilled in siege warfare. To spare their own manpower, they would also use captives to build the siege works, clear moats, and lead the initial assaults, forcing the defenders to kill their own people or even stop fighting. Once a city was taken, it was usually sacked and destroyed, its inhabitants being slaughtered en masse except for valued technicians and a few choice women. Bodies or skulls of the dead would be left in huge piles as warnings to others concerning the fate of those who dared resist the Mongols.



The Mongol conquest of China was a drawn out affair, lasting close to seventy years (1211-79). It occurred in two phases corresponding to the two kingdoms China was divided into at the time, the Jurchens under the Jin Dynasty in the North and the Song Dynasty in the South.

The campaign against the Jin (1211-34) took the form of yearly invasions, at first largely to plunder the countryside and later to besiege cities. Repairs or additions to the Great Wall were defeated either by storming, bribery, or circumvention, the latter also involving splitting the Mongol army into widely separated but still highly coordinated forces. Even when the Mongols failed to take a city, their plundering raids served the purpose of weakening and demoralizing the enemy. By 1215, most of the Jin Empire was under Mongol domination, but several major cities remained to be taken.

After a brief lull following Genghis Khan's death (1227-30), his successor, Ogedei resumed the offensive and finished off the Jin in 1234 with the epic siege of Kaifeng. (1232-3). The Jin defenses relied heavily on gunpowder. At first they used soft-cased "thunderclap" bombs, which evolved into the much deadlier iron-cased "thunder crash" and "heaven shaking thunder" bombs which, having two-inch thick iron shells, produced deadly shrapnel. A contemporary account describes their effect:

There was a great explosion, the noise whereof was like thunder, audible for more than a hundred li, and the vegetation was scorched and blasted by the heat over an area of more than half a mou. When hit, even iron armor was quite pierced through. Those who were not wounded by fragments were burned to death by the explosions."

As the Mongol siege trenches approached the walls of Kaifeng, the defenders lowered thunder crash bombs by chains so that "when these reached the trenches where the Mongols were making their dugouts, the bombs were set off, with the result that the cowhide and the attacking soldiers were all blown to bits, not even a trace being left behind."

Kaifeng fell in 1233 and the last of the Jin committed suicide the next year.

Now there remained the Song Dynasty in the South. This created new problems for the

Mongols. In addition to a lot of heavily fortified cities, there was also the hotter subtropical climate and the diseases it produced. Another problem was the landscape, in particular rivers and massive rice paddies that were harder to traverse and provided no forage for Mongol horses. In 1265, the Mongols defeated the Song in a major battle at Diaoyu and captured 146 ships. These proved crucial for conquering a land with so many rivers, and the Mongols adapted to naval warfare much as they had to sieges.



Song riverboats run the gauntlet of Mongol thunder crash bombs in order to relieve the siege of Xiangyang). Chinese riverboats were paddle wheelers, with power coming from men operating a treadmill in the back.

The climax of the conquest was another of the great epic sieges in Chinese history, that of Xiangyang (modern Xiangfan), which lasted five years (1268-73). By this time, the Mongols had their own thunder crash bombs, but even they weren't enough against the city's massive fortifications. Luckily for them, their conquests of Muslim lands in the West had given them the technology to build a new kind of siege weapon, the counterweight trebuchet.



Centuries earlier, the Chinese had actually developed a traction trebuchet, powered by people pulling from one end to slingshot a stone against enemy walls. Now China's weapon had come back to haunt them in a new form, the counterweight trebuchet that could launch a 200 pound stone, ten times the delivery load a traction trebuchet was capable of. Thus an old weapon with a new twist proved more effective than modern gunpowder, bringing down an entire tower of Xiangyang's defenses with a single shot.

This proved to be the difference in taking Xiangyang and the remaining cities in the South, some of them surrendering just at the sight of the fearsome trebuchets. By 1279 the last remnants of the Song Dynasty were gone and a new dynasty, the Yuan, took power under Kublai Khan.

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THE MING AND EARLY MANZHOU DYNASTIES (1368-c.1800)

The Ming Dynasty (1368-1644). The expulsion of the Mongols from China in 1368 ushered in a new period of peace and prosperity for China under the Ming ("brilliant") Dynasty. The early Ming emperors revived Chinese power and wealth through their foreign, governmental, and economic policies. In the realm of foreign policy, several strong emperors aggressively extended Chinese power to the old borders of the Han Empire. Not surprisingly, the Ming Dynasty was especially concerned with the threat of the northern nomads who had so recently humiliated China. Therefore, they put forth a tremendous effort to subdue the nomads (with very limited success) and partially restored the Great Wall. The fortifications around the first capital, Nanjing, were 60 feet high and extended in a perimeter 20 miles long, the most massive urban fortifications in the world. In 1421, the Ming moved the capital to Beijing, only 40 miles from the northern frontier in order to keep a better eye on nomadic movements. Not only did this endanger the capital, since it was so close to the nomads, it also removed the government from contact with and understanding of the more economically vibrant South. As it was, the nomads posed no real serious threat to China during most of the Ming Dynasty's rule.

Beijing itself became a magnificent city with 40-foot high walls around a perimeter of 14 miles. Central to the capital was the emperor's palace complex, known as the Forbidden City. Unlike Western architecture, which reaches ever skyward away from earth, as seen in Gothic cathedrals and skyscrapers, Chinese architecture aims for a more balanced and harmonious effect in the true Taoist spirit. The Forbidden City especially shows this, being spread out on a broad horizontal plane under the overarching dome of the blue sky, which counterbalances the effect of the high roofs of many of the government buildings and palaces. The overall effect is one of horizontal stability, emphasizing the permanence of the regime of the Son of Heaven (Chinese emperor).

The Ming reversed the unpopular policies of the Mongols and reinstated the system of civil service

exams for selecting officials, thus restoring the Mandarins to prominence in Chinese society. They also retained the other features of government used by previous dynasties, such as the Six Ministries and the Censorate. The Censorate was largely concerned with preventing corruption and abuses by sending traveling censors to the provinces to hear complaints and investigate the conduct of local magistrates. Unfortunately, many censors were young officials being asked to report against senior officials who could seriously damage their careers later on. Since the censors had little protection against such reprisals, they often shrank from doing their jobs properly. However, the overall effect of Ming policies was to provide fair and efficient, though strict, government.

Ming economic policies similarly provided for China's prosperity during this period. Dikes and canals were repaired, while extensive land reclamation programs were instituted, since some regions of China were totally depopulated from earlier Mongol depredations and neglect. The government offered tax exemptions lasting several years to any peasants who moved into the ruined areas, a policy which effectively revived much of China. Another policy was to encourage extensive reforestation, probably for shipbuilding purposes, although palm, mulberry, and lacquer trees were also planted for other economic purposes.

As a result of the Ming Dynasty's policies, China was again a strong and prosperous empire, making it the dominant political and cultural power in East Asia. China's cultural vibrancy can be seen in several aspects of the Ming era. For one thing, architecture flourished, as the Chinese constructed arched bridges and tall pagodas with graceful curved roofs. As stated above, the setting of these buildings in broad horizontal planes provided a more balanced effect than the lofty spires of cathedrals one found in Europe at that time.

Chinese science and technology at this time was largely bound up with newcomers from the West. The expulsion of the Mongols in 1368 effectively cut China off from the West for nearly two centuries. In fact, Columbus was still looking for the Mongols in 1492, since Europe had not received word of their fall over a century after its occurrence.

However, in the 1500's, the Portuguese and then the Spanish arrived in China by sea. Most of China's contact with the West at this time was through the Jesuits who skillfully presented Christianity in Confucian terms in order to gain entrance into China and win converts to their faith. Ironically, the Jesuit leader, Matteo Ricci, won court favor by presenting the emperor with a wind-up clock, which, of course, was ultimately derived from the Chinese water clock. (He kept in their good graces by keeping the key, so he would be summoned to court each week to rewind the clock.) Over time, the Jesuits provided the Chinese with a good idea of the state of Western science and technology, especially in the areas of mathematics, cartography, astronomy, and artillery. Europe learned a great deal from China as well, such as the idea for its first suspension bridge, built in Austria in 1741, over 1000 years after the first such bridge had been built in China.

Extensive maritime expeditions into Southeast Asia, the Indian Ocean, and as far as East Africa and Arabia, were another feature of the early Ming period. Between 1405 and 1433, no less than seven major expeditions were launched under the command of the admiral, Zheng He (1371-c.1434). Some of Zheng He's expeditions comprised over 25,000 men sailing in ships that were 400 feet long, many times larger than anything Europe, just then embarking on its age of exploration, could put into the water. The purpose of these expeditions is not entirely clear, probably being more to display Chinese power and influence than cultivate trade, although profitable trade was certainly carried on, especially in fine porcelain, which we today still call china. Then, in 1433, the expeditions suddenly ended, once again for vague reasons. One idea is that the mandarins, resentful of the profits made by the middle class merchants running these expeditions, pressured the emperor to end them. Whatever the reasons, it is tantalizing to think of what might have happened if these expeditions had continued, possibly with China discovering a route to Europe. As it was, Europe was left to find those routes and eventually dominate the globe.

The end of these expeditions had other far-reaching results for China, since they deprived the government of vital trade revenues. This, combined

with two other factors, led to the decline and fall of the Ming Dynasty. First of all, the later Ming emperors lost interest in government, retreating to the comfort and pleasures of the Forbidden City and allowing abuses and corruption to multiply in the provinces. At the same time, the practice of making military offices hereditary led to the gradual deterioration of the army. Together, these factors weakened China and encouraged a growing number of peasant rebellions, attacks by nomads in the North, and raids from pirates in Japanese and Chinese ports. In 1644, another northern people, the Manzhou from Manchuria, replaced the Ming Dynasty and founded a foreign, and China's last, dynasty.

The Qing Dynasty (1644-1911). The Qing Dynasty founded by the Manzhou, although of nomadic origin, had absorbed much of Chinese culture and did everything it could to portray itself as a legitimately Chinese dynasty. As a result, the emperors revived the civil service exams and other governmental institutions, restored the mandarins to the levels of prestige they had enjoyed before Mongol rule, and maintained interest in classical scholarship. (However, the Manzhou also outlawed the crippling practice of binding Chinese women's feet and forced the Chinese peasants to shave their heads except for wearing Manchurian-style pigtailed.) Militarily, the Manzhou extended China's borders to their greatest extent ever, encompassing Manchuria, Mongolia, Siankiang, Tibet, Korea, Burma, Taiwan, and Vietnam.

All this time, contact with the West continued. However, in the long run, it caused problems for China in two very different ways. For one thing, several new crops, such as corn, sweet potatoes, and better strains of rice, were imported, thus making China's agriculture much more productive. In the short run this was good. But, in the long run, these new crops and improved transport of food along China's canals and waterways, both of which allowed specialized cash crops suited to local soils, triggered a population explosion that pushed China's population to nearly 400,000,000 by 1800. At the same time, China's agriculture was expanding into Manchuria, which held the upland and drainage areas of some of China's rivers. Extensive farming here caused soil erosion and

deforestation that triggered disastrous flooding downstream. These floods plus overpopulation put severe strains on China's ability to feed so many people and seriously weakened it.

The second problem had to do with religion. As we have seen, the Jesuits were allowed to preach Christianity in China, because they presented their religion in Confucian terms and were tolerant of Confucian practices. All that changed when Franciscan and Dominican priests arrived and started behaving in a much less tolerant manner than the Jesuits, condemning, among other things, the venerated Chinese custom of ancestor worship. Also, unlike the Jesuits, who concentrated on the educated ruling classes, the Franciscans and Dominicans preached more to the masses, which made Chinese authorities suspicious and resulted in a crackdown on Christianity in China (although the Jesuits still maintained some status at court) and a curtailment of trade with the West in the 1700's.

Unfortunately for China, Europe's power and interest in Chinese goods, especially tea, were growing beyond China's ability to hold these western "barbarians" back from its gates. The result would be a century of humiliation at the hands of the West and a revolution that would at once transform China and maintain its unique culture and integrity as a nation.

Chinese Sailing Technology



A comparison of Zheng He's flagship, which was around 400 feet long, compared to Columbus' ship, the *Santa Maria* that only measured 85 feet in length.

Although it was Europeans who led the way in global exploration and colonization starting in the 1400s, there has been the common impression that the West always led the way in sailing and navigation. In fact, for centuries Chinese ships greatly outclassed Western ships in terms of size and navigational capabilities.

Probably the best-known Chinese navigational innovation is the compass. The Chinese, like the Greeks, discovered magnetic properties at an early date. In China, the first emperor, Shih Huang Ti, supposedly had a giant magnetic gate to detect any iron weapons being smuggled into his palace, presumably to assassinate him.

The first mention of compasses being used by the Chinese for navigation was in 1117 C.E. While previously believed that Europe got the compass indirectly from China, its earliest recorded use in Europe was in 1187, even before its first mention in Arab sources, who presumably would have been the middlemen passing it on to Europe. Therefore, some historians believe the navigational compass was invented independently in both China and Europe.



A Chinese compass/ladle balanced on a bronze plate. It points south, the primary direction on Chinese maps since that was where the warm spring winds originated.

Nautical compasses faced the problem of being disrupted by rocking ships. One solution was to place a magnetized needle in a floating straw, the water's fluidity maintaining some stability to compensate for the ship's rocking. Another version was to balance a magnetized needle on one's thumbnail.

The best-known Chinese ship is the junk, a word that became a term of derision in the West as its ships started surpassing those of China in size. However, in its day the Chinese junk was the premier ship on the high seas using features that would be adapted by the West.

The junk's hull design, possibly inspired by the interior structure of bamboo, had separate bulkheads (compartments) to prevent an entire ship from being swamped by a hole in the hull. As late as 1787 Ben Franklin was urging the

construction of ships with individual compartments “after the Chinese manner.” Chinese design and techniques allowed them to build ships far bigger than their European counterparts. The most famous example, Zhen He’s flagship in the 1430s, may have been 400 feet long.

Sail design was also radically different. Junks had up to nine masts hung with bamboo sails that could be turned for efficient navigation, being able to sail 30° closer into the wind than square-sailed ships. Each sail had several horizontal bars known as *battens*, which effectively divided the sail into a number of individual sails. Their advantage was that if during a storm the wind tore a hole in the sail, it only affected that part of the sail, not expanding beyond the neighboring battens.

Between 1405 and 1433, the Chinese admiral, Zheng He led seven voyages into the “Western Seas” to trade and collect tribute. The first voyage reportedly had 317 ships and nearly 28,000 men, many of them soldiers. The size of these voyages indicates a military/diplomatic component. Although the large military component was mainly to overawe other rulers, Zheng He was not afraid to use it when he thought necessary. Therefore, among his accomplishments was the suppression of piracy in Southeast Asia, while another time he captured the king of Ceylon and brought him back to China. Zheng He’s voyages ranged progressively further west, exploring the east coast of Africa and twice visiting Mecca. (Zheng He had a Muslim background and he may also have been Muslim or shared many Muslim beliefs.)



After Zheng He’s death in 1433, the Ming court sent no more voyages west, leaving it to the Portuguese to find the way around Africa. If the Chinese voyages had continued, they might have “discovered” Europe before the Portuguese had found their way to India.

There is controversy over why the expeditions were stopped. One theory is that the scholar-bureaucrat faction at court was jealous of the influence Zheng He’s faction that promoted the voyages. Another factor could have been increased pressure on the northern borders by the Yuan Mongols who even destroyed a Ming army and captured the emperor. The increased costs of defense and the fact that the Ming court moved the capital north to Beijing adds weight to the argument that China couldn’t afford expensive naval expeditions. Of course, the two theories on why the expeditions stopped are not mutually exclusive.

Just how far did the Chinese get? Consider this account from the Fra Mauro world map made in Portugal about 1450:

“About the year of Our Lord 1420 a ship, what is called an Asian Junk (lit. “Zoncho de India”), on a crossing of the Sea of India towards the “Isle of Men and Women”, was diverted beyond the “Cape of Diab” (Shown as the Cape of Good Hope on the map), through the “Green Isles” (lit. “isole uerde”, Cabo Verde Islands), out into the “Sea of Darkness” (Atlantic Ocean) on a way west and southwest. Nothing but air and water was seen for 40 days and by their reckoning they ran 2,000 miles and fortune deserted them. When the stress of the weather had subsided they made the return to the said “Cape of Diab” in 70 days and drawing near to the shore to supply their wants the sailors saw the egg of a bird called roc, which egg is as big as an amphora.”

If nothing else, this account of the Chinese circumnavigation around Africa helped debunk the belief that the Indian Ocean was an inland sea and encouraged the Portuguese to sail directly to India half a century later.

Chinese Architecture and Feng Shui



The Forbidden City inside Beijing, built by the Ming Dynasty, is a perfect example of Chinese architecture, especially its emphasis on covering a broad horizontal space to give the impression of stability and the all-embracing character of imperial China.

China's influence throughout East Asia is especially apparent in the realm of architecture, which has remained surprisingly consistent through the centuries. Although little was written on the subject itself, there are several basic principles that distinguish Chinese and East Asian architecture.

Bilateral symmetry is one prominent feature of Chinese buildings, which provides a sense of balance. Chinese gardens, by contrast are asymmetrical to give a sense of natural flow, probably a Taoist influence.

Enclosure around an open space is another aspect of Chinese architecture. This contrasts sharply with the West where buildings and houses typically have an open space or yard around them. Courtyards have a practical purpose in terms of regulating temperatures and providing ventilation. In the North, courtyards are generally open at the southern end to provide more sunlight and warmth. In the South, courtyards, known as *sky wells* are typically closed and mainly provide light.

Horizontal, rather than vertical, orientation is another important characteristic of Chinese architecture. This contrasts with the West, where the emphasis is on height and buildings are often ranked by how tall they are. In China, the importance of horizontal expanse is further stressed by the roofs, which extend beyond the walls and seem to float over the base.



Ironically, the one type of architecture many or most people associate with China is the pagoda, such as the The Fugong Temple Wooden Pagoda pictured above. While pagodas are oriented vertically, they are also not a native design, being imported from India along with Buddhism.

Popular folk beliefs also influence Chinese buildings. These include statues of door gods to ward off evil spirits and encourage good luck, anthropomorphic representations of the Fu, Lu and Shou Stars, which bring good fortune, prosperity, and longevity respectively, and rebus signs representing pomegranates (for good fortune) and bats (for prosperity).

Feng shui (literally “wind-water”) is a traditional Chinese system for orienting buildings to take best advantage of *qi*, basically the various life forces surrounding and affecting us. It takes into account the cosmological orientation of the building as well as local landforms and magnetic readings. For example, having a raised landscape behind a building and water in front of it is considered good Feng Shui.

The Boxer Rebellion in 1900 was partly a reaction against the Western powers building railroads and other structures contrary to Feng Shui principles. During Mao's Cultural Revolution in the 1960s, Feng Shui was outlawed as one of the Four Olds (traditional superstitions) and its practitioners were heavily persecuted. Even today, it is technically illegal to practice Feng Shui professionally, although a growing number of people, including Communist Party members, are adopting it. Interestingly, Feng Shui also has a growing following in the West.

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59. EARLY JAPAN TO 794 C.E.

Introduction: the geographic element. Certainly one of the most vibrant and influential cultures in modern history has been Japan. Despite the fact that it is mountainous, small (being roughly 2 percent the size of the United States) and has few natural resources, Japan is still one of the most productive industrial nations in the world. At first glance, Japan seems to be a mirror image of Great Britain, since both are small island nations just off the coasts of Eurasia. Indeed similarities do exist, such as the relatively independent existence each island nation has maintained in relationship to the respective continental cultures with which they are most in contact. However, significant differences also exist between the two cultures.

Three main geographic factors have influenced the history of Japan. First of all, Japan is an island nation consisting of four main islands (Hokkaido, Honshu, Shikoku, and Kyushu) and thousands of islands that reach nearly to Taiwan. Japan's closest point to Korea on the mainland is still 115 miles away, some five times the distance between Britain and France. This relative isolation has had two main results. For one thing, it has led to fewer invasions of Japan, thus creating less need for a strong central government. It has also let Japan pick and choose the influences it has taken from other cultures, in particular China, since it is close enough to the continent to absorb foreign influences, but isolated enough to be able to reject the aspects it does not want. One of the most striking characteristics of Japanese culture has been its ability to blend select elements of foreign cultures with its own native innovations to create something uniquely Japanese.

The second important aspect of Japan's geography is its mountains, which cover 72 percent of the land. This has led to some political fragmentation throughout much of Japan's history, although its extensive coastline helps tie Japan together through communication by sea. The mountainous landscape has also severely restricted the amount of available farmland, forcing Japanese peasants to intensively cultivate what little land is available. This has led to both a crowded and necessarily cooperative society that values the group, loyalty, and obedience to authority over the rights of the individual. The introduction of Confucianism after 400 C.E., with its emphasis on strictly defined social roles, further reinforced this trend.

Finally, except for forests, which cover 55 percent of its land, Japan is poor in natural resources. This has forced

its people to be resourceful traders and manufacturers, especially since the late 1800's when the Industrial Revolution vastly increased Japan's dependence on outside resources. Overall, Japan's geography, in particular its isolation, caused civilization to come considerably later than it did elsewhere for many of the high civilizations of Eurasia.

Early elements of Japanese culture. Early Japan seems to have had a number of different peoples migrating to its shores and influencing its early culture. Among the earliest were the Ainu, a Caucasian people quite distinct from the Mongolian stock that most Japanese are descended from. Some 17,000 Ainu still inhabit the northern island of Hokkaido. However, the primary influences on Japan's early culture were of Mongolian stock. From about 250 B.C.E. to 300 C.E., a culture from Asia known as Yayoi predominated, introducing rice agriculture, iron and bronze technology, and weaving. Yayoi society seems to have been matriarchal, with women holding high positions as priestesses or shamans. Only much later in Japanese history would women be reduced to a more subservient role in society.

By the third century C.E., cultural influences probably introduced from Korea, in particular better iron weapons and fighting from horseback, led to the Yamato period of Japanese culture (c.300-710). At first, the country was divided between numerous warring clans, known as *Uji*, each with its own patriarchal chief and guardian deity. Gradually, the Yamato clan unified most of Japan under its rule, claiming divine descent from the sun goddess Amaterasu. The imperial family in Japan today still traces its lineage back through the Yamato clan in the fourth century. Since there was no real distinction between governmental and religious functions in early Japan, the imperial family's duties have always been largely concerned with religious ritual. The burden of these ritualistic duties would hinder the emperors in the exercise of real political power so much in later centuries that they would often abdicate their thrones to their sons so they could be free to rule.

The emperors were especially concerned with their duties in Shinto, a uniquely Japanese religion that was emerging at this time. Shinto, which means "Way of the Gods" and is still popular in Japan, concerns itself with reverence for the forces of nature, which affect Japan so profoundly (e.g., typhoons, earthquakes, and volcanoes). It has no written texts or organization, being centered on shrines to local deities, known as *kami*. Worship is simple, consisting mainly of clapping (to get the kami's attention), bowing, and possibly making offerings.

Shinto largely focuses on ritual purification to remove impurity caused by contact with physical dirtiness, sex, childbirth, wounds, and death. The modern Japanese insistence on baths and cleanliness probably derives from this aspect of Shinto. The most important Shinto shrine at Ise is sacred to the sun goddess and has helped provide a national focus of loyalty to the imperial family associated with that deity.

Growing Chinese influence. By the fifth century C.E., the growing power and sophistication of the Japanese state was making Japanese society more open to the influence of Chinese culture coming in by way of Korea. (A list compiled in 815 C.E. showed that more than one-third of Japan's aristocratic families claimed ancestry from Korea or China by way of Chinese colonies in Korea.) In addition, two other factors fed into this influence. For one thing, the Uji system of individual local clans was inadequate for meeting the growing needs of the state, oftentimes challenging or disrupting its authority. Secondly, the T'ang dynasty, which took power in 618, was taking China to new heights of power and influence that were being felt especially in Japan.

Two of the most important influences from China were Buddhism and Confucianism. In 552, the Korean state of Paekche presented scriptures and an image of Buddha to the Yamato court. Despite initial resistance by Japanese nobles, the Soga clan, which then effectively controlled the emperor and government, won Buddhism's acceptance. An important side effect of the introduction of Buddhism was the introduction of Chinese writing to Japan. This led many Japanese scholars to study in China where they would pick up other aspects of Chinese civilization and bring them back home. Thus Buddhism served as a vehicle for spreading Chinese civilization in much the same way that Christianity spread Mediterranean civilization to North Europe.

Confucianism brought two important elements to Japanese culture. First of all, its stress on a strict hierarchy of relationships reinforced the already cooperative nature of Japanese society as well as the autocratic social and political order that would emerge. Second, the Confucian emphasis on merit and education as the means of advancing in government would have some effect on Japanese values. However, this concept of advancement by merit would meet with stiff resistance from the hereditary Japanese nobility.

In the early 600's, Chinese, in particular Confucian, influence, sparked a number of governmental reforms.

First of all, in 603 and 604, Prince Shotoku advocated the Chinese concepts of a supreme ruler, a centralized bureaucracy, advancement through merit, and the Confucian virtues. He tried to accomplish this by creating a system of court ranks that would replace the hereditary Uji ranks as the major basis for status. Prince Shotoku also sent several large embassies to China whose main importance was to bring back even more Chinese culture, which further accelerated the process of Japan's cultural transformation.

The Taika reforms and rise of the Japanese state. By 700 C.E., the central government was ready for the next step in consolidating its power: the Taika ("great change"). This set of reforms tried to apply Chinese governing techniques and institutions to Japan in several ways: the establishment of central government ministries, provincial government, law codes, and a taxation system modeled after that of T'ang China. Central to these reforms was a census to redistribute lands to the peasants, although the emperor in theory owned all these lands and parceled them out among his loyal followers. In 702, these reforms were formalized in the Taiho law codes. At the same time, the government established its first permanent capital at Nara, which was modeled after the Chinese capital, Ch'ang-an, being laid out in a rectangular grid along a north-south axis.

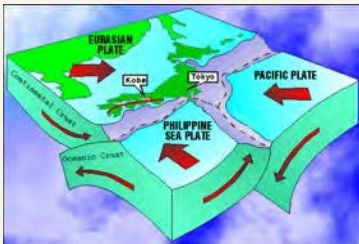
The Taika reforms and Taiho law codes increased the power of the emperor and court, but with some typically Japanese modifications. For one thing, the Japanese never adopted the Chinese doctrine of the Mandate of Heaven, which justified revolution against corrupt rulers. Therefore, the same dynasty of emperors has kept the throne in Japan throughout its history to the present day, however unqualified some of them may have been. Second, resistance by the hereditary Japanese nobles against the Confucian system of promotion by means of an examination system meant that birth, not merit, remained the main criteria for government office. Finally, since dues to an overlord were cheaper than taxes to the central government, many peasants commended their lands to monasteries and powerful court nobles whose lands were tax exempt. This created a narrower tax base for the government and a greater tax burden on the peasants who kept their lands. Despite these limitations, the Taika reforms and Taiho law codes were still a major step forward in the development of the Japanese state.

Earthquakes in Japan



The devastating tsunami that hit Japan following the earthquake in 2011

Earthquakes. Another major problem sporadically hitting Japan throughout its history has been earthquakes, since it rests on the convergence of the Pacific, Eurasian, and Philippine Sea tectonic plates (below). In 1857, an earthquake devastated Tokyo, killing 107,000 people, a much worse toll than the 1906 San Francisco Earthquake, which took 3,000 lives.



Even more devastating was the Great Kanto Earthquake that struck Tokyo on September 1, 1923, triggering what certainly ranks as one of history's greatest "perfect storms" in terms of catastrophes. The quake hit with an estimated strength of 7.9, snapping buildings in two. Being midday, there were already thousands of charcoal fires burning to prepare lunch. The quake combined these to set the city, which was largely made of wood and paper, on fire. The conflagration was ferocious enough to generate a firestorm with high winds that further stoked the fire, further intensifying the winds, and so on.

Meanwhile, the earthquake had triggered two other effects: a tsunami and a series of landslides that swept away and/or buried entire villages with bodies and flying debris. The fires raged for three days, leaving 60% of Tokyo and 80% of

Yokohama destroyed, along with an estimated 142,807 people killed.

By comparison, the earthquake that hit northeastern Japan in March 2011 was an estimated 9.0 in strength, over ten times the strength of the Kanto Earthquake. Despite even greater population density, Japanese diligence in preparing for such a disaster in terms of earthquake proof buildings, warning systems, and a well-drilled population saved thousands of lives that would have otherwise been lost.

Another striking aspect of Japanese culture revealed in the aftermath the 2011 earthquake was the orderliness of the Japanese people. There were virtually no incidents of looting or fighting as people waited calmly and patiently in lines for hours on end to receive what few supplies were available or just to make a phone call. Just as remarkable was the way those people would go back and share their meager supplies with their neighbors.

Early Japanese Society



An AINU chief photographed in the 1920s

The AINU, Japan's aboriginal inhabitants, were gradually driven to the northern parts of Japan. Originally Caucasians from Siberia, they may have spoken an early form of Japanese, which is totally different from Chinese. Referred to as *emishi* (barbarians) and "earth spiders", they were tough fighters whom early emperors recruited as guards. Many Samurai traditions (e.g., curved swords) were likely taken from the AINU. Based on how one classifies them in terms of ethnic purity, the estimated number of remaining AINU ranges from 20,000 to 200,000.

Women's status in early Japanese society was relatively high, as seen in the prominence of goddesses in Japanese mythology and of women (who might even lead in warfare) in early legends. One legend was that of a sorceress Pimiko, who supposedly lived shut up with 1000 women and one man who was used to communicate orders to her subjects. A Chinese traveler in 238 CE) reported that southwestern Japan was ruled by sorceresses. Ancient custom of female rule continued to 700's CE. Not until the 1400's as Japan was becoming more urban did women assume totally submissive roles. And even then, women of samurai rank might be proficient with weapons, especially a form of pole arm known as the *niginata*.



The legendary Japanese Empress Jingu (169-269 CE) conquering Korea. The lack of information about her brings even her existence into doubt, especially since there is no evidence of Japanese rule in Korea at this time. Most likely, she was an historical character with considerable influence at court, if not full regal power.

Another early Chinese account said Japanese lived on raw vegetables, smeared their bodies with pink and scarlet pigments, and divined the future from baked bones.

Shinto



The “floating tori-e” near Hiroshima. Such gateways marked entrances to Shinto shrines

Shinto, "Way of the Gods," sees any mystery of nature as a kami (divine spirit). It has traditionally stressed the importance of family, communal life, valor, and fidelity, as well as submission to authority (at first to the clan and later to the state) and, at times, even an aggressive militarism. Since the emperor was essentially the high priest for Shinto, it emphasized his divinity and has served as a basis for national unity.

Shinto stresses purity and cleanliness, which is still strongly evident in Japanese culture. Polluting oneself through contact with death, disease, blood, or childbirth required cleansing oneself by bathing in a stream and then fasting. Much like in India, occupations that involved polluting acts, such as burial of the dead, were confined to an untouchable class known as *eta*.

Shinto shrines are simple structures symbolizing the virtues of purity and austerity. Often they are just surrounded by a fence and/or trees planted round a square. If there is a building, it rests on plain pillars and is covered by a thatched roof. The *Tori-e* (ceremonial entrance to a Shinto shrine), is a portal of two curved quadrangular beams atop two round pillars.

The shrines have no images, just a symbol, usually a mirror, recalling a legend that the sun goddess, Amaterasu had brought down three symbols: a curved jewel, sword, and a mirror. Shinto priests are a hereditary class and can marry.



Wedded Rocks Shinto Shrine

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JAPAN FROM COURT SOCIETY TO THE RISE OF THE SAMURAI (794-1573)

*"There are three things which I cannot control,
the fall of the dice, the flow of the River Kamo,
and the turbulent monks of Mount Hiei."--*

Emperor Go-Shirakawa

Heiankyo and Japanese court society (794-1184).

By the eighth century, the Japanese state had developed to the point of establishing a permanent capital at Nara. Unfortunately, at the same time, the power of the Buddhist monasteries was getting out of control. One Nara temple alone possessed forty-six manors and 5000 acres of excellent farmland, all of it tax-free. As we have seen, peasants often commended their lands to the monasteries in order to avoid government taxes. When a Buddhist monk, Dokyo, exercised undue influence over the empress Koken, this triggered a reaction against women running the government that reduced their overall status in society. It also caused the next emperor, Kammu, to move the capital away from the monasteries. Following the example of the T'ang dynasty then at the peak of its power in China, he founded a new capital at Heiankyo, meaning "Capital of Eternal Tranquility". The new city, modeled after the T'ang Chinese capital, Ch'ang-an, but on a smaller scale, was laid out in a rectangular grid facing South with the palace at the north end.

Since Japan was isolated and faced no foreign invasions at this time, Heiankyo had few fortifications and was little concerned with military affairs. It was able to maintain control over most of Japan through peaceful means. However, thanks to the non-military character of the government, two elements of Japanese society were creating problems that eventually would weaken Heiankyo's control. First of all, the power and rivalries of the different Buddhist monasteries often got out of control. These monasteries went so far as to form their own armies that fought each other and disrupted the public peace. Another source of trouble came from the Ainu on the frontiers. Japanese settlers and nobles claiming new lands had

to spend much of their time fighting these primeval inhabitants. As a result, these frontier settlers became both tough fighters (ancestors of the Samurai) and increasingly independent.

For the time being, however, a powerful landed family, the Fujiwara, was able to maintain effective control over both the countryside and the emperors, through whom they ruled. They used the power that came from their extensive landed estates and exercised a skillful diplomacy of playing one faction off against another to control the nobles in the countryside. Their influence over the emperors and the government came from their ability to marry their daughters into the imperial family. By this time, the emperors were also so burdened by their ritual duties that it was increasingly difficult for them to exercise real power. Thus the custom of indirect rule, a dominant feature of Japanese history, became firmly entrenched during the centuries of Fujiwara influence.

Thanks to the peace and security provided by the Fujiwara, a handful of idle nobles in Heiankyo were able to participate in the brilliant, if somewhat artificial and inbred, culture that court life offered. Much like the French nobles at Louis XIV's court at Versailles, these nobles engaged in activities where manners, taste, and fashion counted for more in gaining status than did accomplishing anything more substantial. Careers rose and fell on the basis of the choice of colors for clothes and stationary or the proper phrasing in a poem. Long hair, blackened teeth, and eyebrows that were shaved and repainted higher on the forehead were the marks of beauty for women. A continuous round of love affairs, cuckoo viewing expeditions, and winding water banquets, where men would drink from floating cups of wine and then compose poems, occupied their time.

Our best source for getting the flavor of this court life comes from the pen of a woman, Lady Murasaki, who wrote one of the greatest works of Japanese literature, *The Tale of Genji*, whose title character spends his life in search of true love. Interestingly, women at court tended to write the

best literature since, unlike men who had to concern themselves with the precise calligraphy of the difficult Chinese writing system, they could use the more phonetic Kana script. As artificial as much of court life at Heiankyo may have been, it did have a profound effect on later Japanese tastes in such things as art and poetry.

Despite the positive influences of this court culture, it had several factors working against its continued existence. For one thing, it was cut off from the realities of mainstream society and its powerbase in the countryside. Also, the Taika reforms and Taiho Law Code were meeting with growing resistance from both nobles and peasants. Along these lines, the peasants' practice of commending their lands to local nobles and monasteries to avoid government taxes seriously cut into government revenues. As a result, the central government's power and the influence of the Fujiwara family in particular declined. This led to the rising power of the provincial warlords, which further accelerated the decline of the government, and so on. The resulting turmoil triggered a civil war between the two most powerful noble clans, the Taira and Minamoto, both of whom were originally minor offshoots of the imperial family who had gone to the provinces to make their fortunes. In the end, the Minamoto, who had the backing of the shadowy emperors in Heiankyo, won the civil war and the title of *Sei-tai-shogun*, meaning "barbarian suppressing generalissimo". The shortened version of this title, *shogun*, would be the one that most effective rulers of Japan would carry until 1868, ruling indirectly through the emperors who still carried on as ceremonial figureheads.

The Kamakura Shogunate and rise of the samurai (1185-1333). As the term shogun suggests, the Kamakura Shogunate that the Minamoto established was in essence a form of military rule. This contrasted sharply with the highly cultured but non-military regime that preceded it in Heiankyo, and was referred to as the *bakufu* ("tent government") to reflect this military nature. Gradually, the shoguns replaced the formal government centered in Heiankyo with a strongly run feudal administration

that rewarded their followers with income from estates and offices in the provinces. In 1221, a retired emperor who was resentful of this erosion of the central government's power rebelled in what was known as the Shokyu War. The shoguns easily defeated this uprising, which allowed them to extend their feudal government all across Japan.

Feudal rule in Japan was very similar to its counterpart in Western Europe at the time. This was especially true of the warrior class that served as the backbone of the feudal order, known as the *bushi* ("warriors") or *samurai* ("those who serve"). Much like the European knights who were descended mainly from the Germanic invaders who had overthrown the Roman Empire, the samurai were largely descendants of the old provincial uji aristocracy, each group inheriting its military traditions from its respective ancestors. Both groups were an elite aristocracy, since the arms and armor needed to fight were too expensive for most people. Both groups also fought primarily from horseback in a series of individual encounters that often required the exchange of courtesies that befitted warriors of an elite class. Opposing samurai would greet each other with their respective genealogies to ensure they had worthy opponents, compliment their defeated opponents' courage afterwards, and even burn incense in their own helmets so their heads would smell good if they were decapitated (a common practice in samurai combat, largely to prove one's victory).

The Samurai code of honor, later known as *Bushido* ("Way of the Warrior"), demanded selfless loyalty to one's lord. Much like in Western Europe, the lord-vassal relationship was a reciprocal one, where the lord gave his vassal protection and income from land or an office in return for lifelong service. However, in times of turmoil when the law of the jungle prevailed, many samurai would quickly change loyalties according to the shifting fortunes of war and politics. Samurai were also expected to display unflinching bravery in combat and bear incredible hardships without so much as complaining. Even to feel pain and hunger, let alone show or express it was considered a dishonor.

Such values tended to breed a certain callousness for human suffering and disregard for human life which later shocked Westerners when they came into contact with Japan.

Many of the same virtues were expected of samurai women, who were taught to repress their feelings, ignore suffering, loyally serve their husbands, and in some cases to handle weapons. Women handled household affairs, including money, which was considered beneath a warrior's dignity. Even today, Japanese women typically handle family finances, probably deriving from this custom. At first, a samurai woman could inherit her husband's property and take charge of her family affairs and deceased husbands' duties to his lord. But, as time went on and warfare became more chronic, women's property rights declined and they found themselves reduced to an increasingly inferior position in society.

Japanese arms, armor, and techniques of combat were quite different from their counterparts in Western Europe. Unlike European knights who used the lance as their primary weapon, the samurai relied primarily on the bow and their splendid curved swords, probably the finest crafted blades anywhere. As a result, the samurai's sword became the material focus of his honor, and a whole tradition and mythology grew up around both Japanese sword making and their swords. In contrast to the heavy plate armor which evolved in Western Europe, samurai armor was made up of thin strips of steel held together by brightly colored threads, making it much lighter and more flexible, while still providing a good deal of protection.

The strong rule established by Minamoto Yoritomo continued under his widow, Masa-ko, and her father, Hojo Tokimasa (1138-1215). Afterwards, the Hojo clan established a regency (1205-1333) that controlled the shoguns who in turn were supposedly running Japan in the name of the emperors. The Hojo Regency ruled Japan with a firm and somewhat just hand. In 1232, it established a guideline for jurists known as the Jōei Code. Magistrates were expected to find and

carefully weigh evidence in trials. (If that failed, they would then look for some evil omens, such as nosebleeds, choking, or being wet upon by a crow or a kite) to decide the case. Society was divided into three classes (samurai, commoners, and slaves), but did not always give the upper classes better treatment. Women's status was still relatively high. They inherited land, administered offices, and even led troops into battle. One of them, Masa-ko who was Minamoto Yoritomo's widow, even acted as the power behind the throne after her husband's death.

The Hojo Regency saw two problems arise that would bring about their eventual fall. First of all, the peace and prosperity it brought encouraged the rise of a middle class. Although the samurai looked with disdain upon people so concerned with money, prosperous times did influence them to imitate the more elegant and expensive lifestyles carried on at court. At the same time, the rising money economy triggered rising prices. As in Western Europe, this inflation hurt the samurai, especially the poorer ones who, besides being on static fixed incomes from lands and offices, were also not very good at handling money. As a result, many samurai found themselves in difficulties, some of them becoming unattached and footloose bandit samurai known as *ronin* who would add to Japan's troubles in the future.

The second problem came in 1274 when the Mongol ruler of China, Kublai Khan, launched his first invasion of Japan. Although this was driven back by a typhoon, the Mongols returned in 1281 with a much larger force of some 140,000 men. Despite the Mongols' numbers and use of such weapons as catapults that fired explosive projectiles, the samurai fought furiously to repel the invaders. However, once again, it was the force of nature in the form of a typhoon that decided the issue by wrecking much of the Mongol fleet and saving Japan. The Japanese called these typhoons *kamikaze* ("divine winds"), feeling that Japan was specially protected by the gods.

The Mongol invasions had forced the Japanese to band together as never before in the common

defense of their nation. However, the cost of fighting the invaders had been a tremendous burden for the Hojo government. It had also led many samurai to expect rewards from the government for their efforts. Unfortunately, since the Hojos had gained no new lands or plunder from these wars and could not meet samurai expectations of rewards, they lost many of their followers' support. Therefore, because of both economic strains and dissatisfaction among many samurai, the Hojo Regency and Kamakura Shogunate gave way to the weak rule of the Ashikaga Shogunate (1338-1573). The government's weakness allowed local lords, known as *daimyo*, to assert their independence. Eventually, Japan was split into some 60 virtually independent states whose daimyos disrupted the public peace with their private wars.

Japan's First Capital, Heian-Kyo



Daibutsu temple, the world's largest wooden building was built in Nara, Japan's first capital until 794 when the government moved to Heian-Kyo.

***Establishing a permanent capital* was hindered by the fact that it was considered a ritual impurity every time an emperor died, so they had to keep moving the court until some way was found around this conundrum.**

***Heian-Kyo* means "Capital of Eternal Tranquility". Instead of heavy fortifications it was protected by forests or mountains to the east, west, and north, while the Yodo River provided transportation for supplies into the city. More than anything, Heian-Kyo's sacred nature helped protect it from attack during this period.**



The original Heian-era imperial residence, built when the capital was moved from Nara in 794.

Like the Chinese capital at Chang' an, Heian Kyo was laid out in a rectangular grid with the imperial palace in the North at the end of the main avenue, which was 100 meters wide. Other broad avenues where the nobles lived were flanked by trees. While the city had a population of 100,000, the court itself only contained about 3,000 people who maintained a highly inbred and insulated culture. Adding to this isolation was the decline of the Tang Dynasty after c.750 C.E., which cut Japan's contact with China to a trickle. Therefore, any Japanese nobles interested in culture tended to concentrate at court where the Fujiwara could watch them.



***The Sanjuusan Gen-do temple* at Kyoto has 33 images of Buddha along with 1001 statues of other protective Buddhist deities.**

***The Chinese court rank system* was closely copied by the Japanese, with the top five ranks allowed to wear special clothes and enter the emperor's audience chamber. Rank also provided court officials income from peasant estates, allowing them to stay at court.**

***The monks on Mt. Hiei* outside Heian-Kyo were especially powerful and troublesome, deriving**

their power from the fact that Mt. Hiei was north-east of the imperial city, the direction from which it was believed evil spirits attack cities. Therefore, Mt. Hiei was considered sacred for its role in protecting the capital.

Scaring demons away at court was the job of palace guards who periodically twanged their bowstrings.

Court Life at Heian-Kyo



Thanks to the peace and security provided by the Fujiwara, a handful of idle nobles in Heian-kyo were able to participate in the brilliant, if somewhat artificial and inbred, culture that court life offered. Much like the French nobles at Louis XIV's court at Versailles, these nobles engaged in activities where manners, taste, and fashion counted for more in gaining status than did accomplishing anything more substantial. Careers rose and fell on the basis of the choice of colors for clothes and stationary or the proper phrasing in a poem. A continuous round of love affairs, cuckoo viewing expeditions, and winding water banquets, where men would drink from floating cups of wine and then compose poems, occupied their time.

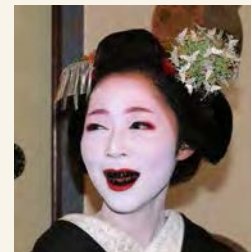
Heian fashion. During the Heian period fashion counted for everything. Women shaved their eyebrows and redrew them higher on their foreheads. Long hair was highly valued, especially if it were longer than woman's height. Both sexes chose to have their faces painted white. A woman would typically wear five layers of silk robes, although it might run up to 30. However, if she got a shade just slightly wrong,

she could be mercilessly subjected to humiliation and gossip.



Among men it was fashionable to wear a small patch of beard on their chins and headgear that made them look like quails. Men made perfume blending a fine art so that one could identify a man in a dark room by his scent. They also cultivated good manners, such as knocking on a lady's door by scratching it with their pinky fingers.

Black teeth. Among the stranger practices at the Japanese court was the custom of staining one's teeth black with a mixture of oxidized iron shavings melted in vinegar and powdered gallnuts. The thought was that white teeth look glaring and hideous. During the Muromachi period (1336-1568) lower classes adopted this practice, starting from the age of puberty. In the Edo period (1603-1868), married women were required to dye their teeth black.



One of the more popular court entertainments was the winding water banquet where one who came upon a floating cup of wine had to take a sip and compose a poem on the spot. Another popular event was viewing the harvest moon

from a dragon boat, a ceremony that is still carried on today.



Other leisure activities were cherry blossom viewing tours, cuckoo viewing, and Chrysanthemum viewing festivals where participants would write poems and then drink wine steeped in Chrysanthemums. Heian women rarely went outdoors, although in winter they were occasionally allowed to go out and roll in the snow.

Japanese writing has used three different scripts. *Hiragana* is one of two Japanese syllabaries termed as *kana*, the other being *katakana*. *Kanji* are Chinese characters used to write certain parts of the Japanese language. They have different semantic value in Japanese than they have in Chinese, but phonetically they are the same. There are literally thousands of kanji characters.

Men at court wrote the more difficult kanji, made all the more challenging by the emphasis put on calligraphy. Women wrote in the simpler kana script, sometimes referred to as women's writing. However, this freed women to write more, and most of what we know about Japanese court life was written by women.

The Tale of Genji. The most notable example of "women's writing" is Lady Murasaki Shikibu's *The Tale of Genji*, an epic romance about the pursuit of love. While it spans several generations, it mainly concerns the title character's search for love, even with common women and a 10-year old girl whom he raises and marries as his fourth wife. *The Tale of Genji* has remained one of the most popular works of

Japanese literature down through the centuries, inspiring numerous commentaries, one of which written in the 1200's was 54 volumes in length.

Courtship and romance at Heian-Kyo. Since young women lived secluded lives, the only way for a man to know whom he might want to court was to spy on women in their private chambers. As a result, such peeping toms (below) were tolerated in Japanese society.



The preliminary move in courting a woman was to write a poem, using just the right syllables and paper with appropriate color and folding. The lady and her confidants would carefully scrutinize such notes to decipher their true intentions and seriousness.

If interested, the lady would send a messenger with a reply. Such messengers often played a vital role in getting two lovers together. Once together, a couple might think they were sharing an evening alone, but the paper-thin walls of Japanese homes must have made it possible for outsiders to eavesdrop, thus making true privacy nearly impossible to attain.

Japanese Warrior Monks



Ironically, some of the most troublesome elements in Japanese society were Buddhist monks. Their preferred weapon was the *niginata*, a curved blade at the end of a long pole. Unlike the West, where there were constant doctrinal disputes, monks in Japan mainly fought over the appointments of leaders of their monasteries. Rioting warrior monks, known as *sohei*, would demonstrate in the streets in support of their leader. To further intimidate the populace, they might bring out their *mikoshi*, a sacred image rarely seen in public.

Sohei would even exercise spiritual blackmail where they would bring a mikoshi and set it in front of an enemy and then go home. The enemy, fearing the god's wrath, especially if anything happened to its image, would beg for its removal and agree to the soheis' terms.

Over time, warrior monks became involved in broader political struggles. In 1180, during the civil war between the Taira and Minamoto clans, a band of them even burned the old capital city, Nara in 1180.



The Gempei War (1180-85) and Foundation of the Shogunate



Minamoto & Taira forces clash in a battle offshore.

***Six degrees of separation.* During the Heian Era, minor branches of imperial family had to move to frontiers after six generations at court. Two such branches, which then built up independent power bases in the countryside were the Taira and Minamoto clans.**

During this period of turmoil, roads and seas were plagued by bandits and pirates. Not even the capital, Heian-Kyo, was safe, being beset with looting and the burning of homes, while dead women and children remained unburied in the streets. At one point, the Taira sacked Kyoto and captured the Minamoto leader whose own officer killed him before the Taira could take him alive. Then he killed himself.

Initially, the Taira forces won a great victory, causing the Minamoto to enlist the aid of the powerful Takeda clan. The Takeda launched a surprise morning attack against the Taira who were hung over from drinking too much sake the previous evening. Despite this victory, the Taira won the first round of the Gempei War and seized power, running the government much like the Fujiwara had, intermarrying into the imperial family and succumbing to the soft life at court. As a result, they lost touch with the tougher provincial nobles, allowing the Minamoto to regroup for a comeback and start a new civil war (1180-85). In the end the

Minamoto won a decisive victory in a naval battle on an inland sea, allowing them to take control of Japan.



Minamoto no Yoritomo, winner of the Gempei War and Japan's first Shogun

The toughness of Japanese warriors is seen in the story of a 16-year old fighting for the Minamoto who was shot in eye who would not fall until he had killed his opponent. When a colleague put his foot on boy's face to help pull out the arrow, the boy threatened to kill him for the dishonor of putting his foot on his face.

The Way of the Warrior



The Kamakura Shogunate and rise of the samurai (1185-1333). As the term shogun suggests, the Kamakura Shogunate that the Minamoto established was in essence a form of military rule. This contrasted sharply with the highly cultured but non-military regime that preceded it in Heian-kyo, and was referred to as the *bakufu* ("tent government") to reflect this military nature. Gradually, the shoguns replaced the formal government centered in Heian-kyo with a strongly run feudal administration that rewarded their samurai followers with income from estates and offices in the provinces.

Bakufu, often translated as "tent government", was originally a screen set up in camp where a general could confer with his officers.

Shogun, like the old Roman office of dictator, was originally given just for the duration of a particular crisis.

Feudal rule in Japan was very similar to its counterpart in Western Europe at the time. This was especially true of the warrior class that served as the backbone of the feudal order, known as the *bushi* ("warriors") or *samurai* ("those who serve"). Much like the European knights who were descended mainly from the Germanic invaders who had overthrown the Roman Empire, the samurai were largely descendants of the old provincial *uji* aristocracy, each group inheriting its military traditions from its respective ancestors. Both groups were an elite aristocracy, since the arms and armor needed to fight were too expensive for most people. Both groups also fought primarily from horseback in a series of individual encounters that often required the exchange of courtesies that befitted warriors of an elite class.

Buhshido ("The Way of the Warrior") demanded an almost religious commitment to military life. Much like chivalry, its counterpart in the West, it evolved from simple feudal loyalties into a powerful and elaborate ethical code, which is still important in Japan today.

"A samurai should live & die sword in hand...To be brave & warlike must be his invincible condition."

"When his stomach is empty, it is a disgrace to feel hungry."

Much like in Western Europe, the lord-vassal relationship was a reciprocal one, where the lord gave his vassal protection and income from land or an office in return for lifelong service. However, in times of turmoil when the law of the jungle prevailed, many samurai would quickly

change loyalties according to the shifting fortunes of war and politics. Samurai were also expected to display unflinching bravery in combat and bear incredible hardships without so much as complaining. Even to feel pain and hunger, let alone show or express it was considered a dishonor. Such values tended to breed a certain callousness for human suffering and disregard for human life which later shocked Westerners when they came into contact with Japan.

Service to one's lord was supposedly more important than loyalty to family or fear of death itself. However, many samurai were more opportunistic than legends would like us to believe, especially in times of turmoil. Similarly, as times became more turbulent, old rules of etiquette, such as when the Taira and Minamoto would initially agree to a site for battle, tended to give way to ambushes and even aiming to kill an enemy's horse.

Seppuku (AKA *hari-kiri*) was ritual suicide by a samurai, introduced in the 1200's. Seppuku might be ordered for a violation of the samurai code of conduct or done voluntarily at a lord's death, for feeling disgraced, to atone for mistakes or transgressions, to protest unjust actions or to dissuade lord from certain course of actions. After the defeat of the Hojo's, thousands of loyal samurai killed themselves. Similar actions also took place during World War II.

Seppuku was done by slitting across one's stomach with a knife, a particularly painful (but honorable) way to go. Consequently there often would be someone holding a sword with which to behead the subject right after he slit his stomach, thus making for a quick and relatively painless death.

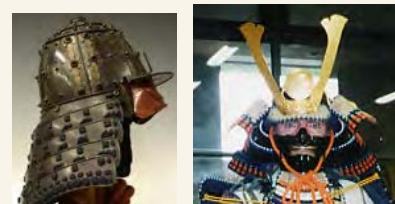


Before committing *seppuku*, a Samurai would typically compose a suicide poem by which to be remembered.

In the Tokugawa period *seppuku* became so common it had to be banned in 1663 to keep the samurai class from killing itself off.

Samurai arms and armor. The samurai were descended from horse archers who fought from small Mongol ponies. Therefore they developed light flexible armor, largely consisting of scales (lamellae) of lacquered iron laced together with colorful silk cord (top picture). This made the armor as flexible as mail, but much tougher, and also light enough (c.25 pounds) for a samurai to leap through rice paddies or over castle walls and, at the end of the day, be able to fold it up and store it in a box.

Because of their custom of decapitating slain enemies, samurai wanted especially strong head and neck armor. Therefore their helmets were made of riveted iron, with special neck protectors and a metal facemask to scare their enemies.



Left: a samurai helmet showing the reinforced neck. Right: The author in a replica of a samurai helmet & mask

The samurai's sword was the material focus of his honor, and losing one's sword was ultimate

dishonor. A newborn was presented with a sword in the crib, slept with it all his life, and was buried with it. Japanese swords were the best of their day. The most treasured swords were battle tested heirlooms, and were thought to be magical with lives of their own, giving rise to a host of legends about them and sword smiths.

Sword-making. The technique of sword-making revolved around the dilemma of making them either hard but brittle or flexible but soft. Sword smiths came up with an ingenious combination of the two by hammering out a sandwich of hard & soft steels, folding it over and repeating this process over 20 times. This created a blade with over a million layers, giving it a hard outer cutting edge and flexible inner blade.

The final step was to cover the sword's outer edge with clay and heat it at dawn until the sword smith could see it glow and then, reciting a prayer, plunge it into water. The exposed edge cooled instantly while the inner edge cooled slowly producing a blade that was both extremely hard and durable.

New swords were tested on bundles of straw, corpses, and even condemned men. One such convict said he'd have swallowed stones if he'd known his fate.

Japanese sword smiths would sometimes attain legendary status. Two of the most famous were the rival sword smiths, Muramasa and Musamune, who had a contest to see whose sword was sharper by sticking their swords up in a stream. Muramasa's sword cut all the leaves, but the leaves avoided Musamune's sword, so he won.

The Japanese bow was the samurai's other main weapon. It took arrows 4 feet long and had a range of 45-110 yards. Minamoto bows were supposedly so strong it took 3-5 men to stretch them. Unlike most bows, the Japanese bow was held below the center, probably to make it easier

to fire from horseback. Such a bow took years to master, and often became a central part of the training of Zen monks.



Combat. According to custom and tradition, before battle, a samurai would announce his name, ancestry and previous deeds to ensure he fought a worthy opponent. However as warfare intensified in Japan, especially with the introduction of firearms, a samurai often didn't have the time to announce his lineage before enemy musketeers shot him. Thus for quick identification of soldiers on the battlefield, they attached *sashimono* (Japanese for banner) to their backs.

Warriors faced each other on horseback, first shooting between 20 and 30 arrows at each other. Once their arrows were depleted they would charge on horseback with their swords. However, since it was hard to kill an opponent from horseback with one's sword, they would wrestle each other to the ground and try to slit their opponent's throat with a dagger.

"...to cut into the enemy all alone, and die unseen by any witnesses is a futile action. This is called a 'dog's death'..."

Witnesses of deeds of battle were required if one were to be rewarded, so after combat the victorious samurai would compliment his slain foe for his courage and then decapitate him to serve as proof of his deeds. Before battle some samurai would scent their helmets with incense so their heads would smell nice if they fell in battle.

The head-viewing ceremony was an important part of a samurai's life, since it confirmed his

deeds in battle and qualified him for a reward from his lord. Before the ceremony the victorious samurai's women relatives would clean, comb, and scent (with incense) the heads being presented. They also applied cosmetics to make them look alive, tag them with paper identifying the slain and victorious warriors, and mount them on spiked boards for presenting.

Samurai women. Many of the same virtues required of samurai men were also expected of their women, who were taught to repress their feelings, ignore suffering, loyally serve their husbands, and in some cases to handle weapons. Women handled household affairs, including money, which was considered beneath a warrior's dignity. Even today, Japanese women typically handle family finances, probably deriving from this custom. At first, a samurai woman could inherit her husband's property and take charge of her family affairs and deceased husbands' duties to his lord. But, as time went on and warfare became more chronic, women's property rights declined and they found themselves reduced to an increasingly inferior position in society.

Jigai was the female samurai's own version of suicide. Their method was to cut the jugular vein for a quick and relatively painless death, usually to avoid capture by enemies. One other feature of *jigai* was tying the legs together to ensure the woman maintained a dignified posture in death.



The Mongol Invasions



The typhoon that seemed to miraculously come up to destroy the Mongol invasion fleet in 1281 was dubbed *kamikaze*, meaning (divine wind). Later Japanese use of this term for suicide pilots in World War II led to the mistranslation of *kamikaze* to mean suicide.

The first Mongol invasion (1274) was triggered by Japanese refusal to bow to a veiled threat from Kublai Khan and killed his ambassador. An expedition of 15-30,000 Mongols first landed at Tsushima where the small garrisons fought and died to a man. When the Mongols moved to Kyushu, the local samurai, rather than waiting for reinforcements, threw themselves furiously at Mongols in one on one combat.

Not having fought a major war in a century, the samurai fought with the old ideas of challenging their foes and reciting their pedigrees. But first they had to get through the hail of Mongol arrows and firebombs launched from catapults. However, after a bloody but indecisive battle at Hakata, the Mongols returned to their ships, which were then wrecked by a storm.

The second Mongol invasion (1281) was the largest seaborne invasion in history, bringing and estimated 150,000 men. Nevertheless, the Samurai once again recklessly assaulted the Mongols and drove the first wave back from beach, while the smaller Japanese ships wreaked havoc on Mongol fleet. Faced with overwhelming numbers, the samurai sent a message for the imperial family to pray. Soon after this, a 2-day typhoon blew up and wrecked the Mongol fleet. As a result this raised the

status of the emperor, who naturally claimed credit for this seeming miracle

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CHAOS AND REUNIFICATION: JAPAN TO THE RISE OF THE TOKUGAWA SHOGUNATE (1338-1639)

The breakdown of centralized rule and the rise of the Daimyo. The Ashikaga shoguns who took over in 1338 found themselves faced with many of the same problems that had led to the downfall of their Hojo predecessors, namely resistance from outlying regions of Japan and continuing turmoil caused by bandit samurai (ronin). In addition, two other things weakened the Ashikaga government. First of all, the emperor Godaigo, rather than remaining a shadowy figurehead, challenged the Ashikagas for power. Although he was defeated, his revolt further weakened the shoguns. Secondly, the Ashikagas engaged in expensive building projects that cut into their already diminishing tax and estate revenues. As a result, many constables, the shoguns' officials in the provinces, started assuming more power locally, further weakening the central government.

This triggered revolts and the assassination of the shogun in 1441. A regency of four competing houses followed, which only led to more feuding and the Onin War (1467-77). Although a settlement was patched up, the damage was already done, leading to a period known as the Age of Warring States, dominated by new provincial warlords known as *daimyo*. The turmoil of the age created a good deal of social upheaval, which allowed many ambitious men of lower class origins to rise to positions of power. (Among these would be Toyotomi Hideyoshi, a peasant who would eventually unify most of Japan under his rule.) Contributing to the era's social mobility was the introduction of European muskets in 1542. This led to growing reliance on peasants for the daimyos' armies, some of which had three peasants in the ranks for every samurai. Another impact of the age's upheaval was women's declining status, largely the result of wider enforcement of primogeniture in order to prevent the splitting of family estates in these dangerous times. Therefore, women lost most of their property rights and became little more than pawns in the power politics of the day.

The roughly 142 daimyo who controlled Japan at this time were virtually independent rulers who fought each other viciously for survival and power. For about a century, rival daimyos plundered towns,

devastated the countryside, and massacred innocent civilians. However, many or most daimyo, seeing that a healthy society was essential to their power, closely supervised their estates and encouraged economic improvements, especially through public works such as irrigation projects. This helped create more settled conditions, which had three major results. First of all, much like in Western Europe, the more settled conditions and improvements in agriculture led to the rise of towns. These generally started as markets under the protection of the daimyo's castle walls and then grew into full-fledged towns with a middle class of moneylenders using both cash and credit.

Second, the more settled conditions and a desire for trade combined with a growing problem with Japanese pirates, known as wako, made Japan more open to trade and relations with Portuguese explorers who were then first entering East Asian waters. This was because wako raids on the mainland had caused the Ming dynasty in China to cut trade relations with Japan. The Japanese, who were especially anxious to get silk from China, saw the Portuguese, who could trade in China, as useful middlemen to that end. In addition to trade, two other very different things came into Japan with the Portuguese. One was the manufacture and use of firearms in warfare, which spread rapidly across Japan. The other influence was Christianity, which was spread by Jesuit missionaries who displayed great self discipline and concentrated on the upper classes, both of which features the Japanese samurai liked. As a result, many samurai and even daimyos converted to Christianity. Both firearms and Christianity would later lead to growing stresses in Japanese society.

Zen and Amida Buddhism. Another effect of the more settled conditions then prevailing was a cultural flowering in Japan. This largely centered on a new Buddhist sect known as Zen. Up to this point, the most popular form of Buddhism was Amida, or the Pure Land, sect. Unlike Theravada Buddhism, whose members thought that it took personal effort to attain Nirvana through the extinction of the self (which they felt was an illusion anyway), Amida Buddhism's followers saw Buddha and the Bodhisattva (other mortals who had gained enlightenment) as deities who would help them reach a paradise to the West. While this paradise was originally meant to be merely a sort of

halfway spot where people could attain final enlightenment, many people saw it as an end in itself.

Amida Buddhism came to resemble Christianity in several ways. For one thing, it based salvation on God's grace. Second, it conceived of Buddha as something of a Trinity in the doctrine of the Three Buddhas: the body of Essence, who was the primordial Buddha pervading the universe, the Created Body, which was the historical Buddha much like Christ, and the Body of Bliss which takes the form of many Buddhas. The most important of these is Amida Buddha (Immeasurable Glory) who dwells in the Western paradise. Also, like Christianity, Amida Buddhism concerned itself with good works and charity. By the fifteenth century it was the most popular form of Buddhism in Japan, and it has kept that distinction to this day.

However, by this time another form of Buddhism, Zen (Chinese *Chan*), was becoming especially popular with the Samurai. Zen, which had reached Japan from China in the sixth century, emphasized reliance on one's own efforts rather than the grace of Buddha to attain enlightenment. As a result, it never achieved the popularity of Amida Buddhism. The basic idea of Zen is that there is an underlying unity tying everything together; but we are trapped in our daily perceptions by the illusion of a distinction between ourselves and the world around us. The goal of Zen is to be able to perceive the reality of that unity and extinguish our egos that create the illusion that separates us from all around us. This is not done through rational means, since rational thought is the product of minds that still perceive a subjective and objective world where things are separate from one another. Rather, Zen strives for enlightenment (*satori*) through an intuitive grasp by means of meditation and concentration.

One primary techniques to this end is the *koan*, which, from the rational point of view, is an illogical riddle or theme meant to break the mind's customary thinking and "derail" it from its normal rational patterns of thought. The strain that the koan puts on the conscious mind should liberate the subconscious and break down the barriers between the two, thus leading to enlightenment. Another technique is *zazen*, a strict meditation using proper posture, breath, and concentration that stills the

mind, controls the emotions, and strengthens the will. Unlike the koan, which through its "illogic" suddenly shakes one into enlightenment, *zazen* generally attains a more gradual enlightenment. However, *zazen* was more popular with the samurai, since its emphasis on discipline helped them develop their military skills, while its ideas on life and death (which in Zen are one and the same) helped them face death in battle with more resolve. Interestingly, such martial arts as swordsmanship and archery came to be closely associated with Zen, a far cry from Buddha's original intentions.

Zen, with its emphasis on harmony, purity, tranquility, and simplicity, had a profound impact on several aspects of Japanese culture during this time. One was the tea ceremony, which had also been imported from China several centuries earlier. This ritual, where one person served tea to another, took place in a simple hut and emphasized simplicity through the precise arrangement of objects and the equally precise motions in the ceremony itself. Ceramics and flower arranging, which were inherent parts of the tea ceremony, also became important aspects of Japanese culture at this time. Zen also influenced the development of Japanese gardens, and in particular rock gardens of raked gravel (to represent the tranquility of the sea) interspersed with larger rocks arranged in precise and asymmetrical patterns. The beauty and simplicity of these gardens were designed to help one in meditation.

The restoration of order and unity by Oda Nobunaga and Toyotomi Hideyoshi (1551-98). Although these various cultural advances were not of a political nature, they did help provide Japan with a common culture that promoted the unity of Japan as a whole. At the same time, the rising towns and middle class along with the spread of firearms and Christianity were available for anyone with the daring and foresight to exploit them in the reunification of Japan. That person, Oda Nobunaga, came to power in a relatively obscure but strategically placed province of Owari in 1551. He and his successors, Toyotomi Hideyoshi and Ieyasu Tokugawa, would restore unity and order to Japan.

Nobunaga was a cruel and ruthless tyrant who once had a maid executed for leaving a fruit stem on the floor. However, he was a skillful general and ruler who successfully exploited the forces of the day to

his advantage. He was a leader among Japanese daimyo in adapting firearms to his army and using them to great effect. He also built his economy by building roads, abolishing tolls, and establishing open markets and a standard coinage. One other thing Nobunaga did was favor the Christians against the militant Buddhist monasteries that he especially disliked. Success bred success for Nobunaga, since each victory attracted more followers to his standard, which led to more victories and so on. By his death in 1582, Nobunaga controlled 32 of Japan's 66 provinces. It was left to his successor, Toyotomi Hideyoshi, to nearly complete Japan's unification.

Hideyoshi was originally a peasant who had risen through the ranks to become one of Nobunaga's most trusted generals. Like Nobunaga, he was also a superior general, being both bold and resolute in action. Although not quite as cruel as his predecessor, he could still be ruthless as he avenged Nobunaga's death, eliminated any rival generals who might make a bid for power, and got Nobunaga's lands under his control. By 1590, Hideyoshi had unified all of Japan except for the lands of Ieyasu Tokugawa with whom he concluded a treaty that lasted until Hideyoshi's death in 1598. Hideyoshi declined to assume the title of shogun since he was not related by blood to the current line of shoguns.

Once Hideyoshi's power was established, he followed three policies that would profoundly affect Japan's future course of development. For one thing, he launched two invasions of Korea (1592 and 1597). Both of these failed, largely due to the Korean navy of armored "turtle" ships that cut the Japanese army in Korea off from its homeland and forced its retreat. Despite these defeats, one can see this as part of a greater expansion of the Japanese people, going along with the spread of Japanese settlers, mercenaries, and pirates (wako) throughout East and Southeast Asia.

Secondly, despite his own peasant origins, Hideyoshi cracked down on society in an attempt to stifle the social mobility that had helped stir up so much turmoil over the past century. In an attempt to disarm the populace, Hideyoshi launched the Sword Hunt, confiscating all weapons, especially firearms, from non-nobles under the pretext of melting them down to make a statue of Buddha. He

also prevented peasants, merchants, and samurai from changing their professions or switching overlords, thus creating a rigid social structure that lasted until the mid 1800's.

Hideyoshi's third policy concerned growing tensions with European Christians, whose ability to trade with China had greatly increased their influence in Japan. As we have seen, the Japanese liked the Jesuits whose self-discipline and habit of preaching mainly to the upper classes did little to disrupt the harmony of Japanese society. However, several things about Christianity disturbed many Japanese: their meat diet (since the Japanese were mainly vegetarian), their intolerance of other religions, their slave trade which took Japanese out of their country, and the question of who Japanese Christians were more loyal to, their own rulers or the Christian God. In 1587, after one of his vassals refused to renounce Christianity, Hideyoshi decreed all Christian missionaries should leave the country. However, the decree was not strictly enforced, and missionaries just kept a low profile as they did their work. Tensions increased in 1593 with the arrival of Spanish Franciscans who raised suspicions of trying to stir up rebellion by focusing their preaching on the lower classes. A dispute over ownership of a Spanish galleon shipwrecked off the coast of Japan in 1596 led to fears of a Spanish invasion and persecution of Japanese Christians.

Hideyoshi's death in 1598 led to a power struggle which ended with the new ruler, Ieyasu Tokugawa, establishing his power and even assuming the title of shogun. During this time, problems with the Christians were put on hold. However, in 1600, Dutch Protestants arrived who told stories about their Spanish enemies that revived Japanese fears of all foreigners. As a result, Tokugawa outlawed and persecuted Christians. His successors went even further, banning virtually all foreigners from Japan by 1639. Only two Dutch ships and a handful of Chinese and Korean ships could enter Japan each year to trade. For the next two centuries, Japan would cut itself off from the rest of the world and develop on its own.

Growing Problems under the Ashikaga Shogunate



A Wako (Japanese pirate) raid is met by Chinese Ming forces (c.1600). Largely because of such raids China also cut off most of its contact with the outside world.

The Ashikaga Shogunate is also known as the Muromachi era after the district of Kyoto holding government headquarters. Just like its successor, the Tokugawas, this dynasty produced fifteen shoguns. Several inherent weaknesses plagued the Ashikagas. For one thing, they owned very little land, compared to the Tokugawas who would own one quarter of Japan's land, most of its mines, and nearly all the important towns. Also, unlike the Tokugawas, The Ashikagas had a small army of only about 350 men, forcing them to rely on alliances with other houses. In addition, they faced the dilemma of either strengthening their shugos (governors), who weren't necessarily good or loyal, thus making them a threat to the central government, or keeping them weak and thereby ruining the shogunate's power.

The Ashikagas tried to keep the nobles under control by requiring them to live at court, either in Kyoto or Kamakura, making it treason to leave without permission. These hostages brought plenty of followers, one family supplying 3000 such workers, which did supply free labor for the dynasty's building projects. The nobles' virtual captivity at court also led to a gradual fusion of the samurai with the civilian court nobles, something that would help the development of a national culture. On the other hand, so many nobles at court could also influence policy.

The Onin War (1467-77) over the shogun's successor, saw the imperial capital, Heian-kyo, become a battleground with the streets littered with corpses and cartloads of severed heads

collected as trophies. It also saw warfare changing from being ruled totally by the samurai to the growing use of peasants, called *ashigaru*. At this time daimyo started relying more on strategy instead of individual duels, organizing their ashigaru into tightly packed formations of pikemen. As a result, even low ranking soldiers could distinguish themselves at the expense of the samurai, since there was no strong central power to stop their upward mobility.

Wako, from the Chinese word for dwarves (for their small ships?), were Japanese pirates who disrupted trade throughout East and South-east Asia. Although Japanese in origin, many, if not most, were non-Japanese. Years of peace in Japan led many restless warriors to join their raids as well. Some raids had 100's of ships and penetrated 150 miles inland.



Top: Japanese wako disembark for a raid on the Korean coast in the late 1300s.

Bottom: A model of an attack by wako ships on a Korean trade vessel

Since many daimyo were providing wako protection and supplies in return for part of the loot, the Ming dynasty cut off trade with Japan and built a fleet to combat their raids. In response, the wako often turned to trading illegally for Chinese goods. However, this didn't satisfy Japan's hunger for Chinese goods, especially silk, thus leaving the door open for the Portuguese, who could trade with China, to enter Japan.

Like the Vikings in Europe, many wako settled down in areas they raided: the Philippines, Thailand, Java, Malacca Strait, Indonesia, and Indo-China. Once settled, they used a

combination of warfare, peaceful trade, and meddling in local politics to enhance their own influence.

Japanese castles. Much like in feudal Europe, Japanese warlords built castles to secure their independence. While these structures were every bit as impressive as their European counterparts in terms of military engineering, they were also aesthetically pleasing as works of architecture.

Himeji Castle (below), known as the White Heron for its appearance, is the best preserved of Japan's feudal castles. Although originally built in the 1300s, it was built in its present form by Hideyoshi Toyotomi and Tokugawa Iyasu's son-in-law between 1581 and 1601.

The overall complex of Himeji Castle (below) had 83 buildings, such as storehouses, gates, corridors, and turrets and a circumference of 2.53 miles. The highest walls of the castle are 85 feet (26 meters) tall, while the castle keep reaches a height of 152 feet (46.4 meters). It was also coated with white plaster to resist fire. Like European castles, it was built with over 1,000 loopholes for archers and musketeers, as well as "stone drop windows", angled chutes for dropping stones or boiling oil.

Bottom: A map of the overall complex of Himeji Castle with the surrounding city shows how its moats offered yet another defense layer against attackers.



Zen Koans



Since Zen taught that our ordinary rational thinking creates barriers to our seeing the unity of the universe around us, some Zen masters would try to "derail" their logical thinking by creating illogical paradoxes and riddles known as koans.

For example, a group of Zen masters would have a great time declaring that there is no such thing as Buddhism or enlightenment or anything even remotely resembling Nirvana and would set traps for one another to get them to say that such things exist. Similarly, a novice who made a respectful allusion to the Buddha would be ordered to rinse his mouth out and never utter that dirty word again. In another case, whenever he was asked the meaning of Zen, an ancient master would raise one of his fingers. Another would kick a ball, while another would slap the inquirer in the face.

One famous story involved a monk who approached a master asking him for instruction. The master asked if the monk had eaten breakfast yet. When told yes, he told him to go wash his bowl. From this the monk was enlightened as to the meaning of Zen. Below are some of the better-known koans.

- A cow passes by a window. Its head, horns, and the four legs pass by. Why did not the tail pass by?"
- What was the appearance of your face before your ancestors were born?
- What is the sound of one had clapping?
- Tang government officer: "A long time ago a man kept a goose in a bottle. It grew larger and larger until it could not get out of the bottle any more. He did not want to break the bottle, nor hurt the goose; how would you get it out?"

Master: "O Officer!"

Officer: "Yes"

Master: "There, it's out"

- **Question:** What is the meaning of Bodhidharma coming from the West?
Answer: The cypress tree in the garden.

And now my favorite Zen story:

One day, the Japanese Zen master Tanzan and a monk came across a beautiful woman unable to cross a stream. Tanzan immediately picked her up and carried her across. Some time later, as the two men were walking, the monk finally asked Tanzan how he could touch a woman and hope to maintain his purity. To which Tanzan replied: “I put her down long ago, while you are still carrying her.”

Tea Ceremony, Flower Arranging, and Rock Gardens



An example of a tea ceremony house

The tea ceremony, imported from China, was another Zen ritual. It emphasized simplicity in nature, taking place in a thatched hut with a small simple room to “foster the spirit of harmony, reverence, purity, and tranquility”. It was originally performed by samurai to honor a friend, and many of the postures and how the host holds the instruments reflect those origins. By the same token, everything about the ceremony is incredibly precise and demands being totally focused and disciplined.

The tea ceremony involved only a few guests and took several hours, leaving time for discussion, usually about something like the host’s art objects.



“Chanoyu, the Japanese tea ceremony, celebrates imperfection and variety. No two objects are ever the same. Every artifact used for the ceremony is noticed and appreciated...Do not fill the entire bowl with tea, but rather leave most of the interior to be admired while drinking.

Notice how the warm tea bowl feels in your hands. Is the surface rough, or smooth? How does the bright green tea look against the black or pink glaze? “--an ad for tea ceremony bowls I thought expressed the spirit of their simple elegance.

Ikebana, Japanese flower arranging, also fits in well with Zen, stressing the simple and understated arrangement of flowers over a full bouquet. Like Taoist art, empty space serves to accentuate everything else. Each ikebana arrangement is a world of its own, creating a simple and natural harmony between the vase, stems, and flowers in an effort to create a bit of nature in its irregular purity. In ikebana quality is preferred over quantity, asymmetry over symmetry, flower buds over full-blown flowers. Even a single branch in a vase counts as a total ikebana arrangement.



Zen rock gardens. As with the tea ceremony and ikebana, zen rock gardens strive for an asymmetrical simplicity that evokes a calm peaceful sea (represented by white sand or rocks) and rock “islands” scattered about in a seemingly random way.



Oda Nobunaga and the New Warfare



Not a man to be trifled with. When Nobunaga captured a man who had shot at him many years earlier, he buried him up to his head and sawed it off. In a similar vein, he had some enemies publicly bound, leaving a bamboo saw for passersby to take one or two swipes, slowly torturing his victims to death. Nobunaga especially hated Buddhist monks, once burning 150 of them for performing funeral services for a departed clan head. Not surprisingly, the monks reciprocated Nobunaga's hostility. It would take Oda 11 years to break the power of one especially intransigent group of warrior monks known as Ikko-ikki.

Besides waging war, Oda Nobunaga also encouraged merchants and trade with open markets, making them tax exempt, abolishing tolls and forced labor, and curbing the guilds' monopolies. He encouraged the building of ships and roads, tried to set up a standard coinage, and favored contact with the outside world through Christian missionaries. Below: a model of a Japanese town from this period



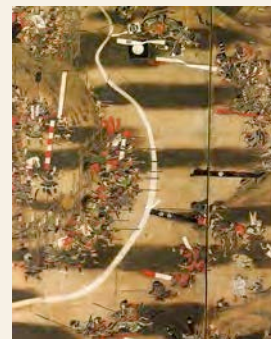
The new warfare. Firearms first entered Japan in 1542 by way of Portuguese merchants. Within six months, the ever-inventive Japanese were making their own guns and improving upon them, notably adding a covering to keep a muskets and its charge of powder dry, so it could even be fired when it was raining.



Since reloading early firearms took so long, the Japanese, as in Europe, created blocks of pikemen to guard the musketeers between volleys. This further enhanced the status of peasants needed to fill the ranks of these armies, an issue Hideyoshi Toyotomi would deal with later.

As with any new technology, it took a while to adapt old behaviors to muskets. Early musket training incorporated the highly formalized and rigid postures and motions that samurai used in hand-to-hand combat. Eventually, they realized the uselessness of this for muskets and adapted a more efficient drill. However, samurai continued to announce their lineage before combat, while the lowborn *ashigaru* on the other side would just shoot them.

Oda Nobunaga was the first daimyo to use firearms as an integral part of his army. At the battle of Nagashino in 1575, his 3,000 arquebusiers (musketeers) blunted the charge of the Takeda samurai cavalry, leaving them open to a counterattack by his own samurai.



Japanese castles, much as in medieval Europe, had evolved from wooden stockades to highly complex centers of power that could tie down besieging armies and fleets of ironclad gunships for years. For example, Osaka castle, the final stronghold of the Ikko-ikki, had a complex of 51 fortified outposts. It took four years for Oda Nobunaga to reduce this huge fortress. When it finally surrendered, with uncharacteristic generosity, he let the surviving defenders go.

Years later, Oda's successor, Toyotomi Hideyoshi, would build the present castle, Japan's largest, on the site of the old one.

In 1560 Oda faced his first big test when a powerful neighbor, Imagawa, led 25,000 men through his province of Owari on his way to attack Kyoto. Nobunaga ambushed Imagawa with only 3000 men in a narrow defile during a blinding rain. This triggered a stampede and the beheading of Imagawa by one of his own officers, Tokugawa Ieyasu. This also led to a rush of independent samurai to Oda's standard.

Nobunaga's death. Mitsuhide, a former enemy, had come over to Nobunaga's side. During a siege conducted as Nobunaga's ally, Mitsuhide had sent his mother to the enemy fortress as a hostage to get them to come out and negotiate surrender. However, when they came out, Nobunaga crucified them. Naturally, Mitsuhide's mother was killed in revenge, which embittered her son. Some time later, Mitsuhide betrayed Nobunaga and marched against him instead of for him at a critical moment. Nobunaga was taken off guard and trapped in a temple where he committed suicide.

The Meeting of Cultures



The Jesuits landing in Japan

Through European eyes: Jesuit views of the Japanese. In 1549, seven years after the first Portuguese landing, Jesuit missionaries arrived in Japan and made several astute observations about their hosts. They found them soft spoken and friendlier than the haughty Chinese and admired their reverence for dead ancestors and table manners, which they learned the importance of at all levels. They admired the simplicity and elegance of the tea ceremony and were amazed at the Japanese cleanliness and skillful use of chopsticks.

The Jesuits were struck by the lengths to which the Japanese went to save face and avoid combat

through an elaborate system using third parties to negotiate between spouses, fathers and sons, and masters and servants. On the other hand, they saw the samurai as combative and holding too high an opinion of themselves. They were also shocked by the Japanese habit of bathing in full view of the street.

To the Japanese, the European habits of eating with the hands and wiping the mouth with napkins seemed gross. Both cultures found the other's music dissonant.

The Japanese liked the Jesuits for their discipline and noble bearing, their practice of focusing on converting the upper classes, and ability to trade with China. Therefore, Daimyo often converted for trade and recanted when it didn't arrive.

Many Japanese converts probably confused Christianity with Amida Buddhism, since both have prayer beads and believe in redemption. Another thing they either failed to grasp or accept was Christianity's exclusive nature. This would put Christian samurai in the difficult spot of having to choose between loyalty to Japan or the Church, which in turn would lead to the expulsion of all foreigners from Japan. However, the lack of a central government at this time prevented totally getting rid of Christian missionaries, even if the daimyo wanted to.

Nagasaki, with its deep-water harbor was even given to the Jesuits to facilitate trade with China. A board of Jesuits collected harbor dues and split them with the local daimyo. It rapidly became very Christian, with schools, churches, and a fortified Jesuit headquarters.

During World War II, Nagasaki's strong association with Christianity led to the belief it was immune to American bombing raids, and indeed it did escape major destruction through most of the war. Unfortunately, being relatively intact marked it as a secondary target for demonstrating the power of the atomic bomb. Therefore, on August 9, 1945, when clouds obscured the primary target, Kokura, Nagasaki became the second (and so far the last) city to suffer a nuclear attack.

Turtle Ships and Karate



Hideyoshi Toyotomi was originally a peasant who entered Nobunaga's service as a sandal holder, and from there rose through the ranks to become one of his most trusted generals. Despite his humble origins, he was hardly sympathetic to the lower classes, tying the peasants to the soil and encouraging daimyo to enforce rigid codes to keep them in place.

Hideyoshi was less cruel than Nobunaga, but not by much. For instance, having adopted his nephew as his heir, he forced him to commit suicide when his own son was born, then put his nephew's wife, three young children, mistresses, and servants to the sword, dumping their bodies in a pit he called the animal mound.

Another time, when he came across some abusive graffiti, Hideyoshi seized eight townsmen, cut off their noses one day, their ears the next, and strung them upside down and had them impaled on the third day.

Hideyoshi was appointed regent in 1585 and chancellor in 1586. However, he did not take the office of shogun, since only descendants of the Minamoto clan customarily held that title.

Korean "turtle ships." One element in defeating the first Japanese invasion was the fleet of Korean "Turtle ships", armored vessels that could ram an enemy or blow it apart with their artillery and incendiary devices similar to Greek fire. The term turtle ship comes from the top of the hull, which was covered with iron and spikes to protect it from enemy fire and boarding efforts.



The role of these ships in defeating the Japanese invasions has been exaggerated, since only three were built due to a shortage of iron. However, the use of firepower by other all-wood Korean ships probably was important.

While his Great Sword Hunt was supposed to be for making a statue of Buddha, it was used instead to make a statue of Hideyoshi.

Karate. Hideyoshi's disarming of the common people led to the martial arts discipline known as karate, which literally means "open hand", referring to the ability of an unarmed man to defeat an armed one.

The 26 Martyrs of Japan. In 1597, as part of Hideyoshi's crackdown on Christianity, authorities arrested and crucified 6 Franciscan missionaries and 20 converts. This drove the remaining Christians underground. Surprisingly, a community of Christians survived the Tokugawa shogunate until Japan opened up to the West 250 years later.



Tokugawa Japan (c.1600-1867)



A folding screen painting of Sekigahara (1600), the decisive battle in Tokugawa Ieyasu's final unification of Japan

Concerning the unification of Japan, it was said that Oda Nobunaga kneaded the bread, Hideyoshi baked it, and Tokugawa Ieyasu ate it. His final step in the reunification of Japan came in 1615 with the taking of the powerful castle of Osaka. Supposedly Tokugawa took the castle by convincing its owner to dismantle part of its defenses in return for him leaving. He left, then came back to take the weakened fortress. With this final piece of the puzzle in place, Japan was unified at last.

The final exclusion decree. It was the shogun Tokugawa Iemitsu (1623-51), Tokugawa Ieyasu's son, who issued the final exclusion decree in 1639 that cut Japan off from the outside world for over 200 years except for one Dutch and one Chinese ship per year.

Tokugawa Iemitsu also instituted the *Sankin Kotai* system where daimyo had to spend half their time living at the court at Edo (modern Tokyo) while leaving their wives and children as virtual hostages there.



The era of Japanese history under Tokugawa rule is known as the Edo period, after the original name for the Tokugawa capital, Tokyo. Although politically isolated, Japan at this time showed great vibrancy, both economically and artistically, thus preparing it for modernization in the 1800s.



One of the most famous artists of the Tokugawa era was Hiroshige, whose paintings of common people, such as those crossing a bridge here, reflected changing social mores despite the strict legal dominance held by the samurai

Early Kabuki drama started in the early Tokugawa period as song-and-dance numbers done by troupes of female dancers. However, such dances being done by women was seen as lewd, so female dancers were banned from performing. Only when men replaced the women, including taking female roles, did Kabuki gain more respectability and legal status.

The "Floating World". Although rich, the middle class during the Tokugawa era were still looked down on in the classic Chinese sense as leeches who lived off others' labors. As a result, sumptuary laws forced them to be circumspect about displaying their wealth. This resulted in the thriving subculture known as the "floating world", named after the nightclubs on houseboats. To comply with sumptuary laws, middle class would wear reversible coats, with plain exteriors in public and the more sumptuous ones in the clubs.

Japanese woodblock printing Although woodblock printing had been used in China for centuries, it was only during the Edo (Tokugawa) period that it was widely used for copying books and paintings. Since it was so much faster than hand copying, books could be printed much more cheaply, thus dramatically increasing literacy among the Japanese population, a crucial factor in Japan's rapid industrialization after 1867.

Woodblock printing also proved an effective way to popularize art in Japan. Unlike the oil-based inks used in Europe, Japanese printers used water-based inks, which gave them a wide range of colors.



Probably the most famous woodblock print was this painting, “The Great Wave of Kanagawa” from Hokusai’s “53 Views of Mt. Fuji.” As the name implies, it consisted of 53 views of Japan’s most famous mountain. Sometimes Mt. Fuji takes center stage, while at others it forms the backdrop for various scenes of Japanese life: fishermen, ferrymen, woodworkers, villages, placid lakes, and giant waves.



A model of the Tyogoku Bridge leading to Edo (modern Tokyo) in the early 1800s, showing Japan’s thriving economy under the Tokugawas.

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9.4 The Secret History of Monsters: An Historical Parody

Foreword. As a teacher, I've always put a premium on keeping students interested in and even entertained by history. Therefore, I've developed a parody of history based on the idea that giant prehistoric monsters that (for some mysterious reason) always attack Tokyo are real, having their own history and culture. If this is your cup of tea, please enjoy this in the spirit of believing life is too short not to have a good laugh and that nothing should be taken too seriously. Even Zen monks know that. If this isn't your cup of tea, I'm not forcing you to read it. You've been forewarned and should probably delete this foreword for the more sensitive children in your class. (By the way, I only drink tea that is cold and from a bottle.)

Introduction. The recent release of "Pacific Rim" has generated a lot of interest in monster attacks on Humanoid cities. Just where did these monsters come from? What do they want from us? Why do they only keep attacking Tokyo? These are just some of the questions this short essay will hopefully answer about these mysterious creatures who both terrorize and fascinate us.

Geographic factors. First of all, geography plays a major role in explaining monster history, which has centered on Japan, a Godzilla word meaning "Monster Island." For one thing, Japan used to have lots of active volcanoes, which are perfect for hatching monster eggs. Unfortunately, most of these volcanoes got stopped up by particularly large eggs and went extinct one by one. Since then monsters have moved their reproductive activities to another, undisclosed, location also referred to as Monster Island, a fact that creates a lot of confusion.

Besides volcanoes, Japan also had a warm climate and plentiful supplies of zinc, a mineral crucial for giving monsters shiny coats with which to attract mates. As a result, the period c.6000-5000 BCE saw a dramatic rise in the monster population, with frisky young monsters digging up more zinc during each 500-year reproductive cycle, causing more baby monsters, and so on until Japan's zinc deposits were exhausted.

Finally, the staple of any monster's diet is fish (Humanoids tasting awful to them), and the Sea of Japan has (or used to have) lots of fish. While this would lead to later troubles with the Humanoids, this plentiful supply of fish along with the other factors mentioned above, led to what is seen as the Golden Age of the Godzillas, lasting from 4200 to 2350 BCE.

Social structure of Monster Island. While there are many different classes of monsters organized into a strict social structure, they break down into four main castes, five if one includes the bottom rung of Humanoids. The ruling caste is that of the Godzillas (Japanese *Gojiras*), from which their empire gets its name. As a result, monsters of all kinds are often mistakenly referred to as Godzillas, a faux pas that real Godzillas take particular exception to. True Godzillas, which means "friendly dragons", rule by right of having the highest IQ, averaging 165, and the sole ability to breathe radioactive fire.

Next came the Titantosaurs, who were physically distinguished from Godzillas by being generally quadrupedal and not being able to breathe fire. With an IQ of 135, they served as civil servants. Below them were the Rodans, who bore an uncanny resemblance to prehistoric pteranydons. Only having an average IQ of 120, for which they were sometimes derisively called Newmans, they were in charge of the postal service.

Subject to even more ridicule were the Mothras, who, as their name implies, looked like giant moths. Considered too stupid and emotionally unstable for anything else, they were given light "messenger duties" that usually consisted of taking giant rocks to other cities. Even when given such simple tasks, they were prone to fly off course, often reaching the Arctic where their wings would ice up, causing disastrous crashes. This explains both the sparse present-day population of Mothras and equally sparse Humanoid population at the North Pole.

At the bottom of the heap were the Humanoids, who, because of their tiny hands that could wield hammers and screwdrivers, were used for

construction projects, especially temples to the Holy Mackerel and other deities in the fish pantheon.

Things prospered peacefully until humanoids of the “Third planet escaping from the Black Hole” attacked earth using giant Mechagodzillas. Godzillas led the fight to drive out the Mechagodzillas by swinging them around by their tails and launching them back into outer space. Unfortunately, only an estimated seventeen Godzillas survived.

Following this came the “Time of Troubles” (2350-1498 BCE) when humanoid revolts drove the monsters into the sea, triggering in turn “The Big Sleep” (1498 BCE-1945 CE) during which the monsters lay dormant, licked their wounds, and only woke up every 500 years to dutifully reproduce.

This might have been the end of their sad story, except for reckless Humanoid activity during the Industrial Revolution culminating with a string of nuclear tests near Monster Island in the 1950s.

Thus began the Age of the Big Stomp (1954-61) when monsters, mainly Godzillas, would wake from their lethargy and stomp Tokyo with “fire and tail” to promote global environmental awareness. Eventually, the Humanoids would claim they had learned their lessons. The monsters, being satisfied, would go back to sleep, only tempting the Humanoids to go back to their old tricks and start the cycle over again. This pattern repeated itself three more times: in 1956, 1957, and 1961.

One of the most remarkable phenomena to emerge from these attacks has been the incredible resilience of the Japanese people and their ability to rebuild Tokyo practically overnight, only to be forced to do it a few years later. The key to this has been the pre-fab construction industry developed in nearby Osaka. How they developed this so quickly is still a mystery, although rumors abound that the Godzillas, feeling guilty for all the damage to Tokyo, gave the technology to the Japanese, who quickly adapted it for making cars.

Along similar lines, anime, previously considered an artistic creation by the Japanese, also owes its origins to Godzilla art. (Notice I use the term “Godzilla” here, because they are the only class of monsters capable of such remarkable innovations.

The Fourth Battle of Tokyo in 1961 was the last official battle between the monsters and Humanoids. The turning point came later that year when a team of intrepid scientists doing research on Monster Island saved a baby Godzilla from the Spiga (giant spider). (Footage of this served as the basis for “The Son of Godzilla”, the only monster film that faithfully followed the historical facts.) The Godzillas, grateful to the scientists for saving their *miny*a (a term used to describe baby Godzillas that can only blow smoke rings, but not fire) made peace with the Humanoids in December 1961, a treaty that has *officially* held up ever since.

Unfortunately, the Time of Troubles had disrupted the orderliness of monster society, and a number of roninzas (rogue monsters) attacked Tokyo between 1962 and 1974. In each case, the Humanoids called for protection from the Godzillas, who honored the mutual defense pact with the Humanoids and defeated the monsters, although Tokyo was effectively destroyed each time in the process.

The first major disruption came in 1962, when a rodan attacked Tokyo, blowing it away with the gale force winds generated by its giant flapping wings. Fortunately, a Godzilla came to the rescue, blinding the rodan with his fiery radioactive breath, causing him to crash to his death on Mt. Fuji. (There is still an obscure museum on Mt. Fuji displaying fragments of the rodan’s wings.)

Two years later there was an attack by two Pupaesauruses (baby Mothras) who destroyed much of Tokyo by spinning a giant web around it and crushing it. Although a Godzilla came to fight them off, it was really the efforts of two tiny women (both of whom could fit in the palm of your hand) who emerged miraculously when one of the Pupaesauruses hatched into a full-blown Mothra. The two tiny little women sang a hauntingly beautiful song that convinced the Mothra to crash to

its death on Mt. Fuji. Meanwhile, the Godzilla squished the other Pupaesaurus with his giant foot.

In 1974, the last rogue attack on Tokyo took place when a Titantosaur allied with a visiting Mechagodzilla and attacked Tokyo. This time, technology came into play as Japanese scientists developed a sonic ray that emitted a frequency that disrupted the Titantosaur's inner ear, making him fall over like a bridge.

Some historians claim this was technology adapted from a similar sonic ray developed against an attack by giant grasshoppers in Illinois in the 1950s. In this case the device mimicked the mating call of grasshoppers that by that point controlled Chicago, and lured them to a watery grave in Lake Michigan. The jury is still out about the possible link between the two technologies, fracture lines between historians pretty much following nationalist lines.

Meanwhile, the Godzilla, after an epic battle, took a lesson from ancient history, grabbed the Mechagodzilla by the tail and flung him back to the "Third planet escaping from the Black Hole". No Mechagodzilla sightings have been reported ever since.

This marked the end of rogue monster attacks on Tokyo, although there was a sad epitaph to the whole tale. Apparently, scientists in Osaka, exhausted from constantly rebuilding Tokyo, developed a powerful ray that, when fired at a tiny full-scale replica of the city, would enlarge it to life size. Regrettably, their calculations were off and the Tokyo they created was three times larger than the original one, thus making it impossible for normal Humanoids to live there. As a result, a team of Godzillas was called in to level the oversized Tokyo with fire and tail so that the city could be rebuilt from scratch. This unfortunate incident, of course, is the basis for the current international ban on enlarging rays.

While 1974 marked the end of the rogue monster attacks on Tokyo, its problems weren't over yet. The truth is that adult monsters are generally benign, although a bit cranky when disturbed by such things as atomic tests going off in their living

rooms during their favorite reruns of the 1950s sitcom, "I Love Lucy." In fact, the recent spate of Godzilla attacks starting in 1998 are closely related to the monsters' 500-year reproductive cycle, at the start of which female monsters go into heat (i.e., volcanoes) where they lay their eggs, which hatch after a gestation of 50 years.

Around age 1,200 years the monsters reach adolescence and go through a very wild and virtually uncontrollable phase, made no easier by the fact that monster parents are very lenient and let their kids do whatever they want as long as it doesn't interrupt their watching Lucy's hare-brained schemes. (Some monster child psychologists theorize that the plots of "I Love Lucy" are the direct inspiration for the resulting teenage pranks.

Luckily for the Humanoids, the little scamps confine their antics to one night a year, Halloween, when the Humanoids are least likely to notice anything is amiss. (These festivities used to take place on Flag Day, but drew too much attention and adverse publicity, and so were moved to October 31st.)

Fortunately, most Monster Mashs aren't very destructive and provide little or no usable footage for Hollywood movies. After the Age of the Big Stomp and rash of rogue attacks ending in 1974, things settled down after monster legislation outlawed underage inhalation of sulfurous volcano fumes, which make monsters under the age of 2,100 especially rowdy.

Since then, the only two really destructive Monster Mashs have taken place in 1998 and 2012, both being years that the mischievous little smoke ring blowers found a heretofore undiscovered volcano and smoked themselves into a sulfurous city-bashing high. In fact, they were so schnoekered in 1998 that they missed Tokyo altogether and destroyed Kyoto, the only example of a city besides Tokyo (a Godzilla word meaning "Party Central") being the scene of a Monster Mash. Footage from the most recent outbreak in 2012 became the basis for "Pacific Rim."

Of course, Hollywood always has to tamper with historical events, vainly hoping to make them more exciting. Therefore, they superimposed computerized images of people in robot suits fighting, and unbelievably, beating the monsters. Except for ignoring every law of physics that dictates how impossible such robots would be, this idea of humanoids defeating the monsters was nothing new, and it did alleviate public fears about reported monster attacks on Halloween, something the authorities could usually explain away as drug-induced hallucinations or swamp gas.

One major discrepancy between earlier Godzilla movies and “Pacific Rim” was the form that the monsters took, which traditionally would look either like giant dinosaurs or moths. However, over the years, this annual event has developed into an elaborate costume contest, where the monster whose costume is deemed the funniest parody of a human superhero wins an all-inclusive dream vacation inside Mt. St. Helens. Seeing this as a golden opportunity, cutting edge fashion designers came up with a whole new generation of Humanoid superhero costumes that pushed the Monster Mash costume contests to Carnival-like proportions.

This explains the truly bizarre and (from the monsters’ point of view) hilarious appearance of the monsters in “Pacific Rim”. This should also dispel any rumors that the monsters seen in that movie were just fake special effects.

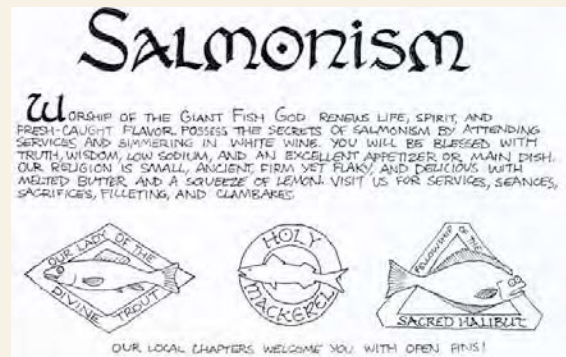
Monster Religions



As intelligent as monsters, in particular Godzillas, are, it might seem strange that they worship something as primitive as fish. Some historians think this appeals to their strong sense of tradition, while others see it as a way for the Godzillas to keep the lower classes in line. However, considering that even a baby Godzilla eats 25,000 fish each day, it is no wonder that at

some early date the monsters took to worshipping fish.

Like the Christian Church, the Giant Fish Religion, known as Salmonism, had its own reformation in reaction to priestly corruption. Triggering it was the selling of frozen fish sticks as a guarantee of time out of purgatory, which monsters imagine as a giant ocean full of fresh water. After this, there were three main splinter groups breaking off from Salmonism: Our Lady of the Divine Trout, the Holy Mackerel, and the Fellowship of the Sacred Halibut. For these believers, the Salmon is still the true Fish Head, while other types of fish represent its various avatars. As the ad below indicates, there are strong efforts to reunite the various sects into one school of belief.



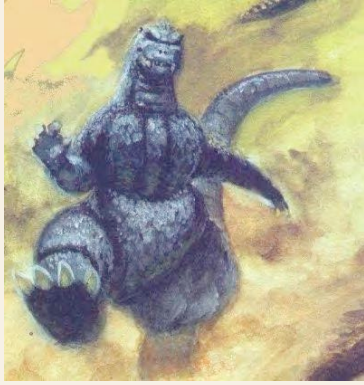
The lowest class in the monster hierarchy, Humanoids, has never taken to worshipping the Giant Fish God in any of its incarnations. This may have to do with all the forced labor spent on building pagodas (literally: fish houses) for the monsters. However, there was a short-lived Humanoid cult in the early 1960s that worshipped Mothras and the two tiny little girls who could summon them with their song. Below: a picture showing how tiny they were:



This heresy abruptly collapsed in 1964 when a Mothra attacking Tokyo inexplicably crashed into Mt. Fuji and shattered into a million pieces. The tiny little priestesses reportedly found

employment in a carnival sideshow where they made a fortune, eventually retiring to a small town somewhere in Arkansas.

Godzilla Fun Facts

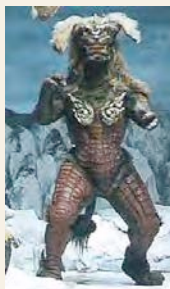


Godzillas love to dance, especially clogging.

Godzillas are very family oriented and attend church regularly, politely waiting until the service is over before wrecking the church.

The Godzilla education system has historically been ranked as the world's finest. Japanese humanoid schools strive to carry on this tradition.

Victoria's Secret has recently marketed a line of miracle bras for female Godzillas, called Brazillas.



Godzillas' favorite music is Tibetan throat singing.

Despite their noted intelligence, in a rare lapse of judgment, the Godzillas were initially taken in by the Mechagodzillas' deceptively friendly

demeanor, leading them to reveal the launch codes for their ICBMs.



Arguably the greatest chess game in history took place when a Godzilla challenged a Mechagodzilla to a game of chess. The Mechagodzilla resigned after 63 moves (over a period of 21 years), seeing a forced checkmate in seven moves (and with only 4 years left on his clock).

Lesser-Known Monsters



Guiron. Considered the most reclusive of monsters, little is known of Guirons except that they make terrible dinner guests.

While everyone is familiar with Godzilla, Rodans, and Mothras, there are less well-known monsters that deserve some discussion. Following is a short but by no means comprehensive, list.

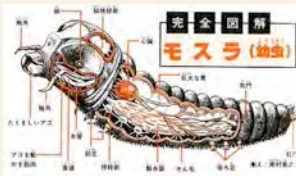


Gamera. This illustration of “Flaming Monster Gamera” (from *An Anatomical Guide to Monsters*) reveals eyes that can see in the dark, arms strong enough to lift and throw a 50-ton boat, and “fire sacks” that let Gamera shoot flames from his hands. The illustration also shows a series of sack-like organs for storing lava, oil, coal and uranium (like Godzilla), as well as balloon-like organs in the legs that can blast air through the bottoms of the feet, allowing it to fly like a jet. Despite their similar appearance to turtles, gameras can fly at speeds comparable to that of rodans (mach 1.5)



Jiger. According to this anatomical drawing, Jiger has a pair of horns that can shoot missiles made of hardened saliva and another one that fires a deadly magnetium (?) beam. Other characteristics of Jiger include extremely powerful suction cups covering the entire body, an organ that enables Jiger to spit jets of seawater at 300 kilometers per hour, a stomach that can melt iron ore, and a tail that functions as an ovipositor (whatever that is).

The main function of Jigers is supposedly as auto mechanics. Although no one has ever seen a Godzilla car, they reportedly get mileage comparable to a Toyota Prius (when the accelerator is working properly).



Pupaesaurus (Mothra larva). This anatomical sketch of Mothra in larval form shows a robust

jaw, an enormous stomach, an elongated silk-producing organ, a row of breathing orifices on either side of the body, countless cilia on the bottom surface, and a rudimentary nervous system consisting of a cerebral ganglion and a network of nerve ganglia distributed across the body. Mothras used to be kept in insane asylums, but more enlightened views now prevail, so they are given supposedly “harmless” tasks like dropping boulders in the sea. But even this can backfire, as seen with the Fiji disaster of 2008. Efforts are still under way to figure out how to convert their tremendous silk producing abilities into commercial profits. The main problem has to do with the fact that the silk thread is 10 feet in diameter, weighs 700 pounds per linear foot, and is impermeable to any cutting technology we currently have.



Angirus. As seen here, Angirus (who belongs to the Tiatantosaurus caste) has eyes that can detect infrared light for scanning immigration documents, highly developed rear leg muscles, a heavily spiked rear carapace for romance, and an extra pair of sub-brains to control the forelegs and rear legs, which makes him highly prone to Restless Leg Syndrome when playing chess.

Godzilla Humor



A Godzilla tricks a giant ape with the old hand buzzer trick. The ape got the last laugh however, because giant apes don't even exist

Godzillas have what may be the most highly developed sense of humor in the galaxy. Not surprisingly, their jokes center on the stupidity of Mothras and Humanoids. Their favorite TV shows are "I Love Lucy" and "Seinfeld", although nearly anything that Humanoids or Mothras do will send them into fits of laughter. A growing number of scientists believe that all the attacks on Tokyo were done either as big jokes or on a drunken dare. Think about it, what could be funnier than all those tiny humanoids scurrying around to rebuild Tokyo, knowing it'll be destroyed again in a couple of years? Why don't they all just move to Osaka?

Mothras take their lumps in the humor department as well. Below: When the teacher points out how Japan looks like a Pupaesaurus, everyone in class has a good chuckle...everyone that is except for the Pupaesaurus.



Here we see a Mothra flying out of a party in a rage after a Rodan put DDT in her Pepsi. Mothras, the constant butt of such party jokes,

are hypersensitive about their subhuman intelligence.



A few choice Godzilla jokes:

Q: What's smaller than a human?

A: A Mothra's brain.

Q: How many Mothras does it take to change a light bulb?

A: One, but only after she's broken 10,000 trying to fly into the light.

Q: How many Humanoids does it take to change a light bulb?

A: One, but it takes 1,000 of them to run the factory that makes light bulbs.

Godzillas even think surprise parties are hilarious. Above we see Godzilla and Pupaesaurus springing a surprise party on Gidra for his 4,000th birthday, although Gidra still jokes that he's only 3,999.



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THE RISE OF THE ITALIAN CITY-STATES (c.800-1200)

The first stirrings of revival from the Early Middle Ages in Western Europe took place in Italy. There were three reasons for this. First of all, the Roman cities were older and more deeply rooted than cities in Northern Europe. Second, their position in the middle of the Mediterranean attracted trade from the richer Byzantine and Muslim civilizations in the East. Finally, the Byzantine Empire, which ruled parts of Italy, protected its towns there from at least some of the chaos of the times. Italian towns were much reduced in size from the days of the Roman Empire, but they still functioned as religious centers ruled by bishops as well as centers of defense.

In the eighth century, the popes had summoned the Frankish rulers, Pepin the Short and Charlemagne to Italy to defend them against the Lombards. Especially as a result of Charlemagne's campaigns, the northern half of Italy came under Frankish rule. After Charlemagne's death in 814, law and order collapsed along with the central government, but the Frankish nobles left behind by Charlemagne remained as the power in the countryside while the bishops ruled the cities.

The turmoil following Charlemagne's death attracted waves of Muslim raids. These raids reached their peak in the ninth and tenth centuries, and, at one point, the Muslims even controlled part of Rome. Eventually, they were driven out, leaving the Frankish nobles in the countryside to fight one another for control of Northern Italy. Holding the balance of power in these struggles were the bishops in the towns. In order to enlist the bishops' aid the Frankish nobles promised various rights to them. Typically, the first of these rights was to build their own fortifications. Since such projects were expensive, the Franks also gave the bishops the right to collect taxes. And along with that would come certain judicial rights that also brought in court fees. Over time, the bishops' power and their desire to break free from the nobles steadily grew.

Luckily for the bishops, a strong German state with interests in Italy was emerging under Otto I. At the pope's request, Otto came down and crushed the power of the nobles and left the bishops in the cities as his agents of control in Northern Italy. This

resulted in two things. For one thing, the pope rewarded Otto in 961 with the Roman imperial title that Charlemagne had been given 160 years before. For the next 850 years, the aura of the imperial title would influence German rulers' policy and be the cause of ruin for Germany. However, at this time, a strong Germany, or Holy Roman Empire as it came to be called, was useful for protecting the peace in Italy. Second, the Italian cities, now freed from the nobles, started to take the offensive against the Muslim raiders. By 1200, Italian navies and merchants would be powerful enough to dominate the Mediterranean, help the Crusaders conquer and maintain their states in Syria and Palestine, and even conquer Constantinople in 1204.

Together, these factors brought peace and security from the Muslims and Frankish nobles, which led to the revival of towns and trade. At first, this benefited the bishops ruling the cities, since it brought in more taxes from trade. But it also meant the rise of a middle class of artisans and merchants in each city who were increasingly dissatisfied with living under the rule of the bishops. Eventually, they rose up against the bishops and overthrew them, establishing independent town governments known as communes. As nobles moved into the towns where many of them took up trade and merchants seized more and more political power, the distinction between nobles and middle class became somewhat blurred. What emerged in Italy was a new nobility known as *magnates* (literally "great ones") that was a fusion of these two groups.

It is important to note that while we talk about Italy as a country, it still existed as a patchwork of different and competing states. Northern Italy, in particular, was made up of a large number of independent city-states, the most important being Venice (a former Byzantine city), Genoa, Pisa, Milan and Florence. It was these cities that led the way for Western Europe to emerge from the Early Middle Ages. Their example and wealth would help spark a similar revival of towns north of the Alps. However, as we shall see, the political development of Northern Europe would be quite different from that of Italy, giving rise to the emergence of what would be our modern nation states.

The Turbulent World of the Italian City-state



The French city, Arles, especially symbolized the decline of towns after the fall of the Roman Empire. Its few remaining inhabitants fit their entire community inside the old Roman amphitheater for protection from barbarian & Arab raids. When it was cleared out for restoration in 1830, there were two chapels & more than 200 houses inside.



A major hazard to medieval trade was piracy, especially from Muslims based in Sicily and North Africa. However, by 1150, Genoa, Pisa, and Venice had eliminated much of this threat and established Italian naval dominance of the Mediterranean. This was a major factor in the success of the First Crusade and the Crusaders' ability to hold onto the coast of Palestine for 200 years. After the failure of the Second Crusade in 1144, all other crusades were transported by water.



Artist's sketch of a typical Mediterranean transport ship of the 1200s. The most important change from its Mediterranean predecessors is the use of triangular sails which were better for tacking into the wind. In the 1300s, the side steering oar will be replaced by the stern rudder, which will allow it to navigate the rougher waters of the North Atlantic, thus securing sea-borne trade with that region.

Peoples' loyalties then were more local than ours today. Families and local neighborhoods, known as *contrade*, competed with the city state for peoples' loyalty, sometimes with disruptive results, as seen in the opening of Shakespeare's *Romeo and Juliet*.

Below: Various symbols for medieval Siena along with the flags for each of its 17 *contrade*.





The town of San Gimignano (above) still has 13 of its original 70 towers. However, they were for the protection & prestige of individual families competing against one another rather than for the defense of the city, whose population probably never exceeded 3,000.

The Italian city-states fought fervently to maintain their liberty, especially the freedom to pursue business without interference from nobles and the Church. In deference to their commercial interests, cities typically called up militia in rotation to minimize disruption to business. The militia, who formed the backbone of the city's army, were mainly drawn from the artisans and shopkeepers who could afford weapons and armor.

While infantry militia formed the core of Italian city-states' armies, there were nobles, many or most of whom had moved into town, who fought as heavy cavalry like their comrades in the north. However, some of them still wielded the lance with two hands like the Byzantine cataphract. Still others used the lance overhead. In the North, European knights by 1100 mostly held the lance couched under their armpits to maximize the shock effect of their charging horses.

By the late 1200s Italian knights had adopted the heavy barrel helm to protect themselves against a nasty new weapon, the crossbow, which town militia could use effectively against the heavily armed nobles and the Church tried unsuccessfully to outlaw in an attempt to preserve the traditional social order. Crossbowmen from the city-state Genoa were in especially high demand across Europe, their

weapons being more powerful than English longbows, but also slower to reload and fire.

Guelphs and Ghibellines. Keep in mind the popes were also secular rulers heavily involved in the politics and warfare of the time. Their main enemies after 1075 were the Holy Roman Emperors in Germany who claimed sovereignty over Church elections.

The struggle between Popes and emperors, which lasted over 200 years, involved the Italian city-states caught in between. In each city there were two factions: the Guelphs who supported the Pope and the Ghibellines who backed the emperor. The factional struggle between these two groups largely resembled that between Oligarchs and Democrats in the ancient Greek polis.

The reasons one city went Guelph or Ghibelline typically had nothing to do with ideology. Florence, for example, supported the Guelphs because the Popes had given them the right to collect taxes for the Church in Tuscany.

Similar to modern gangs, Guelphs and Ghibellines were often identifiable by the side of the hat on which they wore a feather or how they cut their fruit.

Complicating matters further was the split in each city between Guelphs and Ghibellines. Landed nobles typically supported the Ghibellines while merchants joined the Guelphs, sometimes because they could collect taxes for the pope. However, a faction or city would often side with Guelphs or Ghibellines, or switch sides if it was convenient, simply because their rivals supported the other side.

To make matters more confusing around 1300, Guelphs in Florence split between the Black Guelphs who supported the pope and White Guelphs who opposed him.

Sometimes exiles from one party would join a rival city against the ruling party in their own city. This was the case at the Battle of Compaldino where Florentine Guelphs fought

alongside the Sienese army against Florence then ruled by Ghibellines.

At first, most Italian city-states supported the Guelph faction in their efforts to win independence from the German emperor, Frederick I Barbarossa. They succeeded in 1176 at Legnano when, against all expectations, the city-state militia defeated the supposedly invincible German knights.



One of the major battles between Guelphs and Ghibellines took place at Montaperti in 1260 when the Guelph city of Florence fought the Ghibelline city of Siena. However, on the Sienese side were Florentine Ghibellines who wanted to gain control of their city.

Although the Florentines heavily outnumbered Siena's army, the battle turned when a Florentine merchant, Bocca degli Abati, who was sympathetic to the Ghibelline cause, cut off the hand of the Florentine standard bearer.

When the Florentines saw their standard fall, they panicked. Out of an army of 35,000 Florentines and their allies, some 15,000 were cut down in the ensuing rout. In the *Inferno*, Dante, who was a Guelph sympathiser, gave Bocca degli Abati a special place in Hell for his treason.



A common rallying point for townsmen on the battlefield was either a cart (*caroccio*) or a portable bell tower (*martinella*).

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TOWARDS THE RISE OF TOWNS IN WESTERN EUROPE: THE AGRICULTURAL REVOLUTION OF THE MIDDLE AGES

Until this century, the vast majority of people spent their lives involved in one basic occupation: getting food, either through hunting and gathering, herding, or agriculture. When these people could produce a surplus, they were freed to do other things, which provided the basis for towns, cities, and civilization. Without the ability to produce surplus food, no civilization would be able to survive. Therefore, it should come as no surprise that the first step in building a new civilization in Western Europe was developing ways for producing a surplus of food.

Europe (c.1000 C.E.) Before discussing these new agricultural techniques, it is useful to look at the state of Medieval life and agriculture in the Early Middle Ages. The vast majority of peasants were *serfs*, bound to the soil and service of a lord who owed them protection in return for work in his fields. These serfs lived in villages, isolated pockets of farmland in the midst of a vast wilderness of forests, thickets, and marshes. Typically, a village would have several acres of cultivated fields, a wooden castle or manor house for the lord, a peasant village, a parish church, and a mill. A village might be equivalent to a manor, the economic unit given to support a noble. However, it could just as well be divided into several manors to support several nobles or be only one of several villages making up a large manor.

The village had to be self-sufficient because it was virtually cut off from the outside world. Roads were poor and brigands or local lords constantly threatened travel. Raids from neighboring nobles and such invaders as the Vikings, Magyars, and Moslems also kept most people huddled under the safety of their lord's castle walls. As a result, the flow of trade and commerce was reduced to a fraction of what it had been during the Pax Romana. Compared to the thriving Byzantine and Islamic cultures to the south and east, Western Europe was a fragile outpost on the western fringe of civilization.

Europe's agriculture reflected this low level of culture. The plow used then was still the scratch plow that worked fine in the thin dry soils of the

Mediterranean, but was not very suitable for the wetter, deeper soils of Northern Europe. Such a plow might be reinforced with iron, or it might be nothing more than a curved digging stick. The main source of power for pulling the plow was the ox hooked up by a yoke harness that pulled at the neck. Although slow, the ox was more than some peasants could afford. As a result, they had to pull their own plows or dig with spades (known as *delving*). Finally, the peasants used the two-field system, where one field lay fallow to reclaim the soil's nutrients while the other field was being cultivated. This left only fifty percent of the farmland for use in any given year. As a result, crop yields were very low. In the Roman Empire, for every bushel of seed grain planted, four bushels would be harvested. In the Early Middle Ages with the poor techniques being used, this ratio dropped to one and a half or two to one. In other words, a full half or more of a peasant's harvest had to be saved as seed grain for next year's planting. In years of famine, this led to serious difficulties. Given these limits, it should come as no surprise that population remained low and grew at a very slow rate, if at all.

One has to be very careful when generalizing about what techniques were used where. This is because we have little evidence to go on, especially concerning the peasants, whose lives were of little concern to the monks writing religious histories. Also, the poor communications between manors meant that widely different techniques and tools might be used in a fairly local area. However, it does seem likely that the light scratch plow, oxen, yoke harness, and two-field system were in general use in Western Europe in the Early Middle Ages. Then came some changes that would lay the foundations for more advanced civilization.

First stirrings of revival. It is impossible to say when population first started expanding in Western Europe, although we can make some educated guesses. For one thing, the climate seems to have turned warmer in the 800's. We base this on tree ring evidence and the fact that the Vikings could sail in northern latitudes unobstructed by ice. The warmer climate meant longer growing seasons, better harvests, and thus a healthier and growing population. Major plagues that had hit intermittently since the later Roman Empire also ceased after 743 C.E. This might be partly a result of the better-fed population having more resistance

to disease. Finally, a certain amount of political stability had returned to Western Europe by 1000 C.E. The feudal system, whatever its faults, was providing at least a minimal amount of security to Europe. Along with this, the invasions of Vikings, Magyars, and Muslims were letting up by this date. The increased stability created by all these factors helped provide the conditions needed for population growth and economic revival. This brings us to new farming techniques that would greatly expand food supplies and lead to the rise of towns.

An agricultural revolution. The first of these techniques was the *three-field system*. Originally, the spread of civilization to Northern Europe brought with it the two-field system. This was well suited to the climate of the Mediterranean with its hot dry summers and one growing season in the cooler, wetter winters. The more temperate climate of Northern Europe allowed growing seasons in both summer and winter. However, planting two crops a year would exhaust the soil if peasants used the old two-field system. As a result, peasants divided their farmland into three fields, one for winter crops, one for summer crops, and one to remain fallow. The use of the fields was rotated each year. A second part of the system, in order to prevent soil exhaustion, was to use different crops that took different nutrients from the soil. The winter crop typically would consist of winter wheat or rye, and the spring crop would be either spring wheat or legumes (beans or peas). The greater variety of crops provided people with a more balanced diet. Also an advantage of legumes is that they take nitrogen out of the air rather than the soil, and when buried, actually replenish the soil with nitrogen. (The Romans referred to this as "green manuring".) The following charts show how the two systems work.

TWO-FIELD SYSTEM

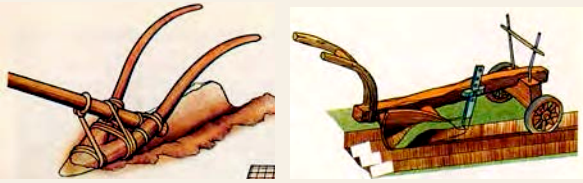
	Field 1	Field 2
Year I	Winter crop	Fallow
Year II	Fallow	Winter crop
Year III	Winter crop	Fallow

THREE-FIELD SYSTEM

Year I	Winter crop	Summer crop	Fallow
Year II	Fallow	Winter crop	Summer
Year III	Summer crop	Fallow	Winter
Year IV	Winter crop	Summer crop	Fallow

Consider what the changeover from the two-field system would have meant to a peasant village farming 60 acres. In the old system only 30 acres would be planted each year. In the new three-field system 40 acres would be planted, an increase of 33%. Also, peasants would plow the fallow land twice to keep weeds down. In the two field system this mean plowing all 60 acres once plus the 30 fallow acres again, 90 acres of plowing in all. The three-field system, involved plowing all 60 acres plus only 20 acres of fallow again, a total of only 80 acres of plowing. Thus while producing 33% more food, the peasants were plowing considerably less, especially considering what hard work plowing was back then. The extra time saved could be used for clearing new farmland from the surrounding wilderness, which, of course, meant even more food. Likewise, the extra food meant more people from population growth, who would also clear new lands to produce more food, and so on. Eventually, enough new land would be cleared and surplus food produced to support population in towns.

Another major development in farming was the *heavy plow* that could cut through the deep, wet, and heavy soils of Northern Europe much better than the light scratch plow. It had three basic parts: the *coulter* or heavy knife that cut through the soil vertically, the *plowshare* that cut through the soil horizontally, and the *mouldboard*, which turned the soil to one side. Some models had two wheels that acted as a fulcrum to keep the plow from getting stuck. There were two advantages to this kind of plow. First, it cut the soil so violently that there was no need for cross plowing as there was with the scratch plow. This saved time, which could be used for, among other things, clearing more land and producing more food. Second, the heavy plow created *furrows*, little ridges and valleys in each plowed row. In times of drought, water would drain into the valleys and ensure some crops would survive. In times of heavy rains, the crops on top of the ridges would not get flooded out. As a result, peasants could usually look forward to at least some crops to harvest even in bad years. The furrows the heavy plow created also meant that the rich alluvial bottomlands by rivers could be farmed without their frequent floods doing too much damage. As with the three-field system and crop rotation, the heavy plow also fed into the feedback cycle of more food, population growth, etc.



Left: The wooden scratch plow that was suited for the thinner soils of the Middle East and Mediterranean, but not the thick heavy soils of Northern Europe.

Right: the heavy plow.

The heavy plow had an impact on peasant society and land holding patterns. Being heavy, it required as many as eight oxen to pull it compared to two oxen on the scratch plow. Since few peasants could afford their own teams, they would combine their ox teams and hook them to one plow. Occasionally, disputes might arise as to whose land would be plowed first, especially if the weather had been bad and it was doubtful that all the fields could get plowed in time for a good crop. As a result, peasants split their lands into long strips and interspersed them among other peasants' and the lord's strips. Some peasants might have 50 or 60 strips spread out over the manor. The advantage of this was twofold. First of all, it ensured that everyone got at least some land plowed. Second, the long strips of land meant that the plow team did not have to turn as much, one of the most difficult aspects of plowing, especially with four rows of oxen to increase the turning radius. The heavy plow also created a more cooperative peasant society and caused small hamlets to combine into larger villages in order to share ox teams.

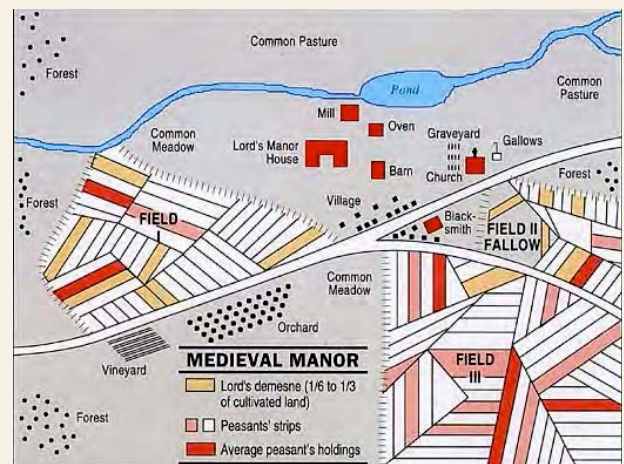


The last major development in farming was a new source of power, the plow horse. Several factors allowed the use of the horse in Western Europe. The invention of the horseshoe (c.900 C.E.) prevented the hooves of the horse from cracking in the cold wet soil. The horse collar let the horse pull from the chest rather than the neck. This increased the horse's pulling power from about 1000 lbs. (with the yoke harness) to as much as 5000 lbs with the horse collar. Finally, cross breeding to make larger warhorses also provided the peasants with larger

plow horses. Although it could not pull any more than an ox, the horse did have two advantages. It could pull up to fifty percent faster than the ox, and it could work one to two hours longer per day. The one drawback was that the horse ate a lot. Overall, despite eating more, the plow horse could increase farm production as much as 30 percent for those peasants who could afford horses. As with the three field system and heavy plow, this led into the feedback cycle of producing more food, population growth, and developing new lands for even more food production, etc.

There were some interesting side effects of the use of the horse. Being fifty percent faster than oxen, horses could bring food into a town from outlying villages fifty percent farther away without taking any more time than before with an ox team. Increasing the radius of the surrounding farmland supplying a town by fifty percent more than doubled the area of farmland and amount of agricultural produce available to support that town, and, subsequently, the potential size of the town itself. In addition, the replacement of the two-wheeled cart with the four-wheeled wagon with a hinged post for greater maneuverability increased the amount of grain a peasant could bring into town.

We should keep in mind the limits to medieval agriculture. While a yield to seed ratio of four to one was good back then, farmers today expect at least ten times that. What this means is that for centuries it took ten farmers to create enough surplus to support one townsman. Still, along with the greater stability brought by feudalism, the increased food production brought on by the agricultural revolution of the Middle Ages was essential for the revival of towns, without which our own civilization would not have evolved.



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THE RISE OF TOWNS DURING THE HIGH MIDDLE AGES (c.1100-1300)

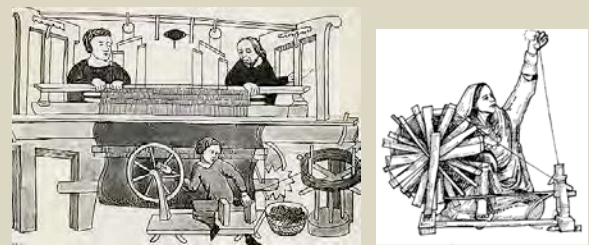
From trade fairs to towns. In the twelfth century, towns and trade in Western Europe, which had long been in decay since the end of the Roman Empire, saw a renewed outburst of energy. A combination of four factors would lead to this. First, there were the old Roman cities in Italy that had evolved from centers of defense into thriving towns with a strong middle class primarily concerned with trade and manufacture.

Second, another area, Flanders (roughly equivalent to modern Belgium), soon saw the development of towns and trade also. Crucial to this was the wool industry started by a new monastic order, the Cistercians. These monks were part of the ongoing cycle of Church corruption and reform that usually started with the monasteries. To protect their spiritual purity from the corruption of the outside world, they would found their houses "far from the haunts of men." Oftentimes, this was on hilly rocky ground that was often unsuitable for farming. Other uses were found for it, in particular raising sheep. The Cistercians were well organized and very good at raising sheep and wool, which they traded to Flemish merchants, who started a wool industry and towns.



However, the Flemish had a problem that limited the scope of their operations: slow weaving on the old hand loom. Luckily, an improved mechanical loom came up from Muslim Spain sometime in the eleventh century. This device, possibly originating in China, eliminated hand weaving the weft thread in and out between each individual warp thread. Instead, foot pedals attached to every other warp

thread would raise those threads and speed up the process of weaving in one direction. Another foot pedal would raise the other warp threads for the weft coming back. This increased wool production, but the traditional method of spinning thread with the drop could not keep up with the pace of weaving. Not until the thirteenth century, thanks largely to the crusades and increased contact with the East, was the spinning wheel introduced, which quickly pulled and spun wool through a spindle and wound it on a bobbin. Woolen production jumped by a factor of ten times and Flemish woolens became the basis of a thriving urban culture in northern Europe.



Indeed, Flemish wool was a highly valued commodity, reputedly being as smooth as silk. The tendrils of Flemish trade stretched far and wide, but especially across the Channel to buy rough English wool for weaving into fine Flemish product. The close economic ties this bred between England and Flanders, then a French vassal, would help lead to the Hundred Years War. The influence of Flemish woolens also reached southward to Italy and beyond, touching off trade at intervening points in France where towns next revived.

The emerging feudal order helped make possible two other factors vital to the rise of towns and trade. One was the agricultural revolution that could support town populations. The other was the end of Viking and Arab raids that made the roads safer for trade. These four factors helped create more political stability, which encouraged merchants to take to the roads once again. In the middle of the old Roman trade routes linking Italy and Flanders was the French county of Champagne, whose counts were shrewd enough to take advantage of this trade by sponsoring six annual trade fairs held in four rotating locations. Rather than robbing these merchants, the counts charged them for the use of booths, local justice, lodging, food, and protection. Among those attending these

fairs and providing the counts with revenues were wealthy merchants from Italy and Flanders.



The area of France where trade fairs started to revive trade

The excitement these fairs generated was infectious. So were the profits. Some jealous nobles attacked and robbed merchants traveling to the fairs. Others, being more far-sighted, worked to ensure safer travel so they could start their own fairs and make their own profits. With each new fair came greater incentive to stifle troublesome local nobles and increase political order. This in turn stimulated more trade fairs, more profits, more law and order, and so on.



Trade fairs could be boisterous exciting, and sometimes turbulent events requiring the strong arm of the local lord's justice.

Eventually fairs and trade became so common that merchants started settling down in permanent towns. Generally, such settlements were on well-traveled routes that could attract the trade of passing merchants. They also were under the protective walls of a lord's castle, an abbot's monastery, or a bishop's settlement. Many towns were brand new settlements, but others were outgrowths of already established communities. Even today, many European towns have a castle in or near them, evidence of their medieval beginning.

The impact of towns. More stable conditions had helped produce the rise of towns. The towns in turn helped create even more peaceful conditions with far reaching effects. For one thing, towns generated taxes in the form of money, a new more fluid kind of wealth vastly superior to land as the primary form of wealth. Previously, almost any noble with a castle and a stockpile of food could defy his lord by going under siege, since feudal armies were notoriously unstable and prone to breaking up after their terms of service (usually forty days) were up. However, the more powerful lords that could attract settlers for towns now had money from taxes. With that money, they could buy mercenaries, usually landless knights, who would fight as long as the lord could pay them. Such armies were more stable and allowed their owners to crush the power of their rebellious vassals and establish more law and order. The increased order would encourage more towns which would generate more taxes for the king and upper nobles, who could impose even more law and order, and so on. This would also feed back into the ongoing cycle encouraging trade fairs. All this led to two things: a rising class of townsmen and a money based economy, both of which would help lead to the rise of kings.

Money created another problem especially hurting the nobles and Church: inflation. At first, when towns were just getting started and there was little money in circulation, the fixed rent set by the original town charter seemed like a good deal. However, as more money came into circulation, prices rose, and the buying power of the fixed rents declined. This especially hurt the nobles and the Church. The nobles often took the short term expedient of selling freedom to their towns and serfs for one lump sum. This gave them some immediate cash, but wrecked much of their power, leading to the decline and eventual end of the feudal order.

The Church, with its wealth mostly in land and fixed rents, also suffered. It did have other options for raising money, namely selling church offices and indulgences (reprieves from punishment in Purgatory before being admitted into Heaven). Such practices were subject to abuse and led to popular discontent that cut into the Church's power and prestige. Eventually, that would lead to the

Protestant Reformation, which would destroy the Catholic Church's religious dominance in Western Europe.

As far as townsmen were concerned, nobles and churchmen first saw them as an asset providing them with taxes and militia. However, as the class of townsmen grew, so did tensions with their overlords. For one thing, townsmen (or *burghers*, from *burg*, the German word meaning town) felt increasingly stifled under a lord's rule. The two classes had very different values, the burghers being concerned with trade and commerce and their overlords being concerned with power and fighting. Therefore, one by one, towns started trying to gain their freedom. Some towns bought it with one big payment to the lord or fought for it, sometimes in long protracted struggles. For example, the town of Tours in France fought twelve wars before it finally won its independence.

Another tactic was to appeal to the king for support, since kings and townsmen saw each other as valuable allies against the nobles and Church in between. Eventually, the towns managed to break free and form *communes* (urban republics) like their counterparts in Italy. Oftentimes confirming the town's independent status would be a charter that would detail the specific duties and liberties the town and lord owed each other. Also, as serfs and towns bought their freedom, they came more closely under the king's authority, supplying him with taxes and loans.

Two other factors unique to the king gave him an edge over other nobles. One was his religious position as God's appointed ruler, which was symbolized by a churchman anointing him with oil in the same manner as Biblical rulers. The second factor was his position as the supreme judge of the land. When the kings were weak in the Early Middle Ages, this did them little good. However, as they rose in power, they could exercise their judicial powers more effectively, which in turn would give them more political power and so on.

All these factors, the rise of a money economy, the growing class of townsmen, and the kings' judicial and religious status gradually led to the decline of the medieval Church and nobles and the

corresponding rise of kings with money that could buy them two things. One was stable full time mercenary armies that would fight for as long as they were paid. The other was a bureaucracy drawn increasingly from the middle class. These new royal bureaucrats had several advantages over feudal vassals. For one thing, they were more loyal, being the king's natural allies against the nobles. Also, they were more efficient since they were generally literate and could keep records. Finally, they were easier to control because they were totally dependant on the king for their status. Also, they were paid with money, so the king could just cut their pay if they got out of line. This contrasted greatly with the land based economy of the Early Middle Ages when the king had to physically drive rebellious vassals from their lands. Although the rise of kings and national monarchies would be a centuries long process, it was the rise of towns starting in the twelfth century that set that process in motion and laid the foundations of the modern world.

The revival of learning and the rise of universities. As trade revived and spread into Muslim Spain and with the Muslim and Byzantine East, merchants also came into contact with the advanced learning in math and science that was thriving in those areas. (Another source of contact was the pilgrimage route to Santiago de Compostela in Spain, only surpassed in popularity as a destination by Jerusalem and Rome.)

Not that learning had completely died out in Western Europe. Among the bright spots were the universities established by Charlemagne (c.800) and other Carolingian rulers during the Carolingian Renaissance. Most of these were established as cathedral schools to train clerics who could double as bureaucrats.

In 1079, as more settled times were returning, Pope Gregory VII mandated the creation of Cathedral schools to educate the clergy. Such clergy could also support him in the Investiture Struggle against the German emperors. As these schools proliferated, many developed into universities. Among the most notable were:

- The University of Bologna (f.1088) in Italy, which specialized in canon (church) law
- The University of Paris (c. c.1119) coalescing from various monastery schools
- The Theological School of the Sorbonne in Paris (c. 1231)
- Oxford University (1167-85)
- The first college of Cambridge (1209)

Students would enter the university as early as age 14 and take part in 6 years of lectures in the liberal arts which were divided into two parts:

- The *trivium* ("three ways") of grammar, dialectic, and rhetoric
- The *quadrivium* ("four ways"): math, geom., astronomy, & music

Lecture comes from the Latin word for read, because lecturers would typically read from the only copy of the text usually available while students copied them down. Students could also rent 8-page sections (*peciae*) of the text that had been hand-copied (as were all books, including the master texts before the printing press came along after 1450.)



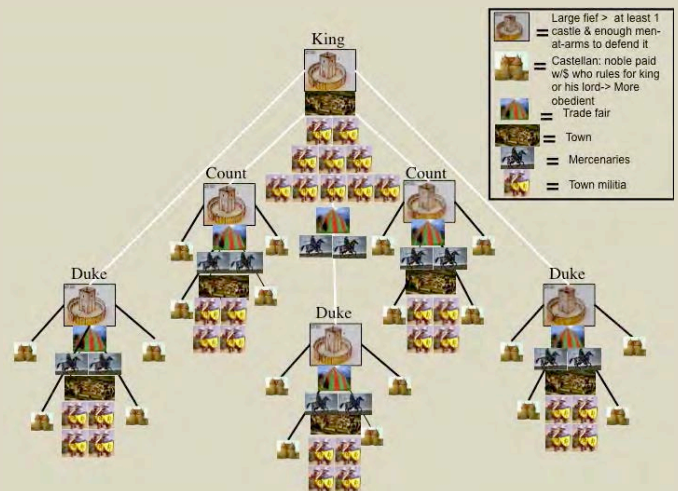
Next came 2 years of debate or disputations which led to examinations that could earn a degree in the Bachelor of arts. A Master's degree usually required one more year of further studies. That in turn qualified one to study law, medicine, or theology and earn a doctorate (from the Latin word for teacher). Altogether, this could involve up to 12 years of study.

Universities were almost always under clerical rule. Since the Church's laws and punishments were more lenient than those of secular authorities, universities also attracted a number of irresponsible young men who used the umbrella of the Church's protection to engage in

theft and other petty crimes. This, in turn, often led to bad relations and even violence between Town and Gown, sometimes making the atmosphere in medieval towns even more turbulent than usual.

Despite this more unsavory aspect, medieval universities were the basis of the revival of learning that has served as the basis for Western civilization to this day. The core and foundation of this learning were the works of Aristotle (384-322 B.C.E.), which the Arabs had especially preserved and passed on to the West. Aristotle's works would serve as the basis of Western learning and what is known as the Twelfth Century Renaissance. His influence, backed by the power of the Church, would totally dominate Western learning until the Scientific Revolution in the 1600s.

Towns and the Evolution of the Feudal Monarchy out of the Feudal System



The king needs armies to defend his kingdom, but has no money with which to pay them.

The king divides the kingdom into 5 parts, keeping 1 for himself and giving the other 4 as *fiefs* to *vassals*, who will defend their fiefs & owe him 5 knights each for 40 days a year. However, each vassal needs knights to provide to the king & for his own local wars.

Therefore, they each *subinfeudate* (subdivide) their respective lands into 5 parts, keeping one to live on and giving the other 4 as fiefs to *rear*

vassals who owe their lords 3 knights each for 40 days a year for his wars.

To meet his obligations & needs each rear vassal *subinfeudates* his fief into 5 fiefs, each with 1 manor able to support 1 knight. He keeps one for himself & gives the other 4 to vassals who personally owe him 40 days of service a year for his wars.

To take advantage of the growing trade, the king and all the counts and dukes hold trade fairs. To do this, they need to guarantee the peaceful travel of the merchants. As a result, they team up with their direct vassals to bring their rear vassals under control.

Having established peace in their realms, the king, counts, & dukes hold successful trade fairs that bring in money that they use to buy mercenaries who will fight full time for them. Using these mercenaries, they bring their barons under control and install castellans paid with money, giving them more control.

The towns, wanting freedom from their overlord dukes and counts, ally with the king to win independence from them, while remaining loyal subjects and allies of the king who safeguards peaceful trade.

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IN PURSUIT OF SECURITY: MEDIEVAL LEAGUES AND GUILDS

The years when towns and trade were first reviving in Western Europe were precarious ones for the emerging middle class of merchants and artisans. Costly tolls levied by local nobles hampered trade when times were peaceful, while more turbulent times could see each of those nobles cutting off trade and marauding merchants on the road. Different weights, measures, and standards of coinage complicated transactions between merchants of neighboring towns. Famine could drive prices up dramatically, thus cutting down the flow of trade and causing turmoil among the workers who wanted higher wages to keep up with rising prices. Given such a dangerous world for the medieval merchants and artisans, it should come as no surprise that they formed associations, leagues and guilds, to protect and promote trade. These were not examples of free enterprise, however. Their purpose was to exclude outside competition from their markets since the evolving market economy was seen as too fragile to sustain much competition.

Leagues. In northern Europe, towns would band together in leagues to establish collective security. The most important of these leagues was the *Hanseatic League*, which was centered on the city of Lubeck in the southwest corner of the Baltic Sea. At the height of its power (c.1350 C.E.) the League contained over seventy German cities throughout the Baltic and North Seas. It kept an effective monopoly on the trade in this area by keeping out Russian, Scandinavian, and English competition. When pirates, local lords, or even kings threatened their trade or freedom, the League's forces could successfully defend their interests. The king of Denmark found this out to his dismay in 1370 when he tried to encroach on the League's territory and was driven back. The Hanseatic League dominated the trade of the Baltic and North Seas in the north much as the Italian cities dominated the Mediterranean trade in the south.

Besides common military action, the Hanseatic League carried out other measures to protect and promote trade. For one thing, it established common weights, measures and coinage throughout its member cities. This cut down on the time-consuming hassles of having to convert from one weight and measurement system to another each time a new business transaction took place. Today we are in the final stages of this standardization process, as the metric system is being pushed for worldwide use.

The Hanseatic League's success was also based on more advanced business techniques, in particular the use of credit. With a cash economy, a merchant could only buy as many goods as he had the cash on hand to pay with, which severely limited the scope of his activities. With credit that merchant could borrow more money than he actually had and use it to buy goods that he could sell for a larger profit than with a cash economy. This was because he was borrowing, buying, and reselling on a much larger scale (even after repaying the loan) than he ever could if he were dealing strictly with cash. As the merchant's credit rating improved, he could borrow ever-larger sums of money, oftentimes in several places at a time through the use of his agents, which vastly expanded the scope of his activities, his profits, and his credit rating. Buying in larger volume also allowed him to sell each unit of goods more cheaply and thus undersell other merchants not dealing in credit. In such a way, the Hanseatic League established a virtual monopoly on trade in the Baltic and North Seas.

The political expansion of the German people also helped the German cities of the Hanseatic League. At this time, German peasants and the crusading order of the Teutonic Knights were expanding into the interior of Eastern Europe against the Slavic peoples there. Meanwhile, the German cities founded colonies in their wake, thus increasing their economic power over the Baltic Sea and further restricting competition there.

Although the Hanseatic League was the most important of the medieval town leagues, it was by no means the only one. There were several leagues of towns along the Rhine whose main concerns were to stop the raids of local nobles on trade and to curb the tolls those nobles imposed on goods passing through their territory. The most famous of these leagues, the Swabian League, had over eighty member cities at its height (late 1300's) and was strong enough to challenge the dukes of Austria and Bavaria. In Flanders, there was a league of twenty-two towns whose purpose was to buy raw wool from England. Another league of seventeen towns in Champagne County, France regulated marketing practices at trade fairs. Whatever their functions, the cumulative effect of leagues was to improve the trade and economy of Western Europe. And that in turn contributed to the rise of kings and more stability.

Guilds served much the same function on a local level as leagues did on a wider geographic level: protecting their members from the dangers of outside world, whether they were marauding nobles

and bandits, economic ruin, or outside competition. Originally each town would have one guild encompassing all crafts. However, as the towns grew, the guilds evolved into various specialized guilds: merchant, goldsmith, armorer, tailor, bargemen, etc. By 1200 C.E., Venice had fifty-eight guilds, Genoa thirty-three, Florence twenty-one, Cologne twenty-six, and Paris one hundred. The purpose of each guild was to exclude outsiders from practicing that guild's craft or trade within the city walls. Although this virtually eliminated free enterprise, it did provide a stable atmosphere in which the newly evolving crafts and trades could develop and survive.

Guilds went much farther than excluding outside competition from within their walls. In fact they controlled just about every aspect of the town's economy, in particular wages, prices, quality of goods, and guild membership. For example, an armorer would buy the materials he needed through the guild at a set price, not on his own for whatever price was cheapest. His workers worked for the number of hours and wages set by the guild. His armor had to be of certain quality meeting the guild's specifications. He could not advertise beyond setting one example of his work in his window. The guild also determined the price he could charge so he would not get an advantage over other members of the guild. Set prices also reflected the Church's displeasure with profits.

Training for and admission into the guild were also strictly regulated. Apprenticeship was almost always restricted to sons or nephews of guild masters, something that caused anger among the common laborers. Typically, a master craftsman would send his son to another craftsman for apprenticeship at the age of ten to twelve years. The boy would live in the master's home, work in his shop, and learn the craft in an apprenticeship lasting from three to fifteen years. At the end of his training, the apprentice would usually get a gift of money from the master to help him start his own business. He then became a *journeyman* who worked as a day laborer for different masters until he could save enough money to start his own shop. When he was ready, the journeyman would be examined by the guild masters for his technical ability, oftentimes having to produce a *masterpiece* to show his proficiency at the craft. If he passed the exam, and there was room in the guild, he became a master who shared in the limited, but fairly stable market established by the guild for its members.

The guild was more than a business association. It was also a social and political organization that looked after the welfare of its members. It provided

justice by settling disputes between its members. It supervised the morals of its members in such matters as public fighting, drunkenness, and a dress code. It provided insurance against fire, flood, theft, prison, and old age (for those few who survived that long). It paid for members' funerals and for masses and prayers to free their souls from Purgatory. The guilds would also build hospitals, almshouses, schools and orphanages for the many orphans in society back then.

The guild was also a source of pride for its members. Each guild had its own guildhall where meetings and social functions were held. On the day celebrating its patron saint, a guild would put on parades and religious plays. Guilds would also dedicate to the town cathedral stained glass windows depicting biblical scenes that were also concerned with that guild's particular craft.

Guilds, like leagues, caused Europe's economy and trade to improve, which made possible the rise of kings and more stable conditions. However, those very kings who profited from guilds and leagues were largely the cause of their decline in the 1400's. For one thing, the stable conditions protected by the kings made the guilds' protective restrictions unnecessary. In spite of this, the guild masters who ran the towns restricted membership even more than before while maintaining strict price and quality controls on their goods. Earlier, such practices had been good since they had protected a fragile trade vulnerable to the harsh conditions of the time. By the late 1400's, those same practices that had once protected the guilds now worked to destroy them. Restrictive membership and low wages, even in time of inflation, led to worker revolts in many cities. Even more devastating was the competition from outside of town. Rich merchants started *cottage industries* where they moved production outside the city walls (and the guilds' jurisdiction). Here they could pay individual peasants lower wages to produce wool and undersell the guilds which were still locked into their controlled wage and price structure. As a result, guilds went into decline.

The rise of strongly centralized states in the Later Middle Ages also hurt leagues, because the kings now protected trade and also saw the leagues as rivals for political power. At the same time, stability and trade fostered by the rise of kings sent explorers looking for new markets. The discovery of new trade routes to America and around Africa shifted trade away from the Baltic and North Seas, thus hurting the German leagues.

Daily Life in Medieval Towns



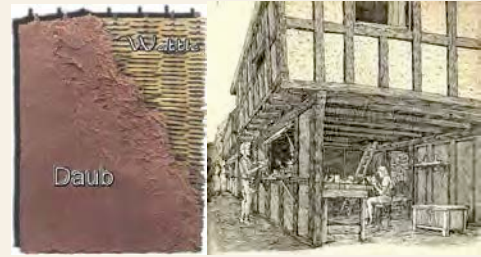
Carcassonne in southern France, one of the best preserved medieval cities

Upon approaching a town, one would first encounter its fortifications, which besides protecting it from enemies, also marked a clear distinction between town and country. Suburbs were discouraged or forbidden because they could offer cover to approaching enemies.

In addition to a town's fortifications, one would typically see towers inside a city. Each tower would belong to a noble family and served as a status symbol as well a fortified center of defense against other nobles they may be feuding with, such as the Capulets and Montagues (real families) in Verona, Italy and portrayed by Shakespeare in *Romeo and Juliet*. San Gimignano in Tuscany (below) is probably the best surviving example of this phenomenon, although only 14 of its original towers survive.



Houses were typically made of a wooden frame with the gaps filled in with wattle (a woven mat) and daub (mud plaster). Such buildings were prone to fire and had to be redaubed every year or two.



Typically, merchants and craftsmen would occupy an upstairs apartment, while having their shop on street level.



Above: Street scenes in medieval Florence, but typical of other towns across Europe then. Oftentimes, each district would specialize in one type of product, such as woolen textiles seen here. Notice the crowded unpaved street and the pig, which was allowed to run loose to eat garbage and children's homework.

Although the 6-day work-week was the norm in the Middle Ages, there were also numerous festival days to commemorate various saints that people got off work. On the day of the patron saint of a particular guild, its guild members would typically stage a parade for the entertainment of the whole town.



Town life had its hazards as well. Two in particular, thanks to the crowded conditions, were fire and disease. In the absence of modern vacuum pumps, medieval townspeople had little to put out fires except grappling hooks to pull down houses in the path of the fire to create a firebreak. The worst-case scenario was a fire starting during a dry season on the windward side of town on a windy night when people were less alert. If dealt with quickly, the fire might be contained. However, windy conditions could rapidly multiply the problem exponentially, as happened to London in 1666. Between 1200 and 1225, the French town of Tours burned down six times.

The other hazard, disease, was compounded by the lack of sanitary facilities that attracted rat disease-bearing insects and rats. Not having any accurate ideas on what caused diseases, the only options during an epidemic were quarantining (confining) the sick or fleeing town. The worst-case scenario was the Black Death in the 1300s, which probably wiped out 30% of Europe's population overall, although in the cities that rate typically soared to 60-70%. The allure of town life and opportunities attracted migrants from the countryside, and they were needed, since towns often could not sustain their populations through natural increase.

There was a medieval saying that town air made one free. However, it also made one sick. Not until public sanitation and modern medicine developed in the late 1800s would life expectancies in towns and cities equal or exceed those in the countryside.

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THE RISE OF THE PAPAL MONARCHY IN THE MIDDLE AGES (c.900-1300)



The posthumous trial of Pope Formosus

Introduction: the plight of the Church in the Early Middle Ages. Few stories better illustrate the problems of the medieval Catholic Church than the story of Pope Formosus. When this pope died in 896, his troubles were far from over. A personal enemy became the new pope and had Formosus' body dug up and put on trial. To no one's surprise, the late Formosus was convicted of illegally seizing the papal throne. His body was stripped of its priestly vestments, the fingers on his right hand (used for giving the benediction) were cut off, and his body was thrown into the Tiber River. Not surprisingly, the rest of the Church, ranging from bishops, archbishops, and abbots down to the lowliest monks and parish priests, was also seething with corruption.

The Church's wealth, some 20-30% of the land in Western Europe, was a big part of the problem. With little money in circulation at this time, land was the main source of wealth and power, making the Church the object of the political ambitions of nobles throughout Europe. Naturally, such nobles, who were warriors by trade, usually ignored and even trampled over the religious interests of the Church.



The abbey of Cluny where a major Church reform movement started c.910.

The zeal for reform (910-1073). Even in such troubled times, the Church's ongoing cycle of corruption and reform meant there were always men of religious conviction determined to set the Church

back on its spiritual path. As so often happened, reform started in the monasteries, in this case in the monastic house founded at Cluny, France in 910 C.E. The monks of Cluny placed themselves directly under the pope's power and out of the reach of any local lords. That meant virtual independence from any outside authority, since the popes were too weak to exert any authority from so far away. Technically, they were Benedictines and there was no separate order of Cluniac monks, but their agenda of reforms became so widely adopted that they have been referred to as Cluniacs ever since. Over the next 150 years, Cluniac reforms spread to hundreds of monasteries across Western Europe.

The zeal for reform was also strong in Germany, especially among the upper clergy and the emperors. The emperors saw church reform as a way to weaken the power of the nobles trying to control church lands and elections. By the same token, devout bishops and abbots looked to the German emperors for protections from ambitious nobles. As a result, both German emperors and German clergy supported the growing reform movement. Emperors put reformers into church offices throughout Germany. Such men were generally loyal to the emperor since they owed their positions to him and saw him as the main defender of reform.

The emperor, Henry III, even appointed four reform popes. One of them, Leo IX, carried out numerous reforms against simony (selling church offices), clerical marriage, violence, and overall moral laxity among the clergy. He even felt strong enough to tangle with the patriarch in Constantinople, thus causing a *schism* (break) within the Church in 1054 that was never healed. Since that time, the Roman Catholic and Greek Orthodox Churches have functioned as two separate Churches. Consequently, by the mid eleventh century, the popes were taken seriously as a real moral force in Western Europe. However, a storm was about to break that would destroy relations between Church and Empire.

The Investiture Struggle (1073-1122). In 1056, the reform Church's main ally and guardian, Henry III, died leaving a child, Henry IV, as his successor. This deprived the Church of any effective imperial protection until the young emperor came of age. As a result, the popes had to seek new allies, and

settled on the Normans in Southern Italy and the dukes of Tuscany in Northern Italy. Both of these were enemies of the German emperors, thus creating a tense situation between the popes and Henry IV when he came of age. One reform adding to the tension was the creation of the College of Cardinals whose job it was to meet in private to elect a new pope. Designed largely to keep the turbulent Roman mob out of papal elections, it also kept the German emperors out of direct participation, although they still could veto any choice the College of Cardinals made.

Another problem was the pope, Gregory VII, an ardent and stubborn reformer who agitated to replace imperial with papal control of Church elections. Growing suspicion and tension between pope and emperor finally erupted in the Investiture Struggle over who controls Church elections and invests (bestows) the bishops and abbots with the symbols of their power.

The stakes in this fight were high on both sides. Henry needed control of the bishops and abbots to maintain effective control of his empire. Pope Gregory felt the Church had to free itself from outside secular control if it were to fulfill its spiritual mission. There was also the larger question of who was the real head of the Christian world: the Universal Empire or the Universal Church. Although the Byzantine emperor usually held sway over the Eastern patriarch in Constantinople, this question of supremacy, going back through Charlemagne to the later Roman Empire, had never been resolved in the West.

Meanwhile, the pope stirred the German nobles into rebellion against Henry. When Henry and his bishops declared Gregory a false pope, Gregory excommunicated Henry. Excommunication could be a decisive weapon since it released a ruler's vassals from loyalty to him until he did penance to get accepted back into the Church. As a result, Henry did such penance by standing barefoot in the snow outside the pope's palace at Canossa.

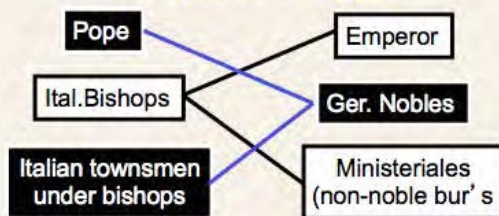
However, the struggle was hardly over. Gregory was driven from Rome and died in exile in the Norman kingdom to the south, while Henry's reign ended with Germany torn by civil war and revolts. Finally, a compromise was reached where only clergy elected new bishops and abbots, but in the presence of an imperial representative who invested the new bishop or abbot with the symbols of his secular (worldly) power. Although the struggle between popes and emperors continued for centuries, the popes had won a major victory, signifying the Church's rising power and a corresponding period of decline for Germany.

The Papal monarchy at its height (1122-c.1300).

The papal victory in the Investiture Struggle and the higher status it brought the popes led to many more people turning to the Church to solve their problems, in particular legal ones. Canon (church) law and courts were generally seen as being more fair, lenient and efficient than their secular counterparts.

However, the more the Church's prestige grew, the more its courts were used, and the more its bureaucracy grew. As a result, the popes found themselves increasingly tied down with legal and bureaucratic matters, leaving less time for spiritual affairs. The popes of the 1200's generally had more background in (church) law than theology. By and large they were good popes, but also ones with an exalted view of the Church's position. The most powerful of these popes, Innocent III (1199-1215), even claimed that the clergy were the only true full members of the Church.

**My enemy's enemy is my friend:
Who sided with whom in the
Investiture struggle**



The Investiture struggle was a bitterly fought conflict on both sides. Pope and emperor stirred each other's subordinates into revolt. The reform bishops, appointed up to this time by the emperor, generally supported him against the pope.



Pope Innocent III

Unfortunately, growing power and wealth again diverted the Church from its spiritual mission, and led to growing corruption. Two other factors aggravated this problem. One was the rising power of kings, which triggered bitter struggles with the popes over power and jurisdiction. Popes often used questionable means in these fights, such as overuse of excommunication, declaring crusades against Christian enemies, and extracting forced loans from bankers by threatening to declare all debts to the bankers erased if the loans were not granted. A second problem was inflation, which arose from the rise of towns and a money economy. The Church, with its wealth based in land, constantly needed money and therefore engaged in several corrupt practices: simony, selling indulgences (to buy time out of Purgatory for one's sins), fees for any and all kinds of Church services, and multiple offices for the same men (who were always absent from at least one office).

All these factors combined to ruin the Church's reputation among the faithful and undermine its power and authority. Eventually, they would lead to the Protestant Reformation, shatter Christian unity in Western Europe for good, and help pave the way for the emergence of the modern world.

Those troubled popes

Papal history after the disintegration of Charlemagne's empire was both dangerous and fraught with scandals. By the late 800s, the papal throne had sunken to being little more than a political prize fought over by rival Roman families. Therefore, four popes were murdered between 882 and 984: John VIII (872-82), Stephen VI (896-97), Benedict VI (973-74), and John XIV (983-84). During another six-year period, there were seven popes and one anti-pope, four of them in one year. And of course, there was poor old Pope Formosus whose body was dug up and put on trial after he died.

In addition to murders, there were also plenty of scandals, or rumors of scandals that tend to thrive in such an environment. One woman, Theodora, had her father make her lover pope Sergius. When he died in 911, her mother, Marozia, had her husband make her lover Pope. One pope sold the papacy to another noble and moved to Constantinople, while John XII supposedly brought prostitutes into the papal palace.

Then there was the legend of Pope Joan, who may be confused with John VIII. Supposedly, she was a scholarly woman who got elected pope without anyone realizing her gender. That was until she went into labor during mass and was subsequently killed and deposed. Whatever the truth of this story, after this, popes were crowned on a chair with a hole in the seat to confirm they were men.

Monastic sign Language



The refectory where monks would gather to eat in silence

Since monks were supposed to refrain from speaking during mealtime while a comrade read scripture aloud to them, they developed a sophisticated sign language to communicate their needs while eating. These are taken from *Monasteriales Indicia*, Book with 127 signs used in Anglo Saxon monasteries.

(8.53) If you need a dish, raise up one hand and spread your fingers.

57. (8.54) When you would have a loaf of bread, set your two thumbs together and your two forefingers one against the other.

58. (8.55) If you need a knife, cut with one finger over the other as if carving.

59. (8.56) If you need a spoon, move your hand as if you were eating with a spoon.

63. (9.60) The sign of porridge is to move your fist back and forth as if stirring porridge.

64. (9.61) When you would like pepper, shake with one forefinger over the other.

67. (10.64) When you would like cheese, set your two hands flat together, as if pressing.

68. (10.65) If you want butter or fat, stroke with your three fingers on the inside of your hand.

69. (10.66) If you would like milk, stroke your left finger with your right hand as if you were milking.

70. (10.67) If you need eggs, scrape with your finger up on your left thumb.

71. (10.68) When you would like salt, bring down your hand with three fingers together, as if you were salting something.

72. (10.69) The sign of honey is to set your finger on your tongue.

73. (11.70) When you would like fish, move your hand back and forth the way a fish moves its tail, when it swims.

(7.48) When you would have a whip, move your fist back and forth as we described before, and raise up your two fingers.

The Arsenal of Papal Weapons



Jan Hus being excommunicated as a heretic

While at first glance the popes would seem to be at a disadvantage in their struggles against powerful secular rulers, they had allies who could carry on the fight in return for blessings and the hope of confiscating the papal enemies' lands. They also had a formidable arsenal of spiritual weapons, two in particular: excommunication and the interdict.

Excommunication cut its victim off from the Church and even society itself. The excommunicant and everything about him were

cursed: his clothes, food, air, etc. In addition his subjects were absolved of their oaths of loyalty to the ruler and didn't have to obey him

Interdicts stopped church services for laity in a whole region by "bell, book, & candle." In fact, often the first sign that something was wrong was the failure of the church bells to ring at regular times to signal when it was time for prayers (similar to the muezzin's call to prayer in Islam.) During an interdict, masses were only held for other clergy. There were no marriages performed or burials on consecrated ground, leading to the fear that those who died under interdict would go to hell. Therefore, an interdict was a weapon that could scare and anger people and put pressure on a ruler to give in to the pope.

Declaring a crusade against the pope's enemies was another way to stir up the public, since it promised forgiveness of sins for those who participated and gave them the right to confiscate the enemy's property.

However, the popes had to be careful in using these spiritual weapons against worldly, especially Christian, enemies, since their impact tended to wear out with repeated use as people became increasingly skeptical about their legitimacy. Besides, two could play that game and the emperor could set up anti-popes who claimed to be the truly legitimate popes, being elected by the bishops (or cardinals after 1055) who owed their offices to the emperor who typically appointed them before the Investiture Struggle.

Returning corruption and renewed Redemption: St. Francis of Assisi



St. Francis preaching to a flock of birds

As the Church's wealth and power increased, various corrupt practices worked their way back into use (or never went away) among some clergy. For example, Bishop Matthew of Toul, although excommunicated for eight years, murdered his replacement and plundered church lands. The bishop of Parma even refused last rites from the church he led and supposedly had believed in. Another clergyman rigged up a crucifix that made Jesus move on the cross. Some bishops were barely literate and could not pronounce, let alone understand the Latin scripture they were reading their followers. Not surprisingly, standards fell among the lower clergy. One study indicated that the average priest knew only four of the Ten Commandments. Meanwhile, peasants were crumbling communion wafers on their cabbages as some sort of magical potion/insecticide.

But just as things seemed to be at their lowest, someone would rise from the ranks of the Church to revive it spiritually. In the early 1200s, that role was especially played by St. Francis of Assisi.

St Francis was the son of a wealthy merchant who grew up rich and spoiled. He fought in Assisi's army against neighboring Perugia and in 1204 joined Innocent III's army. At that point, he fell ill with a fever. While recovering, he heard a voice asking him: *"Why do you desert the lord for the servant, the prince for his vassal?"* Taking this as a sign from God, he left the army and went home to devote his life to God.

Francis especially devoted his life to helping the poor, even giving them the clothes off his back.

Once after shrinking back in revulsion at the sight of a leper, he repented and returned to give him money and even kiss his hand to show his humility before God.

His father was furious with how Francis had handled his money, and summoned him before the bishop. Declaring he was now only a son of God, Francis returned all his property and even his clothes to his father who took them and left. (Throughout his life, Francis' followers had a hard time keeping him in clothes, because whenever he saw a beggar, he would literally give him the clothes off his own back.)

Francis then went to rebuild an old chapel with his own hands. Claiming himself now married to Lady Poverty he resolved to obey the Gospels & preach the kingdom of Heaven and gospel of poverty, begging for food from door to door.

Among other things, because of his love of animals, Francis would become the patron saint of animals. He would buy game birds in the market to set them free. In return, birds would supposedly perch on his hand and listen to him preach. At one point he petitioned the emperor Frederick II to ban hunting animals for sport. Another time, when someone was about to put out a candle, Francis stopped him, saying the candle might not want to be put out.

Francis himself was never ordained as a priest, but he would preach to the common people in the vernacular (common language instead of Latin which people no longer understood), while leaving ordained followers to administer church sacraments. Although not an ordained priest, Francis still convinced Pope Innocent III to formally ordain the Franciscans as a mendicant order that went out to preach (as opposed to a cloistered order whose monks generally stayed in their monasteries).

Supposedly, Francis even went on crusade, not to kill Muslims but convert them. One night he slipped through the lines and showed up in the sultan's tent to preach to him about Jesus' love. Although he didn't convert, the sultan was impressed with this simple and kindly man and had him escorted safely back to the Christian camp.

In addition to preaching in the common language to make Jesus' message more accessible to the mass of people, Francis also loved to sing as a way of praising God, serving as a sort of glee club for Jesus. Therefore, when terminally ill and told that he was about to die, he sang a song in praise of death.

Francis and the order he founded were just what the Church needed in an age of growing material prosperity. Franciscan friars wandered far and wide, preaching to the common people while owning nothing beyond their plain brown robes and begging bowls. Unfortunately, as before, most people weren't ready to devote their lives to such a severe discipline, but many wanted to donate to the Franciscans in order to save their own souls. However, the Franciscans lived by a strict code of poverty and could not accept such donations, until someone cleverly drew the distinction between *owning* property and *stewarding* (taking care of) it for God.

Thus the cycle of corruption and spiritual revival in the Church started again, so that by 1500 the Franciscans were parodied as being fat and corrupt drunkards. That parody especially survived in the form of Friar Tuck of Robin Hood fame and whose name graces the entrance to a chain of liquor stores.

Luckily for the Church, other reformers, such as St. Ignatius Loyola and St. Xavier would come along to pick up the banner of spiritual reform that St. Francis had so boldly waved in his own time.

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EUROPE RESURGENT: THE CRUSADES (1095-1291)

*"...But these were small matters compared to what happened at the temple of Solomon, a place where religious services are ordinarily chanted. What happened there? If I tell the truth, it will exceed your powers of belief. So let it suffice to say this much at least, that in the temple and portico of Solomon, men rode in blood up to their knees and bridle reins. Indeed, it was a just and splendid judgment of God, that this place should be filled with the blood of the unbelievers, when it had suffered so long from their blasphemies."--
Foucher de Chartres*

The First Crusade (1095-99). The modern reader (both Christian and non-Christian) is justifiably shocked at how medieval Christians such as Foucher de Chartres exulted in the wholesale butchery that took place in Jerusalem, the holiest city of Christianity, to end the religious war known as the First Crusade. However, that description expresses quite well not just the rough edge of medieval Christian faith, but also the power and energy that, for nearly two centuries, drove Europeans to launch the Crusades in order to conquer and hold Palestine. There were several reasons for the Crusades happening when they did.

First of all, there was the expanding power of Western Europe in the eleventh century. More settled conditions plus better agricultural techniques helped trigger population expansion that created large numbers of landless younger sons of nobles. Adding to these pressures was a series of bad harvests providing an even greater incentive to find land elsewhere. While the Crusades were the most dramatic and publicized example of Europe's expanding frontiers, there was similar expansion by Spanish Christians in Spain, by the Normans in Southern Italy and Sicily, and by the Germans in Eastern Europe.

The most immediate reason centered on events in the Middle East. In the eleventh century, a new people, the Seljuk Turks, replaced the Arabs as

the dominant power in the Islamic world, overrunning most of Asia Minor after crushing the Byzantine army at Manzikert (1071) and seizing Palestine from the Shiite Fatimids of Egypt. These conquests led to pleas to the West for help, both from Christian pilgrims to Palestine who suffered from mistreatment at the hands of the Turks and from the Byzantine emperor, Alexius I, who just wanted mercenaries with which he could reconquer Asia Minor. As an added enticement, Alexius held out the possibility of reuniting the Greek Orthodox and Roman Catholic Churches, which had been split since the schism of 1054.

The rising power of the Church at this time was another factor leading to the Crusades. This created a rising tide of piety in Western Europe that expressed itself in pilgrimages to Palestine before the Turks seized it, and adapted itself to a holy war (crusade) after the Turkish conquest. This rising tide of piety was part of a broader movement for Church reform led by the popes that had caused the Investiture Struggle with the German emperors over control of the election of Church officials. Both the reunification of the Catholic Church with Byzantium and the recovery of Jerusalem fit into the larger ambitions of Pope Urban II. If the pope could lead all of Christendom in a crusade to recover the Holy Land (Palestine), then his moral authority would far surpass that of the German Emperor. Therefore, in 1095, at the French town of Clermont, Pope Urban II preached the First Crusade (from the Latin word, *crux*, for cross) to liberate the Holy Land from the Turks. Apparently his speech struck a nerve, because thousands enthusiastically "took the cross" (i.e., vowed to go on crusade).

This raises the question of what spurred the rank and file of Europe to undertake such a long and dangerous journey. Two main factors present themselves: piety and poverty. Piety should never be downplayed in the Middle Ages, although the nature of medieval piety may have been somewhat different from our own concept of it. Crusaders went to the Holy Land believing that such a journey and the killing of non-Christians in defense of the faith would earn them forgiveness for their sins. Poverty and greed also played their role. As we have seen, Europe's expanding population created a large number of landless

younger sons of nobles. Going on crusade offered them both the opportunity to win such lands and forgiveness for their sins as well. No wonder so many of them decided to undertake such a long and dangerous enterprise.

Most of those who went were nobles who needed time to get supplies for their journey and set their personal affairs in order before leaving. Therefore the departure of the First Crusade was set for August 1096 from Constantinople. This would also give the Byzantines time to prepare supplies along the line of march.

However, there were also many desperately poor peasants who had no substantial affairs to set in order. Therefore, they just set off for the Holy Land without making any plans or provisions for the march. These undisciplined mobs, known collectively as the Peasants' Crusade, gained followers and momentum in each village through which they passed. Their growing numbers also created ever mounting supply problems that often erupted into violence as they turned to pillaging for food. Such violence was often turned against local Jews, since they were non-Christian and this was a "holy war" to begin with. As a result, thousands of Jews were either killed or forced to flee their homes.



However, the Jews were not the only ones upset by these peasant groups, and local populations and rulers would often turn against these unwelcome intruders. For example, three waves of peasants who went through Hungary were each destroyed by the Hungarians who were tired of their plundering.

Those who made it to the Byzantine Empire fared no better. Many were picked off on their foraging raids by Byzantine cavalry. The rest were quickly ferried across to Asia Minor to prevent further trouble in Constantinople. Not trusting the Byzantines, this undisciplined mob ignored Alexius' advice to stay by the coast and Byzantine

support. As a result, the Turks annihilated all but a few of them. When the main body of crusaders arrived, the few surviving peasants they met blamed their fate on Byzantine treachery. Relations between Byzantines & crusaders were already being poisoned.



Soon after landing in Asia Minor, the crusaders came upon the remains of the Peasants Crusade massacred by the Turks, a grim warning of hardships ahead.

The more organized and disciplined crusading knights and nobles made their way to Constantinople in isolated groups. This allowed the emperor to deal with them singly, impressing them with his collection of relics and mechanical wonders and then extracting an oath from them to turn over any lands formerly held by the Byzantines. He would then shuttle them across to Asia Minor in time to meet the next group of crusaders arriving in Constantinople and repeat the process. These measures did help Alexius recover part of Asia Minor, notably the city of Nicaea, but they also added to growing tensions with the Crusaders who felt they were the victims of Byzantine trickery.



On the eve of the final assault, the Turks secretly surrendered Nicaea to the Byzantines rather than face massacre by the Western "barbarians". This especially irked the Crusaders who had borne the brunt of the siege, & soured their relations with the Byzantines.

The crusaders saw their first serious fighting in Asia Minor. Helped by both the turmoil caused by the Assassins' murder of Malik Shah and the Turks' expectation that these European knights would be as easy a prey as the Peasants' Crusade had been, the crusaders' heavily armored shock cavalry defeated the Turks in their first major encounter. The crusaders themselves were frustrated by the Turks' mobile hit and run tactics that made it hard to win a decisive victory over them. Despite this, the intense heat, and even poisoned wells, the crusaders fought their way across Asia Minor.



While the rest of the crusaders pressed into Syria, one of their leaders, Baldwin, carved out his own state around the city of Edessa using only 80 knights and some skillful diplomacy and intrigue. Naturally, this spurred the ambitions of other crusaders, in particular a Norman knight named Bohemond who had his eyes set on Antioch, one of Syria's premier cities. Antioch fell after a long grueling siege, thanks largely to the intrigues of Bohemond who then claimed the city as his own. This was the second of the crusader states to be founded as well as the source of a good deal of jealousy and quarrelling among the various crusader leaders.

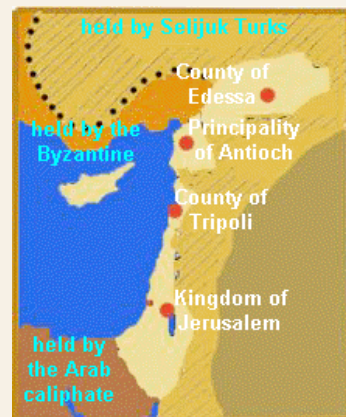
Crossing the Anti-Taurus Mountains with their treacherous passes was another major challenge for the crusaders, especially since it was during the rainy season. Supposedly more crusaders & pack animals perished here than during any other part of the journey.



The eight-month siege and stay at Antioch had decimated the Christian army through disease, hunger, and battles against various Muslim armies

sent to relieve Antioch. Add to this the constant bickering between its leaders and the polyglot mixture of French, English, Germans, and Italians making up the army, and the chances of continued success did not look good. However, the rank and file in the army insisted on putting aside their quarrels and marching on Jerusalem. Finally, in June 1099, with an army of only 15,000 men, they reached their long sought goal, Jerusalem.

The crusaders endured desert heat and shortages of food and water while besieging Jerusalem. They also faced the threat of a large Egyptian army coming to relieve the city. Luckily, an Italian fleet arrived at the harbor of Jaffa, bringing the crusaders supplies and timber for siege engines. After doing penance by marching barefoot in the desert heat around Jerusalem, the crusaders launched an assault that broke into the city on July 15. What ensued was one of the worst massacres in history, spurred on by religious frenzy combined with frustration from the hardships of the last three years. Foucher de Chartres' graphic description at the top of this reading shows how the crusaders used religion to justify this ghastly event. The success of the First Crusade was a remarkable feat, but it was stained with the blood of thousands of innocent Muslims and Jews.



The Kingdom of Jerusalem (1099-1187).

Despite their incredible victory, the crusaders had much going against them. First of all, they were surrounded and outnumbered by hostile Muslim states that eventually learned to unite against the Christian invaders. Secondly, since they were so far from their home base in Europe and many of the original number went back home after the conquest of Jerusalem, the remaining crusaders suffered a chronic manpower shortage, leaving them spread thinly across Syria and Palestine.

Third there was a growing cultural gap between the crusaders who stayed behind in the Holy Land and any newcomers who did arrive from Europe. They were shocked to find that after a number of years in the Near East, the original crusaders had adapted to local ways. Their clothes and houses resembled those of the Muslims. Some even kept harems with veiled women wearing makeup. More surprising yet, they set aside chapels in their churches where their Muslim neighbors could worship. Even their wars were fought in the more sophisticated local method of small local raids interrupted by truces with the Muslims. Nothing daunted, these newcomers, who had come all this way with the purpose of killing Muslims, would often break the truces, attack the Muslims, and then go home, leaving the crusaders in Palestine to bear the brunt of Muslim reprisals.

A fourth problem stemmed from the feudal system that the crusaders transplanted from Europe. Instead of one unified kingdom, they founded four separate states: the kingdom of Jerusalem and the counties of Edessa, Antioch, and Tripoli. This prevented the cooperation and unity of purpose needed against the surrounding Muslim enemies. Compounding this into a virtually hopeless situation was the further fragmentation of these states into individual baronies and fiefs.

Finally, the presence of the Italian city-states proved to be a mixed blessing. While they did provide a vital lifeline to Europe along with valuable naval support in taking the coastal cities of Palestine, this was all done for a price: the establishment of independent quarters in the coastal cities that they had helped take. This could be somewhat disruptive, since at times they might not cooperate with the crusaders in wars that could hurt their trade and business. At other times, two Italian cities might go to war with each other and the fighting would spread to those cities quarters in various crusader cities. In addition, Italian merchants also controlled much of the trade of Palestine and Syria, depriving the crusaders of much needed revenues.

Despite all these hardships, the crusader states did remarkably well, even expanding their territory in the early decades of the 1100's. Europe was still

enthusiastic about the crusaders' success and kept a constant (if barely adequate) stream of reinforcements going to the Holy Land. However, as the surrounding Muslim states unified against the common enemy, the tide started to turn.

The first crusader state to fall was Edessa in 1144, which promptly triggered the Second Crusade to recover it. This crusade, led by Louis VII of France and Conrad III of Germany, tried to follow the route taken by the First Crusade. However, the heat of Asia Minor and severe supply problems decimated the crusaders' army, which was then beaten near Damascus, leaving Edessa in Muslim hands for good.

The next forty years saw Egypt and Syria become unified in a strong Muslim state under the skillful leadership of Salah-a-din. Gradually, he tightened the noose around the beleaguered crusader states and finally destroyed the crusader forces at the Battle of Hattin in 1187. Jerusalem and most of the coastal cities of Palestine and Syria soon fell into Saladin's hands.

This brought on a series of crusades that failed to take Jerusalem or hold it for any substantial time. The third Crusade (1187-92), led by the famous warrior king of England, Richard "the Lionhearted", managed to take the coastal city of Acre after a prolonged siege. However, despite a march down the coast and various exploits, including a hard fought victory against Salah-a-din at Arsuf, Richard failed to take Jerusalem. Salah-a-din did grant Christian pilgrims free access to the holy city in order to worship, something he would have been willing to do anyway.

Later crusades tended to stray further and further from their goal of Jerusalem. For example, the Fourth Crusade (1202-4) was diverted by the Venetians to Constantinople, partly to cover the cost of transporting the crusaders, and partly because of growing tensions with the Byzantines over the growing Italian stranglehold on Byzantine trade. In 1204 the Venetians and crusaders stormed and mercilessly sacked Constantinople.

Besides never reaching Palestine, the Fourth Crusade set in motion the final decline of the

Byzantine Empire and deprived the crusaders of a potentially valuable ally. Relations between the Byzantines and Western Europe, which had been deteriorating for some time, grew that much worse as a result of the Fourth Crusade.

The Fifth Crusade (1228-9), led by Frederick II of Germany, did manage to negotiate the surrender of Jerusalem, but without fortifications. As a result it fell back into Muslim hands soon after Frederick returned home. The Sixth Crusade (1248-50) under Louis IX of France (Saint Louis) was directed against Egypt in the hope of being able to trade it for Palestine. The strategy would have worked except that Louis refused to negotiate with the Muslims when they were ready to give in. Then the Nile flooded, disease set in, and the entire French army was captured and forced to ransom itself from captivity. The Seventh Crusade (1270), also led by Louis IX, was directed even further afield against Tunis in North Africa. The idea was to cut off Muslim trade in the Mediterranean between Tunis and Sicily (which was held by Louis' shrewder and more practical brother, Charles of Anjou). Once again, disease did its work, this time claiming Louis, who died with the words "Jerusalem, Jerusalem" on his lips.

After this, interest in the crusades fizzled out for a couple of reasons. For one thing, Europe had changed dramatically in the 200 years since Urban II had preached the First Crusade. The rise of towns and a money economy had raised Europe's standard of living tremendously and given its people something to get interested in besides holy wars in distant lands. Also, the popes had gotten into the habit of declaring crusades against heretics in Europe (e.g., the Albigensians in France) and their mortal enemies, the German emperors. This cheapened and tarnished the image of the crusade and cost it a good deal of support.

Meanwhile, the crusader states huddled along the coast of Palestine were gradually being worn down by Muslim pressure. A brief hope of delivery seemed to present itself with the Mongols, who shattered one Muslim army after another in their rampage across Asia. However, in the Battle of Ayn Jalut (1260), the Mameluke sultan of Egypt, Baibars, crushed the Mongols and

stopped their advance once and for all. This also sealed the fate of the crusaders who had encouraged the Mongols. In 1291, the last of their strongholds, Acre, fell after a desperate siege. For all intents and purposes, the age of Crusades was over.

Despite their failure, the crusades had important results. For one thing, they opened Europeans' eyes to a broader world beyond Europe, stirring interest in and a bit more tolerance of other cultures. In particular, an influx of Arab texts and translations of classical Greek and Roman literature created a more secular outlook that helped lead to the Italian Renaissance in the 1400's. The Arabs passed on knowledge in a wide array of topics ranging from math, astronomy, and geography to such techniques as papermaking and the refining of alcohol and sugar (both of which are Arabic words). On a more basic level, the Crusades stimulated an increased desire for luxury goods from the East. When they lost control of these trade routes to the Turks, they embarked upon a series of voyages of exploration in search of shorter and cheaper routes to get those luxuries. In the process, Africa was circumnavigated, Asia was more thoroughly mapped, and the Pacific Ocean, the Americas, and Australia were discovered. Thus, the Crusades, by helping lead to the Renaissance and Age of Exploration, were instrumental in opening the way to the modern world.

For the Arab world, the Crusades had less positive results. True, the Muslims ultimately won, but at a heavy price. Besides the human and material cost, there was also the psychological factor. Since c.1000 C.E., the Arab world had been assaulted by Turks, Crusaders, and Mongols. These successive invasions generated the feeling that Arabs must harden their attitude toward other cultures in order to preserve their own. In succeeding centuries, as Western Europe created its own high civilization, which has largely dominated the globe since the 1800's, many Arabs have resisted the pressure to adapt aspects of that culture to benefit their own, an attitude that has often put them at a disadvantage in the modern world. The struggle of whether or not to modernize and make compromises with Western culture still divides the Arab world today.

Antioch (Oct. 1097- Jan. 1099)

In October, 1097, the Crusaders reached Antioch in Syria, the seat of one of the five original patriarchates of the Church. It was a formidable city, having 400 towers, open ground inside its walls for growing food, and a citadel 1000 feet above the rest of the town. However they had to take it in order to secure the road to Jerusalem.

The crusaders couldn't even surround the city, and had to settle for guarding its gates. A Byzantine fleet, most likely manned by Anglo-Saxons in Alexius' pay, had taken Antioch's port city, St. Symeon. However, any supply convoys sent from there to the crusaders besieging Antioch faced the constant threat of being raided.

With winter came rain, food shortages, and disease. Many deserted the crusader camp, including Peter the Hermit (who was caught and brought back) and the Byzantine general, Tacticius, who feared the crusaders would blame him for their troubles. Earth tremors and the Aurora Borealis further demoralized the besiegers.

When Bohemond of Taranto & Robert of Flanders left on a foraging expedition, they ran into a relief army from Damascus which they turned back after a hard fought battle. However, they returned to Antioch empty-handed and found their comrades had barely defeated an attack by the city garrison.

Soon afterward, news came of another powerful army, this one from Aleppo, coming to relieve Antioch. With only 700 horses left in the army, those knights still with mounts ambushed and defeated this new threat.

In early 1098, Baldwin, younger brother of Godfrey of Lorraine, left the main army besieging Antioch and took 80 knights to Edessa on the Euphrates River. He was welcomed there as a liberator from the Turks by the Christian Armenian population and

adopted by the local leader whom he soon overthrew, seizing power for himself.

However, Baldwin was popular with the Armenians, since he had freed them from the Turks & used them in his government. Edessa would serve as a useful Crusader outpost until its fall in 1144. However, as an independent ruler with a large treasury, Baldwin drew many knights away from the Crusaders' army into his service, while inspiring others, most notably Bohemond, to want their own states.

In June, 1098, the siege of Antioch was still dragging on when news came of the approach of yet another relief army, this time led by Kerbogha of Mosul. The crusaders had to take Antioch to avoid being caught between Kerbogha and the city garrison.

Meanwhile, Bohemond had established contact with an officer of the garrison willing to betray the city. Reluctantly, the other crusaders agreed to let Bohemond have the city if he could deliver it to them.

On June 3, 1098, the Crusaders gained entry to the city and proceeded to massacre the population.



Inhabitants of Antioch escape over the city walls to avoid massacre by the Crusaders when they took the city.

Two days later, Kerbogha arrived with the largest army the Crusaders had encountered yet.

The besiegers had become the besieged.

Adding to their misery, the corpses from the massacre were rotting in the hot summer sun and threatening to bring epidemic.

The deserters met the Byzantine emperor Alexius coming with a relief force. However, after the deserters convinced him that the situation in Antioch was hopeless, he turned back, which added further to the distrust developing between crusaders and Byzantines.

Meanwhile, the situation in Antioch grew more desperate by the day. Food was so scarce that one egg cost 2 gold bezants, while a chicken cost 15.

At this point, as luck would have it, an unknown monk named Peter Bartholomew was inspired by a dream to dig beneath a church in Antioch and find what he believed to be the holy lance-head that pierced Christ's side on the Cross.

While the leaders of the crusade were skeptical about Peter Bartholomew's find, the rank and file believed in it.

Inspired by this relic at the head of their ranks, the Crusaders emerged to meet the Muslim army and routed it in a battle which turned into a massacre when Kerbogha's emirs deserted him.

Over the next several months, the crusaders consolidated their hold on the territory by taking neighboring strongholds. Meanwhile, squabbling continued over control of Antioch. A typhoid epidemic that killed the papal legate, Adhemar, eliminated the one peacemaker who had been able to keep the crusade with its various nationalities together.

Finally, the rank and file, anxious to continue on to Jerusalem, threatened to destroy Antioch's walls if the princes couldn't patch up their quarrels.

Jerusalem (June-July 1099)

In January, 1099, Bohemond got his coveted prize, Antioch, and the rest of the crusaders proceeded on to Jerusalem.

With Kerbogha of Mosul's power broken, the way lay open to the holy city with virtually no opposition.

Finally, in June 1099, with an army of only 15,000 men, they reached their long sought goal, Jerusalem.

Jerusalem was held by a large garrison loyal to Fatimid Egypt. Initial assaults on the city failed, while food supplies dwindled to critical levels. Water was an even greater problem, the garrison having poisoned all but one of the surrounding wells and springs. And that spring was directly beneath the city walls manned by a hostile garrison.

Luckily for the crusaders, six ships from Pisa sailed into the deserted harbor of Jaffa with materials for building siege engines.

The approach of a powerful relief army from Egypt forced the crusaders to hurry preparations for the final assault on Jerusalem.

However, the crusaders, their ranks reduced to a fraction of those who had started out from Constantinople, marched barefoot in penance around Jerusalem before launching what would prove to be the final and decisive assault on the city.



The final assault started on July 13. After two days, one of their siege towers finally gained a foothold on the walls. Panic set in and resistance collapsed. The ensuing massacre of Muslims and Jews was one of the great atrocities in history, killing an estimated 40-60,000 people.

After the massacre, the victorious Crusaders gathered in the Church of the Holy Sepulchre to give thanks for their victory.

Three weeks later, news of the fall of Jerusalem, reached Rome.

Unfortunately, Pope Urban II, who had started the crusading movement, had died one week earlier.

The Kingdom of Jerusalem (1099-1187)

The victorious crusaders elected one of their number, Baldwin, as the king of Jerusalem. Most of them then went home, leaving Baldwin with an army of only 300 knights.

The remaining crusaders proceeded to consolidate their hold on the Holy Land by taking the coastal ports, largely with naval support from Italian city-states such as Genoa, Pisa, and Venice.

Unfortunately, the massacres didn't stop, as Muslims and Jews were put to the sword in various cities, such as the seaport, Caesarea.

In the years that followed, Baldwin at the head of tiny Christian armies would score several remarkable victories over relief armies launched from Egypt. From these victories came an aura of invincibility that gave crusaders a huge psychological edge over their Muslim foes for decades.

However, despite their incredible victory, the crusaders had much going against them. First of all, they were surrounded and outnumbered by hostile Muslim states that eventually learned to unite against the Christian invaders.

Secondly, since they were so far from their home base in Europe and many of the original number went back home after the conquest of Jerusalem, the remaining crusaders suffered a chronic manpower shortage, leaving them spread thinly across Syria and Palestine.



One way to fill their ranks was to hire local mercenaries, known as Turcoples, whose style of warfare was suited to combat the mobile hit-and-run tactics of their neighbors. Another way to cope was to fortify any settlements against the sudden raids that were a hallmark of Middle Eastern warfare.

Krak des Chevaliers below), in present day Syria, is probably the best surviving example of the chain of castles the Crusaders built to defend their conquests. Such fortresses maximized the value of the very limited manpower the Crusaders had for defending their holdings. The techniques for building such massive stone fortifications, learned from the Byzantines and Muslims, became the basis for what we associate with medieval castles.



Much of the crusader states' military strength came from two military orders, the Hospitallers and the Templars.

The Templars had originally stayed behind in Palestine after the First Crusade to tend the Church of the Holy Sepulchre. Soon they assumed the military role of protecting pilgrims in the Holy Land which soon expanded to fighting anywhere for the faith. They were given the al-Aqsa mosque which was believed to be the site of the Temple of Solomon, thus giving them their name. The pope officially ordained them as a military order in 1120 and as a religious order in 1129.

Similarly, the Hospitallers started out tending the sick in a hospital in the Holy Land and soon assumed military duties.

Both orders were respected for their discipline and training. In addition to combat skills, they were expected to maintain monastic purity and chastity.

Besides attracting recruits for the holy war, the Templars and Hospitallers received generous donations. In the early 1300s' Philip IV of France brought trumped up charges of heresy against the Templars so he could confiscate their wealth. Although the charges were never proven, the pope had the order dissolved and their lands given to the Hospitallers, then known as the Knights of St. John.

Since they could attract a more steady supply of recruits from Europe, the Templars took over more and more castles from nobles no longer able to maintain and garrison them. As a result, they became an increasingly vital part of the defense of Palestine. This translated into political influence and a sometimes bitter rivalry between the two orders.

A third problem the crusader states faced was a growing cultural gap between the crusaders who stayed behind in the Holy Land and any newcomers who did arrive from Europe.

These newcomers were shocked to find that after a number of years in the Near East, the original crusaders had adapted to local ways. Their clothes and houses resembled those of the Muslims. Some even kept harems with veiled women wearing makeup. More surprising yet, they set aside chapels in their churches where their Muslim neighbors could worship.

Even their wars were fought in the more sophisticated local method of small local raids interrupted by truces with the Muslims. Nothing daunted, these newcomers, who had come all this way with the purpose of killing Muslims, would often break the truces, attack

the Muslims, and then go home, leaving the crusaders in Palestine to bear the brunt of Muslim reprisals.

Through Arab eyes



Arab medicine was probably the most advanced of its day, relying largely on herbal cures, distilled natural oils, and common sense. Likewise, Arab surgeons were highly accomplished. By contrast, European medical practices were crude and even shocking to the Arabs. Even Christians learned to prefer Arab doctors to their own.*

“When they came near us I saw that the man in the middle had been struck across the center of his face by a Crusader’s sword...One half of his face was so loose that it hung over his chest and between the two halves was a gap almost the width of a hand span...The surgeon sewed his face and treated it. The sides stuck together and the man recovered.”--Memoirs of Usama ibn Munqidh

Contrast the treatments given first by an Arab and then a Christian doctor to cure a knight with an abscess on his leg and a woman suffering from tuberculosis.

First, the Arab doctor prepared a plaster for the knight, causing the swelling to open up and improved. For the woman he prescribed a better diet for the woman and she improved as well.

Along came the Frankish (European) doctor who objected, *"This man does not know how to care for them"* After which he asked the knight: *"Which do you prefer, to live with one leg or die with two?"*

Thereupon he had another knight with a battle-axe chop off the infected leg, causing the patient to die right away.

Concerning the woman, he said: *"She has a demon in her head who has fallen love with her. Cut her hair"* After they cut her hair & returned her to her diet, she got worse, leading the Frankish doctor to declare: *"The devil himself must have entered her head"*

Whereupon he cut a cross-shaped incision in her skull and rubbed salt into it, causing her to die right away.

The Arabs had other choice words concerning the Franj (Franks):

"The Franj (I.e., Franks) have no sense of honour. If one of them is walking in the street with his wife and encounters another man, that man will take his wife's hand & draw her aside and speak to her, while the husband stands waiting for them to finish their conversation. If it lasts too long, he will leave her with her interlocutor & go off! Imagine this contradiction! These people possess neither jealousy nor honour, whereas they are so courageous. Courage, however, comes only from one's sense of honour and from contempt for that which is evil!"

"When I was visiting Jerusalem, I used to go to al-Aqsa mosque, where my Templar friends were staying. Along one side of the building was a small oratory in which the Franj had set up a church. The Templars placed this spot at my disposal that I might say my prayers. One day I entered, said 'Allahu akbar', and was about to begin my prayer, when a man, a Franj, threw himself upon me, grabbed me, and turned me toward the east, saying, 'Thus do we pray'. The Templars rushed forward and led him away. I then set myself to prayer once more, but this same man, seizing upon a moment of inattention, threw himself upon me yet again, turned my face to the east, and repeated once more, 'Thus do we pray.' Once again the Templars intervened, led him away, and apologized to me saying, 'He is a foreigner. He has just arrived from the land of the Franj and he has never seen anyone pray without turning to face east.' I answered that I had prayed

enough and left, stunned by the behavior of this demon who had been so enraged at seeing me pray while facing the direction of Mecca."

A fourth problem stemmed from the feudal system that the crusaders transplanted from Europe. Instead of one unified kingdom, they founded four separate states: the kingdom of Jerusalem and the counties of Edessa, Antioch, and Tripoli. This often hampered the cooperation and unity of purpose needed against the surrounding Muslim enemies.

Compounding this into a virtually hopeless situation was the further fragmentation of these states into individual baronies and fiefs that were often just as hard to control.

For example, it was the behavior of one baron, Reynald de Chatillon, who raided Muslim caravans and harassed pilgrims on their way to Mecca, that aroused the full wrath of the Muslim leader, Saladin, against the crusader states in 1187, leading eventually to the disastrous campaign of Hattin and the fall of Jerusalem.

Finally, the presence of the Italian city-states proved a mixed blessing. While they did provide a vital lifeline to Europe & valuable naval support in taking the coastal cities of Palestine, they did this for a price: the establishment of independent quarters in the coastal cities that they had helped take. However, at times they might not cooperate with the crusaders in wars that could hurt their trade and business. At other times, two Italian cities might go to war with each other and the fighting would spread throughout various crusader cities. In addition, Italian merchants also controlled much of the trade of Palestine and Syria, depriving the crusaders of much needed revenues.



Although stripped of almost all its armed forces, those left in Jerusalem valiantly withstood the siege by Saladin's forces, acutely aware of the massacre their predecessors had inflicted in 1099. However, Saladin generously let the Christians buy their freedom, even releasing those who too poor to pay the ransom.

The Third Crusade (1189-92)

Even with the loss of Jerusalem, the crusaders still managed to hang onto Antioch, Tripoli, and Tyre. While the pope was calling for a new crusade in Europe, the remnants of crusader forces in Palestine gathered at Tyre and began to regain their lost lands.

The Third Crusade is known as the Crusade of kings, since three monarchs took the cross: Philip II of France, Richard I of England, and the Hohenstauffen emperor of Germany, Frederick I Barbarossa. However, Frederick, retracing the old land route taken by the first two Crusades, drowned while crossing a river, and his army turned back.

The main focal point of crusader efforts was the port city, Acre, around which an epic siege developed. While the crusaders besieged the city, Saladin in essence besieged them in an effort to relieve the city. However, the arrival of crusaders from Europe expanded the Christian forces enough to keep Saladin at bay.

Probably the most famous crusader of all, Richard I of England, known as Richard the Lionheart, took part in the Third Crusade. It was his presence that especially breathed new life into the siege of Acre.

The crusaders' siege of Acre was noted, among other things, for its siege engines such as a ladder named The Cat and trebuchets with such names as God's Own Sling and The Bad Neighbor. It was these machines as much as anything else that brought about the fall of Acre in 1191. It would serve as the capital of the crusader kingdom until its fall almost exactly one century later in 1290.

Islam Resurgent (1144-87)

In 1144, Edessa became the first crusader state to be reclaimed by the Muslims. This promptly triggered the Second Crusade to recover it. This crusade, led by Louis VII of France and Conrad III of Germany, tried to follow the land route taken by the First Crusade. However, the heat of Asia Minor and severe supply problems decimated the crusaders' army, which was then beaten near Damascus.

The crusaders would never recover Edessa.

The noose was starting to tighten.

The next forty years would see Egypt and Syria become unified in a strong Muslim state under the skillful leadership of Salah-a-din (AKA Saladin)

Gradually, Saladin tightened the noose around the beleaguered crusader states. Finally, he trapped and destroyed practically the entire armed forces of the Kingdom of Jerusalem at the Battle of Hattin in 1187.

Most of the Knights Templar and Hospitaller fell fighting at Hattin. Those who surrendered were executed by Saladin in an uncharacteristic example of brutality.

The defeat at Hattin left Christian strongholds throughout Palestine almost completely stripped of their garrisons, allowing Saladin to quickly overrun one Crusader castle after another as he marched toward his ultimate goal, Jerusalem.

Richard may have been known as a great warrior, but not a kind one, as seen in the episode where he had 5000 Muslims taken prisoner at Acre executed by beheading.

After the fall of Acre, Richard led the crusaders down the coast, taking more ports and gaining great glory for his exploits as a warrior. Saladin attacked the crusaders along the coastal road at Arsuf. Although the Muslim horse archers were taking a horrible toll on the crusaders' war horses, Richard held his army in check to avoid attacking prematurely and falling into a trap.

Suddenly, the hard-pressed Hospitalers charged setting the whole crusader army into motion. The suddenness of this charge took Saladin's army by surprise and routed it.

Despite his famous exploits, Richard was never able to retake Jerusalem, and had to return to Europe when his fellow crusader, Philip II of France, who had gone home early, attacked Richard's lands in France.

However, Salah-a-din did grant Christian pilgrims free access to the holy city in order to worship, something he would have been willing to do anyway.



The Crossbow was and extremely powerful bow used by the Crusaders and European armies in general. While slow to load, its power and range were such that the Papacy unsuccessfully tried to outlaw its use in the 1100s as inhumane, especially for nobles, since commoners armed with it could defend themselves on the battlefield. However, the pope and other Christians had no qualms about using this weapon on Muslims.

The Fourth Crusade: A Crusade Gone Astray (1202-1204)

In 1202, Pope Innocent III preached a new crusade. Thousands of French knights took the cross, eager to liberate the Holy Land. They arranged for Venice to take them by sea, the preferred route now that Italian navies dominated the Mediterranean. In return for a huge fee, Venice agreed to suspend all other operations for one year and devote its efforts solely to this crusade.

However, when the crusaders found out the plan was to conquer Egypt and trade it for Jerusalem, two-thirds of them never showed up. The one-third that did show up were now stuck with a huge bill they couldn't pay.

The doge of Venice, Enrico Dandolo, who was 80 years old and blind, but still sharp as a tack, pressured the Crusaders to storm the Christian city of Zara on the Dalmatian coast (modern Yugoslavia) as payment.

The pope was furious, but Enrico wasn't done yet.

As the crusaders were about to set out for Egypt, a dethroned Byzantine emperor arrived in their camp, offering huge sums of money and military support for the crusaders if they would first put him back on the Byzantine throne. So the crusaders now sailed for Constantinople.

When they first saw Constantinople, the crusaders were awe struck at its size and majesty. However, under Dandolo's leadership, they besieged the land walls, while the Venetian navy was able to crash through the chain guarding the harbor and attack the harbor wall, the weakest part of the city's defenses.

This was crucial in persuading the emperor in Constantinople to abandon his throne and flee for safety. The crusaders restored the other claimant to the throne, but here was one problem.

The Byzantines didn't have the money or troops they had promised Venice and the crusaders.

Therefore, a second siege ensued, during which the crusaders broke in and sacked the city.

The crusaders committed atrocities normally reserved for non-Christians. However, in the crusaders' eyes, the Byzantines were heretics and so deserved nothing better.

"I do not know how to put any order into my account, nor where to begin, continue or end the story of what these monsters committed. They broke the holy images, beloved of the faithful. They hurled the sacred relics of the martyrs into unmentionable places. They scattered the body & blood of the savior. These precursors of Anti-Christ seized the Chalices & patens, tore out their precious stones & ornaments, & drunk from them..."-- Greek historian Choniates

Choniates remarked that even the Turks would have shown more mercy.

Two and a half centuries later, they would prove him right.



The Latin Empire founded in the aftermath of the Sack of Constantinople during the Fourth Crusade was a feeble entity that fatally weakened the Byzantines, the Crusaders' main potential ally in the East while denying the Crusader states vital help from Europe.

“Jerusalem, Jerusalem”:

The Later Crusades (1228-1270)

The Children's Crusades. In 1212, two boys, one French and the other German, inspired other children to go to free the Holy Land, believing their pure hearts would open the sea before them & give them victory. The French children arrived at Marseilles. However, when the sea didn't open up for them, two merchants, Hugh the Iron & William the Pig, offered to take them to Palestine for free. Instead, the credulous children were sold into slavery in North Africa and were never heard from again.

The German children, led by a boy named Nicholas, fared a bit better. When they arrived in Rome, the Pope told them to go home. Some went on to unknown fates. Some were taken in by local families. A few made it home. Nicholas' father was blamed for this fiasco and lynched by an angry mob of parents.

The Fifth Crusade (1228-9) was led by Frederick II of Germany, a unique ruler who was more interested in Muslim culture than Christianity. Frederick was constantly at odds with the papacy, which excommunicated him for delaying his crusade for years. When he finally did go, he made friends with the Egyptian sultan who gave him Jerusalem, but without fortifications. However, the pope refused to lift the ban of excommunication because Frederick hadn't killed any Muslims to get Jerusalem.

It didn't matter though, because the demolition of Jerusalem's fortifications made it vulnerable to attack, and it fell back into Muslim hands soon after Frederick returned home.

The Sixth Crusade (1248-50) under Louis IX of France (Saint Louis) was directed against Egypt in the hope of being able to trade it for Palestine. The strategy actually worked when the French took the city of Damietta.

However, the saintly Louis refused to negotiate with the Muslims when they were ready to give in.

Then everything started going wrong. The Nile floods severely hampered any movements by the French army. Louis' army got bogged down in a siege of Mansourah, which combined with the heat and humidity brought disease.

During that siege, the crusaders charged blindly through the city's unguarded gates and were ambushed from the city's side streets and alleys. Many of the Templars who had accompanied Louis were killed here.

Finally, Louis retreated with his sick army, but was finally forced to surrender his whole army and agree to pay a huge ransom to get it released.

***The Seventh Crusade (1270)*, also led by Louis IX of France, was directed even further afield from Jerusalem, this time against Tunis in North Africa. The idea was to block Muslims from the passage between Tunis and Sicily (which was held by Louis' shrewder and more practical brother, Charles of Anjou).**

Once again, disease did its work, this time claiming Louis, who died with the words "Jerusalem, Jerusalem" on his lips.



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THE RISE OF THE FRENCH FEUDAL MONARCHY (c.1100-1300)

In addition to the rise of towns and a money economy, the High Middle Ages also saw the development of strong feudal monarchies in Western Europe, especially in France and England. These feudal monarchies were a transition between the personal and decentralized feudal system of the Early Middle Ages and the more highly centralized nation states of the modern era. At the beginning of this era, most people may have believed in the concept of Universal Empire or Universal Church (as embodied in the Holy Roman Empire in Germany and Roman Catholic Church respectively). However, by the end of this era, it was becoming increasingly apparent that the future belonged to neither Church nor Empire, but to these newly emerging nation-states. Prominent among these was France. There were four main factors leading to the rise of the French feudal monarchy.

First of all, there was the ability of the Capetian dynasty to keep its hold on the throne, and that hinged on three things. First of all, the Capetians were lucky to consistently produce male heirs, which eliminated the need to look outside the Capetian family for a new king to succeed the old one. Second, the Capetians practiced primogeniture, ensuring that what little they controlled stayed together under one ruler, unlike the disastrous policy of earlier kings of dividing the kingdom. Finally, they ended elective monarchy by having their sons rule jointly with them, ensuring a smooth transition of power when the older king died. Over time, the Capetians gradually replaced the elective monarchy with the dynastic principle of son succeeding father to the throne.

The second factor, the medieval agricultural revolution, helped both the French kings and the great dukes and counts since they owned most of the land being cleared and could support the surplus population needed for towns. In contrast, lower nobles had neither the land to support towns nor the power to defend them.

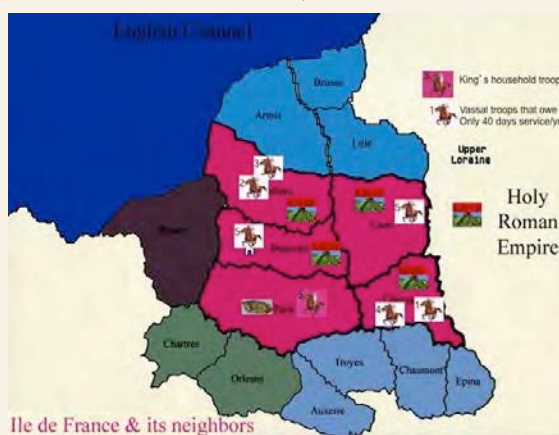
However, the rise of towns ultimately helped kings against even the dukes and counts, because townsmen and kings were natural allies against the nobles. While the towns could supply kings with militia, their primary means of help was money

with which to buy mercenaries who were much more reliable than feudal armies. Bit by bit, this alliance of towns and kings helped break the power of the nobles.

The kings' legal position as supreme judge in the land was the third factor helping them. No matter how weak a king might be, his crown distinguished him as the supreme judge whom townsmen and lower nobles could appeal to over the heads of their own lords. When kings were weak, this was done on a very local level. However, it helped kings gradually establish their power over the local nobles and assert their authority on a wider level.

Finally, there was the kings' religious position, symbolized by the Church anointing them with oil to mark them as God's chosen agents on earth. Although this raised the question of who had more authority, kings or the churchmen who anointed them, it did give the king a certain amount of religious sanctity that medieval people took very seriously. In addition, the king's sanctity also symbolized his alliance with the Church, whose powers, in particular the power of excommunication, could be very useful in bringing rebellious nobles under control. It is significant that Louis VI's right hand man was a churchman, Suger, abbot of St. Denis.

Together these factors (the Capetians' firm grip on the throne, their sacrosanct nature, their position as supreme judge, and their alliances with the towns who could also supply money with which to buy mercenaries) allowed kings to gradually expand and exert their power and authority across France. That, in turn, enhanced their judicial and religious authority, bringing them into contact with more towns that could ally with the kings and provide more taxes for mercenaries, and so on.



For over a century (987-1108) the Capetians could barely hang onto their throne, but they did manage to survive. By 1100, in addition to the king's realm around Paris, known as the Ile de France, France's numerous independent feudal states were largely gathered into five greater feudal states: Flanders, Normandy, Toulouse, Aquitaine, and Burgundy. Even in his own small realm, the king's vassals defied him. At one point, the king was taken prisoner by a particularly unruly vassal and only rescued by the loyal militia of Paris. However, the succession of Louis VI in to the throne in 1108 marked the beginning of over two centuries of expansion for the French monarchy and the Capetian dynasty. During this time, seven kings reigned, three of who were especially capable. These three kings, Louis VI, Philip II, and Louis IX, would especially exploit the cycle mentioned above to lay the foundations for the modern French nation.

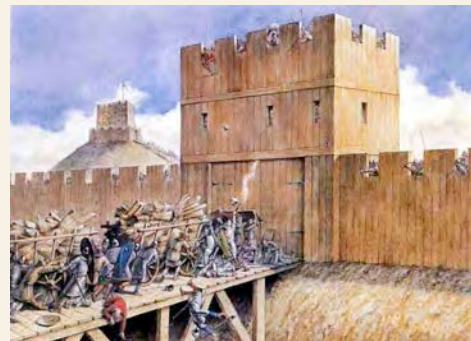
Louis VI (1108-1137), known as "the Fat" started the process of building up royal power. The first step, which he accomplished, was to establish the king's authority in his home territory around Paris. Confronting Louis were several rough and obstinate barons renown for their lawless ways. Louis had one valuable ally, Suger, abbot of St. Denis, who brought the power of the Church down against these nobles. In general we find the Church allied to the kings during this period, since both were concerned with ending the chronic violence and feudal warfare plaguing the land. Suger was a staunch and valuable ally throughout Louis' reign.

Louis' usual method was to call a noble to his court to account for the crimes his vassals and subjects accused him of. Often, the noble refused to come, giving Louis the legal excuse to claim the noble's lands now belonged to the king. Of course he had to enforce such a declaration and drive the noble off of the land. One potent weapon at the king's disposal was excommunication of the noble by the abbot Suger. This released the noble's vassals from any legal obligations to him and deprived him of some, if not all his support.

Louis still had to ride constantly with his troops from one end of his realm to the other, burning nobles' castles and wasting their lands in order to bring them to heel. It took him seven years to break the power of a certain Hugh de Puiset and sixteen

years to subdue another noble, Thomas de Marley. This was because Louis had little money and had to rely on feudal armies to break his vassals. Therefore, he could accomplish little in the 40 days of campaigning he got each year. Once he was gone, the noble could rebuild any burnt castles and restore much of his power.

Still, the effects of excommunication and yearly raids gradually broke the nobles' power. By the end of Louis' reign, the Ile de France was firmly in royal control, giving the king the troops and resources to expand even further. Louis' prestige was enhanced to the point that he was able to restore the infant lord of Bourbon and bishop of Clermont to their rightful places. He was even able to arrange a marriage alliance between his son and Eleanor, daughter and heiress of William X, the powerful duke of Aquitaine. Much of the subsequent history of France and England would revolve round this woman.



Louis VI finally takes his rebellious vassal, Thomas de Marle prisoner. Called a "lecherous sadistic enemy of all mankind," Marle went to war against his own father, cut the throat of an ecclesiastical kinsman who displeased him, protected brigands who had murdered the bishop of Laon, and seized Church property for himself. Even church officials gave money to Louis' campaign to destroy Marle's forts.

When Eleanor of Aquitaine married Louis VII (1137-80), she claimed she married a king only to find him a monk. Eleanor's fun loving ways certainly clashed with the pious king's personality and eventually led to getting the marriage annulled. Not only did this cost Louis the valuable lands of Aquitaine, it let Eleanor marry Henry II of England. The result of this union was what is known as the Angevin Empire, whereby the king of England controlled Aquitaine in addition to his hereditary

lands of Normandy and Anjou (hence the name Angevin). This gave Henry II control of one-third of France, much more than the king of France, his nominal overlord, ruled. However, the size of Henry's empire alarmed other French nobles and drove them to support Louis. At the time the English holdings seemed like a threat to the very existence of the French monarchy. The next French king, Philip II, would destroy this threat.

Philip II (1180-1223), called "Augustus", was certainly one of the greatest of French monarchs, being responsible for establishing the French monarchy as the recognized power throughout most of France. He was an astute and unscrupulous diplomat, though not a great general. In the early years of his reign he was lucky to maintain his own against Henry II, his main tactic being to stir Henry's rebellious sons against their father. Philip had little luck against the warrior king Richard I "the Lion-hearted" (1189-99). His luck was better against Richard's brother and successor John I (1199-1216) of Robin Hood fame.

Philip skillfully used his position as John's overlord in France to bring charges against John and summon him to court. Of course, John refused and Philip declared John's lands forfeit and now belonging to the French crown. War resulted in which a powerful coalition of England, Flanders and Germany was formed against Philip. Luckily for Philip, John moved too slowly and the French king was able to crush the Flemish and German forces at Bouvines in 1214.

This battle had far reaching consequences for France, England and Germany. In France it tripled the size of the king's realm at one stroke while driving the English out of France except for Bordeaux and Bayonne. The blow to king John's prestige was such that the next year the English barons rebelled and forced John to sign the Magna Charta, one of the cornerstones of British and American democracy. Bouvines also helped some with the disintegration of the German monarchy, as we shall see.

However, our main concern here is Philip's victory and what he did with it. Not since Charlemagne had any ruler so effectively controlled France. However, times had changed, and Philip found he had different and more effective means for ruling

France than Charlemagne had. Whereas Charlemagne had been forced to rely on giving land to uneducated nobles in return for service, Philip had money and an educated middle class at his disposal to help him rule. As a result he started putting middle class *baillis* (bailiffs) paid with money, not land, to administer his far-flung state for him. Such *baillis* were loyal to him and were kept in line by the threat of the king cutting off their salaries. Also their lower social status made them less likely to try to gain power for themselves. Philip rotated them from place to place so they would not get established in one area. Since soldiers would not follow middle class *baillis* in battle, any offices requiring military duties were filled by lower nobles called *seneschals*. Being lower nobles, they were less likely to rebel, although their power and prestige could increase after years of service with the king.

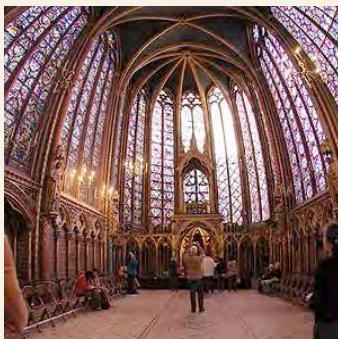
The size of the king's realm and its efficient administration provided him with money that allowed him to hire mercenaries who helped him further increase his power within his realm and in areas of France still outside it. This of course gave him more revenues that allowed him to further increase his power, and so on. Philip II made the French monarchy the most powerful and respected in Western Europe. The work of his successors mainly embellished upon what he had accomplished. Keep in mind, however, that Philip was building on the foundations laid by Louis VI. Still, it is safe to say that Philip II's reign was a major turning point in French history.

Louis VIII (1223-26) made one significant innovation: the appanage system whereby younger sons of the king were given lands (appanages) to rule in the king's name. These princes were not independent rulers in their own right, such as happened with earlier Frankish kings. But the system did have its dangers, as seen by the appanage of Burgundy, which almost established itself as an independent power in the 1400's. The appanage system shows the limits of medieval government. Since royal power and prestige still depended largely on dealing with affairs in person and the king could not be everywhere at once, members of the royal family were the next best choice for enforcing royal control. Despite its dangers, the appanage system worked fairly well.



Louis IX was renowned for his sense of justice, regularly sitting under a tree so that the humblest subjects could bring their cases to him. As a boy, he supposedly opened the prisons to release their inmates.

Louis IX (1226-70), known as Saint Louis, extended royal power even further. He asserted that lower nobles could appeal directly to the king's courts over the heads of their immediate lords. Nobles were excluded from interfering with Church elections. He also hemmed in the nobles by outlawing trial by combat and making restrictive rules that took the "fun" out of feudal warfare. Nobles could not slaughter peasants or burn their crops. They had to give enemies notice of impending attacks and had to grant truces when asked to do so. Royal officials scoured the land to enforce these rules. Louis also launched two disastrous crusades that deprived France of many of its troublesome nobles, although that was not his intention. Bit by bit, peace and order were replacing feudal anarchy in France, which by 1300 was the most powerful and respected state in Western Europe.



Among Louis' more memorable achievements was Sainte Chapelle, a church in Paris noted for some of the most beautiful stained glass windows anywhere. (Hint to tourists: Most of the windows are on the second floor.)

Knights, tournaments, and chivalry

One aspect of medieval knights that still excites people's fascination was the tournament. However, the tournament originated as something much rougher and bloodier than modern movies and novels portray it.

It started when greater centralized political control by major counts and dukes and the resulting peaceful conditions made it harder for younger nobles to raid and kill and plunder to their hearts' content. In order to give them some halfway harmless outlet for their aggressions, a lord would announce a tournament pitting any willing knights from his realm against the knights of a neighboring realm.

At first, the tournament was a free-for-all melee little short of an all-out battle, the only restrictions being that it take place within a certain area and that knights, whenever possible, take defeated foes prisoner instead of killing them. Of course, the initial shock of two lines of charging knights often killed more men than real battles did. However, this was a useful way for young landless knights to make a living, since their defeated captives had to buy back their horses and armor.

Besides the previously mentioned rules, almost anything else was fair game. Numbers on the two sides didn't have to be even. Feigned retreats to lead the enemy into an ambush were used. One side even brought infantry armed with grappling hooks to haul down opposing knights. The duke of Flanders once held a tournament where his men stood on the sidelines until the other knights were exhausted from fighting and then sent his men in to finish everyone else off.

There were limits, however. It was considered unsportsmanlike when one lord brought infantry armed with crossbows to shoot the enemy from a distance, much like if an NFL quarterback carried a pistol to bring down blitzing linebackers.

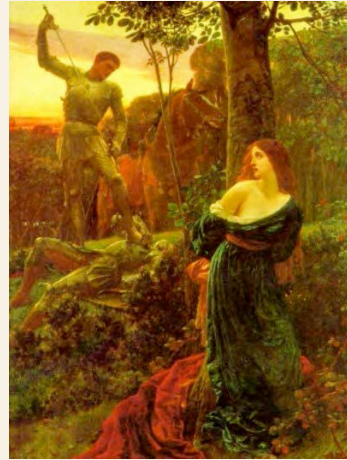
Over time, as more peaceful conditions, the Church, and the Courtly Love movement gained influence, the tournament became more “civilized”. For one thing the one-on-one joust became the main event. It started as a “pre-game” warm-up where individual knights who were so anxious for the fighting to begin would single out opponents for a duel. As time went on the joust, as this one-on-one fighting became known, supplanted the melee.

Other rules and restrictions appeared: blunted lances that shattered on impact, special jousting armor reinforced on the left side, and a point system for such things as losing a stirrup or plume.



Out of this came a group solidarity among nobles that became the basis for the code of chivalry governing the behavior of nobles toward one another, much like *Bushido*, the samurai code of behavior prevailing in Japan at the same time. Added to this were efforts by the Church to tame Europe’s tough nobles and turn them into religious saints, such as in the Arthurian legend of the quest for the Holy Grail.

Festivities after the tournament, attended by “beautiful ladies”, also encouraged nobles to develop better manners. This became another aspect of the code of chivalry, as seen in tales of knights saving damsels in distress.



This code of chivalry spread to the battlefield, making warfare seem almost like a charade, especially during the Hundred Years War. For example, an English captain offered to surrender his town if the leader of the besieging army, the famous Duke of Burgundy would agree to knight him. In another example, the English Prince Edward released the French commander, Bertrand du Guesclin, from captivity when du Guesclin proclaimed how happy he was that Edward was so scared of him that he kept him in chains.

Chivalry, however, did not extend to the common people who were mercilessly attacked and plundered. For instance, during the siege of Rouen in the Hundred Years War, the French garrison expelled the civilian population of the town to conserve food. Unfortunately, the English army besieging the town refused to let the refugees through. As a result, some 12,000 helpless civilians slowly starved to death as the two armies looked on.

Chivalry’s days were numbered though, as such weapons as the crossbow, English longbow, and gunpowder evened the playing field between nobles and commoners. As a result, the rules of chivalry were gradually thrown out, although they continued to govern the behavior of men toward women until the Women’s Liberation Movement in the 1970s created new rules. However, the rules of chivalry still hang on, especially among the older generation.

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ANGLO-NORMAN ENGLAND (1066-c.1300)

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As we have seen, the Anglo-Saxons, largely because of pressure from the Vikings, had built one of the strongest states in Western Europe by 1000 C.E. However, the Anglo Saxons could never quite escape the Vikings. A Danish king, Canute, took over and ruled England in the early part of the eleventh century. And in 1066, William of Normandy, a descendant of Hrolf the Walker, the Viking chief who became the first duke of Normandy in 911 C.E., landed in England to claim the English crown.

The Normans had assumed at least a veneer of Frankish culture and Christianity while their dukes had built one of the strongest and best run feudal principalities in Europe. However, their most long-lasting accomplishments took place in England.

In December 1065, the Saxon king, Edward the Confessor, whose excessive piety is said to have prevented him from producing any heirs to the throne, died. William, Duke of Normandy, had a legitimate claim to the throne as Edward's cousin, but the Saxon nobles chose Harold of Wessex instead. For William, there was only one response: take the crown by force. He gathered an army of some 5000 knights and infantry, promising his followers land in England. He also was armed with a papal blessing and banner, partly because the Norman dukes' liberally endowed the Church with lands and partly because the Pope wanted to bring the somewhat independent Saxon clergy more into line with current Catholic practices.



In 1066, Halley's comet (right of center above) passed between the earth and sun, rather than on the other side of the sun, thus making it so bright it could be seen in the daytime. Of course, such unusual celestial events were seen as foreboding some huge and/or terrible events. Scene from the Bayeux Tapestry that told the story of the Norman invasion in detail

Ironically, luck was with the Normans, since adverse winds held them up long enough for still another Viking claimant to the throne, Harold Hardraade of Norway, to land in the north. The Saxon king, Harold of Wessex, rushed north to drive out his namesake, which he did at the bloody battle of Stamford Bridge. Then he had to rush his tired Saxons southward to meet the Normans who had now landed in England.

The Battle of Hastings (10/14/1066) pitted mounted medieval knights against the Saxon infantry drawn up in a shield wall on the crest of a ridge. Frontal assaults by Norman knights, infantry, and archers could not make a dent in the shield wall. Norman trickery could. Feigning retreat, the Norman knights drew groups of Saxons out of formation, surrounded them, and wiped them out. Being weakened several times by this tactic, the Saxon army then came under a barrage of arrows and one final charge of Norman cavalry that won the day. This gave William the crown and the title "the Conqueror", which was much more appealing than his previous nickname "the Bastard". Never since has England fallen to foreign conquest.



Much more remarkable than William's victory was how he consolidated it through a combination of feudal practices from the continent and old Saxon customs. While he owed his followers land, William also wanted to keep them from getting too powerful as had happened to the French monarchy. The solution was to give the nobles lands, but scatter them over England so that they could not gather power in one area as a threat to the king. There were exceptions to this, notably on the frontiers bordering Scotland and Wales where power needed to be concentrated for defense. William also took about 20% of England's land for

himself, showing that it was still a primary source of power. He demanded a large feudal army totaling 5000 knights from the 180 barons to whom he had given land, which forced them to subinfeudate their lands to meet this quota. Thus England quickly came to resemble the feudal monarchy of France. The Normans also built some 500 castles in England between 1066 and 1100 AD, to guard against native uprisings as well as foreign invasions.

William also used several Saxon institutions to great advantage. He demanded from each freeman in England a personal oath of loyalty that took precedence over any feudal oaths vassals paid their lords, thus strengthening ties of loyalty to the king. He continued to collect the only non-feudal tax in Western Europe, based on the *Danegeld*, which the Saxons had originally paid to buy off the Vikings and later to pay for defense against them. Although he allowed the Church to set up its own independent court system in England as it had on the continent, William kept tight control of the elections of bishops, archbishops, and abbots. He saw these men as his ministers and entrusted them with much local power and responsibility. Finally, William used the Anglo Saxon officials, earls and sheriffs to look after the king's interests. Under William I and his son William II these were usually strong nobles who had the independent means to enforce their king's will, but could also be a threat. Later kings used lower nobles who, being dependent on the king for their positions, were both more loyal and less dangerous to the king.

The two centuries after William I's reign (1066-1087) saw the growth in the power and sophistication of royal government. At the same time, various Saxon democratic practices reasserted themselves and became an inherent part of the Anglo-American tradition of democracy. There was a constant struggle during this period between kings and their barons over their respective rights and obligations. In times of weak kings, the nobles won the upper hand. However, most of England's kings were strong and able to extend royal power.

Henry I (1100-35) started a more efficient treasury system, thanks to the introduction of Arabic numerals and the *exchequer*, named after the checkered table cloth they used to organize the king's money in rows. The court system also saw

advances, with the king adopting the Anglo Saxon belief that such personal crimes as murder, rape, and arson were also crimes against the king and state. Henry used this principle to send his justices throughout the land to try such cases. Henry also married a Saxon princess and, in the process, signed a charter where he promised to rule less harshly in the Norman manner and more in accordance with Saxon rights and customs. This charter would heavily influence the Magna Charta signed a century later.

After the feudal anarchy and civil wars during the reign of the weak Stephen I (1135-55), Henry II (1155-89), one of England's greatest monarchs came to the throne. As a feudal ruler, Henry still had to deal with the privileges and obligations of his noble vassals. However, as king, he claimed certain special rights and privileges to increase his power. Some of Henry's greatest accomplishments were in his legal reforms. Previously, private citizens had to bring charges against criminals, who often prevented such proceedings by intimidating their victims. Even without intimidation, few people wanted to risk bringing cases to court, because they had to pay a severe penalty (*talion*) if they lost. Henry changed that by having the state, not private individuals, bring suspects to trial. He also established grand juries whose duty was to gather evidence and submit the names of any likely suspects of crimes. Failure to do this resulted in heavy fines. As a result, more cases were brought to trial, a greater degree of law and order was established, and the king made money from the increased court revenues. The concept of state prosecution of criminals and fact-finding grand juries is still a major part of our legal system going back to Henry II. Ironically, suspects brought to trial demonstrated their guilt or innocence through ordeals, such as by water. However, even if a suspect passed the ordeal but he was still suspected of the crime, the king might exile him from England.

Henry II is also remembered for his marriage to Eleanor of Aquitaine, whose lands gave him control over one-third of France. However, the Angevin empire, as it is called, was more trouble than it was worth, since Philip II of France, technically Henry's overlord for his French lands though he was much weaker than the English king, was always trying to stir up trouble and revolts. However, Henry and his

older son Richard I, known as “the Lionhearted” (1189-99) for his exploits in the Crusades, held their own against Philip.

Unfortunately, Henry’s younger son, John I (1199-1216), was not so effective. John got into trouble on a number of accounts: losing a quarrel with the Pope, overtaxing England for his war against Philip, and then losing that war. All these problems led to a revolt of the English barons who forced John to sign the Magna Charta in 1215. Based largely on Henry I’s charter a century earlier, this was basically a feudal document, but it put forth the principles that not even the king was above the law and that no free man could be arrested without due process of law and a trial by his peers. This idea of due process of law is still a vital part of our legal system today.

The long reign of John's son Henry III (1216-1272) saw the barons under the leadership of Simon de Montfort controlling the government and usurping many privileges. However, Henry’s son, Edward I (1272-1304), was a strong king who reestablished royal authority over the nobles, conquered Scotland and Wales, developed the Welsh long-bow into the weapon that would rule the battlefields of the Hundred Years War.

Edward I is also remembered for his governmental reforms, and especially the evolution of Parliament. Originally, this was any meeting of the king and his vassals or subjects to talk (*parley*), usually over taxes. Since negotiating taxes with each town and shire was cumbersome, Edward called the Model Parliament in 1295. This body consisted of representatives from all three estates. Although later parliaments did not necessarily contain all these elements, in time it came to be the rule that all three estates should be represented.

Parliament became especially important in England for a couple reasons. First of all, England being an island enhanced its trade and the status of the middle class. As a result, the middle class merchants and lower nobility (*gentry*) were thrown together in the House of Commons. In time, their common interests led to a powerful combination capable of challenging royal power. Secondly, since England was an island, it faced few invasions, giving little need for heavy taxes to pay for expensive armies. This, in turn, left English kings

relatively weak, so that, by the 1600's, Parliament would have both the power and the constitutional right (or so it thought) to usurp much of the king's authority and lay the foundations of modern democracy.

Hastings seen through the Bayeaux Tapestry

Actually a 230-foot long embroidered cloth rather than a woven tapestry, the Bayeaux Tapestry tells the story of the Norman invasion in a strikingly dynamic visual format. Below are some selected scenes illustrating crucial stages of the battle.



Wearing only leather jerkins or quilted coats for protection, Norman bowmen advance within 100-hundred-yards from the enemy line, & let loose a barrage of shafts that clatters against the shield wall like a hailstorm. When they make not a dent in the human fortress, William orders his knights forward into the fray.



Bretons, Normans, and European mercenaries pound toward the seasoned housecarls, Harold's personal troops on the hilltop. Ranks stand so packed that the slaughtered cannot fall. Steel clashes against steel, and the awful drone of javelins fills the air.



Wielding battle-axes and hurling spears and stones, the English give measure for measure.

"They bravely withstood and successfully repulsed those. ... at close quarters," wrote William of Poitiers, and inflicted loss upon the men who were shooting missiles at them from a distance." The Saxons' long two-handed battle axes took an especially heavy toll on the Normans' horses, bringing both horse and rider down and leaving the knight in his heavy chain mail armor vulnerable to further attack as he struggled to get up.



The Bretons begin to waver. Stallions, their bloody flanks flecked with foam, stumble as their riders turn in retreat. Despite Harold's order to stand fast as a defensive bulwark, English rustics of the fyrd, or militia, filling out his ranks feel the flush of victory and break out in pursuit.



Trapped on a hillock in the valley, the over-anxious Anglo-Saxon militiamen fight to the last man against encircling invaders. Galloping past, Bishop Odo rallies the Norman cavalry with his swinging mace, a weapon he prefers so he doesn't shed blood while killing Saxons. In the melee William's horse is thrice cut from under him.



To quell rumor of his death, the duke doffs his helmet and cries, "Look at me well! I am still alive and by the grace of God I shall yet prove victor!" Eustace of Boulogne, carrying the papal banner symbolizing Rome's approval of the invasion, points out his commander.



As Saxon casualties mount, they shorten their line so the better armed huscarls and thegns can fill the front line. However this exposed the Saxons' flanks to attack. Towards the end of the day, the bone-weary, haggard Normans call upon their tired steeds for a final charge, vowing to breach the English line while archers (in the tapestry border) aim their arrows in a high arc over the wall of shields and death rains upon the Anglo-Saxons.



The shafts take their toll. The shield wall begins to crumble, exposing Harold to mortal danger. Rushing in, a mounted Norman knight hews down the doomed monarch with one mighty blow from his broadsword. Their stalwart leader dead, their army shattered, the English have little heart left for battle.



"They... began to fly as swiftly as they could," wrote William of Poitiers. Behind them, "The blood-stained battleground was covered with the flower of the youth and nobility of England." The sun set on the field - and on Anglo-Saxon England. (Scholars believe two missing panels at the end may have portrayed William on the throne of England.)

The Subjugation of England

While claiming England's crown took just one battle, reducing the countryside after Hastings took another five years for a force of some 10,000

Normans, Bretons, and French to reduce a population of 1.5 million Anglo-Saxons. And it was a brutal occupation. William replaced 13 of England's 14 Anglo-Saxon bishops with Normans who in turn replaced the older liturgy and Gregorian Chants with a newer style favored by the reforming papacy.

At the monast. of Glastonbury the new Norman abbot, wanting to oust the Saxon monks, cut their already meager rations, but they failed to give in. Finally, in a rage, the abbot called in troops who chased monks into church, broke down the doors and butchered the monks.

Likewise, Saxons were displaced of all but 8% of their land by their new Norman overlords who neither knew the language or cared about subjects who spoke it. In fact, it would take 300 years for the two tongues, Old English and Norman-French, to merge into what we know as the English language. The first major work of literature in this hybrid would be Chaucer's Canterbury Tales in the 1300s. Until then, the nobles and court would speak French while the commoners spoke the older Saxon tongue.

Not that the Saxons took all this lying down. There were revolts, sometimes supported by the Danes who mainly came to plunder and destroy and then leave the Saxon's to William's mercy.

In 1070, a leader known as Hereward the Wake led a rebellion from the fens and marshes. To bring him down, the Normans' first used a siege tower, even hiring a local witch to curse the Saxons from its top. However, when the tower caught fire she turned around to curse the Normans who had gotten her in this mess.

Nothing daunted, the Normans built a causeway across the fens and mounted an assault that finally overwhelmed Hereward's men. However, Hereward escaped & continued the struggle, earning legendary fame among the Saxons.

When the Saxons took to murdering Normans, William declared a huge fine for not turning in the murder. So the Saxons would mutilate their victims so they couldn't be identified as

Normans, causing William to declare any such victims were considered Normans till proven Saxons.



In 1085, facing the threat of another Danish attack, William took a census of all England to find out what the kingdom had in the way of men for military duty and taxable income. The resulting census document, the *Domesday Book*, is possibly the most complete census taken in Western Europe during the Middle Ages.

The Domesday census also shows the dire effects of the Norman conquest and can even help us track the path of devastation William balzed in pacifying the land, especially in the North. For example, the town of Horested's value fell from 100-50 shillings after 1066 and had only recovered to 60 shillings by 1086.

In 1087 while torching a French village during a campaign against the French king, William's horse stepped on a burning ember and threw him. After two agonizing weeks of pain from internal injuries, he died. His sons rushed off to secure their various inheritances without even burying him.

William II (1087-1100), known as Rufus for his red hair, was as nasty a ruler as his father. One day while hunting, an arrow mysteriously appeared in his back and he died.

His successor, Henry I (1100-35) spoke some English and was literate, something fairly new for kings. As Henry put it, an illiterate king is like a donkey with a crown. Although he acknowledged twenty illegitimate sons, he supported the papacy's campaign to enforce clerical celibacy, causing an embassy of 100 priests to petition him, crying about how destitute their wives and children would be if they were forced to annul their marriages.

Henry also married a Saxon princess, Edytha, which was not popular with the Norman rulers, but shows start of the blending of the two races.

Edytha, also known as Matilda, or Mold, had Henry sign a charter agreeing to give up the dictatorial powers of William I and II and guaranteeing a return to the more constitutional rule of Saxon kings and civil rights of people. Only certain taxes could be levied on the people, and some protections for commoners against the nobles was provided.

This charter became the basis for Magna Charta, with Anselm, archbishop of Canterbury, having 100 copies being made and stashed away in churches across the kingdom. Only one of these copies survived to 1215, being dug up by Stephen Lanston, archbishop of Canterbury at the time, and used as the template for what we know as Magna Charta.

Henry II and Thomas Becket



Henry II, like other monarchs of the time, had his problems with the Church over who chose church officials and whether church law or common law was supreme. His main opponent was Thomas Becket, one of Henry's close friends that the king had made archbishop of Canterbury. To Henry's surprise, Becket went through a transformation into a pious man upholding the Church's rights against the crown.

The struggle between king and archbishop split England into two camps. Supporting the king were most of the Norman nobles, while the clergy and Saxon population backed Becket as champion of their rights. One day, Henry yelled out: *"What cowards have I about me that no one will deliver me from this lowborn Priest?"* Four of his nobles taking the king at his word, went to Canterbury and murdered Becket at the altar.

Naturally, this act backfired against the king who, to satisfy the pope and public opinion, had to do penance for the murder by walking barefoot in a hair shirt & being "flogged" 5 times by Church officials & 3 times by monks. Becket was subsequently canonized as a saint, making Canterbury the most popular pilgrimage site in England.

Legal Procedures Before Henry II's Reforms

Medieval legal procedure was an accusatory form of criminal procedure, based on Roman law, where the accuser had to prove the guilt of accused or face penalty known as talion, which often equaled the penalty for the accused crime.

There was no difference between criminal and civil cases, since individuals had to bring criminals to justice. They had to convince the judge their intentions were good and that it was an honest mistake.

- Edward I declared Talion should compensate the accused for damage to him & his character
- In cases where the accused was imprisoned for the trial, the accuser was also often imprisoned
- When notifying the judge of a proposed law suit, the accuser must provide written proof. If it was insubstantial in judge's eyes, the accuser paid talion before trial
- Trying to withdraw the case led to paying talion
- Conviction required a spontaneous confession or overwhelming proof "clearer than noonday light"
- Failing these, the accused submitted to trial by ordeal, since human judges had failed. These included:
 - Ordeal by water, where water, the symbol of purity, accepted the innocent and rejected the guilty. Presumably the innocent were fished out before they drowned.
 - Holding a red hot iron or plunging his arm into boiling water, then checking how well the wound healed
 - Ordeal by barley bread: a piece of bread marked w/cross was suspended in church by a hook in the presence of the accused; if guilty the bread would revolve. (Safety tip: if accused, try not to schedule the trial on a

windy day in a drafty church.)

- Ordeal by unleavened barley bread & cheese (which must be made in May from a ewe's milk). These are given to the one accused of theft. If after swallowing, any was left on the corner of his mouth, he was guilty.

Nobles generally relied on ordeal by combat.

English sayings and their origins

"Don't throw the baby out with the bath water"

Baths were rare, but, when given, a big tub was filled with hot water. Dad went 1st with the clean water. Next came adult sons, then the women, children, and finally babies. By then the water so dirty, people would warn not to throw the baby out with the bath water. Yearly baths were typically taken in May, leading to most marriages taking place in June while the couple were still smelling pretty. Just in case, the bride carried a bouquet of flowers to hide body odor.

"It's raining cats & dogs"

Since thatched roofs were the only warm place for animals, mice, rats, cats, and even dogs lived there. When it rained, the thatch became slippery, causing any inhabitants to fall out, thus raining cats and dogs.

Four-post canopy beds evolved since there was nothing to stop bugs, etc. from falling on the bed.

"Dirt poor" & threshold

Only the rich had floors of something other than dirt, giving rise to the saying "dirt poor."

The rich had slate floors, which were slippery when wet. So they spread thresh to help keep footing. As they kept adding more thresh it would all slip outside when the door opened. Therefore, a piece of wood was placed at the entryway, becoming known as a "threshold".

"Bring home the bacon" & "chew the fat"

Pork was a rare and special treat for most people, so that when a man would bring out some bacon and hang it to show off to company, it was a sign of wealth and that a man "could really bring home bacon." They would then cut off a little to share with guests while "chewing the fat."

"Trenchmouth"

Most people only had trenchers (piece of wood w/middle scooped out) from which to eat. Since they were never washed, worms often got into the wood. After eating off these wormy trenchers, they would get "trench mouth."

The rich had pewter plates, causing some lead to leach onto their food, especially tomatoes. As a result, they stopped eating tomatoes for 400 years.

"Upper crust"

Bread was divided according to status, where workers got the burnt bottom of the loaf, family members got the middle, and guests got the top, or the "upper crust".

"WAKES",

Since ale & whiskey were drunk from lead cups, drinkers were sometimes knocked out for a couple days and often taken for dead. They would be prepared for burial and laid out on the kitchen table for a couple of days while family gathered, ate, drank and waited to see if they'd wake up. Thus the term "wake".

Graveyard shifts, saved by the bell, & dead ringers

When England started running out of places to bury people, they'd dig up coffins, take bones to a house, and re-use the grave. Reopening these coffins they found one in twenty-five had scratch marks on the inside, leading to the realization that they had been burying people alive. As a result, they would tie a string on the corpse's wrist and lead it from the coffin to a bell. Someone had to sit in the graveyard all night to listen for the bell during this so-called "graveyard shift." They'd know if someone was "saved by the bell" or a "dead ringer".

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THE HOLY ROMAN EMPIRE OF GERMANY (919-c.1300).

Introduction. The history of the Holy Roman Empire, as Germany was then known, differed quite markedly from France and England. Whereas those two countries were well on their way to developing national monarchies by 1300, Germany was disintegrating into feudal anarchy. This was largely the result of Germany being tied to the ancient and somewhat outdated concept of a universal Roman Empire that claimed dominion over all of Europe. This put it into conflict with the Catholic Church, which had its own claims to universal dominion. The ensuing centuries long struggle between popes and emperors would exhaust the empire, destroy most of the emperors' authority in Germany, and leave it in the power of independent princes and church prelates. Also, the quickly emerging nation states had little room for the idea of a universal empire interfering in their affairs. The concept of such an empire may have had some appeal in the time of Charlemagne. Five hundred years later the luster of such claims was tarnished and starting to rust.

The Saxon Dynasty. The breakup of the Frankish Empire in the ninth century created two main states: West Frankland, which would become France, and East Frankland, which would become Germany. The death of Louis the Child in 911 put an end to the German branch of the Carolingian dynasty, forcing the German nobles to choose a new ruler. Largely because they recognized the need for a strong monarchy to protect them against the nomadic Magyars to the East, the nobles chose the rulers of Saxony as their king. In the following century, the Saxon dynasty (919-1024) established one of the strongest of the early medieval monarchies. The Saxons based their power, as most monarchs then did, on the twin pillars of holding land and an alliance with the Church.

In addition, the Saxon rulers did two other things to strengthen their alliance with the Church. For one thing, they supported the spread of the Cluniac reforms into Germany, largely as a means to weakening the power of local nobles. Secondly, in 961 the pope and Italian bishops called in the Saxon ruler, Otto I, to defend them against their enemies. In return for this favor, the pope crowned Otto Roman Emperor. From this time until 1806, the

imperial dignity would belong to the rulers of Germany, known afterwards as the Holy Roman Empire.

The Salian Dynasty (1024-1106), which succeeded the Saxons, also depended on controlling Church officials and large amounts of land to maintain and build its authority. In addition, the rising power of the nobles made it even more mandatory that they form a more efficient administration. In the absence of towns at this early date, the Salians used a peculiar institution known as *ministeriales*. These were originally non-free peasants whom the Church would use for knight service to the emperor. The bishops and abbots would give the ministeriales use, but not possession of land to pay for these services. The Salian emperors used ministeriales for various military and civil services, since their low social status kept them dependent on the emperor. They also drew silver from the mines in the Hartz Mountains, which gave them still more power.



Their power and policies made the Salians unpopular in Germany, especially with the nobles. However, by 1075, the emperor Henry IV seemed well on his way to building the strongest monarchy in Western Europe. He had extensive lands, a permanent capital at Goslar, money revenues, and a body of servants loyal to the king. Unfortunately, as we have seen, the emperors' support of the Church reforms had also raised the power and status of the popes who then challenged the emperors' control of Church elections in Investiture Struggle (1075-1122). When pope Gregory VII excommunicated Henry, the German nobles seized the opportunity to rebel against their emperor and elect a new ruler. Rebellions, civil war, and anarchy tore through Germany and Italy. Pope Gregory VII died in exile, but his successors

continued the struggle. When Henry IV died, his successor, Henry V, finally managed to reach a compromise settlement, but the damage was already done.

The anarchy and wars of the past half a century had allowed the German nobles to assert their independence. Great nobles became virtually independent princes, while the lower nobles became their vassals. Bishops and abbots also granted fiefs in return for military service. The free peasants virtually disappeared. Even the ministeriales were forced to break their bonds of service to the empire and become other nobles' vassals as the empire started to fragment.

What ensued was a vicious cycle whereby German emperors, seeing Germany as increasingly hopeless and themselves as Roman emperors, would neglect Germany and concentrate on building their power in Italy. As a result, Germany would disintegrate into worse anarchy. This would encourage the emperors to concentrate further on Italy while ignoring Germany, and so on.

This process especially accelerated under the Hohenstauffen dynasty, starting with its first emperor, Frederick I Barbarossa (1152-1190). Frederick I first tried to reassert imperial power in the rich cities of Lombardy in north Italy. After some initial successes, he was defeated by the combined forces of the Lombard League in 1176. Although they acknowledged him as their emperor and paid some money, they remained virtually independent. Frederick did manage to seal a marriage alliance of his son to a Norman princess of Southern Italy and Sicily. Frederick also had some success in controlling the cities in Central Italy. This had the effect of alarming the popes who became the avowed enemies of the Hohenstauffen emperors surrounding them.

Frederick I is said not to be dead, but a sleeping hero in a cave in Kyffhäuser mountain in Thuringia, Germany where his red beard has grown through his table. When the ravens that fly around that mountain stop doing so, he will awaken and restore German power and glory.

Frederick Barbarossa died while on Crusade in 1190. His son and successor Henry VI, being married to Constance of Sicily was even more involved in Italian politics. For one thing he had to spend several years putting down a rebellion of Norman nobles who did not want a German ruler. Although Sicily brought the empire a very well organized and wealthy state, it also kept the emperors out of Germany even more, allowing it to disintegrate further. The acquisition of Sicily also further alienated the popes who were now surrounded with an even tighter noose.

The last great "German" emperor, Frederick II (1196-1250) came to the throne as a baby. After a stormy childhood, during which pope Innocent III was his guardian against more threatening German nobles, he came to the throne in high own right. Frederick was one of the most fascinating medieval characters, keeping Muslim advisors, a harem, and a menagerie of exotic animals. His irreligious ways shocked contemporaries. Even his crusade where he gained Jerusalem through negotiation rather than fighting with the Muslims did not seem quite Christian.

Frederick grew up in Sicily and considered Germany too cold and bleak for a home, spending only two years of his reign there. His policy there was to keep it quiet so he could concentrate on building his power in Italy and fighting the popes. As a result, he was willing to grant further privileges to the German nobles in order to pacify them. The last vestiges of imperial control fell into the hands of nobles who were now granted full powers of government in their individual lands. The popes added to the confusion as they stirred up rebellions against Frederick in both Italy and Germany. Although Frederick maintained his power in Italy, he never succeeded in breaking the popes' power. Even after his death in 1250, the emperors' fight with the popes continued.

The popes finally emerged victorious in their struggle with the German emperors. They broke the ring of enemies surrounding them by inciting rebellions in the cities to the north and bringing in the French royal prince, Charles of Anjou, to overthrow Frederick's son in Sicily and Southern Italy. The pope even forced loans out of the Italian bankers by threatening to ruin them with a decree absolving all debtors from their obligations to the

bakers. The means that the popes used to defeat the emperors also served to tarnish their own reputations and that of the Church.

In 1350, the German monarchy became purely elective, further weakening the power of the emperors. By 1500 Germany would be a patchwork of some 300 independent states nominally united under the empire (below). For centuries, Germany, too weak and divided to defend itself, would be a constant battleground for other powers' wars. Even after its unification in 1871, the memory of these humiliations would largely determine Germany's foreign policy and be an underlying cause of the two world wars in this century.



The Kingdom of the Two Sicilies (1016-1282)

In 1016- Norman pilgrims returning from Palestine stopped at the shrine of the Archangel Michael in Southern Sicily, where they were approached by a local Lombard, Melo who enticed them with stories of vast wealth to be made from being mercenaries. As word got out back to Normandy, thousands of land hungry younger sons made their way to Italy, first as mercenaries, and then as conquerors of their own principalities. The most famous of these was Robert Guiscard who carved out a state encompassing all Southern Italy at the expense of the Byzantines and local Lombards.

By 1100, Guiscard's nephew, Roger, had conquered Sicily, where he left Muslim governors & laws in place, making him fairly popular. In 1130, Roger II was crowned King of the Two Sicilies, which was one of the best administered states in Europe at that time.

In 1186, Frederick Barbarossa's son, Henry, married Constance of Sicily. When her nephew, Roger II died four years later without a

successor, Constance became queen, making her husband, now Henry VI of Germany its king. Henry, also known as The Cruel, was a ruthless ruler, and thus very unpopular. When his wife, Constance, had a baby at age 40, rumors circulated that it was the result of demonic possession. Thus, when Henry died, leaving Germany and the Two Sicilies to his infant son, Frederick II, Germany degenerated into civil war making for a somewhat turbulent childhood for the young king.

While, on a map the Hohenstauffen dynasty's empire looks impressive, its apparent power made it a number of enemies, namely the popes, the Italian city-states in the North, and the German nobles fighting for their own independence. Also, it was too spread out to administer effectively without a trained and loyal bureaucracy

Frederick II meets with the Egyptian sultan al Kamil Muhammad al Malik during the Fifth Crusade. The two men became friends and the sultan turned an unfortified Jerusalem over to Frederick. The pope, who had excommunicated Frederick for delaying his crusade, refused to lift the ban because Frederick hadn't fought to recover the Holy City.



Castel del Monte, built by Frederick II in Southern Italy. The Hohenstauffens, in particular Frederick II, used a variety of troops for their armies. Frederick's Muslim guardsmen were especially useful against the Papacy since being excommunicated had no effect on them.

After Frederick II's death, his illegitimate son Manfred took the throne of the Two Sicilies. However, the Pope, still fearing the Hohenstauffens, called in Louis IX of France's

brother, Charles of Anjou, to oust Manfred from power. Despite the power of Manfred's German heavy cavalry, Charles beat Manfred and took the Two Sicilies as his prize.

In 1270, having taken Sicily, Charles talked his saintly brother, Louis IX of France (AKA St. Louis) to divert his crusade to Tunis in N. Africa. While this wouldn't get Louis very close to Jerusalem, it would help cut off Muslim trade between the Eastern and Western Mediterranean.

Unfortunately, fever beset the crusader camp during the long hot siege and Louis died, supposedly with the words "Jerusalem, Jerusalem" on his lips.

In 1282, using as their signal the Church bells' announcement of the evening (vespers) prayers, the Sicilians rebelled against Charles' stern and unpopular rule. This revolt, known as the Sicilian Vespers, pulled in the rulers of the Spanish kingdom of Aragon and ended up dividing these southern lands between the French Angevins in Naples and the Aragonese in Sicily.

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WAR, PLAGUE, HERESY, DEPRESSION SCHISM AND REVOLT THE BLACK DEATH AND ITS IMPACT (1347-c.1450)

*"God is deaf now-a-days and deigneth not hear us,
And prayers have no power the Plague to stay."--
Piers Plowman*

Introduction. In the 1300s, Europe entered a period of turmoil that shook medieval civilization to its foundations and paved the way for such aspects of the modern world as nation states, capitalism, and the Protestant Reformation. Such periods of transition are rarely easy to endure, and this was no exception. It was a period which saw recurring famines, outbreaks of plague, peasant and worker revolts, the rise of religious heresies, challenges to the Church's authority, and long drawn out wars, in particular the Hundred Years War between France and England. Ironically, the problems were largely the result of better farming methods.

Signs of growing Stress. The High Middle Ages had been a time of growth and prosperity. New agricultural techniques had caused a dramatic rise in population, which in turn led to rising demands for food and fuel. This generated inflation and a strain on the environment, which led people to clear more new lands for cultivation. That, in turn, triggered more population growth, and so on

Aggravating these problems was a change of climate. Apparently, the climate in the High Middle Ages was good, thus making possible that period's prosperity. However, in the 1300's the climate turned colder and wetter than usual, resulting in floods and early frosts. Sources spoke of great famines in 1316 and 1317 and of reports that the Baltic Sea froze over in 1303 and 1316. The resulting malnutrition of the early 1300s made people born during that time especially susceptible to disease, since our immunological systems develop during childhood. This in turn set up the worst of the Middle Ages: the Black Death.

Origins of the Plague. The Black Death, also known as Bubonic plague, appears to have arisen in Central Asia in the early 1300's. The most likely scenario for its spread points to Mongol rulers in Asia who had settled down from their rampages to establish stable caravan routes from China to the

Black Sea where Italian merchants would trade for the silks and spices so highly valued in Europe. Ironically, these trade routes were also the invasion routes of a very different sort. Apparently, the Asian black rats, which carry the fleas that carry the plague, burrowed into the caravan's grain sacks and hitched a free ride across Asia. Rumors had already filtered westward of a terrible plague that depopulated whole regions of China and India. Rumor became reality for Europe in 1347 when a Genoese ship pulled into the Sicilian port of Messina with half its crew dead or dying from plague. The Black Death had arrived.

Germ Warfare. The Plague reached a Mongol army besieging the Genoese city of Caffa on the Black Sea. According to one version, the Mongols decided to wage a primitive form of germ warfare by catapulting plague victims over Caffa's walls. When Plague broke out in the city, Genoese merchants there cleared out for home, spreading the pestilence at every port of call. By the time they reached Messina in Sicily, most of the crew were dead, sparking a panic among the townspeople, who fled the city. Unfortunately, they took the Plague with them.

The Plague quickly spread death and terror across Europe, sweeping through Italy in 1347, France in 1348, and the Low Countries, England, and Scandinavia in 1349. Its pattern was to flare up in the summer and taper off in the winter, only to flare up again and sweep onwards the next summer. By 1350, it had pretty well passed on, leaving in its wake a population decimated by its effects.

Cities, with their crowded unsanitary conditions, generally suffered worse than the countryside. Although contemporary accounts generally exaggerated the toll, it was certainly was staggering. Supposedly 800 people died in Paris each day, 500 a day in Pisa, and up to 600 a day in Vienna. Some cities lost anywhere from 50-70% of their populations. Monasteries, also being crowded, suffered similar death rates. In the countryside where people were more spread out, maybe 20-30% of the population perished.

All across Europe black flags flew over towns to warn travelers that the plague was there. Church

bells rang constantly to announce the deaths of citizens until town councils voted to silence their demoralizing clangor. The Hundred Years War was interrupted by the plague, and construction on the cathedral in Siena, Italy stopped and never resumed, a grim memorial to the plague's power.

People, having no idea then of the existence of microbes, were completely ignorant of the plague's cause. Some, seeing a correlation between fleas and plague, killed dogs and cats, just giving the black rats more freedom to spread the disease. Most explanations of the Black Death concerned divine retribution. This gave rise to the flagellants, people who would march from town to town whipping themselves to atone for society's sins. However, as they spread penitence, they also spread the plague. Therefore, the authorities outlawed them, as much for the social unrest they seemed to stir up as for the disease they were spreading. The most effective way of avoiding the plague was to avoid people who might carry it, causing those rich enough to flee the towns during the plague's height in the summer months. In fact, a virtual panic seized people as husbands abandoned wives, parents abandoned their children, and even priests and doctors refused to see their patients. It seemed as if the whole fabric of society was coming unraveled.

In the absence of any effective remedies, people looked for scapegoats. Many blamed the Jews whose religion dictated a bit cleaner lifestyle, which in turn meant less incidence of rats, fleas, and plague. In some peoples' minds, however, the Jews had poisoned the wells or made a pact with the devil to cause the Black Death. The resulting disturbances resembled those accompanying the First Crusade, with Jews being massacred or burned in their synagogues. Germany and the Low Countries saw especially bad outbreaks of such violence, and, by 1350, few Jews remained in those areas.

The plague hit Europe six more times by 1450, each time with less severity than before, since more survivors were immune to it. And those without resistance were weeded out by natural selection. Still, some 30-40% of Europe's population was lost. Census figures in England fell from 3.7 million in 1348 to 2.1 million by 1430. Even then, Europe was not free from the

Black Death's ravages, suffering recurrent outbreaks until the early 1700's. Why it receded is also a matter of controversy, with such theories as the European brown rat driving out the Asian black rat, tile roofs replacing thatched ones where rats often lived, and the more deadly plague microbe, which more readily killed off its host and left itself no place to go, being replaced by a less deadly version.

The results of the Black Death. Along with an obsession with death that worked its way into European culture for generations to come, one can see the long term effects of the Black Death following three lines of development: a higher standard of living for those who survived, problems for nobles and clergy who were land owners, and revolts by peasants and urban workers. First of all, the Black Death had raised the standard of living of many survivors who inherited estates from the plague's victims. One sign of this was that peasant families, who, before the plague, were so poor that they sat at the dinner table on a common bench and ate from a common plate, now had individual stools and plates. This higher standard of living would lead to a more even wealth distribution and the recovery of the economy after 1450.

Popular uprisings. Peasant and urban worker revolts were a sign of the times in the 1300's and 1400's for two main reasons. First of all the plague created a labor shortage, especially in the cities where up to 70% of the inhabitants had died. As a result, workers and peasants demanded higher wages for their labor, something nobles and guild masters strongly opposed. A second problem was that the Black Death had severely depleted the tax base of the medieval state. This caused kings to raise taxes drastically to meet expenses coming from the chronic warfare of the age, in particular the Hundred Years War raging between France and England. Frustration from these thwarted demands and the heavier tax burden triggered a series of urban and peasant revolts across Europe.

Typically, war, plague, high taxes, or a combination of these would spark a sudden uprising. At first it would take the authorities by surprise, and they would either be killed or flee to the safety of the local towns or castles. In the case

of peasant revolts, the unexpected success of an uprising would encourage other peasants to join and vent their frustrations on their own lords with incredible ferocity and cruelty. The rebellion would sweep through the countryside like wildfire, destroying any opposition in its path. However, the sudden nature of such outbursts also carried the seeds of their destruction, because they had very little, if any, organization or planning. Eventually, the authorities would gather their forces and crush the rebellion, since the rebels were poorly armed and trained compared to the professional warriors facing them. The aftermath would often see massacres and executions as retribution against the rebels and to discourage any further uprisings.

In the cities, workers tried to form their own protective organizations to win higher wages and better working conditions. This alarmed the guilds, which outlawed such organizations. That in turn enraged the workers who resorted to violence. The first such revolts occurred even before the Black Death hit Europe. The plague and its results merely intensified an already existing crisis.

The most serious of these, that of poor laborers known as the *Ciampi*, took place in Florence (1378) and followed a course similar to other popular revolts of the time: initial success (which in this case lasted four years), eventual victory for the authorities, and severe reprisals which only added to existing bitterness. The savagery of such revolts and the atmosphere of fear and hatred they created led the ruling classes in the cities to support princes and tyrants who could establish law and order. In Flanders, the dukes of Burgundy also established law and order under their strong autocratic rule. The greater security plus the collection of power and wealth in the hands of these rulers would be important factors supporting the cultural flowering of the Renaissance

Two revolts typified peasant uprisings, one in France and one in England. The *Jacquerie*, named after the popular name for French peasants, broke out in 1358, ten years after the Black and in the midst of the Hundred Years War with its destruction, high taxes, and forced labor to repair fortifications. On May 28, about 100 peasants in the village of St. Leu assaulted the nearest manor

house and massacred the lord and his family. From there, the revolt spread quickly across the countryside with the usual atrocities and a reported 160 castles burned. Many towns, either out of sympathy or fear of the peasants, opened their gates to them.

The turning point came when some nobles returning from crusade in Eastern Europe came across and defeated some peasants at the town of Meaux. This encouraged them to organize and gather their forces against the main peasant force. The nobles then lured the peasant leader, Guillaume Cale, into a parley and murdered him. Deprived of their leader, the peasants were easy prey in the battle that followed. Hundreds were burned in a local monastery, and thousands more were hanged in their doorways as a warning against future revolts. Less than a month after the start of the revolt, it was over, although the fear and bitterness it bred lived on.

The Wat Tyler rebellion broke out in England in 1381. The immediate causes were much the same as those of the *Jacquerie*: high war taxes, a recent outbreak of plague, and a resulting agricultural crisis. The course of events was also similar. The rebels advanced all the way to London, looting and pillaging as they came. They even managed to seize and murder several of the king's officials. However, a daring ride in front of the rebels by the boy king, Richard II, who offered them concessions and supposedly his leadership in the revolt, settled them down. A parley was then arranged with the peasants' leader, Wat Tyler, which ended in his murder. This demoralized the peasants and allowed the nobles to defeat them and restore order in England much as the French nobles had in France. However, despite their ultimate defeats, the popular revolts of the day had two important results. First, they damaged the nobles' military reputations and power and paved the way for the emergence of kings and the modern nation state. Secondly, workers' and peasants' wages did rise, also leading to a more even distribution of wealth.

Decline of the Church and nobles. The Black Death also created problems for the nobles and clergy in two main ways. First, the huge population loss in the cities' caused a virtual collapse of the urban grain markets, a major

source of income for noble and church landlords with surplus grain to sell. This especially hurt the nobles and clergy, whose incomes were still based on land and who relied on selling surplus grain in the towns for badly needed cash. There were two main strategies for making up for this lost income.

Both nobles and clergy resorted to selling freedom to their serfs. This raised some quick cash, but it also deprived them of future revenues, which contributed to their decline and the corresponding rise of kings and nation states. At the same time, the serfs were now transformed into a free peasantry with more incentive to work harder since they were working more for themselves. This also helped lead to a more even distribution of wealth which contributed to a revival of agriculture, towns, and trade, especially after 1450 when the climate seems to have improved. But with the guilds and nobles weakened by the turmoil of the last 150 years, a new broader consumer market evolved, but one where the average person had less money to spend than the average noble beforehand would have had. Since these people could not afford the guilds' expensive goods and the guilds refused to adapt to this market, rich merchants established cottage industries and sold their goods outside of the guilds' jurisdiction. The profits they made and the absence of the guilds' restrictive regulations helped these merchants establish a new economic system, capitalism, which would replace the guild system and lead the way into the modern world.

The Church had several other fund raising options in addition to selling serfs their freedom: selling church offices (simony), letting one man buy several offices at the same time, charging fees for all sorts of church services, and selling indulgences to buy time out of Purgatory after one died. These practices plus the Church's inability to cope with the crisis of the Black Death led to growing public discontent. As a result, the Church would experience serious challenges to its authority in the Later Middle Ages.

The Nature of the Disease



Rats play “Ring around the Rosie”, also a nursery rhyme about the Black Death. The rosie represented the rash victims of the plague got. The ashes referred to burning the bedding and clothes of deceased victims.

Yersinia Pestis is the bacillus that spreads plague. However, the bacillus needs a host to spread Bubonic Plague. That host was the common household flea. . In order to reach a new host, fleas can jump 4” vertically and 6” horizontally, which is 150 times their size. The flea itself needs a host on whose blood it can live. The bacillus multiplies and clogs up the flea’s stomach, forcing it to bite its host to regurgitate the blood, thus infecting its host. When its host dies, the flea must seek a new host. Its favorite host was the Asian black rat.

The Asian black rat can survive a 50’ fall and scale brick walls. It has a vertical leap of 2 feet, a horizontal leap of 4 feet, and can squeeze through a hole the size of a quarter. Unless it constantly gnaws to file down its teeth, which grow 4-5”/ per year, they will grow up into its brain and kill it. These creatures can even survive by eating excrement.

However, when the plague kills the rats, the fleas need a new host.

Dogs and cats will do just fine. So will humans. In fact, fleas were so common in medieval households that their presence was seen as little more than a nuisance, as a number of contemporary paintings of women picking fleas

off their bodies showed. (Women were typically the subject, since they were mostly at home where the fleas proliferated.) That was part of the problem: fleas were barely noticed.



Symptoms, while varying from person, followed this basic pattern:

Day 1: The 1st symptoms consisted of headaches & weakness, followed by aches & chills in the upper groin.

Day 2: A white coating would appear on the tongue, accompanied by rapid pulse, slurred speech, confusion, fatigue, apathy, and staggering.

Day 3: Lymph nodes near the flea bite would swell to the size of an egg or apple, especially in the armpits and groin. Thus the term *bubonic*, from the Greek *boubon* for groin. As one victim put it: "*...Woe is me of the shilling [i.e., buboe] of the armpit! It is seething, terrible... a head that gives pain and causes a loud cry...a painful angry knob....Great is its seething like a burning cinder...a grievous thing of ashy color.*" — Unknown

Other symptoms included a fluttering heart as it tried to pump blood through suffocating tissue, and subcutaneous hemorrhaging which showed up as bluish black splotches under skin, giving rise to the other common term Black Death

Day 4 saw wild anxiety & terror in the victim as well as intense pain & a bizarre neurological disorder commonly called the Dance of Death from the involuntary jerking around.

Varieties. There were three basic varieties of the plague, largely defined by how the victim was infected.

The Bubonic variety, coming from flea bites, killed 70-80% of its victims within five days .

The Pneumonic variety , transmitted by coughing & sneezing, which were also symptoms of the disease, was more contagious, typically killing an estimated 90% of those infected within 3 days.

The Septicemic variety directly entered the bloodstream, leading to death much sooner, often without symptoms, and having a lethality of nearly 100%. Some victims would go to bed apparently healthy and never wake up, which was probably the best way to go, all things considered.

Personal Accounts of the Black Death



"Neither physicians nor medicines were effective. Whether because these illnesses were previously unknown or because physicians had not previously studied them, there seemed to be no cure. There was such a fear that no one seemed to know what to do. When it took hold in a house it often happened that no one remained who had not died. And it was not just that men and women died, but even sentient animals died. Dogs, cats, chickens, oxen, donkeys sheep showed the same symptoms and died of the same disease. And almost none, or very few, who showed these symptoms, were cured. The symptoms were the following: a bubo in the groin, where the thigh meets the trunk; or a small swelling under the armpit; sudden fever; spitting blood and saliva (and no one who spit blood survived it). It was such a frightful thing that when it got into a house, as was said, no one remained. Frightened people abandoned the house and fled to another." --Marchione di Coppo Stefani

"How many valiant men, how many fair ladies, breakfast with their kinfolk and the same night supped with their ancestors in the next world! The condition of the people was pitiable to behold. They sickened by the thousands daily, and died unattended and without help. Many died in the open street, others dying in their houses, made it known by the stench of their rotting bodies. Consecrated churchyards did not suffice for the burial of the vast multitude of bodies, which were heaped by the hundreds in vast trenches, like goods in a ship's hold and covered with a little earth." -Giovanni Boccaccio

"Father abandoned child, wife husband, one brother another, for this plague seemed to strike through the breath & sight. And so they died. And no one could be found to bury the dead for money or friendship... And I, Agnolo di Tura, called the Fat, buried my five children with my own hands, and so did many others likewise."— Agnola di Tura

"One man shunned another...kinsfolk held aloof, brother was forsaken by brother, oftentimes husband by wife; what is more and scarcely to be believed, fathers and mothers were found to abandon their own children to their fate, untended unvisited, as if they had been strangers."--Unknown

"Realizing what a deadly disaster had come to them the people quickly drove the Italians from their city. However, the disease remained, and soon death was everywhere. Fathers abandoned their sick sons. Lawyers refused to come and make out wills for the dying. Friars and nuns were left to care for the sick, and monasteries and convents were soon deserted, as they were stricken, too. Bodies were left in empty houses, and there was no one to give them a Christian burial."--Unknown

"Bring out your dead": Dealing with Plague



A doctor who treated victims of the Black Death. The beak, filled with perfumes & other substances to ward off the plague, supposedly would filter out the bad fumes. The lenses would likewise protect the eyes from infection through transference by sight.

Burial. In many cases, there were so many dead and so few living that mass burial pits had to be used. Finding people to carry out this grim task wasn't so easy. In Florence, a religious order known as the Campagna della Misericordia collected bodies left on doorsteps until the last of them died. Since such graves were usually quite shallow, dogs and wolves would sometimes come and dig up the bodies.

Explanations for the Black Death were plentiful and imaginative:

- Earthquakes, which led to crevices through which toxic fumes escaped into the atmosphere.
- A triple conjunction of Saturn, Jupiter, & Mars that exerted unusually intense influence on earth
- Transference by sight when someone with the Plague looked at you
- Raining frogs, toads and lizards
- Lust with old women
- Baths which open pores through which Plague would get in
- Bad air, which made exercise especially risky, since it led to heavy breathing and then Plague.

The Black Death was particularly hard on European Jews. Because Judaism prescribed a very clean household, rats found little there to eat and moved on down to the messier Christian households where they shared the fleas in exchange for a few choice crumbs.

Christians, seeing the Jews suffered less from the Plague than they did, assumed they had done something like poison their wells or made a pact with the devil.

Already driven to hysteria by this mysterious disease, mobs in many cities, especially in Germany, massacred entire Jewish communities.

- In Basle several hundred were burned in a house built for the occasion.
- In Strasbourg 2000 were burned at the stake.
- In Worms 400 Jews burned themselves to death rather than be taken alive.
- Frankfurt-am-Main witnessed the same spectacle.
- Jews defending themselves in Mainz killed 200 Christians, leading to all 6000 being killed
- Similar incidents took place in Konigsburg, Freiburg, Augsburg, Nuremberg, Munich, , & Regensburg.

By 1350, few Jews remained in Germany or the Low Countries, many having fled to Eastern Europe.

Avoidance and cures. One of the best cures available was lancing or draining pus from the buboes, but common wisdom, often an oxymoron, thought that would make things worse, so the pus remained inside the victim to do its work. Another measure was to quarantine entire families in their houses when a member got plague. This may have protected people outside of the family, but it generally condemned to death everyone trapped inside. This seems to have worked in Milan, where it was strictly observed and few people died.

Then there were the silly cures:

- Sleeping on your right side, then your left.
- Breathing in urine fumes or bathing in urine, which probably would keep people with plague, (and everyone else for that matter) at a safe distance away from you.

- Drinking pus from the buboes
- Writing “Abracadabra” in this magical manner was another surefire cure

ABRACADABRA
ABRACADABR
ABRACADAB
ABRACADA
ABRACAD
ABRACA
ABRAC
ABRA
ABR
AB
A

Another practice was for groups of penitents to travel around to atone for society’s sins and avert the plague. Such processions often included flagellants who whipped themselves to purge their sins. Unfortunately, by going from town to town, they also spread the plague, until the Church tried to ban them.



Popular Uprisings in the Late Middle Ages



Flemish town militia defeat French knights at Courtrai in 1304

Even before the Black Death wreaked its havoc, there were signs that the old medieval order was coming apart. Among these were popular uprisings that challenged the Old Order.

The Sicilian Vespers (1282) was the first major example of such an upheaval, being directed against the Angevin dynasty, which conquered

and misruled Sicily after the death of the emperor, Frederick II. This revolt escalated into a full-blown war between the Angevins and Aragon, with the Aragonese eventually taking Sicily.

The Matins of Bruges and battle of Courtrai. In 1297, Philip IV of France added Flanders (modern Belgium) to the crown lands, taking the rightful Count of Flanders, Guy of Dampierre, hostage, an act that angered many Flemish townsmen.

Possibly in reaction to this, the English king Edward I began to sell wool directly to customers, bypassing the rich burghers of Bruges who had the exclusive right to import wool as middlemen from England. When the burghers appealed to the French king, to restore their monopoly, Philip installed a garrison in the city, in the process driving a number of people from their homes in order to quarter his troops.

On the night of May 18, 1302 townsmen, led by Pieter de Coninck and Jan Breydel, massacred the garrison and any other French they could find, some 2,000 people. In order to identify the French, they were ordered to say "*schild en vriend*" (shield and friend), which was Bruges' shibboleth (a phrase whose pronunciation identifies its speaker as being a member or not a member of a particular group). Those unable to pronounce it correctly were killed.

Philip sent an army of about 8,000 men, including 2,500 knights and squires, to crush the insurrection. They were met by a force of 9,000 town militia from Bruges, Ghent, and Ypres. These were almost exclusively infantry armed with long spears and maces. While mounted nobles had disdain for infantry, counting one knight as worth ten of the enemy, these were well trained militia unlikely to break and run at the first sight of enemy cavalry thundering towards them.

The two armies met on the field of Courtrai, which was crisscrossed by canals and streams, making a cavalry charge difficult and even hazardous. The French first sent in servants to

bridge the canals with boards and then their infantry to soften up the Flemish. However, when they saw their infantry winning, they charged in to get all the glory, getting tangled with their own men and bogged down in the canals and streams, where the Flemish militia speared them like fish.

The Battle of Courtrai was also called the Battle of the Golden Spurs because of all the golden spurs the victorious Flemish townsmen supposedly took from the bodies of French knights and dedicated to the Virgin Mary.

The Ciompi rebellion (1378-82) in Florence was named after the wool carders, a low class of workers unaffiliated with any guild, although other workers, such as vegetable sellers and pottery vendors, and minor guilds were involved as well. They had a long list of grievances against the rulers of the textile guild, which gives us a good idea of urban working conditions then:

- They worked 16-18 hours per day for fixed wages often below subsistence level.
- Even so, wages were often withheld for any waste or damage to raw materials.
- The Church backed the rich guild masters leading to a letter from the bishop declaring workers could be excommunicated for wasting wool.
- Resisting an employer could lead to prison, flogging, or even cutting off one's hand.
- Agitators for the right to organize were subject to hanging, 10 being hanged in 1345.



Wool carders are brushes used to comb through and straighten woolen fibers in preparation for later spinning and weaving.

In 1378, workers rioted and rushed the Signoria's palazzo and demanded the right to organize workers into their own guild, reform the

system of fines and punishments, and have a voice in Florence's government. The fearful town council gave in and a truly democratic government, led by Michele di Lando (left), was established which gave the Ciompi the right to organize their own guild.

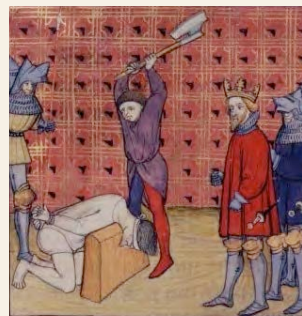
However, the radical reforms of the Ciompi, frightened more moderate elements among the minor guilds, who aligned with the major guilds to undermine the new government, which crumbled after only 41 days. The Ciompi's reforms gradually eroded away until by 1382 the major guilds had reasserted their power. Scared by this event, the guilds were willing to submit to the strong rule of the Medici banking family.

The Jacquerie in 1358 was a spontaneous outburst of frustration by French peasants against the higher taxes that came from Plague & defeat in the Hundred Years War. Being spontaneous, as most peasant revolts were, the Jacquerie caught the nobles off guard and spread like "wildfire" across the countryside. Many towns also joined the rebels, often out of fear rather than sympathy, although Paris was involved in its own rebellion. However such revolts, being unplanned and poorly organized, were typically put down just as quickly. In this case, the turning point came when French knights returning from crusade encountered and massacred some rebels at the town of Meaux.

The leader of the uprising, Guillaume Cale (AKA Jacques Bonhomme) seems to have been a capable soldier who had forged the peasants into as much of an army as possible in such a short time. They made swords out of scythes and billhooks, armor from boiled leather, and even fashioned banners with the Fleur-de-lys motto "Montjoie" to show their loyalty to the king. In fact, peasant rebels commonly thought of themselves as loyal subject just trying to free the king from the power and influence of the nobles.

The decisive event in the revolt was the treacherous execution of Cale after being lured into a parley with the nobles. The excuse for going back on the promised safe conduct to Cale was that, as a peasant rebel, he wasn't a full

human being and didn't enjoy the privilege of a truce. Before beheading him (below), the nobles' leader, Charles the Bad of Navarre, added to Cale's pain and humiliation by crowning him with a red-hot circlet of iron.



As with most peasant revolts, the Jacquerie ended in massacre when the untrained and now leaderless rebels quickly broke and ran at the first charge by the nobles' cavalry. Punishment as always was swift and brutal. Often rebellious peasants were hanged, sometimes in their doorways as a warning to others who might be thinking about revolt.

The Wat Tyler rebellion broke out in England in 1381. The immediate causes were much the same as those of the *Jacquerie*: high war taxes, a recent outbreak of plague, and a resulting agricultural crisis. The course of events was also similar. The rebels advanced all the way to London, looting and pillaging as they came. They even managed to seize and murder several of the king's officials.

However, a daring ride in front of the rebels by the boy king, Richard II, who offered them concessions and supposedly his leadership in the revolt, settled them down. A parley was then arranged with the peasants' leader, Wat Tyler, which ended in his murder. This demoralized the peasants and allowed the nobles to defeat them and restore order in England much as the French nobles had in France.

However, despite their ultimate defeats, the popular revolts of the day had two important results. First, they damaged the nobles' military reputations and power and paved the way for the emergence of kings and the modern nation state. Secondly, workers' and peasants' wages did rise, also leading to a more even distribution of wealth.

WOMEN'S CHANGING STATUS IN LATE MEDIEVAL EUROPE

"Wives, submit yourselves unto your husbands as unto the Lord"--St. Paul

"...every reasonable man must prize, cherish, love woman...She is his mother, his sister, his friend; he must not treat her as an enemy."-- Christine de Pisan (b.1364)

Introduction. One of the major trends in Western societies over the last 150 years has been women's progress towards equal status with men. The roots of this lie in medieval Europe, although it is best to look separately at the three main social classes of middle class, peasants, and nobles, since they each told a different story.

Middle class women saw little or no gain, and maybe even a decline, in their status as town revived during the high and late Middle Ages. This was typical of pre-industrial towns, since most townspeople originally came from peasant backgrounds where the labor was more equitably shared, since every person's labor was critical for bringing in and processing the crops. When families moved to towns, the men typically became craftsmen who ran their own shops with little or no help from the women. This loss of economic status led to a corresponding loss of social status, and can be seen in practices across a number of pre-industrial urban cultures such as the wearing of veils, not just in Muslim, but also the ancient Greek society and foot binding in China. Women in urban societies were also married off at earlier ages and as pawns in family alliances, although this could happen among peasants as well. That being said, practices could vary a bit from country to country. For example, a woman in England could take over her husband's business after he died if he had no adult sons to succeed him. In general, however, urban living was no bargain as far as women's status was concerned.

Peasant women actually laid the firmest foundations for later gains in status. Part of this comes from the fact that they shared in the farm work and thus had status closer to that of their husbands than did their counterparts in town. This is typically overlooked because we have few written sources by or about women overall, and even fewer

for peasant women who were almost always illiterate (as were their husbands). However, in the 1300s, a colder climate and bubonic plague would improve their status in an unforeseen way.

People realized that overpopulation had made the disasters of the fourteenth century especially bad. Therefore, they made efforts to limit population growth so they didn't have to keep splitting up family lands until the plots were too small to support anyone. The primary method for this was to delay the age of marriage for both men and women. Men would typically wait until they could independently support themselves, which usually meant when their parents died or were too old to manage the family lands. Thus the multi-generational extended family of several generations living together under one roof gave way to the nuclear family of just parents and children in the household. However, most relatives still stayed in the same village or close by, thus providing the same basic safety net of support that extended families had provided for centuries. The real fragmentation into isolated nuclear families would not take place until the industrial revolution in the nineteenth century and the invention of the suburbs a century later.

Women also married later, which was especially critical to population control by restricting the number of active childbearing years. Thus women who previously might have married in their teens, now married in their twenties. However, women in their twenties were a bit harder to force into an arranged marriage than girls in their teens (despite what the behavior of the fourteen year old Juliet in Shakespeare's play might suggest).

Two bits of peasant culture support this. One is a common betrothal ceremony. When a couple had mutually agreed to get married, the man would approach the woman in the presence of neighbors and ask her if she were married, which everyone of course knew was not the case. He would then say he thought they should get married, and the crowd would agree. But then someone would say the prospective bride should have a say, to which everyone agreed. She would then assent to the marriage and they were betrothed.

Another bit of evidence comes from children's games, which typically mimic adult behavior. In

one game, a circle of girls protects one girl from the boys who are trying to break in and “marry” her. After the boys have tried to win the girl over with all sorts of promises, she chooses whom she will marry. The point in each of these examples is that peasant women in Western Europe had a say in whom they would marry, giving them more say in their lives than found in other cultures. Women would build on this status during the suffrage movement of the nineteenth and twentieth centuries.

Noble women, the courts of love, and the birth of “romance”. Women of the noble class underwent a very different sort of change in status. Their position in the warrior class gave them status over men for lower classes, but they were still subordinate to their husbands who almost exclusively did the fighting. However, the need for and value of warriors gradually started to drop as more settled conditions took over in the high Middle Ages. Meanwhile, there was a rising tide of piety, especially toward the Virgin Mary who symbolized a more gentle and merciful side of Christianity, and this was reflected on the esteem given to women overall.

One can see this reflected in the account of an Arab observer in the 12th century: *“The Franj (Franks, Western Europeans) have no sense of honor. If one of them is walking in the street with his wife and encounters another man, that man will take his wife's hand & draw her aside and speak to her, while the husband stands waiting for them to finish their conversation. If it lasts too long, he will leave her with her interlocutor & go off.”*

The scene shifts to Duke William IX of Aquitaine, father of one of the more assertive women of the age, Eleanor of Aquitaine. When Arab love poetry coming up from Spain was introduced to William’s court, it caught on, first with the duke and then with his subordinates. Following is a selection from one such poem:

*“A gazelle's are her eyes, sun-like is her splendor,
Like a sandhill her hips, like a bough her stature:
With tears I told her plaintively of my love for her,
And told her how much my pain made me suffer.
My heart met hers, knowing that love is contagious,
And that one deeply in love can transmit his
desire...”*

Traveling troubadours, who depended on the generosity of their hosts to make a living and previously had subsisted on stirring tales of battle, added these poems to their repertoire with great success, especially with the ladies of the household. In Southern France, where they started, they had to be careful not to make the songs too explicitly romantic with the man of the house right there. Therefore, at first, this was all very idealistic and non-physical in nature, but that changed when it spread to northern France and generated a new movement: the courts of love.

The courts of love were set up as a mirror image of regular courts. Whereas, in the king and nobles’ courts, men ruled by right of strength and power, and prowess in battle or tournaments was celebrated, in the courts of love, women presided and romantic virtues, poetic ability and good manners determined one’s place.

According to Andreas Coppelamus, an early writer on courtly love: *“Love is a certain inborn suffering derived from the sight of or excessive meditation upon the beauty of the opposite sex which causes each one to wish above all things the embraces of the other & by common desire to carry out all of love's precepts in the other's embraces.”*

Supposedly, a true lover never slept soundly, but always tossed & turned in bed. True love improved a man in every way. Fools became wise; klutzes became graceful & polished; cowards became heroes. It was even doubted whether a man who didn't truly love a woman could be a true knight. In fact, it was ideas like that last point that probably worked the courtly love ideals into the mainstream of society ruled by men.

The courts of love established strict rules on what true love is.

It was always between people of nearly equal social standing. Ironically it was supposedly acceptable for a noble to rape a peasant without losing his lady’s favor since peasants were considered incapable of feeling love.

It was always adulterous. The Church idea that sex was only for reproduction led to the belief that people so bound to each other couldn't love each other. Therefore, courtly love must be outside

marriage and one was not in fashion if one didn't have boyfriend or girlfriend outside of marriage.

It was always idealized & pure. This was a fairly new notion, considering love before was often spelled l-u-s-t (e.g., Ovid). With courtly love, the true test of love was for a couple to sleep together without doing anything but sleep.

It was religious in tone. This fit well with being idealized and pure, but hardly with the Church's stance on sex & love.

It was always secretive and expressed through sly glimpses, shadows of a smile and other signs of affection. Although it was best to keep one's extramarital affairs secret, women naturally wanted to advertise the attentions of other men to themselves. This led to a highly stylized ritual behavior where every word or action had significance.

It was always long lasting, faithful, & arduous, as seen in this story by Boccaccio:

"A knight who had offended his mistress was told, after two years of refusal, that if he would have one of his fingernails torn off & if 50 loving & faithful knights presented it to her, she might forgive him. He hastened to obey her. The nail was brought to her by 50 knights- all certified to be in the good grace of their ladies- resting on a velvet cushion. She was so touched by his obedience & commitment that she forgave him."

Of course this raises the question of how the ladies got the men to buy into this new code of behavior. For one thing, women did have higher status than before, and therefore more say in who received their favors.

One possible scenario may be that if one nobleman at court brushed his teeth and bathed regularly, talked about nice things rather than the latest foe he decapitated in battle, and used a handkerchief instead of his hand as the receptacle for blowing his nose, he must have gotten all the ladies' attention. Therefore, other guys would have to do the same if they wanted a date for Saturday night.

Since nobles set the tone for the rest of society, these new ideas about romance, everlasting love,

and chivalrous behavior toward women spread to the lower classes and became firmly embedded in our culture. Not until the later twentieth century would these values come under attack as being demeaning to women. However, if one considers the position women had been in before, this was a giant step forward.

Privacy in the Middle Ages? Forget it



A bishop blesses newly weds to ensure their fertility and ability to bear strong healthy children. This shows how marriage was a public as well as a private affair, since it bound two families and their fates together.

Our concept of privacy where we each have our own space, bedroom, or "man-cave", is a very recent phenomenon. Before the Black Death, a European peasant family typically lived together in a one-room hut, slept together in the same bed, and even ate from the same plate. After the Black Death, when the survivors inherited the wealth of those who didn't survive, that changed a bit with people having their own beds, and plates. But togetherness was still more the rule than the exception.

Naturally, this was reflected in society, which even saw such personal things as marriage as public matters. The picture above with the bishop blessing a newly wed couple in their bed with the entire community present certainly illustrates this point. Even more to the point is the picture below of the groom escorting the wedding guests out of his bedroom to have some time alone with his bride. Their blissful moment of privacy won't last for long, however, as the guests will come storming back in, probably drunk, to make sure everything went well.



Even the concept of family encompassed a broader group of people than just close blood relatives. Peasant households before the Black Death would have extended families of multiple generations living under the same roof. Shortened lifespans meant there were always plenty of orphaned nephews, nieces, and cousins to take in, not to mention the occasionally disabled or elderly relative unable to live alone. Families could also be less stable and more diverse, as women might die in childbirth or men in fights or farming accidents, the surviving parent getting remarried, often to someone who was also widowed and with children, thus blending two unrelated families together.

The “families” of nobles and royalty would be even more extensive, with soldiers, officials, and servants filling up their households, maybe even spilling over into the lord’s bedroom. In the French monarchy, household officials, such as the seneschal, chamberlain, constable, and butler would expand their duties as royal officials as the Capetian Dynasty expanded its power across France.

Queens probably experienced the ultimate lack of privacy, especially at that most intimate of moments, giving birth. This was to make sure the queen didn’t substitute another baby (such as a boy for a girl) in order to fulfill her highest duty: producing a male heir to the throne. Failure to do so could lead to civil war over a disputed succession. Thus a queen found guilty of infidelity was charged with treason, since this cast doubt on the legitimacy of the chosen heir that might lead to civil conflict.

No one suffered from this custom more than Marie Antoinette, mainly because the first eight years of her marriage to Louis XVI had been childless and people were anxious for an

heir. Therefore, when she gave birth to her firstborn (which turned out to be a girl), her room was packed with spectators, including two chimney sweeps who climbed on top of the furniture for a better view. In fact the crush of people was so great that, if not for tapestries hung around the queen’s bed, she would have been literally buried in spectators during the blessed event. As it was, the heat of all those bodies probably contributed to her fainting after giving birth. Luckily a doctor was on hand to do a bloodletting to revive her. Amazingly she survived this ordeal.

After the Black Death, the extended family would be replaced by the nuclear, or “extended nuclear” family (since relatives still lived close to one another and largely functioned as a family unit). This provided a bit more privacy and opened the way for the emergence of the individual in the Renaissance. However, the level of privacy we are used to wouldn’t completely evolve until the twentieth century.

Women as Healers



Medieval medical tradition was strongly based on the theories of a second century physician, Galen. Since human dissections were frowned upon, he had to dissect animals, especially pigs, which he thought were closer to humans in terms of anatomy. Of course, he was often wrong in his assumptions about human anatomy based on that of pigs. But Galen had the force of tradition and support of the Church behind him, so his theories were generally accepted.

Medieval medical theory was also heavily based on Aristotle’s theory of four humors (blood, phlegm, black bile, and yellow bile)

which corresponded to the four terrestrial elements (air, water, earth, and fire). All sickness was seen as an internal imbalance of humors, not the result of outside factors. Thus all treatments had to do with restoring the balance by purging the excess humor through bleeding, enemas, or vomiting. However inaccurate this theory was, it was strongly backed by the Church and medical establishment, which consisted solely of men to the exclusion of women.

However, there was another completely separate and less publicized medical tradition: midwives. Throughout much of history these women were often the only healers available for women and poor people in general. Also, they usually knew as much, if not more, about herbal cures and anatomy than male doctors trained in the questionable traditions of ancient medicine.

Not that midwives didn't have their own superstitions using such things as hyena's feet, snake sloughs, canine placentas, sticks, and vulture feathers along with opening all the drawers and untying any knots in the house to ease the birthing process.

Midwifery has been the realm of women throughout history in most cultures such as the ancient Egyptians, Israelites, Greeks, Japanese, and Persians. Two Hebrew midwives Shifra and Puah, are even mentioned by name in the book of Exodus.

Luckily, many of the herbal cures these women learned through trial and error had applications beyond childbirth. Therefore, midwives often provided the only medical care that many or most people could get. This is even reflected in the contemporary novel, *The Hunger Games*. A study of Russian folk medicine showed that roughly half of its 400 herbal treatments were legitimate for at least relieving symptoms of an ailment, if not curing it.

From Midwives to Witches



Unfortunately, midwives/herbal healers had to be careful because their practices often ran counter to accepted theories of the medical establishment and Church. Also, since only women were involved in midwifery, the source of their knowledge was a mystery to men, who sometimes suspected they were witches practicing black magic and reacted by burning them at the stake.

The stereotype of witches as hags with disheveled hair and warts on their noses may also be partially rooted in fact. For one thing, many, maybe most, midwives were without male relatives, being single women or widows. Given the medieval corporate mentality of valuing people largely according to what group they belonged (family, guild, city, etc.), such women in essence belonged to no group having no families and being barred from citizenship and membership in the guilds. This also barred them from any profitable trades, forcing them into either prostitution or midwifery. Therefore, their isolation, by medieval standards, made them virtual nobodies. Below: Witches brewing up a storm.

Since their clientele were mostly women, who also had little money to spend, these midwives/herbal healers typically had to survive on very limited means in hovels at the edge of town or in the nearby woods. Not having access to hairdressers or nice clothes, they must have presented a somewhat ugly sight, even by medieval standards.

Likewise, their diets would consist of items not usually found on the tables of richer people in town (e.g., eye of newt). A common stereotype of witchcraft, the witch's brew, may have arisen from midwives' diets or because of their familiarity with different healing herbs that other people didn't understand.

Being so isolated, haggard, and mysterious, rumors of unsavory practices sprung up to fill in any gaps of knowledge about them. If something went particularly wrong, such as an epidemic, they could be convenient scapegoats and be charged as witches. By the same token, their greater success than real doctors in treating ailments might lead to such charges as well.

Even townswomen who knew them and used their services would be reluctant to defend them or even admit they knew them, since they might also be charged with witchcraft by association. Wives and daughters might also fear the wrath of their menfolk if they were to find out their women had been using such services.

Keep in mind that the lives of men and women intersected much less than now, so men were much more in the dark about midwives and the world of women in general, and would tend to be more suspicious of their mysterious practices.

As the Florentine proverb put it: "*A good woman and bad one require equally the stick.*" Such treatment must have constantly been in the forefront of women's minds when deciding what they could safely tell their husbands.

The Perils of Womanhood



Old man and Maid by David Teniers. Notice they aren't alone as someone, presumably the old man's wife, is watching from the upper left.

Sexual harassment is nothing new to our times. In medieval and early modern times teenage girls from poorer homes typically would work as domestic servants for richer families to supplement their own families' income. Being poor, young, and female, they were especially vulnerable to attentions of their employers. It was often a lose-lose situation for them, since, if they went along and got pregnant, they would get fired, and if they didn't go along, they also might get fired.

Complicating matters was the Church practice of sanctioning secret marriages done by clergy but without the parents' consent or knowledge. While this enhanced the Church's prestige at the expense of the family, its secretive nature and the absence of public witnesses led to lawsuits over whether the father was actually married to the mother. If the father admitted to being secretly married to her by the Church, the civil courts would also declare him married. If he denied being married, he judged a fornicator and had to pay twice the normal dowry to the mother, since she was now considered less marriageable. In disputed cases that remained unresolved, the courts usually ruled in the woman's favor, assuming she had been seduced and/or forced into the relationship. To avoid more of these disputes, towns started requiring public weddings before witnesses.

Another unfortunate practice involving young women was prostitution. Contrary to many male fantasies, women did not enter “the world’s oldest profession” because it offered loads of fun and exciting career opportunities. Rather, it was typically an act of desperation driven by poverty, and even fathers desperate for money. Farmers might also bring their daughters into town to sell their services, especially during trade fairs when business was particularly good.

Since the age of marriage for young townsmen was commonly the mid to late twenties, towns actually kept brothels in order to control or channel their wilder testosterone driven tendencies and minimize street violence. However, tighter moral standards emerging from both the Protestant and Catholic Reformations along with the spread of syphilis in the 1500s led to a movement to close these brothels after 1550. This wasn’t necessarily good news for women, since prostitution continued, but without the protection from violence by the state.

The perils facing young unmarried women inspired the following testament from a dying mother to her daughter in the 1600s:
“Don’t eat and drink too much at parties. Eat and drink ahead of time and accept drinks only from other girls. If a boy peels a fruit for you, do not accept it. When boys come and sit beside you, don’t answer their questions; say only “yes,” “no,” and “I don’t know.” And do not smile at them. When boys happen to come into your bedroom, hide behind the bed and threaten to hit them in the face.”

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SCHISM AND HERESY: THE DECLINE OF THE CHURCH (c.1300-1450)

The Avignon Papacy or "Babylonian Captivity" (1309-77). The Later Middle Ages were a time of turmoil for the Catholic Church, as the growing power of kings and popes in the High Middle Ages led to rising tensions over various forms of authority and jurisdiction. Although they had largely won their struggle with the emperors in Germany, the popes were less successful in dealing with the rising power of the French and English monarchies. Problems centered on control of two things: the local clergy and Church taxes. The popes had a habit of rewarding their Italian supporters with church offices all across Europe. Both common people and local native clergy resented this and looked to the king for help against these Italian clergy. As a result, the popes found much of their own local clergy aligned against them and with the kings.

Meanwhile, during their struggle with the Holy Roman Empire, the popes had granted kings the right to collect church taxes in return for aid against the German rulers, justifying their actions by declaring these wars crusades. But when war broke out in 1294 between France and England, both countries' kings used the precedent of collecting church taxes for the popes' wars to justify collecting church taxes for their own wars. When Pope Boniface VIII refused to let Philip IV of France do this, Philip and his agent, Nogaret, planned to subject the pope to the inquisition for crimes he allegedly had committed. When this plan failed, Nogaret and the pope's enemies in Rome kidnapped Boniface. Although he was soon rescued by loyal followers, he died a few days later.

Among the charges brought against Boniface, who was 86 years old at the time, were blasphemy, murder, sorcery, and consorting with a familiar spirit (pet demon).

The College of Cardinals, probably feeling pressure from the highhanded acts of the French king and his agents, elected a Frenchman, Clement V, as the new pope. Clement set out for Rome, but never made it there, stopping at Avignon, a papal city close to French territory. For the next 70 years (1309-77), the popes, all of who were French born, stayed in Avignon. During this period (known as the

Babylonian Captivity after the 70 years of captivity the Old Testament Jews had spent in Babylon), the popes came under increasing criticism for being corrupt and under the thumb of the French kings. Whatever the truth of these charges, the Avignon papacy symbolized the decline of the medieval papacy. The kings' increasing ability to claim the loyalty of the local clergy and to collect church taxes helped create several quasi-national churches that officially were part of the Roman Catholic Church but were increasingly under royal control. The Babylonian Captivity, along with the Hundred Years War then going on, also triggered challenges to papal authority from two other directions: church councils and popular heresies.

The scholar, Petrarch, called Avignon the "Babylon of the West."

The Great Schism and Conciliar movement. The resentment that the Babylonian Captivity aroused against the Church worsened when the pope tried to move back to Rome. By the 1370's, the turmoil of the Hundred Years War was making life at Avignon increasingly dangerous. The capture and ransoming of Pope Innocent VI by a company of English mercenaries (who had little use for a French pope, anyway) convinced Gregory XI to move to Rome. However, Rome was a more dangerous place to live in during times of "peace" than France was during war. It took Gregory three tries to get into Rome, and once he got in, he quickly decided he wanted to leave and return to Avignon. Unfortunately, Gregory died before he could get out.

For the first time in 70 years, Rome was the scene of a papal election, and the Roman mob clamored outside for an Italian pope. Under such pressure, the College of Cardinals elected an Italian, Urban VI, as the next pope. Unfortunately, Urban was something of a violent and bigoted man whose actions drove all but three cardinals back to Avignon where they elected a second pope. Thus began the Great Schism, a period of turmoil when the Church was divided in its loyalty between two lines of popes, one French and one Italian. To no one's surprise, each pope refused to recognize the other and even excommunicated him and his followers. This led to enormous anxiety among devout Christians, who found themselves supposedly excommunicated by one pope or the

other. With neither pope willing to resign, something had to be done.

The most popular suggestion was a general church council such as the ones summoned to solve major disputes in the past. There were several problems with this solution. First of all, popes traditionally called such councils, and neither pope was willing to call such a council. This made the legality of such a council questionable if not called by at least one pope. Second, different rulers in Europe supported particular popes, largely for political reasons. Such political divisions made it almost impossible to get people to agree on the site of a council, not to mention the deeper issues involved. Finally, the whole issue of a Church council raised the question: if a council could depose the pope, who was the real head of the Church? This was a question that lingered on long after the Great Schism had faded away.

At last, a council was called at Pisa, Italy in 1409. It deposed the two rival popes and elected a third. Unfortunately, neither original pope recognized the council's power to depose a pope, so now the Church had *three* popes.

When the third pope died, he was succeeded by John XXIII, often called an anti-pope, who was so corrupt that no pope took the name John until the 1950s. Among his scams was a plan to pack the next Church council at Constance with his own followers by creating lots of new Italian bishops. However, he was thwarted by a rule that each nation got only one vote. John then tried to flee before the council could depose him, but was captured, deposed and imprisoned. However, the next pope freed him and made him a cardinal. He died soon after and was buried in the Baptistry of Florence.

However, by this time, people were committed to the idea of a church council, and another one was called at Constance, Switzerland. All three popes were deposed, and a fourth, Martin V, was elected. Although one of the deposed popes held on in Avignon until 1429, the Great Schism ended here. Its effects did not, because it caused people all over Western Europe to question the authority of the pope in the Church. Although a single pope once

again ruled the Church, his reputation and authority were permanently undermined.

The challenge from below: the Lollard and Hussite heresies. Besides discontent within the ranks of the clergy, the Babylonian Captivity also caused popular discontent in the form of heresies. During the Hundred Years War, the French popes at Avignon were especially unpopular in England, and it was here that the first of these heresies emerged. Its leader was an Oxford scholar, John Wycliffe (called Wicked Life by his enemies). His main point was that the *Bible* is the sole source of religious truth, and therefore anything not in the *Bible* did not belong in the Christian faith or practice. In Wycliffe's view this meant that such mainstays of Catholic practice as confession, penance, pilgrimages, veneration of saintly relics, excommunication, Church ownership of property, and the gap in status between the clergy and laity (non-clergy) should all be abolished since there was no mention of them in the *Bible*.

Possibly Wycliffe's most revolutionary act was translating the Latin Vulgate *Bible* into English so the common people could read it for themselves. Such an act made it much more difficult for the Church to keep its monopoly on religious truth. It also led to a variety of interpretations of the *Bible* by some of Wycliffe's followers known as Lollards (meaning mumblers or babblers). The more radical Lollards did such things as chopping up images of saints for firewood, holding mock masses, and eating communion bread with onions to show it was no different from regular bread.

Because of England's hostility to the French and the popes at Avignon, initial reaction to the Lollards was mild until the Wat Tyler Rebellion broke out in 1381. After that, the authorities were much sterner with the heresy, burning some fifty Lollards at the stake over the next 40 years. Wycliffe himself was mildly reprimanded. He died peacefully in 1384. However, his heresy did not.

Among the Lollards were a number of influential people, including Queen Anne, who came from Bohemia (modern Czech Republic). She sent several copies of Wycliffe's writings home where the heresy caught on. In addition to this heresy, there was also a growing national consciousness among the Bohemians aimed mainly against the

German ruling class. This combination of heresy and a growing national consciousness would prove to be a devastating force in the events about to unfold.

Public sermons in the streets of Prague criticized Church corruption while translators produced 33 handwritten copies of the *Bible* in the Czech language. At the center of all this turmoil was Jan Hus, a popular preacher and professor who was heavily influenced by Wycliffe. Hus' writing and preaching stirred up more and more anti-church and anti-German feeling. This led to a condemnation of Hus' works, which in turn provoked a wave of riots and protests across Bohemia. Faced with the possibility of a full-scale rebellion against the Church, the pope and the Council of Constance summoned Hus, under promise of a safe conduct, to defend his views. The council unwisely went back on its word, had Hus declared a heretic, and burned him at the stake. Rather than depriving the Bohemians of a leader, this act provided them with a martyr around whom they could rally. The resulting Hussite Wars (1420-36) showed how powerful a combination nationalist feeling and popular piety could be.

The Church's excuse for going back on its promise of safe conduct to Hus was that as a heretic, he was not worthy of having oaths made to him being kept.

The Church launched five crusades against the Hussites, all of them dismal failures. The Hussites combined new firearms technology with the ancient Bohemian tactic of making circular walls of wagons (*wagenburgs*) to create a seemingly invincible army. Hussite armies even invaded Germany, plundering at will all the way to the Baltic Sea. By 1433, the Church had had enough and opened negotiations with the Hussites to keep them from spreading their heresy across Europe. The Hussites, not ready for a complete break with the Catholic Church that had led the faith for centuries, were also willing to compromise. The Church allowed certain religious liberties in return for the Hussites' allegiance to the Church.

Although the Hussites had returned to the Church, their importance lived on. For, just across the border in Saxony some 85 years later, another reformer by the name of Martin Luther would lead

another revolt against the Church, raising many of the same points Wycliffe and the Hussites had raised. Only this time, the break, known as the Protestant Reformation, would be permanent and alter the course of European and world history.

Hussite Warfare



The Hussite army on the march. The chalice on the banners signifies their demand to be given wine as well as bread at communion. The Church would only let clergy have the wine, fearing the laity would spill it, thus spilling Christ's blood.

Hussite armies were a perfect example of the transition from the medieval to modern worlds, using an ancient Slavic formation, the *wagenberg* (wagon-fort), along with firearms to break up enemy cavalry charges. Sometimes, *wagenbergs* would be left open, but arranged internally in the form of a maze, so enemy cavalry would charge in and get lost. Hussites on the surrounding wagons could then attack them with guns and flails while they tried to find their way out.



An estimated 1/3 Hussite soldiers were armed with a very early type of firearms (above). It took two people to handle one of these guns: one to hold and aim it and the other to light the fuse to fire it. Such guns took a long time to load and fire and were quite inaccurate. But they could pierce cavalry armor and scare enemy horses not used to their loud noise.

THE HUNDRED YEARS WAR AND THE EMERGENCE OF THE FRENCH AND ENGLISH NATIONS (1337-1453)

Introduction. Nothing better epitomizes the turmoil of the Later Middle Ages than the prolonged and desperate struggle between France and England known as the Hundred Years War. Technically, this was a series of wars intermittently separated by periods of uneasy peace, but the fact that it took over a century to resolve this struggle justifies treating it as one war. Although, on the surface, the issues involved just concerned who held certain territories and the French throne, there were deeper processes going on that gave this struggle an importance far beyond its battles. The main process taking place was the painful separation of the two nations from a feudal and dynastic concept of the state that had kept French and English histories intertwined with one another since the Norman conquest of England in 1066. The growing use of the English language throughout the war especially illustrated this process. Whereas French was the primary language of the English court at the start of the war, by the end it was English. Also, Geoffrey Chaucer had written *Canterbury Tales*, one of the first great works of English literature, and John Wycliffe had translated the *Bible* into English, all this showing a growing sense of an English nation and culture.

Causes. Probably the greatest problem was England's control of Gascony (AKA Guyenne), a rich wine producing area in southwestern France with close trade ties to England. Since 1259 the English king had held this province as the French king's vassal, and herein lay the problem. It was humiliating for the sovereign king of England to have to do homage to the French king as his overlord, especially when the latter would arbitrarily use his position as the English king's overlord in any disputes between the two. Gascony had already been at the center of two previous wars between France and England in 1294-98 and 1324-27. Therefore, the Hundred Years War can be viewed as part of this deep-seated dispute. To complicate the situation, the Gascons (who spoke Gascon, not French) preferred the English kings' lighter rule to that of the French king. Even the French historian of the war, Froissart, would often refer to the Gascons as "the English", since they

joined the English raids on France and defended Gascony against the French with minimal help from England throughout the war.

Both sides supported independence movements by the others' subjects. England, which had strong trade ties with Flanders, favored the Flemish towns' rebellion against France and the Count of Flanders, which had produced the shocking defeat of French chivalry at Courtrai in 1302. Likewise, France supported Scottish revolts against England, which suffered a humiliating defeat at Bannockburn in 1314. Although both kingdoms avenged these defeats and reasserted their rule over the rebels, they each had to keep a vigilant eye on affairs closer to home while dealing with their rivals across the Channel.

Then there was Edward III of England's claim to the throne of France. Edward was the son of Edward II of England and Isabella, the daughter of the French king, Philip IV. Since Philip had three sons, this marriage seemed to pose little danger of making an English king heir to the French throne. However, as luck would have it, all three of Philip's sons (Louis X, Philip V, and Charles IV), ruled without leaving a male heir. When Charles died in 1328, Edward III of England was the only living male descendant of Philip IV.

To counter Edward's claim, Philip's nephew, also named Philip, invoked an old law code, known as Salic Law, that said the French throne could not be passed through the female line of the royal family. The French lawyers and nobles, not wanting the strong and energetic Edward ruling over them, chose Charles' first cousin who assumed the French crown as Philip VI.

Historians have made much of Edward's claim to the French throne, more than Edward seems to have done. Despite a number of disputes with Philip VI, Edward never put forth his claim to be king of France until 1340, making it seem more a result, rather than cause, of the war. Ironically, English kings would still claim the title of king of France all the way to 1801.

The new face of war. One of the most dramatic signs of the transition from the medieval to modern world was the changing nature of warfare. The English were especially innovative in this regard,

probably because they faced a much larger and more powerful enemy and thus felt more of a need to experiment with new ways of fighting. The armies of the Hundred Years War would differ from the armies of the Dark Ages in three major ways. One change was that, for the most part, these were not feudal armies of noble vassals fighting to fulfill their personal obligations to their lords. Rather, they were largely collections of mercenary companies containing many members of the lower classes and even criminal element. Their captains would contract their services to a king in return for the promise of pay, plunder, and ransoms for any captured enemies. Such armies may have been more stable and reliable than the old feudal armies, but they also created serious problems. Since they were rarely paid in full or on time and their ranks were often filled with the more disreputable types in society, they were prone to desertion, plundering, and violence against the civilian populace.

Two other big changes had to do with weaponry. One was the longbow, adopted from the Welsh by Edward I in the late 1200's. This was a specialized weapon that took a full year to make and years to master. As a result, only richer free peasants (yeomen) and professional mercenaries had the leisure time for practice. The longbow was both powerful and had a rapid rate of fire. Formations of English long-bowmen, protected by rows of sharpened stakes and intervening formations of English knights, could unleash ten to twelve volleys of arrows per minute, a devastating rate of fire as the French would find out. Another weapon that would assume greater importance as the war continued was gunpowder. Both the English and, later on, the French would use cannons effectively to demolish castle walls and the medieval order they stood for.

While the history of the war was long and involved, it followed a basic pattern. At first, the English, with strong leaders and new weapons and tactics, would win striking victories against much larger French armies. This would continue until weak leaders would take power in England and more decisive one would take over in France. Then the French would adapt to the English weapons and tactics and gradually recover their lands. However, England would once again see strong leaders while France would suffer weak ones again and the pattern would start all over. This pattern cycled

around two times, dividing the war into four basic phases.

Phase I: England ascendant 1337-1369. The first major battle of the war, Sluys (1340), was a naval battle and determined who would control the English Channel. Naval battles in the Atlantic were rare, since the seas were too rough for oar driven galleys, and the square sail then in use could not tack well into the wind. Therefore, one navy or the other was usually confined to port, depending on the wind. Without the use of oars, ramming and clipping enemy ships was impractical, so naval battles were mainly land battles fought at sea, with each side trying to grapple and board the other side's ships. In such a battle, the English had a definite advantage, since their longbows provided the firepower to clear enemy decks and let English soldiers storm their ships. As a result, the Battle of Sluys was a decisive victory for the English and gave them the freedom to raid France while securing their own coasts from seaborne raids.

For several years, small English armies would raid and plunder French territory while being careful to avoid any large French forces, since the English themselves were not sure of how effective their longbows would be against French knights. However, in 1346 a large French army succeeded in cornering a much smaller English army and forcing it to fight at Crecy. Lined up behind protective wooden stakes, the English long-bowmen launched volley after volley of arrows as "thick as snow", first mowing down enemy crossbowmen and then bringing succeeding waves of charging French knights crashing to the ground. By sundown, the English had won a stunning victory against what seemed like insurmountable odds, considering enemy numbers and the high regard in which French knights were held all over Europe. Crecy opened the French countryside to the English, allowing them to seize the port of Calais, which they held until the 1550's.

However, the French refused to recognize that the outcome at Crecy using these new tactics of long-bowmen in coordination with knights was anything besides a fluke. Therefore, after an interlude in the fighting brought on by the Black Death, they went after the English army again. This time they tracked down Edward the Black Prince and an army of some 8000 men at Poitiers (1356). Once again

the French knights charged the English lines, and once again the hissing volleys of English arrows littered the field with French dead and wounded. Among the numerous prisoners held for ransom was the French king. Poitiers confirmed Crecy's verdict that the balance of power on the battlefields of Europe was clearly shifting away from the heavily armored knight.

The aftermath of Poitiers saw the English conquer large areas of France in the western coastal areas. Meanwhile, peasant revolts, such as the Jacquerie, were challenging new taxes and the nobles' power in society. Given all this turmoil and their inability to beat English armies, the French concluded the Treaty of Bretigny in 1360, recognizing Edward's new conquests in return for his relinquishing any claim to the French crown.

However, peace did not return to France, because the English did not want to disband their so-called free companies of mercenaries in England where they could raise all sorts of havoc. Instead, they turned them loose in France where they continued to loot and pillage as if peace had never been signed. One free company made a living from capturing castles and then selling them back to their original owners. Another company, under Sir Robert Knollys (knighted by Edward for his exploits and atrocities in France), controlled forty castles and plundered at will from Orleans to Vezelay. In response to these ravages, French peasants fortified their churches, slept on islands in local rivers, and dug tunnels to escape the English. Seeing no apparent difference between peace and war, the French resumed the war in 1369.

Phase II: The French resurgence (1369-1413). By now, the French had learned to avoid open battle against the English long-bowmen, choosing instead to bolster town and castle fortification, cut off any isolated raiding parties, and deny the English the plunder that made the war worthwhile to them. Thanks to this strategy, the French recovered most of their lands from the English. This, the return of the Black Death, and then the Wat Tyler rebellion in 1381 all combined to make the war very unpopular in England. Therefore, in 1396, it was the English turn to ask for peace, giving up most of their French possessions in the process.

However, the tide soon turned back to favor the English for a couple reasons. First of all, the rule of the mentally unstable French king, Charles VI (1380-1422), unleashed factional strife between the noble houses of Orleans and Burgundy over who would control the king and French policies. Therefore, France was in a state of turmoil and open to attack. Also, about this time, a warlike English king, Henry V, took the throne and decided to launch a new campaign in France.

The English resurgence (1413-1428). Henry entered France with a small army of 1000 knights and 6000 long-bowmen. Like Edward III and the Black Prince before him, Henry was trapped by a much larger French army that forced his tired and hungry army to fight at Agincourt (1415). By this time, knights were wearing suits of plate armor weighing up to 65 pounds, a much harder shell for the longbow arrows to penetrate. Despite this, the longbow still played a vital role in winning Agincourt. For whatever reasons, the French chose to avoid the formations of long-bowmen and instead attacked the groups of English knights in between. This had the effect of cramming the French into ever-narrower spaces that gave them no room to raise their weapons. Meanwhile, their comrades in back, unaware of this, kept pushing forward, creating even more of a crush up front that the English knights exploited mercilessly. At the same time, the English long-bowmen were hitting the French from the sides. This combination of being unable to maneuver and being attacked from three sides made Agincourt as much of a disaster for the French as Crecy and Poitiers had been.

Agincourt unleashed an avalanche of misfortunes upon France. The Duke of Burgundy, bitter over the murder of his father by the Duke of Orleans, defected to the English side. Paris fell to the enemy, while famine and turmoil stalked the land. Equally decisive and portentous for the future was another new weapon that was changing the face of warfare: gunpowder. Cannons had been used as early as Crecy in 1346, but mainly as glorified noisemakers. However, by the early 1400's, the English had a large and effective siege train of cannons that pulverized the old medieval fortifications of towns and castles. By 1420, the English and their Burgundian allies had control of the northern half of France, forcing the French to agree to the Treaty of Troyes, by which Henry

would take the French throne after Charles VI died. However, Henry died shortly before Charles and was succeeded by the infant, Henry VI. The French refused to give the throne to this child, and war resumed.

Joan of Arc and the final French triumph (1428-53). At first, the Duke of Bedford, regent for the young Henry VI, ably continued the English advance against the pale and feeble Charles VII. It was then that a remarkable peasant girl, known to history as Joan of Arc, came to the French court, claiming divine voices had told her to lead France to victory. Despite the snickering at this simple peasant girl by the court, her persistence and genuine faith in her mission persuaded Charles to let her accompany the French army trying to relieve the city of Orleans. For whatever reasons, the French succeeded in saving Orleans, thus opening the road to Reims where Charles could officially be crowned.

To the soldiers, Joan was a symbol of French defiance, and her example restored the army's spirit. However, her luck soon ran out. In 1430, the Burgundians captured Joan and sold her to the English who tried her as a witch for hearing demonic voices. After a long and exhausting trial, she was convicted by a French church court and burned at the stake in the market place of Rouen in 1431. Years later the Church would reverse its decision and declare Joan a saint. She was only 19 years old when she died.

Joan's death backfired against the English in much the same way as the execution of the Hussite leader, Jan Hus, had backfired against the Church a few years before. Charles VII took heart and led a vigorous offensive against the English, while the French people agreed to a war tax to pay for soldiers and artillery to free their land of the now hated English. Now it was the French turn to use cannons to demolish English fortifications and sweep through France. Meanwhile, high war taxes and the lack of plunder to pay for the war made it increasingly unpopular in England. As a result, Parliament cut most funds for fighting in France. In 1451, at the Battle of Castillon, the French, using another experimental weapon, primitive firearms, defeated the last English army in France. Two years later in 1453, the same year the Ottoman Turks used artillery to help them storm the walls of

Constantinople, the English were out of France except for the port of Calais. The Hundred Years War was over.

Conclusion. What had all this accomplished? The main significance of the Hundred Years War was that France and England, bound together for centuries by outmoded feudal ties and concepts, were now wrenched apart, leaving in their wake two distinct nations free to follow their own destinies. The Hundred Years War also symbolized far reaching military and social changes. Although nobles would be around for centuries to come, the longbow and gunpowder showed that their days were numbered. Gunpowder in particular meant that nobles were no longer safe, either on the battlefield or behind their own castle walls. And with their military dominance went the nobles' unchallenged social preeminence. Gunpowder technology was also expensive. As a result, only kings and princes were able to afford armies with cannons and firearms, thus stripping nobles of even more of their power and prestige, leaving the way open for the rise of the modern nation state.

Psychos and "Soldier Riots": The New Face of War

"War without fire is like sausage without mustard."—Henry V of England



English mercenaries burn a French village in *The Messenger*, one of the most brutally realistic films about Joan of Arc and the Hundred Years War.

Nothing more dramatically showed the transition from the medieval to modern world than the changing nature of warfare. The English, who faced a much larger and more powerful enemy were especially innovative in this regard.

However, these were no longer just feudal armies of noble vassals fighting to fulfill personal obligations to their lords. Rather, they were mostly collections of mercenary companies drawn from the lower classes and even criminal element. In fact, one study indicates 12% of the English soldiers were condemned criminals, choosing military service over the executioner's axe.

Captains would contract their companies' services to a king in return for the promise of pay, plunder, and ransoms for any captured enemies. Such armies may have been more stable and reliable than the old feudal armies, but they also created serious problems. Since they were rarely paid in full or on time and their ranks were often filled with the more disreputable types in society, they were prone to desertion, plundering, and violence against the civilian populace.

However, the brutal attitude of these soldiers suited the English leaders, who planned to wear down and break the French through a series of *chevauchees*: raids intended to completely devastate the countryside. Soldiers would torture the men to reveal where they kept their valuables, mutilate and rape the women, even the pregnant ones, and murder the rest they could catch. Not even the clergy were exempt from such treatment. When a French archbishop was taken to the top of a tower to witness the countryside in flames as far as he could see, he fainted from shock.

Even worse, during times of "peace" when the mercenaries were without employment, many of them, both French & English, would organize into companies known as *routiers* & continue to ravage the countryside. Making this especially bad was the fact that, in contrast to wartime when these men were under at least some level of restraint by their commanders, during peacetime there was not even that much restraint on their behavior. No wonder that by the end of the war, the French would refer to the English as the Godoms ("God damns")



Psychos and "soldier riots." A particularly brutal and psychotic mercenary (above) closes in to murder and rape a French girl in *The Messenger*. Most soldiers in history weren't as crazy as this one, being more interested in food and plunder than gratuitous violence. However, they were generally unwilling to get in the way of the occasional psycho that would be in their units. Unfortunately, in the absence of any discipline from above, more and more "normal" soldiers would get pulled in to a spiraling orgy of violence until it reached epidemic proportions with tragic results for the civilian population.

Such "soldier riots", for lack of a better term, have occurred repeatedly throughout history and can be seen as an especially brutal variant on mob violence, the difference being they are carried out by trained killers who are already heavily armed. Just a few of the more notorious examples from twentieth century history were Nazi atrocities (in particular against Slavic peoples in Eastern Europe, the "Rape of Nanking" by the Japanese in World War II, and the massacre of Vietnamese civilians at My Lai by American soldiers.



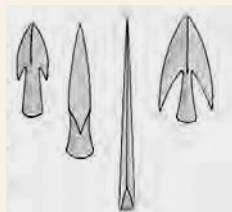
Longbows and cannons. There were also big changes in weaponry. One was the longbow, adopted from the Welsh by Edward I in the late 1200's. This was a specialized weapon that took a full year to make and years to master. As a result, only richer free peasants (yeomen) and professional mercenaries had the leisure time for practice.

The longbow had both power and a rapid rate of fire. Formations of English long-bowmen, protected by rows of sharpened stakes and intervening formations of English knights, could unleash 10 arrows a minute up to a range of 150 meters, piercing plate armor at 60 meters.

In contrast, the crossbow, favored by the French had a greater range and required little training (making it a popular weapon among town militia), but it weighed 20 pounds and could only be fired 2 times a minute.

English long-bowmen may have used “time on target” firing where the ranks fired in sequence from back to front so that all the arrows fell at once. Such a technique could have devastating psychological effects, since there seemed to be nowhere to escape.

American artillery in World War I used the same technique against the Germans. Women, known as *computers* were hired in order to calculate the respective firing times for different lines of artillery. Later in the war, this process was automated by a new type of electronic calculator, which also became known as the computer.



Different types of arrowheads were used for different purposes. From left to right: a general-purpose point, armor-piercing bodkin point, chainmail-piercing point, and a hunting point used against unprotected horses.

As decreed by the king, English yeomen (richer peasants) would practice “at the butts” on Sunday afternoons. This is what produced the strength and training necessary for England to have the large numbers of skilled long-bowmen it used in France. The

French had no comparable system for training long-bowmen, so had to rely on slower and heavier crossbows. In addition to long-bowmen, English armies had numbers of very nimble Welsh infantry armed with long knives who would sneak under horses to cut their bellies or looked for wounded soldiers to kill and strip.

The other innovation decisively affecting the Hundred Years War was combining gunpowder with the cannon. At first, cannons fired stone balls chiseled to fit into the cannon barrel. These were soon replaced by cast iron cannonballs that pulverized castles’ tall thin walls.

However this new technology could be as hazardous to its users as its intended victims. Gunpowder was of uneven quality, so one never knew how big a charge was being loaded. That, along with poor casting, could cause the barrel to explode upon firing. After the siege of Cherbourg, the French king congratulated his gunsmith for only four of his cannons blowing up during the operation.

First Blood at Sluys (1340)



English and French clash at Sluys, the first major engagement of the war.

Where this war was fought depended on who could control the English Channel and take the war to the enemy’s land. Thus the first major clash in the Hundred Years War was a naval battle.

Naval battles were fought like land battles, with each side trying to board and take over the enemy ships. With nowhere to run, such battles could be especially fierce and desperate. However, naval battles were rare in the North Atlantic with its strong winds, since the square sails in use severely limited tacking into the wind and typically confined one navy or another to port.

The English fought in groups of 3 ships, two with long-bowmen and one with men-at-arms. The archers would clear the enemy decks so their men at arms could storm aboard their ships.

The French did have a number of Genoese oared galleys with rams that would favor them in a battle in open waters. However, they chose instead to form three lines of ships lashed together in an estuary, allowing the English to get upwind of them and wait for the tide to turn. Then, with the wind, tide and sun at their backs, they crashed into the French ships, pouring volleys of arrows into their ranks at five times the firing rate of enemy crossbowmen.

The first wave of French threw both their wounded and themselves overboard. When the French admiral was captured and hanged, the second wave panicked and also jumped overboard. At that point the battle became a massacre with bodies covering the water and the decks of French ships.

The light from the burning ships was so bright that the slaughter continued into the night, with only 30 French ships escaping this disaster. It was said that if fish could talk, they'd speak French from all the French blood they drank.

Obviously, no one wanted to break the news to the king, so they had the court jester run in yelling: "*Oh the cowardly English, the cowardly English! They don't jump in the water like our brave Frenchmen.*" The king got the message and the English now had control of the Channel and a foothold in France.

The Longbow Proves its Worth at Crecy



For several years after the battle of Sluys, French and English armies raided each other's territories in France, but did little in the way of fighting. Then, in 1346, Edward III's son, Edward, known as the Black Prince for the color of his German armor, led a particularly daring and destructive raid. This time the French army went in pursuit and trapped a much smaller English army near the town of Crecy.

The English took up a strong position on a hill and arranged their army in alternate groups of bowmen and knights. The French camped so far from the English that they didn't arrive until 4 PM with the sun in their faces. The French king wanted to stop and attack the next morning, but his huge army kept pressing forward until it drove the front ranks to within sight of the English.

Therefore, the French nobles felt that honor dictated they charge immediately.

Genoese crossbowmen opened the attack for the French. However, a sudden storm had soaked their crossbow strings, while the English had coiled theirs under their helmets. This forced the Genoese to approach the enemy lines closer than usual. Suddenly, before they could get in range they came under storm of arrows "as thick as snow". Having discarded their heavy shields (pavises) on the march, they had no protection, so they immediately broke and ran.

At this, the French cavalry charged, slashing and cutting through their own retreating men. Hearing the screams of the Genoese, the French in the rear thought it was the English

screaming and pressed forward to share in the glory and plunder.

This just created a densely packed mob at the foot of the slope, making it nearly impossible for the long-bowmen to miss their mark. French horses that were hit bolted in panic increasing the chaos in the ranks. Horses piled on top of horses “like a litter of piglets”.

Some French reached the English men at arms, only to be cut down. Among them was, John, the blind king of Bohemia who charged with his reins tied to those of horses flanking him. Prince Edward was so moved by the blind king’s bravery, that he adopted his motto: Ich dien (I serve) for his own coat of arms.

The French launched 15 waves well into the night, all of which faltered and broke under the murderous rain of arrows. Finally, the English advanced on foot into the carnage to finish off the wounded. One estimate put French losses at 10,000 men. When the French king left the field, he could only find 60 knights to accompany him. The rest had died or fled.

Everyone, including the English, was stunned by the scope of their victory. The French, reputedly the bravest and fiercest warriors in Europe, had been cut to pieces by a much smaller army consisting mainly of lowly archers.

Crecy led to the capture of several coastal cities. The most important of these, Calais, would serve the English as their primary base of operations to the end of the war. Edward turned out its people and repopulated it with English settlers, making it a little bit of England under the jurisdiction of the Archbishop of Canterbury for the next 200 years. They would hold Calais until 1558.

Another Disaster at Poitiers (1356)



By 1356, Europe had recovered sufficiently from the shock of the Plague to resume normal activities, including warfare. Edward the Black Prince launched another devastating *chevauchee*, a 600-mile march of total destruction that only spared those rich enough to be ransomed while killing all the rest. The baggage train groaned beneath the weight of all the plunder, but the English also suffered from the French scorched earth policy to deny them provisions.

The battle opened with 300 picked French knights charging on horse, but the English long-bowmen easily brought down their horses. Then the rest of the French knights, 13,000 of them arranged in three waves, advanced in full armor on foot, probably to protect their horses from English arrows. However, the march was across a muddy field, which wore them out before they even reached the English.

Once the French were within range, the English unleashed a hail of arrows so thick that they darkened the sky. Still, the first wave reached the English lines and a savage hand-to-hand battle ensued. However, when the English threatened to capture the French king, the first wave retreated and ran into the second wave, which panicked and ran without even fighting.

The third French wave now advanced against the battered & exhausted English army whose archers had to retrieve arrows from the battlefield or throw stones. Finally, they joined in the melee with axes & spears. The fighting was so fierce that it was heard in Poitiers seven miles away.

With the battle hanging in the balance, Edward attacked the French king’s battalion with his

last reserves, sneaking from behind. This triggered panic and the French king's surrender, at which his army fell apart and slaughter ensued.

Poitiers cost France its king, its constable and both marshals (their "pentagon"), one fighting archbishop, thirteen counts, five viscounts, 21 barons, and over 2000 knights & noble men-at-arms.

The English had so many prisoners (some archers 4,5,or 6 apiece), that they released many of them on the promise of paying their ransoms by Christmas. The French camp yielded huge amounts of plunder, including the king's jewel casket and a salt-cellar in the form of a silver ship.

Poitiers confirmed Crecy's verdict that armored knights no longer ruled the battlefield unchallenged. Possibly its greatest fallout was the shame of so many French fleeing without even fighting.

When the dauphin, the future Charles V approached the Estates General (France's version of Parliament) for money to ransom his father, they demanded government reforms. The Paris mob even forced him to wear a cap with the Paris colors, red and blue.

Neither War nor Peace (1360-69)



"Houses and churches no longer presented a smiling appearance with newly thatched roofs but rather the lamentable spectacle of scattered smoking ruins amid nettles and thistles springing up on every side. The pleasant sound of bells was heard indeed not as a summons to divine worship but as a warning of hostile intention, so that men might seek out hiding places while the enemy were still on the way. What more can I say?" --Prior Jean de Venette

The Treaty of Bretigny brought France no peace, because England failed to disband its mercenaries in England where they could raise all sorts of havoc. Rather, it turned these so-called *free companies* loose in France where they terrorized the people in what amounted to *chevauchees*, but ones with no strategic purpose or apparent leadership to restrain the worst sorts of atrocities. Although technically English, these companies attracted Germans, Gascons, Flemings, and even French to their ranks.

Typically, a company would seize a castle as a base from which to pillage surrounding towns and villages. One company made a living by capturing castles and selling them back to their owners.

To protect themselves, French peasants fortified their churches, slept on islands or boats in the middle of rivers, or dug tunnels into local hills and riverbanks. It was neither peace nor war, just some new kind of hell for the French people. Some even believed the English were demons, apparently thinking the knifemen's belts hanging from some of the mercenaries were tails.

Several leaders from humble backgrounds made their fame and fortune from these operations. One of them, Robert Knollys, commanded a company that plundered at will from Orleans to Vezelay and came to control forty castles. Locals reportedly would throw themselves in a river and drown at the mere word of his approach. Knollys was even knighted and handsomely rewarded for his service to the English crown. He later retired with the riches plundered from France and became known as a benefactor of churches and a founder of almshouses.

The free companies became especially dangerous when they combined into grand companies. The most renown of these was the White Company led by Nicholas Hawkwood, originally the humble son of a tanner. The White Company created tremendous havoc in

France, even capturing the pope at Avignon in 1361 and holding him for ransom.

Later, Hawkwood led the White Company into Italy where he had a renowned career as a condottiere (mercenary captain). Eventually, he retired married a daughter of the Visconti family, rulers of Milan, and retired with a pension of 3000 gold ducats from Florence.

Seeing no apparent difference between peace and war, the French resumed the war in 1369.

Agincourt (1415)



By 1413, the tide had turned back in favor of the English for a couple reasons. First of all, there was the rule of the mentally unstable French king, Charles VI, who suffered a malady that, among other things, made him believe he was made of glass and that he would shatter if anyone touched him. This unleashed factional strife over control of the king and policies between two noble houses: Orleans (who ruled when the king was sane) and Burgundy (who ruled when the king wasn't). This turmoil left France open to attack.

Meanwhile, England was recovering from a period of weak rule as the warlike Henry V took the throne and revived the English claim to the French throne. In 1415 he landed in France and laid siege to Harfleur in Normandy. Through the skillful use of artillery, he brought down the gate defenses and forced it to surrender in September. By now, it was too late in the year to march on Paris, so Henry embarked on a *chevauchee* just to let the French people know their king was there.

However, a French army probably triple the size of the English army was tracking Henry down. Over the next three weeks, the French kept

cutting off Henry's escape until he had to make a stand with his exhausted and sick army of some 1000 knights and 5-6,000 archers at Agincourt (10/26/1415).

The English were arranged in alternating formations of archers and knights, with archers on the wings in four ranks. They faced a French army of around 25,000 men drawn up in 3 lines with 500 mounted men on each flank (many of whom supposedly slept on their horses the night before to keep their armor from getting muddy).

The next morning, the English marched to within 300 yards of the French, a dangerous move if the overconfident French had been alert (which they weren't) and placed sharp stakes at chest level to the horses in a staggered pattern. They then opened fire in a high arc probably more to hit the French horses' rumps and send them rearing and plunging about. This plus the clatter of thousands of arrows clanging on armor prompted the angry French to charge, apparently unaware of the sharpened stakes, which were probably masked by English archers standing in front of them.



As the French cavalry came thundering down, knee to knee, at a full charge, the archers loosed one or two more volleys to bring down horses in front, tripping more behind them while others tried to rear back. But the momentum of the charging mass carried the rest of them forward.

At the last minute, the English dropped behind their stakes, causing a violent collision as horses were impaled, their riders thrown to the ground and pounced upon by the English. The surviving cavalry on the flanks veered off and retreated. The English unleashed several more volleys hitting the retreating horses sending them into a maddened and uncontrollable flight that crashed into the dismounted French knights coming up.

The collision sent a violent ripple through the crowd as men clutched at neighbors stumbling forward and backwards over them. Being so densely packed, they had no control over their movement and in many cases were lifted off the ground by the surging mass. Some men were knocked down into the mud and trampled to death in 60-70 pounds of armor.

Meanwhile, the English poured more arrows into their ranks, creating more disruption and more time for them to prepare for the next attack. As the French advanced, the English fired at a more deadly flat trajectory, pouring 5000 arrows a minute into the French ranks where casualties mounted, especially from wounds through visors and joints. As the French got closer, arrows even started piercing their plate armor.



Oddly, the French knights narrowed their attacks to the three groups of English knights, ignoring or avoiding the archers either from fear of arrows or because it was beneath their dignity to fight social inferiors. As a result, the French were squeezed into three narrow prongs, giving them little or no room to wield their weapons. In addition, the crush of men surging uncontrollably from behind pushed them helplessly toward the English who cut them down. The next men coming up stumbled over their fallen comrades, creating a tumbling effect as more and more bodies piled up.

Meanwhile, the French along the edges kept suffering from the volleys of arrows still being poured into their ranks. As the archers ran low on arrows and saw the enemy stalled and in confusion, they started attacking them in groups, one archer keeping a knight occupied from front while others got around behind, hit his knees, brought him down, and threatened to hammer a spike through his visor unless he surrendered.

However, many French asking for quarter were refused because the battle was hanging in the balance and the English couldn't spare men to guard prisoners.

The second wave of French coming up only aggravated an already awful situation.

Total time of battle up to now: 30 minutes

The second wave wasted much of its energy fighting those retreating and trying to slog through the mud in their heavy armor. One of them died of a heart attack as a result. The second wave did no better than the first.

The field was now populated by the dead, wounded, and fugitives tracked by bounty hunters while prisoners were herded to the back in large groups without their right gauntlets and helmets.

However, the third wave, which outnumbered the now exhausted English, was still coming up. Therefore, in the face of the uncertainty of the final outcome, Henry ordered the prisoners massacred because he couldn't spare men to guard them. Some of the lower ranking mercenaries refused, not out of a sense of mercy, but because they wanted money from ransoms. Nevertheless, Henry found 200 archers who carried out the grisly task. In spite of this, the English still took 1000 prisoners.

Meanwhile, the third wave suffered the same fate as the first two, giving the English an incredible victory.

The next day, the English scoured the field, stripping the dead and finishing off the wounded, many of them mercy killings.

When Henry's sick and hungry army finally reached Calais, the townsmen charged such exorbitant prices for food, many soldiers lost their hard-won plunder as the price of a meal.

Thus the fortunes of war.

The Disasters of War (1413-29)



“There one might see wandering here and there children of two or three years old begging for bread as their parents were dead. These wretched people had only sodden soil under them and they lay there crying for food-- some starving to death, some unable to open their eyes & no longer breathing, others cowering on their knees as thin as twigs. A woman was there clutching her dead child to her breast to keep it warm, and a child was sucking on the breast of its dead mother. There one could easily count ten or twelve dead to one alive, who had died so quietly without call or cry as though they had died in their sleep.”- John Page on the siege of Rouen

After Agincourt, everything caved in on France.

For one thing, a civil war broke out between when the Duke of Orleans hacked the Duke of Burgundy to death while he was kneeling to the king on a bridge. Although the Orleans faction now dominated the French court, it was a bitter victory, because Burgundy now joined the English side (1419). Years later, a Carthusian monk showing Francis I the Duke of Burgundy’s skull, said *“This is the hole through which the English entered France.”*

While the French nobles indulged in civil war, Henry launched a serious campaign to conquer France, systematically reducing towns and castles, making especially good use of cannons. At the siege of Caen he placed cannons in tops of Abbey towers in a suburb to bombard town, firing stone shot and hollow iron balls filled w/flaming tallow that opened a breach in the walls. When an English knight fell in the moat during the assault, the French heaped flaming straw on him and burned him to death. When the enraged English took the town, they massacred 2000 inhabitants in revenge.

At the siege of Rouen, the desperate defenders, to save food, expelled 12,000 citizens, mostly women, children and the aged. However, since the English wouldn’t let them through, they starved and froze between the English and French lines. When the city finally surrendered and people brought food to the starving survivors, the shock of food after such long deprivation killed many of them. Of Rouen’s 15,000 people, only 6,000 survived.

As reports of English atrocities spread, people in other towns quickly surrendered or fled, such as Lisieux where only two cripples were left when the English arrived.

In 1420, England and France signed the Treaty of Troyes, sealing it with the marriage of Henry to Charles VI’s daughter, Catherine. It recognized Henry's claim to the throne after the deranged Charles VI should either die or shatter.

Despite this treaty, the war went on as Henry resumed his conquest of France, reducing one town after another.

The winter of 1420-21 was an especially harsh one for the French people. In efforts to escape the English, peasants flocked into the towns, thinking they would be safer. They weren’t.

Bodies of children were found in trash heaps where they died looking for food.

Wolves roamed Paris’ half deserted suburbs, picked up the scent of death, and left.

Then Charles VI died.

Unfortunately Henry had died one month earlier, leaving an infant as his successor.

So the war continued.

Luckily for England, the infant, Henry VI was well served by John, the Duke of Bedford, both an able administrator and general. Thus the next seven years were the most successful for the English...and the worst for France as the alliance of England and Burgundy unleashed a continuing avalanche of disasters upon the French.

In Normandy, freebooters, called flayers from the habit of flaying (skinning) their victims, reduced the land to a wilderness. And what the flayers didn't take or destroy, the English garrisons did.

Then, out of the most unlikely of places, came hope.

The Maid of Orleans (1429-31)



Joan of Arc enters Orleans after lifting the English siege.

In 1429, at the court of Charles, the dauphin (uncrowned king, since his way to Reims, where French coronations took place, was blocked) there arrived a humble peasant girl named Joan who claimed divine voices had told her to lead France to victory. The Dauphin, a very superstitious man, had the court theologians examine her and they found no sign of heresy or insanity. So, despite court snickering, Joan's persistence and genuine faith in her mission persuaded Charles to let her accompany a French force of 4,000 men to relieve the city of Orleans from an English siege. When the French stormed the enemy earthworks, the English raised the siege.

Whatever Joan's role in this victory, the French soldiers believed she was sent by God and successfully stormed several other English strongholds. These victories opened the road to Reims where Charles was officially crowned as Charles VII.

To the soldiers, Joan was a symbol of divine favor, and her example restored the army's spirit, especially after a seemingly miraculous recovery from a wound. However, her luck soon ran out. In 1429, the Burgundians captured Joan during an improperly supported attack on Paris and sold her to the English who tried her as a witch for hearing demonic voices that, among other things, spoke to her in French rather than English. After a long and exhausting trial, she was convicted by a French church court and burned at the stake in the market place of Rouen in 1431.



Years later the Church would reverse its decision and declare Joan a saint. She was only 19 years old when she died.

However, the English execution of Joan, much like the Church's execution of Jan Hus a few years earlier, backfired in the worst possible way.

It had created a martyr.

The Return of the King (1431-53)



Charles VII of France

Charles VII especially seems to have undergone some sort of transformation after Joan's death. He became a king in reality as well as name and led a vigorous offensive against the English. His leadership and hatred of the English convinced the French people to agree to a special tax, the *taille*, to pay for soldiers and artillery. This would be the primary form of tax income for the French monarchy until the French Revolution in 1789.

The 1430s saw fortune turn back against the English. There were crop failures and a severe depression in trade. In England, the weak Henry VI was unable to control the nobles who kept their own personal armies. In 1455, these armies would contribute to thirty years of civil war known as the Wars of the Roses.

The war in France was also going badly for England. At Chartres, French soldiers entered the city hidden in supply wagons and drove out the English.

Paris, still under English control, suffered from an especially harsh winter in 1435, bringing starvation and temperatures so cold that people were tearing down houses for firewood. In that year also the capable Duke of Bedford died with no leader of his caliber to replace him.

Less than a week later, Burgundy defected back to the French side.

The next year, 1436, the French retook Paris.



By the mid 1400s, more elaborate armor, mercenaries, and gunpowder were making warfare much more expensive than ever. Calais' garrison alone cost one-half of the English king's normal revenue. High war taxes and the lack of new plunder made the war increasingly unpopular in England. So did defeat as the French swept through France, demolishing English fortifications with their new artillery.

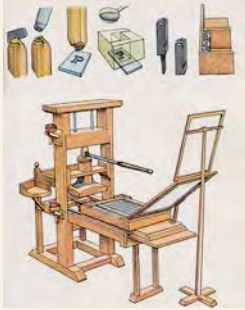
In the face of all these problems, Parliament cut most funds for fighting in France. The end wasn't far off.

It came in 1451 at the Battle of Castillon. The French, using another experimental weapon, primitive firearms, defeated the last English army in France. Two years later in 1453, the same year the Ottoman Turks used artillery to help them storm the walls of Constantinople, the English were out of France except for the port of Calais, which they managed to hang onto until 1558.

The Hundred Years War was over.

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11.1 THE PRINTING PRESS & ITS IMPACT



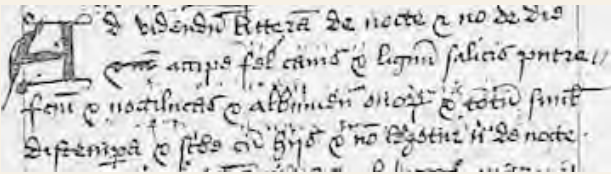
the text, which may have gone through many less-than-careful sets of hands between being literally chewed up by bookworms. (Surviving copies of medieval manuscripts often have such bookworm holes going all the way through them.)

Yes, there are such things as bookworms. However, instead of there being a single species of bookworm, per se, a number of insects, such as silverfish, booklice, and even termites and roaches, that feed on the starchy material in the pages of a book collectively fall under this category.

Other factors contributing to the mess would be the poor lighting produced by oil lamps, the boredom and fatigue of mindlessly copying page after page of oftentimes incomprehensible and illegible text. Thus, a scribe might doze off while copying a common Latin word, such as *idem*, on line seven of a page, wake up and pick up at *idem* on line eleven, thus eliminating four lines of text. Boredom, fatigue, and poor pay could also generate anger and resentment in a copier, who might write jokes or nasty comments about the book dealer in the margins.

Because they were only paid for eight pages of copying, scribes would often cram in the last few lines of a page along with using tons of abbreviations to avoid the cost of using more paper or parchment. In addition, different scribes typically copied different peciae of each copy of a book, complicating efforts to sort out who had copied what specific mistakes and where they had originated. Of course, later copiers would mindlessly incorporate all of these mistakes and imperfections into their copies, along with a few of their own. And so it would go through the generations, one set of mistakes being piled on top of another along with generations or centuries of abuse, until later generations of scholars tried to sort out the mess.

Introduction. At the height of the Hussite crisis in the early 1400's, when authorities ordered 200 manuscripts of heretical writings burned, people on both sides realized quite well the significance of such an act. Two hundred handwritten manuscripts would be hard to replace. Not only would it be a time consuming job, but also trained scribes would be hard to find. After all, most of them worked for the Church, and it seemed unlikely that the Church would loan out its scribes to copy the works of heretics. Although the Hussites more than held their own militarily against the Church's crusades against them, their movement remained confined mainly to the borders of their homeland Bohemia. This was because there was no mass media, such as the printing press to spread the word. A century later, all that had changed.



The Problems with Hand-written Books. Hand-written books were prone to mistakes from a variety of sources. One of these was the system used for copying books. Since university students couldn't generally afford their own copies of textbooks, they would rent 8-page sections, known as *peciae*, from a book dealer. To get their own or more copies, richer students and book dealers would hire poorer students to copy the *peciae* for them.

Such students were often inadequately literate to understand the texts they were copying, especially since they were written in Latin. Poor handwriting (of either the scribe copying the older text, the scribe making the new copy, or both) compounded the difficulty (and legibility) of the task. So did the condition of

Like any other invention, the printing press came along and had an impact when the right conditions existed at the right time and place. In this case, that was Europe in the mid 1400's. Like many or most inventions, the printing press was not the result of

just one man's ingenious insight into all the problems involved in creating the printing press. Rather, printing was a combination of several different inventions and innovations: block printing, rag paper, oil based ink, interchangeable metal type, and the squeeze press.

Much of this started with the rise of towns in Western Europe that sparked trade with the outside world all the way to China. That trade exposed Europeans to three things critical to the invention of the printing press: rag paper, block printing, and, oddly enough, the Black Death.

For centuries the Chinese had been making rag paper from a pulp consisting of water and discarded rags that was then pressed into sheets of paper. When the Arabs met the Chinese at the battle of the Talas River in 751 C.E., they carried off several prisoners skilled in making such paper. The technology spread gradually across the Muslim world, up through Spain and into Western Europe by the late 1200's. The squeeze press used in pressing the pulp into sheets of paper would also lend itself to pressing print evenly onto paper.

Chinese paper was made from bamboo stalks that were stripped of leaves of smaller branches, and then boiled in a tub for three days to break them down into thin hair-like fibers. The mixture, known as a slurry, was cooled in a large brick tub where a specialist dipped a silk screen, then extracted it, letting most of the water drain through the silk, leaving a thin layer of slurry. The screens were stacked and allowed to partially dry, after which the slurry, having coalesced into sheets of paper, was dumped from the screens onto a stack of similar sheets. After drying some more, the sheets were hung outside to completely dry, after which they were full sheets of paper.

Chinese movable type. A Chinese inventor, Bi Sheng, actually came up with movable type in the 1040s, carving Chinese characters into uniformly sized clay blocks that were then fired. He then arranged them in vertical rows inside a rectangular frame, inked them with a mixture of gum and soot made from burned pine, and pressed a piece of paper over them to get a printed page.

The problem was that storing and cataloging a writing system of literally thousands of characters was extremely tedious and impractical. Therefore, the Chinese reverted to the simpler technique of carving entire pages of text out of wood, a system devised back in the eighth century. Supposedly, there were 500,000 copies of one Buddhist text printed with this technique.

The Black Death, which also spread to Western Europe thanks to expanded trade routes, greatly catalyzed the invention of the printing press in three ways, two of which combined with the invention of rag paper to provide Europe with plentiful paper. First of all, the survivors of the Black Death inherited the property of those who did not survive, so that even peasants found themselves a good deal richer. Since the textile industry was the most developed industry in Western Europe at that time, it should come as no surprise that people spent their money largely on new clothes. However, clothes wear out, leaving rags. Consequently, fourteenth century Europe had plenty of rags to make into rag paper, which was much cheaper than the parchment (sheepskin) and vellum (calfskin) used to make books until then. Even by 1300, paper was only one-sixth the cost of parchment, and its relative cost continued to fall. Considering it took 170 calfskins or 300 sheepskins to make one copy of the *Bible*, we can see what a bargain paper was.

However, the Black Death had also killed off many of the monks who copied the books, since the crowded conditions in the monasteries had contributed to an unusually high mortality rate. One result of this was that the cost of copying books rose drastically while the cost of paper was dropping. Many people considered this unacceptable and looked for a better way to copy books. Thus the Black Death rag paper combined to create both lots of cheap paper plus an incentive for the invention of the printing press.

The Black Death also helped lead to the decline of the Church, the rise of a money economy, and subsequently the Italian Renaissance with its secular ideas and emphasis on painting. It was artists in Northern Europe who, in their search for a more durable paint, came up with oil-based paints. It was

fairly simple to adapt these to an oil-based ink that would adhere to metal type.

Block printing, carved on porcelain, had existed for centuries before making its way to Europe. Some experiments with interchangeable copper type had even been carried on in Korea. However, Chinese printing did not advance beyond that, possibly because the Chinese writing system used thousands of characters and was too unmanageable. For centuries after its introduction into Europe, block printing still found little use, since wooden printing blocks wore out quickly when compared to the time it took to carve them. As a result of the time and expense involved in making block prints, a few playing cards and pages of books were printed this way, but little else.

What people needed was a movable type made of metal. And here again, the revival of towns and trade played a major role, since it stimulated a mining boom, especially in Germany, along with better techniques for working metals, including soft metals such as gold and copper. It was a goldsmith from Mainz, Germany, Johannes Gutenberg, who created a durable and interchangeable metal type that allowed him to print many different pages, using the same letters over and over again in different combinations. More importantly, Gutenberg combined all these disparate elements of movable type, rag paper, the squeeze press, and oil based inks to invent the first printing press in 1451.

The first printed books were religious in nature, as were most medieval books. They also imitated (handwritten) manuscript form so that people would accept this new revolutionary way of copying books. The printing press soon changed the forms and uses of books quite radically. Books stopped imitating manuscript forms such as lined paper to help the copiers and abbreviations to save time and space in copying. They also covered an increasingly wider variety of non-religious topics (such as grammars, etiquette, and geology books) that appealed especially to the professional members of the middle class.

The problems and process of early printing. The real trick to creating a working printing press was making metal type that was of uniform thickness so that all the letters would press down on the paper. What made Gutenberg

especially suited for this was his trade as a goldsmith, because he was skilled in working with soft metals, in particular copper, that were more durable than wooden type but easier to work with than harder metals like iron.

Printing wasn't yet the lightning fast process we have today. For each page, the type had to be inked, the paper had to be individually laid down, and the printer had to use a good deal of strength in pulling back the bar to press the inked type to the paper. After removing the page and hanging it up to dry, he would start all over.

It was still a lot better than having to hand copy each page.

One way to shorten the process was the *folio*, which involved printing two pages at once on a double sized sheet. Later, two more pages would be printed simultaneously on the backside of the sheet. Of course, this involved a lot of prior planning, because in assembling the folded sheets into a book, two consecutive pages would rarely be printed side by side. For example, an 8-page folio would have pages 1 and 8 printed side by side and backed by 2 and 7. Similarly, pages 3 and 6 would be printed together and backed by 4 and 5.

Assuming pages are numbered sequentially from the very first to the very last page, the sum of any two pages printed together within a book always adds up to the same number as the sum of any other two pages. Back when books were still assembled by hand, this could be a valuable check on the correct pairings of pages for each folio sheet.

Behind the printing press were trays of interchangeable type for setting up new pages. The need to organize the letters in a way for efficiently finding them led to standard alphabetization.



Printing was such a revolutionary way to copy books that when Jacob Fust, Gutenberg's

partner, started selling Bibles in Paris, local book copiers, acutely aware that printed books could put them out of business, wanted Fust arrested for conspiring with the Devil to be able to make so many identical copies so quickly. Of course, this begs the question of why the Devil would help make so many copies of the word of God. Fust got off the hook.

Aldus Manutius invented italics, supposedly based on the handwriting of the medieval Italian scholar, Petrarch. The wide variety of fonts we have today got started by early printers who adopted the most fashionable handwriting style for their type. One font had no fewer than 240 characters.

By 1482, there were about 100 printing presses in Western Europe: 50 in Italy, 30 in Germany, 9 in France, 8 each in Spain and Holland, and 4 in England. A Venetian printer, Aldus Manutius, realized that the main market was not for big heavy volumes of the Bible, but for smaller, cheaper, and easier to handle "pocket books". Manutius further revolutionized book copying by his focusing on these smaller editions that more people could afford. He printed translations of the Greek classics and thus helped spread knowledge in general, and the Renaissance in particular, across Europe. By 1500, there were some 40,000 different editions with over 6,000,000 copies in print, compared to an estimated total of only 30,000 copies in 1400.

Printing images and in color. Maybe as important as the revolution in printed words was the revolution in printed images made possible by engraved woodblock images. This became especially apparent in 1536 with the publication of Vesalius' *De Fabrica*, which contained the first truly accurate drawings of human anatomy, making it possible for medical students everywhere in Europe to view how the human body really looked and functioned, thus pushing medical knowledge still further.

Not that the literal truth was the only thing being printed. The printing press also proved useful for religious and political propaganda. The first major example of this was the Protestant Reformation, when Protestants in

particular printed scathing cartoons of the pope and Catholic Church. Such images were even more powerful and persuasive when done in color.



Color printing was done with separate copper plates, one for each color being used, the different color plates applied one after the other to create the full color image. The trick was tightly calibrating the two plates so the colors stayed separate.

The impact of the printing press. The printing press had dramatic effects on European civilization. Its immediate effect was that it spread information *quickly* and *accurately*. This helped create a wider literate reading public. However, its importance lay not just in how it spread information and opinions, but also in what sorts of information and opinions it was spreading. There were two main directions printing took, both of which were probably totally unforeseen by its creators.

First of all, more and more books of a secular nature were printed, with especially profound results in science. Scientists working on the same problem in different parts of Europe especially benefited, since they could print the results of their work and share it accurately with a large number of other scientists. They in turn could take that accurate, not miscopied, information, work with it and advance knowledge and understanding further. Of course, they could accurately share their information with many others and the process would continue. By the 1600's, this process would lead to the Scientific Revolution of the Enlightenment, which would radically alter how Europeans viewed the world and universe.

The printing press also created its share of trouble as far as some people were concerned, since it took book copying out of the hands of the Church, thus making it much harder for the Church to control or censor what was being written. It was hard enough to control what Wycliffe and Hus wrote with just a

few hundred copies of their works in circulation. Imagine the problems the Church had when literally thousands of such works could be produced at a fraction of the cost. Each new printing press was just another hole in the dyke to be plugged up, and the Church had only so many fingers with which to do the job. It is no accident that the breakup of Europe's religious unity during the Protestant Reformation corresponded with the spread of printing. The difference between Martin Luther's successful Reformation and the Hussites' much more limited success was that Luther was armed with the printing press and knew how to use it with devastating effect.

Some people would go as far as to say that the printing press is the most important invention between the development of writing and the computer. Although it is impossible to justify that statement to everyone's satisfaction, one can safely say that the printing press has been one of the most powerful inventions of the modern era. It has advanced and spread knowledge and molded public opinion in a way that nothing before the advent of television and radio in the twentieth century could rival. If it were not able to, then freedom of the press would not be such a jealously guarded liberty as it is today.

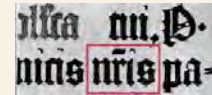
Random Facts About Early Printing

The medieval mind rejected alphabetic order as irrational. Thus there was no indexing of topics within books or of books within libraries. Not until the printing press was there regular use of punctuation, spacing, paragraphs and capital letters and efforts to create uniform spelling. William Caxton's choice of dialect and the large number of books he published helped lead to a more standardized English.

Because the early printed page was arranged as a composition and work of art, typesetters were known as compositors.

Since people typically conceive of a new technology within the limitations of the old technology, early printed books still used lined paper and a multitude of abbreviations even though space, time of copying, and neat rows of writing were no longer an issue. For example, *nris*, the old abbreviation for the Latin word

***nostris*, is still being used in the printed text below**



Ancient and medieval dialogues between two points of view were a popular form for printed books for years.

Dedications originally were to patrons or hopeful patrons.

The idea of copyrighting authors' works began in the 1400s.

Cloth binding for books was invented in the early 1800s.

The term "lecturer" comes from the Latin word for reader, since teachers often read the one available book aloud to his students. Similarly, because of the scarcity of books before the printing press, reading was largely a social activity where one person read aloud to others. Not until printing and the wide availability of books did reading become a silent and solitary exercise, just one of a number of inventions that have made for much less social activity in the modern world.

The book has weakened individual and collective memories and divided the intellectual world into specialized niches without one center of knowledge. Before the profusion of printed books and corresponding explosion of knowledge, the traditional concept of a scholar was someone who had read all the known classical literature.

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75. THE ECONOMIC RECOVERY OF EUROPE (c.1450-1500)

The turmoil of the Later Middle Ages (c.1300-1450) continued and accelerated the changes that started with the rise of towns and kings in the High Middle Ages (c.1100-1300). Although these were certainly difficult times to live through, they also paved the way for the modern institutions, movements, and values that would emerge after 1450: the Renaissance with its new attitudes toward the secular world and Man's place in it, the nation state with its relatively centralized bureaucracy and army, and the age of exploration with the new perspective it gave on Europe's place in the world, and capitalism with its new attitudes toward money and profit.

Social changes. The turmoil of the Later Middle Ages did not affect everyone equally. Nobles and clergy, in particular, saw their power decline. The longbow, gunpowder, and massed formations of infantry pikemen effectively challenged the armored knight's supremacy on the battlefield. Even his place in the castle grew ever more precarious as new and more destructive cannons were constantly being developed. Similarly, religious scandals, corruption, and heresies had hurt the Church's reputation and influence. Economically, the Later Middle Ages had seen labor shortages that led to higher prices. Inflation cut increasingly into the wealth of the nobles and clergy, since it was based on land with a more static value. By 1450, most peasants in Western Europe had been able to buy freedom from their lords, wither sharecropping or paying them fixed rents instead of labor. Even those rents only helped in the short run, since inflation soon reduced their value, while the nobles and clergy often had little skill or desire to spend within their means.

The nobles' decline meant other social classes could rise in power and status. Peasants benefited by buying their freedom and many even buying their own land. The greater incentive provided by working for themselves rather than their lords generated higher rates of agricultural production and the revival of Europe's population. The middle class benefited by making money from selling them

goods to the nobles for a profit and even giving them loans for interest so they could buy those goods. The middle class was also assuming larger roles as bureaucrats and bankers for the emerging national monarchies in Western Europe. Thanks largely to the natural alliance of kings and middle class against the nobles, kings were the only ones with the power and wealth to afford the new gunpowder technology that was becoming a necessary part of any respectable army.

Although there were still some powerful and influential nobles, others were forced to seek employment in the king's army or at his court as *courtiers*, basically idle hangers-on whose job was to make the king's court look impressive. Still others lost their noble status altogether by having to support themselves through such *ignoble* pursuits as agriculture and commerce. Nonetheless, nobles were still considered *the* class to be. Consequently, wealthy members of the middle class would buy titles of nobility from the king (who always needed cash), give up their businesses, and settle down on landed estates just like other nobles. In this way, the nobles' ranks were constantly replenished by new blood, although their importance as a class kept on its path of gradual decline. The changes sweeping through Europe were making it increasingly harder to find a meaningful place in society for themselves.

Thus, by 1500, the peasants in Western Europe free and often in possession of their own land, the middle class' status was steadily rising, both through their money and positions in royal bureaucracies, and kings were tightening their grips on power through their bureaucracies and armies.

Economic revival, as usual, was based firmly on agriculture revival, but other factors also helped. For one thing, the turmoil of the Later Middle Ages, which had weakened the Church and Nobles, was largely subsiding in Western Europe by 1450. Out of this emerged strong monarchies that could safeguard the peace and promote trade and commerce. Secondly, the nobles, ruined by inflation and the collapsed urban grain market triggered by the Black Death, had sold most of their serfs their freedom by 1450. Finally, the peasants who had survived the Black Death and inherited the

property of those who died had attained a higher standard of living. The fact that most peasants were now free and that many owned their land provided incentive to work harder that led to better agricultural production. One good indication that this was taking place was the fact that Europe's population rose from an estimated 50 million in 1450 to 70 million by 1500. This revival had three effects that would combine to create a dynamic new economic system: capitalism.

First of all, the dramatic population growth of the late 1400's meant that towns and trade could also rapidly recover and surpass their previous prosperity. In 1450, the wealthiest banking family in Europe was that of the Medici of Florence, whose fortune consisted of 90,000 florins. By the 1500's, another banking family, the Fuggers of Augsburg in Germany, had taken over first place with nearly one million florins to their credit, over ten times that of the Medici half a century before. What this suggests is that the amount of trade and money in circulation had increased a great deal.

The second effect was that there were new consumer markets, but with a very different distribution of wealth from before. In the High Middle Ages, nobles had provided merchants with much of their market since they controlled so much of Europe's wealth at that time. By 1450, this had changed. Most nobles had lost money and status and could not afford the fine woolens and other goods made by the guilds. Instead there were common laborers and peasants, each with a modest amount of money to spend. A lot of money was there. It was just spread out more widely.

This change in the consumer market from a few rich nobles to a large number of people each with modest amounts of cash led to a change in production techniques as well. Up to this point, guilds had controlled the production and selling of manufactured goods, while nobles could afford the high quality and prices that the guilds maintained. The new type of consumer emerging by 1500 could not afford them. In response to this, some wealthy businessmen went outside the town walls and the jurisdiction of the guilds to the various peasant cottages in the countryside. Here the peasants would produce lower quality woolens than the

guilds produced. The businessmen would pay them lower prices for those woolens and turn around and undersell their guild competitors. In this way, older medieval cities and guilds, such as in Flanders, went into decline, while other centers of production took their places. This also led to the growing concentration of wealth in the hands of a few rich businessmen instead of being spread out among the guilds. Thus by 1500, the consumer market was more spread out than before, while the means of production and investment were concentrated in fewer hands.

The third effect of Europe's reviving economy was that its expanding internal markets prompted Spanish and Portuguese explorers to search for new trade routes to the sources of spices in the Far East. Besides opening up whole new continents for discovery and exploration, this also vastly expanded the volume of Europe's trade.

Economics as a Secular Act of Faith



On the surface, trading something of inherent value (such as food or clothes) for something as pretty, but inherently useless, as gold or silver seems pretty crazy. And trading a piece of paper saying it's worth gold or silver seems crazier still. Of course, money and credit vastly facilitated and expanded trade and are essential parts of our economic system.

However, we should never lose sight of the fact that our whole economic system relies largely on one ephemeral but critical element: faith. As long as people believe the economy is working, they will spend money on new TV's and invest in new businesses and the stock market. And as long as people keep buying and investing, factories will keep producing new products, thus hiring workers who get paychecks and, feeling good about their jobs and the economy, will keep buying TV's, etc., etc.

But if people stop believing, the whole process goes into reverse.

It's all about faith, not just by one person, but whole societies. So, to a large extent, our whole civilization is based on a form of mass insanity.

New business techniques. In order to handle this higher volume of trade, new techniques of handling money became prevalent about this time. The Italian city-states especially pioneered these new methods. The prosperity that these new business techniques brought Italy largely explains why Italy would lead the rest of Europe in the Renaissance. Very briefly, these techniques were:

1) *Joint stock companies.* These allowed people with small amounts of cash to take part in business enterprises such as merchant expeditions. Their importance was that, instead of hoarding their money, people put it into circulation in Europe's economy, allowing it to grow even more.

2) Insurance companies. These reduced the risk of losing all of one's investment in a business venture. The result was much like that of joint stock companies, in that it encouraged people to invest, rather than hoard, their money, which stimulated further growth in Europe's economy.

3) Deposit banks and credit. Credit allowed a businessman to use more money than he actually had to embark on some venture, paying his creditor back with interest when he made his profit. Europe's economy grew much more quickly this way than if it had been limited by the amount of cash on hand at any particular time. Unfortunately, with a strictly cash economy, someone transferring funds long distance ran the risk of losing his money to brigands, pirates, or storms.

Luckily, there were two parties with complementary needs that led to a solution. One was the Church, which needed to send its taxes to Italy from all over Europe. The other consisted of Italian merchants, especially Florentines, who wanted to take money from Italy to destinations across Europe in order to carry on trade. With credit, the same merchant could send an agent to London with a note saying he was worth so much money guaranteed by the bank back in Florence. The agent could get that money in the form of church taxes bound for Italy, use it in England, and then send a credit note back

to Florence worth the amount he borrowed in Church taxes. If brigands ambushed an agent either way, all they got was a credit note that they could not spend. Meanwhile, the Florentine banker got hold of all the funds he needed in England, and the Church in Italy safely collected its taxes from England...all without transferring one bit of cash.

As this practice caught on, there were other people who wanted to transfer funds across Europe without the risks that came from traveling with cash. Therefore, they would deposit cash with a merchant who had branch offices all over Europe, take a letter of credit to their destination, and reclaim their cash from the merchant's branch office there. Naturally, the merchant would charge a fee for this service. He would also use the money deposited with him for his own business deals, hopefully making a profit on the depositor's cash before he reclaimed his money. Thus was born our modern institution of banking, an essential ingredient in the capitalist system.

There were dangers to this system, especially debtors not repaying their creditors. Kings were especially bad risks in this respect. For example, in the 1340's, Edward III of England failed to repay the Bardi and Peruzzi firms of Florence. This caused their bankruptcies, which sent ripples throughout Western Europe's economy since so much of it was tied up with these two banking houses.

These new business techniques combined to create a feedback cycle that accelerated the growth of Europe's economy. More money was invested in new business ventures. This increased trade, which stimulated more production of goods. That, in turn, created more jobs for people, who had more money to spend, which was safer because of the new business techniques, and so on.

Overall, the system worked quite well, providing money for the expansion of Europe's economy and the growth of its monarchies. Two other important factors should be mentioned. One is the dramatic improvement in mining techniques in Europe at this time. Germany in particular saw a fivefold increase in mining production between 1400 and the early 1500's, which put much more silver into circulation.

Secondly, the adoption of Arabic numerals improved accounting techniques so trade and business could run more efficiently. All this increased economic activity and prosperity transformed European values and attitudes toward money and helped create a new economic system called capitalism.



Florins and Ducats

Two gold coins, the Venetian ducat (left), which maintained a purity of 99.9% for 500 years, and the Florentine florin, especially symbolized the increasingly money based economy. While Roger II of Sicily started minting coins called ducats around 1140, the first regular issue of gold coins was by Florence in 1252, followed in 1284 by Venice. Because of their stability, large-scale monetary deals and sums were often expressed in terms of one or other of these coins.

Capitalism is an economic activity that involves using large sums of money or **capital** in large-scale commercial, manufacturing, or agricultural activities. It had some medieval roots, but also some non-medieval elements that did not develop until around 1500. We can isolate four main characteristics of capitalism:

1) Private ownership of the means of production.

This was largely a break from the Middle Ages when guilds controlled the means of production. We have seen how wealthy businessmen started to break the guilds' monopoly by having peasants produce textiles in the countryside. This process continued and accelerated after 1500. Modern communism theoretically has the means of production owned by the workers, represented by the government, which in some ways seems closer to medieval guilds than its main rival, capitalism.

2) The law of supply and demand determines prices.

Once again, this is a break from the guilds which kept prices artificially fixed no matter how plentiful or scarce its goods were. Communist governments also control prices in a similar way.

3) There is a sharp distinction and often little contact between the workers and the capitalist who owns the means of production. Such a distinction existed to a much smaller degree between guild masters and their laborers, and this became a serious problem in the later Middle Ages. Such a gap between capitalists and their workers would widen considerably and become especially bad in the early Industrial Revolution of the 1800's.

4) The profit motive. Although medieval guilds and merchants made profits, those profits were largely restricted by the Church's ban against charging more than a "fair price" for goods and services. The emergence of the profit motive by 1500 especially shows the changing attitudes and values in European civilization.

Capitalism helped lay the foundations for the rise of national monarchies in Europe by providing them with the capital to build up strong professional armies and bureaucracies. The states that best adapted to capitalism, in particular the Dutch Republic in the 1600's and England in the 1700's, would emerge as the economic and political powerhouses of Europe and eventually establish dominance of the world in later centuries. European prosperity in the later 1400's also made patronage of the arts possible and helped create one history's greatest cultural movements: the Renaissance.

Money, Women, and literacy



Although during the Middle Ages, most of the few books being written and copied were of a religious nature, the rise of towns and trade after 1000 C.E. led to a new literate class of merchants with different uses for literacy, namely keeping accounts and writing business contracts. They also might have other reading interests outside of religious topics, although that didn't matter much as long as Churchmen were the main group copying books. However, with the printing press printers quickly saw the potential

for exploiting this new reading market, and started printing books on more secular topics.

Interestingly enough, it wasn't just a male market either, because the wives of merchants and guild masters had a somewhat higher status, especially in Northern Europe where they actively helped in their husbands' business. In England, a guild master's widow could even run his business if she had no sons or until her sons were old enough to take over on their own.

Consequently, women involved in helping with the family business would know how to read as well. Two paintings in the 1500s, one by Quentin Metsys and the other by Marinus Claesron van Reymerwarle, tell us this in their portrayals of merchants and their wives counting their profits. Even more telling, the woman in each painting has her fingers on an open book, symbolizing she can read. While literacy rates for men would remain far higher for men than women for centuries, the gap was starting to close.

Continuing feudal burdens

To say that the peasants had bought their freedom needs to be qualified, because a myriad of feudal dues and obligations remained to provide some income to the nobles and misery to the peasants. For example, peasants were often still obligated to use the lord's mill, paying, on average, one bag of flour for every twenty that was milled. Similarly, they might have to pay to use his oven, roads, and bridges. Then there was the corvee, several weeks of forced labor in the summer to repair the lords' bridges and roads.

Maybe the most hated of the nobles' feudal rights was the captaineries, which gave them hunting rights on the peasants' lands. Besides trampling the crops in pursuit of game, this might even involve delaying the time of planting or harvest because partridges needed ground cover for nesting and laying their eggs. One noble, the Prince de Conde, even raised wolves and turned them loose on the peasants' lands for his hunting enjoyment. Any peasants or their children lost during these festivities should have been paying closer attention.

These feudal burdens would remain in France all the way to the night of August 4, 1789 during the French Revolution when the National Assembly would finally abolish all vestiges of feudalism.



The Would-Be Gentleman

Or A Quick and Dirty Guide to Social Climbing in Early Modern Europe

Qualifications for nobility were different from one country to the next. For example, in England, it was purely through heredity, so there was a fairly small class of nobles (known as the peers or peerage) compared to France. However, there was no specific legal status or class known as the gentry, who have popularly been seen as the lower nobility.

In France, there were three ways to become a noble:

- 1) Inheriting the status from your father if he had permanent noble status;
- 2) By a special letter from the king; or
- 3) Buying the status.

By the 1700s, there were 4,000 offices one could buy that conferred nobility. To buy noble status, one must buy an office that conferred nobility. Some offices (e.g., judges in the Paris Parlement and the hundreds of "royal secretaries") immediately conferred permanent nobility on the first generation holding that office. Others (e.g., mayors and tax collectors) typically did not receive permanent status only after the third generation of a family holding that office

Keep in mind that buying an office (and noble status) was like buying a car or house today. It was the personal property of the person who bought it and could be handed down to succeeding generations. By the same token, one could sell an office, thus depriving one's descendants of that office and noble status, unless he sold it after attaining permanent noble status, which he could then hand down to his heirs without the office being attached.

Military offices were one category of positions that commoners could not buy. While this kept a lot of rich people with no military talent from infecting the army with their incompetence, it also kept out a lot of potential new talent, often to France's detriment in its many wars all the way down to its revolution in 1789.

Noble status was just the first step in social climbing among the elite. There were four main factors determining your position within the noble hierarchy:

- how long your family been noble, three generations being a major threshold;
- what other families you had married into;
- what offices and titles you and your family members had achieved; and
- what notable actions they had performed

One critical step was finding a suitable marriage into a family with power, prestige, and wealth, especially the latter, because an aspiring noble needed a sizable dowry to climb the ladder of success. However, a suitor had to be careful not to set his sights too high, because trying to win a bride from an extremely prestigious and powerful family would likely meet with rejection and damage his still fragile status

Having children was another important decision for building a powerful family. Having too many sons could dissipate a noble's wealth, but having no sons to succeed him would be the end of the line. Of course, the fly in the ointment was the high rate of infant and child mortality, probably 50% by age twenty. But child mortality varied widely from family to family, so one never knew how many, if any, children would survive him. If a noble were blessed with several healthy sons, he could limit the size of his family by finding "romance" with a mistress or various peasant girls. (However, his wife didn't have such options, since any children born would be of suspect legitimacy.) If a noble's legitimate sons all died, he could have any bastard sons declared legitimate noble heirs by a letter from the king.

Money was important to a noble, not as goal in itself, but as a means to social prestige. Thus an

ambitious noble needed to make astute investments within the legal restrictions of his class. Practicing certain ignoble occupations, such as commerce or manual crafts, would cost one his noble status. Other trades, such as medicine, glass blowing, exploitation on mines and maritime and wholesale commerce were tolerated. So was tilling the soil, as long as it was the noble's own land and not someone else's.

Three types of investments were in tax farms, textiles (wholesale) and land. Tax farms were the most lucrative, but also disreputable, so a noble involved in that might lose status in the eyes of his peers. Textiles were also lucrative, but also riskier, while land was the safest long-term investment.

A noble with land also had two main options on how to manage it. He could collect fixed monetary rents, which were stable, but also more subject to inflation. Or he could let his peasants sharecrop and take a percentage of the grain as rent. He could then either sell the grain in town or store it and wait for a year when grain production was down and then sell it for a greater profit. One danger here, however, was that rats and spoilage would reduce his grain stores each year.

An aspiring noble also wanted to get a title, such as duke or count. In the middle ages, these were titles held by noble families that had fought their way up in society as members of the warrior class and established as much power and independence from the king as they could. However, over the centuries, the monarchy had gradually regained control of these titles through such things as marriage and the extinction of family lines, whereby the titles reverted to the king by a custom known as escheat. By 1600, the king controlled these titles and could grant them at will to those gaining his favor. The hierarchy of titles was:

- 1) Duc (duke)
- 2) Marquis (marquis)
- 3) Comte (earl)
- 4) Viscomte (viscount)
- 5) Baron (baron)

Of course, a lowly first generation noble couldn't expect to get a title on his own. He needed help from a patron, so he would vie for the patronage of a powerful noble who could work in higher circles of power for his benefit and protect him from enemies who would try to subject him to fines, confiscations, and the humiliation of scandal. Thus a lower noble's fortunes were tied to those of his patron, and if that patron fell from favor, so did his clients.

And no self-respecting noble is going to be taken seriously if he doesn't have his own castle in the country, or what we now refer to as a chateaux. Many or most castles fell into disrepair, but a number of them, in particular along the Loire River close to Paris, were renovated as country estates. Except now they were built more for comfort, and less for defensive purposes.

Nobles of the sword and the robe

Naturally, the older noble families showed disdain for any upstarts who had bought noble titles. Therefore, they drew a sharp distinction between themselves and the newcomers. Older noble families referred to themselves as nobles of the sword, implying their noble titles went back to when nobles actually did most of the fighting. Newer noble families who had just bought their titles and offices (such as Charles Alexandre de Calonne pictured above by Elizabeth Vigee Le Brun) were called the nobles of the robe, a reference to the bureaucratic or judicial robes they might wear as holders of their new offices. However, after three or four generations, these nobles were no longer newcomers compared to all the other nobles who had bought their titles more recently. Therefore, they could consider themselves members of the old nobility and now refer to themselves as nobles of the sword, even if they didn't know one end of a sword from the other (although they would learn pretty quickly if caught in a duel).

The Truth Behind Fairy Tales

Fairy tales, or more properly folk tales, give us one of the few insights into how common people felt about medieval society. Take, for instance, the villains, who typically are evil ministers or women, often with diabolical magical powers

that allow them to control events. Since the king's ministers and advisors typically came from the noble classes, their portrayal as evil largely reflects the commoners' views of nobles as the enemy and source of their troubles.

Women also feature prominently among villains, because of the belief that it was an inversion of the natural order for women to be in power. Therefore, such women must be evil. This also means that real women in power, such as Marie de Medici and Marie Antoinette of France, were typically seen as evil and scheming (maybe even witches) and had a hard time getting fair treatment from historians of the time (almost all of them men). Only recently have historians been reassessing these women's lives and giving them more balanced treatment.

By contrast, kings are seen as good, because they were the natural allies and protectors of peasants and townsmen against their common enemy: the nobles. Therefore, if things are going badly in the kingdom, it's not because the kings are bad, but because they are under the influence (or spell) of evil ministers or queens. Once the spell is broken, the king or his son the prince (AKA Prince Charming) can again rule and bring the kingdom prosperity.

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THE BIRTH OF BANKING



The word *bank* comes from the Italian word *banco* referring to the bench or counter at markets and fairs where moneylenders did their business. If they lost all their money and went out of business, officials would literally break the *banco* with an ax, signifying they were *bankrupt*.

One of history's most important financial innovations was banking, which was closely bound up with credit. The main problem spurring on this development was the need to safely transport large amounts of cash over long distances in order to carry on trade across Europe. Such journeys were particularly beset by two dangers: natural disasters, especially storms, and attacks by pirates or brigands. Luckily, there were two parties with complementary needs that led to a solution. One was the Church, which needed to send its taxes to Italy from all over Europe. The other consisted of Italian merchants who wanted to take money from Italy to destinations across Europe in order to carry on trade.

At some point, a merchant started sending agents to other countries to trade. However, instead of carrying cash, they had letters of credit that they would present to local Church officials in return for cash that they could use there for trading. When they or church officials returned to Italy, they would bring letters of credit worth the amount borrowed from the Church and present them to the Italian merchant who would then give the church the money he owed them. In that way, both parties could transfer large amounts of money across Europe without carrying any cash.

As this practice caught on, there were other people who wanted to transfer funds across Europe without the risks that came from traveling with cash. Therefore, they would deposit cash with a merchant who had branch offices all over Europe, take a letter

of credit to their destination, and reclaim their cash from the merchant's branch office there. Naturally, the merchant would charge a fee for this service. He would also use the money deposited with him for his own business deals, hopefully making a profit on the depositor's cash before he reclaimed his money. Thus was born our modern institution of banking, an essential ingredient in the capitalist system.

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THE ITALIAN RENAISSANCE (1400-1600)

*"...everything that surrounds us is our own work, the work of man: all dwellings, all castles, all cities, all the edifices throughout the whole world, which are so numerous and of such quality that they resemble the works of angels rather than men. Ours are the paintings, the sculptures; ours are the trades sciences and philosophical systems."--
Gianozzo Manetti, 1452*

Introduction: why Italy? On rare occasion one comes across a period of such dynamic cultural change that it is seen as a major turning point in history. Ancient Greece, and especially Athens, in the fifth century B.C. was such a turning point in the birth of Western Civilization. The Italian Renaissance was another. Both were drawing upon a rich cultural heritage. For the Greeks, it was the ancient Near East and Egypt. For the Italian Renaissance, it was ancient Rome and Greece. Both ages broke the bonds of earlier cultural restraints and unleashed a flurry of innovations that have seldom, if ever, been equaled elsewhere. Both ages produced radically new forms and ideas in a wide range of areas: art, architecture, literature, history, and science. Both ages shined brilliantly and somewhat briefly before falling victim to violent ends, largely of their own making. Yet, despite their relative briefness, both ages passed on a cultural heritage that is an essential part of our own civilization. There were three important factors making Italy the birthplace of the Renaissance.

1) Italy's geographic location. Renaissance Italy was drawing upon the civilizations of ancient Greece and especially Rome, upon whose ruins it was literally sitting. During the Middle Ages, Italians had neglected and abused their Roman heritage, even stripping marble and stone from Roman buildings for their own constructions. However, by the late Middle Ages, they were becoming more aware of the Roman civilization surrounding them. Italy was also geographically well placed for contact with the Byzantines and Arabs who had preserved classical culture. Both of these factors combined to make Italy well suited to absorb the Greek and Roman heritage.

2) The recent invention of the printing press spread new ideas quickly and accurately. This

was especially important now since many Renaissance ideas were not acceptable to the Church. However, with the printing press, these ideas were much harder to suppress.

3) Renaissance Italy, like the ancient Greeks, thrived in the urban culture and vibrant economy of the city-state. This helped in two ways. First, the smaller and more intimate environment of the city-state, combined with the freedom of expression found there, allowed a number of geniuses to flourish and feed off one another's creative energies. Unfortunately, the city-state could also be turbulent and violent, as seen in the riot scene that opens Shakespeare's *Romeo and Juliet*. Secondly, the Italian city-states, especially trading and banking centers such as Venice and Florence, provided the money to patronize the arts. Therefore, the wealth and freedom of expression thriving in the urban culture of Italy both helped give birth to the Renaissance.



The Medici were a wealthy Florentine banking family and the primary patrons of Renaissance culture in the 1400s. While seen as the de facto ruling family of Florence, they were careful not to hold high offices and draw attention to themselves at this time. However, this wasn't as strange as it may seem, because Italian society was ruled through personal and family ties, much like the mafia, more than it was through official state institutions and offices. Cosimo de Medici (1389-1464) carefully built up the family fortune, making it possible to patronize the arts. He also established and protected the peace and balance of power in Italy through the Treaty of Lodi, thus creating the conditions for the Renaissance to flourish.

Lorenzo the Magnificent (above, 1449-92), Cosimo's grandson, carried on the family legacy of patronizing the arts. On Easter Sunday, 1478, he narrowly survived an assassination attempt during mass by the rival Pazzi family, although it did kill his brother, Giuliano. After this he assumed tighter control over Florence and married into a powerful Roman family to gain allies and influence outside of his home city.

Even more than his grandfather, Lorenzo is remembered as a patron of Renaissance artists, including Botticelli, Verrocchio, Leonardo da Vinci, and Michelangelo. Thanks to his astute diplomacy, Florence and Northern Italy experienced peace and prosperity.

Unfortunately, after Lorenzo's death in 1492, things fell apart with a severe religious reaction led by Savonarola taking over the city followed by an invasion by the French, which effectively brought Florence's golden age to an end.

Renaissance literally means rebirth, in this case the rebirth of classical Greek and Roman culture. The traditional view of the Renaissance was that it suddenly emerged as a result of the fall of Constantinople in 1453, which drove Greek scholars to seek refuge in Italy and pass classical culture to Italy. Historians now take this as too simplistic an explanation. For one thing, knowledge of Greek and Roman culture had never completely died out in medieval Europe, being kept alive during the Dark Ages in the monasteries, and during the High Middle Ages in the growing universities. Secondly, a revived interest in classical culture can be traced back to the Italian authors, Dante and Petrarch, in the early 1300's. Thus the Italian Renaissance was more the product of a long evolution rather than a sudden outburst.



Petrarch (1304-74) was an Italian scholar who is widely considered the “Father of Humanists”. Like the great medieval theologian, Thomas Aquinas, he saw religious faith and reason as compatible. Because of his love for classical culture, he supposedly coined the term “Dark Ages” to describe the early medieval era.

The Tuscan dialect in which he, Dante, and Boccaccio wrote would become the basis for standard Italian in the 1600s. Since he traveled across Europe for pleasure, Petrarch is also called the First Tourist, claiming to be the first man since Philip V of Macedon in the third century B.C.E. to scale a mountain as a recreational activity. During his travels, he went through monastery libraries and uncovered a

number of crumbling Latin texts, including previously unknown letters by Cicero.

In 2003, Petrarch's body was exhumed to use his skull to create an accurate image of what he looked like. Unfortunately, DNA tests showed that the skull fragments in his tomb belonged to someone else, although the body was likely his, since it bore the marks of injuries he was known to have suffered, including once being kicked by a donkey.

Still, the term "renaissance" has some validity, since its conscious focus was classical culture. The art and architecture drew heavily upon Greek and Roman forms. Historical and political writers used Greek and Roman examples to make their points. And renaissance science, in particular, relied almost slavishly upon Greek and Roman authorities, which was important, since this set up rival authorities to the Church and allowed Western Civilization to break free from the constraints of medieval thought and give birth to the Scientific Revolution during the Enlightenment.

New patterns of thought. Whether one sees the Renaissance as a period of originality or just drawing upon older cultures, it did generate four ideas that have been and still are central to Western Civilization: secularism, humanism, individualism, and skepticism.

1) Secularism comes from the word secular, meaning of this world. Medieval civilization had been largely concerned with religion and the next world. However, the new economic and political horizons and opportunities opening up for Western Europe in the High and Late Middle Ages got people more interested in this world. During the Renaissance people saw this life as worth living for its own sake, not just as preparation for the next world. The art in particular exhibited this secular spirit, showing detailed and accurate scenery, anatomy, and nature, whereas medieval artists generally ignored such things since their paintings were for the glory of God. This is not to say that Renaissance people had lost faith in God. Religion was still the most popular theme for paintings. But people were now finding other things worth living for in addition to the afterlife.

2) Humanism goes along with secularism since it makes human beings, not God, the center of

attention. The quotation at the top of this reading certainly emphasizes this point. So did Renaissance art, which portrayed the human body as a thing of beauty in its own right, not like some medieval "comic strip" character whose only reason to exist was for the glory of God. Along those lines, Renaissance philosophers saw humans as intelligent creatures capable of reason (and questioning authority) rather than being mindless pawns helplessly manipulated by God. Even the term for Renaissance philosophers, "humanists", shows how the focus of peoples' attention had shifted from Heaven and God to this world and human beings. It also described the group of scholars who drew upon the more secular Greek and Roman civilizations for inspiration.

3) Individualism takes humanism a step further by saying that individual humans were capable of great accomplishments. The more communal, group oriented society and mentality of the Middle Ages was giving way to a belief in the individual and his achievements. The importance of this was that it freed remarkable individuals and geniuses, such as Leonardo da Vinci to live up to their potential without being held back by a medieval society that discouraged innovation.

Besides the outstanding achievements of Leonardo, one sees individualism expressed in a wide variety of ways during the Renaissance. Artists started signing their paintings, thus showing individualistic pride in their work. Also, the more communal guild system was being replaced by the more individualistic system of capitalism, which encouraged private enterprise.

4) Skepticism, which promoted curiosity and the questioning of authority, was largely an outgrowth of the other three Renaissance ideas. The secular spirit of the age naturally put Renaissance humanists at odds with the Church and its purely religious values and explanations of the universe. Humanism and individualism, with their belief in the ability of human reason, raised challenges to the Church's authority and theories, which in turn led to such things as the Protestant Reformation, the Age of Exploration and the Scientific Revolution, all of which would radically alter how Western Europe views the world and universe. These four new ideas of secularism, humanism, individualism, and skepticism led to innovations in a variety of fields

during the Renaissance, the most prominent being literature and learning, art, science, the Age of Exploration, and the Protestant Reformation.

Literature and learning throughout the Middle Ages were centered on the Church. Consequently, most books were of a religious nature. There were Greek and Roman texts stashed away in the monasteries, but few people paid much attention to them. All that changed during the Renaissance. For one thing, increased wealth and the invention of the printing press created a broader public that could afford an education and printed books. Most of these newly educated people were from the noble and middle classes. Therefore, they wanted a more practical and secular education and books to prepare them for the real world of business and politics.

In response to this, new schools were set up to give the sons of nobles and wealthy merchants an education with a broader and more secular curriculum than the Church provided: philosophy, literature, mathematics, history, and politics. Naturally much of the basis for this new curriculum was Greek and Roman culture. Classical authors such as Demosthenes and Cicero were used to teach students how to think, write, and speak clearly. Greek and Roman history were used to teach object lessons in politics. This curriculum provided the skills and knowledge seen as essential for an educated man back then, and served as the basis for school curriculums well into the twentieth century. Only in recent decades has a more technical education largely replaced the curriculum established for us in the Renaissance.

Along the same lines, a more secular literature largely replaced the predominantly religious literature of the middle Ages. History, as a study of the past (Greek and Roman past in particular) in order to learn lessons for the future, was emerging. So was another emerging new discipline deeply rooted in history: political science. The father of this discipline was Nicolo Machiavelli (1469-1527). His treatise on governing techniques, *The Prince*, urges the prince to carry on with whatever ruthless means were at his disposal. This serves as a stark contrast to St. Augustine's concept of the "just war."

Another book of a secular nature was Castiglione's *The Courtier*, which spelled out the ideal education and qualities of a nobleman attending a prince's

court. Unlike the usually illiterate and rough mannered medieval noble, Castiglione's courtier should be versed in manners (such as not cleaning one's teeth in public with one's finger). This ideal of the well-rounded "Renaissance Man" harkens back to the Greek ideal of a well-rounded man and has continued to this day.

Art is the one field most people associate with the Renaissance since it saw the most radical innovations and breaks with the middle Ages. Since medieval art was religious in tone and for the glory of God, artists neglected mundane details, thus making the art seem flat and lifeless. Faces and bodies were cartoon-like, having no individual features or anything approaching accurate anatomical detail. Other details such as background, perspective, proportion, and individuality were all virtually unknown.

Renaissance art contrasted sharply with medieval art in all these respects. More paintings were on secular themes, especially portraits. And even the religious paintings paid a great deal of attention to glorifying the human form and accomplishments. Starting with Giotto in the early 1300's, Renaissance artists increasingly perfected and used such things as background, perspective, proportion, and individuality. In fact, Leonardo's detail was so good that botanists today can identify the kinds of plants he put into his paintings.

Although painting was especially prominent during the Renaissance, other art forms also flourished. For example, architecture broke somewhat with the medieval Gothic style during the Renaissance, relying more heavily on classical forms, in particular columns, arches, and domes as well as building on a massive scale. Possibly the supreme example of this is the dome of St. Peter's in Rome which was designed by Michelangelo and towers 435 feet from the floor.

Baptisteries



Italian custom prevented babies from entering a church until they had been baptized. Therefore

the front of an Italian cathedral was often graced with a baptistry. Thus the baptistry (such as that of Pisa above) became nearly an integral part of an Italian city's religious architecture along with the *campanile* (bell tower) and cathedral (*duomo*, meaning house [of God]).

Bridges

Bridges, were high-rent districts in cities because they were relatively safe from fire, since any urban fires trying to cross the river would bottleneck at bridges where efforts could be concentrated to contain them. Also, they were probably cleaner, since they had their own natural "sewer systems" flowing underneath. In addition, they were easily supplied by water transport, and caught any business crossing the river.

Music in the Renaissance saw developments that would later blossom into classical music. Instruments were improved and the whole family of violins was developed. Counterpoint (the blending of two melodies) and polyphony (interweaving several melodic lines) also emerged during this period.

Science saw little advancement, but it was also important for future developments. In particular, classical authorities were discovered who contradicted Aristotle, whose works were accepted by the Church almost as gospel. Finding conflicting authorities forced Renaissance humanists to ask questions that would lead to developing new theories, which in turn would lead to the birth of modern science in the 1600's and 1700's.

The Age of Exploration also showed Renaissance ideas at work. It was secular in its interest in the world. It certainly displayed skepticism by challenging accepted ideas about the world. And the fact that it pitted individual captains against the forces of nature shows it was both humanistic and individualistic.

The Protestant Reformation was one other result of the Italian Renaissance. The spirit of skepticism challenged the authority of the Church, thus opening the way for much more serious challenge later posed by the Protestants. The Protestant Reformation, in turn, would pave the way for new

patterns of thought in social, political, economic, and scientific matters.

Starting in 1495, Italy's political disunity would attract various outside powers, triggering a devastating round of wars and invasions that ended its most innovative cultural period. However, in the process, the invaders took the ideas of the Italian Renaissance back to Northern Europe and sparked what is known as the Northern Renaissance.

Why Florence led the Renaissance.

Initially, Florentines had gained their wealth as pro-Papal Guelphs who had been allowed to collect Church taxes for the popes. Using this revenue, they developed one of the premier woolen industries in Europe.

Then the Black Death hit in 1347, and Florence, like other cities, suffered horrendous population losses and with that severely reduced tax revenues. To compensate for this, the Florentines heavily taxed the Church, which reacted by excommunicating the city. All this seems to have accomplished was to anger the Florentines against the Church. As a result, Florence had a much more secular outlook that not only tolerated, but even encouraged new ideas, thus making it the center of the Italian Renaissance.

Leonardo da Vinci

Leonardo da Vinci (1452-1519) is arguably the most recognizable figure of the Renaissance, largely because he cut against the grain of the old corporate mentality of the middle ages more than anyone else. Born in the village of Vinci near Florence, he received little formal education (none in Greek), which kept him out of the inner circle of humanists in Florence. However, Vinci's rural setting got him involved in nature and observing everything in minute detail: rocks, water, clouds, plants, and animals.

At age 13, he was apprenticed to Verrocchio, one of the top painters and sculptors of the day in Florence. Such training involved more than slapping paint on a canvas and pouring bronze. An artist also had to know what pigments to use for certain colors and how to mix them properly, as well as how to prepare clay, make molds, and prepare bronze for casting statues. Beyond that,

he had to study human anatomy, which might include attending dissections of human cadavers.

Leonardo's first painting was the angel to the far left in Verrocchio's *Baptism of Christ*. What made it so startling and realistic was the angel actually seemed to be looking at someone rather than off into empty space. Supposedly, Verrocchio gave up painting after seeing the technical genius of his apprentice.

Because of his lack of acceptance into the inner circle of Medici humanists, Leonardo went to Milan where its ruler, Ludovico Sforza, hired him as the court musician and to make costumes, props, court portraits, and, in one instance for a French royal visit, a Lion automaton that reared on its hind legs and spilled lilies (symbol of the French monarchy) from its breast.

Leonardo's fascination with robots didn't stop there. He built a second robot lion in 1515 that walked and moved its head, and designed a third one that was finally built in 2009 based on rudimentary sketches in his notebooks. Powered like a clock by winding it up with a crank from its side, it can walk ten paces, turn its head, move its tail, and bare its fangs. In addition, Leonardo had designs for a human robot that could even play drums, with a device for controlling the tempo.



To a large extent, Leonardo's move to Milan was a turning point in the Renaissance away from the pioneers who looked for the ideal man in the classics and antiquity. By contrast, his real interests lay in the structure of things and how the world worked, so living in Milan gave him more freedom to explore these interests: drawing maps, casting cannons, installing central heating, designing war engines, irrigation systems, palaces, and whole new cities, along with a multitude of various other schemes.

Leonardo had a whole new vision of the world and its underlying realities. The window to this vision was his collection of notebooks, which were full of sketches taking nature to pieces, not to copy it, but to understand it. In his notebooks we find anatomical drawings, especially of blood

vessels and hollows in the head that compare favorably to modern x-ray photos.

His fascination with flight produced ideas for the parachute, the hang-glider, and even a design for an aerial screw helicopter (below). While his design for the helicopter (aka, ornithopter), would not have provided the needed lift, that of his hang-glider has been proven to be valid. In 2008, a Japanese inventor, Gennai Yanagisawa, inspired by Leonardo's designs for the helicopter marketed a personal helicopter, the GEN H-4, for \$58,250.



Other ideas for inventions included machines for grinding needles and mirrors, a rolling mill, an automatic file cutter, an instrument for measuring wind speeds, a steam cannon, a portable bridge, the machine gun, and the tank (which his age could not have powered.) Supposedly, 150 years before Galileo, he even saw how a pendulum could be used to keep time.

In 1482 Leonardo was commissioned to cast a bronze equestrian statue of his patron's father, Francesco Sforza of Milan. It was supposed to be the largest equestrian statue in the world, being twenty-four feet high and requiring seventy tons of bronze. Despite its massive scale and the problems associated with bronze statues, modern research shows that Leonardo had the fluid dynamics accurately calculated, even designing special furnaces so he could cast the horse in a single pouring of 165 seconds.

Unfortunately, after seventeen years of research and building a clay model for the project, war broke out and the bronze, as all too often happened, was requisitioned for cannons. While occupying Milan, French crossbowmen used Leonardo's clay model for target practice and shot it to pieces, ending any chance of him completing his epic project. One likes to imagine the diverted bronze getting vengeance as cannons against the impudent crossbowmen on a future battlefield in Italy.

Luckily for Leonardo, a group of Americans, using his somewhat incomplete drawings for the project, decided to make his horse. On September 10, 1999, exactly 500 years to the day after French crossbowmen demolished his clay statue, the finished bronze statue was officially unveiled in Milan.

In the end, few of Leonardo's ideas made it beyond his notebooks. Similarly, he completed only about a dozen paintings in his lifetime, a source of great frustration to his employers. As Pope Leo X, one of his many patrons put it: *"This man will never do anything, for he begins to think of the end before the beginning."*

So what was Leonardo's contribution? To a large extent, it was his eye for detail. Renaissance artists before Leonardo had included secular details, such as plants and animals, to make their paintings seem more realistic, but when viewed from up close, they generally would be hard or impossible to identify as particular species.

After this, thanks to the background work Leonardo did in observing and sketching in his notebooks, we can identify the exact species of plants in his paintings. And once he had raised the bar of accuracy for details to this level, no artist worth his salt could afford to aspire to less.

This had an even more profound impact on science (or natural philosophy as they called it then), which operated largely in the realm of vague or highly generalized theories. With Leonardo, we see greater reliance on precise observation and recording of data and phenomena, a major turning point in the history of science.

A key event in this respect was the publication in 1542 of Vesalius' *De Fabrica*, the first accurate book of human anatomy. This is seen as one of the key events in medical history, because for the first time, thanks also to the printing press, medical students across Europe could get an accurate look at the inner workings of human anatomy. The fact that it was students of the famous Venetian artist, Titian, who did the diagrams also underscores the fact that people didn't pigeon-hole the various disciplines, in this case art and science, into separate categories.

Thus Leonardo's detailed art was a crucial factor in the history of science.

The Prince

Machiavelli's *The Prince*, was written in the context of the vicious wars and political intrigue plaguing Italy since the French invasion in 1494. It still sparks controversy for the seemingly ruthless techniques the author advocated for a prince to survive such conditions.

For example, when addressing the question of whether it is better for a ruler to be loved or feared, Machiavelli weighs in on the side of fear, using the logic that one can control whether someone fears him more than he can make that person love him. However, he says that fear is quite compatible with an absence of hatred and that a ruler can best avoid being hated by refraining from stealing his subjects' property (including women, who were seen as a virtual subset of property). In fact, he says that taking a subject's property is worse than killing his loved ones, since memories of loved ones will fade while poverty will be a constant reminder of how a ruler took one's goods.

Even today, we use the term *Machiavellian* to describe a strategy of cold-blooded logic seemingly devoid of any morals.

The Gates of Paradise



Besides the initial outbreak of plague that hit Florence in 1347, wiping out 60% of its population, it was hit again in 1363, 1374, 1383, 1390, and 1400 when 12,000 people, some 20% of its population, died. Extreme measures were taken, such as violently ringing the church bells, discharging firearms into the air, and burning ox horn and lumps of sulfur in the streets, the theory being that the intense stench would drive off the plague. One thing it did accomplish was convincing lots of sparrows to drop dead from the trees and rooftops. Also, for whatever reasons, the plague subsided.

However, a new menace threatened Florence, Giangaleazzo Visconti, duke of Milan, against whom Florence had fought a war ten years earlier. Ginger bearded, cruel and ambitious, his coat of arms and coins showed a coiled viper crushing a struggling man in its jaws. In 1385 he had seized power in Milan by imprisoning and then poisoning his uncle and father-in-law, Bernabo Visconti. After that, he bribed the emperor Wenceslas IV to grant him the title of duke of Milan.

By 1401, Visconti had subdued Pisa, Siena, and Perugia, isolating Florence and cutting it off from trade with the sea. He even prevented Florence from importing wire to make brushes for carding their wool.

Having survived the plague, but now facing this second threat, the Florentines decided both to thank and appease God by dedicating a new set of bronze doors on their baptistery. To that end, they held a contest to see which artist was best qualified for the contract. Two finalists were chosen: Filippo Brunelleschi and another young, unknown goldsmith, Lorenzo Ghiberti. They were given one year to complete a 17' by 13' bronze panel depicting Abraham's sacrifice of Isaac. In the end, the judges couldn't decide between the two pieces and tried to award the contract to the two men jointly. Brunelleschi, being a somewhat cantankerous loner refused these terms, so Ghiberti took on the task.

In the meantime, just as he was about to crush Florence, Visconti suddenly died. The Florentines, feeling like David who had defied and defeated Goliath (with a bit of divine help) would later commemorate their defense of liberty with statues of David by three famous artists: Donatello, Verocchio, and Michelangelo.

Also, because of this seemingly miraculous deliverance, the Florentines spared no expense on the bronze doors of their baptistery. The north doors of the Baptistery depicting 28 scenes from the life of Christ took Ghiberti over twenty years to finish (1403-25). The completed doors weighed 17 tons and cost Florence 22,000 florins, nearly equal to the city's annual military budget.

The East doors (above, with a panel on the Drunkenness of Noah), which took Ghiberti over another quarter century to complete (1425-52), depicted ten scenes from the Old Testament. They were so spectacular that Michelangelo called them the “Gates of Paradise.”

A major issue with works of art is the ravages of time. This is especially the case with art that is exposed to the outside elements. Even efforts at restoration can do more harm than good. Such was the case with earlier attempts to restore the Gates of Paradise. Finally, in 2000 laser techniques developed for this purpose were used to restore Ghiberti’s panels. They are kept in a nearby museum in a plate-glass box, into which inert nitrogen is pumped to prevent future decay. Exact replicas of the panels hang on the Baptistery doors so tourists can see them in their original context.

Florence’s Duomo: Santa Maria del Fiore



In 1296, the Florentines, growing wealthy from the wool trade, laid the foundation for a new cathedral intended to be the largest in Christendom, with a dome surpassing that of the Hagia Sophia in Constantinople by twelve feet. Entire forests were needed to provide its timber.

Despite the Black Death in 1347, which destroyed 80% of Florence’s population, the cathedral’s nave and façade had been completed by 1355. However, there remained the problem of how to build the huge dome. Thus the wool merchants’ guild responsible for building and funding the cathedral resorted to the tried and true method of a competition to see who could present the best design.

The normal practice was for architects to build scale models made from wood, stone, brick, or even clay or wax. Such models were often highly detailed and large enough for judges to walk inside. For example, the brick and plaster model of the cathedral for Bologna was 59 feet long.

Below: Brunelleschi’s model of how his dome would look.

After rejecting a Gothic design as being ugly and awkward, its flying buttresses providing visible support, the Florentines adopted Neri di Fioravanti’s design based on his model which was 15 feet high and 30 feet long and proudly displayed in one of the side aisles of the growing cathedral. (A few years later, it collapsed under its own weight, not a good sign.)

Neri’s dome would be ten feet wider than previously planned, making it wider than the Pantheon in Rome. Sitting on a 30-foot high tambor (drum) that rested on an octagonal structure of walls 140 feet high, the dome itself would *start* rising at 170 feet. By comparison, the highest Gothic choir at Beauvais started at 126 feet and rose to 157 feet.

Based on a medieval Persian design widely used in Arabic architecture, it actually would consist of two domes, with a tall outer shell to give the church impressive height and a shallower inner shell that would provide partial support for the outer dome and be better suited to the interior proportions of the church. Furthermore, unlike hemispheric domes, such as the Pantheon in Rome, this dome was to be pointed like a Gothic arch with four interpenetrating buttresses or vaults.

Now all they had to do was figure out how to build it.

In fact the church sat for fifty years without any sort of dome until 1418 when another public competition was held to see who could come up with the best design for completing Neri’s model. The winner was Filippo Brunelleschi.

One major problem was the vast amounts of timber centering needed to support the masonry for the 12 to 18 months it took for the mortar to dry. If the centering were removed too soon, it would weaken the dome, running the risk of it collapsing. However, long-term pressure on the centerings could cause their wood to warp under the weight of the masonry, which would then shift, also bad for the dome. Timber was expensive, being scarce and difficult both to cut (without power saws) and transport.

Removing the centerings was also a hazardous task, in case the mortar wasn't dry yet. One proposal was to support the masonry by building a 300-foot high dirt mound in the church, a technique used in smaller Romanesque churches. One warden sarcastically suggested planting coins in the mound, which, when the time came, would encourage poor people to remove the dirt like pigs rooting for acorns.

Brunelleschi's very radical proposal was to forego wooden centerings altogether. Some considered him a lunatic for making such a suggestion. According to legend, he convinced the panel of judges to award the contract to whomever could stand an egg on its end. He then cracked an egg on its end and stood it up. Whatever the reason, he got the contract.

Precise calculation of the angle of the pitch needed for the two domes to rise along the eight sides of the octagonal drum was another major problem, especially since it had to be built so high up. Brunelleschi adopted a method by architects of Gothic cathedrals where they would draw templates on the ground to the precise measurements of the pitch of the vault and then build the centerings from that once they had all sides matching up on the ground.

Similarly, Brunelleschi cleared an area by the Arno River for such a project. Although he wasn't going to use centerings, he did make a guide between the two shells that could guide both domes as they went up.

Another problem was that the dome's bricks weren't laid in horizontal courses, but angled in at ever increasing angles as the dome rose and its radius shrank from 70 down to 10 feet. Eventually they would lean in at a 60° angle.

Brunelleschi had to invent all sorts of devices for constructing Santa Maria del Fiore's dome. Possibly the most important was the reverse gear which allowed his crane to raise and lower loads without having to unhitch the oxen driving it and re-hitch them on the opposite side of the turnstile.

The famous biographer of Renaissance artists, Giorgio Vasari said of Brunelleschi's machines:

"...by using counterweights and wheels for lifting he made it possible for a single ox to raise a load so heavy that previously it would hardly have been possible for six pairs of oxen to move it." These contraptions were so amazing that people paid to ride them like carnival attractions, until the Florentine government called a halt to the practice, since it was interrupting progress on the building.

Except for the lantern to hang from the center of the dome, the cathedral was finished by 1436 shortly before Brunelleschi died. Until the completion of St. Peter's Basilica in Rome, it had the largest dome in the world, a remarkable accomplishment for such a small city.

The world's greatest practical joke

Brunelleschi was also known for his elaborate practical jokes. When a good-natured carpenter, Manetto "il grosso" (the Fat) irked him for missing a social gathering, Brunelleschi enlisted the aid of a number of people to convince Manetto he was actually someone else.

One evening, after Manetto left his shop, Brunelleschi picked his lock, went inside, and barred the door. When Manetto returned and couldn't get in, Brunelleschi, who also was a great impersonator, claimed *he* was Manetto and told the real Manetto to go away. Manetto, half-convinced by Brunelleschi, left and was then addressed as another man, *Matteo*, by several people, including the artist Donatello and a bailiff who arrested him for gambling debts. Manetto spent an uncomfortable night in jail, convinced the mistaken identity would be taken care of in the morning, although even his fellow prisoners were addressing him as Matteo.

The next morning, two men, the real Matteo's brothers, showed up, bailed Manetto out as Matteo and berated him for his gambling debts as they took him to Matteo's home where everyone else insisted he was Matteo. That night, Manetto was drugged by a potion, carried to his own home and put to bed, but with his head at the foot of the bed. When he awoke in this confusing position he noticed all his tools had been rearranged. Then Matteo's brothers showed up and addressed Manetto by his real name, claiming Matteo had been claiming to be

Manetto for the last day. Soon afterward Matteo himself showed up and confirmed he had had this dream that he was Manetto for a day and as Manetto had rearranged his tools. By this time, Manetto was convinced that he had indeed switched identities with Matteo for a day.

Mind Your Manners: Renaissance etiquette according to Baldassare Castiglione

While we typically associate the Italian Renaissance with Florence, especially in the 1400s, other Italian cities also served as cultural centers, especially after the French invasion in 1494. One such place was the tiny city-state of Urbino under duke Federigo di Montefeltro who ruled from 1444-82. He was a highly successful condottieri (mercenary captain) in his early years and an accomplished scholar and patron of the arts later in life, largely to expiate his earlier sins as a soldier. His court was a model of its time and thus served as the setting for Baldassare Castiglione's book on court etiquette, *The Courtier*.

Some advice concerning Renaissance etiquette according to Castiglione's *Courtier*

- Don't offer someone a fruit from which you've taken a bite.
- Don't tell sad or gruesome stories at parties or mealtimes. Politely change the subject to something more cheerful if someone starts talking like this.
- Bragging about honors, wealth, or your intelligence doesn't go over so well either.
- Do not speak while yawning or yawn while speaking.
- Don't clean your teeth with your napkin or finger. That also goes for your nose.
- Don't lie all over the dinner table or fill both sides of your mouth with so much food that your cheeks stick out like a stuffed chipmunk
- Do not undress, comb, or wash your hair in front of others
- Don't stick out your tongue, rub your hands together, or groan out loud
- Do not talk too much especially if you don't know what you're talking about.
- Never blow your nose and then look inside your handkerchief, as if pearls or rubies had dropped out of your head, because they probably haven't.
- The ideal noble should be educated, quick-

witted, and physically fit, especially in the ability to throw rocks to impress the commoners.

The Renaissance in Rome



St. Peter's Basilica in Rome

By 1425, the "Babylonian Captivity at Avignon, Great Schism (1378-1429), Black Death, and feuds between powerful Roman families such as the Orsini and Colonna had brought the Papacy to its lowest point since the tenth century. An example of this was a mercenary named Braccio who liked to drop his enemies from towers or into boiling oil.

However, the end of the Great Schism in 1429 saw Rome reborn, not so much spiritually as culturally. The new pope, Martin V (1417-31) from the Colonna family was a strong personality who checked crime and violence and stimulated new architectural building. With the popes back in Rome, money from church taxes, court fees, and religious tourists (AKA pilgrims) came flooding back into Church coffers.

Not that everything was stable. For example, when Eugenius IV (1431-47) fled from Rome to Florence, his bishop, Vitelleschi who was left to restore order instead destroyed property and slaughtered his enemies until he was finally poisoned, maybe by Eugenius himself.

Nicholas V (1447-55) was largely responsible for starting the Roman Renaissance. Being an avid scholar, he built a huge collection of books, employing hundreds of copyists and the best scholars, such as Lorenzo Valla, to edit and copy not just Latin works, but also Greek ones that were starting to make their way to Italy after the fall of Constantinople in 1453. Nicholas paved the way for pagan Greek and Roman works of literature and secular studies in general to be accepted by the Church. He even paid 10,000 gold pieces for a good translation of Homer. In

1420, the Papal collection numbered barely 300 books. By Nicholas' death, the Vatican library contained 9,000 volumes and had attained the status as of one of the world's greatest libraries. As pope Pius II would say of the learned Nicholas: *"What was unknown to Parentucelli (Nicholas) lay outside the sphere of human learning."*

Nicholas also wanted to build Rome as a great city, reinforcing its fortifications, paving its main streets, and improving its water supply by restoring the old Roman Aqua Virgo aqueduct, which emptied into a basin later made into the Trevi Fountain.

But his real goal was to rebuild the Vatican, in particular St. Peter's basilica. To that end and showing little apparent regard for antiquity's ruins, he tore down the old basilica and stripped the Coliseum of 2522 cartloads of marble along with marble from the old Circus Maximus, Roman Forum, Arch of Titus, and temple of Venus. Completion of the new St. Peter's and a papal palace protected by the Castel de Angelo would have to wait for later popes. But Nicholas got it started.

Sixtus IV (1471-84) was a pleasure loving, but refined pope who built much of Renaissance Rome. Being born into poverty, he ruthlessly pursued wealth and luxury once given the chance, as the following description of one of his banquets indicates: "Before them were carried wild boars, roasted whole in their entire hides, bucks, goats, hares, rabbits, fish silvered over, peacocks with their feathers, pheasants, storks, cranes and stags; a bear in its skin, holding in its mouth a stick; countless were the tarts, jellies, candied fruits, and sweetmeats. An artificial mountain was carried into the room, out of which stepped a liveryman w/gestures of surprise at finding himself in the midst of such a gorgeous banquet; he repeated some verses and then vanished. Mythological figures served as covers to the viands placed on the table. The history of Atlas, of Perseus and Andromeda, the labors of Hercules were depicted life-size on silver dishes. Castles made of sweetmeats and filled with eatables were sacked and then thrown from the loggia of the hall to the applauding crowd. Sailing

vessels discharged their cargoes of sugared almonds..."--Daughter of the king of Naples

Sixtus also wanted to rebuild Rome as a great city, reinforcing its fortifications, widening and paving its main streets, and building bridges. By this time, Rome had only three of the ancient city's thirty triumphal arches left standing and one of its eleven aqueducts still functioning. Therefore, Sixtus restored the old Roman Aqua Virgo aqueduct to improve the city's water supply, until then drawn from the yellow, polluted and unhealthy Tiber River. The cistern for this restored aqueduct would later be transformed into the Trevi Fountain. He also had the Sistine Chapel built which Michelangelo would so famously adorn. To encourage growth of the city, he gave land to all who would build houses and palaces there.

As a patron of the arts, he brought in many famous painters, notably Signorelli, Botticelli, Perugino, and Ghirlandaio who formed the artist's guild of St. Luke. He also made an important contribution to science with a papal bull allowing bishops to give unidentified bodies and those of condemned criminals to physicians and artists for dissection. This would be a major step forward in the development of Vesalius' anatomy book that would help anatomy students across Western Europe.

Unfortunately, for security, the popes needed to consolidate their hold on the Papal States, for which they hired the best mercenaries of the day, such as Francesco Sforza and Federigo Montefeltro. However, as Papal power grew, it made more enemies and needed strong popes to maintain it. Indicative of this were the popes Alexander VI and Julius II.

Alexander VI (1492-1503). Rodrigo Borgia, whose family name became a byword for papal corruption and violence took the papal name, Alexander VI. Although an able administrator, he probably bribed his way into the papacy, reportedly engaged in wild and expensive orgies, and also made the mistake of getting involved in the big power politics that tore Italy apart starting with the French invasion in 1494. He also spent a lot of money and energy seeking lands and power for his illegitimate children,

most notably Cesare Borgia, whom he made cardinal at age 18, and his equally notorious daughter, Lucretia.

Pope Julius II (1503-13) was the son of a fisherman, who took full advantage of his rapid rise in the Church. As a cardinal, he had three magnificent palaces stocked with girlfriends, at least one of whom repaid him with syphilis, a disease reputed to be very popular with priests.

He took his name from a fourth century pope, but is associated more with Julius Caesar as a warrior. Like Ivan IV of Russia, he was known as the “Terrible” for his rages of punching or thrashing underlings with a stick. However, his wars are what he is most remembered for. According to a poem by Erasmus, when St. Peter wouldn’t let Julius into heaven, he went back to earth, got an army and stormed the pearly gates.

Papal beards. During the siege of Ferrara, Julius came down with a fever and grew a beard during his convalescence, something that was nearly as unheard of among popes as leading armies into battle. The tradition of clean-shaven popes went back to 1031 when the Council of Limoges concluded for some reason that St. Peter was clean-shaven. Likewise priests were prohibited from having beards so that the communion wine wouldn’t get caught in their whiskers.

Although an able warrior, Julius could barely survive in the constantly shifting politics of the big powers (Spain, France, and Holy Roman Empire) using Italy as their battleground. He is probably best remembered for enlisting Michelangelo to paint the ceiling of the Sistine Chapel. He also laid the foundation stone for St. Peter’s Basilica in 1506.

Julius died in 1513. He was actually improving from illness until doctors gave him medicine containing powdered gold, which killed him.

Renaissance Rome. Even if Rome didn’t start the Renaissance, it produced cultural works on the grandest scale. While expensive, these monuments drew more pilgrims who, overwhelmed by the city’s “religious” splendor, often didn’t care about the popes’ reputed scandals and illegitimate children.

Not that behavior in the streets was any better than in the papal palaces. Rome’s population of 50,000 had an estimated 3,000 priests and 7,000 prostitutes. Carnival especially brought out the worst excesses. Bulls were released in the streets to be slain by men on horseback. Condemned criminals were executed by men in harlequin outfits. There were reportedly prostitute contests, races between hunchbacks and cripples, and even the “racing of the Jews” who had to run down the streets in bizarre costumes while being prodded and insulted by the crowds.

Renaissance women



During the Renaissance women, in particular daughters of the rich, usually played a subservient and largely invisible role as wives and mothers. Their status as bearers of (hopefully male) children and little else is reflected in one man’s advice: “*Buy the Adimari girl. She’s good meat with lots of flavor.*” Indicative of this low status was the ring ceremony where the wedding contract was signed, specifying the dowry the bride’s family had to pay to get the groom’s family to take her off their hands. Juliet’s betrothal at age 13 in Shakespeare’s play to a man twice her age and without her consent was typical among upper class urban families.

Marriages were often not consummated until the bride had moved to her husband’s house, which might take weeks or months. On the happy couple’s first night together, it was customary for wedding guests, usually well lubricated with wine, to burst in on the happy couple to make sure the marriage had been consummated and that the bride had been a virgin.

Sometimes, especially among royalty, weddings were performed by proxy where one or both of the primary participants was not present and was represented by a stand-in. To Consummate

such marriages, the proxy couple would lie in bed and let their legs touch.

During a birthing, men were excluded from the room, the main facilitators being midwives who, having extensive knowledge of medicinal herbs, probably provided the best medical care of the day. In fact, if I had my choice between a midwife with a wealth of practical knowledge about medicinal herbs and a doctor trained in the theory that our health depended on the balance of four mysterious humors in our body and the way to restore that balance was through enemas, making me vomit, or taking blood out of my body, I'd take the midwife.

Although childbirth (above) was a risky event, its dangers have likely been exaggerated by Hollywood and novels that focus on royalty and the rich, who were particularly prone to puerperal, or “childbed”, fever. This was an infection typically passed on to mothers and newborns by physicians who didn't wash their hands. Since only the rich could afford such physicians, who were always male, and the poor had to rely on midwives, who did wash their hands, upper class women and their newborns were probably more exposed to the infection and died at much higher rates.

Women were also confined by the fashions they had to wear. In the sixteenth century, Catherine de Medici introduced the corset, which would leave women gasping for air for centuries. According to Catherine, the ideal waist size was 13 inches, a standard which Elizabeth I in her coronation portrait seems to have attained.

Throughout history, the “ideal” figure went through radical mutations in fullness, flatness, position and cleavage. Eighteenth century Europe, in particular, switched breast vogues with wild abandon. However, women, armed with whalebone, iron and padding, tried their hardest to meet the current dictates of fashion.

The early corset ended just below the bust, thus pushing the breasts up. The added lift was not enough for some, however. Toward the end of the 1700s, an early version of the Miracle Bra pushed the bust high — sometimes near the chin. Later, corsets flattened breasts by squeezing the upper body. Corsets were made of cloth,

whalebone and metal. One was even made entirely of metal — the “coat-of-armor” corset.

Up until the twentieth century, daughters of the rich were commonly forced to wear corsets, and boarding houses scolded girls who complained — after all, rib and organ pain usually disappeared after a few weeks.

Corsets eventually became controversial for health reasons, including fainting and muscle atrophy. Many women, however, defended corsets: “*If the various organs are prevented from taking certain form or direction, they will accommodate themselves to any other with perfect ease,*” said one woman in a letter to *Queen*, an 18th-century magazine.

Another popular torture/fashion trend for women was tweezing the hairlines to create an artificially high forehead and the image of height. To that effect, they wore ridiculously high platform shoes that, if nothing else, kept them from running away from their men.

One of the few circumstances allowing women to participate in the high culture of the Renaissance was when a ruler had no sons and invested in the education of his daughters. Such a woman was Isabella d'Este, one of two daughters of the Duke of Ferrara who gave his daughters an excellent humanist education. As the wife of the condottiere and marquis of Mantua, Francesco Gonzaga, she often acted as his regent when he was gone to war, trying to fix his many diplomatic mistakes. After his capture by the Venetians in 1509, she ruled Mantua on her own making Mantua one of the most splendid courts in Italy through her patronage of the arts.



Sofonisba Anguissola (c.1532–1625) was one of the first women to be recognized as a truly accomplished artist in her own right. For the sake of decency, women were restricted in subject matter to portraying women, children, and men to whom they were related.

77. A BRIEF OVERVIEW OF WESTERN PAINTING (c.1400-1945)

Introduction. Doing such a brief overview of Western painting may seem a bit ludicrous, but it does show how art and other threads of historical development influenced each other throughout history.

The Renaissance (c.1400-1600) is a good place to start, because no historical era has been better reflected in its art. Starting sometime around 1400, a more secular approach was capturing the age's spirit and imagination. Renaissance paintings reflected this move toward a more secular realism in two major ways. One was subject matter, many paintings portraying classical Greek and Roman history and legends or being portraits of individuals. The second way painting reflected the spirit of the age was through technique. The use of such things as perspective, proportion, shading, and closer attention details helped create paintings of striking realism compared to anything since the Roman Empire. It should be said that the single greatest patron of the arts was still the Church and religion was the most common theme, but even those paintings reflected the new techniques sweeping across Renaissance Europe.



Perugino's *Christ Giving the Keys of Heaven to St. Peter* (c.1481) is a perfect example of the use of a vanishing point and linear perspective to give a 3-d sense of depth to a picture

The Baroque. By the 1600s, the Renaissance had helped produce the Protestant Reformation, which gave rise to an age of Religious Wars (c.1560-

1648). This was a turbulent and violent age, and the art reflected it. Even the term Baroque, meaning twisted or distorted, suggested dramatic and even chaotic motion. However, there was also more portrayal of everyday life and common people in paintings by such artists as Caravaggio in Italy and a number of Dutch painters. The Dutch Republic became the most prolific center for art in the 1600s, since its wider distribution of wealth created a much broader market for art. Even moderately prosperous tradesmen could afford small paintings, thus supporting some 500 Dutch artists, so many that some were able to specialize in certain genres of art previously considered unworthy of being painted: landscapes, seascapes, still lifes, and interiors of homes.



Despite being a somewhat serene event, *Moor Presenting Lady with a Parrot* Berchem maintains dramatic tension by means of the clouds in the background.

The Rococo (1700s). The age of religious wars helped lead to two things, one cultural and the other political. Culturally, the seemingly endless fighting had discredited religion and fostered a more secular outlook. The result was the age of Enlightenment that especially stressed reason, secular philosophies, and the newly emerging modern sciences. Politically, the turmoil of the last century created a desire for more stability, giving rise to the Age of Absolutism along with the prominence of the nobles and their values. Together, these produced a very ornamental style of art known as Rococo that typically had lighter, sensual, and more secular themes to suit the nobles' tastes.



Fragonard's *Bathers* perfectly reflects the frivolous paintings favored by noble patrons in the 1700s

However, by latter half of the 1700s, many people were reacting against the cold rationality of the Enlightenment and the frivolous values of the nobles. A new spirit crept into the art, stressing romance over base sensuality and sentimentality over cold reason. Typical of the latter were the paintings by Jean-Baptiste Greuze, showing dreamy looking young women holding fluffy lambs or weeping over their dead pet birds. In reaction to the corrupt values of the old regime there was also more stress given to civic virtue and patriotism, setting the stage for the French Revolution.

Romanticism, Neo-classicism, and Realism (early 1800s). The two new ideas of the late Enlightenment, sentimentalism and emphasis on civic virtue and patriotism, were expressed in two new schools of art. One of them, Romanticism, which was also seen in the literature and music of the time, stressed our emotional side, idealized nature and everyday themes through the use of broad brushstrokes of color. Critics called the Romantics' work sloppy since the figures were often kind of blurry instead of precisely drawn (e.g., Turner's "Rain, Steam, and Speed"). The Romantics' more down to earth themes also reflected the more democratic spirit sweeping across Europe at the time.



Liberty Leading the People by Eugene Delacroix shows the romanticized image people in the 1800s had of Liberty their nation., which typically were personified as a woman to symbolize their romanticized purity.

By contrast, the other school of art, Neo-classicism, created precisely painted images from Greek and Roman myth and history to portray the selfless sacrifices of past heroes in order to inspire present day patriots. Jacques Louis David was especially prominent, doing paintings of such events as the *Oath of the Horatii* (below) from Roman legend and Leonidas at Thermopylae Pass from Greek history. However, as an apologist for the French Revolution and then for Napoleon, he adapted his style to contemporary events such as the Tennis Court Oath and the death of Marat during the Revolution.



As the century progressed, the two styles each contributed to a third school of art: Realism. Painters such as Gustave Courbet combined the realistic techniques of Neo-classicism with the contemporary themes portrayed by the Romantics. Thus Courbet did paintings of such mundane things as a peasant funeral and a dead trout, topics that

critics considered beneath the dignity of portraying on canvas. However, this helped set up the next big movement in painting.



Gustave Courbet (1819-77), *The Burial at Ornans* (1849-50). The Realists criticized both the dramatic exoticism of the Romantics and the stiff moralizing of the Neo-Classicalists with starkly realistic portrayals of everyday scenes and common people. This huge painting of a peasant funeral aroused great indignation for its portrayal of such a humble theme on an epic scale.

The second great art revolution: Impressionism and Post Impressionism (c.1863-1900). In the nineteenth century, the industrial revolution produced two new developments that dramatically changed European painting. The first, tin tubes of pre-mixed paint, eliminated the need for artists to mix all their paints in their studios, thus freeing them to take their craft outside and paint on location. Previously, the closest artists had come to this was drawing rough sketches on location and then doing paintings of those sketches in the studio. The second innovation was the camera, which mechanically produced images with photographic accuracy. This freed artists from slavishly having to recreate a scene exactly as it looked. Instead, they could approach their subjects in increasingly non-representational ways.

The Impressionists, such as Monet and Renoir, tried to free themselves from intellectualizing a subject as solid objects (e.g., trees or tables) and painting each of those objects separately. Instead, they tried to rapidly capture the individual impressions of light in a scene, which together would add up to a picture of that scene, but in a different way from a photograph. Now the emphasis was on the fleeting impressions of light and the emotional impressions they left with the viewer. This technique was

especially effective in portraying such things as smoke, rippling water, flags blowing in the breeze, and the splash of colors seen in a bouquet of flowers. Not since the Renaissance had such a revolutionary new approach to art been taken, and the critics and public didn't like it or accept it for nearly two decades. But the Impressionists had opened the door to any number of new approaches to painting.



Gare St. Lazare by Claude Monet shows how the less precise technique of the Impressionists could be used to capture the fleeting moment of smoke emerging from steam locomotive.

Thus the last decades of the nineteenth century saw a number of new approaches to art, sometimes lumped together as Post Impressionists, such as Vincent Van Gogh, whose *Night Café* is shown below. On the one hand there was the scientific or geometric approach, epitomized by Paul Cezanne's attempts to reduce a scene to a collection of basic geometric shapes. Georges Pierre Seurat created whole paintings of tiny colored dots mixed together that would add up to a picture. Paul Gauguin experimented with using solid fields of color rather than shading to create an effect. Another school of art originating in the late 1800s in Germany, Expressionism, focused on portraying emotional experience instead of physical reality. Probably the best-known Expressionist painting is Edvard Munch's "The Scream" (1893).



as Rene Magritte and Salvador Dali, influenced by the work of Sigmund Freud, painted images of the subconscious. Finally, the period also saw increasingly abstract and non-representational art, represented by Joan Miro and Fernand Leger.



The early twentieth century (c.1900-1945).

Building upon these dramatic artistic changes, painters in the early twentieth century explored progressively more radical approaches to art. Much of the art of this period should be seen in light of the catastrophic events of the period: World War I, the Great Depression, the rise of fascist dictatorships, and World War II ending with the nuclear attacks on Hiroshima and Nagasaki. These, along with the faster and more mechanized pace of modern life, led to a good deal of alienation and disillusionment with civilization. The giant of the age was Pablo Picasso, who went through a bewildering number of styles that especially reflected the century's rapid pace of change. One such style was Cubism, taking Cezanne's geometric approach one-step further and reducing a scene to a collage of cubes. Another approach was that of Surrealism, where artists such

Top to bottom: Picasso's *Woman with a Guitar*, Salvador Dali's *Maximum Speed of Raphael's Madonna* showing post World War II fascination with atomic energy, and Joan Miro's *Ciphers and Constellations in Love with a Woman*

Post Modern art. After World War II, the art world fragmented into a dizzying array of schools and

approaches that seemed increasingly out of touch with mainstream culture: Abstract Expressionism, Color field painting, Pop art, Op art, Hard-edge painting, Minimal art, Lyrical Abstraction, FLUXUS, Post-minimalism, and Photorealism. Largely replacing painting in popularity have been new visual media, especially film, video, and television

In recent decades a new term has come into use, postmodern, describing art considered largely contradictory to modern art in its use of such things as collages, objects of consumer or popular culture (e.g., Andy Warhol's Campbell's Soup can), words as a central artistic element and various multimedia. . By the late 1970s some critics were even speaking about the "end of painting", although some artists since the 1980s have returned to representational art, known in its modern incarnation as Figurativism.

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THE REVOLUTION IN RENAISSANCE PAINTING

Introduction. Perhaps the most dramatic, or at least widely acclaimed, breakthrough in the Renaissance was in the realm of art, in particular painting. Not only did Renaissance art reflect growing concern with secular subjects, it involved new artistic tools and techniques that more accurately portrayed those subjects. Pre-eminent among those tools was the shift from tempera (egg based) paints painted on wood or as frescoes on walls to oil based paints applied to canvas.

Materials used. *Frescoes* were wall paintings applied to wet plaster that set into the wall when dry. While this did help preserve the painting, it had several drawbacks. First of all, frescoes dried quickly so an artist had to plan his work thoroughly in advance, since to change any mistakes involved redoing the whole painting. This made frescoes stiff and less spontaneous. Also, the rough surface of a plaster wall made it hard to work details, forcing the artist to use a pointed brush and even at times to stipple the surface dot by dot. To deal with these limitations, an artist would divide the wall into sections, one for each day's work. He would also do extensive preliminary drawings of the planned painting on the wall.

Tempera was the type of paint used, consisting of egg mixed with pigment. This created a light, but somewhat limited range of colors. It dried quickly, which prevented the layering of paints and the subtle shading (known as *chiaroscuro*) of a painting.

Oil based paints were developed as early as the 1100s and were first widely used in the Low Countries in the early 1400s. Since it dried slowly, oil had three major advantages over tempera. First, it could be layered, which made possible the use of *chiaroscuro* & *sfumato* (a technique giving a painting a misty, foggy, or smoky effect). Second, artists could mix colors with oils, giving them a broader and richer palette to work with than ever before. Finally, as evidenced by X-rays of paintings, artists could, and did, change mistakes, thus letting them be more spontaneous in their work.

While oil paints were widely used in the North, they did not reach Italy until about 1475. Artists in Venice were the first Italians to use oil enthusiastically, their paintings being distinguished by the rich reds they often used. From Venice, the use of oil based paints spread rapidly across Italy.

Canvas as a medium for painting had as dramatic an impact on art as did oil paints. Not having to rely on walls, especially Church walls, for a painting surface, artists could paint smaller portraits and paintings with other themes, opening up wider markets for their talents. Canvas was also more portable, so artists could work in the privacy of their own studios where they could better attract models (especially for nude paintings). These two factors, plus growing middle class patronage, led to a commercial revolution in art and the end of the dominance of the Church, kings, and nobles who previously had the money and walls artists needed. Consequently, they could now pursue a much broader range of topics for paintings.

New techniques in painting also helped transform Renaissance art. The most important of these was *linear perspective*, which allowed artists to attain three-dimensional effects on a two dimensional surface. Without it, paintings were crowded and limited in the number of people and details that could be represented. Greek and Roman paintings had achieved a high degree of perspective, but their techniques were lost during the Middle Ages. True linear perspective was first attained around 1420 in a remarkable experiment done by Filippo Brunelleschi, the same man who had designed the dome of Santa Maria del Fiore in Florence.

Brunelleschi painted Florence's Baptistery from the perspective of the facing cathedral doorway. He then drilled a hole through the vanishing point of the painting (which faced the Baptistery) and set a mirror in front of it. As someone in the cathedral doorway looked toward the Baptistery through the peephole, Brunelleschi could raise or lower the mirror so the viewer was alternately seeing the Baptistery or the reflection of the painting. Supposedly, his painting and mastery of perspective were so good, viewers could not tell the difference between the real Baptistery and the reflected painting. This dramatic demonstration, plus more secular themes, proper proportion, and attention to details, triggered a virtual revolution, not just in art, but in a whole new way of viewing the world that has become a vital part of our civilization. In the 1600s, this new perspective on the world would help lead to the Scientific Revolution.

Giotto: A new beginning

Rather than saying medieval painting was bad, it would be more accurate to say it was different. Its point of emphasis was religious, so paying undue attention to secular details

seemed unnecessary, if not a bit sacrilegious. Thus mutant animals, swastika kneecaps, and angry sock puppets, as The Tapestry of Creation from Girona, Spain in the 11th-12th centuries seemed to portray, didn't seem so out of place.



Giotto (1267-1337) served as a transition between medieval and Renaissance art. His paintings, which were usually religious, showed more realistic portrayals of humans, sometimes in an undefined spiritual space and sometimes in a more defined terrestrial location, such as his painting of St. Jerome (below). He was very popular in his own day and helped spread the new ideas and techniques in painting throughout Italy.



Giotto still had a long way to go to achieve the realism of later Renaissance paintings. Although he did a good job with rocky backgrounds and structures such as buildings and tables, his skies, were somewhat generic, while animals and especially plants were somewhat hard to identify. He still used a medieval sense of proportion, with his buildings the same size as humans, making them look like children's playhouses.

Giotto's portrayal of faces was realistic, but typically looked like they were drawn from a single model with an occasional beard thrown in

to distinguish them from one another. Finally, he seems to have suffered from what one might call "Butch Syndrome", where he portrayed babies as looking like forty-year old men who should be smoking cigars. Nevertheless, his work signaled a breakthrough in how people looked at and would portray the world around them. After Giotto there was no looking back.

How to Fresco

The *cartone*, from which we get such words as chart and cartoon, was a full-scale preliminary drawing an artist did before painting a fresco. He would then place over the appropriate part of the wall and poke pin or pencil holes around all the lines, leaving a detailed impression of the picture on the wall that he could use to guide his painting. The fresco was done in four phases.



1) Lay down a half inch layer of intonaco, a mixture of lime and sand that was permeable, absorbed colors and then locked them in. Intonaco was made by heating limestone or marble in a kiln, which produced a white powder called quicklime (calcium oxide). When soaked or slaked in water this created calcium hydroxide that was mixed with sand and applied to the wall. When the water evaporated, the calcium hydroxide reacted with carbon dioxide in the air, once again producing Calcium carbonate that hardened into stone and locked in the paint. Plasterers had to be very careful applying this mixture, because the quicklime generated so much heat that not only could it damage the painting if applied too liberally, but also the stone wall behind it.

2) Apply the cartone through spolvero, thousands of perforations with charcoal blown through them. A faster way was to put the cartone on the wall and trace it with the point of a stylus, leaving impressions in wet plaster

3) Painting a fresco (on wet plaster) so the paint would set in permanently once the plaster was dry.

4) Painting a secco, which was applying a second layer of paint to the dried plaster to add detail and shading. This had the advantage of being able to use a wider array of paints, such as ultramarine that might otherwise be damaged by the quicklime. The disadvantage, of course, was that it would deteriorate more quickly than the colors painted a fresco.

Quicklime was so corrosive, it was sprinkled on corpses to hasten their decomposition and cut the stench. This was especially used during times of epidemic when death (and stench) rates were unusually high. The need for marble and limestone to make quicklime at such times contributed heavily to the destruction of ancient monuments during the middle ages.

True colors

Many of the best colors came from Venice, which had the most access to trade with the East. Artists or even their patrons went there to fetch the needed pigments, the cost of travel offset by the lower cost in using one less middleman.

The most famous dealers in pigments in Florence were the Gesuati friars. Artists were members of the Guild of Apothecaries since they dealt with chemicals that sometimes doubled as pigments and medicines. For instance, gum tragacanth was used both as a binder and to cure coughs, hoarseness, and weals on eyelids.

There were four basic sources for pigments: minerals, earths (soils and clay), dyes (from plant and animal matter), and mixing chemicals.

Smaltino (used for the blue in sky and water) was made by pulverizing glass tinted with cobalt, which had arsenic that was also used as an insecticide. Our word smelt comes from the friars' technique of heating the cobalt to get

smaltino from it to be added to molten glass. In paintings made with smaltino, one can see grains of powdered glass under a microscope. Coarsely ground smaltino yielded dark blue. More finely ground it gave a paler blue. Coarsely ground smaltino was usually the first paint applied because it adhered better to the wetter plaster.

Many pigments came from the clays and soils in Tuscany.

- The yellowish brown soil found around the hills of Siena, if heated in furnace produced a reddish brown we still refer to as burnt sienna.
- Raw umber came from soils rich in manganese dioxide.
- Red ocher was derived from the ruddy clay dug in Tuscany. Minerals produced some of the deepest colors, but also involved laborious grinding.
- St. John's white was produced from quicklime in Florence that was slaked, and buried in a pit for several weeks, yielding a thick paste that was then exposed to the sun to cake.
- Terra Verde came from the grayish green glauconite quarried near Verona.
- Ultramarine (literally "blue that came from beyond the sea") was made with lapis coming all the way from Afghanistan. Therefore, it was the most expensive pigment used for blue, costing eight gold ducats per ounce, thirty times more expensive than azurite, the next most expensive blue.
- Indian Yellow came from feeding mangoes to cows and collecting their urine. It was then pressed into balls of pigment.
- The most lethal paint was orpiment, which contained arsenic sulphide.

For deep carmine red they used the bodies of female wingless insects that fed on prickly pear cactus. More commonly, the root of madder plants (below) was processed to get a deer red pigment.

Brushes were made from the fur of squirrels or short-tailed weasels known as ermine or stoats. However, the lime in the plaster destroyed such brushes. Therefore, Michelangelo used brushes made from hog bristles. Sometimes, he worked so frenetically that bristles were left in the fresco.

Art or porn?

Justifying nude paintings and statues was tricky business back when the Church was closely watching. The most common tactic was to label any nude figure as a character from Greek and Roman mythology or history. Usually, in the case of female nudes, this was the goddess Venus. This was pretty much how the game was played until the 1800s.

For example, in 1863, there were two female nudes displayed at a show in Paris, one entitled *The Birth of Venus* (left), and the other a common woman's name, Olympia. Even though the painting of Venus was every bit as provocative as the Olympia, it was the hit of the show, while the Olympia was the scandal of Paris, prompting rumors that viewing it would cause pregnant women to miscarry and men to go mad and bite people in the streets.

A New Perspective

Around 1413, Filippo Brunelleschi made a painting of Florence's Baptistery from the perspective of the facing cathedral doorway. He then drilled a hole through the vanishing point of the painting (which faced the Baptistery) and set a mirror in front of it. As someone in the cathedral doorway looked toward the Baptistery through the peephole, Brunelleschi could raise or lower the mirror so the viewer was alternately seeing the Baptistery or the reflection of the painting. Supposedly, Brunelleschi's mastery of perspective were so good, viewers could not tell the difference between the real Baptistery and its reflected painting.

Perspective had been born. Or more likely, reborn, since the Greeks and Romans seem to have mastered it too.

Although Brunelleschi's painting has not survived, his technique of creating the illusion of a three-dimensional image on a two-dimensional surface has.

Masaccio (1401-28), an artistic genius who unfortunately died at a young age, is credited with first using Brunelleschi's linear perspective in the painting *Trinity with the Virgin* (1425) along with pioneering the use of one light source to illuminate a painting.

Massaccio was known as Sloppy Tom, reflecting an apparent trend in Renaissance artists either to be naturally ugly or take little care in how they looked. Similarly, the popular nickname for famous medieval artist, Cimabue, meant "Oxhead."

The first "super-model"

Artists often like to use the same model in many or most of their paintings. Such was the case with Botticelli and a young woman named Simonetta Vespucci, who was considered the most beautiful woman in Florence. Botticelli painted her numerous times: as Venus, as the goddess Flora in *Spring Allegory*, as the Virgin Mary, and as Athena, along with at least two portraits. In fact, she was supposedly the only woman he ever painted. When she died from tuberculosis at age 22 all Florence mourned her passing. Even though she was married, Botticelli, along with most of the men in Florence, was in love with her, and he had himself buried at the feet of her grave when he died.

According to legend, Giuliano de Medici, Lorenzo's brother, had a vampire-hunter catch a vampire who turned Simonetta into a vampire to save her from dying. However, when she found Giuliano more appealing as a man than a lover, he had her cornered in Florence's bell-tower, from which she jumped to her death.

Savonarola and the Bonfire of the Vanities

The French invasion of Italy in 1494 triggered a powerful religious reaction against Renaissance secularism. Its leader, the monk

Savonarola, imposed a harsh reign on Florence, burning many of its luxuries, including a number of paintings, in what became known as the Bonfire of the Vanities.

Savonarola was overthrown and executed in 1498, but not before he had profoundly influenced the work of artists such as Botticelli, who after that only painted religious themes, such as his Pieta.



Mona Lisa (1503-6) is probably the portrait of a Florentine merchant's wife, this painting shows Leonardo's genius in several ways: the great eye contact, the more relaxed 3/4 pose, the use of sfumato (layered thin translucent glazes of paint to give the impression of haze), and the busy background of jagged peaks, winding roads, and receding waters to give tension to this otherwise placid painting.

Leonardo used musicians and jesters to keep his subject amused through the sitting. He even lived in a hospital and dissected over 30 cadavers in his research to render the hands flawlessly.

People viewing this painting in the Louvre in Paris are typically struck by its small size, given how large it looms in the history of art. Most likely, the merchant who commissioned the painting could only afford a small portrait. In fact, for whatever reason (lack of payment?) Leonardo kept the painting for himself and later sold it to the French king, Francis I.



The Last Supper (1495-8) depicts the dramatic moment when Christ reveals that one of his disciples will betray him. Much of its genius is the depiction of the wide array of emotional reactions by the disciples: ranging from shock

and disbelief to dismay and feigned innocence (e.g., Judas, who is the fourth from the left, holding a bag of what is presumably the thirty pieces of silver for which he betrayed Jesus). Yes, all twelve disciples are there, the womanish figure sixth from the right apparently being the apostle John rather than Mary Magdalene, a blow to the theory of that being Jesus' wife.

The painting's effect comes from it being painted at the end of a long dining hall, to add to the appearance of depth. This also gives it a masterful effect of single point perspective with all the lines of the painting and room converging over Jesus.

Its poor condition is largely due to Leonardo experimenting with painting on dry plaster, as opposed to fresco. His experiment did provide him a wider palette of colors, but paint started chipping off almost immediately. They've been trying to restore it almost continuously ever since.

Two other bits of trivia about this painting. Because of Leonardo's irregular work habits, the prior of the abbey constantly hassled him to finish the painting. To the prior's shock and dismay, when it was finished after three years, he saw that his face had been used to depict Judas.

Leonardo did paint Jesus' feet, but around 1650 someone decided to put a door into that part of the wall. Luckily it wasn't a window.



Davids. Another theme for bronze statues that both Donatello (c.1440) and Verrocchio (c.1475) tackled was that of the young David after slaying Goliath. Both statues used the Greeks' more natural pose known as *contrapposto*, showing a subject's weight shifted more to one side than the other. However, Donatello really pushed the limits in

emulating the classical Greeks by portraying David in the nude. While Verrocchio's statue was intended for public display, Donatello's nude portrayal was considered appropriate only for private viewing.

Twenty-five years later (1501-4), Michelangelo would show David both in the nude and as a full grown man, indicative of the more self-assured spirit of the High Renaissance after 1500.

Bronze statues

Casting in bronze, especially for large equestrian statues, was an especially delicate operation. First a full-size model of the statue would be fashioned from clay mixed with cow dung and charred ox horn, then covered with a layer of wax, and another thin layer of clay with holes left in the top and bottom. The whole thing would be suspended over a fire so the wax would melt and run out through the holes in the bottom, which would then be plugged up. Then molten bronze would be poured into the hole or holes in the top. Once the bronze had cooled and solidified, the outer layer of clay would be broken off to reveal the bronze statue.

The main hazard of such an operation was uneven cooling of the bronze that could cause it to contract unevenly and crack. Before casting a bronze statue, Michelangelo, would even have a special mass in the hope of ensuring everything would go well. He should have prayed for their long-term survival, since two works he successfully completed, a 14-foot bronze statue of Pope Julius II and a 4-foot statue of David were both later melted down for the bronze to make cannons.

In fact a major hazard for bronze statues was warlike rulers in search of the metal for casting cannons. There's no telling how many statues ended up on the battlefields of Europe mowing down thousands of soldiers, most of whom probably had no appreciation for art

anyway. One strategy to save a statue from such a fate was to cast it from as thin a layer of bronze as possible so it wouldn't be worth the ruler's time to melt it down. Using less bronze was also cheaper, but it also made statues more fragile.

Bronze equestrian statues were a Roman tradition that Renaissance artists were eager to revive. Done in 1453, Donatello's statue of the condottiere, Erasmo da Narni, (AKA Gattamelata, meaning honeyed cat), was the first equestrian statue cast since Roman times. It was 25 years before Verrocchio successfully completed the next such statue, that of another condottiere, Bartolomeo Colleoni (1479-83), who served Venice.

Michelangelo

Michelangelo (1475-1564) did more than anyone to elevate the status of the artist. He believed creativity was divinely inspired and that sculpture was the highest art form. His wet nurse's husband was a stonecutter, which may be where he got his fascination for sculpture, despite his father's strong approval.

While early Renaissance painting was beautiful; Michelangelo's art moved it into a new phase, often referred to as the High Renaissance. Instead of being delicate and pretty, his art was vast, powerful, rugged, and even terrifying, such as his statue of Moses, which Norman Rockwell paid a tribute to with his wartime poster of Rosie the Riveter.

Like many artists, Michelangelo was a solitary character, usually dirty from his work, and unattractive, especially after his nose was broken in a brawl with another artist. He did a particularly unappealing self-portrait in The Last Judgment, portraying himself as the sagging flayed skin of St. Bartholomew. He could also have a mean sense of humor. Once, when asked why an ox in another artist's painting was its most convincing element, he remarked, "Every painter does a good self portrait". Despite his cantankerous personality,

he was typically referred to as the Divine Michelangelo.

Not surprisingly, Michelangelo's arrogance also led to a stormy relationship with his patrons. It didn't help when they were also obnoxious or small-minded, such as the son of Lorenzo de Medici who made him use his talents to sculpt a snowman. Popes constantly interrupted his work for other projects, leaving many others unfinished. For example, Julius II commissioned Michelangelo to create 40 lifelike statues and a ten-foot tall one of the pope for his tomb as the centerpiece of St. Peter's Basilica. Despite 40 years of constant interruptions and whittling down the scale of the project, Michelangelo referred to it as the "tragedy of the tomb".

Michelangelo was so skilled a sculptor that he never had to add pieces of marble to cover mistakes. His first work of renown, the *Pieta* (1499), now residing in St. Peter's Basilica, captures the pathos of any mother who has lost a son. Upon hearing that one viewer attributed it to a more experienced sculptor, the artist carved his signature on the ribbon across the Virgin's breast, making this his only signed work.

The Sistine Chapel

The Sistine Chapel was Michelangelo's most famous and ambitious project. Built by pope Sixtus IV, its dimensions were meant to match those of Solomon's Temple in Jerusalem (130' X 43' X 65'). It was used for papal elections as well as a fortress, with 10' thick walls, arrow loops, walkways for guards, and barracks, which also made it useful as a prison later on.

Other famous artists had already adorned the walls with frescoes. In 1480, after a war with the Papacy, Lorenzo the Magnificent had sent several artists to fresco its walls: Perugino ("Christ Giving the Keys of Heaven to St. Peter"), Botticelli, and Ghirlandaio (Michelangelo's future mentor whose ambition had been to fresco the entire five-mile circumference of Florence's fortifications). Therefore, Pope Julius II only wanted the ceiling decorated with a few vines on a blue background.

Instead Michelangelo gave him the book of Genesis from Creation to the Great Flood in a fresco nearly half the length of a football field and covering 10,000 square feet with 340 larger-than-life figures. Complicating the task was the curved ceiling divided by cross vaults and a leaky roof that kept the plaster from drying properly.

Despite his supposed disdain for painting compared to sculpture (aggravated by the fact that ceiling paintings were usually delegated to minor artists since they were harder to see), the Sistine Chapel ceiling was a product of his full imagination depicting muscular nudes with twisted torsos and expressive relief-like qualities in their faces. Even though more women than usual were represented, Michelangelo only used male models, which explains why his women look so muscular.

Michelangelo completed the entire work in just 4 years, working with almost no help from a 60-foot scaffold, either lying on his back or standing with his head crooked backward. As a result of working in these conditions, he suffered serious eyestrain, claiming he could only read at arm's length holding a book above his head, the position in which he had painted the Sistine ceiling.

According to legend, Michelangelo wouldn't even let Pope Julius see the painting until the first half was completed. Therefore, Julius, dying to take a peek, bribed someone to let him in one night. Michelangelo, having sniffed out this plot, waited in ambush to drive out Julius by pelting him with planks. He then fled to Florence until the pope cooled down.

In fact, Julius gave Michelangelo a lot of freedom in how he painted his ceiling, and was exceedingly pleased when the first half of the ceiling was unveiled and he saw this powerful new approach to art.

Nudity in art. One issue that shocked many contemporaries was the portrayal of nudity, of which there was plenty, in Michelangelo's art.

In the middle ages, nudity was associated with sin and any nudes portrayed were usually shown in Hell. Even Donatello's nude statue of David (c.1440) was kept from public view and confined to private viewing. However, by the late 1400s drawing from nude models was a standard part of an artist's training, so the issue was bound to surface, and Michelangelo was the sort of person to meet it head on and pave the way for future artists.

Not that it was easy for Michelangelo. When he completed his epic nude statue of David, the Florentine government insisted on covering certain strategic parts with a garland of 28 fig leaves. The only thing that kept pope Hadrian VI from tearing down the Sistine chapel's ceiling frescoes was his untimely (or timely, depending on how you look at it) death. Michelangelo's fresco of the Last Judgment on the far wall of the Sistine Chapel wasn't so lucky. A later pope had loincloths strategically painted on it by an artist who became known as Big Underpants Man. Even in the late twentieth century when Florence offered the city of Jerusalem a copy of Michelangelo's David as a gift to celebrate the 3000th anniversary of its founding, it was only accepted after being fitted with underpants.

Helping his cause was the discovery in 1506 of the Hellenistic Greek statue of Laocoon that was done in the nude. Such a discovery was a big event then, with cheering crowds lining the roads and tossing flowers as it was transported to the Vatican. Every classical nude discovered just added further respectability to the genre by being associated with the Greek and Roman civilizations.

Some random fact about the Sistine Chapel ceiling fresco:

- The forbidden fruit Adam reaches for is not an apple, but a fig, which was a symbol of lust, thus explaining the use of fig leaves to cover certain parts of paintings.
- Portraying God in human form and flying through the air was a radical new approach. Medieval paintings would just show a giant hand reaching down from the sky. Even more

confusing may have been portraying God as an older man with flowing beard, a convention Michelangelo adopted from classical statues of the Roman god Jupiter. As a result, it took people some time to catch on to the fact that the old man reaching his finger toward Adam represented God. In fact many thought God's extended finger was a gesture of scolding, not imparting the spark of life into Adam.



- Speaking of figs and fingers, the barely perceptible small child next to the Cumaean Sibyl is making an obscene gesture, known as “making a fig” by sticking his thumb between his first two fingers. Luckily, at least for Michelangelo, the gesture is too small to be seen from floor level.



The Last Judgment was Michelangelo's other contribution to the Sistine Chapel, filling an entire wall with his terrifying portrayal of the title subject. Done 29 years after the Sistine ceiling, it is a much gloomier painting, with nearly 400 figures, most of them in contorted shapes as they tumble into Hell or struggle to escape. It is said that when Pope Paul III first viewed it, he fell to his knees saying, “Lord hold my sins not against me.”

Restoration of all the chapel's frescoes (including those done by Ghirlandaio, Perugino, Botticelli, and Raphael) took place between

1980 and 1999. There were three types of things to repair: cracks and salt damage caused by water seeping from above and settling of the building, candle smoke and soot damage from below, and removal of linseed or walnut oil from previous restorations that made any crystalline damage transparent and didn't damage the colors, but left a transparent film. In fact, this transparent film had helped protect the frescoes from exhaust and pollution coming in through the windows lining the upper tier of the chapel. Thanks to the thin layer of paint Michelangelo used, the chemicals had largely seeped through the fresco without doing any damage.

Most of this was carefully washed away without having to fill in gaps or cracks with new paint. After the restoration, the windows were permanently closed and a sophisticated air conditioning system installed to protect the frescoes from the heat, humidity, dust, and bacteria brought in by the huge crowds of tourists.

There has been plenty of criticism of the restoration, much of it revolving around the restorers' conclusion that Michelangelo painted only on wet plaster (*buon fresco*) and never came back to add details or shading to the work on dry plaster (*a secco*). As a result, they stripped everything down to the plaster on the assumption it was all dirt or chemicals added by previous restorers. Critics claim he did work *a secco* on parts of the ceiling, especially doing shading, and thus the recent restoration has destroyed or damaged much of his original work.

Rafael (1483-1520) was one of the most popular artists of his day. Unlike many disagreeable and eccentric artists, such as Donatello and Michelangelo, Rafael seems to have had a pleasant personality. He also seems to be one of the few artists who were good-looking and well groomed. Renaissance artists, such as Cimabue ("Ox head"), Masaccio ("Sloppy Tom"), and Michelangelo were better known for their unkempt and ugly appearances.

Therefore, when Rafael died at the young age of 37, he was greatly mourned.



One of his most famous paintings was *The School of Athens* (1510-11). This is a virtual greatest hits of Greek philosophers spanning several centuries. In the middle are Plato (pointing up to the perfect unchanging world of Being above) and Aristotle (pointing down to the earth where real knowledge can be gained). Shown in the pose of *The Thinker* in the foreground is Heracleitus, which is reputedly a portrait of Michelangelo.

Landscapes

Landscapes at this time were not considered worthy topics for paintings. Michelangelo among other artists usually consigned such background details to apprentices. However, Giorgione's *The Tempest* (1506-8) may be among the earliest examples of an artist bucking this tide.

Ranked by a poll of art historians as the third best painting ever, there is no consensus on its meaning. In the foreground is a woman nursing a child and a man looking in her direction. One idea is it represents the expulsion of Adam and Eve from Paradise, but X-rays show the artist originally had a woman where the man is standing. It could be Giorgione was mainly interested in doing a landscape. However, since that was considered too trivial a topic for a painting, he may have thrown some people into the picture to satisfy potential critics.

A number of later artists may have followed this strategy of justifying their landscapes by putting in a few people and entitling the paintings after them or events associated with them. Not until the 1600s in the Dutch Republic would the landscape and still life emerge as legitimate topics for painters.

THE NORTHERN RENAISSANCE (c.1500-1600)

Introduction. There are several reasons why the Renaissance came later to Northern Europe. First, it was further removed from the centers of trade and culture in the Mediterranean. As a result, towns, trade, and the more progressive ideas that tend to come with wealth developed more slowly in the North. Along these lines, the greater influence of feudalism and the Church kept the political, social, and intellectual institutions much more medieval and backward. This in turn provided more resistance to the humanistic ideas developing in Italy.

However, the revival of towns and trade in the North combined with other factors in three ways to bring the Renaissance to Northern Europe. First of all, the urban revival in the North along with the Portuguese and Spanish overseas colonies created the financial resources needed to patronize the arts. Secondly, growing trade in the North, combined with the French invasion of Italy in 1494 and the ability of the printing press to spread ideas quickly and accurately, led to growing contact with the ideas of the Italian Renaissance. Finally, the rise of towns together with the rising national monarchies in France, England, Spain, and Portugal led to the decline of the feudal nobility and medieval Church. This created less resistance to the new ideas from the Renaissance. All these factors came together to produce the Northern Renaissance (c.1500-1600).

Bruges

Much like Florence in Italy, the Flemish city of Bruges was both the leading banking and cultural center in northern Europe in the 1400s. As in Italy, activities in North European cities usually concentrated around the town squares. Besides a market place, there would be the town hall, a symbol of civic pride nearly equal in importance to the town's cathedral.

The Northern Renaissance was not a mere copy-cat of the Italian Renaissance. The movements in Italy and the North differed in two ways. First of all, the Church's influence, despite being shaken by recent corruption and scandals, still was strong enough to make the Northern Renaissance more religious in nature. Second, the rising power of the national monarchies made the Northern Renaissance more nationalistic in character.

Reconciling religion and the Renaissance. The more intense religious feelings prevailing in Northern Europe posed a difficult question: could a humanist education based on classical culture be reconciled with Christianity? The answer humanists came up with was yes. This was largely thanks to the greatest humanist of the age: Erasmus of Rotterdam (1466-1536). Called the "Prince of Humanists" and the "scholar of Europe", Erasmus dominated Northern Europe's culture in a way few, if any, other scholars have before or since his time. So great was his reputation that kings and princes from all over Europe competed for his services at their courts. Erasmus popularized classical civilization with his *Adages*, a collection of ancient proverbs with his own commentaries. His *Praise of Folly* satirized the follies and vices of the day, in particular those of the Church, while further popularizing humanism. Erasmus was still a pious Christian who pushed the idea that it was one's inner spirit, not outward shows of piety through empty rituals, that really mattered. However, he saw no contradictions between Christianity and ancient cultures. He underscored this attitude by referring to the ancient Greek philosopher, Socrates, as "Saint Socrates".

Among the stock characters criticized in Erasmus' *Praise of Folly* were Franciscan friars who were no longer the austere mendicants of St Francis' day. Our picture of Robin Hood's comrade, Friar Tuck, as a jolly hard drinking and hard-fighting man largely come from Erasmus' stereotype. However, contemporary stereotypes were often much more critical, seeing them as fat, bloated, lazy, and corrupt.

***The Thousand Adages* was a collection of wise sayings by the ancients compiled by Erasmus to show that they had wisdom and moral values compatible with Christianity, thus helping justify humanistic studies. The first edition published in 1500 had about 800 such proverbs. His final edition before he died had over 3,000, while he had collected 4,658 of these sayings. Many of these, or variations on them, have made their way into our own common wisdom:**

- **Like teaching an old man a new language (Can't teach an old dog new tricks)**
- **A necessary evil**
- **To squeeze water out of a stone**
- **To leave no stone unturned**

- **God helps those who help themselves**
- **The grass is greener over the fence**
- **The cart before the horse**
- **To sleep on it**
- **To break the ice**
- **Ship-shape**
- **To look a gift horse in the mouth**
- **Like father, like son**

Other humanists in the North would pick up this banner. In England, Thomas More brilliantly defended studying classical Greek and Roman culture by saying their knowledge and the study of the natural world could serve as a ladder to the study of the supernatural. Besides, he pointed out, even if theology were the sole aim of one's education, how could one truly know the scriptures without knowing Greek and Hebrew, their original languages? It was in this spirit that the French humanist, Lefebvre d'Étaples, laid five different Hebrew versions of the Book of Psalms side by side in order to get a better translation than the one in the Latin Vulgate Bible. Even in Spain, the most staunchly Christian country in Europe, Cardinal Ximenes, who served as virtual prime minister for Ferdinand and Isabella, set up a university at Alcalá with a very humanist curriculum. Its purpose was to use humanism to provide better understanding of Christianity. The major accomplishment of Erasmus and the Northern humanists was that they successfully defended the study of the classics and a more secular education as a ladder to better understanding of Christianity. This in turn paved the way for using a secular education for more secular purposes and that would revolutionize Western Civilization.

Art also reflected the more religious nature of the Northern Renaissance. Secular and even mythological themes would appear, but with less frequency than in Italy. This intense religious passion is especially reflected in the work of the Spanish artist, El Greco. Technically, art in the North lagged behind Italy throughout the 1400's, especially in its use of perspective and proportion. The key turning point came when the German artist, Albrecht Dürer, traveled to Italy in 1494 to study its art. Dürer was heavily influenced by the Italians and the ancient writer, Vitruvius, in their efforts to find the mathematical proportions for portraying the perfect figure. Among other things, this shows a growing fusion of art and science that anticipated the scientific revolution that would sweep Europe two centuries later. Other northern artists followed Dürer, and from this time one sees a more realistic art in the North, which approached the standards of the Italian artists.

Art in Northern Europe was on the whole more medieval (i.e., religious) in theme than its Italian counterparts, but leapt ahead of Italy in a couple ways. One of these was the invention of oil paints. Hubert Van Eyck was popularly credited with this innovation in the early 1400s. As a result, his right arm was preserved as a holy relic.

Since oil dried more slowly than tempera, colors could be mixed better, thus giving a deeper and broader range of colors, as seen in Hans Memling's painting of the *Madonna and Child*

Artists in the North also painted everyday objects with more precise detail. Part of this was the result of the greater possibilities oil paints offered. Part of it also came from the fact that, in contrast to the Italians' reverence for and emulation of classical idealism and the idea of elevating the status of humans, Northern artists did little to cover up human shortcomings, since God's glory and fear of eternal damnation was more their focus. Therefore, their portraits typically had a stark realism about them, while other paintings were more likely to be concerned with the terrors of Hell, as in Jan Van Eyck's painting of the *Last Judgment*.

The emerging national cultures in the Northern Renaissance. The other major feature of the Northern Renaissance was the national character of the cultures that were evolving along with their respective nation-states in Europe. The literature of the age especially showed this in the tendency of authors to write in the vernacular to reflect their respective national cultures. In Spain the great literary genius was Cervantes, whose *Don Quixote* showed the changing values of the age by satirizing the medieval values of the nobility. Probably the greatest literary genius of the age was William Shakespeare, whose work reflects heavy influence from the Italian Renaissance. Many of his plays have Greek and Roman themes, sometimes copying the plot lines from classical plays (e.g.--*Comedy of Errors*) or take place in Italy (e.g.--*Romeo and Juliet*). However, many of Shakespeare's other plays take place in England and reflect the fact that the various nations in Northern Europe were

defining their own unique cultures apart from Italian and classical influence.

Results of the Northern Renaissance. Ironically, one could say the most important result of the Northern Renaissance was a religious revolution. This was the result of a several factors: anger at the church's corruption, awareness of which was magnified by the printing press, the rising power of kings at the expense of the popes, and the fusion of Renaissance ideas from Italy with the still intense religious fervor and emerging national cultures of the North. The dynamic combination of these factors would lead to the Protestant Reformation that, in turn, would branch off in three lines of development.

First, the Protestant Reformation would open the way for new ideas about money and the middle class, and that would help lead to the triumph of capitalism in Northern Europe. Secondly, the Protestant Reformation would play a vital role by shattering the Church's monopoly on religious truth, breaking its iron grip on scientific thinking, and paving the way for the Scientific Revolution of the late 1600's and 1700's.

Third, the growing power of kings in Northern Europe, combined with Renaissance learning and local anger at Church abuses, helped pave the way for more secular theories about the state. Among other things, this would lead to the theoretical backing for the democratic revolutions that would eventually overthrow the very monarchies that the Renaissance had earlier helped build.

The Arnolfini Wedding Portrait and the Camera Obscura Controversy

Jan van Eyck (1390-1441) took oil painting to a peak of realism, even depicting beard stubble with amazing microscopic precision. His painting, Man in a Red Turban, which is possibly a self-portrait, is the first known painting where the subject looked at the spectator.



The Arnolfini Wedding Portrait is one of van Eyck's most famous and remarkable paintings. Almost every object in it symbolized the painting's theme of sanctity of marriage:

- **The dog represents fidelity, although in other contexts it can represent lust.**
- **The cast off shoes indicate they are standing on holy ground.**
- **The bed and picture of St. Margaret on the back of the chair represent childbirth, the purpose of marriage.**
- **Van Eyck's signature and reflection in the mirror show he was a witness to the wedding.**
- **The bride's apparent pregnancy is probably more symbolic of the hope of children. The prevailing fashion in dresses of the time seemed to emphasize this. So did the normal portrayal of women's abdomens. Since most such pictures of women showed them burning in Hell, it seems unlikely they were supposed to be pregnant, as this would indicate God was condemning unborn babies to eternal damnation as well. In fact, the Arnolfini marriage remained childless.**

Even more striking about this painting are the technical details, in particular the chandelier and reflection in the convex mirror showing the artist. There has been speculation that van Eyck and other North European artists used a device known as the *camera obscura* to capture this level of detail.

In the camera obscura, a convex mirror inside a box reflects an image from outside against

the opposite wall. Although the image is backwards and upside down, it can still be traced precisely by an artist. Some art historians think this is how Flemish artists attained such photographic realism in some of their paintings. One bit of evidence supposedly supporting this theory is the disproportionate number of left-handed people in their paintings, suggesting they were traced from the backward images reflected by the mirror.

However, there are several problems with this theory, in particular with the mirror:

- 1) Polished metal cannot project an image with the resolution required for such a detailed painting. Only a glass mirror can.
- 2) Measurements of the convex mirror in the painting show that the a concave mirror used for projecting the image for this painting would require a focal length of 61 cm. The diameter of the glass sphere from which such a mirror was made had to be four times that size. That would require a glass sphere 2.4 meters in diameter, far beyond the capability of craftsmen then.
- 3) There is no evidence that craftsmen of this time could make concave glass mirrors by reversing a glass sphere, silvering it, and sealing it with hot tar or pitch.
- 4) Other calculations and experiments indicate that the lighting in the room would not have been bright enough to project a traceable image.
- 5) Infrared reflectography shows that Van Eyck did preliminary drawing and changes in oil paint, not in pencil, which would not be consistent with tracing a projected image.

Hieronymus Bosch (1450-1516)

Hieronymus Bosch's surreal paintings have been subject to various interpretations from one era to the next. They were especially popular with the counter-culture in the 1960s since they seemed to be inspired by some sort of hallucinogenic drugs. Maybe there was something in the bread, like a bread mold

known as ergot, which does cause hallucinations.



But Bosch's message, taken in the context of his own times, was fairly consistent and clear to his contemporaries: shape up or go to Hell. His art also highlights a major difference between the art of Italy and the rest of Western Europe: a greater obsession with and fear of Hell, demons, and the Judgment Day.

Along those lines Bosch and other artists of the time also liked to depict human folly and its rewards, as seen in paintings such as *The Stone Operation* and *Ship of Fools*.

One intriguing image from Bosch's *The Last Judgment* is the panel known as "Ascent of the Blessed", which is reminiscent of how people describe near-death experiences.



Pieter Brueghel the Elder (1525-69)

Brueghel was another Flemish artist who was heavily influenced by Bosch's apocalyptic visions along with his pessimism and satiric approach to human nature. One genre that especially distinguishes Brueghel's work is his depiction of scenes of peasant life, something quite rare at this time and thus representing an invaluable record of the lives of the common people. Such works as *Hunters in the*

Snow (above), *The Numbering at Bethlehem*, *Children's Games*, and *Peasants Attacked by Robbers* give us insights into daily life that no contemporary writers do. For example, his incredible eye for details even show us winter sports such as sledding and skating (using skates made from horses' shins).



Oftentimes, these paintings, such as *The Blind Leading the Blind*, *The Beggars*, and *the Land of Cockayne*, also served the purpose of moralizing about human nature, showing people with exaggerated and even bestial expressions to further make his point. This might have been less acceptable if he had shown the upper classes instead. Or maybe he used such moralizing to justify portraying commoners.

However, the date (1566) and place of this painting are important, because, the Spanish Netherlands were then on the verge of rebellion against Spanish repression. Thus the painting, with contemporary figures and setting, also serves as anti-Spanish propaganda. But Bruegel, if ever questioned by the authorities, would never admit that was its real message.

Bruegel especially shows Bosch's influence in his paintings with apocalyptic themes, such as *The Triumph of Death*, *Fall of the Rebel Angels*, and *Mad Meg* (below), which are jam packed with all sorts of terrifying and bizarre creatures and other frightening details meant to scare us straight.

El Greco (1541-1614) is considered the epitome of capturing the spirit of both the Spanish Renaissance and Catholic Reformation, even though, as his name indicates, he wasn't originally from or raised in Spain. He was born Domenikos Theotocopoulos on Crete where he learned the flat, highly patterned Byzantine style of painting.



Sometimes there's more to a painting than meets the eye. For example, Bruegel's *Massacre of the Innocents* operates on two levels. On one level, it depicts the story of King Herod's attempt to kill the baby Jesus by killing all the newborn boys in the kingdom.

He then went to Venice where he learned Titian's vivid color & Tintoretto's lighting. At age 35, he migrated to Toledo, Spain during the religious frenzy of the Catholic Reformation and Inquisition, which influenced his surreal and emotionally intense paintings with their distorted figures and swirling movement.

El Greco was supremely self-confident, even declaring Michelangelo couldn't paint and offering to revamp the "Last Judgment". He detested walking in daylight, claiming it "blinds the light within," which influenced his use of harsh colors: strong pink, acid green, and bright yellow as in *The Holy Trinity* below.



The elongated figures in El Greco's paintings inspired a fashion for elongated fingers among the women at the Spanish court. Supposedly at night they would hang their fingers from the bedposts to stretch them out.

A poll among art historians rated this as the 6th greatest painting of all time. The rest of the list is as follows:

- 1) Velazquez, "Las Meninas"
- 2) Vermeer, "View of Delft"
- 3) Giorgione, "The Tempest"
- 4) Botticelli, "La Primavera"
- 5) Francesca, "The Resurrection"
- 6) El Greco, "Burial of Count Orgaz"
- 7) Giotto, "The Lamentation"
- 8) Grunewald, "Isenheim Altarpiece"
- 9) Picasso, "Guernica"
- 10) Rembrandt, "The Return of the Prodigal Son"

Shakespeare and the English language

No one person has had a greater impact on the English language than Shakespeare, adding all sorts of words and phrases to our vocabulary. Some were derived from Latin roots. Others were probably already in common use, and he was the first to write them down. Following are some of the 1500 words he added to the language: aerial, amazement, approve, auspicious, ban, bump, cage, countless, courtship, critical, dishearten, dislocate, dwindle, exposure, film, fond, frugal, general, generous, gnarled, impartial, infinite, jovial, kissing, knave, lapse, laughable, lonely, loon, majestic, make, misplaced, monumental, nobility, numb, obscene, pious,

premeditated, radiance, submerge, and undress.

Shakespearean phrases:

- The undiscovered country
- Brave new world
- The milk of human kindness
- Something's rotten in Denmark
- The game is up
- Dead as a doornail
- Without rhyme or reason
- Too much of a good thing
- Foregone conclusion
- Down the primrose path
- Vanish into thin air
- One fell swoop

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FC.78A THE EVOLUTION OF MODERN THEATER

While we look back upon the ancient Greeks as the beginnings of modern theater, their influence has taken a somewhat indirect route. The Romans during the late Republic and Early Empire (c.100 B.C.E.-200 C.E.) did indeed carry on the traditions of Greek theater. In the late Republic, plays of Greek New Comedy, especially those by Menander, were translated and imitated by the playwrights Plautus and Terence. Similarly, Seneca (c.4 B.C.E. – 65 C.E.) continued Greek tragic forms during the Pax Romana. However, since Roman drama wasn't connected to religious rites like Greek drama was to the god Dionysus, it grew increasingly sensational over time in order to attract audiences, much like many Hollywood movies today. Therefore, when Christianity became the state religion, it should come as no surprise that the Church outlawed drama.

After the fall of the Roman Empire in the West (c.500CE), Latin became increasingly unintelligible to most people, making the Catholic mass done in Latin almost equally unintelligible to the common people. Therefore, liturgical dramas were created that would act out scenes during the mass so that people could gain some understanding of their religion.

With the rise of towns in the High and Late Middle Ages (c.1100-1450) came an increasingly secular outlook with corresponding impact on drama, especially as it moved out into the streets. For one thing, there were numerous traveling shows with such things as jugglers and trained animals, whose repertoire might also contain short skits. At the same time, guilds, as part of their civic and religious duty, would often put on religious miracle plays, usually in mime, to educate the common people about their religion. Over time, the combined influences of the guilds' miracle plays and the traveling shows, gave rise to morality plays with dialogue and sometimes secular themes, although still considered appropriate by the Church. Eventually, these developed into plays known as interludes with increasingly secular and even comedic themes. By the time of Henry VIII, these interludes had lower class characters and ludicrous and, at times, comedic plots. From the Church's

point of view, it seemed that pagan vulgarity had revived in full force.

However, it was the Italian Renaissance and the rediscovery of Seneca and other ancient dramas that helped bring theater back to the level of high art after 1580 during the reign of Elizabeth I of England (1558-1603). Elizabethan drama was characterized by several features that have, to one extent or another, remained with theater ever since. One was replacing inn courtyards as makeshift theaters with the construction of permanent playhouses with stages and, later, curtains. Over the years, this would allow the evolution of increasingly elaborate scenery and special effects that required permanent mechanical devices set up backstage and out of sight. Elizabethan drama was also written in blank instead of rhymed verse, eventually leading to the prose used in modern plays. The plots of these plays were secular, being based on plays by Seneca and Menander, ancient Greek and Roman history and literature*, medieval literature, or more recent English history. Finally, whereas previously plays were often private affairs for the entertainment of the rich and powerful, Elizabethan plays were put on as public performances open to all classes, although seating was segregated between the balcony seats for the rich and the ground for the common folk.

During the 1600s, England would go through a period of civil wars and military dictatorship under the Puritan, Oliver Cromwell, who would shut down the theaters, deeming them as sinful places. However, with the restoration of the Monarchy under Charles II in 1661, drama would make a major comeback in what is known as Restoration drama, which first pushed tragedy, although later much of it would be lighter in tone, much like the New Comedy of Menander and our own sit-coms. However, it was here to stay, influencing the dramatic arts to the present day.

*E.g., "Romeo and Juliet", which was based on "Pyramus and Thisbe", one of Ovid's poems in his *Metamorphoses*, which itself was inspired by a Mesopotamian legend).

The evolution of the playhouse
Inn-yards, as they were called, could hold around 500 people gathered around a makeshift stage. Richer people could pay for

places in the surrounding balconies. This would also protect them from pickpockets and fights that often took place in the overcrowded conditions below.

Replacing the inn-yard, starting in 1576, was the Elizabethan amphitheater. Built in the round like Greek and Roman amphitheaters and holding up to 3,000 people in ever higher (and more expensive) balconies, these amphitheaters gave acting troupes more permanent facilities so they didn't have to travel as much or spend time and effort building and taking down the stages. Being modeled on ancient Greek and Roman theaters, they may also have given actors and acting a bit more status and respectability.

Since inn-yards and amphitheaters were open air, performances were limited to daytime and good weather during the warmer months of the year. As a result, promoters started building fully enclosed playhouses that were open year round and could even hold performances at night. Since candles typically would not last an entire performance, intermissions were introduced to allow a change of lighting.

Playhouses allowed more elaborate and permanent scenery to be developed, since it was no longer exposed to the elements. Similarly, large inventories of costumes could be kept for multiple plays, adding an element of realism and interest especially to historical plays. Even more importantly, the better acoustics from being inside shifted the emphasis from special effects to dialogue, since actors could now be heard. This, in turn, added to the seriousness of drama as an art form. On the downside, special effects, in particular fireworks, could not be used due to the risk of burning down the playhouse. Another advantage of playhouses was that everyone got seats, although capacity was once again limited to around 500 people. This also added to expenses, which added to the price of tickets.

Actresses, Makeup, and Sumptuary Laws

There were no actresses during Elizabeth's reign. Much like Greek theater, boys would play women's roles, at least until their voices changed, disguised in wigs and female attire. They also used makeup, which unfortunately was lead based and probably killed or permanently sickened many of those who wore it, including Queen Elizabeth herself. Later, women would be allowed to act, but acting was seen as especially disreputable for women, being almost on a par with prostitution. Given the low pay actresses received, the two careers might go hand in hand. The more famous actresses might even become mistresses of the wealthy and powerful. Most notable in this respect was Nell Gwynn, who became the mistress of Charles II, or as she called him, "my Charles the Third."

Another problem to deal with was sumptuary laws that barred lower class people from wearing the fancy garb reserved for nobles. Since actors were lower class, they couldn't wear costumes representing nobles unless they had special licenses from the queen.

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THE BEGINNINGS OF THE MODERN STATE (c.1450-1500)

Just as the turmoil of the Later Middle Ages had cleared the way for sweeping economic, cultural, and technological changes in Western Europe, it likewise produced significant political changes that led to the emergence of a new type of state in Western Europe: the nation state. It did this along five lines of development, four of them corresponding to various nation-states in Europe and the other having to do with the overall decline of the Church and nobles which helped lead to the revival of towns and middle class allied to the kings.

The later 1400's saw kings in Western Europe picking up the pieces left by the turmoil of the last century in order to build stronger states. However, this process of unification, or in some cases reunification, involved more violence and warfare. In England, the aftermath of the Hundred Years War saw a period of civil strife known as the Wars of the Roses (1455-85) over control of the throne. In the end, Henry Tudor, who became Henry VII, triumphed and restored order with such new government institutions as the Star Chamber.

The English Language and the Hundred Years War

The real importance of the Hundred Years War is largely revealed in the English language. Did you ever wonder why we call:

**the animal a cow, but the meat beef;
the animal a pig, but the meat pork;
the animal a sheep, but the meat mutton;
the animal a chicken, but the meat poultry?**

The answer lies in the class system of medieval England. The kings, nobles, and upper clergy, who were descended from the Norman French who had conquered England in 1066, still spoke French at the beginning of the Hundred Years War (1337). After all, many of them had lands on both sides of the Channel and saw little distinction between the two lands, except that they could understand and talk to French peasants. Since they had regular access to meat,

they used the French derived words: beef, pork, mutton, and poultry.

On the other hand, the Saxon peasants, who spoke English, were only familiar with the animals on the hoof, so they used the old English words: cow, pig, sheep, and chicken.

However, by the end of the Hundred Years War (1453), the English kings and nobles had been driven from France and were speaking English, although it was now a blending of the Norman French with the Old English (based on Germanic Saxon), so we still have Saxon derived words for the animals, but French derived words for their meat.

Not only had the English ruling class' language changed, so had their outlook, which was now distinctly English instead of continental. France and England have been separate nations ever since.

France, badly hurt by the Hundred Years War, gradually reunified as the Valois kings regained control of Picardy (1477), Anjou (1481), and Brittany (1491). The greatest challenge to the French kings came from the powerful and aggressive Charles the Bold of Burgundy. Charles controlled both Burgundy and the Low Countries (Flanders and the Netherlands) and threatened to become a major power in his own right until he met disaster at the hands of the Swiss pikemen in a series of battles ending at the Battle of Nancy (1477). With this potent threat removed and Burgundy also back under French control, a strong unified French state was emerging by 1500 after some 150 years of conflict.

A unified Spain also was born by 1500. The key event here was the marriage in 1469 of Isabella of Castile to Ferdinand of Aragon, which united most of Spain under their joint rule. (However, the two states continued to function largely as separate administrative entities for generations to come.) The final piece of the puzzle was put into place when the last of the Spanish Muslim states, Granada, was conquered in 1492. Among other things, this freed the new Spanish state to fund the voyage of a Genoese captain named Christopher

Columbus who was looking for new routes to the spices of the East.



Since Ferdinand of Aragon and Isabella of Castile (above) were too closely related to legally marry, they needed a special papal dispensation, which the Archbishop of Toledo duly forged for them.

“We who are as good as you swear to you who are no better than we, to accept you as our king and sovereign lord, provided you observe all our liberties and laws; but if not, not.”--Loyalty oath of Aragonese nobles, showing the weakness of the Aragonese monarchy at the time.

Spanish wool and Merino Sheep

The introduction of the Merino sheep into Castile from North Africa about 1300 transformed Castile’s economy and brought it into closer contact with the outside world, which wanted the wool. A special organization, the Mesta, supervised the seasonal migrations of these animals between their summer pastures in the North and winter pastures in the South.

Even Germany, fragmented after centuries of feudal strife and the emperors' struggle with the Papacy, saw its fortunes seem to revive with the rise of the Hapsburg Dynasty that controlled the imperial throne at this time. This family, through a number of astute marriage alliances, would come to control Austria, the Low Countries, Hungary, and Spain along with its Italian possessions and American colonies. In fact, as impressive as this empire looked, it worked to Germany's disadvantage since it would trigger a number of wars to crush the Hapsburg "superpower"-- wars that would use Germany as a battleground and ruin it. Therefore, by 1500, nation states were evolving, having their own strengths and problems.

Strengths of the new nation-states consisted of four main pillars of support: money, which in turn enabled kings to pay for professional bureaucracies and mercenary armies, and control of the Church. This mixture of medieval and modern elements

underscores the transition of Europe from the medieval to modern era.

Finances. The old medieval sources of revenue, such as feudal dues and income from royal lands and monopolies, were totally inadequate for the greater burdens, which the new types of government and army placed on Renaissance kings. Borrowing money against future tax revenues was a dead end that just got kings into deeper trouble, although that was commonly the practice. However, more regular taxes had to be collected. In France, the "extraordinary" taxes the townsmen had granted the crown to drive out the English in the Hundred Years War were collected annually and became a permanent tax, the *taille*. In Spain, the crown increased sales taxes to boost revenues. In England, the king was unable to get a high permanent tax granted to him by Parliament. He did increase his control over revenues for such things as customs on wool and cloth. Luckily, England was an island and in less need of a large expensive army and bureaucracy than states on the continent. Overall, Renaissance kings by 1500 were still faced with serious financial shortcomings. However, no one else in their realms possessed the resources to effectively challenge them. Along with their bureaucracies and armies, their finances presented a picture of the European state in transition from the medieval to the modern era.

Bureaucracies consisted mainly of members of the middle class with the education and experience needed to run the government. Since kings were usually desperate for money, they resorted to selling government offices, a practice known as *venality of office*. This system had its good and bad points. The main good points were that it provided the king with some much needed cash and officials who showed more efficiency and loyalty to their king than the old feudal nobility had.

The main drawback was that such a system bred corruption, since money, not ability, was often the key to gaining office. Bureaucrats tended to assume their own consciousness as a class, maintaining a common silence to thwart any attempts to weed out corruption. They could often successfully resist or slow down reforms or other policies they did not like. But, for all the problems the new bureaucracy created, it was still more efficient than the old

feudal system and gave kings a far greater degree of control over their states.

The new warfare. Renaissance armies told a similar story, being somewhat unruly but still better than their feudal predecessors. The ranks were now filled with mercenaries who fought until the king's money ran out. This gave the king much longer campaigning seasons than the forty days that feudal vassals typically owed. But it could still present some serious, and, at times, embarrassing problems. As soon as the king ran out of money, such armies would often desert or refuse to fight any longer. Also, since they were not usually natives of the state they were fighting for, they often had no qualms about plundering the people they were supposedly defending. Despite these drawbacks, Renaissance armies gave kings in Western Europe much tighter control over their states, largely because they were so expensive that no one but kings could afford to maintain them.

Part of that expense lay in the new type of warfare emerging by 1500. Although heavily armored knights were still prominent, their role was being reduced by two new ways of fighting, one medieval and one modern. One of these, reminiscent of the old Greek and Macedonian phalanxes, was massed formations of pikemen who now formed the core of the Renaissance army. Until the early 1500's, the Swiss were reputedly Europe's best pikemen, and every prince wanted Swiss mercenaries in his army, no matter what the cost. In the 1500's, German pikemen, known as *landsknechte*, and Spanish pikemen organized in formations known as tercios would rival the Swiss in their reputations for ferocity on the battlefield.

The other new and expensive element emerging in the new warfare was gunpowder. Hanging on the flanks of each pike square were men wielding primitive muskets. Such guns were heavy, hard to load, and even harder to aim accurately. They also presented the danger of blowing up in their users' faces. Still, they could be very deadly when fired in massed volleys, having a range of up to 100 meters. Gradual but constant improvements, such as the matchlock that freed both hands for aiming, made them increasingly effective throughout the 1400's and 1500's. As a result, the number of musketeers, and their cost, gradually climbed throughout this period. The combination of guns' firepower with

the solid pike formations proved to be the most potent military innovation of the Renaissance. It ruled Europe's battlefields until the later 1600's when better muskets and the bayonet phased out the pikeman for good.

Artillery was another important, but expensive, element in the Renaissance prince's army. Smaller and more mobile cannons were made for use in pitched battles as well as sieges. There was no standardization in the Renaissance artillery corps, each cannon being made by an independent contractor. The French, with Europe's best artillery, had 17 separate gauges of artillery requiring 17 different sizes of shot. The Hapsburg emperor, Charles V, had 50 different gauges. Obviously, this could create untold confusion in the heat of battle.

The advent of artillery made the tall thin walls of medieval castles obsolete, since they were so easily breached by cannons' firepower. However, this did not make fortifications obsolete. By the early 1500's, a new style of fortifications, the *trace Italienne*, was coming into use and slowing down, if not stopping artillery. These new fortifications were much thicker and more elaborate than their medieval predecessors, having multiple sets of walls, moats, and bastions set at different angles to one another to provide flanking fire from various directions against any enemy assaults. As with muskets and artillery, these new forts were so expensive that only kings could afford them or, more properly, afford to go into debt to bankers to buy them. And, by the same token, this increased the kings' power and put any rebellious nobles more at the kings' mercy.

This new type of warfare and army showed the beginnings of some aspects we associate with modern warfare. For one thing, the new technology and size of the armies made warfare much more expensive. It was also very destructive to any inhabitants unlucky enough to be in the path of these plundering mercenaries and their hordes of camp followers. The seventeenth century general, Albrecht von Wallenstein, once said he could better support an army of 50,000 than one of 20,000 since it could more effectively plunder the countryside. This says a lot about supplying such armies and its effect on military strategy: fight in the enemy's territory and make him pay for the war. Finally, the new warfare was much bloodier than the medieval

warfare that preceded it. We find nobles complaining because any low born peasant with a small amount of training and a gun could blow them out of the saddle. Even more significantly, the humanists condemned warfare for its bloodiness, no matter to what class. Throughout the modern era, that outcry has slowly gained force along with the growing destructiveness of warfare.

The Church was still the largest single landholder in Western Europe, making it mandatory for kings to control this vital source of revenue and propaganda. Luckily for the kings, the Church's power and prestige were seriously weakened by the popular discontent and corruption that climaxed with the Great Schism. In France, kings had gained the loyalty of the local clergy against the Italian higher clergy appointed by the popes and won their struggle to rule the French clergy in the Pragmatic Sanction of Bourges in 1438. This recognized the king's claim to the Gallican Liberties, transferring the direct loyalty of the French clergy from the pope to their king.

Elsewhere, the story was similar. In England, during the Avignon Papacy of the 1300's, kings had limited the right of foreign clergy to visit England and also restricted English clergy in their right to appeal to foreign (i.e., papal) courts. In Spain, the crown came to dominate the Church and, with it, the Inquisition. In all these countries, levying Church taxes was subject to the approval of the kings, who often made a deal to get a percentage of the taxes for themselves.

In addition to the structure of the emerging nation-state, peoples' attitudes toward that state were also in transition from a very personal feudal outlook to a broader concept of a nation. There was a growing awareness among various peoples that there were factors, such as language and culture, making them unique as nations. But the fully developed form of nationalism we are familiar with was still several centuries away. During this transitional period, the loyalties of people focused largely on the person of a king rather than on the nation's people as a whole.

Limits to the Renaissance state's power. We should keep in mind that, while the Renaissance state was a vast improvement over the feudal anarchy of the Middle Ages, it was still rudimentary and highly inefficient when compared to the

modern state. There were three main limitations to state building at this time.

First of all, the decentralized chaos of the Dark Ages had given rise to a multitude of local institutions and customs, rights, and inherited titles and offices. France alone had some 300 local legal systems (run by the local lords, bishops or abbots, towns, guilds, etc.) dating back to a time when there was essentially no central government. In the Netherlands there were 700. The force of tradition with centuries of history to back it up made it well nigh impossible for kings to do away with these offices, customs, and privileges. A good example of this were the *parlements*, local French courts which could modify the king's laws, delay enforcing them, or even refuse to enforce them if they thought those laws interfered with long established local customs and traditions. As a result, kings were forced either to work around the old offices by creating new parallel offices that would very gradually take over their functions, or incorporate the old offices into the new state apparatus. What this meant was that any regularization of government institutions and practices on a national scale was still centuries away.

A second problem was the continued existence and aspirations of the nobles. While we have seen them suffering from a prolonged decline since the High Middle Ages, they remained somewhat resilient as a class. One big reason for this was that they were still seen as *the* class to belong to, and many middle class merchants and bankers were eager to buy noble titles and lands so they could carry on like the nobles of old. A prime example of this was the Fuggers of Augsburg, Germany, the richest banking family in Europe, who bought noble titles and lands and passed into idle noble obscurity. Aiding this process were the kings who were always in need of cash and willing to sell noble titles and offices to anyone with the money. As a result, fresh blood kept infusing the nobility with new life. Unfortunately, these nobles, of whatever origin, could still be quite troublesome and lead revolts against their rulers, as happened in the Netherlands (1566), England (1569), and France (1582).

A third problem was the kings' inability or unwillingness to stay out of debt and pay their armies and bureaucrats. This encouraged corruption in the government and plundering and

desertion by the mercenaries, which further reduced the kings' revenues and ability to pay their bills, leading to more loans at high rates of interest, and so on. Finally, although kings could control their national churches, they could not control the medieval mentality still linking politics and religion and causing disastrous wars over religious issues. This especially became a problem after 1560 in the repeated religious wars between Protestants and Catholics.

The "New Diplomacy". Despite these problems, a new and more dynamic type of nation state was emerging by 1500. And once kings had affairs within their own borders reasonably under control, they started extending their involvement in diplomacy outside of their states. By 1500, we see Western Europe starting to function as an integrated political system, whereby one state's acts affected all the other states and triggered appropriate reactions. This new interdependence and sensitivity to other states' plans and actions sparked the beginnings of modern diplomacy. Two factors aided this process of outward expansion, and, once again, they were a mixture of medieval and modern forces.

Among the older methods still used to consolidate and improve a prince's position, the most notable was the marriage alliance. Rulers still thought of their states as their property. That property could be passed on to their sons, and it could be added to by marrying into another ruling family and assuming all or part of that family's property (i.e., state) as part of the deal. A number of such marriages took place in this period. Henry VII of England married Elizabeth of York, the heiress of his chief rival to the throne, a union that gave him undisputed claim to the crown. Charles VIII of France married Anne of Brittany and tied that region much more closely to the French king's interests.

Certainly the most spectacular example of dynastic empire building through marriage was the Hapsburg Empire, which controlled most of Western Europe in the first half of the 1500's. In 1469, Ferdinand of Aragon married Isabella of Castile, thus uniting Spain under one house, although the two governments functioned separately for some time. Meanwhile, the Hapsburg emperor, Maximilian, had wed Mary, duchess of Burgundy, and added Burgundy and the Low Countries (Flanders and

Holland) to his family lands in Austria and the Holy Roman Empire. Finally, their son, Philip, married Ferdinand and Isabella's daughter, Joanna, to seal an alliance in reaction against the French invasions of Italy starting in 1494. The product of that union, Charles V (Charles I of Spain), inherited most of Western Europe: Germany, Austria, the Low Countries, most of Italy, and Spain along with its American holdings. As a contemporary saying put it: "Others make war, but you, happy Austria, make marriages."

Marriage alliances alone were not enough to keep one diplomatically safe. For one thing, they created nearly as many problems as they solved. Since the network of marriage alliances was so extensive and interlocking there were almost always numerous claimants for vacant thrones whenever a ruler died childless. Such a situation often triggered wars, despite the original intention of the marriage alliance to stop such wars. Second, the Renaissance, with its increased political interdependence between states, created shifting alliances to maintain or improve their positions. This required a ruler to keep a much closer eye on what other states were doing so that they could not surprise him by switching alliances or suddenly declaring war. This led to permanent resident ambassadors, forerunners or our own modern diplomats.

Like so many other innovations, the idea of keeping permanent ambassadors at other rulers' courts originated in Italy. Previously, negotiations between states involved sending special ambassadors only for special occasions, such as a treaty of alliance or celebrating a dynastic marriage. By 1450, a delicate balance of power had evolved in Italy between its five main states: Milan, Venice, Florence, the Papal States, and Naples. The weakest of these states, Florence, felt nervous about its more powerful neighbors and wanted to maintain the balance of power to keep any one of them from threatening its own security. Therefore, it started maintaining permanent resident ambassadors at the other states' courts.

During the Renaissance, these officials were mainly of lower noble and middle class origin. They were expected to maintain themselves in the high style of their home court while being engaged in information gathering, which amounted to little

more than spying. They had to send weekly letters home, often in code, repeating all pertinent facts, rumors, conversations, and character descriptions they could come up with. All this was done at their own expense, which many of them could not afford. We have letters from such men, pleading with their home governments not to force them to serve. Usually such pleas were to no avail.

Physiognomy



Since at least the time of Aristotle, people believed one could figure out someone's character by looking at his or her face. They especially liked to compare them to the personalities of animals they may resemble.

For example, someone who happened to look like a pig was judged to be messy and unpleasant, while someone with the features associated with a lion was thought to be brave and noble.

Even as recently as the 1930s the Nazis used this pseudo-science, known as physiognomy or phrenology to back up their racist theories. Especially disturbing is how they compared Jews to rats, and even now we still typically use the Nazi term extermination of the Jews instead of murder to describe the Holocaust.

Spies

Besides ambassadors as quasi-spies, rulers liked to send real spies to foreign courts, partly to keep an eye on their ambassadors. Different countries favored different covers for their spies. The French liked to use nobles, because courts were always full of nobles anyway. The Florentines preferred bankers, since kings always needed loans from bankers who would want to know why they needed the money. The Venetians relied on doctors, who might have access to rulers and officials while they were delirious with fever and therefore prone to spilling secrets. And German states sent clergy who might be directly or indirectly privy to the confessions of rulers and officials.

There was no diplomatic immunity then, and the resident ambassadors suffered accordingly. Foreign courts saw them as spies and treated them as such, subjecting them to hostile treatment, insults, surveillance, imprisonment, and even torture. To add insult to injury, the home government often did not believe the letters these men sent home and kept spies at the court to watch their own diplomats. When important negotiations were to take place, the home government still appointed special ambassadors of high noble status to do the job.

In 1494, Charles VIII of France invaded Italy. This prompted the intervention and fateful marriage alliance of Spain and the Holy Roman emperor, Maximilian, mentioned above. It also touched off a series of wars that devastated Italy and ended its leadership in European affairs. All these wars and shifting alliances caused the great rulers of Europe to start maintaining permanent ambassadors at each other's courts. Over the years, as resident ambassadors became a permanent fixture of diplomacy in Europe and the world, their status and treatment would improve. Florence's policy of maintaining a stable balance of power would also spread northward and become a cornerstone of European and global diplomacy in the centuries to come.

Richard III and History

When the 10-year old Edward V (a Lancastrian) succeeded as king in 1483, Richard, Duke of Gloucester, was named his protector. In that capacity, he took Edward and his brother, Richard, prisoner and locked them in the Tower of London. He then had their mother's marriage (and therefore the boys themselves) declared illegitimate. They died soon afterward, possibly murdered by Richard, but no conclusive evidence exists. Richard had himself declared king, Richard III, and ruled two years before being defeated and overthrown by the Lancastrian Henry Tudor, who became Henry VII, thus ending the Wars of the Roses.

Richard III has gotten a lot of bad press from history, especially solidified in Shakespeare's portrayal of him as a deformed hunchback. Only recently have historians shown he was

probably not deformed or as bad as typically portrayed. So how did he get this reputation?

Much of it probably comes from the Tudor dynasty's hypersensitivity about the legitimacy of their rule on two accounts. First, Henry Tudor had taken the throne by force. Secondly, since Edward V had been declared illegitimate by Richard III, so had Edward's sister, Elizabeth of York, whom Henry married to secure his family ties and claim to the throne.

Thus to legitimize their rule through Elizabeth of York, the Tudors had to discredit and even demonize (as a hunchback) Richard III.

Therefore, anyone writing about Richard, such as Thomas More during Henry VIII's reign and Shakespeare when Elizabeth I was ruling, had best be careful in how they portrayed Richard, because anything they wrote that was favorable to him would meet with royal disapproval and maybe even charges of treason. By the time Elizabeth died in 1603 and a new dynasty, the Stuarts, took over, Richard had been dead for over a century and his portrayal in history was largely set.

The Swiss and Burgundian War

The Swiss were named after Schwyz, one of their original cantons (districts). (Their German enemies claimed the name came from the word for swineherd.) Technically, the Swiss were part of the Holy Roman Empire, but they didn't want to be. However, they had never presented a united front able to resist foreign interference until the mid 1400s when they started acting in unison to assert themselves by raiding Burgundian lands and cutting off the Alpine passes through which the Duke of Burgundy's Italian mercenaries reached his lands. The result was war between the Swiss and the Duke of Burgundy.

Previously, the Swiss had fought with halberds, heavy pointed axes mounted on long shafts. While this was effective in Swiss mountain passes, it didn't work so well on level ground against heavy cavalry. Thus the Swiss adopted a much longer two-handed weapon, the pike. One soldier with such an unwieldy weapon was fairly

helpless, but a large disciplined group of such men who held together in formation was a much tougher nut to crack. This was especially true for men on horses, which have a distinct aversion to impaling themselves on sharp sticks for the sake of the members of a bipedal species who happen to be sitting on their backs. In fact, it was for the sake of those horses that the front ranks of pikemen planted their weapons at an angle with their points at the height of the horses' chests.



If the battle got bogged down in a melee, the front ranks would open up to let old style halberdiers advance from the back ranks, since the halberd was a much more deadly and effective weapon at close range.

The first clash between the Swiss and Burgundians was at Grandson (1476). One way to break a pike square was to pour artillery shot into its densely packed ranks, which would have had murderous effects except for two things. First, the Swiss were on a hill making proper elevation of the Burgundian guns difficult. Secondly, Burgundian troops were blocking a clear field of fire. So, when Charles ordered his front ranks back, the rest of his army perceived this as a general retreat and fled the field. Luckily for the Burgundian troops, Charles had left a huge treasure in his camp (including his throne and jeweled hat), which the Swiss stopped to plunder instead of pursuing their defeated foes.

Later that year at Murten, the Swiss attacked Charles' mercenaries while they were occupied getting their pay. Once again, panic set in, except this time the Swiss pursued their fleeing enemies with great slaughter, killing 12,000 Burgundians while only losing 400 of their own men.

In January 1477 in the midst of a heavy snowstorm, Charles was defeated a third time at

Nancy, this time losing his life. As the poem that every Swiss schoolchild would have to learn goes:

*“Charles the Bold lost
at Grandson his treasure,
at Murten his courage,
at Nancy his life.”*

After Charles’ death, the lands previously belonging to the French crown were reincorporated into France. Charles’ daughter, Mary, inherited the rest, mainly consisting of the Low Countries (modern Belgium, Holland, and Luxembourg). When she married the Holy Roman emperor, Maximilian, her lands became part of the Hapsburg realm, mostly known as the Spanish Netherlands.

The fall of Granada & End of Moorish Spain

The prolonged war to conquer Granada (1481-92) began with the surprise attack and sack of the Christian stronghold Zahara on December 26, 1481 while the garrison was still sleeping off the effects of its Christmas celebration. The Spanish replied with an equally daring and successful assault on the Muslim fortress Alhama deep within Granada’s territory. What had previously been little more than border clashes between Muslims and Christians now became a fight for Granada’s very survival.

After two disastrous defeats, the Spanish did manage to capture the emir of Granada’s son, Boabdil. Realizing he could be more helpful to them as a free man, they released him to challenge his father for power, but only after he agreed to become a vassal of Spain if Ferdinand and Isabella helped him regain his kingdom.

At this point, the war became one of sieges and artillery. Ferdinand had established gun foundries, and between 1479 and 1485 the number of master gunners (mostly foreigners) he attracted into his service grew from 4 to 91. Serious discussions were also taking place considering the proper siting of guns, their ranges, and the number of shots needed to create a breach. At the siege of the supposedly impregnable fortress of Rondo, the Spanish developed the standard tactics for conducting

sieges over the next century, combining heavy artillery bombardment of the walls with continuous fire from arquebuses (early handguns) to keep anyone from coming out to repair their breaches. As was typical for sieges in this period, it was a combination of medieval and modern weapons and tactics that worked. In this case a trebuchet launched an incendiary over the wall and started a major fire. When the Spanish were able to cut the fortress’ water supply, the defenders were soon forced to surrender.

Instead of iron cannonballs, shaped stone balls, some recycled from trebuchet ammunition used in a siege a century and a half earlier, apparently were used exclusively in the Granada war... with the occasional exception of a human body. When a would-be assassin of Ferdinand missed his target through mistaken identity during the siege of Malaga, the Spanish cut his body into pieces and used a trebuchet to fire it back into the city. The defenders sewed the body back together and gave it a hero’s funeral. This was the last recorded use of a trebuchet in warfare.



In 1491 the Spanish closed in on the final Muslim stronghold, the city of Granada with its fabulous Alhambra Palace. On January 2, 1492 the Muslim ruler, Boabdil surrendered Granada to Ferdinand and Isabella who accepted the surrender wearing Muslim garb out of respect for their defeated opponents and new subjects (above). The reconquista was finally complete, and with it the unification of Spain.

Four months later, the Spanish monarchs gave their final agreement to send Christopher Columbus on his voyage to find a way to reach Asia by sailing west.

The Granada war trained the Spanish infantry in different types of combat and toughened them through exposure to extremes of heat and cold

and mountainous terrain. This experience would serve them well in the years to come both in the conquest of the Americas and the Italian Wars.

The New Warfare



The Hundred Years War had been in a sense the first modern war, since it used paid mercenaries instead of feudal nobles to do most of the fighting. The usual system was for mercenary captains to hire out a company of men to the king for a fixed price. The king would (supposedly) pay the captains who would (supposedly) pay their men. However, even when paid in full by the king, captains would often keep more than their fair share either by short-changing their soldiers or providing fewer soldiers than they were supposed to. If the king or a general decided to have a review, captains might borrow men from other regiments, force local civilians into line, or even have soldiers duck down and run to the end of the line to be counted a second or third time after being counted the first time.

The new recruits. Making matters worse, most mercenaries were drawn from the unproductive classes, nobles at the top and the dregs of society at the bottom, since pre-industrial economies could not afford to lose productive peasants and townsmen. One study of the English army in the Hundred Years War found that 12% of its recruits were condemned criminals who were given the choice to be executed or fight for the king.

Besides your normal day-to-day brutes, such armies especially attracted the more violent and psychotic members of society. Taking advantage of the loose discipline imposed on them, they would rape, murder, and pillage helpless civilians, regardless of what side they were on. Even if their comrades disapproved of such extreme acts of brutality, they were usually too scared to intervene on the civilians' behalf.

More likely these orgies of violence would spread through the army like a plague, creating an atmosphere that would draw in men who, under normal circumstances, would never think of committing such acts.

Not all the men (and the few women disguised as men) lured into these armies were psychos, just enough of them to influence or intimidate the rest who weren't. Many recruits were relatively innocent young men looking for riches, adventure, and a way to leave their farms and villages so they could see the world. Luring them in were unscrupulous recruiting officers who typically got them drunk, while promising glory, riches, and adventure (below). More often than not, what they got, if they survived at all, were disabilities and poverty.

Given the likelihood of eventually getting wounded over a prolonged period of service and the primitive state of medical care and surgery, soldiers were very likely to lose an arm or leg to amputation. Given the fact that such disabled veterans were not too popular with the civilian population they or their comrades had previously plundered, raped and murdered, they typically were reduced to begging. As the saying went: "Young soldier, old beggar."



Fashion history: slashed sleeves. According to one theory, the fashion for slashed sleeves during the Renaissance developed from the practice of stripping the bodies of the dead after a battle. If a soldier took a jacket that was too small for him, he would slash the sleeves vertically so it would fit. The practice caught on and became a major fashion statement in the 1500s.

New and old weapons and tactics. The Renaissance was an especially transitional period in terms of how wars were fought, seeing a continual shifting in how old and new weapons

were mixed and used. The one factor changing warfare on every level was gunpowder.

Cavalry. For example, the period saw the transformation of the medieval knight into a very different sort of fighter. Well into the 1500s, the heavily armored mounted knight remained a fixture on the battlefield, even as his effectiveness was being increasingly challenged, first by phalanxes of pike men, then by infantry armed with muskets and artillery, and finally by other cavalry armed with pistols.

Up until around 1540, firearms were impractical to use from horseback, because they required both hands to load and fire. One of the more cumbersome aspects of firearms was the matchlock mechanism for firing. This involved keeping a long slow-burning fuse lit and constantly repositioned on the serpentine (AKA hammer) of the gun so it could ignite the charge of powder.

Changing all this was the invention of the wheel-lock, a spring-loaded mechanism that ignited the powder with a spark triggered by bringing down a piece of iron pyrite or flint onto a piece of steel. When this was adapted to a much shorter firearm, the result was the pistol, a weapon a cavalryman could fire with just one hand while controlling his horse with the other.

The pistol's shorter barrel also gave it a much shorter range, thus forcing cavalry to still approach the enemy closely before firing. However, it proved more effective than heavy armor and lances, thus ending the days of the medieval knight by 1600.

The pistol did have its limits, however. For one thing, it still required two hands for loading and reloading, so in the heat of battle it was a one-shot weapon. Therefore, to increase their firepower, cavalrymen typically had two loaded pistols in saddle holsters and often one or two more stuck in their boots when going into battle.

Manufacturing the wheel-lock mechanism required the precision of a clockmaker. For example, the distance between the moving wheel and the static block had to be between .04 and .08 mm. to keep the finer grains of primer

powder, which were about 0.1 mm. from infiltrating the gear housing and jamming the gun. This and the gradual wearing down of the spring's power made it prone to breaking and also too expensive for infantry firearms. Not until the simpler and cheaper flintlock was invented in the 1600s would infantry be freed from constantly having to reset matchlock fuses.

Once a horseman had discharged his pistols, he needed a weapon for close-up combat. Thus the saber replaced the cumbersome lance and broadsword. As a result, cavalry armor also got lighter, with a full suit of armor being replaced by a breastplate, segmented armor covering the thighs, and heavy boots below his knees. The greater fluidity and maneuverability of cavalry battles required greater visibility, leading to more open helmets so cavalrymen could be more aware of their surroundings.

The function of cavalry also changed with their armor and weapons. Instead of the blunt force trauma of the frontal charge up the middle, cavalry operated from the flanks against other cavalry. Since they were faster than infantry, they generally joined and resolved their part of a battle first. Once one side's cavalry had won and chased the enemy cavalry off the field, they were supposed to attack the enemy's infantry in their now exposed flanks or rear to finish the battle.

However, cavalry were still nobles who fought more for their own glory than the sake of their lowborn infantry. Besides, the enemy infantry had muskets, which could hurt the cavalry and their horses, which was not a glorious way to die. It was a lot more glorious, lucrative and safer to chase other nobles and plunder their camp. Thus, regardless of how their cavalry did in a battle, the infantry were left on their own to decide the battle.

Infantry and the drill and march. One of the things lost with the fall of the Roman Empire had been its infantry's efficient way of fighting. The key to this had been the intensive training with the drill and march, which transformed a collection of foot soldiers into a well oiled fighting machine. Throughout the middle ages, battles were dominated either by cavalry, static

shield walls, or archers, none of which used the drill and march. However, the Swiss revival of the phalanx of massed pikes, especially as an offensive weapon, required a level of coordinated movement not seen since the fall of Rome.

The answer probably came from the Renaissance revival of a late Roman author, Vegetius, who wrote about why the Roman army had been so effective before it was infiltrated by barbarian warriors who refused to submit to the intensive training that came with the drill and march. Since there are surviving copies of Vegetius translated into various languages before 1300, it seems likely the Swiss were aware of him and adopted some of the Roman training techniques to their own needs. This seems especially likely when considering that there are accounts of the Swiss advancing rapidly in formation across battlefields, something that required a high degree of coordinated training, wherever the idea came from.

As firearms and artillery became increasingly important in European battles in the early 1500s, the pike formation as an offensive weapon became progressively less effective, as witnessed by their disastrous charge in the face of enemy artillery and muskets at Bicocca in 1522.

Instead, it became a largely defensive formation for protecting (and being protected by) formations of infantry with firearms. In order to gain a greater reach over their opponents, armies' pikes were gradually extended to as much as 18' in length.



Since it was cheaper to mass-produce than the wheel lock, the matchlock remained the firing mechanism on the arquebus and heavier musket until well into the 1600s. It was a cumbersome device, since the match had to be repositioned and blown on (to keep it burning) every time it was fired. Loading and firing it took about a minute for each shot. During reloading, a musketeer was much more vulnerable to attacks by enemy cavalry and pike-men.

Therefore, given the complementary vulnerability of pike men and musketeers to one another, it was natural for them to combine for mutual support and protection. However, it wasn't an easy task figuring out how to mix the two types of soldiers. At first, arquebusiers were placed in clumps on the flanks of the pike squares with little coordination in firing.

Soon they were organized to fire together in volleys for maximum effect and noise. Sometimes, as with the Spanish *tercio*, they were placed in blocs, known as horns of shot, on each corner of a pike square, but such formations rendered the rear ranks' fire ineffective, if not dangerous to their comrades in front. Another arrangement was to place them in front of the pike-men, providing a broader more effective field of fire against approaching infantry. As the enemy got nearer, they would retreat through the ranks of their own pike-men.

The real breakthrough came in the late 1500s when the Dutch leader, Maurice of Nassau, using military treatises by the Roman authors, Vegetius and Aelian, adapted the Roman countermarch to reloading and firing muskets.

Maurice adapted this rotating technique for musketeers who, after firing, would countermarch to the rear, allowing their comrades in the rear to step up, fire, and countermarch to the rear in turn, and so on. By the time the last rank had fired, the first rank had reloaded and was ready to step up and repeat the process. Contemporaries estimated this maneuver effectively tripled an army's rate of fire, as well making each rank's firing more effective, since everyone was firing from the front rank.



Part of a manual of arms that broke down loading a musket into a series of simple steps

Overall, firearms were an improvement over the crossbow and longbow. They could pierce armor at relatively close range. Compared to the bow, it was also easier to train soldiers to use firearms effectively. Compact musket balls were easier

and faster to manufacture and also affected less by crosswinds than were arrows or crossbow bolts.

On the down side, matchlocks were harder, if not impossible, to fire when it was raining, although bowstrings were also affected by such conditions. The musket and arquebus required more precisely calibrated and standardized ammunition than did the bow. Another problem was misfires or duds. An experiment in 1966 using 16th century muskets and modern powder resulted in 43% of the guns misfiring.

Matchlock firearms were also less accurate. This was because the musket ball's caliber had to be slightly less than the gun's barreling so that the smoke and residue from the explosion could escape. While this reduced the need to clean the gun, it allowed part of the explosive force to dissipate around the musket ball as well as causing it to veer off slightly in one direction or another rather than firing straight. As this error magnified with distance, it was particularly hard to hit a specific target at any distance.

Therefore, armies fired together in volleys, increasing the odds that someone would hit something. Psychologically, in addition to the louder noise, the volley seemed more effective since it brought down several targets all at once.

However, the musket ball's relatively low velocity and inaccuracy has led to one calculation that, as late as the Napoleonic Wars in the early 1800s, a man's weight in bullets still had to be fired for every man that was killed on the battlefield. Adding to their inaccuracy was the high expense of gunpowder, which eliminated or minimized a soldier's target practice. Even in the best-case scenario, the British army in the 1700s, recruits only got three practice shots per year. As a result, the command in battle wasn't "Ready, Aim, Fire." Rather it was "Ready, Level, Fire."

A matchlock gun was also dangerous for its user. For one thing, that live match he kept lit could detonate all the gunpowder on his person, and even spread a chain reaction to his comrades. In addition, such weapons could also overheat, with the threat of exploding during the process of loading. Then again, the main charge might not

ignite even if the priming powder fired, leading to the expression "flash in a (priming) pan". However, the musketeer might not notice this in the heat of battle and load a second charge that turned his gun into a bomb the next time he fired it. Another problem was backflash burns on the face when the priming pan ignited. To counter this, musketeers often wore floppy hats that they would pull over their faces before firing. Finally, repeated exposure to the firing of guns could permanently damage one's hearing.

Another issue often plaguing musketeers was the inconsistency of the gunpowder. At first, the powder was so finely grained that, when packed into a barrel, there was no room for oxygen between the granules. Thus a charge exploded from the outside in rather than simultaneously, wasting one-third of its explosive force. This led to corned powder (below), which was made by dampening the powder so its granules would stick together in irregular clumps that left room for oxygen in between them, thus allowing the charge to explode simultaneously with full force. Even then, the saltpeter had a tendency to settle unevenly in a barrel, creating an inconsistent mix of powder with equally inconsistent explosive forces for individual charges, depending on where in the barrel they came from. One solution was to shake the barrel before using the powder, but the friction that generated might cause the barrel to explode.

Artillery. The English at the Battle of Crecy Europe in 1347 during the Hundred Years War may have been the first to use artillery. Its main effect, if any, was to scare the French horses. But rulers soon realized the potential of cannons and started pouring huge resources into their development and production.



At first, a cannon's power depended on its size. Witness Mohammed II's monstrous cannons at the siege of Constantinople in 1453 and "Mons Meg" (below), the huge bombard made for Philip the Good of Burgundy in 1449, which weighed 5000 kilograms and fired a 250-

kilogram carved stone ball from a barrel nearly 50 centimeters in diameter. The huge size of these guns restricted their use mainly to sieges, since they were too difficult to maneuver in open field battles.

However, as metallurgy improved, smaller and lighter guns could be made that could both damage fortifications and be used in pitched battles. Even after the Burgundians invented a carriage that would be the standard design for hauling guns for centuries, transport was still a huge task. For example, it required seven pairs of horses or oxen each to transport a demi-culverin (an especially long siege gun with a thicker breech that could take the stress of larger charges of gunpowder, thus giving it a longer firing range). Just one covered wagon to haul ammunition required another nine horses.



Above: an early cannon foundry

At first, guns were cast around a plug known as a mandrel. However, if the mandrel moved, it created uneven sides, which could make the cannon fire crookedly and even crack or explode. In the 1500s they started casting solid barrels and boring out the center, which created a more precise fit for ammunition. Bronze, although ten times more expensive, was preferred over iron for artillery barrels, since it was less prone to create air bubbles in the casting, which led to guns cracking or even exploding when fired.

The ease with which cavalry could be mowed down by artillery fire made cannons and the men who operated them especially hated by nobles who would often cut off the hands of captured gunners. No wonder when one considers that at the battle of Ravenna in 1512, one cannonball supposedly killed 33 knights.

Demonstrations of artillery power were popular spectacles for the public, much like fireworks demonstrations today. Some gunners would mix

their gunpowder so it would make even more noise for such events.

Command and control. Without modern communications, it was particularly difficult for generals to keep in touch with their various units and coordinate their movements. Compounding this problem were two other things: The intense noise of battle and the clouds of smoke produced by thousands of guns repeatedly firing, thus creating “the fog of war.”

To transmit orders that could be heard over the din of battle, armies used fifes, trumpets, and drums that produced sound frequencies that were either high or low enough to be distinguished from the screams and explosions otherwise filling the air.

To cut through the fog of war, every regiment would have several brightly colored flags, all sharing one color or symbol, but each with a different marking so one could find specific officers and bodies of men. Such flags also served as the focal point of loyalty for soldiers within a unit as well as telling them where to move.



Regimental flags for a regiment of the Parliamentary army in the English Civil War

Identifying the enemy was another problem before regular uniforms started becoming the norm in the late 1600s, at first for individual regiments and later for national armies. Until then, regiments typically wore something of a particular color (often a leader's family colors) to be identified in battle: hat bands, sashes, and even certain types of flowers or sprigs of leaves.

Battle. Unfortunately, all these resources and innovations were designed for the destruction of other human beings in the chaos of battle. There is no way to convey in writing the sheer horror and psychological impact of combat, whether in

the Thirty Years War in the seventeenth century or Afghanistan in the twenty-first. However, one contemporary writer managed to convey some of the terror:

“The cruel shots, the crashing of armor plates, the splintering of pikestaves, the screams of the attackers as well as the wounded, the blare of trumpets, the roll of drums, the shrill sound of fifes.” And When over,..”the earth that is accustomed to covering the dead was herself now covered with corpses.”



Medical care. Not to minimize the sufferings and deaths that came from combat, but until the late 1800s far more soldiers died from disease, food poisoning (because of corrupt food contractors and the lack of refrigeration), malnutrition, starvation, and non-combat infections than ever died in battle. Even in the American Civil War (1861-65) two-thirds of soldiers’ deaths came from sickness. Add to soldiers’ deaths the much higher numbers of civilians that often died in the wake of armies bringing murder, famine, and epidemic.

Probably the biggest killer of soldiers was “the camp disease”, dysentery, a gastro-intestinal sickness caused by polluted water, the source often being an army’s own latrines when its officers or men didn’t have enough sense to put them downstream from their water supply. Other sorts of garbage and waste also piled up in a camp, attracting rats and various insects, while massive amounts of horse droppings, drew flies that spread typhus. Then there were the crowded conditions in which armies lived that helped spread whatever infections were floating around.

Maybe 10-20% of the soldiers in an army on the move would die each year, with camp followers dying at an even higher rate, especially babies, young children, and pregnant women. The rates

could be considerably worse when an army was settled in for the winter, for a prolonged siege, and particularly a long siege lasting through the winter. Add to this desertions, either to the other side or just to forage and pillage indefinitely, and one sees the constant recruitment efforts armies had to maintain. Although desertions supposedly brought the death penalty, officers often tolerated such actions during the winter when the army was usually inactive, because it created fewer mouths for the army to feed.

Then there was the issue of care for the wounded. With no understanding of germ theory, battlefield surgeons had only one way to keep wounds from getting infected with gangrene and killing their patients: amputation. Keep in mind there were no anesthetics, unless you count alcohol or a blow on the head to knock you out so you don’t feel the real pain. Thus surgeons needed several strong men to hold down the patient while quickly sawing off his limb(s). Given the high number of casualties after a battle and the need to keep from prolonging a patient’s agony, a surgeon’s reputation rested more on speed than accuracy.



Cauterizing the wound was usually done with a red-hot piece of iron, but sometimes by sprinkling gunpowder on the wound and lighting it. If the patient was lucky, he might survive the shock from the explosion.

Logistics. Unfortunately, the logistics of feeding and supplying these bigger new armies were often beyond the ability of the state to meet, especially as wars dragged on and ate up the resources needed to sustain a war effort. When kings ran out of money and couldn’t pay or supply their armies, soldiers reacted in two ways that were by no means mutually exclusive: mutiny and forage. For example, when Spain’s Army of Flanders went unpaid for 22 months, its men decided to sack Antwerp, the city they were

defending, in order to get their back pay. To their credit, the soldiers did first kneel and pray to the Virgin Mary to bless this action, known as the Spanish Fury, before engaging in rape and plunder.

Even worse, soldiers had to forage and plunder the countryside in order to survive. Besides undermining the discipline and organization of an army whose men may or may not come back, this was an even greater disaster for the civilians whose lands were stripped bare of everything they needed to survive. What soldiers couldn't consume or take with them, they often burned.



Pleas by the peasants for mercy were rarely heeded. Many peasants, having lost their homes, fled to the woods to subsist on whatever they could find there. When given the chance, peasants would take vengeance on stragglers, no matter which side they supposedly represented. Some peasants even organized into armies to defend their homes against both sides in the war.

Since plundering was technically against regulations, officers would occasionally crack down when it got especially out of hand. A few unlucky soldiers would be caught and hanged, serving as a very temporary warning to the others.

Compounding this problem and swelling the armies' numbers were camp followers: contractors supplying the army, merchants, professional gamblers, women (there either willingly or not), and children (especially after nine months of war). Half an army's numbers might be made up of such people, with several babies even being born each week. (One doesn't generally think of armies needing their own maternity wards.)

Another factor in the equation was the larger number of calories (and greater amount of food) people then had to consume back then, since most every task involved physical labor, either

by humans or beasts of burden. One estimate done by the U.S. Army calculated the average farmer in the 1800s needed to consume 5,000 calories a day to maintain himself.

It probably wasn't too different for soldiers in the 1500s marching with their weapons and all their worldly possessions on their backs. Add to all this the food needed for cavalry horses and beasts of burden and then all the water such an army would need on a daily basis. The figures can be staggering. This also helps explain why 85-90% of the population was needed just for agriculture.

The Renaissance State and the Church

In order to understand the importance of the Church to state building in Western Europe during the middle ages, keep in mind that at any given time and place, the Church owned 20-30% of the land and that land was the main source of power and wealth then. Thus controlling elections of bishops and abbots (who ran most of the Church's lands) was crucial to rulers. For example, it's estimated that 74% of the army Otto I of Germany took into Italy in 961 was drawn from Church lands.

Not only did bishops and abbots supply troops, they also fought. Consider Odo, bishop of Bayeux (where the Bayeux Tapestry was woven) and half-brother of William the Conqueror, who was in the front ranks of the Norman army bashing in Saxon skulls with his war club at the Battle of Hastings. (He used a war club, thinking it might avoid shedding blood and therefore making killing an enemy more acceptable to God.)

In *The Song of Roland* there is Archbishop Turpin who leads a charge and kills his enemy, inspiring the comment about how well the Archbishop defended his people with his crook, a double entendre referring to the shepherd's crook, a symbol of a bishop watching over his flock of believers spiritually, but also using it to drive off and kill any predators.

Of course, by 1500, the Church was mostly out of the business of waging war, but its wealth (as seen in the rich vestments of the clergyman

pictured in Fra Angelico's painting below) could be a valuable source of revenue for kings, especially since it generally had to get the kings' permission for special fund-raising drives in return for giving them a cut of the take.

Then there was also the "power of the pulpit". Without mass media, the Church was the most effective organization for spreading orders and propaganda to the people on Sunday mornings. The king would send his message to his archbishops, who passed it on to their bishops, who communicated it to their parish priests, who delivered it to the people on Sunday morning. Therefore, if the king could control the clergy, he could control public opinion and keep the people's loyalty. The power of the pulpit may have been the most valuable attribute the Church had to offer kings. This also helps explain why so many kings were so opposed to the Protestant Reformation, since it threatened to dismantle the primary line of communications between the king and his people.

Financing the Early Modern State

One strategy for borrowing money was called tax farming. If a king needed or wanted more money than he could get in taxes at the time (which was usually the case), he could sell the right to collect part of next year's taxes to a financier in return for cash then and there. Of course, this would reduce his tax revenues for the next year, while his need and or desire for money stayed at least the same. So for that year he could sell two tax farms for the following year (one to make up for the taxes lost to a tax farmer for that year and the second to get the extra revenue beyond his normal taxes).

So what did the king do once he had no more tax farms left to sell for the next year? No problem. He would sell tax farms two years in advance, and then three years in advance, and so on. By the end of the Thirty Years War in 1648, the French monarchy was tax farmed a full five years in advance. In other words, it couldn't collect taxes for itself for another five years. It almost makes modern state spending look good.

Kings would also take out conventional loans, usually at high rates of interest, because they were such bad credit risks. If they defaulted, which even the Spanish monarchy did three times in the 1500s at the height of its power, bankers were out of luck. Of course, a year or two later, the kings needed money again and would cut a deal with the bankers that they would pay back the principle, but not interest, on the previous loan if the bankers would float them a new loan.

One might wonder what happened to the financiers who bankrolled the early modern monarchies, such as the Usurers pictured below by *Marinus van Reymerswaele*. According to a study of such men in 18th century France, two-thirds of them ended up in jail, usually on trumped up charges of treason. Hmm.

History's first major bank crash. In the 1340s, Edward III of England took out massive loans from the main banking houses of the day in Florence, the Bardi and Peruzzi, to finance the first stage of the Hundred Years War. When he defaulted, not only did the Bardi and Peruzzi banks crash, so did many of the banks and businesses they were associated with, triggering a chain reaction across Europe that set its economy back for several years much like the Stock Market Crash of 1929 did 600 years later.

Travel and Communications

Sending letters before there were public post offices was largely a hit-or-miss proposition. There were two ways one could send letters, private postal companies or friends, acquaintances, merchants or anyone else who happened to be going in that direction. Private companies were probably more reliable, but also expensive. With friends, etc. going in the right direction, there was no guarantee of how quickly or leisurely they might travel. They might not survive the journey to get the letter there. Or they might lose the letter or forget to deliver it. Then again, it might get soaked in a rainstorm or stolen by brigands.

A key element in *Romeo and Juliet* is a slow-moving messenger carrying the news that Juliet

is actually alive, but he is passed by Romeo's friend to tell him that Juliet was dead. Like any writer, Shakespeare wanted to make as many details in his plays as believable as possible, such as a sixteenth century Newman carrying the mail. He had enough to sell his audience in the way of Juliet's harebrained teenage scheme of a fake suicide.

Travel times, of course, were much slower back then. It is estimated that travel from Rome to Venice would take two to three days and from Rome to Paris about twelve days. Travel by sea from Venice to England would take 20 to 30 days, the huge variation being due to weather.

The Italian Wars (1494-1559)



The Peace of Lodi brokered by Lorenzo the Magnificent of Florence in 1454 had held up for 50 years. However, in 1494, all hell broke loose upon Italy in a series of wars referred to the Great Italian Wars.

It started when Pope Innocent VIII excommunicated Ferdinand I of Naples over his refusal to pay feudal dues to the papacy. The pope then encouraged Charles VIII of France, who had a remote claim to the throne of Naples going back to the 1250s, to come claim his inheritance. The pope settled his quarrel with Ferdinand and lifted his ban of excommunication, but the bait had already been cast.

Things got more complicated in 1494 when Ludovico Sforza took power in Milan, which the new king of Naples, Alfonso II, also claimed. This spurred Ludovico to invite the French in to claim Naples, never thinking they might want to take Milan as well.

In addition, Charles VIII of France had the surviving claim to, of all things, the crown of

Jerusalem and wanted to use Naples as a base for a crusade to Palestine. Not being too bright or farsighted, he secured his borders by giving money to Henry VIII of England and lands to Ferdinand of Spain and the Holy Roman emperor, Maximilian.

In 1494, he crossed the Alps with an army of 25,000 men, including 8,000 Swiss mercenary pike-men, the most feared mercenaries of their day. After shocking the Italians by brutally massacring the garrisons of two small towns, Rapallo (left) and Fivizzano (right), Charles occupied Florence (below) and moved quickly to take Naples.

The Italians were used to a relatively bloodless style of warfare where condottiere (mercenary captains), not wanting to risk collecting their paychecks, typically maneuvered harmlessly around each other before signing a truce.

Therefore, they were shocked by the speed and brutality of the French invasion. Equally shocking was the effectiveness of the French artillery on their fortifications.

However, the French occupying Naples were in for a shock of their own in the form of a new disease, syphilis, possibly brought by Columbus' men from the New World. Having no previous contact with this disease, it hit with especially terrible virulence, forcing Charles to lead his army back up Italy and for home. (Because of this incident, Syphilis was referred to as the "French Disease" for centuries.)

Meanwhile, in reaction to Charles' invasion, Venice had formed the Holy League with Milan, the Pope, Spain, England, and Maximilian I, the Holy Roman Emperor. Under Venice's leadership they sent an army to block the French. On July 6, 1495, they clashed near the village of Fornovo. Despite the French being heavily outnumbered, it was a bloody, but indecisive battle, costing the French all their plunder from Florence and Naples and forcing them to retreat.

While technically a victory for the Holy League, Charles was allowed to return home peacefully. Two years later, he banged his head on a door and died. But that was far from the end of the matter.

In 1496, largely reacting to French aggression, the Hapsburg prince, Philip “the Handsome”, married Joanna “the Mad” of Spain.

Their son the emperor Charles V (Charles I of Spain) would inherit Spain, the Holy Roman Empire, the Two Sicilies, the Low Countries, and the growing American Empire. France, caught in the middle of this far-flung realm, would fight to break out of this ring of Hapsburg lands in a series of wars that would rage on and off for the next 250 years. The Italian Wars were turning into the European-wide Hapsburg-Valois wars.

In the Second Italian War (1499-1504), Louis XII of France (above left) seized Milan and signed a treaty with the emperor Maximilian recognizing French conquests in Northern Italy. Louis then allied with Ferdinand of Spain (above right) to take Naples, with himself getting the crown and Ferdinand getting some of its lands. However, after seizing Naples, the allies had a falling out over its crown. After two Spanish victories, the two powers recognized French control of Milan and Spanish control of Naples in the Treaty of Lyons.

Meanwhile, Pope Julius II, worried about Venetian, rather than French, aggression, formed the League of Cambrai with Spain, France, and the Holy Roman Empire. After defeating Venice, the pope switched sides and joined Venice against France, declaring a Holy League that included Spain, the Holy Roman Empire, and England.

In 1512, the French, through a combination of firepower and cavalry, practically annihilated a Spanish army at Ravenna. However, the French general, Gaston de Foix, was killed and the Swiss seized Milan, forcing the French to retreat home. The victorious allies then had a falling out over the spoils, causing Venice to switch sides and ally with France.

The French king Francis I invaded Italy again, but was defeated in 1512 by the Swiss pike-men and League forces at the Battle of Novara while Spanish forces the next year defeated and scattered a Venetian force, France’s ally, at La Motta. Meanwhile, the war was spreading across Europe, as Hapsburg forces clashed with Swiss pike-men in French pay in Northern France. In 1513, English King Henry VIII defeated the French at the Battle of Guingate, also known as the Battle of the Spurs because of the myth that the French cavalry fled so quickly that all the English ever saw were the spurs of their fleeing enemy. As a diversion against France’s enemy, England, the Scottish king, James IV, invaded England in 1513, only to be defeated and killed at the Battle of Flodden Field.

The scene switched again to Italy where the French defeated the Swiss at the Battle of Marignano (September 14-15, 1515). Previous to the battle, Francis had hauled 40 (or 70) heavy artillery in a remarkable passage across the Alps on a newly built road. Marignano was an especially brutal and confused battle that lasted two days, even continuing under the light of the moon until troops on both sides just collapsed where they were and went to sleep. Even the French king was reduced to drinking water from a ditch filled with bodies.

The next day, the French alternated cavalry charges, which served to keep the Swiss in tight hedgehog formation, with artillery bombardments that tore into the densely packed Swiss ranks, wreaking horrible carnage and winning the day. They said Marignano was fought “not between men but between ferocious giants”. When it ended, 12,000 Swiss pike-men lay dead on the field, and with them died much of Swiss military power.

In the subsequent treaties of Noyon and Brussels, the League ceded all of Northern Italy to France and Venice. But the wars were far from over.

After Marignano, Switzerland’s limited manpower was largely depleted by continuous

wars. Replacing them as the most sought after mercenaries would be German Landsknechts.

The two rivals met in 1522 at Bicocca, which signaled the end of the pike square as a stand-alone formation. Without waiting for their artillery to clear the way, the Swiss charged into a hail of artillery fire and then got stalled trying to scale a rampart while enemy arquebuses (light muskets) mowed them down. In their wake, they left 3,000 dead. If Marignano wrecked Swiss manpower, Bicocca broke the myth of their invincibility. After this, they would play only a minor role in future conflicts.

By now, the Spanish had developed the *tercio*, a formation better coordinating the use of pikes and firepower. It consisted of a solid square of pike-men with a rectangular “horn” of arquebusiers at each corner. Thus the pike square was being transformed from an offensive weapon, as the Swiss originally used it, to a defensive formation to protect its firepower. Spanish tercios would be the terror of Europe’s battlefields for the next century, causing enemy soldiers to desert just on word of their approach.

However, the *tercio* had its limits. Its pike square was too deep to make effective use of the back ranks, while the horns of muskets on the corners wasted much of their firepower. This was largely rectified at the battle of Ceresole in 1542 where both armies put a line of arquebuses behind the front line of pikes. While the pike-men were engaged in a melee, the arquebusiers opened fire with horrific effect.

At Pavia in 1525, Francis I rashly led the French cavalry in a charge that got him captured by Charles V’s army. He was released upon promise of good behavior, but he was soon back on the attack against Charles.

On May 6, 1527, Charles V’s unpaid Spanish Catholic and German Lutheran troops broke into Rome and ran amok, torturing, murdering, raping and pillaging for weeks on end while Pope Clement VII could only look on helplessly from the safety of the Castel Sant’ Angelo.

Cardinals were humiliated and tortured, especially by Lutherans.

Sacred vessels and works of art were destroyed or melted down.

Children were thrown out windows to extract the location of hidden wealth.

Women, including nuns, were raped.

After the sack of Rome, Florence, France’s ally, threw out the Medici and declared a republic. This brought down the wrath of Charles V who besieged Florence. With Michelangelo in charge of its recently improved fortifications, the Florentines bitterly resisted the imperial siege for 10 months (1529-30). After a stubborn defense, they finally surrendered and the Medici returned, establishing themselves as the Grand Dukes of Tuscany.

Francis soon returned to the attack and at one time even challenged the older Charles to a duel. To Francis’ surprise, Charles accepted to keep his honor, but both monarchs looked for a face-saving way out. On the appointed morning, Charles (left) arrived at the field of honor, “couldn’t find” Francis, and went home, declaring himself the winner. That afternoon, Francis (right) showed up at an “empty field” and likewise declared himself the winner. To be fair to both sides, clocks weren’t too accurate back then.

In 1551, another war, called the Italian War, broke out between the Hapsburgs and the French, who were allied with the Ottoman Turks. During this war, the Turks were able to ravage the coasts of Italy, while the French and Hapsburgs wore each other out in indecisive fighting. The war finally petered out after both the French and Spanish monarchies defaulted on their loans in 1557, leading to the Treaty of Cateau-Cambresis two years later. Both monarchs were also facing growing struggles with Protestants in their lands. The main result of these wars was to confirm Spanish dominance of Italy through control of Naples, Sicily, Milan, and Sardinia, a dominance that would last almost to 1800.

I may be your uncle, but I'm also your second cousin once removed and your sister: The Hapsburg family



The Hapsburg family tree is the classic example of how marriage alliances could build an empire. It could also serve as a poster child for the dangers of inbreeding, a common practice to prevent splitting up family lands. It started with two crucial marriages: that of Ferdinand of Aragon to Isabella of Castile which united Spain, and the union between the Holy Roman Emperor Maximilian and Mary, the daughter of Charles the Bold of Burgundy, which brought the Low Countries under Hapsburg control.

In 1496, largely in reaction to French aggression in Italy, the Hapsburg prince, Philip “the Handsome”, married Joanna “the Mad” of Spain. Their son the emperor Charles V (Charles I of Spain) would inherit Spain, the Holy Roman Empire, the Two Sicilies, the Low Countries, and the growing American Empire.

At this point, the inbreeding fun really began, as Charles married his first cousin, Isabella of Portugal, whose son and heir was Philip II of Spain. Philip would marry Anne of Austria, his niece/first cousin once removed, while his sister, Maria, married her first cousin, the emperor Maximilian II of Germany.

Their son, Philip III of Spain followed suit by marrying his first cousin once removed, Maria Anna of Austria. Their son, Philip IV married his niece/2nd cousin once removed, another Maria Anna of Austria.

Their son, Charles II (above), was so inbred that the first Maria Anna was both his grandmother and aunt. He was descended from his great-great-great-grandmother, Joanna the Mad, along 14 different lines of descent. She was:

- 2 of Charles' 16 great-great-great-grandmothers,
- 6 of his 32 great-great-great-great-grandmothers, and
- 6 of his 64 great-great-great-great-great-grandmothers.

Five generations back he should have had 32 separate ancestors. He had ten.

No wonder Charles couldn't talk until he was four or walk until he was eight. He also drooled, couldn't chew because of a jaw deformity, or talk intelligibly due to an oversized tongue. Because of his infirmities he didn't go to school or allow himself to be cleaned regularly. The one thing he liked to do was shoot guns.

He did manage to live to the age of 39, reigning (though not ruling) for 35 of those years, during which the rest of Europe anxiously waited for him to die so they could carve up the extensive Spanish Empire.

He seems to have taken only one decisive action in his life, and it was a fateful one. Just to spite everyone else who had agreed on how to divide his empire, he wrote a will leaving it to a French cousin, Louis XIV's great-grandson, Philip, probably knowing no one else would allow France to add such a huge empire to its already extensive domains. As expected, when Charles finally died in 1700, the War of the Spanish Succession broke out and would rage for thirteen years until the exhausted combatants would finally come to a compromise agreement.

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GEOGRAPHY AND THE RISE OF WESTERN EUROPE SINCE 1500 C.E.

Introduction. The four centuries since 1500 would see the meteoric rise of Western Europe from a cultural backwater to the first culture to dominate the planet. Given Western Europe's tiny size, the question arises: what singled it out as the civilization to rise to global dominance? A century ago, Europeans would attribute their dominance to the moral and religious superiority of European and Christian culture. However, life and history are not quite so simple. Rather, there was a unique combination of forces that converged at the right time and place to make European civilization the culture that would largely define the modern world, especially in terms of its technology and political ideologies.

On the surface, other civilizations seemed more likely to predominate, having larger populations, strongly centralized governments, wealth, and technologies comparable to, if not greater than, Western Europe's. For example, Ming China had a population two to three times that of Western Europe. Traditionally, Chinese technology had been among the most innovative in the world, heavily influencing Europe itself with such inventions as gunpowder, the clock, paper, and the compass. China's government was strongly centralized and autocratic, being run by what was probably the best civil service in the world at that time.

The other major civilizations in the world, such as the Ottoman Turks, Mughal India, Tokugawa Japan, Muscovite Russia, and the Incan and Aztec Empires in the Western Hemisphere, told a similar story of being populous, wealthy (except for Russia), and highly centralized under strong autocratic rulers. In fact, it was Western Europe's *lack* of autocratic rulers that would be the key to its leaping ahead of the pack. For, while the absolute rulers outside of Europe tended to exploit and suppress their middle classes and, in the process, stifle inventiveness and initiative, the spirit of free enterprise and inventiveness had much more free rein in Western Europe. That freedom created a powerful dynamic that allowed Europeans to forge ahead with new ideas, business techniques, and technologies that would shape the modern world. And if freedom

was the key to Europe's success, geography was much of its underlying basis.

Europe's geography and its effects. There were two main geographic factors that would help lead to Western Europe's later dominance. First, Western Europe was broken up by mountains, forests, and bodies of water: the Alps and Pyrenees cutting Italy, Spain, and Portugal off from northern Europe; the English Channel cutting England off from the continent; and the Baltic Sea separating Scandinavia from the rest of Europe in the south. This broke Western Europe into a large number of independent states that no one ruler had the power and resources to conquer and hold. Second, Western Europe had a wide diversity of climates, resources, and waterways that promoted a large number of separate economies, but which were linked together for trade by the extensive coastlines and river systems covering the region. Therefore, just as no one power could control all of Europe politically, no one power could monopolize one vital aspect of its economy. Thus Europe was characterized by what we call *political and economic pluralism*, which also reinforced each other.

Political and economic pluralism also combined to promote the rise of a prosperous and innovative middle class that could create and spread new ideas, business techniques, and technology if the local rulers would allow it. If they did not allow it, there was always the option of moving to another state that did give them the freedom to pursue their interests. The results of such moves, such as when the French Protestant Huguenots left France *en masse* to avoid Louis XIV's religious persecution in 1685, were to deprive the economies of the persecuting nations of some of their wealthiest and most innovative people while boosting the economies of the countries that took these immigrants in. As a result, the balance of power would constantly shift away from powerful and repressive states and in favor of the more progressive and free thinking ones, thus reinforcing political pluralism in Western Europe.

The rise of a free middle class had two other important effects. First of all, in conjunction with Western Europe's political pluralism, it could spread new technology (e.g., the printing press) and ideas (e.g., the Reformation). Second, in conjunction with Western Europe's economic pluralism, the

middle class was able to create a freer capitalist economy and promote a competitive spirit that encouraged new technologies and generated profits for those with the drive and imagination to invent and sell them.

These two factors combined to generate even more rapid technological development, especially in the realm of military inventions. There were three main areas of military technology developed. First of all there was the new gunpowder technology which, when combined with the Roman drill and march recently rediscovered and revived during the Renaissance, created the most powerful and efficient armies in the world by the late 1600's. The defensive response to gunpowder gave Europe the second military factor: stronger and more sophisticated fortresses to resist artillery. These fortresses tied invading armies down to prolonged and tedious sieges that stopped, or at least drastically slowed, the progress of invading armies. One side effect of this was that it fed back into and further reinforced Western Europe's political pluralism. The third military innovation (or more properly, application of peaceful technology to military purposes) was the development of large bulky ships to withstand long voyages over the rough waters of the Atlantic Ocean. Such ships also served as excellent gun platforms, thus making European navies the most deadly on the planet.

These three factors, small but well armed and disciplined armies and navies plus strong fortresses, helped Western Europe establish large overseas colonial empires. As Western Europe's technology progressed over time, its armies would show an amazing ability to defeat non-European armies many times their size with astounding regularity, each time increasing and strengthening their hold on their colonies.

Europe's large colonial empires brought an influx of money and resources into Europe. This fed back into Europe's economic and political pluralism, especially after 1600 when smaller states such as England and the Dutch Republic were taking their share of overseas trade and colonies, thus starting the cycle all over again. These colonial empires also made Western Europe the center of a world economy, providing it with the money and resources needed for the Industrial Revolution in the late 1700's. It is no accident that the Industrial

Revolution started in Great Britain, which also happened to be the foremost colonial power of its day.

Thanks to this cycle, Europe and European derived cultures (e.g., the United States, Canada, and Australia) were able to control 85% of the globe by 1900. Since then, Europe has lost its colonial empire, thanks primarily to two highly destructive world wars, but not before it could spread its ideas and technology across the globe where they have taken firm root.

Maurice of Nassau & the Roman Drill-&March



It was Maurice of Nassau whose adoption of the Roman drill-and-march helped transform European armies into the most effective fighting forces on the planet. The problem he solved was how to get a faster rate of fire despite the long time it took to load the matchlock musket. The solution, based on the ancient Romans, was two-fold. First, Maurice adapted the Roman counter-march whereby fresh troops could move up through gaps in the line to replace their comrades in front. The troops in back could now reload and be ready to fire by the time it was their turn to fire again. By constantly rotating his musketeers in this manner, Maurice's troops could maintain a rate of fire three times that of their opponents.

Second, Maurice adopted the Roman drill-and-march. By constantly drilling his troops in the countermarch and reloading their muskets, they could function like virtual automatons on the battlefield. This had a second, possibly more significant effect. The constant rhythm and cadence of the drill-and-march stimulated a pleasure center in the inner ear that likes a beat. This, in turn, created a psychological bond between men in the ranks. This proved to be powerful glue holding together European

armies and giving them a decisive edge over non-Western armies in the coming centuries.

In 1757, the British general, Robert Clive, showed it wasn't just Europeans who could use these techniques. Leading a small army consisting mostly of European trained and equipped Indian troops, he decisively defeated an Indian army twelve times its size at Plassey, showing the effectiveness of the European drill-and-march. Even today, when close order marching on the battlefield would be suicidal, it still is extensively used in basic training to forge today's modern armies.

In the spirit of the Renaissance, rulers also tried to emulate the Roman legions of antiquity by such measures as laying camps out in an organized grid. Francis I of France even tried to raise 7 regional legions each with 6,000 conscripts.

Su Tzu and the Chinese Drill-and-March



There is evidence of parallel development of the drill-and-march in China as far back as 500 B.C.E., the first drill instructor being none other than Sun Tzu (above), the author of "The Art of War." Working for King Helu of Wu, he supposedly demonstrated his methods' effectiveness by training a contingent of 180 palace women in close order drill with pole arms.

Sun Tzu organized the women into two units, with the king's two favorite concubines as leaders, and gave them basic instructions on moving right, left, about face, etc. When the women did not follow his orders, and laughed instead, he beheaded their unit leaders, which adjusted their attitude appropriately. Having trained them to a peak of efficiency Sun Tzu presented them to the king saying they were properly drilled and disciplined and ready to go

through fire and water for him. Although depressed by losing his two favorite concubines, Helu retained the services of Sun Tzu, who trained Wu's armies and led them to victory over its archrival, Chu.

However, China did not institutionalize the drill and march like the Romans did, since they came to rely more on cavalry to meet the nomads from the North, and horses don't march well.

Fortresses and Sieges in the Early Modern Era



The Dutch fortress of s'Hertengobosch, showing how waterways could be incorporated into fortress defenses

The first response to gunpowder's destructive power was to strengthen existing medieval fortifications. Along with bolstering the old towers, a low wall level with the moat might be built as a stable firing platform for cannons.

In the late 1400s, the Italians developed angled bastions that jutted out from the wall and provided flanking fire covering the entire face of the intervening wall. Artillery posted on the side of the bastions was also relatively safe from the direct fire of the besiegers' guns. The wide platforms at the tops of the bastions allowed defenders to post additional artillery. Fortifications were also built at a sloping angle to minimize damage from enemy artillery, making it harder to hit the walls at a direct perpendicular angle.

A siege was largely a race against time, with the attackers needing to take a fortress before combat, desertion, and especially disease had decimated their ranks, their supplies ran out, and/or an army showed up to relieve the defenders. Therefore, over time, defenders

added different types of fortifications, such as triangular structures known as *ravelins*, in front of the moat to further delay the besiegers' progress and ensure their own survival.

Probably the best-known military engineer of the early modern era was the Marquis de Vauban (1633-1707) who ringed France with a network of 37 fortresses while upgrading the fortifications of some 300 towns and cities for Louis XIV. Besides being an expert at building forts, Vauban was equally adept at besieging and breaking through them.

Along with continuous artillery bombardments to blow breaches in fortress walls, armies used the strategy of undermining. This involved digging a tunnel underneath a section of the wall and then collapsing the tunnel with explosives to bring down the wall overhead now that it was partially unsupported underneath. If defenders detected the mine being dug, they might dig a countermine to meet it before it reached the wall and collapse it. Sometimes this would lead to battles beneath the earth in areas only two or three feet tall and wide.

If the wall were breached, defenders put up an especially ferocious fight against any assaults, because if the city fell, the attackers, usually brutal mercenaries who had just endured the hardships of an extended siege, were typically allowed three days of murder, rape, and pillage. This often encouraged a negotiated surrender by towns to avoid such a fate. Conversely, the attackers knew the defenders would be especially fierce in defending their town and were often hard to induce to make the final assault.

An invading army had to take, or at least isolate by siege, each fortress in its path before proceeding deeper into enemy territory. Not doing so would expose its lines of supply and communications to attack, leaving it isolated in enemy territory.

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THE AGE OF EXPLORATION (c.1400-1550)

Introduction. In 1400 A.D. Europeans probably knew less of the globe than they had during the Pax Romana. Outside of Europe and the Mediterranean, little was known, with rumor and imagination filling the gaps. Pictures of Cyclopes and people with dogs' heads or ears the size of satellite dishes illustrated books about lands to the East. There was the legendary Christian king, Prester John with an army of a million men and a mirror that would show him any place in his realm whom Christians hoped to ally with against the Muslims.

Europeans also had many misconceptions about the planet outside their home waters. They had no real concept of the size or shape of Africa or Asia. Because of a passage in the Bible, they thought the world was seven-eighths land and that there was a great southern continent that connected to Africa, making any voyages around Africa to India impossible since the Indian Ocean was an inland sea. Nor had they any idea of the existence of the Americas, Australia, or Antarctica. They also vastly underestimated the size of the earth by some 5-10,000 miles, a miscalculation that gave explorers like Columbus and Magellan the confidence to undertake voyages to the Far East, since they should be much shorter and easier than they turned out to be.

Factors favoring Europe. However, about this time, European explorers started to lead the way in global exploration, timidly hugging the coasts at first, but gradually getting bolder and striking out across the open seas. There were three main factors that led to Europeans opening up a whole new world at this time.

1) *The rise of towns and trade along with the Crusades* in the centuries preceding the age of exploration caused important changes in Europeans' mental outlook that would give them the incentive and confidence to launch voyages of exploration in three ways. First, they stimulated a desire for Far Eastern luxuries. Second, they exposed Europeans to new cultures, peoples and lands, spurring an interest in the outside world that was further stimulated by the travels of Marco Polo in the late 1200's.

Third, towns and the money they generated helped lead to the Renaissance that changed Europeans' view of themselves and the world. There was an increasing emphasis on *secular* topics, including geography. *Skepticism* encouraged people to challenge older geographic notions. *Humanism* and *individualism*, gave captains the confidence in their own individual abilities to dare to cross the oceans with the tiny ships and primitive navigational instruments at their disposal.

2) *Medieval religious fervor* also played its part. While captains such as Columbus, da Gama, and Magellan had to rely on their own skills as leaders and navigators, they also had an implicit faith in God's will and guidance in their missions. In addition, they felt it their duty to convert any new peoples they met to Christianity. Thus we see Renaissance Europe caught in the transition between the older medieval values and the new secular ones. Together they created a dynamic attitude that sent Europeans out on a quest to claim the planet as their own.

3) *Europe's geographic position* also drove it to find new routes to Asia in three ways. First of all, Europe's geographic position at the extreme western end of the trade routes with the East allowed each of the numerous middlemen to take his cut and raise the cost of the precious silks and spices before passing them on to still another middleman. Those trade routes were long, dangerous, and quite fragile. It would take just one strong hostile power to establish itself along these routes in order to disrupt the flow of trade or raise the prices exorbitantly. For Europeans, that power was the Ottoman Empire. The fall of the Byzantine Empire and the earlier fall of the crusader states had given the Muslims a larger share of the trade headed for Europe. Thus Europe's disadvantageous geographic position provided an incentive to find another way to the Far East.

However, Europe was also in a good position for discovering new routes to Asia. It was certainly in as good a position as the Muslim emirates on the coast of North Africa for exploring the Atlantic coast of Africa. And when Spain gained control of both sides of the straits of Gibraltar, it was in a commanding position to restrict any traffic passing

in and out of the Western Mediterranean. Europe was also well placed for exploration across the Atlantic Ocean.

Finally, ships and navigation technology had seen some dramatic leaps forward. The most striking of these was the compass, which had originated in China around 200 B.C. This allowed sailors to sail with much greater certainty that they were going in the right direction. Instruments such as the quadrant, crosstaff, and astrolabe allowed them to calculate latitude by measuring the elevation of the sun and North Star, although the rocking of ships at sea often made measurements taken with these instruments highly inaccurate. Columbus, one of the best navigators of his day, took readings in the Caribbean that corresponded to those of Wilmington, North Carolina, 1100 miles to the north! As a result of such imperfect measurements, sailing directions might be so vague as to read: "Sail south until your butter melts. Then turn west." Compounding this was the lack of a way to measure longitude (distance from east to west) until the 1700's with the invention of the chronometer.

Maps also left a lot to be desired. A medieval map of the world, showing Jerusalem in the center and Paradise to the Far East, gives an insight into the medieval worldview, but little useful geographic information. By 1400, there were fairly decent coastal maps of Europe and the Mediterranean, known as *portolan charts*. However, these were of no use beyond Europe, and larger scale global projections would not come along until the 1500's. As a result, explorers relied heavily on sailors' lore: reading the color of the water and skies or the type of vegetation and sea birds typical of an area. However, since each state jealously guarded geographic information so it could keep a monopoly on the luxury trade, even this information had limited circulation.

Advances in ship design involved a choice between northern Atlantic and southern Mediterranean styles. For hulls, shipwrights had a choice between the Mediterranean *carvel built* design, where the planks were cut with saws and fit end to end, or northern *clinker built* designs, where the planks were cut with an axe or adze and overlapped. Clinker-built hulls were sturdy and watertight, but limited in size to the length of one

plank, about 100 feet. As a result, the southern carvel built hulls were favored, although they were built in the bulkier and sturdier style of the northern ships to withstand the rough Atlantic seas. One other advance was the stern rudder, which sat behind the ship, not to the side. Unlike the older side steering oars which had a tendency to come out of the water as the ship rocked, making it hard to steer the ship, the stern rudder stayed in the water.

There were two basic sail designs: the southern triangular, or *lateen*, (i.e., Latin) sail and the northern square sail. The lateen sail allowed closer tacking into an adverse wind, but needed a larger crew to handle it. By contrast, the northern square sail was better suited for tailwinds and used a smaller crew. The limited cargo space and the long voyages involved required as few mouths as possible to feed, and this favored the square design for the main sail, but usually with a smaller lateen sail astern (in the rear) to fine tune a ship's direction. Also, once sailors had figured out how to exploit prevailing easterlies and westerlies (known as trade winds) so they usually had tail winds, they could rely more on square sails as their primary means of propulsion.

The resulting ship, the *carrack*, was fusion of northern and southern styles. It was carvel built for greater size but with a bulkier northern hull design to withstand rough seas. Its main sail was a northern square sail, but it also used smaller lateen sails for tacking into the wind.

Living conditions aboard such ships was appalling, especially during long voyages. Ships were filthy, with little or no sanitation facilities. They constantly leaked and were crawling with rats, lice, and other creatures. Without refrigeration, food and water spoiled quickly and horribly. Disease was rampant, especially scurvy, caused by vitamin C deficiency. A *good* voyage between Portugal and India would claim the lives of twenty per cent of the crewmen from scurvy alone. It should come as no surprise then that ships' crews were often drawn from the dregs of society and required a strong and often brutal hand to keep them in line.

Portugal and Spain led the way in early exploration for two main reasons. First, they were the earliest European recipients of Arab math, astronomy, and

geographic knowledge based on the works of the second century C.E. geographer, Ptolemy. Secondly, their position on the southwest corner of Europe was excellent for exploring southward around Africa and westward toward South America.

Portugal and the East (c.1400-1498). Portugal started serious exploration in the early 1400's, hoping to find both the legendary Prester John as an ally against the Muslims and the source of gold that the Arabs were getting from overland routes through the Sahara. At first, they did not plan to sail around Africa, believing it connected with a great southern continent. The guiding spirit for these voyages was Prince Henry the Navigator whose headquarters at Sagres on the north coast of Africa attracted some of the best geographers, cartographers and pilots of the day. Henry never went on any of his expeditions, but he was their heart and soul.

The exploration of Africa offered several physical and psychological obstacles. For one thing, there were various superstitions, such as monsters, Cape Bojador, which many thought was the Gates of Hell, and boiling seas as one approached the equator. Also, since the North Star, the main nighttime navigational guide, would disappear south of the Equator, sailors were reluctant to cross that line.

Therefore, early expeditions would explore a few miles of coast and then scurry back to Sagres. This slowed progress, especially around Cape Bojador, where some fifteen voyages turned back before one expedition in 1434 finally braved its passage without being swallowed up. In the 1440's, the Portuguese found some, but not enough, gold and started engaging in the slave trade, which would disrupt African cultures for centuries. In 1445, they reached the part of the African coast that turns eastward for a while. This raised hopes they could circumnavigate Africa to reach India, a hope that remained even when they found the coast turning south again.

When Prince Henry died in 1460, further expeditions stalled for the next 20 years. However, French and English interest in a route around Africa spurred renewed activity on Portugal's part. By now, Portuguese captains were taking larger

and bolder strides down the coast. One captain, Diego Cao, explored some 1500 miles of coastline. With each such stride, Portuguese confidence grew that Africa could be circumnavigated. Portugal even sent a spy, Pero de Covilha, on the overland route through Arab lands to the Indies in order to scout the best places for trade when Portuguese ships should finally arrive.

The big breakthrough came in 1487, when Bartholomew Dias was blown by a storm around the southern tip of Africa (which he called the Cape of Storms, but the Portuguese king renamed the Cape of Good Hope). When Dias relocated the coast, it was to his west, meaning he had rounded the tip of Africa. However, his men, frightened by rumors of monsters in the waters ahead, forced him to turn back. Soon after this, the Spanish, afraid the Portuguese would claim the riches of the East for themselves, backed Columbus' voyage that discovered and claimed the Americas for Spain. This in turn spurred Portuguese efforts to find a route to Asia before Spain did. However, Portugal's king died, and the transition to a new king meant it was ten years before the Portuguese could send Vasco da Gama with four ships to sail to India. Swinging west to pick up westerly trade winds, da Gama rounded the Cape of Good Hope in three months, losing one ship in the process. Heading up the coast, the Portuguese encountered Arab surprise and hostility against European ships in their waters. However, da Gama found an Indian pilot who led the Portuguese flotilla across the Indian Ocean to India in 1498.

The hostility of the Arab traders who dominated trade with India and the unwillingness of the Indians to trade for European goods, which they saw as inferior, made getting spices quite difficult. However, through some shrewd trading, da Gama managed to get one shipload of spices and then head home in August 1498. It took over a year, until September 1499, to get back to Portugal, but he had proven that Africa could be circumnavigated and India could be reached by sea. Despite its heavy cost (two of four ships and 126 out of 170 men) Da Gama's voyage opened up new vistas of trade and knowledge to Europeans.

Subsequent Portuguese voyages to the East reached the fabled Spice Islands (Moluccas) in 1513. In that same year, the Portuguese explorer,

Serrao, reached the Pacific at its western end while the Spanish explorer, Balboa, was discovering it from its eastern end. Also in 1513, the Portuguese reached China, the first Europeans to do so in 150 years. They won exclusive trade with China, which had little interest in European goods. However, China was interested in Spanish American silver, which made the long treacherous voyage across the Pacific to the Spanish Philippines. There, the Portuguese would trade Chinese silks for the silver, and then use it for more trade with China, while the Spanish would take their silks on the even longer voyage back to Europe by way of America. In 1542, the Portuguese even reached Japan and established relations there. As a result of these voyages and new opportunities, Portugal would build an empire in Asia to control the spice trade.

Spain and the exploration of the West (1492-c.1550). Spain led the other great outward thrust of exploration westward across the Atlantic Ocean. Like Portugal, the Spanish were also partially driven in their explorations by certain misconceptions. While they did realize the earth is round, they also vastly underestimated its size and thought it was seven-eighths land, making Asia much bigger and extending much further west. Therefore, they vastly underestimated the distance of a westward voyage to Asia.

This was especially true of a Genoese captain, Christopher Columbus, an experienced sailor who had seen most of the limits of European exploration up to that point in time, having sailed the waters from Iceland to the African coast. Drawing upon the idea of a smaller planet mostly made up of land, Columbus had the idea that the shortest route to the Spice Islands was by sailing west, being only some 3500 miles. In fact, the real distance is closer to 12,000 miles, although South America is only about 3500 miles west of Spain, explaining why Columbus thought he had hit Asia. The problem was that most people believed such an open sea voyage was still too long for the ships of the day.

Getting support for this scheme was not easy. The Portuguese were already committed to finding a route to India around Africa, and Spain was preoccupied with driving the Moors from their last stronghold of Granada in southern Spain.

However, when the Portuguese rounded the Cape of Good Hope and stood on the verge of reaching India, Spain had added incentive to find another route to Asia. Therefore, when Granada finally fell in 1492, Spain was able to commit itself to Columbus' plan.

Columbus set sail August 3, 1492 with two caravels, the *Nina* and *Pinta*, and a carrack, the *Santa Maria*. They experienced perfect sailing weather and winds. In fact, the weather was too good for Columbus' sailors who worried that the perfect winds blowing out would be against them going home while the clear weather brought no rain to replenish water supplies. Columbus even lied to his men about how far they were from home (although the figure he gave them was fairly accurate since his own calculations overestimated how far they had gone). By October 10, nerves were on edge, and Columbus promised to turn back if land were not sighted in two or three days. Fortunately, on October 12, scouts spotted an island, possibly San Salvador, which Columbus mistook for Japan.

After failing to find the Japanese court, Columbus concluded he had overshot Japan. Further exploration brought in a little gold and a few captives. But when the *Santa Maria* ran aground, Columbus decided to return home. A lucky miscalculation of his coordinates caused him to sail north where he picked up the prevailing westerlies. The homeward voyage was a rough one, but Columbus reached Portugal in March 1493, where he taunted the Portuguese with the claim that he had found a new route to the Spice Islands. This created more incentive for the Portuguese to circumnavigate Africa, which they did in 1498. It also caused a dispute over who controlled what outside of Europe, which led to the pope drawing the Line of Demarcation in 1494.

Ferdinand and Isabella, although disappointed by the immediate returns of the voyage, were excited by the prospects of controlling the Asian trade. They gave Columbus the title "Admiral of the Ocean Sea, Viceroy and Governor of the Islands that he hath discovered in the Indies." Over the next decade, they sent him on three more voyages to find the Spice Islands. Each successive voyage put even more of the Caribbean and surrounding coastline on the map, but the Spice Islands were

never found. Columbus never admitted that his discovery was a new continent. He died in 1504, still convinced that he had reached Asia.

However, by 1500, many people were convinced that this was a new continent, although its size and position in relation to and distance from Asia were by no means clear. The Portuguese discovery of a route to India around Africa in 1498 provided more incentive for Spanish exploration. In 1513, the Spanish explorer, Balboa discovered the Pacific Ocean, having no idea of its immensity or that the Portuguese explorer, Serrao, was discovering it from the Asian side. Given the prevailing view of a small planet, many people thought that the Pacific Sea, as they called it, must be fairly small and that Asia must be close to America. Some even thought South America was a peninsula attached to the southern end of Asia. Either way, finding a southwest passage around the southern tip of South America would put one in the Pacific Sea and a short distance from Asia. If this were so, it would give Spain a crucial edge over Portugal, whose route around Africa to India was especially long and hard.

In 1519, Charles V of Spain gave five ships and the job of finding a southwest passage around South America to Ferdinand Magellan, a former Portuguese explorer who had been to the Spice Islands while serving Portugal. Magellan's circumnavigation of the globe was one of the great epic, and unplanned, events in history. After sailing down the South American coast, he faced a mutiny, which he ruthlessly suppressed, and then entered a bewildering tangle of islands at the southern tip of the continent known even today as the Straits of Magellan. Finding his way through these islands took him 38 days, while the same journey today takes only two.

Once they emerged from the Straits of Magellan into the Pacific "Sea", Magellan and his men figured they were a short distance from Asia, and set out across the open water and into one of the worst ordeals ever endured in nautical history. One of those on the journey, Pigafetta, left an account of the Pacific crossing:

"On Wednesday the twenty-eighth of November, one thousand five hundred and twenty, we issued forth from the said strait and

entered the Pacific Sea, where we remained three months and twenty days without taking on board provisions or any other refreshments, and we ate only old biscuit turned to powder, all full of worms and stinking of the urine which the rats had made on it, having eaten the good. And we drank water impure and yellow. We ate also ox hides, which were very hard because of the sun, rain, and wind. And we left them...days in the sea, then laid them for a short time on embers, and so we ate them. And of the rats, which were sold for half an ecu apiece, some of us could not get enough.

"Besides the aforesaid troubles, this malady (scurvy) was the worst, namely that the gums of most part of our men swelled above and below so that they could not eat. And in this way they died, inasmuch as twenty-nine of us died...But besides those who died, twenty-five or thirty fell sick of divers maladies, whether of the arms or of the legs and other parts of the body (also effects of scurvy), so that there remained very few healthy men. Yet by the grace of our Lord I had no illness.

"During these three months and twenty days, we sailed in a gulf where we made a good 4000 leagues across the Pacific Sea, which was rightly so named. For during this time we had no storm, and we saw no land except two small uninhabited islands, where we found only birds and trees. Wherefore we called them the Isles of Misfortune. And if our Lord and the Virgin Mother had not aided us by giving good weather to refresh ourselves with provisions and other things we would have died in this very great sea. And I believe that nevermore will any man undertake to make such a voyage."

By this point, the survivors were so weakened that it took up to eight men to do the job normally done by one. Finally, they reached the Philippines, which they claimed for Spain, calculating it was on the Spanish side of the Line of Demarcation. Unfortunately, Magellan became involved in a local tribal dispute and was killed in battle. Taking into account his previous service to Portugal in the East, Magellan and the Malay slave who accompanied him were the first two people to circumnavigate the earth.

By now, the fleet had lost three of its five ships: one having mutinied and returned to Spain, one

being lost in a storm off the coast of South America, and the other being so damaged and the crews so decimated that it was abandoned. The other two ships, *Trinidad* and *Victoria*, finally reached the Spice Islands in November 1521 and loaded up with cloves. Now they faced the unpleasant choice of returning across the Pacific or continuing westward and risking capture in Portuguese waters. The crew of the *Trinidad* tried returning over the Pacific, but gave up and were captured by the Portuguese. Del Cano, the *Victoria's* captain, sailed far south to avoid Portuguese patrols in the Indian Ocean and around Africa, but also away from any chances to replenish its food and water. Therefore, the Spanish suffered horribly from the cold and hunger in the voyage around Africa.

When the *Victoria* finally made it home in 1522 after three years, only 18 of the original 280 crewmen were with it, and they were so worn and aged from the voyage that their own families hardly recognized them. Although the original theory about a short South-west Passage to Asia was wrong, they had proven that the earth could be circumnavigated and that it was much bigger than previously supposed. It would be half a century before anyone else would repeat this feat. And even then, it was an act of desperation by the English captain Sir Francis Drake who was just trying to avoid capture by the Spanish fleet.

Interior and coastal explorations (1519-c.1550). Meanwhile, the Spanish were busy exploring the Americas in search of new conquests, riches, and even the Fountain of Youth. There were two particularly spectacular conquests. The first was by Hernando Cortez, who led a small army of several hundred men against the Aztec Empire in Mexico. Despite their small number, the Spanish could exploit several advantages: their superior weapons and discipline, the myth of Quetzacoatl which foretold the return of a fair haired and bearded god in 1519 (the year Cortez did appear), and an outbreak of smallpox which native Americans had no prior contact with or resistance to. Because of this and other Eurasian diseases, native American populations would be devastated over the following centuries to possibly less than ten per cent their numbers in 1500.

The Spanish conquistador, Pizarro, leading an army of less than 150 men, carried out an even more amazing conquest of the Inca Empire in Peru in the 1530's. Thanks to a smallpox outbreak, which had preceded him and taking advantage of dispute over the throne, Pizarro captured the Inca Emperor, whose authority was so great that his capture virtually paralyzed the Incas into inaction. As a result, a highly developed empire ruling millions of people fell to a handful of Spaniards.

The conquests of Mexico and Peru more than compensated Spain for its failure to establish a trade route to the Spice Islands. The wealth of South America's gold and silver mines would provide Spain with the means to make it the great power of Europe in the 1500's. Unfortunately, Spain would squander these riches in a series of fruitless religious wars that would wreck its power by 1650.

Other Spanish expeditions were exploring South America's coasts and rivers, in particular the Amazon, Orinoco, and Rio de la Plata, along with ventures into what is now the southwest United States (to find the Seven Cities of Gold), the Mississippi River, and Florida (to find the Fountain of Youth). While these found little gold, they did provide a reasonable outline of South America and parts of North America by 1550. However, no one had yet found an easy route to Asia. Therefore, the following centuries would see further explorations which, while failing to find an easier passageway, would in the process piece together most of the global map.

A Short History of the World Map to 1400



The early Greeks, such as Homer, saw the world as a disc surrounded by Ocean (above). If you sailed beyond the Pillars of Hercules (Straits of Gibraltar) you would fall off. By 500 B.C.E., although the Greeks still thought the land mass of Europe, Asia, and Africa was surrounded by Ocean, more and more of them were coming to the conclusion that the world was spherical, as evidenced by ships

disappearing over the horizon and the shadow of the earth on the sun. While most educated people believed the world was round, one exception was a Greek geographer of the 5th century C.E., Cosmas Indicopleustes, who said the world must be flat, because if it were round, people in the Southern Hemisphere would have fallen off.

The most influential geographer of antiquity was the 2nd century C.E. Greek geographer, Ptolemy, who envisioned a round world, but one that was mostly land. Included in this was a Great Southern Continent that was considered necessary to balance all the land in the Northern Hemisphere so the globe didn't tip over. It was Ptolemy's map (below) that the Arabs passed to the Spanish and Portuguese, giving the impression that the earth was smaller than it really is, that Asia stretched 3,000 miles further east than it does and that a Great Southern Continent joined with Africa and Asia to make the Indian Ocean an inland sea. Together these left the conclusion that a voyage around Africa might be impossible, while one going west from Europe should reach Asia fairly easily.



Luckily, Ptolemy's figures ignored the remarkable work of another Greek, Eratosthenes, who through some astute geometry had calculated the earth's circumference to within 50 miles of its real size. I say luckily, because if sailors had known the earth's real size, it would have taken much longer for them to get the courage and technology to make transoceanic voyages.

Among the things lost in the West with the fall of Rome was Ptolemy's world map. Replacing it was the T-in-O map showing a large blob of

land (Asia) over two smaller blobs of land (Europe and Africa), which were divided in the middle by three other blobs (the Mediterranean Sea and the Don and Nile Rivers) that formed a T. Surrounding all this was the Ocean, which made the O in the T-in-O map. Orientation of medieval European maps had the East on top, since that was where Paradise was thought to be. And, of course, Jerusalem was at the center of the map. No wonder so many explorers got lost.

Marco Polo

Marco Polo was by no means the first European to reach China. However, he is particularly remembered because of his account of his travels, which included spending 17 years in China, some of them as a governor of a city for the Mongol ruler, Kublai Khan. (The Mongols favored foreign officials over their Chinese subjects, whom they didn't trust.)

Upon returning to his native Venice, Marco was captured in a war with another Italian city-state, Genoa. While in prison, he recounted his travels to a fellow prisoner, Rustichelli, who wrote them down and published them. It was a best seller for its time and sparked increased interest in exploration. Much like Herodotus, Marco's descriptions of things and places he actually saw are fairly reliable. However, sights reported to him second or third hand (such as people with faces in their stomachs, arms growing out of their ears, and umbrella-feet to protect them against the sun) are typically taken at face value and are often of questionable value.

And there were some weird things, too...like monsters, boiling seas, and possibly the strangest of all...the platypus.

Nature's Cruellest Joke: the Duckbill Platypus
Among the most ridiculous legends, if not an outright hoax, was the supposed existence of a mammal with a duckbill, webbed feet, and a beaver's tail. Reasonable people quickly pointed out that if such a creature did indeed exist, it was nature's cruelest joke. When the discovery of the platypus was announced back

in Europe, people thought it was a practical joke or delusion. In fact, even the first European to discover it in 1799, Dr. George Shaw, thought it was a hoax and cut it open expecting to find stitches holding the bill to the skin. One of the legends surrounding the so-called platypus was that its young had teeth and lost them in favor of ridges for scrounging through river mud for food!!!

Added to this ridiculous rumor was the idea that the platypus will only mate in captivity if it has river mud full of yummy bugs, etc. to feed on. Not satisfied with such absurd claims, these hoaxsters further claimed that, although a mammal, THE PLATYPUS LAID EGGS!!

Another of the improbable legends surrounding the platypus was belief in a venomous hind leg as its primary defense!!!

And, of course, all this was true.

Some other “platyfacts”:

- The accepted plural for platypus is either platypus or platypuses. Platypi is *not* a recognized form. Also, contrary to popular belief, the proper term for a baby platypus is not puggle.
- According to aboriginal legends, the first platypus was born when a very persuasive water rat convinced a duck to mate with him. Boy was her mother mad 9 months later.
- The adult platypus is only about half the size of a house cat and lives about 12 years.
- Female platypus don't have nipples, but secrete milk through two patches of skin on their abdomen that the baby platypus, which at birth is the size of a lima bean, slurps up.

The Legendary Kingdom of Prester John



Prester John was one of the most enduring legends of the middle ages. In 1165 a letter supposedly from him showed up in Europe, claiming he had a huge Christian kingdom in Central Asia and wanted to join Christian Europe in crushing the Muslims in between. Other legends surrounding him reported that he was descended from one of the Three Wise Men and had a magic mirror that would let him see any part of his realm he wanted. While most of his army of one million soldiers were naked, their leaders wore armor made from alligator hides.

It gets better, because his kingdom bordered the earthly paradise and contained such wonders as unicorns, griffins, the Fountain of Youth, men with three horns coming out of their foreheads or eyes in the backs of their heads, a waterless sea full of fish, and Amazons and pygmies who each year allied in a war against the giant birds.

Indeed, there were Nestorian Christians in Central Asia that could have formed a germ of truth for this legend. Similarly, the Christian kingdom of Abyssinia in Africa was another source for the legend and a goal for Portuguese explorers to find.

Where the original letter came from is another mystery, although recent scholarship suggests it may have been somewhere in Northern Italy, possibly of Hebrew origin. This raises the tantalizing question of whether it was an intentional hoax designed to lead European explorers on a wild goose chase for several centuries. If that was the case, it worked marvelously.

The Technology of Navigation

While primitive by our standards, navigational instruments and techniques sailors during the age of exploration did a remarkable job of helping sailors find their way to new places and back home again. The most notable piece of navigational technology was the compass.

The first mention of the compass being used by the Chinese for navigation was in 1117 C.E. While previously believed that Europe got the compass indirectly from China, its earliest recorded use in Europe was in 1187, even before

its first mention in Arab sources, who presumably would have been the middlemen passing it on to Europe. Therefore, some historians believe the navigational compass was invented independently in both China and Europe.

Nautical compasses faced the problem of being disrupted by rocking ships. One solution was to place a magnetized needle in a floating straw, the water's fluidity maintaining some stability to compensate for the ship's rocking. Another version was to balance a magnetized needle on one's thumbnail.

Sailors called the compass the constant needle. However, on Columbus' first voyage, which was also the first long distance east-west voyage by Europeans, they noticed the compass pointing toward magnetic north (which they had no clue about) instead of the North Star. Although initially disturbing, this proved to be of no great significance for future voyages.

The crosstaff, quadrant, and astrolabe were all used to measure the elevation of the sun or North Star in order to calculate latitude, the higher the sun or North Star, the lower the latitude. For example, the astrolabe was a circular disc with degrees measured evenly from 0 to 90 from top to bottom. Holding the instrument upright, a pointer hinged at the center would be moved until it lined up with the sun. Where the pointer intersected on the outer edge told the latitude in degrees.

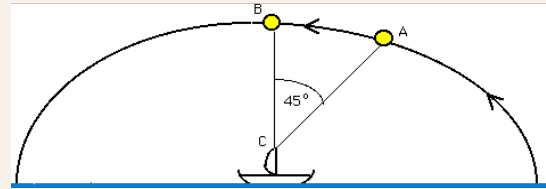
Calculating the ship's speed was done by tossing overboard a piece of wood attached to a rope with knots tied in it at regular intervals. The rope would be let out at the rate of the ship's speed for certain amount of time and then reeled in to count how many knots the ship had traveled. Thus the nautical term knots.

Calculating where the ship had traveled was done with a traverse board. Which had 32 radii, each with 8 pegs to record the direction the ship was sailing each half hour of a pilot's 4-hour shift.

Measuring the water's depth was done with a lead line, a 1200 foot long rope that was knotted at intervals and weighted with a piece of lead hollowed out underneath and filled with tallow. A sailor would drop it overboard, count the knots just above the water and then pull it up to read the debris from the tallow for telltale signs of where they might be.

Finding longitude (one's relative east-west position) was much harder, because there were no constants (such as the North Star) to rely on and two variables to keep track of: the time at home and how far one had traveled out to sea.

People knew the sun moved 15° each hour to travel a full 360° circle in one 24 hour day. Therefore, if they knew what time it was at home, they could measure the angle ACB where A was the sun at the present location, B was the sun's position as it would appear at high noon back home, and C was the ship. That angle should be how many degrees west the ship was.

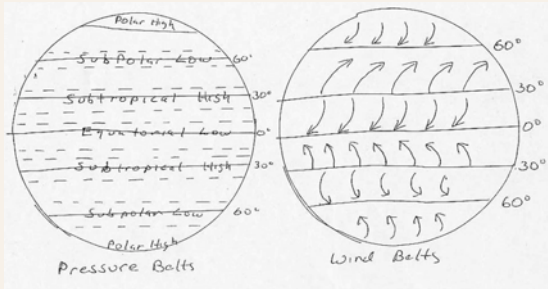


The problem was keeping accurate time so they could know the time back home, since there were no accurate clocks that could work on a rocking ship. They had half-hour glasses to mark time, but if someone was too busy or forgot to change the sandglass, they would lose track of what time it was back home and thus be unable to calculate their longitude. It would not be until the 1750s that John Harrison, after 30 years of trial and error, invented the chronometer, an accurate timepiece that worked on sailing ships, thus making possible the calculation of longitude.

Since the British invented the chronometer, they got to determine the primary reference point for longitude, which was Greenwich, which just happened to be in England.

The trade winds were possibly the single most important thing sailors needed to be aware of

for long-distance voyages. The most basic thing to understand about winds is that all winds blow from high pressure to low pressure. What causes winds is uneven heating of the earth, which creates different belts of air pressure. There are seven major pressure belts between the poles. Moving from the poles to the equator there are two polar high-pressure belts, two sub-polar low-pressure belts, two subtropical high-pressure belts, and the equatorial low-pressure belt.



Therefore, it would seem prevailing trade winds would blow straight north or south between these belts. But they don't, thanks to the spin of the earth and something known as the Coriolis effect. The fly in the ointment is that the earth doesn't spin at the same speed at different latitudes. After all, a point at the equator has to travel over 1000 miles per hour to make a complete rotation in 24 hours. By comparison, a point at 45° north only has to travel half that speed.

Therefore, a wind blowing south toward the equator from 30° is starting at a point that is traveling east at a much slower speed than the point on the equator directly south of it. Thus, when it reaches the equator, it will have fallen behind that much faster moving point, making it blow to the southwest instead of due south. Similarly all winds blowing toward the equator will fall behind and also blow in a northwesterly or southwesterly direction. And all wind blowing away from the equator will be going faster than their corresponding point due north or south and will "jump ahead", blowing in a northeasterly or southeasterly direction.

Although sailors didn't understand what causes winds, they did know where different belts of trade winds were (along with belts of doldrums

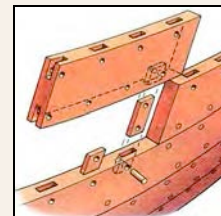
with no prevailing winds) and plotted their courses accordingly.

Classified information. Geographic knowledge was kept so secret that when the Dutch wanted to go to the Spice Islands a full century after the Portuguese had gotten there, they still didn't know the route. Luckily for them, a Dutch captain who had been in Portuguese service in the Far East showed them the way.

Ship Construction and Design

Ancient shipwrights used plank first-construction where the planks of the hull were laid first and then strengthened with an infrastructure of ribs and thwarts. This evolved from the earliest ships, which were dugout canoes. To make them larger, planks (AKA strakes) were added up the sides, being bent by heating to conform to the master plan inside the shipwright's head. Since there was no frame to attach the strakes to, they were all joined together by thousands of tenons, a very time-consuming process. As ships grew in size, an interior frame of ribs was needed to reinforce the strakes, and even higher up crossbeams (AKA thwarts) were added. There were no written plans, and so each ship was a unique creation.

By the early medieval period, both cheap labor and timber were in relatively short supply in the Mediterranean. The result was a new type of construction technique known as frame-first, which used pre-conceived plans to build a skeletal frame of ribs to which the planks were then fitted. Also, nails were probably being used to fasten the planks to the frame, a much easier and faster method than fitting the planks together edge-to-edge with the tedious mortis-and-tenon method (below).



However, iron nails were handmade and expensive, so cheaper alternatives were often used, such as wedge shaped wooden dowels

known as a trenails and using rope to tie planks together. Both of these were techniques used for thousands of years.

By the 1400s frame-first construction was in general use in the Mediterranean and making it possible to develop large, sturdy ships, suitable for extended voyages of exploration on rough seas. It soon spread to Northern Europe, replacing the lapstrake (over-lapping) construction, which seriously limited the size of ships they could build.

The Stern rudder was another innovation vital to the voyages of exploration. The older side-mounted steering oars were limited to the calmer waters of the South, since rocking from side to side in rough waters caused it to come out of the water, making it useless. The sternpost rudder invented in the first century in China and probably independently again in the 1300s in Northern Europe was only susceptible to pitching along the length of a ship's beam, which was much less pronounced than rocking from side to side. Any ship pitching violently enough to bring the stern rudder out of the water was probably doomed anyway.

The stern rudder also affected the design of the hull, making the stern (back) more squared off to accommodate it. Sometimes the tiller for operating the rudder was below deck, so its operator had to be told which way to turn.

Ships of the age of exploration. Caravels were lateen rigged vessels that were favored for tacking into the wind. *The lateen sail* could tack 55° into the wind while the square sail could only tack 67°, allowing it to make 50% more progress toward reaching its goal in a given time. Originally a type of fishing vessel, the Portuguese developed and enlarged the caravel for longer voyages to a capacity of 80-100 tons. Two of Columbus' ships, the Nina and Pinta started off as small caravels of about 60 tons.

At times a caravel was converted to a Caravel Redunda by moving the largest mast back to the centre of the ship and refitting it with a square sail. Columbus did this to the "Nina" at the Canary Islands on his way to America. While good for tacking into the wind, lateen sails were hard to handle and required larger crews.



The Santa Maria was a typical small carrack (above), about 75 feet long and 25 feet wide in the beam, with a 6-foot draught. It had 3 masts with 5 sails, the most important being a large square sail, while the others were used for trimming.

Later ships would have increasingly more sails, and the main sails would shrink accordingly. Columbus thought the Santa Maria a mediocre ship and unfit for long-distance exploring. It ran aground on Christmas Day, 1492 and was abandoned. Thus, only the Nina and Pinta, caravels refitted as caravels redundas, made the return voyage.

As a point of comparison, Chinese ships, which Westerners would derisively call junks, were huge and much more sophisticated, having, among other things, separate bulkheads to prevent an entire ship from being swamped by a hole in the hull.

Between 1405 and 1433, the Chinese admiral, Zheng He led seven voyages into the "Western Seas" to trade and collect tribute. After his death in 1433, the Ming court sent no more voyages west, leaving it to the Portuguese to find the way around Africa. His last expedition consisted of 60 ships (as opposed to three for Columbus' first voyage) and explored the east coast of Africa. If the Chinese voyages had continued, they very likely would have "discovered" Europe before the Portuguese had found their way to India.

A Titanic disaster. Speaking of separate bulkheads, modern ships, including the Titanic, have adapted this feature to their ships. The main reason the Titanic sank in 1912 was that the pilot steered it away from a direct hit with the iceberg. Instead, it scraped all along the length of the ship, penetrating most or all of the bulkheads, causing it to sink. A direct hit would have caused a more violent initial jolt, but may have also saved the ship.

Through the “Gates of Hell”: The Portuguese and Africa (c.1400-88)



Prince Henry the Navigator was the guiding spirit of early Portuguese explorations. He established a base at Sagres on the southern tip of Portugal from which he launched voyages to explore Africa’s coast.

Much of the inspiration for Henry’s voyages came from the legendary pilgrimage of Mansa Musa, the king of Timbuktu, to Mecca in 1324. His lavish spending of gold got Europeans interested in the Sub Saharan gold trade. However, since the Arabs controlled the caravan routes over the Sahara to Timbuktu, Henry and the Portuguese thought they might find another route along Africa’s west coast.

Among Henry’s first acts was to take the Madeiras, Azores, and Cape Verde Islands off the west coast of Africa as forward bases for exploration of the continent.

There were various psychological barriers to exploring down the African coast. One legitimate one was that past the equator, sailors would lose sight of their one stable reference point for sailing at night, the North Star. There were also the usual stories of monsters and boiling seas. But the most daunting psychological barrier was Cape Bojador: the Gates of Hell.

There were good reasons for sailors to consider Cape Bojador the Gates of Hell and ends of the earth. For one thing, the coast extends into an underwater reef that makes the water’s depth only six feet out to a distance of three miles from shore, so sailors have to steer clear of land. When waves crash into subsurface gullies in the reef, water spouts up like giant steaming geysers. Adding to the impression of boiling seas is a hissing sound caused by the flicking tails of sardines and the larger fish that feed upon them as they come to the surface.

Furthermore, desert dust blowing out to sea creates an unnatural darkness and heat, all suggestive of Hell to superstitious sailors. Just as disturbing are ferrous rocks that wreak havoc with compasses, causing their needles to whirl erratically. Add to that whirlpools, crumbling cliffs, shifting sands and the large number of ships that attempted the passage never came back, it didn’t take much imagination to add monsters to the mix and scare even seasoned sailors off.

Therefore, the first expeditions down the coast were short & timid. Some 15 different expeditions either never made it back from rounding Cape Bojador or stopped short of it and turned back.

Finally, in 1434 a Portuguese expedition passed Cape Bojador and left the Gates of Hell behind.

Probably the most powerful African kingdom the Portuguese encountered was that of Benin, whose oba (king) could supposedly call on an army of 80,000 men.

Then, in the 1440s, the Portuguese finally found gold. They also discovered another, more insidious source of wealth: the slave trade.

For the next 400 years, millions of Africans would be kidnapped and dragged to the Americas to replace the Native Americans who had died from European diseases and mistreatment. Millions would die on the hideous Middle Passage on ships over packed with human cargo. Millions more would not survive their first years in the New World. And for those who did survive, they and their descendants would suffer generations of brutality, poverty, and humiliation: a legacy that still reverberates today.

In 1445, the Portuguese reached the point where Africa’s coast turns eastward, raising hopes that they might be able to circumnavigate the continent and reach India. Then, in 1460, Prince Henry died, and the expeditions slowed to a crawl.

However, growing English and French interest and presence in these waters led the Portuguese resume their explorations. In 1473 they first crossed the equator and no one spontaneously combusted. After that the voyages became longer and bolder. One explorer, Diego Cao explored 1500 miles of coast

In 1488 a Portuguese expedition led by Bartolomeu Diaz was blown off course by a storm near the southern tip of Africa. When he found the coast again, it was to his west, indicating he had rounded what he called the Cape of Storms, now known by the more optimistic Cape of Good Hope. However, his sailors, scared of monsters, forced him to return home.

It would be 10 years before the Portuguese would return to finish finding the route to India.

The strange journey of Pero da Covilha

In 1487, as Diaz was about to sail south, the Portuguese king, John II, sent two men, Pero da Covilha and Alfonso da Paiva, across the Mediterranean and then the Red Sea to find where cinnamon, other spices, and Prester John could be found. Paiva died, but Covilha sent back a letter advising the Portuguese to navigate the east coast of Africa and proceed to Calicut in India, useful information that Vasco da Gama would use on his epic voyage.

Covilha then proceeded to Abyssinia (AKA Ethiopia) where he found the Christian emperor Eskender, whom he assumed was Prester John. While honorably treated and awarded with estates and wealth, Covilha was prevented by Eskender and his successors from leaving Abyssinia. While there, Covilha maintained correspondence with the home government in Portugal, supplying it with vivid descriptions of the wealth and splendor of Abyssinia. In 1520 a Portuguese embassy arrived, which Covilha helped with his talents as an interpreter. However, he was never allowed to leave Abyssinia, where he died in 1530.

Around the Cape of Storms to India (1497-9)



“...henceforth all Christendom in this part of Europe shall be able...to provide itself with these spices and precious stones.”—Manuel I of Portugal

The Portuguese sent out a fleet of three strong square-rigged ships (*naus*) and one caravel manned by a total of 170 men. It was under the command of Vasco da Gama (above), described as a “man of iron physique,” surly, brutal and violent, but also loyal and fearless, all of these necessary qualities for the commander of such an expedition.

Another time, he took the high priest of Calicut, who had been sent to discuss da Gama’s demands for the expulsion of all Muslims from the city, cut off his ears and lips, sewed dog’s ears onto his head, and sent him back to his master.

The expedition set sail on July 8, 1497. However, Instead of hugging the coast, da Gama sailed straight south into the open ocean and picked up the South Atlantic westerlies that Dias had discovered in 1487. Using these winds, they reached the Cape in three months, having sailed across 6,000 miles of open sea, the longest such voyage in history up to that point.

Having reached the Cape, they broke up one *naus*, distributed the surviving crew and supplies to the other ships, and headed up the African coast to Mozambique.

At Mozambique, da Gama impersonated a Muslim out of fear of hostility to Christians. Although gaining an audience with the sultan, his paltry trade goods proved to be insufficient gifts to impress his host. This aroused the suspicions and hostility of the locals and the Portuguese had to flee, sailing north to Mombasa.

Meanwhile an Arab-speaking pilot of Da Gama's had learned there were ports further north trading spices, pearls, and rubies, and also that Prester John lived in cities along the coast!!

On the way to Mombasa, they looted Arab merchant ships. Not surprisingly, at Mombasa, da Gama encountered hostile Arab traders unwilling to show him the way to India. However, after "questioning" (da Gama's term) two Moorish prisoners by dropping boiling oil on their foreheads to jar their memories, he managed to learn he could find Hindu pilots up the coast at Malindi, whose rulers were at war with Mombasa. There he recruited a Hindu pilot familiar with the monsoons to guide him to India.

Following Pero da Covilha's advice, the Portuguese sailed to the Indian port of Calicut. Unfortunately, after an initially friendly reception, the ruler was unimpressed with the gifts da Gama had brought from Portugal (four scarlet cloaks, six hats, four coral branches, a box containing seven brass vessels, a chest of sugar, two barrels of oil and a cask of honey).

Local Arabs, naturally hostile to the Portuguese, suggested they were pirates instead of ambassadors. Relations soured even more when Calicut's ruler demanded gold as customs payments. In response, da Gama seized several hostages and somehow managed to trade his goods for local ones worth 60 times the cost of the expedition.

The Portuguese thought Hindus were Christians with Krishna as Christ and his mother, Devaki, representing the Virgin Mary. In addition:

"They threw holy water over us and gave us some white earth, which the Christians of this country are in the habit of putting on their foreheads, breasts, around the neck, and on the forearms...Many other saints were painted on the walls of the church, wearing crowns. They were painted variously, with teeth protruding an inch from the mouth, and four or five arms."

Against local advice, da Gama set off for home against the monsoons. Thus, while the trip from Malindia to Calicut took only 23 days, the return trip there took 132, forcing him to abandon another ship due to disease. The remaining journey from Malindi around Africa back to Portugal took another seven months, with only 44 of 170 men having survived the round trip.

Da Gama's epic 28,000 mile voyage, the longest in history up to that point, earned him great wealth and status, including the title of Admiral of the Indian Seas. It also opened the lucrative spice trade to Portuguese exploitation.

Even more importantly, it showed India could be reached by sea from Europe. But it also raised new questions, such as where was the Great Southern Continent and could the earth be circumnavigated by ship.

Spain goes West: Columbus



Ghirlandaio's posthumous portrait of Columbus. There are no known authentic portraits of him.

Christopher Columbus is such an icon in our history that it's easy to lose sight of the real man behind history's mask. He was a visionary as far as the possibility of sailing west to reach Asia was concerned. He was also one of the great sailors of his day, having traveled from Iceland down to the Guinea coast of West Africa. His experience with the Portuguese also gave him valuable knowledge of the trade winds, which he used skillfully on his voyages. He believed it was possible to make the voyage from Europe to Asia with the existing nautical technology.

Although not the first to make it to the Western Hemisphere, he was the one who made that

discovery stick and turn Europe's eyes westward to a "New World"

Columbus was also probably familiar with the incident of two strange looking people with light brown skin and flat faces who had washed ashore in Galway west of Ireland. Most likely they were Inuits whose kayak had been swamped and their bodies swept eastward and preserved by the cold North Atlantic current. To Columbus, this was one more bit of evidence that China lay to the not so distant West. Adding to this was the rumor of a pilot who had barely survived long enough to tell his tale of his caravel being blown far off course from Africa to the West and landing in a strange land from which he had managed to return.

Columbus did have a penchant for believing what he wanted to believe. He had something of a persecution complex, could be greedy, and was not above distorting facts to make his case. Not that educated people of the time didn't believe in a direct sea route to Asia, just that it was too long for the existing ships. Therefore Columbus stretched his age's version of the truth to conform more nicely to his own beliefs and get support for his scheme.

Much of Columbus' miscalculations came from discrepancies between the Arabic mile of 1,830 meters, which geographic texts used, and the Italian mile of 1,238 meters, which he used. Therefore, he estimated the circumference of the earth at the equator at 25,000 kilometers, 15,000 short of the real distance.

Columbus relied on the Florentine astronomer and cosmographer Paolo del Pazzo Toscanelli (1397–1482), a copy of whose map he took on his voyage. He also used some creative wishful thinking to reduce the length of the voyage to 3,700 km. (In fact it is 19,600 km.) Ironically, the distance from Europe to America is about 3,700 kilometers. No wonder Columbus thought that he had found Japan (Zipangu).

Much of Columbus' problems came from timing. Kings in England and France were pulling their realms together after the Hundred Years War, and Portugal was already committed to sailing around Africa. Columbus'

ego and the high price he demanded for his services didn't help either. However, he had supporters who kept his case alive, especially at the Spanish court, which was preoccupied at the time with the conquest of Granada.

Once they had conquered Granada in January 1492, Ferdinand and Isabella of Spain were ready to support Columbus' voyage westward to find Asia. Another factor was Dias' rounding the Cape of Good Hope in 1488. It might be worth risking three ships to find a cheaper and easier way to Asia and beat the Portuguese there. Contrary to legend, Isabella did not pawn her crown jewels to finance Columbus's expedition. She had already pawned them to pay for artillery in the conquest of Granada.

Columbus set sail August 3, 1492 with his three ships, the Nina, Pinta, and Santa Maria. Sailing south to pick up prevailing easterlies provided perfect sailing conditions. In fact, they seemed too perfect to the sailors who worried about how they would get back against those same winds. They were also concerned that they would get entangled in a sea of seaweed and never be able to get out.

To calm their fears, Columbus lied to them about how far they had gone, telling them a shorter distance than he had calculated. Ironically, the figure he gave them was closer to the truth, since he had overestimated how far they had actually gone.

By early October, Columbus' sailors were close to mutiny, so he promised to turn back if they didn't sight land in three days. He also promised a hefty reward to the first sailor who sighted land. (He later cheated that sailor, Rodrigo de Triana, claiming he was the first one to see land.)

On October 12, 1492, much as he predicted, Columbus hit land about 3000 miles west of Europe, christening the island San Salvador, although it's not known for sure on which island he first landed. The natives were friendly, but given their primitive technology, he assumed he must have hit the outlying islands of Cipangu (Japan)

He moved on to the much larger island of Cuba. Assuming this was Japan, he sent a man as ambassador, since he knew Arabic, which might be known in East Asia. Instead of the Japanese emperor, all he found were natives smoking cigars, the first European encounter with tobacco.

On Christmas Day, 1492, the Santa Maria ran aground and had to be abandoned. Columbus, with the permission of the locals, left behind 39 crewmen in a colony they called La Navidad. When Columbus returned on his second voyage, he found the colony burned and the colonists massacred by the natives, probably in reaction to mistreatment by them.



Much controversy surrounds Columbus' character, and in particular his treatment of the natives, many of whom he enslaved, while his men raped the women. There are stories of the Spanish turning their dogs on them, hanging many of them for the slightest thefts, and even taking babies born to sailors and native women and tossing them into the jungle to die. Although one of his missions was supposedly to convert the natives, he refused to do so since the Church prohibited enslaving fellow Christians.

Montezuma's Revenge? While European diseases would kill off millions of Native Americans, the Spanish sailors probably brought back to Europe an American disease, syphilis, most likely contracted from raping some of the Native American women. Syphilis would wreak havoc with Europe's population for generations. It was possibly the reason that Charles VIII's army had to retreat from Italy in 1494, thus earning it the undeserving title of the "French disease."

Supposedly, Syphilis even had an impact on fashion, namely the widespread use of wigs in the 1600s and 1700s to cover up the loss of hair from being infected.

For his return voyage, Columbus refitted his two remaining ships, the caravels Nina and Pinta, with square sails. He then sailed north to catch the prevailing westerlies home. However, sailing the Atlantic during the winter is risky, making this a rough voyage with a storm forcing them into Lisbon harbor for a week before finally returning to Spain.

Columbus was received with great excitement at court, the 7 or 8 "Indians" who had survived the voyage especially making a stir. However, Ferdinand and Isabella were disappointed at the low return in gold (mostly earrings stripped from the natives). Columbus assured them he had reached the outer islands of Asia, and that another voyage would bring the expected treasure.

As a result, for his second voyage, Columbus was given 17 ships with 1200 men, including farmers, and priests, the plan being to settle these new lands and convert the natives to Christianity, although there were serious debates within the Church about if the natives actually had souls and were worth the trouble. After discovering Puerto Rico and exploring Cuba, which he thought was a peninsula attached to Asia, he returned home in 1494, once again with little gold.

In 1498, Columbus was sent with six ships on a third voyage. Unfortunately, incomplete knowledge of the trade winds led to him getting stuck in the doldrums, or Horse Latitudes, where there are no prevailing winds. The expedition was down to its last barrel of water when they finally hit land.

On this voyage, the Spanish explored some of the coast of South America, discovering the Orinoco River, which Columbus believed was the river to Paradise. However, his sailors thought it was the way to Hell and refused to explore it.

Complaints about his tyrannical rule (including hanging several sailors for insubordination) and bitterness by colonists on Hispaniola about being misled by his promises of easy riches, the governor of Hispaniola had Columbus arrested.

Although he was released several weeks after returning to Spain, he was never restored his governorship.

On his fourth and final voyage (1502-4), Columbus' four ships survived a horrific hurricane. They were then stranded on Jamaica for a year, the governor of Hispaniola being unwilling to rescue Columbus, whom he hated. What sustained Columbus during that year was food supplied by the natives whom he impressed by successfully predicting a lunar eclipse. Help finally arrived and Columbus returned to Spain in 1504.

Columbus died in 1506 at the age of 55. Although wealthy from gold he had plundered in Hispaniola, he was bitter at not being awarded any revenues after his dismissal from that position. Being of relatively humble birth from Genoa probably contributed to his unpopularity among the Spanish nobility as an upstart and to his own persecution complex.

To his dying day, he believed he had found Asia instead of a New World.

In two other voyages between 1499 and 1502, another Italian sailing for Spain, Amerigo Vespucci, explored and mapped more of the coast of South America. While Columbus discovered America, Vespucci was probably the first to recognize it as a "fourth continent". In 1507, a German cartographer, Martin Waldseemüller, published a map with the New World labeled "America". The name has stuck ever since.

What remained was the question of where was Asia?

Magellan and the first circumnavigation of the globe (1519-22)



And I believe that nevermore will any man undertake to make such a voyage." --Antonio Pigafetta

Columbus' discoveries led to a flood of Spanish adventurers seeking their fortunes. Among them was Vasco Núñez de Balboa (c.1475 - 1519), who crossed the Americas at their narrowest point and discovered the Pacific "Sea", because, according to the still prevailing theories of a small planet, there wasn't enough room for another ocean like the Atlantic, let alone one two and a half times its size.

Unbeknownst to Balboa, while he was discovering the Pacific "Sea" from its eastern shores, the Portuguese explorer, Francisco Serrão, was doing the same from the opposite side of the planet's largest ocean.

Columbus' first voyage led to a dispute between Spain and Portugal about who could claim what in the East. At the time, it wasn't clear what Columbus had found, so it looked like the East was up for grabs.

Therefore, in 1494 the pope brokered a deal, the Treaty of Tordesillas, which drew a line of Demarcation in the middle of the (Atlantic) Ocean (the only known ocean at the time). Anything west of that line was Spain's to claim. Anything east of it was Portugal's. The question was: where did it come out on the other side? To know that required knowing how large the earth really was (and still is).

In 1500, when Pedro Álvares Cabral set off for India, he followed da Gama's advice and swung southwestward to pick up the westerlies to swing him around Africa. A storm blew his fleet off course and they landed in Brazil, which according to the Line of Demarcation, was on the Portuguese side.

In 1519, outside of what had been explored so far, what a map of the rest of the world looked like and its real size was anyone's guess. Along came Ferdinand Magellan, a Portuguese adventurer who had served Portugal in the Far East, knew the area, and after a falling out with his king, offered his services and knowledge to Spain.

Given a small planet with only a Pacific “Sea”, Magellan thought America was just a peninsula (Malay Peninsula?) protruding from Asia. Therefore, one could easily find a southwest passage around it and reach the Spice Islands after a much shorter voyage than going around Africa.



The Spanish king Charles I (Holy Roman emperor Charles V) gave Magellan five ships and 240 men to test his theory. Unfortunately, corrupt contractors shortchanged the expedition, leaving it poorly supplied.

The main trade item Magellan took was 20,000 hawk bells to hang around the necks of hunting hawks. For some reason, they thought people in Asia would want that.

They didn't.

The expedition left in 1519. It had an easy crossing to America, but had to avoid the Brazilian coast since that was Portuguese territory. However, a storm off Patagonia left the expedition only 4 ships.

Among his other troubles, Magellan had to face a mutiny, since his sailors were scared of what might lay ahead and, being Spanish, they didn't trust their Portuguese commander. At times like this ships needed strong, decisive, and even ruthless captains who were entrusted with the power of “the rope and knife” (i.e., life and death). Magellan was such a man. During a parley, his first mate cut the throat of the mutiny's ring-leader, Mendoza, while sailors loyal to Magellan stormed aboard to quell the mutiny.



The stormy passage through the Straits of Magellan took Magellan 38 days, while today it takes only two. During this passage, another ship, the *San Antonio* mutinied and fled back to Spain, spreading slander to Charles V about Magellan.

Then, without adequately resupplying, Magellan's three ships set out on the short voyage across the Pacific “Sea”.

Antonio Pigafetta accompanied Magellan on his voyage and wrote an account of the journey. Following is his account of the Pacific crossing:

"On Wednesday the twenty-eighth of November, one thousand five hundred and twenty, we issued forth from the said strait and entered the Pacific Sea, where we remained three months and twenty days without taking on board provisions or any other refreshments, and we ate only old biscuit turned to powder, all full of worms and stinking of the urine which the rats had made on it, having eaten the good. And we drank water impure and yellow. We ate also ox hides, which were very hard because of the sun, rain, and wind. And we left them...days in the sea, then laid them for a short time on embers, and so we ate them. And of the rats, which were sold for half an ecu apiece, some of us could not get enough.

"During these three months and twenty days, we sailed in a gulf where we made a good 4000 leagues across the Pacific Sea, which was rightly so named. For during this time we had no storm, and we saw no land except two small uninhabited islands, where we found only birds and trees. Wherefore we called them the Isles of Misfortune. And if our Lord and the Virgin Mother had not aided us by giving good weather to refresh ourselves with provisions and other things we would have died in this very great sea. And I believe that nevermore will any man undertake to make such a voyage."

Following is Pigafetta's account of the effects of scurvy during the Pacific crossing:

"It rotted all my gums which gave out a black and putrid blood. My thighs and lower legs were black and gangrenous, and I was forced to use my knife each day to cut into the flesh in order to release this black and foul blood. I also used my knife on my gums, which were livid and growing over my teeth...When I had cut away this dead flesh and caused much black blood to flow, I rinsed my mouth and teeth with my urine, rubbing them very hard...Many of our people died of it everyday, and we saw bodies thrown into the sea constantly, 3 or 4 at a time. For the most part they died with no aid given them, expiring behind some case or chest, their eyes and the soles of their feet gnawed away by rats.

"Besides the aforesaid troubles, this malady (scurvy) was the worst, namely that the gums of most part of our men swelled above and below so that they could not eat. And in this way they died, inasmuch as twenty-nine of us died...But besides those who died, twenty-five or thirty fell sick of divers maladies, whether of the arms or of the legs and other parts of the body (also effects of scurvy), so that there remained very few healthy men. Yet by the grace of our Lord I had no illness."

Slowly the tiny flotilla made its way across the unknown vastness of the Pacific. At last they reached Guam, which Magellan called the Island of Thieves because the natives stole much of his cargo. However, they did manage to replenish their supplies and push on.

In March 1521 they reached the Philippines with 150 men. They were able to communicate with the natives because Enrique, a Malay servant indentured in 1511 by Magellan during his service to Portugal in the East, knew the local language and served as interpreter. Unfortunately, when Magellan helped a tribal leader, who had conveniently converted to Christianity, against another tribe, he and his 50 men were overwhelmed by 1500 natives and he was killed.

Soon Afterwards, a third ship, the *Concepcion*, had to be abandoned because so many crew had

died, many of them in the battle in the Philippines.

Even counting his previous Portuguese service in the East, Magellan probably fell just short of being the first man to circumnavigate the globe. That honor, ironically, went to his Malay servant, Enrique who, several days after Magellan's death, got his freedom with the help of a local native leader, despite the efforts of the Spanish to keep him and his linguistic skills. Luckily, Pigafetta had written down about 145 words from the local languages and served as the expedition's interpreter from that point on.

After Magellan's death, command of the expedition fell to Sebastian del Cano. With the help of local pilots, the Spanish navigated the shallow seas to Brunei, where they loaded their ships with cloves, a product the locals disdained but Europeans valued as much as gold.

With 115 men left, the two remaining ships, *Trinidad* and *Victoria*, continued westward. But the *Trinidad* started taking on water and, there being no room on the *Victoria*, had to be left with its crew. After making repairs, the *Trinidad's* crew attempted to return across the Pacific, but gave up and were captured by the Portuguese.

In order to avoid capture by the Portuguese, whose waters they were now in, the Spanish sailed across the open sea around the Cape of Good Hope and up the west coast of Africa. Cold, disease, and starvation claimed 20 more lives before they put in at the Cape Verde Islands for supplies. While Spanish ships in those waters were not unusual, Spanish sailors paying for their supplies with cloves were. The Spanish had to run for it, leaving 13 comrades in order to save their 26 tons of cloves and cinnamon.

On September 22, 1522, almost exactly three years after setting out, the *Victoria* landed in Spain with its 18 surviving members. The first thing they did was go (some of them so weak they had to crawl) to the local church to thank the Virgin Mary for their survival.

Of the 55 crewmen of the Trinidad, four would survive and make it home.

Another 232 crewmen never made it home.

Curiously, the sailors' calendar was one day behind the home calendar, because they had followed the sun for one revolution around the globe and seen one less sunrise than the people back home.

Pigafetta was right in that no one would want to repeat Magellan's feat for nearly a century. The next man to do it would be Sir Francis Drake, who did it to avoid capture by the Spanish navy after he had plundered one of their treasure ships. It would also take him three years to complete the voyage (1577-80).

When Worlds Collide: Cortez & the Aztecs



The myth of Quetzalcoatl concerned a feathered serpent god and his priest, both called Quezalcoatl. The priest, who had fair skin and a heavy beard, had been driven into exile over the ocean but vowed to return, according to some versions in the year 1519, the very year Cortez arrived. Therefore, the Aztec ruler, Montezuma II, was increasingly bothered by strange omens that seemed to portend Quetzalcoatl's return: uncontrollable fires in the temples, strange lights in the sky, and reports of armed warriors riding monsters like deer, but bigger.

Ready to take advantage of these portents was a Spanish adventurer, Hernan Cortez.

Cortez was a Spanish soldier and adventurer who had fought in the Italian wars and then came to Cuba to seek his fortune. When he heard reports of a fabulous and wealthy civilization in Mexico, he talked the governor of

Cuba into letting him organize an exploratory expedition.

However, Cortez' intentions all along were to go beyond his governor's orders and conquer and plunder the Aztecs. Therefore, upon landing in Mexico, he burned his ships (below) so there was no turning back for the rest of his men.

He had 553 men and 16 horses with which he planned to conquer an empire of millions.

When an Aztec embassy greeted Cortez with gifts, hoping that he would be satisfied with them and leave, this only whetted his appetite for more.

As the Spanish marched toward Tenochtitlan, they were attacked by subjects of the Aztecs known as the Tlaxcalans. The Spanish defeated the 30,000 Tlaxcalan warriors and convinced them to join them in rebellion against their hated masters. Support from the Aztecs' disgruntled subjects would be a major factor in Spanish success.

In battle, steel armor & weapons, along with gunpowder and these strange new beasts, horses, gave the Spanish conquistadors a huge advantage over the wooden and obsidian war clubs that the Aztecs used. For a while, the Aztecs thought the horses and their riders were one creature.

In one battle in Peru, Francisco Pizarro's army killed or wounded 2000 of the enemy, while only losing five men.

Also nullifying their superiority in numbers were the Aztecs' concern with taking prisoners for sacrifices to their gods and their failure to bring all their warriors into the battle at once.

However, the Aztecs were anything but pushovers in battle:

"We noted their tenacity in fighting, but I declare that I do not know how to describe it, for neither cannon nor muskets nor crossbows availed, nor hand to hand fighting, nor killing 30 or 40 of them every time we charged, for they still fought

with more energy than in the beginning.”—
Bernal Diaz

Diaz also described the Spaniards' first impression of Tenochtitlan:

“We were amazed on account of the great towers & buildings rising from the water and all built of masonry. And some of our soldiers even asked whether the things we saw were not a dream...Gazing on such wonderful sights, we did not know what to say, or whether what appeared before us was real, for on one side, on the land, there were great cities, and in the lake were so many more, and the lake itself was crowded with canoes...And in front of us stood the great city of Mexico, and we--we did not even number 400 soldiers.”-

Montezuma II met Cortez outside Tenochtitlan, hoping to persuade him to leave. However, Cortez, accompanied by his interpreter, Dona Marina, (whom he later married), could see Montezuma's nervousness and insisted on entering the city.

Still worried that Cortez might be Quetzalcoatl, the Aztecs put him up in their best palace. Feeling uneasy about how calm the city seemed, Cortez seized Montezuma as a hostage to ensure the Aztecs' good behavior.

Meanwhile, word came that the governor of Cuba had sent another force to relieve Cortez. Cortez went with part of his force and succeeded in winning this relief force over to his side.

However, during a ritual dance put on in their honor, the Spanish left behind in Tenochtitlan attacked their Aztec hosts and then toppled the pagan idols from the Aztec temple.

The Aztecs, no longer convinced the Spanish were gods, attacked them and put them under siege in their palace.

When Cortez returned, he tried to use Montezuma to calm his subjects, but they killed him as he spoke, thus removing the last bit of leverage Cortez had over the Aztecs.

The Spanish, in desperate straits, decided they must try to escape Tenochtitlan at night, building a portable bridge to cover the three gaps left in the causeway by the Aztecs to block their exit. At first, they seemed to go undetected, but then the huge drum atop the city's main pyramid sounded the alarm and suddenly thousands of warriors were swarming about them in canoes, their war cries piercing the night.

A furious running battle ensued as the Spanish spanned the first gap with their portable bridge. But it got stuck, and as they approached the second gap, the crush of those behind pushed those in front into the water. Being weighed down with armor and gold, they drowned, eventually filling the gap with a bridge of bodies, loot, and weapons over which the others could cross.

They passed the third gap in the same bloody way. All this while the giant drum kept booming and wave after wave of Aztec warriors in war canoes assaulted them from all sides.

Somehow, Cortez and a few of his men managed to fight their way out of the city and gathered around a cypress tree that still stands in Mexico City. Ever since in Mexican history, this has been known as “Noche Triste” (the sad night).

Undaunted Cortez fought his way back to his Tlaxcalan allies and gathered a new army.

This time he had a new ally: smallpox.

Having no prior exposure to European diseases, native Americans had virtually no resistance. As a result they would die by the thousands, and eventually by the millions.

Along with the tremendous loss of life, these diseases caused tremendous psychological damage among Native Americans, whose world suddenly was coming apart for no apparent reason.

The next year (1520) Cortez returned with a new army of 600 men and 40 horses along with 100,000 allied warriors, and 13 pre-fabricated ships armed with cannons so he could assault the now disease-infested Tenochtitlan by both land and sea.

Even after breaking into the city, the Spanish faced fierce resistance in house to house fighting all the way to the central plaza where the Aztecs made a desperate last stand.

In the end, Tenochtitlan and the Aztec Empire fell, but Cortez' Mexican allies soon found they had exchanged a bad master for a much deadlier one.

When Worlds Collide II: Pizarro and the Incas



Francisco Pizarro (above), the conqueror of the Incas, was a distant relative of Cortez and also a soldier with fighting experience in the Italian wars. In 1502 he came to the New World and made a fortune in Panama from farms worked by Indian slaves and partial ownership in a gold mine. However, he wanted much more.

In 1526, after one abortive attempt at exploring the Pacific coast of South America, Pizarro led a second expedition that caught and plundered a balsa trading raft from Peru that was full of valuable goods, including gold, silver, and emeralds. Despite the refusal by the Spanish governor of Panama to send reinforcements, Pizarro continued south with a handful of comrades and entered a rich and heavily populated area of the Inca Empire. The friendliness of the natives and the wealth he found there made him even more determined to conquer Peru.

Since the governor of Peru would not sanction another expedition, Pizarro went over his head

to Charles I of Spain (the Holy Roman Emperor Charles V) to convince him of the wealth he could bring to Spain by conquering the Incas. Pizarro received the Capitulation of Toledo (1528), which authorized him to raise an army of 250 men to conquer Peru and made him its governor general.

In 1532 Pizarro entered Peru with about 180 men and 27 horses. He had several factors helping him in his quest to conquer this empire of millions with only 168 men (106 infantry and 66 cavalry). For one thing, the Spanish had superior weapons and a more effective method of fighting battles. These, plus horses, which the Incas had never seen, gave Pizarro a psychological edge. Also, the emperor Atahualpa had just finished a civil war with his brother, Huascar, so the Incas were somewhat worn out by that. Finally, and ultimately most important, smallpox had preceded the Spanish and was already wreaking physical and psychological damage among the population.

After months of long-range negotiations with Atahualpa carried on by Hernando de Soto, Pizarro advanced into the heart of the Inca Empire, setting up camp in the city of Cajamarca as Atahualpa approached with an army of 80,000 men. Pizarro knew he could neither defeat such a huge army, nor retreat, since it would show weakness in the midst of the enemy. Therefore, he decided to seize Atahualpa, hoping to paralyze the Incas with fear and indecision without their absolute leader to tell them what to do.

For some reason, Atahualpa agreed to a parley inside Cajamarca, accompanied only by an unarmed retinue. At first a priest tried to convert the emperor, who asked to see a Bible that the priest said talked to him. Having never seen a book or writing, the priest reached over to help him open the book. Atahualpa struck the priest's arm, opened the book, and when it didn't talk to him, threw it to the ground.

According to one version, the priest turned and urged the Spanish, who were hidden around the plaza, to rush and capture the Inca ruler.

Caught by surprise, plus never having seen guns or horses, the Incas were easily overwhelmed by a cavalry charge coordinated with gunfire (including four small cannons). The resulting Battle of Cajamarca was more a massacre than battle, the Spanish killing 2,000 Incas while only losing five men. The remaining Incas fled and Pizarro captured their emperor. With their emperor captured and other leaders killed, the Incas were paralyzed into inaction.

After his capture by Pizarro, the captive emperor, Atahualpa, promised to give Pizarro a room filled with gold and two other rooms with silver in return for his release. However, having received the ransom, Pizarro had Atahualpa strangled and then made his younger brother, Túpac Hualpa, puppet emperor of the Incas.

Soon afterward Túpac Hualpa died of smallpox, so Pizarro appointed Manco Inca Yupanqui as emperor, hoping to rule through him. However, mistreatment by Pizarro's brothers prompted Manco Inca to escape and stir up a rebellion, supposedly raising an army of 200,000 men. After being defeated by the Spanish, Manco retreated into the mountains where he held out until his death in 1544. His son, Túpac Amaru, succeeded him as the last ruler of the Inca, finally being murdered by the Spanish in 1572.

Meanwhile, the Spanish had stormed the Inca capital, Cuzco, destroyed every building in it, and built a Spanish city on top of it. They then proceeded to plunder the former Inca Empire.

The silver mines around Potosi would be the mainstay of the Spanish monarchy for a century. Unfortunately, most of that wealth would largely be wasted on a series of religious wars that would leave Spain, the superpower of the 1500s, exhausted by 1650.

So how could an army of 180 men bring down an empire of millions? Paralyzing their command structure by capturing it helped. But the real culprit may have been smallpox, which preceded Pizarro into Peru and had killed thousands by his arrival in 1532. Among its

victims may have been Atahualpa's predecessor.

As devastating as the physical effects of a new and strange epidemic on a population might be, the psychological effects could be much worse. Pizarro told the Incas that smallpox was God's punishment on them, and, having no other explanation, they may have believed it. As their whole concept of order and the universe crumbled away, they became easy prey for the agents who said they had brought this plague.

Estimates vary. But by 1600, as much as 90% or more of the native population in the Americas would be wiped out, partly by mistreatment, but mostly by European diseases.

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THE PORTUGUESE EMPIRE IN THE EAST (1500-c.1600)

Even before da Gama had set out for India, Christopher Columbus, had returned from what he believed was a direct route to Asia. This provoked a dispute between Spain and Portugal over who could claim what territories outside of Europe. In 1494, the pope arbitrated the dispute and drew a Line of Demarcation down the middle of the Atlantic. Everything outside of Christian Europe and west of the line belonged to Spain; everything east of it was Portugal's to claim. The line extended all around the globe, but since the size of the earth was not known, just where that line came out was anybody's guess. Despite these uncertainties, the Pope's Line of Demarcation determined the direction of both Spanish and Portuguese explorations. For the Portuguese, this meant they must control the trade routes to the East.

In 1500, only a year after da Gama's return, Pero Alvares Cabral followed da Gama's route to India with a fleet of ten Portuguese ships. Using da Gama's tactic of swinging westward to pick up westerly winds to take him around the Cape of Good Hope, he accidentally hit Brazil which juts eastward into the Atlantic. Since that part of Brazil lay east of the Line of Demarcation, Cabral claimed it for Portugal. He continued to India, but found the same problems da Gama had encountered: Arab hostility and an unwillingness to trade for European goods.

Therefore, the Portuguese decided to change their approach. The third expedition to India, led by da Gama in 1502, took 14 well-armed ships that would take the spice trade by force. The bulky European ships, built to stand the rough Atlantic seas, also provided excellent gun platforms for artillery, and that was the decisive factor in the battle that followed as the Portuguese beat the Arab fleet opposing them. A second decisive victory by the Portuguese fleet in 1509 established the Portuguese reputation for naval invincibility in Eastern waters and started Portugal on the road to establishing a maritime empire in the East.

The architect of the Portuguese Empire in the East was a capable and daring leader, Alphonse de

Albuquerque. He realized that such a tiny state as Portugal could not conquer a land empire in Asia and run it all the way from Europe. Therefore, he concentrated on seizing key strategically placed ports that could control the flow of the spice trade. First he captured the strongly fortified island of Goa off the coast of India. From there he could strike out in several directions. Although he failed to cut off Muslim trade coming out of the Red Sea, he did cut off much of the Arab trade by seizing Ormuz at the tip of the Persian Gulf through some masterful bluffing and sailing with only six ships.

The Portuguese maintained their dominance of the East through a combination of astute and ruthless policies. Albuquerque was especially talented in establishing the proper ratio of escort ships to cargo ships. The Portuguese also blackmailed other merchants into paying for certificates of free passage in the Far East. For a few years they managed to have nearly all spices headed for Europe traveling on Portuguese ships.

However, there were serious limits to Portugal's power in the East, which led to the eventual decline of its Empire in Asia. For one thing, the Portuguese, in a fit of religious fervor, had expelled their Jewish bankers and merchants from Portugal, thus eliminating most of Portugal's business community. As a result, the Flemish port of Antwerp handled most of Portugal's spice trade and took much of its profit. Second, Portugal's empire put a tremendous strain on its very limited manpower. Along these same lines, it was very expensive to maintain forts, garrisons, and fleets, especially over such long distances. Finally, the hostility of local rulers, in particular the Mughal Dynasty ruling India, put extra strains on Portugal's ability to hold its empire.

All these factors cut deeply into Portugal's profits and prompted several cost cutting moves. The Portuguese cut corners by not maintaining their ships in the best condition. They would replace lost European crewmen with half-trained natives unfamiliar with European ships and rigging. Finally, because of the limited number of ships and the desire for as large a profit as possible, they would over pack their ships with spices. All these measures led to costly shipwrecks, which cut further into Portuguese profits and caused even more of these cost cutting measures. By 1600, the

Portuguese Empire in Asia was in serious decline and increasingly losing ground, first to the Dutch and later to the English.

A complicated three-way trade.



The lengths to which Europeans would go to get Eastern luxuries is possibly best seen in the three-way trade carried on by Spain and Portugal to get Chinese goods, in particular porcelains. (Even today we refer to our good dishes as “China”.)

In 1513, the Portuguese reached China and tried to open trade with the Middle Kingdom. However, the Chinese weren’t interested in the stuff the Europeans offered, the only thing they were interested in being silver, which was relatively scarce in China.

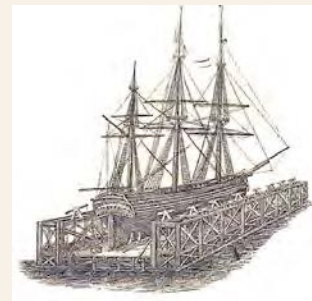
The Portuguese didn’t have silver, but the Spanish did, the Potosi silver mines of Peru being the most productive in the world. Thanks to Magellan, the Spanish also had the Philippines, which was a convenient meeting place for the two peoples. Finally, the Portuguese had something the Spanish wanted: spices. Out of this emerged what was probably the first global exchange. Step by step, it went like this

1. The Portuguese sailed to the Spice Islands and traded European goods for spices. Meanwhile, the Spanish took their silver from Peru to Panama.
2. The Portuguese sailed to the Philippines with part of their spices. Meanwhile the Spanish sailed all the way across the Pacific to the Philippines with part of their silver,

the rest being portaged across Panama and then taken by ship to Europe.

3. The Spanish traded their silver for Portugal’s spices in the Philippines.
4. The Portuguese sailed to China & traded their Spanish-American silver for Chinese goods. The Spanish took their spices back across the Pacific in grueling 4-7 month voyage
5. The Portuguese sailed all the way home around Asia and Africa to sell their Chinese goods and spices. Meanwhile, the Spanish portaged their Chinese goods across Panama and sailed home to sell them in Europe.
6. Start all over again at 1.

Maintenance of Ships and Sailors



A ship dry-docked in Boston harbor for refitting.

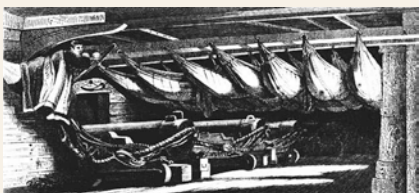
Wooden sailing ships required a lot of work to keep them serviceable for any length of time. In addition to replacing sails and rigging, the hulls had to undergo extensive repairs every few years.

The first thing to do was dry-dock the ship. Rather than hauling it up onto shore, they let the tides do the work. The ship was put inside a shallow pen at high tide. When the tide went out, it left the ship high and dry inside the pen, which was then shut and sealed off from the next tide. With the ship lying on one side of its hull, they would rip out and replace any rotten timbers, seal the hull with a fresh coat of tar or pitch, and cover it with a layer of copper or lead sheathing to protect it against sea worms. When that side was finished, the tide was let in to float the ship upright, and then let out again to lay

the ship on its other side, which they would also repair. Then the tide would be let in one more time to set what seemed like a brand new ship afloat and back out to sea.

Such scheduled maintenance could extend a ship's life by a factor of several times. For example, Lord Nelson's flagship, Victoria, would have lasted four or five years without maintenance. With regular maintenance, it stayed in service for a quarter of a century. It was also a lot cheaper than building a whole new ship every few years.

***A good night's sleep for sailors.* From a sailor's point of view, the discovery of Brazil provided them with one of the most useful inventions of the Age of Exploration: the hammock. Previously, they had to find whatever space was available on a crowded ship for sleeping. Not only that, they had to share that space with the rats and whatever other creatures happened to be on board. The hammock suspended them comfortably above all that. Besides the health benefits, it may have avoided a number of mutinies fomented by cranky sailors who just needed a good night's sleep.**



Crewmen asleep in their hammocks aboard a sailing ship

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THE WORLD MAP TAKES SHAPE: LATER VOYAGES OF EXPLORATION (c.1550-1900)

The progress of the past 150 years still left many questions to answer and myths to dispel concerning the world map. Subsequent explorations concerned four main issues and followed four lines of development:

- 1) Finding a practical northwest passage around North America to Asia;
- 2) Finding a practical northeast passage around Scandinavia to Asia;
- 3) Determining if North America and Asia were connected or separate, which would determine if any north-west or north-east passages, if they existed, could get through to Asia; and
- 4) Looking for a great southern continent to counterbalance the weight of the Northern Hemisphere.

The English largely led the search for a northwest passage. Much of what probably inspired this was the fact that Balboa had walked just a short distance from the Atlantic coast to the Pacific coast at what happened to be the narrowest part in all the Americas. Given that feat, no wonder people expected to find a water passage or narrow isthmus somewhere else in the vast distance the Americas covered from north to south. In 1576, Martin Frobisher, while exploring arctic regions, found an inlet, making him believe he had found the way to Asia and that the Eskimos were Mongols. Further explorations followed. Hopes especially soared in the early 1600's when Henry Hudson found a deep inlet, known ever since as Hudson's Bay. Because of this bay's size and the fact that no one had any idea of North America's size, people believed they had found the way to Asia. However, the Northwest Passage was never found, unless one counts voyages by modern nuclear submarines under the Arctic Ocean's icecap. Of course, the melting of the icecaps from global warming will soon open a Northwest Passage.

At the same time, Europeans were trying to find a northeast passage north of Scandinavia to Asia. The English explorer, Richard Chancellor, reached the Russian port of Archangel, but got no further. He did claim to have "discovered" Russia and established relations between it and England. However, it would not be until the early 1700's that

the czar Peter I would make Russia an integral part of European affairs. Subsequent attempts by Dutch explorers met with similar failures in finding the Northeast Passage. Finally, in 1878, the Swedish explorer, A.E. Nordenskjöld, found the Northeast Passage along the rim of the Arctic Ocean and then down the Bering Straits to Asia. Even today, Russian icebreakers ply the route to keep it open for trade and shipping.

The usefulness of the Northeast Passage depended on whether North America and Asia are connected. If they were, any northwest or northeast passages would be cut off from entering the Pacific. The answer to this hinged on determining the size of North America, which most people then vastly underestimated. Therefore, a number of expeditions explored the northwest coast of North America to find a passage between it and Asia. The key expedition was led by a Russian, Vitus Bering, who found the passage (the Bering Strait) in 1725. He also claimed Alaska, which Russia held until its sale to the United States in 1867.

For whatever reasons, many people did not believe Bering had found this passage; so more expeditions were launched to this region. Spain and England both explored North America's northwest coast both to find the strait of water separating Asia from the New World and claim lands for the growing fur trade. Conflicting claims between the two countries were resolved in 1790, with Britain getting everything from Oregon to Alaska. In the meantime, England's most famous explorer, Captain James Cook, confirmed Bering's discovery. By 1800, the coastal map of North America was pretty much in place.

Expeditions in the South Pacific centered on finding the great southern continent. The Dutch led the way in the 1600's, discovering Australia (literally "Southland"), New Zealand (named after a province of the Netherlands), and Tasmania (named after the Dutch captain, Abel Tasman). Since the Dutch had not circumnavigated Australia, many believed it was the great southern continent. In 1768, the English Captain Cook disproved this by circumnavigating it and New Zealand. On his next voyage, he sailed further south to find out if there was a great southern continent, but rough icy waters forced him to turn back. (On his third voyage, which confirmed the existence of the Bering Strait,

Cook met his death in Hawaii when trying to recover hostages taken by the natives.) It was not until 1820 that the explorer, Nathaniel Palmer, finally discovered the long sought great southern continent, which we call Antarctica.

Conclusion. By 1800, most continental coastlines had been mapped. The following century was mainly one of exploring and settling continental interiors. Two things helped this process, both of them products of the ongoing Industrial Revolution. First of all, the railroad made possible the movement and supplying of large numbers of settlers in continental interiors. This was especially decisive in the development of the interior of North America. Second, germ theory and the development of vaccines for various tropical diseases meant that Europeans could now explore and conquer tropical regions. This particularly affected Africa, known until then to Europeans as the "Dark Continent" since its interior had been so impenetrable.

James Cook: a Captain Worthy of Star Trek
Captain James Cook (1728-79) was the foremost explorer of the 18th century, making three epic voyages to the Pacific, two of them around the world. Among his accomplishments were confirming the existence of the Bering Strait and showing that Australia was an island and not part of a Great Southern Continent. Although generally liked and respected by native peoples he met and treated with respect, he met his end at the hands of Hawaiians in a scuffle very likely over some stolen property he reclaimed.

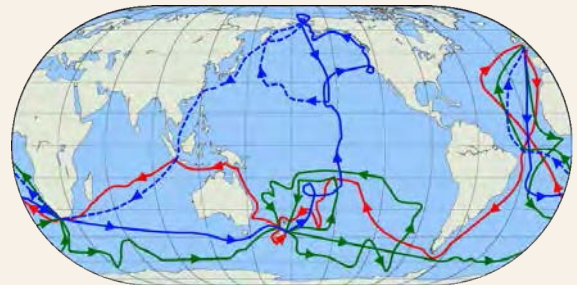
By most accounts, Cook was a fair and humane captain, excellent navigator, and skilled (and self-taught) cartographer. He was also a good psychologist and adaptable to adverse situations, as the following stories indicate.

Curing scurvy. Cook is credited with the first long-distance voyage that tested the theory that vitamin C could prevent scurvy. However, since there was no way to preserve citrus fruits, the only thing they could use for much of the voyage was pickled cabbage (AKA sauerkraut). Unfortunately, Cook's sailors refused to eat sauerkraut, so he had to trick them much like

parents do to little children. He posted a notice that the officers were to receive double helpings of sauerkraut and the sailors none. The sailors reacted by demanding they be given their shares of sauerkraut too.

Only one sailor died on that voyage, which circled the entire globe. And he didn't die from scurvy.

How to plug a hole in your ship when stuck in the middle of nowhere. While exploring Australia, Cook's ship ran aground on the Great Barrier Reef, which punched a hole in the hull through which the ship was started taking on water. To fix this problem, they first sent a diver to run a rope under the ship and over the hole. Having created a loop, they attached a sail to the rope, threw it overboard, and pulled it under the ship. When the sail was over the hole, the pressure of the water rushing in sucked it into the ship, thus plugging the hole, allowing them to bail out and make the necessary repairs.



A map of Cook's voyages

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THE START OF THE PROTESTANT REFORMATION (1517-1546)

Introduction. In the year 1506, a young man by the name of Martin Luther was caught in a violent thunderstorm and nearly hit by lightning. Terrified by this near miss, he vowed he would pursue a career in the Church if he survived. As if in answer to his prayer, nature's storm subsided, freeing Luther to eventually start a more decisive storm in human affairs: The Reformation.

The roots of the Reformation lie far back in the High Middle Ages with the rise of towns and a money economy. This led to four lines of development that all converged in the Reformation. First of all, a money economy led to the rise of kings who clashed with the popes over control of Church taxes. One of these clashes, between pope Boniface VIII and Philip IV of France, triggered the Babylonian Captivity and the Great Schism. Second, the replacement of a land based with a money economy led to growing numbers of abuses by the Church in its desperation for cash. Both of these factors seriously damaged the Church's reputation and helped lead to the Lollard and Hussite heresies based on John Wycliffe's English translation of the Bible and assertion that it was the sole source of religious truth. Therefore, any church practices not found in the Bible should be abolished. These ideas would heavily influence Luther's Protestant Reformation a century and a half later.

Another effect of the rise of towns was a more plentiful supply of money with which to patronize Renaissance culture. When the Renaissance reached Northern Europe, the idea of studying the Bible in the original Greek and Hebrew fused with the North's greater emphasis on religion, thus paving the way for a Biblical scholar such as Martin Luther to challenge the Church.

Finally, towns and trade spread new ideas and technology. Several of these bits of technology, some from as far away as China, helped lead to the invention of the printing press, which helped the Reformation in two ways. First of all, it made books cheaper, giving Luther more access to the Bible and the chance to find what he saw as flaws in the Church's thinking. Second, the printing press would spread Luther's ideas much more

quickly and further afield than the Lollards and Hussites ever could have without the printing press.

All of these factors, growing dissatisfaction with corruption and scandal in the Church, the religious emphasis of the Northern Renaissance, and the printing press, combined to create a growing interest in Biblical scholarship. Nowhere was this interest more volatile or dangerous than in Germany. The main reason for this was the fragmentation of Germany into over 300 states, which helped the Reformation in two ways.

For one thing, there was no one power to stop the large number of Church abuses afflicting Germany, thus breeding a great deal of anger in Germany against the Church. Secondly, the lack of central control also made it very difficult to stop the spread of any new ideas. This was especially true in Germany, with over 30 printing presses, few, if any, under tight centralized control, and each capable of quickly churning out literally thousands of copies of Protestant books and pamphlets. If Germany was a tinderbox, Martin Luther was the spark that set it on fire.

Luther, like all great men who shape history, was also a product of his own age. He had a strict religious upbringing, especially from his father who frequently beat his son for the slightest mistakes. School was little better. Young Martin was supposedly beaten fifteen times in one day for misdeclining a noun. All this gave him a tremendous sense of guilt and sinfulness along with a view of God as a harsh and terrifying being. Therefore, his reaction to the above mentioned thunderstorm in 1506 should come as no surprise. He carried out his vow and became a monk.

As a monk, Luther carried his religious sense of guilt to self-destructive extremes, nearly torturing himself to death through relentless praying, reading, and vigils. Indeed, one morning, his fellow monks came into his cell to find him lying senseless on the ground. Given this situation, something had to give: either Luther's body or his concept of Christianity. His body survived.

Then one night, while reading the Bible, Luther found two passages that would change his life and history: "*For by grace are you saved through*

faith; and that not of yourselves: it is the gift of God; not of works, lest any man should boast.” (Ephesians 2:8-9) *“Therefore, we conclude that a man is justified by faith without the deeds of the law.”* (Romans 3:28) As Luther put it, *“Thereupon I felt as if I had been born again and had entered paradise through wide open gates. Immediately the whole of Scripture took on a new meaning for me. I raced through the Scriptures, so far as my memory went, and found analogies in other expressions.”* From this Luther concluded that faith is a “free gift of God” and that no amount of praying, good deeds or self-abuse could affect one’s salvation. Only faith could do that.

The storm breaks. In the following years, Luther’s ideas quietly matured as he pursued a career as a professor, back then a Church position. Then, in 1517, trouble erupted. Pope Leo X, desperate for money to complete the magnificent St. Peter’s cathedral in Rome, authorized the sale of indulgences. These were documents issued by the Church that supposedly relieved their owners of time in purgatory, a place where Catholics believe they must purge themselves of their sins before going to heaven. Originally, indulgences had been granted to crusaders for their efforts for the faith. In time they were sold to any of the faithful who wanted them. The idea was that the money paid was the result of one’s hard work and was sanctified by being donated to the Church. However, it was easily subject to abuse as a convenient way to raise money.

Indulgence sales were especially profitable in Germany where there was no strong central government to stop the Church from taking money out of the country. This greatly angered many Germans and made them more ready to listen to criticism of the Church when it came. The Church’s agent for selling indulgences in Brandenburg in Northern Germany, John Tetzel, used some highly questionable methods. He reportedly told local peasants that his indulgences would relieve them of the guilt for sins they wished to commit in the future and that, after buying them, the surrounding hills would turn to silver. He even had a little jingle, much like a commercial:

*“As soon as coin in coffer rings
a soul from Purgatory springs.”*

Luther was then a professor in nearby Wittenburg, Saxony, not far from the home of the Hussite heresy in Bohemia. When some local people showed him the indulgences they had bought, he told them they were invalid and a waste of their money. Tetzel denounced Luther for this, and Luther took up the challenge. On October 31, 1517, he nailed a placard to the church door in Wittenburg. On it were the Ninety-five Theses, or statements criticizing various Church practices, some of which are given here.

26. ***“They preach mad, who say that the soul flies out of purgatory as soon as the money thrown into the chest rattles.”***
27. ***“It is certain that, when the money rattles in the chest, avarice and gain may be increased, but the suffrage of the Church depends on the will of God alone...”***
32. ***“Those who believe that, through letters of pardon, they are made sure of their own salvation, will be eternally damned along with their teachers.”***
43. ***“Christians should be taught that he who gives to a poor man, or lends to a needy man, does better than if he bought pardons...”***
56. ***“The treasures of the Church, whence the Pope grants indulgences, are neither sufficiently named nor known among the people of Christ.”***
- 65 & 66. ***“Hence the treasures of the Gospel are nets, wherewith they now fish for the men of riches...The treasures of indulgences are nets, wherewith they now fish for the riches of men.”***
86. ***“Again; why does not the Pope, whose riches are at this day more ample than those of the wealthiest of the wealthy, build the one Basilica of St. Peter when his own money, rather than with that of poor believers...?”***

Luther’s original purpose was not to break from the Church, just to stimulate public debate, a time honored academic tradition. The result, however, was a full-scale religious reformation that would destroy Europe’s religious unity forever.

Soon copies of his Ninety-five Theses were printed and spread all over Germany where they found a receptive audience. Indulgence sales plummeted and the authorities in Rome were soon concerned about this obscure professor from Wittenburg. Papal legates were sent to talk sense into Luther.

At first, he was open to reconciliation with the Church, but, more and more, he found himself defying the Church. Luther's own rhetoric against the Church was becoming much more radical:

“If Rome thus believes and teaches with the knowledge of popes and cardinals (which I hope is not the case), then in these writings I freely declare that the true Antichrist is sitting in the temple of God and is reigning in Rome—that empurpled Babylon—and that the Roman Church is the Synagogue of Satan...If we strike thieves with the gallows, robbers with the sword, heretics with fire, why do we not much more attack in arms these masters of perdition, these cardinals, these popes, and all this sink of the Roman Sodom which has without end corrupted the Church of God, and wash our hands in their blood?”

“...Oh that God from heaven would soon destroy thy throne and sink it in the abyss of Hell...Oh Christ my Lord, look down, let the day of thy judgment break, and destroy the devil's nest at Rome.”

Luther also realized how to exploit the issue of the Italian church draining money from Germany:

“Some have estimated that every year more than 300,000 gulden find their way from Germany to Italy...We here come to the heart of the matter...How comes it that we Germans must put up with such robbery and such extortion of our property at the hands of the pope... If we justly hand thieves and behead robbers, why should we let Roman avarice go free? For he is the greatest thief and robber that has come or can come into the world, and all in the holy name of Christ and St. Peter. Who can longer endure it or keep silence?”

The papal envoy, Aleander, described the anti-Catholic climate in Germany:

“...All Germany is up in arms against Rome. All the world is clamoring for a council that shall meet on German soil. Papal bulls of excommunication are laughed at. Numbers of people have ceased to receive the sacrament of penance... Martin (Luther) is pictured with a halo above his head. The people kiss these

pictures. Such a quantity has been sold that I am unable to obtain one... I cannot go out in the streets but the Germans put their hands to their swords and gnash their teeth at me...”

What had started as a simple debate over Church practices was quickly becoming an open challenge to papal authority. The Hapsburg emperor, Charles V, needing Church support to rule his empire, was afraid that this religious turmoil would spill over into political turmoil. Therefore, although religiously tolerant by the day's standards, Charles felt he had to deal with this upstart monk. A council of German princes, the Diet of Worms, was called in 1521. At this council, the German princes, opposed to the growth of imperial power at their expense, applauded Luther and his efforts. As a result, Charles had to summon Luther to the diet so he could defend himself.

Luther's friends, remembering Jan Hus' fate, feared treachery and urged him not to go. But Luther was determined to go “*though there were as many devils in Wurms as there are tiles on the roofs.*” His trip to Worms was like a triumphal parade, as crowds of people came out to see him. Then came the climactic meeting between the emperor and the obscure monk. Luther walked into an assembly packed to the rafters with people sensing history in the making. A papal envoy stood next to a table loaded with Luther's writings. Asked if he would take back what he had said and written, Luther replied:

“Unless I am convinced by the evidence of Scripture or by plain reason—for I do not accept the authority of the Pope, or the councils alone, since it is established that they have often erred and contradicted themselves—I am bound by the scriptures I have cited and my conscience is captive to the Word of God. I cannot and will not recant anything, for it is neither safe nor right to go against conscience. God help me. Amen.”

Having defied Church and empire, Luther was hurried out of town where he was “ambushed” by his protector, Frederick of Saxony, and hidden in Wartburg castle to keep him out of harm's way. However, although Luther dropped out of sight for a year, the Reformation did not go away.

Luther's religion. Because of his criticism of papal authority and Church practices, Luther had been excommunicated from the Church. This along with the dramatic meeting at Worms led him to make a final break with the Catholic Church and form Lutheranism, the first of the Protestant faiths. This was not a new religion. It had basically the same beliefs about God as the Catholic faith. However, there were four main beliefs in the Lutheran faith that differed substantially from Catholicism.

1) Faith alone can gain salvation. No amount of good works can make any difference because man is so lowly compared to God. In the Catholic faith, penance and good works are important to salvation.

2) Religious truth and authority lie only in the word of God revealed in the Bible, not in any visible institutions of the Church. This largely reflects what Wycliffe had said about the many institutions and rituals the Church valued. As a result, Lutheranism tended to be simpler in practice than Catholicism.

3) The church is the community of all believers, and there is no real difference between priest and layman in the eyes of God. The Catholic Church gave greater status to the clergy who devoted their lives to God.

4) The essence of Christian living lies in serving God in one's own calling. In other words, God sees all useful occupations, not just the clergy, as valuable. This especially appealed to the rising middle class whose concern for money was seen as somewhat unethical by the Medieval Church.

The spread of Lutheranism. When the Church burned 300 copies of Hus' and Wycliffe's writings in the early 1400's, this dealt a heavy blow to the Hussite movement. However, from the start of the Reformation, printed copies of Luther's writings were spread far and wide in such numbers that the movement could not be contained. By 1524, there were 990 different books in print in Germany, 80% of which were by Luther and his followers, with some 100,000 copies of his German translation of the Bible in circulation by his death. Comparing that number to the 300 copies of Hussite writings underscores the decisive role of the printing press in the Protestant Reformation.

When discussing whom in society went Lutheran or stayed Catholic and why, various economic and

political factors were important, but the single most important factor in one's decision was religious conviction. This was still an age of faith, and we today must be careful not to downplay that factor. However, other factors did influence various groups in the faith they adopted.

Many German princes saw adopting Lutheranism as an opportunity to increase their own power by confiscating Church lands and wealth. Many middle class businessmen, as stated above, felt the Lutheran faith justified their activities as more worthwhile in the eyes of God. The lower classes at times adopted one faith as a form of protest against the ruling classes. As a result, nobles tended to be suspicious of the spread of Protestantism as a form of social and political rebellion. Many Germans also saw Lutheranism as a reaction against the Italian controlled Church that drained so much money from Germany. However, many German people remained Catholic despite any material advantages Lutheranism might bestow. For both Catholics and Protestants, faith was still the primary consideration in the religion they adopted.

Lutheranism did not win over all of Germany, let alone all of Europe. Within Germany, Lutherans were strongest in the north, while the south largely remained Catholic. However, Germany's central location helped Protestants spread their doctrine from Northern Germany to Scandinavia, England, and the Netherlands.

The Reformation and Women. The Protestant Reformation was a mixed bag as far as women's status was concerned. On the one hand, it encouraged literacy in women, since they too should read the Bible. Also, Luther's doctrine of the spiritual equality of all believers would spill over into ideas about social equality as well. Thus Protestant countries, such as Great Britain and the United States, would be among the first to give women the vote in the twentieth century. On the other hand, since Protestants didn't believe in a celibate clergy, they closed monasteries and convents, thus depriving women of the one alternative to living under the authority of men. Similarly, the Reformation's abolition of the veneration of saints eliminated the single most important source of role models for women. However, overall the Protestant Reformation

seems to have helped open the way for women in the future.

Luther's achievement. Although Luther had not originally intended to break with Rome, once it was done he tried to keep his religious movement from straying from its true path of righteousness. Therefore he came out of hiding to denounce new more radical preachers. He also made the controversial stand of supporting the German princes against a major peasant revolt in Germany in 1525, since he saw the German princes' support as vital to the Reformation's survival. This opened him to attacks by more radical Protestants who saw him as too conservative, labeling him the "Witternburg Pope". However, as the Protestant movement grew and spread, it became increasingly harder for Luther to control.

Martin Luther died February 18, 1546 at the age of 63. By this time events had gotten largely out of his control and were taking violent and radical turns that he never would have liked. Ironically, Luther, who had started his career with such a tortured soul and unleashed such disruptive forces on Europe, died quite at peace with God and himself. Like so many great men, he was both a part of his times and ahead of those times, thus serving as a bridge to the future. He went to the grave with many old Medieval Christian beliefs. However, his ideas shattered Christian unity in Western Europe, opening the way for new visions and ideas in such areas as capitalism, democracy, and science that shape our civilization today.

Young Luther

Martin was a bright and hard working pupil. At age fourteen he gained admission to the Latin High School at Magdeburg, sixty miles from his home. It was here that he probably had his first opportunity to read a Bible. A year later, his father transferred him to a school in Eisenach, where a rich and pious young woman, Mrs. Ursula Cotta, took interest in him, giving him free lodging, while he received free meals in another house in return for tutoring a young child of the family. Luther was now free to devote more time to his studies. Since the Cottas were a cultured family, Luther gained an appreciation of the arts and especially developed a remarkable

talent for music. Some of the hymns he composed are still sung in Lutheran churches to this day.

Even worse than the corporal punishment that Luther and other students typically endured was the horrifying sense of guilt they were taught as young children and the eternal fires of Hell they would suffer if they weren't good Christians. Of course, small children are not psychologically prepared to process such a message except on the most basic and immediate level. As a result, Christianity became for many people a continuous source of terror that smothered its gentler and more enlightened aspects. Later, as an Augustinian monk, Luther virtually tortured himself to relieve this horrible sense of guilt, starving and beating himself and even lying in the snow. As he himself put it:

"I was a pious monk, and so strictly observed the rules of my order that...if ever a monk got into heaven by monkery, so should I also have gotten there...If it had lasted longer I should have tortured myself to death with watching, praying, reading, and other work."

Luther's mission to Rome.

In 1510, Luther was sent to Rome on Church business, where he performed all the duties of a pilgrim: visiting relics and churches, climbing the Scala Sancta (sacred steps) on his knees while repeating a prayer on each step. He earned so many indulgences that he "almost wished his parents were dead so that he might deliver them from purgatory." Years later, he recalled, with some exaggeration, the sinfulness of the Roman clergy, claiming the papal court was being served supper by twelve naked girls, although he probably had no access to watch the Pope eat his meals.

Luther also claimed the Italian clergy looked down on German clergy because they could recite four times as many masses a day as their German counterparts and collect four times the fees as a result. Not surprisingly, he came away from Rome with an overall negative view of the papal city.

Purgatory and Indulgences

In the Catholic faith, Purgatory was where Christians who were saved would go to be purged or cleansed of their sins before being admitted into heaven. (Those not in a state of grace would go directly to Hell, there being no point in sending them to a temporary place of punishment when an eternity of punishment already awaited them.) Although it has never been officially designated as a place in Church doctrine, it has popularly been conceived as such. Probably the most famous description occurs in Dante's *Purgatorio*, the second part of his *Divine Comedy*, where the author describes it as a mountain in the southern hemisphere where people ascend through various levels until they reach the top and they are purified.

The amount of time spent in Purgatory was also a matter of great concern to many Christians, with estimates soaring into the hundreds of thousands of years. For example, a prayer roll of Henry VIII claimed that saying five *Pater Nosters*, five *Ave Marias* and one *Credo* reduced one's time in purgatory by "52,712 years and 40 days.

Catholic theology also believes in indulgences, which are full or partial remission of temporal punishment for sins after doing confession and penance for those sins. Medieval Christians' belief that much of their punishment would take place in Purgatory added to their distress. A major turning point came with the preaching of the First Crusade at the Council of Clermont in 1095 when by Pope Urban II offered a plenary indulgence (total remission of penance for all sins) to Crusaders who made the long and arduous trip to Jerusalem.

Indulgences could also be bought, the logic being that giving money to the Church sanctified that money and was deserving of indulgences. Backing up the Church's issuing of indulgences, as with bank notes, was the concept of the Treasury of Merits, first proposed around 1230. According to this doctrine, Christ and the saints had built up an

infinite number of merits, which the Church could draw upon and issue as indulgences. This gave it a virtual blank check for issuing indulgences and encouraged widespread and growing abuses.

Although the Church officially issued indulgences worth only 40 days, unscrupulous salesmen, often selling forged indulgences, claimed theirs were worth hundreds and even thousands of years. Some even claimed that their indulgences would save their buyers from eternal damnation, while John Tetzel claimed their purchase would turn the surrounding hills into silver.



Raphael's portrait of the Medici pope, Leo X, who authorized the indulgence sale that triggered the Reformation

Frederick of Saxony (1486-1525), who ironically would become Luther's primary protector, offered possibly the best deal anywhere. His museum of 17,443 relics supposedly included part of Christ's beard, a piece of bread from the Last Supper, twigs from Moses' burning bush, 35 pieces of the true cross, parts of Jesus' cradle and swaddling clothes, and the Virgin Mary's milk. A pious person doing reverence to each of these could earn according to different accounts 127,779 years and 116 days or 1,902,202 years & 270 days out of Purgatory.

Although the Council of Trent (1545-63) reaffirmed the value of indulgences, Pope Pius V outlawed any sales of indulgences in 1567.

Three Main Players of the Early Reformation

John Tetzel (1465-1519) was a Dominican preacher of some renown before Luther took him on. In fact he earned his doctorate the

year after Luther posted his Ninety-five Theses by defending the doctrine of indulgences in two disputations. In 1509 he had also been made an inquisitor before his appointment in 1517 to oversee all indulgence sales in Germany. The outbreak of the Reformation led to Tetzel getting a lot of bad press, often of questionable accuracy, from Karl von Miltitz who may have invented charges such as Tetzel telling people they could use indulgences to get out of punishment for sins they wished to commit in the future. Thanks, to Miltitz and others, Tetzel died worn out and broken, his reputation destroyed, in a monastery in Leipzig in 1519, less than two years after Luther posted his Ninety-five Theses.

Ironically, on his deathbed Tetzel received a letter from Luther that graciously stated that the child had another father (i.e., the Church, not Tetzel, had started the indulgence scandal).

Frederick of Saxony (1486-1525), Luther's overlord, became elector in 1486. He supported Church reform, which he urged upon the emperor Maximilian. In 1502, he founded the University of Wittenberg, where Martin Luther and Philip Melancthon taught.

Frederick's museum of 17,443 relics supposedly included part of Christ's beard, a piece of bread from the Last Supper, twigs from Moses' burning bush, 35 pieces of the true cross, parts of Jesus' cradle and swaddling clothes, and the Virgin Mary's milk. A pious person doing reverence to each of these could earn according to different accounts 127,779 years and 116 days or 1,902,202 years and 270 days out of Purgatory. Therefore, to protect his own racket, Frederick kept Tetzel out of his lands. Ironically, he would become Luther's primary defender against the Church.

Albrecht of Brandenburg. Although Frederick closed his lands to indulgence sales, his neighbor, Albrecht of Brandenburg, did let Tetzel in for some very non-religious reasons. Albrecht owed 20,000 ducats to the Fugger banking family for buying the office of Archbishop of Mainz, which also gave him one

of the seven imperial electoral votes. Since he was already archbishop of Magdeburg as well as the administrator of Halberstadt since 1513, and therefore ineligible to hold a second (or third) church office without special papal dispensation, the pope was able to put pressure on him through the Fuggers to let Tetzel into his lands. This is how and where the good people of Wittenberg got the indulgences they showed to Luther.

By the way, Albrecht rounded out his church career in 1518 by becoming a Cardinal-Priest.

Samhain and the Origins of Halloween

Halloween, more properly the Hallowed Eve of All Saints' Day (November 1 on the church calendar) was supposedly the last day before the saints purged the world of its demons, thus its association with witches, goblins, and tooth decay. Its likely origins were a Celtic festival known as *Samhain*, meaning summer's end. The Celtic year was divided into a light half and a dark half, and Samhain was the cusp between the two. It was believed the boundary between this world and the Otherworld was especially thin on that day, allowing spirits both good and bad, to cross over into our world. Thus the purpose of Samhain was largely to ward off evil spirits, often by wearing masks and costumes to scare them.

Trick or treating probably originated in medieval England and Ireland, where people would go from door to door on Hallowmas (November 1) begging for food in return for prayers for the souls of the dead on All Souls Day (November 2).

The birth of political cartoons

Maybe even more effective than the printed word in affecting public opinion was the printed image, in particular "political cartoons". Meant to sway public opinion, they often did so by stretching or distorting the truth in ways that would seem very familiar to us today. One such cartoon (below) showed Frederick of Saxony dreaming of Luther writing his 95 Theses with a quill reaching all the way to Rome. In the distance is Jan Hus'

execution. A swan in the foreground symbolizes Luther's piety and purity. Another showed Luther as a German knight defending the true faith with a sword in his hand and the Bible at his side.



The medium would get much looser with the truth than that, however. Another cartoons portrayed the pope and Franciscan friars (a popular target of derision) as bloated from the excesses of corruption and suffering eternal damnation in Hell. The pope was also portrayed as a demon or the Anti-Christ.

Although the Protestants made wider use of such propaganda, the Catholic Church also smeared Luther, showing him as a 7-headed beast or as a bagpipe being played by Satan.



Luther's Final Break with the Church (1518-21) anti-papal rhetoric became increasingly bolder and more violent, Pope Leo X decided to act. In October 1518 he sent his papal envoy, Cardinal Cajetan, to meet with Luther. Despite his rhetoric, Luther was still deferential to the Church, even prostrating himself before the cardinal when they met. But he was disappointed that he was only expected to retract his views without having a chance to defend them. Therefore, in defiance of papal orders, Luther engaged Cajetan in three days of theological debate that got nowhere. Several

nights later, Luther's friends, fearing for his life, grabbed him and got him out of town.

Luther, remembering Hus' fate, refused an invitation to go to Rome. But in a later debate with another renowned theologian, Johann Eck, he admitted that he agreed with many of Hus' points and thought the Council of Constance had been wrong to burn him. Agreeing with a condemned heretic gave the Church further grounds for excommunicating him. When the bull of excommunication came in September 1520, Luther publicly burned it, ensuring his final break with the Church.

The problem was that the Church needed the secular authority of the emperor in order to seize Luther. The emperor at the time was Charles V, who had just won (i.e., bought) the throne of the Holy Roman Empire.



In 1519, when emperor Maximilian I died, his grandson Charles V (above) inherited all the Hapsburg family lands. However, he had to secure the throne to the Holy Roman Empire through election held by seven electors. It was a contentious election, both Henry VIII of England and Francis I of France also wanting the crown. Henry, seeing his chances as too slim and the price as too steep, dropped out.

But Francis was a more formidable candidate, and Charles only won after getting loans amounting to of 852,000 guilders, 544,000 of that from the Fugger banking family of Augsburg, to use as bribes to secure his election. Naturally, after paying such a hefty price, Charles wanted more for his money than a realm being torn apart by religious conflict. As the papal legate Aleander put it:

"All Germany is up in arms against Rome. All the world is clamoring for a council that shall meet on German soil. Papal bulls of

excommunication are laughed at. Numbers of people have ceased to receive the sacrament of penance...Martin is pictured with a halo above his head. The people kiss these pictures. Such a quantity has been sold that I am unable to obtain one...I cannot go out in the streets but the Germans put their hands to their swords and gnash their teeth at me..."

Therefore, Charles had to settle the issue of Luther before it got anymore out of hand. Bound by an agreement with the German princes, he summoned Luther under a safe conduct to the Diet (parliament of German princes) being held in the city of Wurms.

Luther's friends, remembering Jan Hus' fate, feared treachery and urged him not to go. But Luther was determined to go *"though there were as many devils in Wurms as there are tiles on the roofs."* His trip to Wurms under the protection of an imperial herald sent by Charles, was like a triumphal parade, as crowds of people came out to see him.

Then, in Wurms, came the climactic meeting between the emperor and the obscure monk. Luther walked into an assembly packed to the rafters with people sensing history in the making. A papal envoy stood next to a table loaded with Luther's writings. Asked if he would take back what he had said and written.

At first, Luther wasn't quite so fearless and defiant as history remembers him. When asked if he would recant what he had said and written, he had a temporary failure of nerve and asked if he could have some time to consider his answer. He was given 24 hours. By the next day, the crowds a people anticipating history in the making had grown so much that the meeting had to be moved to a larger hall. It was then, in front of a much larger audience, that he defied Church and state with his famous statement:

"Unless I am convinced by the evidence of Scripture or by plain reason—for I do not accept the authority of the Pope, or the councils alone, since it is established that they have often erred and contradicted themselves—I am bound by the scriptures I have cited

and my conscience is captive to the Word of God. I cannot and will not recant anything, for it is neither safe nor right to go against conscience. God help me. Amen."



Having defied Church and empire, Luther was hurried out of town where he was "ambushed" by his protector, Frederick of Saxony, and hidden in Wartburg castle to keep him out of harm's way. While in hiding, Luther, now severed from the Catholic Church and his monastic vows, grew out his hair and beard and assumed a new pseudo-identity as Junker (Knight) George (below), even though he was an animal rights activist bitterly opposed to hunting, and refused to take part in the nobles' customary rabbit chases. Supposedly, he would go out in this disguise to talk to people and get a sense of what was happening in the world, especially with his Reformation.

Luther, Satan, and the Bible

Luther's religion, while pointing toward the modern world, was still very medieval in many ways. He continued to hold to the old medieval view of Christ as an avenger despite his doctrine of faith as a free gift of God. Along those lines he believed that "few are saved, infinitely many are damned."

Luther also believed in the constant presence of Satan, having conversed with him many times, either charming him with a flute or scaring him away with foul names. Supposedly he even would throw excrement at him. At night would awaken to the creaking of walls from the cold outside, would conclude it was only Satan and go back to sleep. He also believed in demons and witches, which should be burned.

On the other hand, for the sake of his children, he said there were puppies in Heaven. He even admitted on occasion that he knew little about

God. Luther was also known for his sharp sense of humor. Once, when pestered about what God was doing before creation, he finally replied: "*He was building Hell for such presumptuous, fluttering, and inquisitive spirits as you.*"

Besides Luther's four main points of difference with the Catholic Church, there were other changes as well, largely based on Wycliffe's idea that if it wasn't in the Bible, it should be abolished. For example, the Catholic Church had seven sacraments, ceremonies considered essential to salvation: baptism, confirmation, holy communion (AKA the Eucharist), confession and penance, marriage, holy orders, and last rites (AKA extreme unction or the Anointing of the Sick). Luther kept only baptism and communion, since he saw no biblical evidence of the others taking place or assuming special importance in Christ's ministry. Later, he did reinstate marriage as a third sacrament.

One of Luther's most important and provocative actions was translating the Bible into the vernacular so all could read the word of God. His translation of the Bible into German was considered a major event in the history of the German language, much like the King James Version of the Bible has been with English.

Luther kept some aspects of Catholicism that later Protestants would do away with. For one thing, he sided with the Church's on transubstantiation (the belief that the bread and wine in communion literally transform into Christ's body and blood). Being a music lover, he also kept music in the church service, although there is no biblical reference to Christ singing.

Timed sermons. The requirements for a Lutheran minister were quite demanding, in terms of education, so they knew scripture well, and preaching. Lutheran ministers were expected to deliver 200 sermons a year, including two each Sunday. They had hourglasses next to the pulpit, not to keep them

from running too long, but to make sure they gave sermons of at least a minimal length.

The Perils of Womanhood in Early Modern Europe

Despite any benefits the Reformation may have brought women, they still were highly vulnerable to abuse and harassment from men. This was especially true for young women from poorer urban families that hired themselves out as domestic servants to the families of the rich. Being at a disadvantage because of both their gender and social class, their employers would often force them into compromising sexual situations. If they refused to cooperate, they would be fired. If they complied and got pregnant, they were also fired.

In the middle ages, the Church had sanctioned and even encouraged secret marriages done without the parents' knowledge and permission. While this enhanced the power of the Church, such secret marriages often left open the question of whether a pregnant woman was actually married to the father, since there were no witnesses. The man could either admit to being married to her, and thus be married by law, or he could deny being married and face punishment as a fornicator. Many men preferred the latter option, despite the stigma and the requirement of paying a "second dowry" as compensation to the mother. This was typically twice the value of her regular dowry, since she was now considered less marriageable. In disputed cases, women were usually assumed the innocent party, having been seduced into the relationship. To counter secret marriages and the promiscuity they both encouraged and masked, towns started requiring public weddings before witnesses.

Another problem was the large number of single young men, since they couldn't get married until they could support a family. As a safe outlet and to protect young women, late medieval towns often ran public brothels. However, the spread of syphilis after 1500 and tighter moral standards resulting from both the Protestant and Catholic Reformations led

to such institutions being shut down in the 1500s.

Therefore, young women still had to be extremely careful, which inspired this testament from a dying mother to her daughter in the 1600s: *“Don’t eat and drink too much at parties. Eat and drink ahead of time and accept drinks only from other girls. If a boy peels a fruit for you, do not accept it. When boys come and sit beside you, don’t answer their questions; say only “yes,” “no,” and “I don’t know.” And do not smile at them. When boys happen to come into your bedroom, hide behind the bed and threaten to hit them in the face.”*

The German Peasants Revolt (1524-5)



“When Adam delved & Eve span/
Who then was the gentleman?”
--John Ball*

**Delved and span: Middle English terms for plowing without the aid of a draught animal and for spinning wool.*

Although Luther spoke of equality in purely spiritual terms, many poor people took it to mean social and political equality as well. Not that this was a wholly new idea. It was most notably expressed in the above poem by John Ball, a Lollard leader of the Wat Tyler Rebellion in 1381.

In other words, when Adam and Eve were the only people, there were no social classes. Thus social classes were not divinely ordained and all people should be equal in status. In an era when religion and politics were inseparable, such an idea, fused with Luther’s Reformation, could prove a most volatile fuel during a popular uprising, such as the German Peasants’ Revolt in the 1520s.

The German Peasants’ Revolt (1524-5). The 1500s were a time of rapid economic change. As more money entered the economy, peasants, (i.e., the 85-90% of the people who made their living from the less dynamic agricultural sector) felt the squeeze of rising rents charged by landlords who were also trying to keep up with inflation and the progressively weaker buying power of the money they got for their crops. In 1524, a peasant revolt suddenly erupted and spread across Germany.

Peasant revolts followed a fairly typical pattern. They would start spontaneously, catching the authorities off guard and thus initially spread rapidly across the countryside. Years of frustration would be unleashed on any nobles and clergy the peasants captured, whatever atrocities they committed being magnified tenfold by rumor and fear.

However, while the revolt’s spontaneous nature might have helped it at first, it eventually would be its undoing, because it wasn’t organized into a well trained army. By contrast, the nobles the peasants were rebelling against were professional warriors. Once the initial shock of the revolt had worn off, the nobles would pull together a real army and go after the rebels. When the two forces met, the rebels, with little or no military organization or training, would usually panic and run at first contact with the nobles, and the rebellion would be crushed as suddenly as it erupted. Vengeance for peasant atrocities, real or imagined, would be extremely severe in order to discourage any future thoughts of rebellion.

Complicating the German Peasant Revolt was the fact that, since religion and politics were so intertwined, peasant converts to Lutheranism might also use it to justify political revolution. Reinforcing this idea was the fact that several leaders of the Peasants’ revolt were Lutheran preachers, most notably Thomas Muntzer.

Against the Murderous, Thieving Hordes of Peasants (1525) was Luther’s response to the Peasant revolt. One wonders how much this reflected his real views and how much of it

reflected the pressure to distance himself and his Reformation from the revolt in order to keep the crucial support of the German nobles:

“First they have sworn to their true and gracious rulers to be submissive and obedient, in accord with God's command (Matt. xxii. 21), ‘Render therefore unto Caesar the things which are Caesar's,’ and (Rom. xiii. 1), ‘Let every soul be subject unto the higher powers.’ Wherefore St. Paul judges them, saying (Rom. xiii. 2.), ‘And they that resist shall receive to themselves damnation.’ The peasants will incur this sentence, sooner or later; for God wills that fidelity and allegiance shall be sacredly kept....

“Rebellion is not simply vile murder, but is like a great fire that kindles and devastates a country; it fills the land with murder and bloodshed, makes widows and orphans, and destroys everything, like the greatest calamity. Therefore, whosoever can, should smite, strangle, and stab, secretly or publicly, and should remember that there is nothing more poisonous, pernicious, and devilish than a rebellious man. Just as one must slay a mad dog, so, if you do not fight the rebels, they will fight you, and the whole country with you.”

The *bundschuh* that peasants wore was popular symbol for rebelling peasants, *bund* referring to the shoe's leather bindings, thus implying the idea of “union”.

The German Peasant Revolt was the third most destructive event in German history, only exceeded in material damage by World War II and the 30 Years War. (World War I being fought almost exclusively in other countries, it did little material damage to Germany.)

The Reformation Starts Spinning out of Control
As the Reformation spread, it also got increasingly out of control. In towns across Germany, including Wittenberg, crowds rioted against the Catholic Church, smashing and whitewashing icons, attacking priests, and turning monks and nuns out into the streets as they took over monasteries and convents.

At Erfurt, just two months after the Diet of Worms, students, artisans, and peasants attacked and demolished 40 parish houses, destroying libraries and rent rolls. In August Friars there were denouncing the Church and by autumn were preaching Lutheran doctrine.

Much of Luther's early support came from a younger generation of preachers frustrated with Rome's patronizing response to the 95 Theses. In towns that refused to silence them, they would generate public discussions that often turned into arguments and even violence. These would lead to petitions to the town council to abolish the Catholic mass, often leading to even more violence.

Eventually the mass would be replaced with a simpler service with the congregation singing (instead of just the clergy) or banning music altogether (since it wasn't in the Bible). The clergy, now paid by the state, were expected to get married, since Christ didn't dictate a celibate clergy. Monasteries were turned into state property or given to charity, the monks and nuns being turned out into the streets. About half of Germany's monasteries were willingly or forcefully emptied in such a way.

As a result, churches across Germany were being transformed from being parts of an international hierarchy to becoming self-regulating departments of the local political communities, at first at the level of towns and villages, and eventually entire principalities as rulers joined the reform movement.

However, without Luther's guiding hand, many communities went much further than he had intended. For example, at Zwickau, a firebrand preacher, Thomas Munzer, influenced by more radical Taborites (Hussites), engineered an unsuccessful revolt and was driven out of town. After much wandering, Munzer ended up leading a peasant revolt in Thuringia where he was defeated, tortured, and executed.

However, he had influenced one of Luther's followers, Andreas Carlstadt, who believed in

the impending Millennium (apocalypse) and the need to destroy books and exterminate the upper classes. Carlstadt's followers forced the municipal council of Wittenberg to ban all religious images and replace the Catholic mass with a much simpler service with bread and wine for all. They tore images down from church walls and pelted priests with stones. Believing Munzer's idea that God speaks directly to men, especially simpler ones, Carlstadt preached against learning and books, causing many students to give up school and take up farming or handcrafts.

Luther, alarmed by this news, came out of hiding in 1522 to bring Wittenberg to its senses. In a series of eight dramatic sermons, he restored a tolerant religious climate between Protestants and Catholics. Carlstadt fled to Orlamunde where, as Brother Andreas, he preached more radical Old Testament practices, including polygamy, while earning his living behind a plow. When Luther went there to preach against him, he was pelted with stones and mud and driven out of town. With the collapse of the Peasants' Revolt, Carlstadt straightened up and lived as a University professor at Basel until his death in 1541.

Luther's family life

Marriage came largely as an afterthought to Luther and as a concession to his own disapproval of a celibate clergy, since in the Old Testament God had told people to be fruitful and multiply. His wife, Katherine Bora, was a former nun who had become drawn to Luther's doctrine of faith alone. To avoid an angry mob outside the convent, she and eight other nuns escaped, reportedly hidden in herring barrels on a wagon.

Luther spent much of his own time and money helping former monks and nuns in the transition to living in mainstream society. Although he considered Katherine arrogant and tried to match her with several different men, he ended up marrying her, supposedly because all the other escaped nuns were already married and he thought he should set an example of marital bliss for other ministers.

Although he seems to have married as an afterthought, he grew to love her and it was a happy union. Luther considered sexual method of human reproduction as absurd. He apparently knew what he was talking about, because he and Katie had six children. As he put it: "*...had God consulted me in the matter, I should have advised him to continue the generation of the species by fashioning human beings out of clay, as Adam was made.*"

Luther encouraged a healthy sex life within marriage as a means to keep men from straying outside of marriage. Ironically, he said it was all right for a wife to take another lover if her husband couldn't satisfy her and that her husband should agree to this. Then again, Luther would tease his wife by saying a man should have more than one wife since he can beget many children in a short time while she can only bear one child per year.

In addition to their six own children, they adopted 11 more and usually had up to twelve students boarding with them, thus creating a full household to support. Since Luther refused to take money for his religious services, Katie's organizational skills kept his household running, freeing him for less mundane affairs. Luther did help support his family through gardening. He was reputedly an excellent gardener who raised championship-sized lettuce. The Luthers' home in Wittenberg was a former Augustinian cloister given to Martin and Katie soon after their marriage.

Luther died in 1546 from complications of a cold after traveling through some bad weather to tend to a sick friend. His life and work formed a bridge between the medieval and modern worlds and triggered changes he never could have dreamed of.

When I die, I want to be a ghost...So I can continue to pester the bishops, priests and godless monks until they have more trouble with a dead Luther than they could have had before with a thousand living ones.--Martin Luther

The Reformation Fragments (1518-1560)

Introduction. While the Catholic Church kept Western Europe religiously united for 1000 years, Protestant unity broke up almost immediately. There were three major reasons for this. First, Luther's successful challenge to the Catholic Church set an example for other reformers to follow. Second, the printing press and translations of the Bible from Latin to the vernacular let more people read and interpret scripture on their own. Previously, the Church's monopoly on Bibles, all written in Latin, severely limited individual interpretations. Finally, the Bible itself is often vague, which also encouraged widely differing interpretations. Consequently, a number of different *sects* (religious groups) sprang up on the heels of Luther's Reformation.



Huldreich Zwingli and the Swiss Reformation. The first break in Protestant unity came from the Swiss reformer, Huldreich Zwingli. Although only a year younger than Luther, Zwingli seemed to come from a different world. While Luther's outlook and background were very medieval, Zwingli received a liberal humanist education and did not have the great sense of guilt and fear of the terrors of hell his German counterpart had. Zwingli's humanist education influenced him to call for a religion based entirely on the Bible. In 1518 he became a common preacher in Zurich, Switzerland and echoed Luther by speaking out against Bernhardin Samson, a local seller of indulgences. He also denounced other church abuses and thus launched the Swiss Reformation.

Zwingli's religion was both similar to and different from Luther's. Like Luther, he stressed a more personal relationship between man and God, claimed faith alone could save one's soul, and denied the validity of many Catholic beliefs and customs such as purgatory, monasteries, and a celibate (unmarried) clergy. However, Zwingli's goal from the first was to break completely from the Catholic Church. His plan for doing this was to establish a theocracy (church run state) in Zurich.

By 1525, he had accomplished this, having banished the Catholic mass and introduced services in the vernacular. He vastly simplified the service to sermon and scripture readings. Despite his love of music, Zwingli banned it from the service and even smashed the church organ. He either destroyed or whitewashed religious images, which he saw as idolatrous, served communion in a wooden bowl rather than a silver chalice, and closed down monasteries or turned them into hospitals and schools. While not persecuted, Catholics had to pay fines for attending mass and eating fish on Fridays (a Catholic practice then to symbolize personal sacrifice by not eating meat) and were excluded from public office. Zwingli also closely supervised the morals of his congregation. All these measures anticipated the later reforms of John Calvin.

By 1528, Zwingli's reforms had spread across northern Switzerland with the South remaining Catholic. Because of fear of being caught between Catholics in southern Switzerland and Germany to the north Zwingli followed a more aggressive foreign policy and attempts to unite with the Lutherans in common cause against the Catholics. The proposed alliance never occurred because the two camps could not agree on one piece of theology: whether the bread and wine of communion were actually *transubstantiated* (transformed) into the body and blood of Christ. The Catholic Church had claimed for centuries that transubstantiation did take place, and Luther agreed with them in a modified form. Zwingli said it was only symbolic of Christ's body and blood. A personal meeting between Luther and Zwingli in 1529 accomplished nothing except hard feelings, and the proposed alliance between the Zwinglians and Lutherans fell through.

Aggressive Zwinglian missionaries in the Catholic districts of Switzerland led to war in 1531, and an army of 8000 Catholics destroyed Zwingli and his force of 1500 men. An uneasy co-existence between Protestants and Catholics followed, and Protestantism survived in Switzerland. Zwinglianism, however, did not survive, being replaced by Calvinism in the Swiss Reformed Church. Still, Zwingli was important for establishing Protestantism in Switzerland and serving as an example for the more successful Calvinists who followed.

Grassroots Protestantism: the Anabaptists. After breaking the Catholic Church's centuries-long monopoly on religion, the issue arose of how far beyond the old set of rules the new beliefs could go. Luther, Zwingli, and Calvin, despite significant religious differences, drew up new sets of rules fairly close to the Catholic Church's. Among other things, they all believed in obedience to civil authority. However, some men preferred to go much further in rewriting the rules. As a result, some 40 different religious sects sprang up in Western Europe. Although their beliefs varied somewhat from one another, they have been lumped together under the name of Anabaptists from their common practice of baptizing members as adults when they could make the free choice to be Christians. In addition to the Bible as a source of religious truth, they also believed in inner revelation coming directly from God.

Death for rebaptism. A common misconception about Anabaptists, which meant “rebaptists”, was they were baptized twice, once as babies and a second time as adults, when they only did it once as adults. However, rebaptism was a capital offense going back to Justinian’s law code, the reason being that to get baptized a second time implied one doubted the validity of the first ceremony, and to doubt the validity of a Church sacrament deserved death.

Anabaptists thought baptizing infants was ridiculous, since they had no idea of what was going on. They way they put it, baptizing babies was like washing cabbages in the dark.

In Appenzell, Switzerland Anabaptists, taking literally a Biblical passage about not worrying about where their food would come from, laid out tables in the streets and waited for food to drop from Heaven. It didn’t.

The Anabaptist movement was more involved with social discontent than the other Protestant sects were. The 1500's saw economic difficulties resulting from rising population and inflation. Peasants, town craftsmen, and miners were especially hard hit, and it was they who especially joined the Anabaptist ranks in hope for a better world to come. Most Anabaptists denied the right of civil governments to rule their lives. They

refused to hold office, bear arms, or swear oaths, which naturally made the authorities suspicious.

Actually, most of the Anabaptists were just trying to live good, peaceful; Christian lives in imitation of Christ himself. They did not openly resist the authorities, but they still aroused suspicion because of their different ways. Some groups held property in common. Others went to extremes in interpreting the Bible literally, preaching from rooftops and even babbling like children as the Bible supposedly told them to. They tended to separate themselves from the rest of society, which they saw as sinful. Despite their peacefulness, the Anabaptists were heavily persecuted. This forced them to migrate, which spread their beliefs from Switzerland down the Rhine to the Netherlands. It was here that the movement turned more violent as it combined frustration from economic hard times with an older tradition of socially revolutionary ideas that were popular among the peasants of the region. The climax of this process took place in the German city of Munster in the early 1530's.

It was in Munster that radical Anabaptists seized power and combined religious fanaticism with a reign of terror that tarnished the reputation of other Anabaptists for years. All books except the Bible were burned. Communal property and polygamy were enforced. Their leader, John Bockleson, ruled with a lavish court while ensuring his followers that they too would eat from gold plates and silver tables in the near future. So alarming was this spectacle that Lutherans and Catholics combined forces to snuff it out. The determined and disciplined resistance of the Anabaptists led to a drawn out siege (1534-35). The city was finally betrayed and the Anabaptist leaders exterminated. An intense persecution of the Anabaptists followed, killing thousands and driving many more from place to place. Some of them, such as the Mennonites and Amish, would find a home in North America and have had a profound influence on our attitude of separating church and state. Others made their way to the Spanish Netherlands where they helped stir up a major revolt against Catholic Spain.

The English Reformation. As discussed above, the strong medieval monarchies of France, England, and Spain assumed more and more control over the Church within their own lands. As a result, these kings had few grievances against the Church and

were generally hostile to the Reformation, since it threatened their own control of religious policies. They were also strong enough to repress the spread of Protestantism among the lower classes. However, the Reformation found a home in one of these monarchies, England, thanks to some very peculiar circumstances.

Henry VIII of England had been given the title of "Defender of the Faith" by Pope Clement VII for a work he had written attacking the Lutherans, mainly on political grounds. However, just as at one point Henry defended the Church for largely political reasons, at a later date, he broke with it, also for political reasons.

Henry had a problem: he needed a son to succeed him to the throne. Without such a son, England might plunge back into civil war like the Wars of the Roses that Henry's father had ended in 1485. Henry's wife, Catherine of Aragon, had borne him a daughter, Mary, but no sons. Since Catherine was getting older, Henry wanted his marriage annulled so he could find a new wife to bear him a son. Unfortunately, Catherine was the aunt of the Hapsburg emperor, Charles V. Naturally he wanted Catherine to remain as Queen of England in order to influence its policies and possibly get control of the throne herself. Since Charles also controlled the pope, the annulment was refused. Meanwhile, Henry had "fallen in love" with a young woman of the court, Anne Boleyn, giving him even more reason to dispose of Catherine.

Only twenty years earlier, Henry would have had to accept this verdict or resort to violent means to solve his problem. Ironically, the Lutherans that Henry despised provided him with an answer to his problem: break with Rome. However, he had to move quickly, because Anne was with child and Henry wanted the baby, hopefully a boy, to be born after the break with Rome in order to be legitimate.

In 1533, Henry started to break England's ties with the Catholic Church. He was clever in how he did this, doing it in stages, first by cutting off money to Rome, then curtailing the power of the Church courts and assuming more authority over the English clergy. Also, he did this through Parliament to make it seem the will of the English people rather than the mere whim of the king. In 1534, he severed the last ties with Rome, and the

Church of England replaced the Catholic Church. All this took place in time for the birth of the baby, which turned out to be a girl, Elizabeth.

The average churchgoer in England would have noticed little difference in the dogma and service as a result of this break, since the Church of England was basically the Catholic Church without a pope. Therefore, most people accepted it because they resented Church abuses, feared a civil war if Henry died without a male heir, and there were no drastic changes.

After Henry's death, his nine-year-old son, Edward VI, the son of Jane Seymour, one of Henry's later wives, took the throne. During his brief reign, the nobles ruling in his name followed Protestant policies. However, when Edward died in 1553, his older half sister, Mary, came to the throne. Like her mother, Catherine, she was an ardent Catholic, even marrying her cousin Philip II of Spain to enforce her Catholic policies. The main effect of Mary's persecution of Protestants was to alienate the English People, make them more firmly Protestant, and earn her the title of Bloody Mary.

When Mary died childless in 1558, her half sister, Elizabeth I, succeeded her. This remarkable woman, one of England's ablest and most popular monarchs, steered an interesting course between Protestantism and Catholicism. The English, or Anglican, Church under Elizabeth grafted moderate Protestant theology on top of Catholic organization and ritual. This compromise satisfied most people, although the more radical English Calvinists wanted more sweeping reforms, such as doing away with bishops and archbishops altogether. These people, known as Puritans, wanted to purify the Anglican Church of all Catholic elements. Their numbers and power would continue to grow throughout Elizabeth's reign, although she was able to control them.

In addition to England's navy saving European Protestantism from extinction at the hands of the Spanish Armada in 1588, the English Reformation was important for opening the way for the more radical Puritans Calvinists to filter in. Eventually, they would become influential enough to overthrow the pro-Catholic king, Charles I, and establish a parliamentary democracy. This in turn would

inspire the spread of democratic ideals to America, Europe, and the rest of the world.

Zwingli's Reformation

Early in his career, Zwingli served as a chaplain for Swiss mercenaries in the Italian wars and witnessed the disastrous battle of Marignano where 6,000 of his countrymen died. Like many other Swiss, he was concerned about the drain of these wars on the Swiss population and campaigned against "selling blood for gold". Largely due to the attrition coming from these wars, the Swiss were replaced as the era's premier mercenaries by German *landsknechts*. However, Swiss Guard honor regiments would serve popes to the present day and French kings until the end of the monarchy in 1792.

Gold for babies. The Swiss clergy were notorious for being morally lax. When a Swiss bishop charged each of his subordinates four guilders for each illegitimate baby they had fathered, he collected 1522 guilders in just one year. (Where the extra two guilders came from is unclear.) Zwingli himself had an affair with a barber's daughter until 1516, when he ended the affair.

Earning "street cred". In 1519, plague struck Zurich, eventually killing one-third of its population. Unlike many clergy and doctors who fled the scene, leaving the sick to fend for themselves, Zwingli stayed and tended the plague's victims, which made him popular with the townspeople. It also exposed him to and infected him with the plague, which required a long period of recovery that taught him to depend on God's mercy.

A pretty smart guy. Zwingli not only read, but even memorized St. Paul's epistles. He also astounded his congregation one Sunday by doing a sight translation of the entire Gospel of Matthew. What made this especially amazing was the fact that Catholic congregations would only hear selected verses from the Bible, not entire books in context.

Stricter interpretation. Zwingli tended to be more tightly tied to scripture than Luther. One simple way to distinguish between the theologies of the two men is that, in general, Luther allowed what was not strictly forbidden in the

Bible, while Zwingli banned whatever was not explicitly allowed. He did keep stained glass windows, most likely because replacing them would be expensive and necessary, given the cold winters in that part of the world.

Fish on Fridays. Until extensive reforms in the 1960s, Catholics were not allowed to eat meat on Fridays, although they could eat fish. The reason for this was that the meat from warm-blooded animals right before the weekend could inflame the passions and make people act naughty. Such danger did not exist with fish, since they are cold-blooded.

Cuckoos and hedge sparrows. There were fifteen major points of difference between Luther and Zwingli. For example, Luther said only God knew the elect (those who were saved) while Zwingli said they were known by their public adherence to faith. Amazingly, they managed to come to agreement or some sort of compromise at the Colloquy of Marburg (1531) on all but one point: transubstantiation. Afterwards, Luther said Zwingli's symbolic interpretation of the Bible would lead him to turn a passage such as "God created the heavens and the earth" into "The cuckoo ate the hedge sparrow."

According to one version, Catholics found Zwingli already wounded after the battle and killed him when he refused to recant his beliefs.

Paradise Lost: Munster, Germany (1534-35)



Adding to the already heated religious passions of the 1530s were groups of Millennialists, people who thought the second coming of Jesus and the end of the world were close at hand. This was an especially prevalent thought in the 1530s due to a belief that Christ would be gone a thousand years but not thousands. The medieval mind being obsessed with mathematical symmetry, many thought his

return would be exactly halfway between 1000 and 2000 years, i.e. 1500 years after he left earth. The only question was exactly when that should be. People knew Christ had lived around 33 years, so different prophets declared various specific dates in the 1530s as the date of the Second Coming.

All this came together in the North German town of Munster.

Munster had seen hard times over the last decade, suffering from the Peasant revolt (1524-5), plague and famine (1529), and a huge tax for wars against the Turks (1530).

On top of this, the people of Munster were saddled with a new ruler, Prince-Bishop Franz von Waldeck (1491-1553), who had never even been ordained as a priest and kept both a wife and mistress. The prominence of his sword and armor in his portrait show the typically political nature of his position. Although as sympathetic to the Protestants as to the Catholics, he alienated both groups with his heavy taxes to cover the cost of buying his office.

This, along with plague, famine, and taxes already burdening Munster, triggered a Lutheran revolt that drove the new bishop from Munster, establishing a more tolerant religious climate.

Word of the existence of at least one haven of religious freedom opened the way for thousands of Anabaptist refugees to come flocking in and take over. In response, the bishop quickly gathered other princes, both Catholic and Lutheran, to drive the Anabaptists from Munster.

The Anabaptists put up a determined defense during the siege, strengthening their fortifications with a double moat, defensive palisades and even cannon shot emanating from the cathedral tower. This kept the Prince-bishop's forces at bay for well over a year and drove him heavily into debt.

The first Anabaptist leader, Jan Matthys, was killed following a vision that he should lead 12 followers out to drive off the entire besieging army. It didn't work. After that, a Dutch leader, Jan van Leyden (AKA John Bockleson), took over. That's when things got really crazy.

Bockleson started his reign over Munster by running through the streets in fits of religious frenzy (on one occasion naked). This stirred up a virtual hysteria, which he used to impose a reign of terror on the town. Bockleson declared Munster the New Jerusalem and himself as "King, Messiah of the Last Days". His coat of arms had a globe topped with a cross and pierced by two swords symbolizing revenge and spirit. He forcibly converted all newcomers to Anabaptism, confiscated all superfluous wealth to "be held in common", and enforced mandatory polygamy, largely because there were three times as many female refugees as men in the town.



When Henry Mollenheck, a prominent guild leader, and some 50 others rebelled against the Anabaptist leader for his decree of enforced polygamy, Bockleson had them all shot. Similarly, he executed one of his wives, Elizabeth Wandscheer, for rebelling against his authority and then celebrated with his other wives with dance and song around her body.

To break or discourage any further spirit of revolt, Bockleson had all new converts herded into the Church under armed guard and told them he would wait to see what God wanted him to do with them. After sundown and several hours of ever increasing fear, Bockleson returned and announced that God had spoken to him and commanded him to (with a pregnant pause) spare their lives. This had the desired effect.



Meanwhile the siege had been lifted, only to be replaced by a much tighter one prosecuted by a broader coalition of Catholic and Lutheran states scared of the Anabaptist hysteria spreading. As the siege intensified Bockleson's reign of terror became increasingly bizarre. While famine took its toll among the general population, he lived in increasing luxury with his court, staged lavish plays and spectacles as diversions, and prophesied God would turn the cobblestones of Münster into bread at Easter. They didn't.

To keep people on their toes, Bockleson declared at the sound of the trumpet, everyone should assemble in the square to march on Jerusalem and conquer the world, proclaiming each of them would be worth ten enemies in battle and would feel neither hunger, thirst, nor pain. Occasionally, usually in the middle of the night to generate the most fear, Bockleson would sound the trumpet. The people would assemble and he would say he was just testing them.

Finally, some disgruntled mercenaries betrayed a breach in the wall to the Prince-bishop's forces, which poured in and took the town. Bockleson and two of his followers were executed and hung in cages from the cathedral. The cages still hang there as a reminder of the madness that can affect any of us.



Because of what happened at Münster, persecution of Anabaptists intensified, driving them downriver toward the Spanish Netherlands where their presence would trigger an even more vicious round of religious violence. Ironically, all they ever wanted was peace in a peaceful land.



Some of them, led by people like Menno Simons, would find it for a while in the New World. Their idea of separation of Church and State to prevent further religious conflict would become a cornerstone of our constitution.

“Divorced, Beheaded, Died...”—Henry VIII's Complicated Love Life



Henry's legal excuse for getting his marriage to Catherine annulled was that she had been his brother's wife, there being a biblical curse of childlessness if a man married his brother's widow.

Following is a letter from Anne Boleyn to Henry, showing the levels to which a girl such as herself had to stoop to impress the king:

*“Sire,
It belongs only to the august mind of a great king, to whom Nature has given a heart full of generosity towards the sex, to repay by favors so extraordinary an artless and short conversation with a girl. Inexhaustible as is the treasury of your majesty's bounties, I pray you to consider that it cannot be sufficient to your generosity; for, if you recompense so*

slight a conversation by gifts so great, what will you be able to do for those who are ready to consecrate their entire obedience to your desires? How great soever may be the bounties I have received, the joy that I feel in being loved by a king whom I adore, and to whom I would with pleasure make a sacrifice of my heart, if fortune had rendered it worthy of being offered to him, will ever be infinitely greater.

The warrant of maid of honor to the queen induces me to think that your majesty has some regard for me, since it gives me means of seeing you oftener, and of assuring you by my own lips (which I shall do on the first opportunity) that I am,

*Your majesty's very obliged and very obedient servant, without any reserve,
Anne Bulen."*

In order to make Anne's child, who was due in September 1533, look as legitimate as possible, Henry married her secretly in January, but didn't publicly divorce Catherine until May.

Henry had the English clergy recognize him as the head of the church in England "as far as the law of Christ allows", an intentionally vague term that would give him room to maneuver.

After breaking with the Church, Henry closed and confiscated the lands of 550 monasteries in England, forcing 7,000 monks out into the world to fend for themselves. He then sold his new lands at cut-rate prices to various English nobles. Therefore, when the inevitable backlash came from the Church, the nobles were tied to Henry's interests since they wanted to keep their newly seized lands.

Anne Boleyn didn't last long after just giving Henry a girl. She was charged with adultery, which was treason when committed by a queen, because it called the legitimacy of the king's children into question, which might lead to civil war over the succession. Just to be safe, Henry also charged Anne with being a witch for having six fingers and three breasts.

An easy way to keep track of the fates of Henry's six wives (Catherine of Aragon, Anne Boleyn, Jane Seymour, Anne of Cleves, Catherine Howard, and finally, Catherine Parr) is this simple little poem:

*"Divorced, beheaded died
Divorced, beheaded survived"*

Mary's husband, Philip II of Spain, was, in the best of Hapsburg traditions, also her first cousin once removed. Ironically, as king-consort, he helped build up England's navy, the same navy that would defeat his armada thirty years later.

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THE REFORMATION FRAGMENTS (2): CALVINISM



Introduction. As important as the Zwinglian, Anabaptist, and English reformers may have been, it was Calvinism that would have the most profound and revolutionary impact on Western Civilization. Although the Calvinists' primary concerns were religious, their reforms would radically alter the political and economic institutions of Europe, helping lay the foundations for the eventual triumph of capitalism and democracy.

Luther's break with the Church was especially difficult since he had grown up without any religious alternatives to Catholicism or examples to follow in his reforms. The next generation of reformers, led by John Calvin, grew up in a world that offered alternatives to Catholicism, thus making it easier to break with the Church and carry religious reforms much further than Luther ever had.

Calvin himself grew up in France as the first shock waves of the Reformation rocked Europe. Although not officially allowed in France, Protestant ideas still filtered across the border and won converts. Unlike Luther, whose tormented soul provides fascinating reading, Calvin was a much calmer individual. He seems to have been plagued by none of Luther's self doubts and his personal character was described as nearly flawless. After receiving a good education in theology, law, and also humanist studies, which prompted him to read the *Bible* more carefully, he seems to have arrived at some sort of conversion in 1533.

Calvin's religion. The cornerstone of Calvin's theology was God's all encompassing power and knowledge. There was nothing God did not know or have control of: past, present, or future. As a result, God knew and controlled from the beginning of time whose souls would be saved or condemned for eternity. This doctrine, known as *predestination*, had scriptural support and was a logical outgrowth of what Luther had said about

faith and salvation being a free gift of God. Predestination raised several disturbing questions. First of all, if God were all-powerful, could we have any free will in choosing between God and Satan? Quite bluntly, Calvin said no. Second, if God were good, how could he let evil exist in the world? Calvin answered that these were mysteries of God that we cannot know the answers to and probably have no business asking.

Finally, can we know we are saved and how? According to Calvin, there is no way for us to know for sure. However, if we meet the requirements of living an upright life, profession of faith, and participation in the sacraments, we could become pleasing to God and be saved despite our sinful nature, if predestined to do so. Such a puritan lifestyle might not ensure salvation, but it could be a sign that one *might* be one of the few elected by God to go to heaven. However, Calvin said our primary concern should not be going to Heaven, but rather carrying out God's plan for us in this life. As fatalistic as Calvinism with its denial of the existence of free will may sound, its adherents felt empowered by this idea that they were the special instruments for carrying out God's plan. This gave them an unshakable faith in the utter rightness of their cause and made Calvinism the most dynamic movement of its day.

Calvin's *Institutes of the Christian Religion*, first published in 1536 and constantly revised throughout his life, became one of the most popular and influential books of its day. However, Calvin went beyond words in trying to make a point about his religion. To ensure that as many people as possible had a chance to be saved, he established a model Church and community in Geneva, Switzerland to enforce the proper lifestyle needed for salvation. Naturally, Calvin's reforms met resistance and it took him nearly twenty years to get control of Geneva and reform it.

Although the city government still functioned, the Consistory, a church council of twelve elders, wielded the real power over people's lives in Geneva. All citizens were members of the church and had to attend services three or four times a week. This was because there was no telling who was predestined to be saved, and so all must be given a chance. Such acts as fighting, swearing, drunkenness, gambling, card playing, and dancing

were outlawed. Even loud noises and laughing in church were fined. Theaters and taverns were closed and replaced by inns allowing moderate drinking accompanied by sermons and church propaganda. Members of the Consistory would make annual inspections of homes to ensure they were morally run. People were even expected to report their neighbors for any behavior that was less than saintly.

The Consistory also ruled the more trivial aspects of peoples' lives. Jewelry and lace were frowned upon, the color of clothing was regulated by law, and women were fined for arranging their hair to immodest heights. Children were to be named after Old Testament figures, and one man was jailed for four days for naming his son Claude instead of Abraham. Punishments were equally harsh, with fifty-eight executions between 1542 and 1564, mostly for heresy (especially Catholicism) and witchcraft. Fourteen witches were burned in one year and one boy was beheaded for striking his parents. Not surprisingly Geneva was called "City of the Saints".

Geneva served as a model to other reformers in Europe, helping make Calvinism the most popular form of Protestantism in the Netherlands, Scotland, and England. This was in spite of its lack of support from rulers who feared both Calvinism's emphasis on God's absolute power, which might undercut the doctrine of Divine Right of Kings, and its lack of being associated with any particular nation. In Germany and Scandinavia, Lutheranism was quickly identified with strong nationalist sentiments that rulers could exploit for their own political purposes. However, Calvinism had no particular national ties, thus depriving it of the strong state support that Lutheranism enjoyed.

However, this lack of state support forced Calvinists to form independent local congregations without any real central organization, making it virtually impossible to uproot and destroy their movement by concentrating on a few leaders. These congregations were somewhat democratic, thus inspiring greater loyalty in all their members, even when facing intense persecution for their beliefs.

Long range effects of Calvinism. Two of Calvin's ideas would have long-term effects going far beyond religion. First, the idea of predestination

meant not only that Calvinist merchants were *allowed* to do business and make money, they were *predestined* to do so and should do so fervently as God's will. Of course, as devout Calvinists, they were to make money *for the good of the church and community*, and at first that was what they did. However, later generations, lacking the intense fervor of the first generation of reformers (a normal pattern with any revolutionary movement), came to feel justified in pursuing profits for their own personal good. The result of this was the triumph of capitalism as the dominant economic system in Western Europe, especially in England and the Dutch Republic where Calvinists predominated. This in turn would make Western Europe the economic center of the world and home of the Industrial Revolution.

The second far-reaching effect of Calvinism was the idea that God sees all useful occupations as equal that, along with the concept of God's absolute power, discredited the doctrine of Divine Right of Kings. Calvin himself preached obedience to authority unless religious conviction forced civil disobedience. But it should never involve open resistance, since God alone would punish any evil rulers. However, some Calvinists, such as John Knox, the fiery leader of the Scottish Calvinists, preached people could overthrow a corrupt prince to defend their religious beliefs and God's law. The revolt of the Spanish Netherlands (1566-1648) and the English Civil War (1642-45) were two prime examples of such Calvinist religious revolts.

Later, these two ideas, capitalism and religious revolution, combined into an even more powerful idea discussed in John Locke's *Two Treatises on Government* (1694). Much as middle class contracts define obligations in a business deal, Locke saw government as an implied contract especially defining obligations for the king who, as caretaker of the state for the good of the people, should *protect their lives, liberties, and property*. If the king failed in these duties, the contract was null and void and the people had the right to overthrow him. This combination of middle class contracts and the belief in religious revolution would become the cornerstone of democracy. And within that idea lay the seeds for the democratic revolutions that would spread to America and then sweep through France, Europe, and eventually the entire globe in the 1800s and 1900s.

Calvin's Religion



A French Calvinist (AKA Huguenot) church. Notice the more open arrangement, including the lack of altar rails which Protestants saw as separating the clergy and congregation.

Throughout his life, Calvin maintained a staggering workload: pasturing individuals, preaching daily, massive correspondence, training missionaries, and writing commentaries on almost every book of Bible...all this while suffering from migraines. In 1538 he was even driven out of Geneva for three years before coming back to complete his transformation of the city. To accomplish this, he had three "libertines": executed. It still took him until 1555 to establish total control.

This is one of the main biblical passages supporting the doctrine of predestination: *"God the Father hath chosen us in Him before the foundation of the world, that we should be holy and without blame before him in love; having predestinated us unto the adoption of children by Jesus Christ to Himself, according to the good pleasure of his will."*-Ephesians 1:3-7

Calvin's view of human nature and our ability to work for our own salvation was anything but positive: *"The mind of man is so completely alienated from the righteousness of God that it conceives, desires, & undertakes everything that is impious, perverse, base, impure, & flagitious. His heart is so thoroughly infected by the poison of sin that it cannot produce anything but what is*

corrupt, & if at anytime men do anything apparently good, yet the mind always remained involved in hypocrisy & deceit, & the heart enslaved by its inward perversity."--John Calvin

Calvin considered it the greatest blessing to have never been born and the second greatest blessing to die immediately. By the same token, he thought we should take pleasure in this world and God's creation, within reasonable limits, of course. As Calvin put it: *"There is not one blade of grass, there is no color in this world that is not intended to make us rejoice."*

Surprisingly Calvin spent little time describing Hell, either because there was enough such talk already or life on earth was already Hellish enough, and spent more time describing Heaven

Several biblical passages are used to support the Catholic doctrine of free will:

" He isn't really being slow about his promised return, even though it sometimes seems that way. But he is waiting for the good reason that he is not willing that any should perish, & he is giving more time for sinners to repent."--2 Peter 3:9

"...for he longs for all to be saved & understand the truth."--1 Timothy 2:4

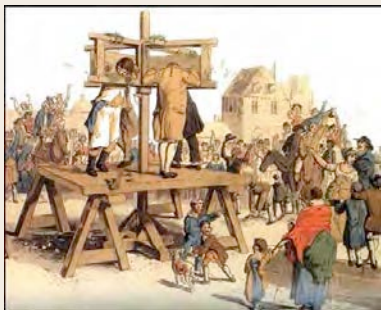
-"If anyone chooses to do God's will"---John 7:17

Literally from the Greek: *"If it be any man's will to do His will."*

Later Calvinists, now known as Presbyterians, revised the more fatalistic interpretation of predestination where God predestined some to be damned (a doctrine known as "double predestination" or "reprobation") to one where sinners are responsible for their own sinful acts, but are unable to turn away from them without God's grace, which transforms human will so it can freely obey God's will. This affirms God's absolute power without rejecting human free will.

Life and Death in The City of the Saints Behavior in church. To put the rules against laughing and loud noises in church into context, one has to understand how Catholics often

behaved. Since the Catholic service was in Latin, which most people didn't understand, worship for many involved going through the motions by rote. This left time for visiting, carrying on business deals, and even telling jokes. After all, the Church was the central focus of social life, so everything blended together. For Protestants, who worshipped in the vernacular that everyone could understand, the service commanded and demanded more attention, forbidding any unseemly noises, especially laughing. For those who didn't understand that, Calvin had specific rules to remind them and punishments (fines, public humiliation in the stocks or prison) to further remind them.



Contradicting Calvin's teaching or saying he wasn't a good teacher brought a prison sentence. When one Calvinist, Pierre Ameaux, criticized Calvin at a private dinner party, he had to appear before the Council of Two Hundred, which ordered him to kneel before Calvin and ask his mercy. Calvin said this wasn't good enough and had Ameaux walk all around the city dressed only in his shirt, falling three times on his knees and begging for mercy. As a reminder of his fate if he didn't comply, a gallows was erected in front of his house. Another form of public humiliation was forcing someone to wear a giant scarlet letter A (for adultery). Of course, women suffered this more since any pregnancies out of wedlock would serve as evidence of their actions.

Dancing, drinking, and card playing brought a prison sentence. Jewelers making silver chalices and barbers tonsuring (shaving the top of the head to simulate Christ's crown of thorns) clergy passing through town could be hanged. Saying "rest in peace" over one's grave was considered blasphemy. Two young children

were beaten with rods for eating two servings of cake after leaving Church.

Cultural Reference. Not surprisingly, many considered Calvin's regime a harsh dictatorship and either resisted it or fled town. Arthur Miller's play, *The Crucible*, which on the surface about the Salem Witch Trials in Calvinist New England, was written as a veiled protest against McCarthyism in the early 1950s.

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85C. THE REFORMATION'S IMPACT ON POLITICAL & ECONOMIC IDEAS

Few things in history take more devious twists and turns from their origins than ideas, and few ideas have taken more devious twists and turns from their origins than how those of the Protestant Reformation helped lead to such things as the triumph of capitalism, democracy, and women's rights. In fact, to fully understand this progression of ideas, we need to go back to the Italian Renaissance and the four major ideas that came from it:

Secularism: the belief this world and life are worth studying and living for now, not just as a preparation for the afterlife;

Humanism: the belief that humans are not helpless pawns in the divine plan, but capable of their own great accomplishments;

Individualism: the belief that individuals alone, not just groups of people, can accomplish great things on their own; and

Skepticism: the belief we should challenge accepted authorities' views rather than blindly accept them.

When these ideas made their way out of Italy and combined with the more religious attitudes of the Northern Renaissance, they helped lead to the Protestant Reformation. Two of Luther's ideas would have dramatic and unforeseen effects: the beliefs that God sees all useful jobs as equal and all believers as equal.

While Luther also believed in pre-destination, it was Calvin who especially emphasized it. That combined with the idea that all useful jobs are equal led to the conclusion that if one is a merchant, it is because he was predestined to be a merchant. Therefore, it was God's will that he work hard to earn profits for the good of the church and community. However, as religious fervor cooled over succeeding generations, Calvinist merchants started keeping more and more of their profits for themselves. Eventually, some merchants would lose all their religious fervor, leaving only a fervor for hard-earned profits, which we still refer to as the Protestant work ethic, and the triumph of capitalism in Northwestern Europe.

The idea that God sees all believers as spiritually equal also had surprising repercussions through the

succeeding centuries. For one thing, the idea of spiritual equality was seen as applying to women as well as men, but not in the political or social sense.... at first. A major, though little noted, turning point came in the 1600s with a Protestant sect known as the Quakers. They figured that, if women were spiritually equal, they should have the right to preach. However, the church was the center of their social life as well, and women assumed a more prominent place in Quaker society overall. Fast forward two centuries to 1848 and the Seneca Falls Conference, which was the start of the women's suffrage movement in America. Of the five women leading that conference, three were Quakers who would take the lead in gaining women the vote.

The spiritual equality of all believers also had profound political effects in another way. The reasoning was that, if all believers and the jobs they do are equal, that would discredit the quasi-religious status of rulers and the doctrine known as the Divine Right of Kings. Calvin said that if people were religiously repressed and kept from worshiping God in the proper manner, they had the right to resist, but only non-violently through civil disobedience. It didn't take long for a Calvinist leader in Scotland, John Knox, to extend this to justifying revolution on religious grounds. The problem was that religion and politics were so intertwined that a religious revolution had major political implications as well. This mixture of religious and political issues played out in nearly a century of religious wars that raged across the Netherlands, France, Germany, and England.

The English Revolution (1603-88) also saw economics mixed in with religious and political issues. In 1694, the rise of a capitalist middle class and triumph of democratic principles (in a very limited form) led to a remarkable book by John Locke, *Two Treatises on Government*, which summarized what that revolution had been about. Locke saw government, in typically capitalist fashion, as an implied contract between the ruler and subjects where each had mutual rights and obligations, as opposed to everything existing for the benefit of the ruler. The people owed their ruler obedience, but he was obligated to protect three things: their lives, liberties, and property. If the ruler failed to live up to these terms, the contract was null and void, justifying revolution on purely

political grounds. Thus, less than two centuries after the start of Luther's reformation, his purely religious ideas about the equality of believers and their jobs had transformed into ideas justifying political revolution on purely secular grounds.

In 1776 the American Declaration of Independence would merely restate Locke's ideas, substituting "pursuit of happiness" for property. The "Declaration of Rights of Man and Citizen" in 1789 during the French Revolution wouldn't even diverge that far and would inspire revolutions across Europe and the globe over the next two hundred years.

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THE CATHOLIC REFORMATION (1540-63)

One must remember that the Protestant reformation had only limited success. The two most powerful monarchies in Europe, Spain and France, remained Catholic, as did Austria, Italy, Portugal, Hungary, Poland and parts of Germany. Still, Protestant success had been rapid and posed a serious threat to the Catholic Church. As a result, the Church went through its own Catholic Reformation, also known as the Counter Reformation, in which it reformed itself, defined its theology, reestablished the pope's authority in the now reduced Church, and prepared for a counter-offensive against the Protestants.

Early reactions by the Church to Protestantism.

The Church had often been challenged with criticism in the past, but each time had patched things up with internal reforms. Therefore, at first it failed to recognize the deep philosophical and religious issues at stake and saw Protestantism as just another protest that a few reforms could mend. Since many Church abuses were the result of the financial problems deeply rooted in the later middle ages, maybe it was too much to expect reforms of abuses at this time. However, those problems only got worse in the 1500s. Inflation, loss of lands and revenue to the Protestants, and invasions of Papal lands left Pope Paul III with only 40% of the revenues his predecessor had just ten years earlier. As difficult as it would be, the threat of further losses to the Protestants made reforms all the more necessary. In 1536, Pope Paul III established a fact-finding commission to find out why there was so much protest and what could be done about it. The resulting report, *Advice on the Reform of the Church*, blamed the Church for many of its problems and called for reforms that would convince the Protestants to rejoin the Church. Two things resulted from this report. First, the Church failed to accept responsibility for its problems, making what few reforms that resulted only half-hearted. Consequently, Protestantism kept expanding.

The second result was that the Church, rather than trying to reform itself, decided to attack its enemies. In 1542, the pope brought the Inquisition into Italy, giving the inquisitor general authority over all Italians. This effectively uprooted any elements of Protestantism in Italy and restored the pope's

authority over the whole peninsula. To a large extent, the Inquisition helped put an end to the Italian Renaissance, since it suppressed Italy's vigorous intellectual life for the sake of conformity to the Church. Remarkable individuals, such as Galileo, might still come along, but they would face the Inquisition's repression for any new ideas they might propose. The Church was also waking up to the dangers that a free press presented to the established order. In 1543, the Inquisition published the first Index of Prohibited Books, the first full-scale effort to limit or destroy the free expression of ideas through the press. It would not be the last. Among its victims was the report *Advice on the Reform of the Church*, since it was seen as giving solace to the Protestants and their ideas.

To be fair to the Church, it was caught in what seemed to be a no-win dilemma. If it reformed itself, it would lose money in the short run, but keeps more in long run. If it didn't reform itself, it would save money in the short run but lose more in the long run. Of course, making this so difficult was the fact that it had immediate expenses to pay for on a day-to-day basis.

However, by the mid-1540s, it was becoming increasingly apparent that the Catholic Church would have to institute serious reforms if it were to halt the rising tide of Protestantism. These reforms came from two directions: the Papacy at the top and the grassroots (popular) level below.

Reform from the top: the Council of Trent (1543-63).



Pope Paul III'S *Dream of calling the Council of Trent*

One problem facing the Church was the wide variety of interpretations people had of the Bible and other Church writings. This was not a new problem, but it became an urgent one when faced

with competing Protestant interpretations. Consequently, Pope Paul III called a general Church council that met at Trent, Italy to define decisively what the official doctrines of the Church were. People remembered the threat to the pope's power that councils had posed during the Great Schism a century earlier. Naturally, the pope was nervous about this and tried to restrict the council to working on Church doctrine instead of reforms that might threaten his position.

The Council of Trent met in three sessions from 1543 to 1563. Popular hopes focused on the desire to restore Christian unity, since Protestant representatives were supposed to attend (but never did). Even if it did not achieve such unity the Council did revitalize the Catholic Church and restore the pope's power within the Church. It strictly defined religious doctrine. It emphasized the role of both faith *and* good works in achieving salvation. It declared the Latin Vulgate Bible the only acceptable form of scripture, thus excluding any vernacular translations. It also reaffirmed the validity of all seven Catholic sacraments and the writings of such Church Fathers as St. Augustine as sources of religious truth. It kept the elaborate ritual and decoration of the Church, since they were inspirational for the mass of illiterate Catholics with little or no understanding of Church dogma. It also enacted various reforms, ensuring clergy were better educated and their morals better supervised. The pope was even able to restore his authority over local church and clergy at the kings' expense.



An example of the elaborate decorations and passionate art (*The Trinity* by El Greco) that the Council of Trent sanctioned in order to impress and inspire the laity

Although the Council of Trent did not peacefully restore Christian unity, it did reestablish the authority of the popes within the Catholic Church,

giving it the power to launch an offensive against the Protestants to reclaim formerly Catholic lands. Also restoring the Church's spirit was a new religious order: the Society of Jesus, commonly known as the Jesuits.

Reform from below: Ignatius Loyola and the Jesuits. The Jesuits' founder, Ignatius Loyola, (1491-1556) was quite similar to Luther in how he achieved inner religious peace, although the two men arrived at some very different conclusions about their respective faiths. Loyola was born a Spanish noble and, like Luther, had no initial plans for a religious career, being a soldier by profession. Also, like Luther, a somewhat dramatic event turned his life to religion. Instead of lightning, it was a leg broken by a cannonball while defending a fort that forced him into a long period of convalescence and ultimate conversion. Instead of the tales of war and chivalry that Loyola liked, the only reading material available was religious in nature. Eventually, this literature had its effect. Loyola experienced an intense conversion and decided to devote his life to Christ.

Like Luther, Loyola nearly died from trying to purge his guilt. He finally obtained some inner peace by deciding the Devil was responsible for any self-doubts and despair one had for sins he had already confessed to the Church and done penance for. Loyola developed a four-week long set of spiritual exercises to help others achieve similar inner peace. People would first contemplate their sins and their eternal consequences in Hell for two weeks, then contemplate Christ's life, sacrifice on the Cross, and resurrection for a week, and finally contemplate the final ascension into Heaven.

After a pilgrimage to Palestine, Ignatius decided to get an education in order to preach more effectively. In school he gathered a loyal core of followers, the most famous being Francis Xavier. In 1536, they went to Rome determined to win souls, not by the Inquisition or the sword, but by educating people, especially the young who are most impressionable.

In 1540, they founded the Society of Jesus, also known as the Jesuits. The order was organized along military lines with four ranks or classes. Members were expected to show absolute obedience to their superiors, the pope and God. Instead of ascetic activities such as endless praying

and whipping themselves, the Jesuits performed Loyola's Spiritual Exercises and menial labor. Discipline was rigorous, but flexible, helping the Jesuits produce some remarkable leaders. The Jesuits also carefully selected their target audience from two main groups in society: nobles and children. As the confessors for royalty and nobles, they exercised considerable influence on religious policies within catholic states. They also ran numerous schools, believing that if they could influence children at an early age, they would remain loyal Catholics for the rest of their lives.

The order grew rapidly and became the virtual "shock troops" of the Catholic Church. They had missionary activities to South America (still mostly Catholic) and Asia. Within Europe, they spearheaded the Catholic reformation by strengthening the Church's power in areas it still held while restoring allegiance in such areas such as Bohemia and parts of Germany.

With their Church on much firmer ground than before, many Catholics felt ready to go on the offensive against Protestantism. What resulted was a series of religious wars that would engulf Western and Central Europe for the next century.

The Council of Trent's Rough History



The Council of Trent had a rough time just getting started and staying in session. For one thing, there was the issue of where to meet. The pope naturally wanted to meet in Italy. However, the emperor, Charles V wanted it to meet inside the Holy Roman Empire where he would have more influence on its proceedings. Finally, they decided to meet at Trent, which was both in Italy and inside the Empire.

Then, as the Council was about to start, the Schmalkaldic War (1542-5) between the Lutheran princes and Charles V broke out in Germany, creating a delay of three years. Another problem was the expectation that Protestants would show up at the Council in the hope that the Church could still be unified, but no Protestants came.

In 1548, just as the Council was getting started again, a typhus epidemic broke out in Trent, so the Council moved to Bologna. However, Bologna was not part of the Empire, and the imperial representatives refused to move. Therefore, everyone else came back to Trent. Unfortunately, the members of the Council had to flee again in 1552 upon the approach of Protestant troops.

Somehow, in the midst of all these interruptions, the Council got a lot of work done. Among the issues addressed was the one that had started the Reformation: indulgences. Although the concept of indulgences was upheld in a modified manner, they were no longer to be sold after 1567.

***Confessional booths.* One innovation that came out of the Catholic Reformation was the private confessional booth where the sins one confessed were just between a person and a priest. This transformed confession and penance from a public humiliation to a private reconciliation with God.**

Ignatius Loyola and the Jesuits



Loyola's full name when born was Inigo Lopez de Onaz y Loyola. He took the name Ignatius when he entered the Sorbonne in 1543. Among Basques, the eldest son was expected to become

a sailor. All other sons of Basque nobles, including Ignatius, who was the youngest of thirteen children, were expected to go into the military.

Surgery in the 1500s. The cannonball that hit Loyola while defending the fortress of Pamplona smashed his right leg and required setting. Unfortunately, surgeons set his leg wrong and it had to be re-broken and reset nine months later. That didn't work either, as some sort of growth started protruding from the wound, which had to be sawed off. Since his right leg was now shorter than his left leg, doctors attached a system of weights and pulleys to stretch back to its former length. Keep in mind, this was all done without anesthetics. And to think, Loyola was getting some of the *better* medical care of the day.

Loyola's ordeal. After his leg healed (more or less) Loyola made a pilgrimage to Barcelona to find the Holy Grail. He stopped at a cave outside the town of Manresa where he lived for a while as an ascetic, praying for hours at a time, nearly starving himself by only eating herbs, and scourging himself three times a day. Because of his poor diet and hygiene, his hair fell out and he nearly died. A pious local woman nursed him back to health, but he went back to scourging himself and nearly committed suicide in despair over his sins until he had a series of visions and came to the life-saving conclusion that it was Satan who was making him doubt the value of the Church's sacraments.

A detailed look at Loyola's spiritual exercises:
WEEKS 1 & 2: We contemplate our sins and the punishment they deserve. Lucifer was condemned for one sin, and isn't each of our sins a similar rebellion against God? Therefore, kneeling down, we try to picture Hell as vividly as possible; its undying fires, the torments of the damned, their shrieks of pain and cries of despair, the smell of burning sulphur and flesh and the feel of flames. From that we ask how we can escape such torments, and the only answer is through Christ's sacrifice on the cross.

WEEK 3: We contemplate Christ's life in every detail, accompanying him through every step of his life and execution: the scourging, the nails, every moment on the cross. We even lie with him in the tomb.

WEEK 4: We picture ourselves rising from the grave with Christ and into Heaven, then focusing on that blessed vision.

Some people, when taught Loyola's Spiritual Exercises, overdid it and suffered some fits and trances, which got Loyola hauled up before the Inquisition two different times. After some examination and questioning, the Inquisition decided there was nothing theologically wrong with Loyola's exercises, but cautioned him to go a bit easier on them.

The Superior General was the leader of the Jesuits and second in authority only to the pope. He was popularly called the Black Pope in reference to the black robe, which was the distinctive garb of the order.

The admonitor was one of the Jesuits' more interesting positions, especially when considered in light of the Order's strict hierarchy. As second in command, it was the admonitor's job to serve as the Superior General's conscience, warning and criticizing him when he seemed to be getting off track. The word and custom came from the ancient Romans who would put an admonitor in the chariot with a general celebrating a triumphal parade to constantly whisper in his ear the words: "Remember, you're only human."

St. Loyola and St. Francis Xavier, Loyola's most renowned missionary in Asia (below) were both canonized as saints in 1622, and their body parts were highly prized as relics. In addition, water blessed by Xavier was said to cure various illnesses and poor eyesight, while water blessed by Loyola could stop caterpillar infestations. In addition, a portrait of Xavier could supposedly protect cows from Satan.

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87. THE AGE OF RELIGIOUS WARS (c.1560-c.1600)

"Kill them all; God will know his own."

--Catholic general ordering a massacre of a town containing both Cathar heretics and Catholics

By the mid 1500's, three main factors were converging to push Western Europe into a century of brutal religious wars. Two of these were the Protestant and Catholic Reformations that were firmly opposed to each other. Added to this was a prevailing medieval mentality linking religion with political issues, making it impossible for either side to tolerate the other side's presence or rule. The first round started in Germany.

Germany (1521-55). The emperor Charles V's dramatic confrontation with Luther at Worms in 1521 had resulted in outlawing the Lutheran heresy. However, this was easier said than done for several reasons. First, Charles had little control over the Holy Roman Empire (Germany), a patchwork of over 300 principalities, Church states, and free cities, all jealously guarding their liberties against any attempts by the emperor to increase his authority over them. Charles could not even get effective support from the Catholic states to help suppress the Lutherans, since his success might give him more power over Catholic princes as well.

Second, the size of Charles' empire made him many enemies, in particular France and the Ottoman Turks, who posed a constant threat from west and east. As a result, Charles felt forced to let the Protestants alone and turn to more pressing matters on his borders. Finally, Charles was plagued with money problems. Several times in his career he found himself short of funds while on the verge of a major victory. In an age of mercenary armies prone to run out on their employers as soon as funds for paying them ran out, this was fatal and forced him to let his enemies, especially France, off the hook. All these factors kept Charles from effectively dealing with the Lutherans for over twenty years.

Therefore, it was 1546 before Charles could attack a defensive alliance of Lutheran princes known as the Schmalkaldic League. Charles won a decisive military victory. But the complex forces discussed above kept him from imposing either firm imperial control or his Catholic faith on Germany. Both

Lutheranism and the privileges of the German princes were too deeply entrenched for that. Consequently, Charles agreed to the Peace of Augsburg in 1555, a compromise giving each German prince the right to choose his realm's religion, as long as it was either Catholic or Lutheran. Calvinists, Anabaptists, and other non-Lutheran Protestants were outlawed.

The Old Schmalkaldic Double-Cross

In the Schmalkaldic War between the Protestant princes and Charles V, Maurice, a minor duke and cousin of the Protestant leader, John Frederick of Saxony, betrayed the Protestant cause by invading Saxony just as the Protestants were about to meet Charles V in battle. This diversion drew John Frederick back to Saxony, thus dividing the Protestant forces and allowing Charles to win an easy and decisive military victory.

Charles rewarded Maurice with John Frederick's lands and titles for betraying his cousin. But Maurice then betrayed Charles V by joining Henry II of France against him. It was this French action that forced Charles to grant the compromise peace of Augsburg in 1555.

Instead of settling Germany's religious problems, the Peace of Augsburg actually made them worse in three ways. For one thing, Calvinism kept spreading across Germany, even among German princes, thus raising religious tensions even more. Also, Charles V, worn out by over 30 years of trying to maintain his empire and religious unity, gave up his throne. The family lands in Austria and the Imperial title went to his brother Ferdinand, while Charles' son, the staunchly Catholic Philip II, inherited Spain, the Netherlands, most of Italy, and Spain's American colonies. Philip's passionate hatred of the Protestants would also aggravate the growing religious conflict brewing. Finally, the Peace of Augsburg led to thousands of refugees, especially Calvinists and Anabaptists, fleeing Germany and spreading their religious beliefs to the Spanish Netherlands (modern Belgium and Holland), France, and eventually England.

As a result, religious conflict spread to these three countries after 1560. In the Spanish Netherlands the influx of Protestants created growing religious unrest that led to a pattern of Spanish repression,

riots and protests in response, more repression, and so on. Despite its disunity, the ensuing revolt would hang on due to its control of seaports in the North, good leadership, and anger against Spanish atrocities. In France, rising tensions between Calvinists and Catholics triggered its own vicious cycle of weakening the government, which allowed more anarchy, further weakening the government, etc. Coming from this was a series of bitter civil wars aggravated by the weak government, feudal separatism, nobles' rivalries, and foreign intervention, especially by Spain. Finally, tensions between Protestant England and Catholic Spain led the English to raid Spanish shipping and support the revolt in the Spanish Netherlands while Philip II conspired to dethrone Elizabeth I.

The critical turning event in all three of these conflicts was the defeat of Philip II's Spanish Armada (1588) that was aimed against the Dutch and French Calvinists as well as England. While this did not destroy Spain as a power, it did save Protestantism in Western Europe, thus setting the stage for the Thirty Years War. It also helped the Dutch win their freedom (1648) and become the premier naval and trading power in the 1600's. Finally, it allowed the Calvinist leader, Henry of Navarre, to take the throne of France after placating his Catholic subjects by converting to Catholicism while ensuring religious freedom to the French Calvinists. This ended the French Wars of Religion so Henry IV could lay the foundations for the absolute monarchy of Louis XIV.

Revolt of the Spanish Netherlands (1566-1648).



The Spanish Netherlands was a collection of seventeen semi-independent provinces lumped together under Spanish rule. With the possible

exception of Italy, they were the wealthiest trading and manufacturing area in Europe in the 1500's. Their main port, Antwerp, handled a full 50% of Europe's trade with the outside world. Charles V had been born there and was somewhat popular with the inhabitants. That was not the case with Philip II. It was said that Charles neglected the Spanish Netherlands, but his son, Philip, abused them. This was largely true, although Charles also heavily taxed the Netherlands for his wars and tried to impose his religious policies on them. The major difference was that Philip did it with a heavier hand and with little or no concern for the feelings of his subjects there.

Philip was Spanish born and never left his homeland after his coronation in 1556. His view of the world was very Spanish and very Catholic. He taxed the Netherlands to pay for Spanish wars and he claimed he would rather die a hundred deaths than rule over heretics. As it was, Anabaptist and Calvinist "heretics" were making their way into the Netherlands, especially after the Peace of Augsburg outlawed them in Germany. Philip, determined to get them out, brought in the Inquisition and increased the number of bishops the Netherlands had to support from four to sixteen. This repression started a cycle that led to protests and riots, more Spanish repression and so on until rebellion broke out. This rebellion would drag on until 1648, become part of the wider European struggle known as the Thirty Years War, and itself become known as the Eighty Years War.

In 1566, the Duke of Alva with an army of 10,000 Spanish troops established the so-called "Council of Blood" which burned Calvinist churches, executed their leaders, and raised taxes to levels ruinous for trade, and nearly extinguished the revolt. However, despite the disunity of the revolt itself, it managed to survive for several reasons. First, Calvinist raiders, known as "Sea Beggars", managed to gain control of some ports in the North. When word of these Calvinist havens spread, more Calvinists flocked in. As a result of this migration, Holland in the north became and remains primarily Protestant today. The second reason was the rebels' leader, William, Prince of Orange, called "the Silent" for his ability to mask his intentions. Although a mediocre general, William was a brave and patriotic leader whose selfless determination gave the revolt what little cohesion it had. His accomplishment,

much like that of George Washington in the American Revolution, would be as much to keep the rebels together as keeping the enemy at bay.

Finally, Spanish attempts to crush the revolt of the Sea Beggars often alienated more people and made them go over to the rebels' side. This was especially the case in 1576 when Spanish troops in the loyal provinces to the south rioted and went on a rampage of looting and slaughter in Antwerp after going unpaid for 22 months. (However, they were pious enough to fall to their knees and pray to the Virgin Mary to bless this atrocity.)

Fighting in the war itself was desperate and destructive. The siege of Maastricht in 1579 involved vicious battles in the miles of underground mines and countermines dug around the city. When Spanish troops finally poured in through a breach in the wall, a slaughter ensued which killed all but 400 people out of a population of 30,000. At times the rebels had to stop Spanish invasions by opening up their dikes and literally flooding the enemy (and their own crops) out. At the siege of Leyden, this was done also to provide water on which the Dutch rebels could float relief ships full of grain right up to the walls of the city. The city held out, but only half of its inhabitants survived the rigors of the siege, having subsisted on boiled leaves and roots, wheat chaff, dog meat, and dried fish skins. Interestingly enough, it was not until 1581 that the Dutch rebels formally deposed Philip II as their king and declared the Dutch Republic in the Oath of Abjuration, a document that would strongly influence the American Declaration of Independence and later democratic movements.

Philip's efforts to establish Catholic rule in England and France got the Netherlands involved in the wider scope of European religious wars. Troops from England helped the rebels, as did the defeat of the Spanish Armada in 1588, which was aimed against the Dutch and French Calvinists as well as England. After Dutch advances in the 1590's and early 1600's, the two sides signed a twelve years truce in 1609. However, the Dutch continued to blockade the Scheldt River and cut off Antwerp's trade. Gradually, this trade shifted to the Dutch city of Amsterdam, thus making it the new commercial capital of Europe. Hostilities resumed in 1621 as part of the wider conflict known as the Thirty Years War. Gradually, growing Dutch economic power

and Spanish exhaustion from constant warfare turned the tables in favor of the Dutch. In 1628, the Dutch captured the entire Spanish treasure fleet. In 1639, they crushed another Spanish Armada at the Battle of the Downs and ended Spanish naval power once and for all.

After eighty years of struggle, Spain finally recognized Dutch independence in 1648 in the Treaty of Munster. At this point, the Dutch were at the height of their commercial and naval power, although England would challenge them for that position in the later 1600's. The southern provinces would remain under Spanish, then Austrian, and finally Dutch rule until they won their freedom in 1831 and established the modern nation of Catholic Belgium in the south.

The French Wars of Religion (1562-98).



France was another country that saw the devastating effects of religious wars in the last half of the 1500's. In this case, the antagonists were the Catholic majority of France and a strong minority of French Calvinists known as *Huguenots*. Although only comprising about 10% of France's population, the Huguenots had several factors that helped them maintain their struggle for over thirty years. Their number included many nobles who provided excellent leadership. They were concentrated largely in fortified cities in the south. Finally, they were enthusiastic and well organized into local congregations.

For thirty years Catholic and Huguenot armies marched across France destroying its fields and homes. All this bred a cycle of chaos and destruction where growing anarchy would steadily weaken the French government's power, thus allowing even more anarchy and so on. There were actually seven French religious wars with intermittent periods of peace, which made these wars & this period of French history confused, chaotic, and bloody.

Once the wars started, they tended to drag on and were aggravated by several factors that made them especially destructive. First of all, besides the religious struggles, fighting between noble factions and revolts by old feudal provinces exposed and added to the weaknesses of the French state. Second, foreign intervention, especially by Spain, but also by other states such as England, compounded the turmoil and destruction. Finally, France was ruled by weak monarchs who let these forces tear the country apart.

The fighting was confused and often involved the massacres of women and children. From 1562-1571 there were eighteen massacres of Protestants, five massacres of Catholics, and over thirty assassinations. The most famous such event was the Saint Bartholomew's Day Massacre (8/24/1572), when the Paris Catholics suddenly burst upon local and visiting Calvinists and killed some 3000 of them. A letter from a Spanish ambassador shows the degree of fanaticism and viciousness that infected peoples' minds and values then: "As I write they are killing them all, they are stripping them naked...sparing not even the children. Blessed be God."

Philip II added to the disorder by actively supporting the Catholics. The turning point came with the defeat of the Spanish Armada in 1588, which led to a series of assassinations. First, the king, Henry III, assassinated the Catholic leader, Henry of Guise. Then, a fanatical monk assassinated the king for what he saw as his betrayal of the Catholic cause. The man in line to succeed Henry was still another Henry, duke of Navarre, who also happened to be the Huguenot leader. The prospect of a Calvinist king did not set too well with the predominantly Catholic population of France and led to even more fighting. Despite brilliant victories against heavy odds, Henry still faced the desperate resistance of the Parisians, whose priests told them it was better for them to eat their own children than let them live under a Calvinist king. When confronted also with Spanish intervention to put a Catholic back on the throne, Henry somewhat cynically converted to Catholicism to give his Catholic opponents no more reason to attack him.

Despite Henry's obvious political motives and the fact that he guaranteed Huguenot religious freedom by the Edict of Nantes (1598), Frenchmen were

ready to accept him as king, since they were tired of constant warfare and wished only for peace. In order to ensure this, Frenchmen were willing to submit to the stronger rule of a king. This attitude helped set the stage for the rise of France as the dominant power in Europe in the later 1600's and the rule of one of its most glorious and absolute monarchs, Louis XIV, the Sun King.

Elizabethan England and the Spanish Armada.



Certainly one of the most fascinating and capable monarchs of the age was Elizabeth I of England (1558-1603). We have already seen how she skillfully defused religious tensions in England by grafting Catholic ritual and organization onto mild Protestant theology, thus keeping most people reasonably content. Good Queen Bess, as she was known, was quite popular with her people, since she kept taxes low and knew how to get what she wanted from Parliament without being too demanding about it. She also kept the people's good will by acting as one of their own, patiently sitting through any pageants or speeches given in her honor. Elizabeth and her subjects understood and loved each other quite well. Her tolerant reign was a virtual golden age for England, nurturing among other things, the genius of William Shakespeare, possibly the greatest literary figure in its history.

Being a woman, Elizabeth had to be crafty to keep her throne, avoiding at all costs a marriage that would put a husband in her place as the real power in England. As a result, she never married, although she cleverly held out the prospect of marriage to neutralize potential enemies and keep them on their best behavior.

The great test of Elizabeth's reign was the war against Spain culminating in the Spanish Armada in 1588. The causes of the war revolved mainly around religious differences between Spain and

England that caused various acts of aggression by each side against the other. Philip II still hoped fervently to re-establish Catholicism in England. Throughout the 1570's he plotted toward this end, trying to put Mary Queen of Scots, a Catholic, in Elizabeth's place. Elizabeth countered these intrigues by finally executing Mary after a long imprisonment. She also sent troops to help the Dutch rebels, while encouraging freebooting English captains, such as Sir Francis Drake, to raid Spanish shipping. Finally, Philip decided to crush the Protestants in England, Holland, and France by sending a huge armada (navy) and army northward in 1588.

Philip's plan was to send the Armada to pick up the Spanish Army of Flanders which was then fighting the Dutch, transport it to England to crush the English, and then transport it back to crush the Dutch rebels and French Huguenots. Thus the Armada presented a serious threat, not just to England, but also to the very existence of Protestantism in Europe.

On the surface, the struggle looked like an uneven one, heavily stacked in Spain's favor. However, the English had developed radical new tactics and ship designs that would revolutionize naval warfare. They built sleeker ships powered totally by sails. Instead of boarding and grappling, they relied on cannons fired from the broadside to destroy the enemy fleet. Recent research shows that the English enjoyed a decisive edge in firepower thanks to their use of shorter four wheeled carriages that made it easier to reload and fire the cannons. This contrasted with the Spanish who still used longer gun carriages adapted for land use. These had long trailers, which made it very difficult, if not impossible, to pull them inside the cramped quarters of the ship's gun deck for reloading during the heat of battle. These innovations successfully frustrated the Armada's attempts to come to grips with the English. However, the English, in turn, were unable to stop the Spanish advance up the coast for its rendezvous with the Army of Flanders.

When the Spanish pulled into the French harbor of Calais to rest, get supplies, and try to establish contact with the Army of Flanders (which through poor communications had no idea of its approach), the English struck. Launching eight fireships into the midst of the Spanish fleet, they forced the

Spanish ships out into the open and out of formation where the English could use their superior firepower and speed to destroy the Spanish ship by ship. An ensuing storm added to the damage and forced the Spanish to give up on their rendezvous with the Army of Flanders and return home by sailing all the way around the British Isles. When the Armada finally came limping back home, a full half of it had been destroyed.

The defeat of the Spanish Armada did not destroy Spain as a great power. However, it did signal the beginning of the end of Spanish dominance of Europe. In the first half of the 1600's this process would accelerate as Spain wrecked itself by trying to maintain its power in an exhaustive and devastating series of conflicts, most notably the Thirty Years War (1618-48). As a result, a new balance of power would emerge in Europe. France would replace Spain as the main superpower, while the Dutch Republic and then England, despite their small size, would become the most dynamic naval and economic powers in Europe.

Europe's mentality would also change in the 1600's. Exhausted and disgusted by the seemingly endless religious wars and disputes, many people would take a more secular (worldly) view of things, seeing religion more as a source of trouble than comfort. By the late 1600's, these views would flower in the great scientific and cultural movement known as the Enlightenment.

Enemy at the Gates: the Turkish offensive against the West (1521-29)



In 1520 a new Turkish Sultan took the throne, Suleiman I “the Magnificent, whose armies would terrorize Europe for the next 45 years while taking the Ottoman Empire to the height of its power. Suleiman’s first major blow against the Christians was the conquest of Rhodes in 1522. For five months its defenders, the Knights of St. John (formerly the crusading order, the knights Hospitaller), desperately defended

Rhodes against a huge Turkish army. When a collapsed tower (below) finally sealed the city's fate the Turks agreed to let the Knights evacuate the city in peace instead of suffering through the bloodbath of a final assault.



Suleiman also advanced overland across southeastern Europe, taking Belgrade in 1521, which opened the way into Hungary. In 1526 he met the Hungarian army at Mohacs. The heavy cavalry of the Hungarians plowed through the first two lines of the Ottoman army and were even threatening the Sultan, when they were surprised by an artillery barrage that sent them reeling back in retreat. After that, the Hungarian army fell apart, with its young king, Louis II, and most of its nobles dying on the field of Mohacs. Hungarians still visit the memorial to the fallen at Mohacs, which they view as a major national tragedy, as seen in the phrase: “more was lost at Mohács” (Több is veszett Mohácsnál) when they experience bad luck, to indicate things could be worse.

The surviving nobles elected Charles V's brother, Ferdinand, as king of Bohemia and the remnants of Hungary. While this brought Bohemia and Hungary into the Hapsburg fold, it also triggered a Turkish invasion of Austria to support a rival Transylvanian claimant to the Hungarian throne. This war climaxed at the siege of Vienna in 1529.

Unfortunately for the Turks, a cold and rainy spring made the roads impassable, killing thousands of camels and other pack animals and leaving much of the Turkish army too ill to fight. The poor roads also forced Suleiman to leave

behind his large siege guns. His remaining lighter artillery was unable to seriously damage Vienna's walls, while Austrian guns, mounted on reinforced rooftops, were able to rake the Turkish camps and decimate attacking formations. Meanwhile, the Turks had to resort to the slower strategy of undermining the city walls, which in turn gave camp diseases such as dysentery more time to ravage the Turkish ranks.

Adding to the Turks' misery was a raid from the city that destroyed two of their artillery positions. On October 5th Turkish troops poured through a breach in Vienna's walls caused by undermining, only to be repulsed by German *landscknechte* and Spanish arquebusiers defending a new improvised palisade. A wall of pikes, musket fire, grapeshot, and a network of palisades repulsed one final Turkish assault against Vienna's damaged Carinthian Gate on October 14. Casualties piled up until the Janissaries refused to go on, retreated, and struck camp. The early onset of winter turned their retreat into a disastrous rout.

In the aftermath of the retreat, the people of Vienna came out to plunder what they could from the Turkish camp. Some of them found some strange dark beans, that when boiled in water, produced a somewhat bitter tasting drink that kept one alert and stimulated.

Coffee had entered the European diet.

No Heaven for Cowards: The other religious war: Christianity vs. Islam

“Just as there is only one God in heaven, there can be only one empire on earth”—Ibrahim Pasha, chief vizier for Suleiman the Magnificent

In addition to their attempts to crush heresy in Christian Europe, Catholics were locked in an even more titanic struggle with the Ottoman Turks for command of the Mediterranean. Throughout the 1500s the Turks terrorized Christians across Europe, while their allies/vassals, the Barbary pirates along the coast of North Africa did the same for the Mediterranean.

Stoking the flames were millennial expectations in Europe and Islam (being 1500 years since the life of Christ and 1000 years since the birth of Mohammed). Thus the struggle between Ottomans and Hapsburgs had global, even cosmic implications.



The “King of Evil”. One of the most notorious of the Barbary pirates was Oruch Barbarossa (“Red beard”), a man whose reputation for cruelty spread across Europe.

• He would dump mutilated Christians on shore with the message: *‘Go and tell your*

Christian Kings: “This is the crusade you have proclaimed.”

• Christian Peasants would cross themselves at the sound of his name.

• Legend said that God had made him invulnerable to sword thrusts and a pact with the Devil made his ships invisible.

• Once, he supposedly tore out a prisoner’s throat with his teeth and ate the tongue.

• Oruch actively spread these rumors to inspire fear.

In 1518 Charles V sent an expedition of 10,000 men to N. Africa, which hunted down and killed Oruch. His brother, Hayrettin picked up the banner and became even more notorious and feared throughout the Christian world. By the late 1520s Hayrettin, also called Barbarossa, had become the Ottomans’ main vassal/ally in the Western Mediterranean having drawn 40 corsair captains to his service, taking 12% of their plunder.

Hayrettin portrayed himself as a manifestation of the will of God and the authority of Suleiman, having prescient dreams that allowed him to escape traps, take cities, and avoid storms. He described himself among Christians *“like the sun*

among the stars, at whose appearance their light vanished.”

At Hayrettin’s approach Christian ships would surrender without a struggle, the sailors jumping in the sea rather than dying the slow death of galley slaves.

His knowledge of the sea was unmatched, getting his information on enemy positions from captives and bitter Moriscos (Spanish Muslims who had been forced to convert to Christianity).

• Once or twice a year, he would sweep the Western Mediterranean, capturing ships, burning villages and kidnapping whole populations.

• In 10 years he captured 10,000 prisoners on a 200-mile stretch of Spain’s coast.

• Among the more embarrassing episodes for Europeans was when he captured a papal galley on the high seas.

• His reputation as invincible, cruel and quick-tempered was enhanced by his own propaganda to burn fear in the hearts of Christian Europe.

• He was known simply as Barbarossa as printing presses fed Europeans’ horror with stories and legends of his atrocities.

• A common song on the Spanish coast went: “Barbarossa, Barbarossa, you are the king of evil.”

In 1529, Hayrettin took Fort Penon, a Spanish fortress that loomed over Algiers in North Africa and its shipping. Unfortunately, Fort Penon and North Africa were Spain’s forgotten frontier. The troops had very low pay, supplies, and morale. If given a chance, they would desert and try to sign on for more lucrative service in the Americas. Ironically, the Western Mediterranean had the same sort of allure of plunder and adventure for Muslims as the Americas did for Europeans in the 1500s. Hayrettin’s conquest of this fort freed Algiers as a major center for piracy, much to the distress of Christians in the Western Mediterranean.

The war between Christianity and Islam was fought on an unprecedented scale as Hapsburgs

and Ottomans could marshal previously unheard of resources. For the Hapsburgs, these came from a brand new source, the Potosi silver mines of Peru. While the Ottomans could draw on a huge and rich tax base, Portuguese Ships in Persian Gulf seriously reduced their revenues from the spice trade, largely equaling out the struggle.

The two powers also played sort of diplomatic “leapfrog” game, the Hapsburgs courting Safavid Persia to the Turks’ East, while the Ottomans allied with France.

“No heaven for cowards”: The siege of Malta



The island of Malta, strategically placed midway between Sicily and North Africa, saw some of the fiercest fighting ever between Muslims and Christians when the Turks besieged it in 1565.

The defending Knights of St. John (who had been given the island after being driven from Rhodes in 1522) defended Malta with every trick in the book, including flaming hoops to catch the Turks’ robes on fire.

One of Malta’s forts, St. Elmo, was expected to fall in a week, but held out for a month, inflicting heavy casualties on the Turks until they finally killed the last defenders. Two of them were so badly wounded before the assault that they fought to the death while propped up in chairs.

After St. Elmo fell, the Turks still had to take the main forts of Senglea and Birgu. At one point, when the Turks rolled a siege tower up to the walls, the defenders bore a hole through the wall opposite the siege tower’s wheels, stuck a cannon barrel with a double charge of powder through the hole and blew off the tower’s wheel, sending it crashing down. In another assault, the Knights of St. John ran out of ammunition and drove the Turks from the walls by throwing rocks.



During an attack on the other fort, Senglea, the Turkish bombardment was supposedly so intense it could be heard in Sicily 100 miles to the north. Once the Turks made a surprise attack by boat, using Janissaries who couldn’t swim so they wouldn’t run away. Unfortunately for them, the Knights of St. John were ready with artillery fire that sank the boats and the Janissaries with them.

A Christian relief army finally arrived to drive off the Turks, already weakened by heavy casualties and disease. Only 2,000 of 9,000 defenders, survived the siege, and of those only 600 were fit for service.

But the struggle went on.

Sea of Fire at Lepanto (1571)



In 1571, a coalition consisting of Spain, Venice, Genoa, the Knights of St. John, and the pope formed to meet the Turkish naval threat. The decisive struggle took place October 7, 1571 at Lepanto off the coast of Greece.

The two fleets stretched 4 miles, totaling 140,000 men & 600 ships, comprising over 70% of all the galleys in the Mediterranean. As they approached each other, it became apparent how much they had underestimated one another. Don Juan, the Christian commander, mixed different squadrons together to prevent defection by any one fleet. He put the lightest squadrons

on left closest to the coast to keep them from running aground.

On the day of the battle in Istanbul, the sultan Selim's turban fell twice and then his horse stumbled, both being seen as bad omens. A man who rushed forward to help the sultan was hanged for touching the sultan.

In Rome, the pope was at a meeting when he suddenly ran to the window and then called off the meeting to give thanks for great victory.



Galleys of the time typically had only 3 or 5 guns concentrated in their bows. Such ships were so narrow they could not take the recoil of a full broadside of cannons without capsizing.

Therefore, they relied on firing their guns, ramming the enemy ship, and then boarding it to take it over in hand-to-hand combat.

The Turks had more ships but they were smaller and more maneuverable, while Christian ships were fewer, but bigger, having on average twice the cannons as Turkish ships. They also sawed off their mostly ornamental rams to fire lower at close range. Muskets could get off only one shot in the time it took for the fleets to close the last 100 yards.

The Venetians had refitted 6 huge fortified merchant galleys, known as galleasses, with 30 guns, many mounted on the front so the shock of their recoil could be absorbed along the entire length of the beam. The initial shock of the firepower unleashed by these ships at the start of the battle would give the Christian fleet an early advantage.



The Turks had few muskets and no protective wooden parapets, but they had many archers with a higher rate of fire. They would dip their arrows in poison and grease their decks against the more heavily shod Christians.

They were puzzled by the big round galleasses in front, thinking they only had 3 guns each, when the galleasses' artillery opened fire with devastating effect, sinking three galleys and throwing the Turkish fleet into confusion. Following that, a volley of Venetian muskets mowed down the Turks without any protecting parapets. Then the galleasses turned 90° and fired another volley, wrecking more Turkish ships.

Getting past the galleasses, the Turks, who could barely see with the wind and smoke in their faces, opened fire, but fired high. The rest of the Christian fleet (without rams) fired close and low, hitting the Turks, so that even before the fleets collided, one-third of the Turks' ships had been crippled or sunk, already filling the sea with men and debris.

"...and already the sea was wholly covered with men, yardarms, oars, casks, barrels, and various kinds of armaments—an incredible thing that only six galleasses should have caused such destruction."

On the Christian left close to shore, the Turks, familiar with these waters, navigated the shoals around the Christian flank. Therefore, the Venetian commander, Barbarigo, interposed his flagship to block them, triggering a furious fight as Turks' boarding parties tried to storm his vessel. When Barbarigo raised his visor so he could be heard, he was shot with an arrow in the eye and died. Barbarigo's nephew brought his ship up to help and he was killed. But the Venetians, burning for revenge over the previous massacre of their garrison at Famagusta on Cyprus, threw themselves furiously into the fight, feeding soldiers onto the front ships while reserve ships brought up more men.



Slowly the tide turned against the Turks. Christian slaves on one ship rose up in revolt, whirling their chains to smash the Turks. Meanwhile, one of the Venetian galleasses crept toward shore and opened fire.

As the Turkish ships drifted toward shore where they were pinned and trapped, their crews panicked and fled for the beach, causing their ships to crash into one another and men to jump overboard. Some drowned while others used their trampled bodies as a bridge to land. The Venetians, with shouts of “Famagusta!” pursued them ashore and massacred them.

In the center, the Turkish line, somewhat torn and ragged from gunfire, still surged forward. The Turks’ flagship, *Sultana*, made for the *Real* (Don Juan’s flagship). They crashed bow to bow, the *Sultana* overriding the *Real* and crushing its oarsmen, thus leaving the two ships locked in combat.

The Papal flagship under Colonna was hit, spun around and hit the *Sultana* while another galley hit its stern. Similar collisions all along the line turned the sea into a tangled mass of thrashing men and ships.

Everywhere confusion and noise: *“a mortal storm of arquebus shots and arrows, and it seemed that the sea was aflame from the flashes and continuous fires lit by fire trumpets, fire pots and other weapons. Three galleys would be pitted against four, four against six, and six against one, enemy or Christian alike, everyone fighting in the cruelest manner to take each other’s lives. And already many Turks and Christians had boarded their opponents’ galleys fighting at close quarters with short weapons, few being left alive. And death came endlessly from the two-handed swords, scimitars, iron maces, daggers, axes, swords, arrows, arquebuses, and fire weapons. And beside those killed in various ways, others escaping from the weapons would drown by throwing themselves*

into the sea, thick and red with blood.”-- Onorato Caetani

Christians stormed the *Real* and forced their way to the mast, only to be forced back by Turkish reinforcements as each side kept feeding men from ships behind them.

Both sides slipped on the greasy and bloody deck.

Even arrows fired at point blank range pierced armor.

Muslim arrows were flying so thick that the Christian ships bristled like porcupines.

The Spanish pike men, trained in close-order drill, were devastating at close range.

Then Christian slaves joined the fight against the Turks.

The fight between the *Real* and the *Sultana* raged for an hour, but Turkish firepower slowly weakened. Christian reserve ships slowly turned the tide as the galleasses came blasting back into the fray. The Turks manning a makeshift barricade repulsed the second wave of Christians storming aboard.

As Christian ships closed in for a third assault on the *Sultana*, the Turks mounted a last ditch stand as their defenses were blasted away, the Turkish admiral, Ali Pasha, fighting to the death. Finally, as the Christians hoisted their league banner on the *Sultana*’s mast, resistance collapsed in the Ottoman center.

Meanwhile on the seaward side, the Turks kept trying to outflank the outnumbered Christians, opening a gap between the Christian center and right where the Turks poured in against the right flank of the Christian center. The Christians there, already exhausted, were also outnumbered 3, 4, or 5 to 1.

The Knights of St John went down fighting against overwhelming odds.

By now, whole ships were drifting lifeless as all their soldiers, sailors, and rowers were dead.

One soldier, wounded in the eye, pulled out the arrow with his eyeball, wrapped a bandage around his head, and fought on.

Men rolling on decks in deadly combat rolled off ships and drowned together.

One Christian crew intentionally blew up their ship, taking surrounding galleys with it.

When an aide couldn't bring himself to cut off his commanding officer's mutilated hand, the officer did it himself, went to the kitchen, tied a chicken carcass onto his stump and returned to battle telling his right hand to avenge his left.

Despite such resistance, the Turks were tearing a hole in the Christian right and might have prevailed. But as the Turkish center collapsed, the Christians could turn to meet this the threat from one side while their ships from the right flank attacked from the other. Many of the remaining Muslims fought to the last, even throwing lemons and oranges, which the Christians threw back.

“The greater fury of the battle lasted for four hours and was so bloody and horrendous that the sea and the fire seemed as one, many Turkish galleys burning down to the water, and the surface of the sea, red with blood was covered with Moorish coats, turbans, quivers, arrows, bows, shields, oars, boxes, cases, and other spoils of war, and above all many human bodies, Christian as well as Turkish, some dead, some wounded, some torn apart, and some not yet resigned to their fate struggling in their death agony, their strength ebbing away with the blood flowing from their wounds in such quantity that the sea was entirely covered by it, but despite all this misery our men were not moved to pity for the enemy...although they begged for mercy they received instead arquebus shots and pike thrusts.”

—Girolamo Diedo

The survivors were appalled by the scale of death and destruction: 100 ships destroyed, 137 more captured, 40,000 Turks dead, 25,000 of them in four hours, a rate of slaughter not equaled until World War I.

“What has happened was so strange and took on so many different aspects, it's as if men were extracted from their own bodies and transported to another world.”—Girolamo Diedo

As night fell, the fleet made for a safe harbor as a storm closed in and scattered the debris of battle as if trying to erase any evidence that such a catastrophe had happened.

A year later, the Ottoman sultan had rebuilt his fleet to its previous strength. As one Ottoman official told a Westerner, Lepanto had only singed the Sultan's beard, and beards grow back. The struggle for the Mediterranean went on.

“Long Live the Beggars”: the Revolt of the Spanish Netherlands (1566-1648)



Pieter Bruegel's *Massacre of the Innocents* (1566-7) operated on two levels. On one level it showed a biblical scene, King Herod's massacre of male Jewish babies in an attempt to kill the Christ child. However, being set in the Netherlands in wintertime, it is clearly a protest against Spain's harsh rule. However, Bruegel could claim it was just a biblical scene. Besides, most paintings of historical events showed contemporary settings and styles.

The Spanish Netherlands was a collection of seventeen semi-independent provinces lumped together under Spanish rule. With the possible exception of Italy, they were the wealthiest trading and manufacturing area in Europe in the 1500's. Their main port, Antwerp, handled a full 50% of Europe's trade with the outside world. Charles V had been born there and was

somewhat popular with the inhabitants. That was not the case with Philip II. It was said that Charles neglected the Spanish Netherlands, but his son, Philip, abused them. This was largely true, although Charles also heavily taxed the Netherlands for his wars and tried to impose his religious policies on them. The major difference was that Philip did it with a heavier hand and with little or no concern for the feelings of his subjects there.

In addition to seventeen provinces, the Spanish Netherlands also had 700 different legal systems and jurisdictions dividing it. It didn't even come to the Hapsburgs all at once. Ten of the provinces came with Mary of Burgundy's marriage to the emperor Maximilian I in the late 1400s. Charles V inherited the other seven provinces in 1543.

The Spanish Netherlands provided Charles V seven times as much revenue as the American colonies (keeping in mind their silver production would peak under Charles' son, Philip). Charles taxed them accordingly. Between 1463 and the 1520s, one village's taxes rose from 9 florins to 116. Still, even with the 300,000 florins Charles collected in taxes each year, he needed over three times that amount to meet his expenses.

This was possibly the most urbanized area of Europe, one historian estimating that 40% of its people lived in towns and cities, with just as many being literate. This was the result of having the most advanced agriculture in Europe. Thanks to sophisticated crop rotation, the Dutch were able to raise livestock and put substantial amounts of meat on their tables. One farmer even had a life-size portrait done of his prize-winning cow.

In 1549, the crown prince, Philip, visited the Spanish Netherlands, noting how big the people were, including the women (and cows), how much beer they drank, and how much they gambled. He also remarked how the women had black teeth and no interest in sex. Being very aristocratic and religious, he was put off by this society of merchants.

"The Sad King"



Philip II was Spanish born and never left his homeland after his coronation in 1556. His worldview being very Spanish and Catholic, he taxed the Netherlands to pay for Spanish wars, claiming he would rather die a hundred deaths than rule over heretics. Unfortunately, untold thousands would die their own individual deaths instead.

One historian has described Philip as a file clerk on a heroic scale. Tucked away like a hermit in his palace, the Escorial, which itself was isolated in the countryside away from Madrid, he tried to rule his worldwide empire from a desk, spending 8 or 9 hours a day writing letters to his officials. He even took a portable desk with him on family outings to get work done. Later he had to employ ministers to help him as the workload kept growing.

Philip II is also known as the Sad King, because he outlived four wives and 6 of his 9 children, probably in part due to inbreeding. He was also an extremely religious man, who dressed in black and knelt before any religious processions. He had such faith in God and the righteousness of his cause that he even sent a seaborne expedition against North Africa in the winter...with disastrous results.

Along those lines, Philip had a world-class collection of 7,422 religious relics, including 12 complete bodies of saints, 144 heads, and 306 limbs. Because there wasn't enough room to display all of the relics at once, he employed an official whose job was to constantly rotate the relics so they could all be on display at least part of the time. Philip was so obsessed with his relic collection that, when he was slipping in and out of consciousness on his deathbed, the one way to rouse him was to say something about disturbing the relics.

From protest to revolt.



The two main features of Philip's rule, religious intolerance and heavy taxes for his wars, combined in the Spanish Netherlands to create the perfect conditions for revolt. Complicating this further was the influx of Anabaptist and Calvinist refugees fleeing persecution in Germany after the Peace of Augsburg in 1555.

All rivers flow down is the main point to remember about why religious refugees flooded into the Spanish Netherlands from Germany. People fleeing with all the worldly possessions they can carry are able to take much more on boats than on their backs. It's also much easier to go with the flow of the river than against it. Since Germany's rivers flow in northerly directions, many of them flowing *down* through the Spanish Netherlands (AKA the Low Countries), that's where many of those refugees ended up.

Hedge" preaching and junior iconoclasm. Since Calvinists and Anabaptists were denied their own churches, they commonly would hold open-air prayer meetings with armed guards in the countryside in what was known as hedge preaching. In August 1566 Calvinists started seizing Catholic churches and smashing icons of saints, which they saw as idolatrous. Protestant children would take ceramic statues of saints and threaten to cut off their heads if they didn't bow. When most of them failed to bow, they then beheaded them. The game didn't usually last too long.

Philip, determined to root out heresy, brought in the Inquisition and increased the number of bishops the Netherlands had to support from four to sixteen. He also brought in the Duke of Alba with an army of 10,000 Spanish troops. Among the Duke's more notorious acts, was establishing a special court known as the "Council of Blood", which carried out 12,000 trials, leading to 9,000 convictions, and 1000 executions and exiles. Supposedly, eighteen nobles were beheaded in a single day.

"Long live the Beggars." Alba was hated as much for his infamous tax, the Tenth Penny, which was ruining trade. When a delegation of Dutch leaders came to Spain petitioning Philip to lower taxes, he replied that he wouldn't deal with a bunch of beggars. The Dutch turned this around and made being beggars a sign of honor, making "Long live the Beggars" their battle cry. Dutch nobles had specially made silver and wooden beggars' bowls to advertise their opposition to Philip II's policies. Another popular motto would be *"Better the Turk than the pope"*.

Margaret of Parma, Philip II's sister and governor of the Spanish Netherlands, tried to keep the growing turmoil under control. But her efforts proved to no avail and she finally resigned in frustration over the Duke of Alba's severe repression.

Alba's harsh rule triggered a cycle that led to protests and riots, more Spanish repression, and so on until rebellion broke out. This rebellion would drag on until 1648, become part of the wider European struggle known as the Thirty Years War, and itself become known as the Eighty Years War.

The Spanish army was the best fighting force of its day, helping Alba nearly extinguish the revolt early on by driving the rebels north through a series of bitterly fought sieges. News of one defeat reached the Dutch in Emden in the form of the hats of his drowned soldiers floating downstream. By the mid 1570s, the southern provinces were largely cleared. However, Spain faced two serious logistical challenges, both based on geography.

The Spanish Road. Getting an army from Spain to the Spanish Netherlands was a long hard process. Since sailing directly there was so risky, Spanish troops had to sail to Italy, cross the Alps, and march the whole length of Germany through various territories, some friendly and some hostile, depending on the situation at that time. This route, known as the Spanish Road, would present major logistical challenges throughout the eighty-year period of the Dutch revolt.

The great bog of Europe. Once the Spanish army got to the Netherlands, they found an environment totally alien from what they were used to in Southern Europe, especially in the northern provinces of Holland and Zeeland where the revolt would be centered. Being crisscrossed by a network of rivers and canals made it very difficult for armies, in particular cavalry, to maneuver and fight pitched battles. One English traveler called the Netherlands: “...the great bog of Europe. There is not such another marsh in the world, that's flat. They are an universal quagmire... Indeed it is the buttock of the world: full of veins & blood, but no bones in it.”

Such an environment led to fortresses very different from the ones encountered in Italy. Instead of stone, which was scarce in the Netherlands, the Dutch made skillful use of combining bastions and ravelins of packed earth (which absorbed cannon balls) with surrounding water. Packed earth was a lot cheaper than stone, while water often made it impossible to undermine the walls. One drawback with water was that it froze in the cold Dutch winters, providing easy passage to the walls.

Marching into the sea. There were good reasons for the aura of Spanish invincibility in the 1500s. One example was the siege of the island of Goes in 1572. When a Spanish relief army of 3,000 men arrived to break the Dutch siege, they were unexpectedly ordered to march across the sea to the city. The reason was that Goes had once been connected by land to the mainland, but a storm had submerged the land bridge. However,

at low tide and with an experienced guide, one could cross that submerged land bridge, which was never more than five feet deep. So, against all expectations, the Spanish waded across the treacherous mud banks on a grueling six-hour march with their guns and ammunition held over their heads. Only nine men of the 3,000 were lost in this dangerous crossing. The Dutch besiegers were so overawed by this superhuman feat that they immediately abandoned the siege.

Although plagued by the various rebellious provinces' separatist tendencies, the revolt managed to survive for several reasons: geography (again), leadership, and The Duke of Alba's brutality, which alienated much of the population. In terms of geography, Calvinist raiders, known as "Sea Beggars", captured the seaport Den Briel in the North, which led to a Calvinist influx from the South. As a result, Holland in the north would be primarily Protestant while Belgium in the south remained Catholic.

Compounding Spain's problems and protecting these gains were small Dutch flyboats able to operate in shallow inland waterways and prevent Spanish troops from landing. A Dutch naval victory at Eertvelt (1573) further helped protect the Protestant North and encouraged the further growth of the Dutch navy into the 1600s when it would be the premier naval power of the first half of the century.

William the Silent.



The second reason for the Dutch rebels surviving was their leader, William, Prince of Orange, a small principality in Southern France. He was the *stadtholder* and commander in chief of

Holland, Zeeland, and Utrecht, inheriting leadership of the revolt when his brother, Louis of Nassau, was killed during an abortive attack on the city of Groningen.

Spanish fury. Besides a reputation for invincibility, the Spanish, in particular the Duke of Alba, were known for their mercilessness. When Mechelen fell after a siege and was burned and sacked, the next town, Zutphen offered only feeble resistance but met a similarly grim fate, with the town being burned to the ground and all the men killed, many of them by being tied together in pairs and thrown into the river.

Having learned of Zutphen's fate, the citizens of Naarden negotiated the surrender of their town in return for being spared. However, once inside the walls, the Spanish systematically massacred the entire population, burning the town to flush out anyone that was hiding. As Alba put it: "they had not left a mother's son alive". The reason given for such harsh treatment was that Naarden was the first town in Holland in which heresy had taken root.

"Better a drowned land than a lost land". However, rather than breaking Dutch resistance, Spanish atrocities merely stiffened it, as seen in this message from the people of Leyden: "You hear that in our town are both dogs, cattle and horses. And if we should in the end want [for] these, there hath every one of us a left arm to eat, and reserve a right arm to beat the tyrant and the rest of you which are his bloody ministers from our walls."

This spirit of resistance would set the tone for the rest of the war.

The battle of the ice castle. When a small fleet of armed Dutch vessels became trapped in the ice near Amsterdam, the Spanish moved in for the kill. In response, the Dutch built a fortress out of ice. As the Spanish approached it, bands of Dutch musketeers burst out on strange vehicles, ice skates, some made from the shinbones of horses. Skating literally in circles around the Spanish, they would pick off a number of the enemy, quickly retreat when the Spanish

attacked in strength, regroup and then return to the attack elsewhere. Hundreds of Spanish were killed in futile attempts to come to grips with these mobile skaters. By the time the battle was over, the ice, including the fort, had melted and the ships escaped.

The siege of Haarlem (1572-3) was one of the longest and fiercest sieges of the war, lasting eight months, even through the winter when sledges and skaters brought in supplies. Holes in the walls caused by the bombardment were patched up with, among other things, icons taken from the town's Catholic church, a practice that especially enraged the Catholic besiegers and contributed to escalating atrocities on both sides. When the Spanish beheaded a prisoner and fired his head into the city, the defenders fired back a whole barrel of Spanish heads in reply. Any prisoners taken on both sides were quickly hanged in full view of the enemy.



Spanish bombardment and assaults against the walls failed. Likewise, their attempts to undermine the walls were thwarted by countermines and battles beneath the earth. On the other hand, a Dutch raid under cover of fog to spike the Spanish guns also failed. In the spring when the ice melted, the Spanish seized control of the sea and gradually starved the city into submission. While most of the surviving population was spared, Alba still butchered the entire Dutch garrison and 2,000 other citizens.

The Alkmaar flood. Next in line to face the Spanish advance was Alkmaar, a town of 1,300 citizens and 800 soldiers facing a Spanish army of 16,000. Fighting here was as fierce as at Haarlem, but the defenders had one ace in the hole: flood. After getting legal consent from local farmers, the Dutch opened the sluice gates of the local dykes. The Spanish, having captured the contracts allowing this tactic, realized why their camp was gradually filling with water, and

retreated. The farmers around Alkmaar paid a heavy price for this victory, because it would take their lands a century to recover from being flooded with salt-laden seawater.

The siege of Leyden. As the Spanish closed in on the next town, Leyden, in 1573, the Duke of Alba was relieved of command for the intense resistance his policies had inspired. Although the Spanish defeated a relief army, their own troops mutinied right after the battle, not having been paid in three years. The delay this caused allowed the Dutch to resupply Leyden.

However, once resumed, it was a tightly run siege, as starvation steadily reduced the city. After seven months, people were living on boiled leaves, roots, dried fish skins, chaff from old wheat threshings, and dog meat devoured raw on spot of slaughter.

Once again, the strategy to open the dykes was adopted, not just to flood out the Spanish, but also to open the way for 200 flat-bottom barges with food to relieve the starving city. And once again, a messenger sneaked out to get legal permission from surrounding farmers to flood their fields and ruin their crops.

In fact, the Dutch had to open a series of dykes to get to Leyden, first storming one, clearing it of Spanish soldiers, break it open, and waiting for the water to reach a depth that could support the progress of the barges. At the next dyke, the process would be repeated. Slowly the Beggars advanced, dyke-by-dyke, smashing each one as they advanced.

All this time, the Spanish besieging Leyden watched helplessly as the water kept creeping toward them. Also watching and waiting through these long weeks were the starving people of Leyden who were dying in greater numbers day by day.

Then five miles from town, an east wind blew the water back. In response, the Beggars pushed and pulled barges over the mud flats while the people of Leyden waited in the agony of expectation. Suddenly, a fresh northwest wind

came up, carrying the barges the last few hundred yards while the Beggars overwhelmed the last Spanish garrison in a brisk fight. The boats pushed triumphantly up to the quays and the dripping Beggars threw loaves of bread to an emaciated population reduced from 12,500 people down to 6500.

The starving survivors of the siege desperately devoured the bread and herring being tossed to them from relief barges, some of them choking to death in their haste to eat. Still others died from the shock of the sudden introduction of food into their bodies, which were still in starvation mode.



William of Orange, to reward the city for its steadfastness, offered Leyden the choice of an annual trade fair or a University. After careful consideration, the hardnosed burghers chose a University as a more stable year-round investment. The University of Leyden continues to thrive to this day.

"The Spanish Fury". In 1575 Philip II declared bankruptcy after getting a papal dispensation pope that let him absolve all his debts "lest he be ruined by usury while combating the heretics". The following year, the Spanish troops garrisoning Antwerp, being unpaid for 22 months, mutinied and went on a rampage of looting and slaughter, known as "The Spanish Fury", to collect their pay from the unfortunate citizens they were supposed to be protecting. After piously falling to their knees and praying to the Virgin Mary to bless this atrocity, they set fire to the streets of the wealthiest quarter and tortured anyone suspected of concealing money. As matters got progressively out of control, they killed anyone: young or old, male or female, Catholic or Protestant, even priests. When it finally ended, 8,000 people lay dead.

The next year, unpaid Spanish mercenaries committed a similar atrocity, the so-called

“pacification of Ghent”, which alienated even more people, including many Catholics, in the Spanish Netherlands.

The Union of Utrecht. In 1579 the seven northern provinces in rebellion against Spain formed an alliance, The Union of Utrecht, to better coordinate their efforts. In response, the ten southern provinces that were still Catholic formed their own alliance, the Catholic Union.

The Duke of Parma. By this time, Philip had appointed Alexander Farnese, the Duke of Parma, as the new Spanish governor of the Spanish Netherlands. Parma, being much more diplomatic and tolerant than the Duke of Alba, started winning back the support of the Catholic South. At the same time, he molded the 60,000 men of the Spanish Army of Flanders into the top fighting force of its day. He then proceeded to reconquer the northern provinces.

The siege of Maastricht (1579) showed the growing desperation of the fighting. The Spanish dug miles of tunnels to undermine the walls, leading to countermines dug even by the city’s women. In the resulting battles under the earth the defenders used boiling water and fire to scald and smoke out the enemy. To repulse assaults on the walls, the Dutch tossed hoops coated with flaming pitch over the attackers’ necks to set them on fire. In addition to other setbacks, an accidental explosion killed 500 of the besiegers. Finally, a breach in the walls brought the Spanish pouring in to sack the town. Out of a population of 30,000 only 400 survived.

The Oath of Abjuration. Interestingly enough, it was not until 1581 that the Dutch rebels formally deposed Philip II as their king and declared independence as the Dutch Republic. Their reasoning was that Philip had violated his compact and duty as a ruler to deal justly with subjects and give them good government. Therefore, he forfeited any allegiance from his subjects who now had the right to oppose a corrupt and tyrannical monarch. The Oath of Abjuration would strongly influence the American Declaration of Independence and later democratic movements.

Taking the oath was a difficult act, since they were disavowing the only form of government they had known and been told was divinely ordained. In addition, each magistrate and official had to take the Oath individually, just intensifying the anguish. One man even had a heart attack or stroke and died on the spot.

Froggy went a courtin’.



Breaking from a king was so dramatic and unprecedented that the Dutch looked for a new king to replace Philip. Elizabeth I of England was too embroiled with her own realm’s religious strife and too smart to get dragged in. Finally, the Dutch settled on Francis, Duke of Anjou, and the youngest son of Henry II of France, hoping he could bring in French support against Spain. Francis is probably best remembered as the subject of the nursery rhyme, *Froggy Went a Courtin’* which is about his efforts to marry Elizabeth I of England. The term Froggy refers either to his ugly looks (from a spinal deformity and scarring from smallpox) or a frog-shaped earring he gave Elizabeth. Elizabeth, however, played a clever game of encouraging potential husbands without ever getting married. This kept other rulers on their best behavior while not giving up any power to a husband.

Unfortunately, Francis’ Catholic faith and insistence on public worship alienated him from the Dutch; so did his failure to bring the men and money as he had promised. The final straw was the so-called “French Fury”, where Philip used French troops to try to seize Antwerp, but was driven out with heavy losses by the townsmen. After that, he left the Netherlands in disgrace and returned to France, where he died soon afterward.

The first “modern” assassination. In 1584 Philip II put a price of 25,000 crowns on William the Silent's head. This inspired a young man named

Balthazar Gerard to sneak in and shoot William on his staircase. What caught William and his men off guard was the weapon Gerard used: the wheel-lock pistol.



Previously, the only weapon a potential assassin could conceal was a dagger, which was no threat even from a few feet away. However, the invention of the wheel-lock eliminated the need to keep a lit match hidden with the pistol, thus making it possible to sneak in with a weapon that could be used from a distance.

Ironically, the pistol Gerard used in the crime was bought with money William had given him because he said he was penniless.

News of William's death brought rejoicing across Catholic Europe. Catholics wanted Gerard declared a blessed (a slightly lower category than saint) and sent his head to Cologne as a religious relic. His parents collected the reward.

However, by this time, William had given the revolt a life of its own and his murder did little except create a martyr for the Dutch cause.

Giambelli's Hellburners. Meanwhile, Parma's stolid veterans kept advancing steadily, taking Bruges and Ghent, which had both joined the rebel side, and then laying siege to Antwerp. It was there that one of the most dramatic events of the revolt took place.

Parma had completed a massive engineering project to starve Antwerp into submission: a bridge closing off the Scheldt River. The bridge was so massive that, when the Spanish captured a Dutch spy, they gave him a tour of the structure and sent him back into Antwerp to inform its people of what they were up against.

Therefore, the rebels were determined to destroy Parma's bridge. They would do it with two exploding fire ships called hellburners that were built by an Italian engineer, Federico Giambelli. The two vessels, christened *Hope* and *Fortune*, were in essence huge floating volcanoes placed inside wooden hulls to disguise them as regular fire ships. Each consisted of a brick foundation on which sat a marble chamber packed with gunpowder. On top of that was a roof holding a marble cone full of rocks, cannonballs, iron hooks, millstones, ploughshares, and anything else that could serve as a lethal projectile when hurled through the air.

They launched the hellburners at dusk on April 5, 1585. The first ship, the *Fortune*, ran aground exploding harmlessly, but diverting the attention of the Spanish troops who were awestruck by its pyrotechnic display. Meanwhile, the *Hope* got through, hit the bridge dead center, and exploded with unprecedented force. The ship, much of the bridge, nearby forts, and, briefly, even the waters of the Scheldt River, just vanished with the explosion. Over 1,000 Spanish soldiers were immediately killed as well, their bodies never being found. The shock wave leveled neighboring houses and blew people off their feet. A junior officer, sensing something fishy, had hurried the Duke of Parma away from the blast zone. Yet, even at a distance, he was thrown flat on his back and knocked unconscious.



Then slabs of granite, cannonballs, stones, and other debris started raining down from the sky. Some pieces were hurled six miles from ground zero. One Spaniard was blasted from one boat and landed in another, while one young officer was thrown across the river and landed safely half a mile away.

It was the largest man-made explosion in history.

However, the Dutch were also so awestruck by their own spectacle that they delayed moving in to finish destroying the bridge and opening the way to relieve Antwerp. In the meantime, Parma, who had regained consciousness, kept his head and regrouped his men to drive off the Dutch attack when it came. They then proceeded to repair the bridge and starve Antwerp into submission four months later.

Despite the failure of their mission, *hellburner* had entered the Spanish army's vocabulary and struck fear in their hearts. As a result, Giambelli's reputation would play a major role in events a few years later.

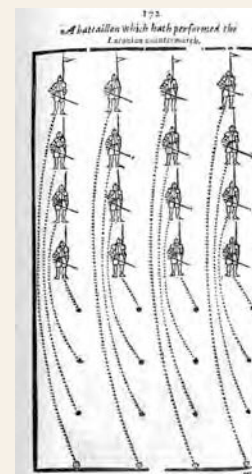
Ill-advised price controls. One factor contributing to Antwerp's starvation was price controls. Dutch captains were willing to run the risk of being hit by Spanish shore batteries in return for the huge profits they could make smuggling grain into Antwerp. However, when the city fathers put strict price controls on the exorbitant prices being charged for grain, that took away the incentive for the Dutch to run the Spanish blockade and Antwerp continued to starve.

Dutch resurgence in the 1590s. Despite The Spanish capture of Antwerp, events elsewhere neutralized and then reversed their progress. Most notably, in 1588 the English defeated the Spanish Armada, which saved not only England, but also the Dutch and French Protestants, from a major Spanish invasion that could have turned the tide of all three conflicts. As a result, the Duke of Parma had to take his army south to support the French Catholics in their religious wars, allowing the Dutch to retake a number of Dutch fortresses and secure their borders.

Dutch military reforms. An even more important event in military history took place in 1594 when Maurice and his brother, William Louis, inspired by the classical author, Aelian, started adapting the Roman drill and countermarch to the loading and firing of muskets. The basic idea was for soldiers to fire their muskets,

countermarch between the ranks to the rear to reload while succeeding ranks stepped up, fired, and countermarched to the rear in turn, by which time the first rank had reloaded and was ready to fire.

Instituting this reform involved several things. One was equipping soldiers with standard gauge muskets and ammunition to expedite resupplying them in battle. Another crucial feature was a manual of arms (above) that broke down the loading and firing of the musket into 42 steps that everyone did together in unison upon an officer's commands. Combining this with strict discipline and constant drill-and-march created a much more efficient army. For example, while it would take 1000 men a full hour to reform ranks, this new system could reform 2000 men in one-third that time. Soldiers were so highly drilled and disciplined that they could load their guns and perform maneuvers on the battlefield with an automatic precision that was much less likely to be disrupted by the fear and chaos of battle.



Besides increasing the smooth movement of troops in battle, the cadence of the drill and march, just as with the Romans and Spartans, created a solidarity between soldiers in the ranks that made them much less prone to panicking and running. Inside every army and soldier is a mob mentality and survival instinct that wants to run in battle. The drill-and-march didn't eliminate that instinct, but it pushed it down in the psyche for long enough to make it more likely that the mob mentality in the opposing army took over first.

The countermarch required spreading out the lines to allow free movement between the ranks for movement to the rear. While this made the musketeers more vulnerable to enemy pike men and cavalry, it also started extending an army's battle line so that it threatened to outflank the enemy. However, the full conversion to extended linear tactics wouldn't take place for nearly a century when the bayonet made the pike obsolete.

Although Maurice of Nassau's reforms would herald a revolution in military tactics, his armies only fought one major battle against the Spanish, at Nieuwpoort in 1600, where the smaller more flexible tactical units and their discipline won the day. However, it would be developments elsewhere that would turn the tide in favor of the Dutch.

For one thing, Dutch sea power was making itself felt. In 1607, the Dutch defeated the Spanish at Gibraltar, opening the Mediterranean to Dutch trade and growing economic power. Meanwhile, the Dutch blockaded the Scheldt River, cutting off Antwerp's trade and diverting it to the Dutch city of Amsterdam, which would replace Antwerp as Europe's premier trading port in the 1600s. And as Dutch economic resources grew, Spain's declined accordingly, helping the Dutch war effort while hurting Spain's, further helping the Dutch economy, and so on.

Meanwhile in the 1590s, famine, followed by plague, afflicted Spain, further depleting its population and resources. Even Philip II's death in 1598 failed to convince Spain to give up. So the war dragged on into the 1600s, further weakening Spain as the Dutch won more victories. Finally the two sides agreed to a 12-year truce in 1609. However, Dutch raids on Spanish shipping continued and everyone expected war to resume when the truce expired in 1621. It did resume, but this time as part of the broader European struggle known as the Thirty Years War.

Gradually, growing Dutch economic power and Spanish exhaustion from constant warfare

turned the tables in favor of the Dutch. In 1628, a Dutch East Indies Company fleet of 31 ships captured the Spanish treasure fleet, known as the Golden Bird, off the coast of Cuba. This dealt a crippling blow to Spanish finances, while netting the Dutch some 180,000 pounds of silver, 134 pounds of pure gold, and thousands of chests of pearls and other gems, worth an estimated 15-million guilders. Some Spanish ships were so heavily laden with treasure that it blocked their gun ports. The Dutch captain, Piet Hein collected a 7000 guilders reward, but was killed by a cannon shot in a fight with pirates six months later.

The Battle of the Downs. On October 31, 1639 a Dutch fleet blockaded and then demolished a Spanish armada of 77 ships off the coast of England while Spain's English allies merely looked on. This crippled Spain's efforts in the Spanish Netherlands and effectively wrecked its naval power, opening the way for the English and Dutch to rule the seas from that point on.

The next year, the Dutch destroyed another Spanish squadron off the coast of Brazil and established a colony there. Consequently, Portugal, ruled by Spain since 1580 when Philip II inherited its throne, rebelled against Spanish rule, followed by Catalonia in Northeast Spain. Those revolts, combined with Spain's faltering efforts in the Thirty Years War, finally led to Spain agreeing to give up and grant the Dutch their independence.

After eighty years of struggle, Spain finally recognized Dutch independence in 1648 in the Treaty of Munster. At the swearing of the oath, the Spanish held their hands on Bibles, while the Dutch delegates pointed their hands toward heaven, symbolizing the religious differences that had kept them fighting for eighty years.



At this point, the Dutch were at the height of their commercial and naval power, although England would challenge them for that position in the later 1600's. The southern provinces would remain under Spanish, then Austrian (1718-1815), and finally Dutch (1815-31) rule until they won their freedom and established the modern nation of Catholic Belgium in the south.

The French Wars of Religion (1562-98)

France was another country that saw the devastating effects of religious wars in the last half of the 1500's. In this case, the antagonists were the Catholic majority of France and a strong minority of French Calvinists known as *Huguenots*.

Although only comprising about 10% of France's population, the Huguenots had several factors that helped them maintain their struggle for over thirty years. Their number included many nobles who provided excellent leadership. They were concentrated largely in fortified cities in the south. And finally, they were enthusiastic and well organized into local congregations.

The case for noise ordinances. In fact, it was largely the Huguenots' enthusiastic worshiping, in particular their loud singing, which catalyzed hostility between the two religious groups. Unlike the Catholic mass where specially trained choirs did the singing (until Vatican II in the 1960s), the entire Protestant congregation took part in singing. Contributing to this practice was one of the era's most popular types of printed literature, the Psalter, which put psalms to music for Protestant congregations to sing. However, this was no guarantee that all Protestants could sing on key, although they did tend to make up for it in spirit (and volume).



This could be a problem when Calvinist and Catholic services were held at the same time in close proximity to one another. For example, in Paris, in reaction to the Huguenots' loud and boisterous singing, Catholics across the street started ringing their church bells to drown them out. When a Huguenot entered the Catholic Church to silence the bells, he was killed, which triggered a riot where the Huguenots sacked the Cathedral and smashed its icons. By the time it was settled down, 80 people had been wounded. In another incident, a riot was sparked when a Huguenot publicly mocked Catholic rituals by baptizing his dog in a fountain.

The most infamous incident was the Massacre at Vassy in 1562, when Francis, Duke of Guise, stopped in the village of Vassay for mass, but was disturbed by loud Huguenot hymns in a nearby barn that had been converted into a church. When he asked them to defer singing for 15 minutes, they refused, which led to an exchange of "compliments", causing the Catholic nobles to draw their swords. When a rock flew out of the Huguenot crowd and hit Francis, all hell broke loose with the Catholics killing 23 and wounding 100 Huguenots, most of them burning to death when the duke set their church on fire.

Scenes like that at Vassy repeated themselves and raised war fever across France in the early 1560s as Huguenots seized fortified towns in self defense. There were eight French religious wars (or seven, depending on what one counts as a war) with intermittent periods of peace, making this one of the most confused, chaotic, and bloody periods in French history.

Once the wars started, they tended to drag on and were aggravated by several factors that made them especially destructive. First of all, besides the religious struggles, fighting between noble factions and revolts by old feudal provinces exposed and added to the weaknesses of the French state. Second, foreign intervention, especially by Spain, but also by other states such as England, compounded the turmoil and destruction. Finally, France was

ruled by weak monarchs who let these forces tear the country apart.

Henry II's death. France's weak leadership and subsequent religious wars might have been averted except for a bizarre accident that killed its strong and vital king, Henry II. Despite the premonitions and warnings from his wife, Catherine de Medici, Henry II of France took part in a joust celebrating the Peace of Cateau-Cambresis with Spain in 1559. Jousting then used flimsy lances that would break on impact instead of wounding or killing an opponent. Unfortunately, in a freak jousting mishap, the shattered lance of Henry's opponent's somehow pierced the king's eye. He lay in agony for nearly two weeks before dying after the wound went septic. Henry left three weak sons to succeed him just as religious tensions between Catholics and Calvinists threatened to boil over into open warfare.



Catherine de Medici, Henry's widow and the queen mother could control her three weak sons who reigned in quick succession, but little else. Despite the hostility of the male sources to a female ruler, she seems to have honestly tried to steer France on a middle course of religious tolerance that neither side could seem to live with.

The Battle of Dreux (1562) was the first major battle of the French Wars of Religion and served as a textbook case of incompetent leadership on both sides. An army of 8-9,000 Huguenots stumbled upon a Catholic army twice its size, but decided to fight anyway. The Huguenots, however did have better and more cavalry, including German reiters armed with wheel lock pistols instead of heavy armor and lances.

At first, the Huguenot cavalry on the right flank drove off its Catholic counterparts. But instead

of turning to attack the Catholic flank, as they should have, they looted the enemy camp, which was more fun. Meanwhile, the Huguenot commander on the left was doing his level best to wreck his troops in fruitless charges against the opposing Swiss pike men armed with eighteen-foot pikes. However, just as the Catholics were about to win, the Huguenot cavalry returned to save the day, ending the battle in a draw. To further complicate the situation, each army's commander had been captured by the enemy. When Catherine de Medici got premature word indicating a Huguenot victory, she supposedly said they should prepare to be praying in French, referring to the Huguenot custom of using the Vernacular instead of Latin.

The First Religious War ended in 1563 with the Edict of Amboise, which restricted Huguenot worship to the suburb of one town per district and the homes and estates of Huguenot nobles. However, all eight *parlements* (regional courts) refused or delayed enacting this edict until the king came personally to ask them to do it. In the meantime, in order to pressure Catherine into renewing the war, the Duke of Alba marched the Spanish army along France's northern frontier, while the Jesuits came in and started executing Huguenots.

Thus began a dreary pattern of war starting up again, the royal government being unable to suppress the Huguenots and having to make a compromise peace, which further aggravated the Catholics, in particular the Jesuits, who stirred up war fever and started the cycle all over again.

There were several reasons for the Catholics' inability to beat the Huguenots. For one thing, royal garrisons were scattered across France's borders, guarding especially against Hapsburg aggression. Therefore, it took them a long time to concentrate against the Huguenots. And even if they defeated the Huguenots in battle, they probably faced long and expensive sieges that they didn't have the funds for. Likewise, at the end of the war, they had to demobilize their armies, which would take a longer time to re-mobilize and concentrate for the next war than was true for the Huguenots concentrated in their

fortified cities. Adding to these difficulties was the Huguenot capital and seaport, La Rochelle, through which foreign aid from England and the Dutch could enter France.

The viciousness and confusion of these wars was exacerbated by massacres of women and children. From 1562-1571 there were eighteen massacres of Protestants, five massacres of Catholics, and over thirty assassinations.

The Saint Bartholomew's Day Massacre



(8/24/1572) was the most famous such event. Following concessions at the end of the Second and Third Religious Wars (1567-8; 1568-70), Catherine de Medici decided to seal the peace by marrying the Huguenot leader, Henry of Navarre to the king's sister, Marguerite of Valois. Since there were four surviving sons of Henry II, people figured at least one of them would have a son and heir, so the throne would not revert to Henry of Navarre through Marguerite. They were wrong on all four accounts.

Unfortunately, another Huguenot leader, Coligny, wanted to control royal policy and take Flanders from Spain, thus instigating war with the big power of the day. Tensions were raised further by the presence of 5,000 armed Huguenots in Paris to celebrate the wedding, which took place with Huguenot modifications and without the pope's approval. When Coligny tried to turn the king against his own mother, pressure mounted from the ultra-Catholic faction led by the Guise family to carry out a massacre of the Huguenots while they were trapped in Paris. Driving events forward was an attempted assassination of Coligny, but it remains unknown who masterminded it: the Guises, Catherine de Medici, or the Duke of

Alba. Whoever, the culprit, the Protestants angrily demanded justice, which scared the king, Charles IX, into agreeing to arm the Parisians and shut the city gates to prevent any Protestants escaping.

Signaling the start of the massacre was the ringing of the Matins bells sometime after midnight on August 24, 1572. The duke of Guise and 100 soldiers burst in and murdered Coligny and several other Huguenot leaders, while the Parisians, incensed by recent events, started hunting down any Protestants they could find crying out "Kill, Kill, The king orders it."

As typically happens with such events, matters got out of control and went far beyond what Catherine wanted, as women and children were butchered in the frenzy. It also served as a convenient excuse for some to carry out personal vendettas, as merchants murdered their competition, debtors erased their debts along with their creditors, prospective heirs murdered relatives. Even the composer Claude Goudimel and the philosopher Petrus Ramus fell victim to the slaughter. Henry of Navarre escaped being killed by quickly converting to Catholicism. He converted back to Calvinism in 1576.

A letter from a Spanish ambassador shows the degree of fanaticism and viciousness that infected peoples' minds and values then: "*As I write they are killing them all, they are stripping them naked...sparing not even the children. Blessed be God.*" A cardinal rewarded the messenger who brought news of this event with 1,000 crowns, and the pope had a special medallion struck to commemorate the massacre.



Finally, after three days the massacre was stopped. Unfortunately, a few days later a Hawthorne bush blooming out of season was hailed by a monk as a miracle, which he announced by ringing the bells, starting the massacre up again.

How many died as the massacre spread to the rest of France is anyone's guess, but most likely 2-3,000 Huguenots died in Paris with several thousand more in other towns with large minorities of Protestants. In addition, several thousand more probably fled the country.

Of course, this triggered a Fourth Religious War (1572-3), which centered on the failed siege of the Huguenot city, La Rochelle. Despite another compromise peace, recent events just led to further polarization of French society as people were increasingly disillusioned with the weak monarchy and its inability to control events. Therefore, France degenerated into even more chaos as conflicts broke out between different families and old feudal provinces tried to assert their independence.

At the same time, Calvinist writers were claiming that subjects had the right and duty to depose a king who failed to rule justly and effectively. In 1574, the anonymous author of the *Political Discourses* claimed "*the sovereign community [the people] is superior to him [the king]...The community gave [public] power to the prince...If he abuses it they can invoke the law which holds that the thing given [public power] can be revoked due to culpability of the one to whom it was rendered.*" This idea would resurface in 1581 with the Dutch Oath of Abjuration, and it wouldn't stop there.

On a different note, a group of political moderates, later known as *Politiques*, were advocating more religious tolerance to ensure the public peace. This was another idea that would gain traction as France continued to be torn apart.

Meanwhile Religious Wars Five (1575-6), Six (1576-7), and Seven (1580) accomplished nothing more than further erosion of royal power. More devastating than these were the ravages perpetrated by both sides' employed and unemployed mercenaries and the peasant revolts that broke out in reaction against them.

When Francis of Anjou, Henry III's younger brother died in 1584 after his unsuccessful sojourn as Dutch king, that put the king's brother-in-law, Henry of Navarre, once again a Calvinist, in direct line to succeed the childless king. Fear of this happening led to the resurgence of the Catholic League led by Henry of Guise who pushed through the Treaty of Nemours (1585), which revoked all the liberties the Calvinists had gained since 1562. And that led, once again to civil war.

The War of the Three Henrys (1585-98) as the Eighth Religious War is known, concerned Henry III, Henry of Navarre, and Henry Duke of Guise. Supporting the Duke of Guise and Catholic League was Philip II whose Armada in 1588 was designed, among other things, to help the French Catholics. Spurred on by this support, the Catholic League drove the king, Henry III from Paris.

In September, soon after the Armada's defeat, the king summoned a meeting of the Estates General at the Chateau de Blois where he had his henchmen murder the Duke of Guise (12/23/1588). On the floor below, Catherine de Medici lay in her deathbed where she could hear the Duke dragging his assassins across the floor as they cut him to pieces.

After the murder of the Duke of Guise, the king found himself alone and caught between hostile Huguenot forces to the south and Catholic League forces now led by Charles de Lorraine, duc de Mayenne. Therefore, he sealed an accord with the Huguenot leader, Henry of Navarre at Plessis-les-Tours (4/30/1589).

Paris now broke out in open revolt against the king, now allied with the heretic Henry of Navarre. Angered by the king's apparent defection to the Protestants, a Jacobin Friar, Clement, saying he had important letters from Paris (then under siege) for the king, assassinated Henry III with a concealed dagger (8/1/1589). Before dying the next day, Henry recognized Henry of Navarre as his heir and urged him to turn Catholic.



That left Henry of Navarre (above) as king, but there was no way the Parisians and many other French Catholics would accept a heretic as king. So the war went on.

Henry was a brilliant general who won victories against armies two or three times the size of his own. He was also an inspirational leader whose white plumed helmet could always be seen in the thick of the fighting. As a result he commanded the loyalty of Catholic as well as Protestant troops.

Eventually, Henry was able to lay siege to Paris. Conditions became so desperate that people ate horses, dogs, cats, grass, and even made flour from ground up cemetery bones. While people starved, priests told Parisians they would be better off eating their own children rather than letting them live under heretic king.

When Philip II of Spain sent the Spanish Army of Flanders into France to relieve Paris, Henry somewhat cynically converted (again) to Catholicism, supposedly saying, "Paris is worth a mass." In other words, it was worth it to convert to Catholicism to give his Catholic opponents no more reason to attack him and to secure the crown.

Despite his obvious political motives and the fact that he guaranteed Huguenots religious freedom by the Edict of Nantes (1598), the French people, tired of constant warfare, readily accepted him as king in return for peace. Therefore, his entry into Paris (above) was a virtual triumphal parade, with the dashing king waving to the ladies while the Parisians cheered him wildly. Finally, in 1598, the pope recognized Henry's conversion and granted him absolution.



Henry IV would prove to be one of France's most popular kings as he restored peace and prosperity to a land wrecked by thirty years of warfare. By the same token, the French were also willing to submit to the stronger rule of a king, which helped set the stage for the rise of France as the dominant power in Europe in the later 1600's and the rule of one of its most powerful and absolute monarchs, Louis XIV, the Sun King.

Henry was one of the few kings to care for the common people's prosperity, saying: *"If God spares me, I will ensure that there is no working man in my kingdom who does not have the means to have a chicken in the pot every Sunday!"* He also adorned Paris with the Pont Neuf over the Seine River and a 400-meter long addition to the Louvre, making it the longest building of its kind in the world then.

Henry would meet the fate of the other two Henrys: assassination. In 1610, as he was about to set out to war against the Hapsburgs, a Catholic fanatic named François Ravailac plunged a dagger into the king for his plans to fight against another Catholic king.

The Age of Elizabethan England



Elizabeth judges Venus, Juno, & Minerva, implying she set the standard for beauty & wisdom

One of the most fascinating and capable monarchs of the age was Elizabeth I of England (1558-1603). We have already seen how she skillfully defused religious tensions in England by grafting Catholic ritual and organization onto mild Protestant theology, thus keeping most people reasonably content. Unlike her sister, “Bloody Mary”, Elizabeth also avoided religious persecution, merely fining someone 5£ for not belonging to the Church of England.

Known variously as Good Queen Bess, Gloriana, and the Virgin Queen (merely for her marital status), Elizabeth was quite popular with her people, since she kept taxes low and knew how to get what she wanted from Parliament without being too demanding about it.

She also kept the people's good will by acting as one of their own, patiently sitting through any pageants or speeches given in her honor. Elizabeth and her subjects understood and loved each other quite well. Her tolerant reign was a virtual golden age for England, nurturing among other things, the genius of William Shakespeare, possibly the greatest literary figure in its history.

Each summer, Elizabeth led her court on an annual “royal progress”, a leisurely 1-2 month tour of the country that, in addition to avoiding disease-stricken London, made her visible and accessible to her subjects. Accommodating the royal court was not cheap, since it typically traveled with up to 300 wagons and carts.

In addition to being well educated and politically adept, Elizabeth was a skilled dancer and musician playing the lute and virginal (an early precursor to the piano). Even into her 40s she could dance with youthful grace and energy such Italian dances as the Lavolta, which required one to step high and lively. When not dancing she would count the cadence for other dancers with an imperious foot.

Much of Elizabeth’s appeal came from her willingness to give full attention to any entertainments her people would put on for her, such as a “wild man” covered with moss & ivy reciting a humorous poem for the queen while

returning from the hunt. For subjects overawed by her majesty’s presence, she would warmly say, “Be not afraid” to calm their nerves.

Popular entertainments for the common folk were somewhat rough and tumble, including bear baiting where spectators would bet on which dog would last longest while attacking a tethered bear.

Other popular sports were logrolling, where the goal was to break as many of an opponent’s toes as possible, and cockfighting where specially bred roosters with metal spurs and sharpened beaks would fight to the death. Even schoolboys were allowed to bring their killer birds to school each Shrove Tuesday so they could fight in the school cockpit.

Even the world’s most popular sport, soccer, has somewhat brutal roots in Elizabethan England. Each Shrove Tuesday, apprentices would engage in a no-holds-barred game with a leather-cased ball. The game had no apparent rules or restrictions except to get the ball to the other team’s end of town.

Such games typically degenerated into brawls that offered opportunities to settle old scores. As one contemporary put it: *“sometimes their necks are broken, sometimes their backs...sometimes one part thrust out of joint.”*

Local residents and merchants hated his sport, scurrying to protect their goods while shouting curses and shaking their fists (sometimes from rooftops) at the rowdies

It was said that Elizabeth, instead of getting married, had a love affair with the English people. Or, as she put it: *"Though you have had & may have many mightier and wiser princes, yet you never had nor shall have any that will love you better."*

Being a woman, Elizabeth had to be crafty to keep her throne, avoiding at all costs a marriage that would put a husband in her place as the real power in England. As a result, she never married, although she cleverly held out the

prospect of marriage to neutralize potential enemies and keep them on their best behavior.

Deadly cosmetics. In 1562 at age twenty-nine, Elizabeth contracted smallpox, which scarred her face. To cover these blemishes, she wore makeup consisting of vinegar and white lead, which is poisonous. Whether because of that or old age, she gradually lost her hair and teeth. It is quite likely that when she died at the ripe old age of seventy, it was because of blood poisoning caused by her makeup.

Mary Stuart, Queen of Scots



The great test of Elizabeth's reign was the war against Spain culminating in the Spanish Armada in 1588. The causes of the war revolved mainly around religious differences between Spain and England that caused various acts of aggression by each side against the other. Philip II still fervently hoped to re-establish Catholicism in England. Throughout the 1570's he plotted toward this end, trying to put Mary Stuart (AKA Mary Queen of Scots), a Catholic, in Elizabeth's place.

Given her turbulent childhood and position as a woman in a man's world, Elizabeth was extremely sensitive to any threats, real or perceived, to her throne. Such was the case with Mary Stuart, who, as the granddaughter of Henry VIII's sister Margaret Tudor, was Elizabeth's first cousin once removed. Mary's father, James V, had died when she was only six days old and she was crowned nine months later.

Troubles with Henry VIII who raided Scotland to pressure Mary into marrying his son Edward, led to her mother, Mary of Guise, was French, to take her to France at age five, where she married the crown prince, Francis. (To further confuse

things, the four maids-in-waiting she took to France were also named Mary). Therefore, Mary was Catholic and probably more French in spirit than Scottish. Unfortunately, soon after her new husband succeeded to the French throne as Francis II, he died and she returned to Scotland. However, being basically French and Catholic, she was poorly prepared for handling the complicated factional politics of her homeland. The radical Calvinist leader, John Knox, especially criticized her for her religion and frivolous French ways.

Being a widow, she married Henry Stuart, Lord Darnley, her half first cousin, but it was an unhappy marriage, as Darnley was jealous of Mary's friendship with her personal secretary, David Rizzio, and murdered him in the presence of his pregnant wife. Some time later Darnley's house mysteriously blew up with him in it, and soon afterwards, Mary wed the suspected murderer, James Hepburn, 4th Earl of Bothwell. As a result, the Scottish nobles imprisoned Mary and forced her to abdicate. Although she escaped, she failed to reclaim her throne and fled to her cousin, Elizabeth, in England, hoping she would help her regain her throne.

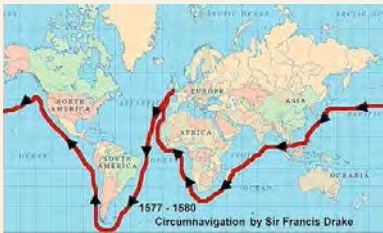
However, since Mary was next in line for the throne of England after Elizabeth (or before her, since Catholics still claimed she was illegitimate), she was imprisoned and closely watched, especially after the Ridolfi Plot in 1570, a failed attempt, probably funded by Philip II of Spain, to murder Elizabeth and replace her with Mary. Still, Elizabeth was reluctant to kill her cousin, and kept her imprisoned for 17 years. Not until 1587, as war with Spain loomed on the horizon and after 19 years of being held prisoner in England, did she finally have Mary beheaded.

Sir Francis Drake

Elizabeth more than got her revenge against Philip through the raids of Sir Francis Drake, who operated as a privateer/pirate through a long and storied career. Such privateers often operated with what were known as letters of Marque, whereby they were authorized to capture another country's vessels and bring them in for sale.

Drake had a special vendetta against the Spanish after being trapped and nearly captured by them in Mexico in 1568. After a failed raid in 1572 on the Spanish Main (the Isthmus of Panama where Peruvian treasure was carried from the Pacific to the Atlantic for transport by sea to Spain), he hit pay dirt the next year, capturing a mule-train carrying twenty tons of Peruvian gold and silver. Unfortunately, he couldn't haul it all back to his ship and had to bury part of it, possibly being the source of tales about buried pirate treasure.

Drake's wildest exploit was circumnavigation of the globe (1577-80) as a result of his raiding Spanish shipping in the Pacific. After exploring the coast of North America and claiming it for England, he crossed the Pacific, traded for spices in the Moluccas, and headed home. Out of 164 men who set out, 59 made it back. The Queen's share of the plunder was worth more than an entire year's taxes.



Drake also made a raid with 30 ships on the Spanish port of Cadiz in 1587, where the Spanish Armada was preparing for its invasion of England. The raid, with the help of some Spanish fire ships that went astray, destroyed 24 Spanish ships. Possibly of even greater significance, on his way home Drake intercepted and destroyed a Spanish convoy carrying seasoned barrel staves. The significance lay in the fact that seasoned wood has fewer microbes than green wood. Thus food and water in barrels made from green wood spoil much faster. There is no telling how much damage this did to the health of the sailors and soldiers in the Armada, but it probably had some impact.

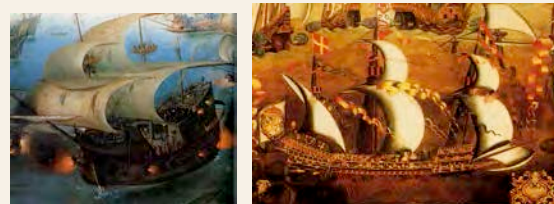


The Spanish Armada (1588)

The great test of Elizabeth's reign was the war against Spain climaxing with the Spanish Armada in 1588. The causes of the war revolved mainly around religious differences between Spain and England that caused various acts of aggression by each side against the other. Philip II still fervently hoped to re-establish Catholicism in England. Among other things, he had plotted to put Mary Stuart (AKA Mary Queen of Scots), a Catholic, in Elizabeth's place.

Spanish preparations experienced incredible delays due to Philip's over-centralized micro-management and the incompetence of the Armada's commander, Santa Cruz, a good fighting officer, but a poor staff officer for organizing the logistics of such an expedition. Therefore, by early 1588, the Armada was falling apart, being reduced to 104 unseaworthy ships while supplies rotted and attrition from sickness, in particular a typhus epidemic that decimated its army from 12,600 men in January down to 10,000 by February.

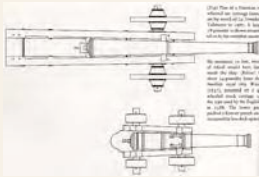
Finally, Philip replaced Santa Cruz with the Duke of Medina Sidonia, an excellent staff officer, but with little or no combat experience at sea. Thanks to his hard work, the Armada grew back to 130 ships and 19,000 soldiers. However, the crash program caused many gunsmiths to cut corners, so their guns were not bored or cast properly, making them prone to not fire straight or, in some cases, to blow up. Also, since the guns were cast all over the Spanish Empire, there was no standard gauge for their cannonballs, making resupplying them a nightmare.



When completed, the Armada consisted of a hodgepodge of regular sailing warships (galleons, left) heavily armed with cannons along with big merchant ships packed with soldiers

and supplies, smaller Caribbean escort ships with few guns and lots of cargo space for extended voyages, and large oar driven Mediterranean galleasses (right) without continuous gun decks and that were slow and ill-suited for the rough waters of the North Atlantic.

The English fleet. On the surface, the struggle looked uneven, heavily stacked in Spain's favor. However, the English had developed radical new tactics and ship designs that would revolutionize naval warfare. It largely started with Henry VIII who by 1547 had a fleet of 53 ships armed with unprecedented numbers of cannons. Supposedly, Henry tested some new Flemish guns he had just received by leveling a peasant village, then declaring he had "cannon enough to conquer Hell".



Combined with all these guns was a revolutionary design for naval gun carriages. Up to this point, people thought of naval battles mainly as land battles fought at sea. After a preliminary bombardment, ships would grapple one another and soldiers would fight to conquer the enemy vessels. Since the guns, as in land battles, were only for preliminary firing, mainly at the enemy sails and rigging to slow them down to expedite boarding, they were seen as being good for only one or two shots before the real fighting started. Therefore, they kept the long two-wheeled trailers on the ends of their carriages, which on land were useful of hitching up to horses for moving (which would be somewhat useless on board ships). However, the narrowness of the ships' gun decks combined with the length of these carriages made it hard for gunners to pull the guns inside for reloading. But, since they were only to be used for preliminary firing anyway, it didn't seem to matter.

The English approached the use of guns differently. Since the ships' buoyancy made them mobile gun platforms, anyway, why not use them primarily for their firepower? Therefore,

they designed shorter, four-wheeled gun carriages (without the long trailers) that could be pulled in and reloaded for firing over and over again. To do this effectively required faster sailing ships that could keep their distance from the enemy to avoid being boarded while they pounded them with their guns.

His Grace a Dieu (AKA *Great Harry*) was one of the first ships to carry a large number of these guns, including some weighing two tons and able to fire a 66-pound shot 500 yards. However it kept the old ship design with high castles and grappling hooks for close combat. Its keel length, 50 meters, was only twice its width. The crew of 700 included 400 soldiers, also reflecting the older style of warfare.

The weight of all those guns combined with the ships' high center of gravity made these ships somewhat unstable. To compensate, the gun decks were placed closer to the water line. As a result, another of Henry's ships, the *Mary Rose* sank in a storm after its gun ports, only 14" above the water line, were left open. The undersea excavation of the *Mary Rose* has supplied historians with a wealth of information about life aboard sixteenth century sailing ships.

The problem of slow top-heavy sailing ships was largely solved by John Hawkins in 1578 with a new design known as "race-built", coming from the French word to shave (related to our word razor). What he shaved off were the fore and aft castles of the old style warships. These new ships (below right) had four qualities:

- 1) They were longer in relation to the beam with finer underwater lines.
- 2) Elimination of the castles reduced wind resistance.
- 3) They had more efficient sail plans.
- 4) They had more guns and they were mounted on the new gun carriages.



This required a fine balance between speed and heavy armament. While Spanish ships were built for ocean voyages to carry and protect their treasure, making them bulky and slow, the English had no need for such bulkiness.

Therefore, while English guns made up 14% of their ships' weight, guns on the bulkier Spanish ships only comprised 4% of their weight. More than compensating for the weight of their guns were the English ships' sleeker lines and more sophisticated sail plans.

The result was a ship combining phenomenal sailing performance with firepower against other ships. As John Howard of Effingham put it: "*I protest it before God... if it were not for her majesty's presence, I had rather live in the company of these noble ships than in any place.*"

Another factor favoring the English was the difference between the two countries' attitude toward naval service. The Spanish were soldiers and saw naval service as second best, if not demeaning. Consequently, their admirals were land soldiers who typically didn't understand the nuances of naval warfare and were less prone to listen to ships' captains who did grasp those nuances.

By the same token, Spanish ships had two distinct groups of men: sailors who sailed the ships and soldiers who were along for the ride until there was a battle. This made for overcrowded ships, which ate up supplies, reduced available living space per man, and didn't help sanitation any. Also, the two groups didn't like each other, thus leading to fights and little unity of purpose.

By contrast, English commanders were first and foremost sailors, usually having served on ships since boyhood and intimately knowing all the details of sailing. Likewise, English crews were all sailors and even gentlemen were expected to "haul a draw" as seen in an apology by a certain Lord Henry Seymour for not writing a letter with his own hand, since he had hurt it "hauling a rope". English ships had one sailor per two tons of ship, while Spanish ships only had one for

every seven tons, often having to rely on help from inexperienced and resentful soldiers. In short, each English ship was under a unified command with a unified purpose. Spanish ships weren't.

Revolutionary new cannons. The recovery in 2008 of two cannons from a sunken Elizabethan ship, the *Alderney*, indicate the English were developing deadly new cast iron cannons that already were giving their navy a reputation as something to avoid by the time of the Armada. For one thing, they had figured out that a lot of smaller guns were more effective than a few big ones. They were also casting guns of a standard size that would use standard gauge ammunition, a development 50 years ahead of their time. Tests on full size replicas of these new, smaller cast iron guns show they had a range of one mile, but a cannonball fired at 100 meters could tear through a solid oak hull, cross the deck and tear its way out the other side. Previously it was known that English warships were greatly feared, but until the discovery of the *Alderney*, it was not known why.

Sixteenth century gunnery. Not that the English had everything worked out. Gunnery, in particular was highly inaccurate for several reasons. For one thing, gunpowder was expensive, so gun crews had little or no practice before battles. Also, non-standardized and unreliable gunpowder made it hard to estimate the range to targets. One charge of powder might barely push a cannonball out the barrel, while another might blow up the whole gun. Finally, the rocking of the ships combined with the time it took for fuses to burn down made it hard to time shots so they would fire on the proper trajectory. Therefore, it was by no means certain that this new approach to naval warfare would work against the tried and true methods of the Spanish Armada.

Philip's grand strategy was to send the Armada to pick up the Spanish Army of Flanders which was then fighting the Dutch, transport it to England to crush the English and replace Elizabeth with a Catholic ruler, and then bring the Armada back to crush the Dutch rebels and French

Huguenots. Thus the Armada presented a serious threat, not just to England, but also to the very existence of Protestantism in Europe.

On July 31, 1588, the English sighted the Armada off Plymouth and sent the news to London by a series of watch fires. Both fleets would be in for a surprise when they met. The Spanish were thrown off by the speed and maneuverability of the English ships, which they couldn't come to grips with in order to board. Similarly, because the Armada sailed in a tight crescent formation with a powerful center, extended horns, and its twenty best ships operating independently in front or behind as needed, the English couldn't isolate individual ships that they could then pound from all sides with their artillery.

Therefore, the first week of fighting was a running battle up the Channel, with neither side making much impact on the other. The English would pick off an occasional straggler or damaged ship, such as when two Spanish ships were damaged in a collision and another was damaged and sunk when its powder magazine blew up. However, they were failing in their primary goal, which was to prevent the Armada from reaching the Netherlands and picking up the Spanish army of Flanders. Therefore, time was running short for the English as the Spanish pulled into the harbor of Calais to regroup and try to establish contact with the Duke of Parma.

The Armada's commander, Medina Sidonia, who mistakenly assumed that Parma knew of his approach and would be ready to rendezvous with him, finally got a letter from Parma saying his army wouldn't be ready for another week, having dispersed it to disguise the intended invasion of England.

On August 8, with a westerly wind and high tide with them, the English, desperate to force the issue, launched eight fire ships to flush the Spanish ships out of harbor and hopefully out of formation. It worked better than they may have expected, because of two words: Giambelli's hellburners.

The Spanish managed to divert the first two fire ships out of harm's way, and were about to latch onto and divert the next two, when a charge of powder exploded on one of the ships. Their immediate thought was that these were more of Giambelli's hellburners such as had wrecked the Duke of Parma's bridge at Antwerp four years earlier.



In fact, Giambelli was working for the English, but on a project to build a bridge not destroy one. However, although these were not some of his hellburners, the terror invoked by his name was enough to paralyze the Spanish crews in charge of diverting the fire ships long enough to let them through to the Armada.

Therefore, the fire ships did their job of forcing the Spanish ships out into the open and out of formation where the English could use their superior firepower and speed to destroy them ship-by-ship.

Luckily for the Spanish, The English Lord Admiral Howard got distracted by trying to plunder a Spanish galleass with a damaged rudder and mainsail. His boarding party took the ship, but this led to a scrape with the neutral French whose waters this was in and who wanted the prize. This whole fiasco gave the Spanish two hours to partially regroup into formation before the actual battle began.



The ensuing Battle of Gravelines was a running battle up a treacherous coast made more treacherous for the Spanish by the Dutch who had removed the local buoys marking the

locations of dangerous rocks and reefs. This helped the English do great damage to the Spanish, especially their frontline ships defending the rest of the Armada.

One ship, the *San Martin*, was hit with 200 shots, forcing divers to patch its holes at the waterline. Meanwhile, a pack of English galleons pounded another ship, the *San Mateo*, until "*she was a thing of pity to see, riddled w/shot like a sieve.*" The recoil of its guns ripped them loose from the hull, pulling it apart. As the English realized how helpless many of the Spanish ships were, they moved in closer to fire at a much deadlier range. The Spanish fought valiantly, even firing their muskets in the face of the much more devastating cannon fire of the English.

Then a storm blew up from the northwest forcing the two navies to break off. While the English could head for safe home harbors, the Spanish had no such option and had to head out to the open sea to avoid the treacherous Flemish coast.

Having had their fill of the English navy and given up on meeting the Duke of Parma, the Spanish kept heading north, eventually to sail all the way around Scotland and Ireland to get home.

As successful as the English were in the Battle of Gravelines, they only sank one ship. They might have sunk more if the battle hadn't been interrupted by the storm...except for one thing. They were out of gunpowder. And there was no more to be had in all of England. (In fact, 25% of the powder they used at Gravelines was what they had captured from the Spanish in earlier fights. If the Spanish had known, they could have sailed in and had England for the taking.

As it was, their stormy journey back to Spain was what really wrecked the Armada, only half of its 130 ships making it home. Spaniards shipwrecked off the coasts of Scotland and Ireland were usually killed, although some Irish, being sympathetic to fellow Catholics, took them in and hid them. After that, any Irish children

born with black hair were rumored to have Spanish blood in them.

While England's radical new approach to fighting at sea had not in itself destroyed the Armada, sinking only one ship at Gravelines, it did point the way to a new era in naval warfare dominated by increasingly larger ships relying on firepower instead of boarding and grappling.

Nor did the defeat of the Spanish Armada destroy Spain as a great power. However, it did signal the beginning of the end of Spanish dominance of Europe. In the first half of the 1600's this process would accelerate as Spain wrecked itself by trying to maintain its power in an exhaustive and devastating series of conflicts, most notably the Thirty Years War (1618-48).

As a result, a new balance of power would emerge in Europe. France would replace Spain as the main superpower, while the Dutch Republic and then England, despite their small size, would become the most dynamic naval and economic powers in Europe.

Europe's mentality would also change in the 1600's. Exhausted and disgusted by the seemingly endless religious wars and disputes, many people would take a more secular (worldly) view of things, seeing religion more as a source of trouble than comfort. By the late 1600's, these views would flower in the great scientific and cultural movement known as the Enlightenment.

[Back to flowchart](#)

THE THIRTY YEARS WAR (1618-1648)

Introduction. The last half of the 1500's saw Europe embroiled in a number of religious conflicts. For the most part, these wars were either between two countries (e.g., England vs. Spain, the Dutch vs. Spain) or internal affairs with some outside interference (e.g., France and Germany). However, as the seventeenth century dawned, religious and political tensions grew to encompass all of Europe in an interlocking network of states extending from Russia to England and from Sweden to Spain. These tensions exploded into what can be seen as the first European wide conflict in history: the Thirty Years War (1618-48).

A Brutal Century



The outbreak of the Plague in Naples

The 1600s were brutal times, the years 1618-48 marked by the first European-wide conflict, the Thirty Years War, the second half of the century dominated by the massive destruction and bloodshed of Louis XIV's wars.

The climate also turned colder. Even the lagoons of Venice froze over, as did the Baltic Sea, providing a convenient invasion route for the Swedes into Russia. And with colder weather came famine, and with that came epidemic. The Black Death made its last major appearance in the 1600s, claiming 100,000 lives in London (1665), 130,000 in Naples (1656), 30% of Stockholm's population (1710-11), and 50% of Marseilles' (1720-21) before virtually disappearing from the scene.

There were other diseases to take its place, though. Poor sanitation nourished lice carrying typhus, rats and fleas carrying plague, and mosquitoes carrying malaria. Piles of horse manure in the streets bred flies, leading to

typhoid and infantile diarrhea that killed thousands of children. Smallpox was especially prevalent, claiming an estimated 1 in 14 lives and leaving its survivors, such as Louis XIV & Charles XII of Sweden, pockmarked for life.

From 1648-1713 it is estimated that Europe's population fell from 118 million to 102 million. For most people life was a desperate struggle for survival. In the words of the 17th century philosopher, Thomas Hobbes, it was "*solitary, poor, nasty, brutish, and short.*"

The rich and famous might look forward to a life of 50 years or so if they survived the first year of life. Up to one-half of all infants did not.

- Peter the Great and his second wife Catherine had 12 children. Only 2 daughters reached adulthood.
- Queen Anne of England had 16 children...all dead by age 10.
- Louis XIV and his queen Maria Theresa had five children. One survived.
- Within 14 months Louis lost his only son, eldest grandson, and eldest great-grandson-- all to measles.

For most people the day ended when the sun went down and their world was plunged into a darkness populated by witches and demons.

The great events of the day were beyond the narrow horizon of the vast majority of people...unless those events came with fire and sword.



Even the heavens seemed to portend calamity, as the appearance of Halley's Comet in 1618 added to already growing anxiety about coming disaster.

A growing fear of war triggered an arms race, as each ruler seemed armed to the teeth to protect himself from his neighbors. Demonstrations of military power, such as the one at Nuremburg

pictured below, were meant to deter aggression. Unfortunately they only alarmed their neighbors and fed a vicious cycle that saw military stockpiles and tensions rising together.

In the early 1600s people expected war to come in 1621 when the truce between Spain and the Dutch (United Provinces) expired. Indeed it would have if not for events in Bohemia in 1618.

Causes and outbreak of war. The roots of the Thirty Years War extended back to two main developments in the 1500's: the religious wars emanating from the Protestant and Catholic Reformations, and fear of Hapsburg Spain and Austria, who between them controlled nearly half of Western Europe. Religious tensions (complicated by political rivalries) led to conflicts between Lutheran Sweden and Catholic Poland, German Protestants and Catholics, and the Protestant Dutch and English against Catholic Spain. Fear of the Hapsburgs also contributed to the English and Dutch conflicts with Spain. In addition, France, once it had recovered from its own religious wars, increasingly took the lead against the Spanish and Austrian Hapsburgs who ringed its borders to the north, south, and east. Venice also had problems with Austria over pirates in the Adriatic.

All these tangled religious and political tensions of the early 1600's polarized Europe into two camps defined largely, but not exclusively, by religion. The Protestant camp consisted of German Protestants, Denmark, the Dutch Republic, England, Sweden, Catholic Venice, and Catholic France. The Catholic camp had German Catholics, Spain, Austria, the Spanish Netherlands, Naples, Milan, the Papacy, and Poland.

Two such hostile camps staring menacingly at one another led to the common fear and expectation of a general war embroiling all of Europe. As a result, kings and princes built up armies and fortifications in preparation for the coming war, which merely reinforced the other side's fears of war, triggering more military spending and so on. Travelers of the time noted how states all over Europe seemed to be armed to the teeth and ready for a fight. This was especially true in Germany where the Protestant princes formed a defensive league known as the Protestant Union in 1609 while the Catholic princes quickly answered with the Catholic League.

Added to this were two other factors making Europe's economy less vibrant than it had been in the 1500's. For one thing, the flow of silver from the Americas had passed its peak. For another, the climate turned colder, reducing crop yields and straining Europe's ability to feed its population (which had doubled since 1450). This, in turn, led to lower resistance to disease (including Bubonic Plague which made a comeback in the 1600's). The combination of soaring military budgets, declining silver production, and the effects of a colder climate led to rising tensions in Europe, both between different states and between social classes within individual societies.

These problems combined with the fact that Europe was split between two hostile political/religious camps meant that any conflict or crisis between individual members of each camp could drag in all the other members of their respective camps and trigger a European wide war. In this respect, the situation largely resembled the one that would drag Europe into World War I in 1914.

In 1618, Protestants in Bohemia, which was part of the Holy Roman Empire, rebelled against the Austrian Hapsburgs. Unfortunately, Germany's fragmented political situation generated a vicious cycle that would turn a local struggle into a European wide conflict using Germany as its battleground. As the crisis grew, more states would get involved and commit increasing amounts of resources. As more allies joined each side, the war grew into an exhausting stalemate that no one could either win or afford to quit since they had already spent so much on it and felt they had to recover its expenses from its enemies. Concern over a Protestant or Hapsburg Catholic victory and belief that the balance could be tipped to their advantage would draw in more powers, eat up more resources, perpetuate the stalemate, and so on.

Thus Spain, Poland, the German Catholics, and the Pope came to Austria's aid to crush the Bohemian rebels. This caused Denmark, England and the Dutch Republic to join the conflict against the Hapsburgs, but they were defeated. Then Sweden attacked Austria, supposedly in defense of the German Protestants, but was eventually defeated. Finally, Catholic France threw itself into the fray, helping the Protestants against the Hapsburgs. Each

new power getting involved merely fed more fuel into a veritable firestorm of continuing stalemate until there was hardly anything left to burn.

More and more, this has become the pattern of modern warfare, as its expense makes it too expensive to fight, but also too costly to back out once a country has committed itself to it. And as the cost and destructiveness of war goes up, the spoils of war to make it pay for itself dwindle correspondingly. This dilemma has increasingly plagued modern warfare to the present day, as the technology of war has gotten progressively more destructive and expensive, both to build and use.

Opening phases of the war (1618-35). Many people figured war would start in 1621 when a truce between the Dutch Republic and Spain was due to expire. In fact, it started in Bohemia (the modern Czech Republic) and Germany over the succession to the crown of the Holy Roman Empire that the Hapsburgs had held for generations. However, there was no guarantee the electors would choose another Hapsburg when the old emperor Matthias died. Since six of the seven imperial electoral votes would likely be split between three Catholic and three Protestant electors, the Bohemian king's electoral vote could be the decisive one.

Here was where the trouble began, because Ferdinand of Styria, the king of Bohemia and heir apparent to Matthias, was an ardent Catholic, whereas Bohemia had been a hotbed of religious turmoil ever since the Hussite revolt in the early 1400's. When Ferdinand tried to end the Protestant Bohemians' religious freedom, they retaliated by defenestrating (throwing out a window) two imperial ministers in the famous Defenestration of Prague (1618) and deposing Ferdinand as their king. Although the ministers miraculously survived the sixty-foot fall, the peace did not survive with them as the turmoil quickly spread across Germany.

Unfortunately for the Bohemians, when they rebelled against Austria, they elected a mediocre king, Frederick of the Palatinate, who only brought moral support from other Protestant powers. Cossack raids stirred up by Poland diverted the one bit of substantial help they might have gotten, troops from Transylvania. Meanwhile, Spain, Bavaria (as head of the German Catholic League), and the Pope were helping Austria with men and

money. Consequently, the Bohemian War (1618-22) was not much of a struggle as Ferdinand (who had since become emperor) easily swept away Bohemian opposition. Ferdinand and his allies confiscated large tracts of land, exiled Protestants, and reclaimed Bohemia for the Catholic Church.

However, growing fear of a resurgent Hapsburg dominance stirred up activity across Europe in two main theaters of war, one aimed against Spain and the other against Austria. First of all, hostilities between Spain and the Dutch Republic resumed as expected in 1621 when their truce ran out. England also declared war on Spain in 1625 and joined the Dutch in a raid on Cadiz that ended in an embarrassing defeat for the Dutch and English. After this, England became more involved in its own religious and political squabbles that culminated in civil war in the 1640's. This kept them from playing any major role in the wider conflict unfolding on the continent.

Meanwhile, France was also active, fighting Spain over strategic towns and passes in Italy. If the French could control this area, they could block the flow of Spanish troops to the Netherlands along the so-called Spanish Road. However, France's effort was somewhat ineffective at this point, largely because of turmoil at court. Cardinal Richelieu, who wanted to commit France wholeheartedly to fight the Hapsburgs, had to fight for his own political life against the Queen mother, Marie de Medici. Richelieu and his policy would eventually triumph, throwing the full weight of France against the Hapsburgs with momentous results for European history. But for now, France's effort was of little account, and Spain held on in Italy.

Despite these victories, ten years of warfare were taking their toll on Spain's wealth, manpower, and ability to protect its treasure fleet, which the Dutch captured for the first time in 1629. This and Spain's already seriously damaged finances forced it to declare bankruptcy, leaving outstanding loans unpaid.

Meanwhile, the Austrian Hapsburgs' overwhelming victory in Bohemia had led Denmark to invade Germany in 1625 supposedly in defense of Protestant liberties. The Hapsburg general, Albrecht von Wallenstein, and the Catholic League's general, Tilly, made short work of the

Danes, thus winning what is known as the Danish phase of the war (1625-29). The emperor Ferdinand felt so strong after his victory that he issued the Edict of Restitution in 1630. This declared that all land taken from the Catholic Church since 1555 must be returned to the Church. The Edict of Restitution drove thousands of Protestants from their homes and aggravated an already turbulent situation. It also alarmed and angered German princes, Catholic and Protestant alike, who felt the emperor was overstepping his constitutional powers.

At this point Sweden, prodded by fear of Austria's growing power, Spain's apparent weakness, and France's willingness to back it with money, threw in its lot against the Hapsburgs and invaded Germany. This transformed what was already a European wide affair into a prolonged and bloody war of attrition where neither side was able to win a quick decisive victory or willing to concede defeat. To the German people caught in the middle, the war seemed to have assumed a life of its own that would carry on until there was nothing left in Germany to sustain it.

Sweden was a relative newcomer to European diplomacy. However, thanks to a line of brilliant and ambitious kings, the "Swedish meteor" would burn brightly over the Baltic before fizzling out in the 1700's. Two other Baltic states, Poland and Russia, were also assuming greater roles in European affairs. As a result, events in Eastern Europe and the Baltic had a growing impact on events in Western Europe. At this point, it was peace between Sweden and Poland that freed Sweden to invade Germany.

Sweden's king, Gustavus Adolphus, was a brilliant and daring general with a highly trained and disciplined army at his back. He used Swedish draftees rather than unreliable mercenaries and put them in smaller units that could more effectively use their numbers and firepower. He further increased this firepower by experimenting with mobile field artillery that could wreak havoc on the massed formations of the day. These reforms proved their worth at the battle of Breitenfeld (1631) where Swedish discipline and firepower overcame the desertion of their Saxon allies to crush an imperial army under Tilly. The next year Swedish tactics won a bloody but costly victory at

Lutzen. In the smoke and confusion of battle, Gustavus was killed, taking a good part of the heart out of the Swedish effort.

Nevertheless, the Swedes pressed on, devastating Catholic lands on the way. Austria enticed its ally and Sweden's enemy, Poland, into the war, but a war further east against Russia neutralized the Poles. This prompted Spain to send an army north to retrieve the situation in Germany and the Netherlands. In 1634, the Spanish army crushed the Swedes at Nordlingen. The Swedes launched some fifteen heroic, but basically suicidal charges against the Spanish positions, all with disastrous results.

The war of attrition (1635-48). Once again, the Protestant cause seemed on the verge of collapse. The war had raged now for some sixteen years. Hundreds of German towns and villages were devastated, and whole regions were virtually depopulated. The war's destruction and upheaval brought famine, and with that came disease. Germany was ready for peace. Unfortunately, the other powers in Europe were not. Instead, the war was about to enter a much more destructive phase of attrition where each side, instead of expecting a quick and decisive victory, fought to wear down the other side no matter what the cost might be to themselves.

In 1635, France wholeheartedly entered the war, ending any hopes for a quick peace. Its strategy was still largely to fund two of Spain's enemies, the Dutch and Swedes, and let them do as much of the fighting as possible. At first its own armies were somewhat ineffective against Spain's veteran troops. However, the Swedes, bolstered by French funds, beat the imperialists at Wittstock (1636) and forced an invading Spanish army to withdraw from France. This in turn allowed the French to invade Spain to support a revolt in Catalonia.

Meanwhile, the Dutch had dealt a crippling blow to the Spanish war effort by destroying a Spanish armada of 77 ships at the Battle of the Downs (1639). The next year, the Dutch crushed another Spanish and Portuguese fleet off the coast of Brazil. These two naval battles had the double effect of permanently wrecking Spanish naval power in the Atlantic and triggering a Portuguese revolt.

Even for the victors, this war was exhausting and ruinous, and by 1640 most powers were ready for peace. However, several things prevented peace at this time. First of all, the tangled alliances kept any one power on one side from negotiating its own separate peace. Second, rulers had a limited resource base with which to pay for the war, and that was shrinking steadily as the war's destruction ate up those resources. This helped generate the vicious cycle of stalemate discussed above.

However, with each year, the tide of war was shifting more and more against the Hapsburgs. In Germany, the Swedes beat an Imperialist army at the Second Battle of Breitenfeld (1642), which caused most of Austria's German allies to desert it. In 1643, the French crushed a Spanish army at Rocroi, opening the way to invade the Spanish Netherlands and establish France as the premier power in Europe for decades.

With Spain on the verge of bankruptcy and collapse, Sweden's manpower depleted, and even France facing tax revolts, everyone agreed to start negotiations at Westphalia in 1645. Even then, heavy French and Swedish demands for land and money, Austrian reluctance to give up, and the fact that neutral Germany was the battleground caused the negotiations to drag out as the war dragged on.

End of the war and its results. In 1648, the Dutch finally made a separate peace with Spain, gaining recognition of their independence after an 80-year struggle (1567-1648). This and the growing threat of revolt in its own lands prompted France at last to come to terms that same year. The resulting treaty became known as the Peace of Westphalia.

The Peace of Westphalia symbolized and confirmed the great changes taking place in Europe's balance of power over the first half of the 1600's. Spain, bankrupt and exhausted, was now reduced to the level of a second-class power. Austria's influence was virtually destroyed in the Holy Roman Empire. However, it would find new life by expanding eastward against an even more corrupt and decaying power, the Ottoman Turks. Germany, whose population and property had suffered damages only surpassed by that of World War II, remained hopelessly broken into some 300 states. Yet out of the ashes of this destruction Brandenburg-Prussia would gradually emerge to unify Germany in 1871.

There were winners. Sweden emerged as the dominant power in the Baltic for another half century. However, by the early 1700's, its aggressive policies would wear it out and knock it out of the mainstream of European politics. The Dutch came out of the war in the best shape of any country in Europe. Dutch trade and economy actually flourished during the war, making enormous profits from raiding Spanish shipping, taking over Spain's colonial trade, and selling munitions to the various combatants, including Spain.

Politically, France was the big winner, severely weakening the ring of Hapsburg powers surrounding it as well as gaining territories along the Rhine. All this also had its cost. For one thing, France's war with Spain dragged on until 1659. Secondly, the terrible tax burden of the war triggered a revolt known as the Fronde (1648-53) that nearly toppled the monarchy of the young Louis XIV. As it was, Louis' monarchy emerged triumphant (unlike its counterpart in England also facing revolution), and France emerged as the dominant power in Europe. The age of Spain was giving way to the age of France.

The Storm breaks: Bohemia (1618-23)



At this time, the balance of power between Catholics and Protestants in Europe centered largely on events in Germany, which was split fairly evenly between the two faiths. Similarly, Germany's balance of power (political and religious) rested largely with seven electors who would choose the Holy Roman Emperor, when the old and childless emperor, Matthias, died. Since three electors were Protestant princes and

three others were Catholic archbishops, the key to *that* balance rested with the king of Bohemia, a staunchly Protestant land whose elective king, Ferdinand of Styria, was also the heir apparent to the Austrian Hapsburg lands.

Two things added further to the rising tensions and uncertainty. One was the emperor Matthias' Letter of Majesty in 1609, which granted the Bohemians religious freedom. Secondly, Ferdinand of Styria, a fervent Catholic, revoked that freedom.

The Defenestration of Prague).



In 1618 Bohemians in Prague retaliated by defenestrating (tossing out a window) two Catholic ministers. Miraculously they survived the 60-foot fall, Catholics claiming they were caught by angels, Protestants saying they landed in a dung heap under the window. Ferdinand rewarded the ministers for their trouble by giving them each the noble title von Hohenfall (of the Great fall). Whatever broke their fall, the Defenestration of Prague triggered the Bohemian Revolt which would escalate into the Thirty Years War, the first European-wide conflict.

Having deposed Ferdinand of Styria, the Bohemians elected Frederick, the Protestant elector of the Palatinate as their new king. Unfortunately, Frederick failed to supply the type of leadership the Bohemians needed for their revolt to succeed. His father-in-law, James I of England, was too remote and too preoccupied with other matters to worry about Germany.

One hundred thousand English ambassadors. Ferdinand, had few troops of his own and had to rely on Maximilian of Bavaria, the leader of the Catholic League in Germany and its army, the largest in Germany at that time. He also got

support from his Spanish cousins, the Pope, and Poland. By contrast, the Bohemians got virtually no support. A Jesuit play of the time made fun of this by having a messenger tell Frederick that he would get help in the form of 100,000 herring from Denmark, 100,000 cheeses from the Dutch, and 100,000 ambassadors from the English.

Imperial forces effectively crushed the Bohemians at the Battle of White Mountain. Frederick of the Palatinate's electoral vote was given to the Catholic Maximilian of Bavaria, while the Jesuits were unleashed on Bohemia to bring it back into the folds of the Catholic Church.

The Danish Phase & Golden Bird (1625-9)



Suppression of the Bohemian Revolt was not the end of hostilities. Growing Hapsburg power now alarmed Protestants outside of Germany. Enter Christian IV of Denmark, who had a well-organized nation-state & thought he could challenge growing Hapsburg power in Germany. Christian thought he would be welcomed as a champion of German liberties. However, he was sorely disappointed at the lukewarm reception he got from German Protestants who were nearly as suspicious of Danish intentions as they were of the Hapsburgs.



The Danish attack brought to prominence Albrecht von Wallenstein, a devious, opportunistic, and highly superstitious general who led the Hapsburg armies. Originally a

Calvinist, he converted to Catholicism in time to cash in on the rush for lands confiscated after the Bohemian revolt. The huge estates he got enabled him to supply large forces, a key to any general's success during the 30 years War when the state rarely could do so consistently.

However, in 1628, the Dutch dealt a crippling blow to Spain by capturing its entire treasure fleet, known as the Golden Bird. Spain also was involved in minor conflicts with France over Alpine mountain passes that were crucial for supplying and communicating with its army in the Spanish Netherlands. Therefore, despite Hapsburg victories in Germany, Spain was starting to feel the pinch. However, the fighting had hardly begun.

The Edict of Restitution (1630). In 1630, the emperor Ferdinand II, feeling confident after two easy victories, issued the Edict of Restitution (1630), which restored all Catholic lands lost to the Protestants since the Peace of Augsburg in 1555. Because of this, the Church reclaimed the lands of 2 archbishops, 12 bishops, & 500 monasteries, thus turning thousands of German Protestants into refugees. Also, since he didn't first consult the German Diet, Catholic and Protestant nobles alike were mad.

The "Lion of the North": Sweden (1630-35)



Into the fray stepped the fiery and charismatic king of Sweden, Gustavus Adolphus (1611-32), probably the most celebrated figure of the Thirty Years War. Since coming to the throne in 1611 at age 17, he already had twenty years of military experience fighting the Poles before he brought the Swedish army into Germany.

Although a strict disciplinarian, several things endeared Gustavus to his soldiers. For one

thing, he looked after their creature comforts, getting them the best food, blankets, and clothes he could as well as waterproof Russian boots. He shared their hardships, even digging trenches with them.

He was also a great general, and soldiers always love to follow a winner, especially one that personally leads them in battle. Once when urged to stay out of danger, he replied he wouldn't be a "king in a box". This was a trait that both endeared him to his men and would cost him his life.

Gustavus was so respected that an Italian mercenary hired to kill him couldn't pull the trigger when he had him in his sights. Even the emperor, Ferdinand II, was said to have cried upon hearing of Gustavus' death in battle.

The Swedish army was somewhat unique as well, being a truly national army consisting of draftees rather than mercenaries. Training and discipline were especially strict, although the Swedes would gain a reputation for being especially ferocious when turned loose on the civilian population. In fact, they were so notorious for their brutality that German mothers would scare their children into behaving with the threat that the Swedes would come in the night and get them.

Much of Gustavus' success was due to his prime minister, Axel Oxenstierna (1583-1654), a cool calculating diplomat who served as the perfect complement to the fiery Gustavus. It was Oxenstierna who laid the diplomatic groundwork, such as the alliance with and monetary support from France, which allowed Gustavus to concentrate on the battlefield.

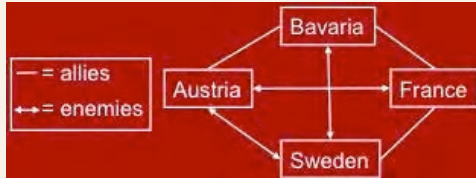
Gustavus: "If we were all as cold as you, we should freeze."

Oxenstierna: "If we were all as hot as your majesty we should burn."

At this time it was common for rulers to leave much of the responsibility of governing to a prime minister. For example, Louis XIII of France relied heavily on Cardinal Richelieu,

while Oxenstierna's counterpart in Spain was the Count-Duke of Olivares, as portrayed by the great Spanish painter, Velasquez.

The diplomacy at this time was especially complex, since Bavaria & the Catholic League were allied with both France and Austria. ...But France was funding Sweden against Austria and Bavaria ...whose armies were both led by Johann Tserclaes, Count of Tilly against Sweden.



In 1631, the emperor, Ferdinand II, dismissed Wallenstein for his constant intrigues with the enemy. This gave command of the Hapsburg, as well as the Catholic League forces to the Bavarian general, Tilly, known as the Monk in armor for his religious piety.

However, Wallenstein's value as a general had been his ability to supply his army from his extensive lands in Bohemia. Now that he was gone, those resources were no longer available, so Tilly had to find another source of food for his hungry army. Believing the town of Magdeburg had food, he put it under siege. Magdeburg tried to hold out until Gustavus Adolphus came to the rescue, but two breaches in the city wall let in the hungry imperialist troops.



What ensued was one of the worst disasters of the Thirty Years War. It was a windy day and a fire broke out in the confusion of sacking the town. Unfortunately, the imperial troops were too drunk and out of control to fight the fire that rapidly spread and destroyed the city. Of 30,000 inhabitants, only 5,000 survived, and most of those were women taken captive by the soldiers. Tilly himself, who was seen carrying a baby he

rescued from the flames, sent priests to get his men to marry their captives.

Word of the catastrophe at Magdeburg incensed Protestants, who, whenever asked for quarter by Imperial troops, would kill them with the cry "Magdeburg quarter."

The war had taken a nasty turn for the worse ...and everyone would pay the price.

When the Swedish and Imperialist armies finally clashed at Breitenfeld (9/18/1631), the Swedes arrived with several innovations. For one thing, they were organized in smaller squares that made them more mobile than the huge Spanish *tercios*. Swedish musketeers were also more thoroughly trained in the countermarch. Even their imperialist foes said the Swedes' rate of fire was three times greater than their own.

Also, the Swedish artillery was lighter and more mobile, allowing them to place their cannons in front of the army for the initial bombardment preceding the battle, and then pull it back as the two armies closed in on one another. X-rays of Swedish cannons showed they consisted of several layers of different materials, including leather, which made them strong, but light.

Early in the battle, the Swedes' Saxon allies were panicked by the wild charge of the imperialists' Croatian cavalry, with their red cloaks and demonic sounding battle cries, thus leaving the Swedes' left flank exposed.

This is where the Swedes' training really told as they adjusted to fill the gap and maintained a relentless rate of fire to hammer the enemy attacks to a standstill. Gustavus seemed to be everywhere, rallying his army until the opportune moment arrived for a counter-attack. Finally, late in the day, with the sun and dust in the Imperialists' faces, he led a cavalry charge that broke the enemy.



By nightfall, the Imperialists had suffered 12,000 casualties and lost another 7,000 prisoners, most of whom were Swedish soldiers by the following morning. The next year, the Catholic general, Tilly, would be fatally wounded by a cannonball in another battle, his right arm being shattered.

This was the Protestants' first major victory in the war, and everything seemed to cave in on the Imperialists who, for the first time, saw the war taken to their lands. Wallenstein reinstated as general by Ferdinand, met Gustavus at the battle of Lutzen in 1632. To make his army look bigger, Wallenstein pressed the local peasants into squares, and then burned their homes so the smoke would blow into the Swedes' faces.

As always, Gustavus was in the thick of the action. At one point, he led a charge and disappeared into the smoke, but only his horse returned. Enraged at their leader's death, the Swedes rallied to lay one more victory at their fallen king's grave. However, it was a hollow victory that took the heart out of the Swedish war effort.



Wallenstein didn't survive Gustavus Adolphus by long. His continual intrigues finally convinced Ferdinand to have him killed. One night, a group of mercenaries broke into Wallenstein's headquarters, cut him down, and rolled his body up into a rug. Of the nine soldiers who finished Wallenstein off, three were Scottish and four were Irish, showing the strong involvement of mercenaries from the British Isles, even if England itself was preoccupied with other affairs.

Meanwhile, Spanish reinforcements arrived to bolster the Imperialists' cause. At Nordlingen in 1634, the outnumbered Swedes launched no fewer than 15 desperate but suicidal attacks against the Spanish position. By the day's end,

their army of 25,000 men had lost 17,000 men, and the Protestant cause again lay in ruins.

Once again help arrived just as the Protestant cause seemed hopeless.

The Dogs of War

The Thirty Years War was a major disaster for Germany's population. However, it was no picnic for its soldiers, regardless of what the recruiting officers promised

Early in the war recruiters used music, colorful banners, and promises of glory and riches to attract naïve young men to enlist. However, as the war dragged on and it became increasingly harder to find willing recruits, recruiters replaced banners and music with gallows next to their tables as a subtle inducement to enlist.

Throughout most of history, the majority of time for soldiers has been spent in the boredom of camp. The Thirty Years War was no different, as soldiers whiled away their days with gambling, drinking, getting drunk and fighting over gambling gone bad, and picking fleas off their bodies. Since they were not consistently paid and supplied, they had to rely on traveling merchants, known as sutlers, to sell them clothes, food, and other day to day needs...often at exorbitant prices of course.

Not that battle wasn't bad enough. As one contemporary account described it: *"The cruel shots, the crashing of armor plates, the splintering of pikestaves, the screams of the attackers as well as the wounded, the blare of trumpets, the roll of drums, the shrill sound of fifes..." so that when over..." the earth that is accustomed to covering the dead was herself now covered with corpses."*

"Young soldier, old beggar" Despite promises of glory and riches to young recruits, most veterans ended up impoverished and often disabled. If wounded, the crude and brutal nature of battlefield surgery seemed to do all it could to ensure a prolonged death or miserable survival. Wounds typically required amputating the affected limbs to prevent infection from gangrene. Cauterizing them often involved

sprinkling the wound with gunpowder and lighting it, the shock of the explosion sometimes killing the patient.

However, as always, the big killer of soldiers was a not wound from battle, but disease. An army might lose 20-25% of its numbers a year, and 5% a month if it campaigned in the winter months.

One study of a Swedish village showed that of 230 recruits taken to war, only 15 eventually returned. In 1639, half the recruits were under the age of 15. Only 2 were over 18.

Many veterans went to monasteries where they intimidated and beat up the monks while stealing the food and drink. In France, the Church agreed to pay for a hospital for disabled veterans if the king would run it and take the veterans out of the monasteries. Thus was born the *Invalides*, the first veterans' hospital.

Casualties of War: The Four Horsemen of the Apocalypse. Fighting in the Thirty Years War consisted more of skirmishes and raids than it did of a few major pitched battles. Therefore many civilians had to deal head-on with war as a chronic problem rather than something to avoid just a few days a year.

Because of its scale and cost, the Thirty Years War seemed to assume a life of its own where neither side could either win a decisive victory or afford to quit. The abuses and atrocities of this war were nothing new. What made it unique was its prolonged nature, which multiplied its abuses many times over what had ever been seen before.

The ravages of plundering mercenaries in the Thirty Years War left hunger and disease in their wake, depopulating many areas of Germany by as much as 60%. The Palatinate may have lost as much as 98% of its population.

Pleas by the peasants for mercy were rarely heeded. Many peasants, having lost their homes, fled to the woods to subsist on whatever they could find there. When given the chance, they would take vengeance on stragglers, no matter

which side they supposedly represented. Some peasants even organized to defend their homes against both sides in the war (below).



Since plundering was technically against regulations, officers would occasionally crack down when it got especially out of hand. A few unlucky soldiers would be caught and hanged, serving as a very temporary warning to the others. One of the most notorious and feared military punishments was the dreaded “Swedish drink”, a mixture of excrement forcibly poured down a soldier’s throat.

The War of Attrition...and Peace (1635-48)

France’s entry into the war was a gradual process, largely because it was still trying to recover from its own Religious Wars. It had been funding Sweden’s war effort since 1631, and Louis XIII’s minister, Cardinal Richelieu, pushed for a more aggressive policy to stop the Hapsburgs.

It largely came down to a power struggle between Richelieu & the king’s mother, Marie de Medici, who wanted France to stay out of war. Marie expected her son to side with her, but on the “Day of the Dupes”, she lost out to Richelieu and was sent to an internal exile on a country estate.

France had chosen war.

Even after entering the war, France eased into its role by funding the Swedes and the Dutch against the Hapsburgs.

The Dutch certainly did their part. In 1639, they destroyed 70 out of 77 Spanish ships at the Battle of the Downs. The next year (1640) they destroyed another Spanish squadron off the coast of Brazil. These defeats triggered revolts in Portugal & Catalonia in 1640 further wearing down the Spanish.

All these disasters piled on top of one another, along with depopulation from famine and plague in the early 1600s, left Spain exhausted...but not ready to give up.

Events in Germany were going no better. At Wittstock (1636) the Protestants won their first major victory since Breitenfeld, capturing 133 enemy cannons. Wittstock both forced the Spanish army to withdraw from France and revived Sweden's military reputation. At the Second battle of Breitenfeld in 1642, the Swedes again triumphed, despite the imperialists' use of chain shot (two cannonballs chained together and fired from one cannon).

In 1643, the French crushed the Spanish at the battle of Rocroi, a battle that is generally seen as signaling the end of Spanish greatness. At the time of the battle, the dying Louis XIII, supposedly had a vision of France winning a great victory.



Finally, in 1645, both sides, exhausted by war, sat down to peace talks. However, each party came to the talks with the intention of gaining as much and compromising as little as possible.

France and Sweden each had the scent of blood in their nostrils, having gained the upper hand in the war, and made stiff demands for land and money to pay for their troubles.

Austria and Spain were like rats trapped in a corner, desperate and still dangerous, and not willing to compromise their long-standing imperial positions, even though the foundations for those imperial positions were rapidly crumbling away.

And in the middle was Germany, or, more properly, 300 German states: powerless to stop the armies rampaging over their soil while

providing a convenient neutral battleground on which other countries could do their dirty work.

So for three more years, the diplomats wrangled, the armies kept fighting, the soldiers plundered...and Germany bled.

But exhaustion was doing its job on even the big powers, especially Spain & Austria, but also France, which was seething with revolt. Thus, when the Dutch and Spanish signed the Treaty of Munster in 1648, finally granting independence to the Dutch Republic after 80 years of struggle, this prompted parallel negotiations a few miles away at Westphalia to put a final end to the war in Germany.

The Price of War

For England, war in the 1540s raised expenses to ten times Henry VIII's normal income, forcing him to sell Church lands, seize estates, force loans, and debase the coinage. Luckily, peace prevailed from 1558 to 1580, and the treasury recovered. However, when war with Spain broke out under Elizabeth, expenses rose from £50,000 in 1580 to £500,000 (1600).

France told a similar story, but grimmer. By 1596 the French crown had accumulated a debt of 100 million *livres*. Its yearly revenue was 31 million *livres* of which 24 million was already taken by debts. Careful nurturing by Henry IV during a period of peace (1598-1610) led to a partial recovery. Richelieu saw that France was in no shape to fight a major war until 1635, when it entered the war. In 1643, French expenditure was double the crown's income, leading to the Fronde (1648-53), a revolt that nearly toppled the monarchy.

Spain was in even worse shape, despite the silver and gold from the Americas. From 1540-1580, American silver production rose by a factor of ten times to 2 million ducats a year. However, the Armada of 1588 cost 10 million ducats, forcing Philip II to default on his loans in 1596. By 1598, Spain's debt was 100 million ducats, equal to 50 years revenue.

That's if the American mines maintained their productivity. They didn't.

Furthermore, in the 1590s, plague ravaged Spain's population, further reducing its revenues.

In 1607 the Spanish crown defaulted again, forcing it into a 12-year truce with the Dutch. In 1621 war renewed, leading again to lower revenues to cover higher expenses.

So once again in 1627, Spain defaulted on its loans. The next year (1628) the Dutch captured Spain's treasure fleet, dealing it another crippling blow that kept it from being able to pay its armies. As a result, overdue payments for the Army of Flanders triggered 46 mutinies during this era.

In 1643 sixty-five percent of Spain's normal revenue was spent just on interest, causing it to debase its coinage.

By then, silver production was down for good. So was Spain as a major power.

The human cost of the Thirty Years War. But it was Germany that paid the heaviest price. Politically, its 300 states were sovereign, with the right to charge taxes, declare war, etc., which was more of a curse than a blessing to Germany.

Demographically, Germany lost an estimated 30-40% of its population, going from 20 million to 12 million

- Marburg changed hands 11 times.
- Magdeburg was besieged ten times and brutally destroyed.
- Wurttemberg's population fell from 65,400 to 14,800, with half its buildings gone.
- Bohemia lost all but 780,000 of its 3 million people and 85% of its villages.
- Berlin & Colmar lost 50% of their respective populations.
- ^a Chemnitz lost 80%.
- Palatinate lost 98%.

The Swedish army claimed to have destroyed 1500 cities and 18,000 villages.

By 1648, many German peasants were living like wild animals in the woods.

Therefore, when we study how Germany was used as a battleground for the Seven years War and the wars of Louis XIV, the French Revolution, and Napoleon, remember the Thirty Years War.

When we study the rise of Brandenburg-Prussia and the unification of the German State, we should remember the Thirty Years War.

When we study two World Wars I and all their destruction and suffering with Germany at the center, remember the Thirty Years War.

And when we look at the Cold War, Germany's reunification, and painful transition back to nationhood, remember the Thirty Years War.

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89. THE COMPARATIVE GEOGRAPHIES AND HISTORIES OF EAST AND WEST EUROPE

Between East and West. Throughout the modern era, there have been striking contrasts between the histories, economies, and politics of Eastern and Western Europe. After World War II, those differences became especially obvious with the Soviet led Warsaw Pact forces poised on one side of the Elbe River and the Western NATO alliance on the other. As so often in history, the underlying basis for these differences has been geography.

First of all, Europe's latitude lies quite far north. For example, Rome, Italy is about as far north as Chicago, Illinois. However, it has a much warmer climate, especially in the winter. This is because Western Europe gets the moderating effects of a warm current known as the South Atlantic Drift and warm sea breezes coming across the Mediterranean from North Africa. Eastern Europe is too far inland to benefit much from either of these effects, and thus has more extremes in climate, especially in the winter.

However, the critical difference between Eastern and Western Europe has to do with waterways. Western Europe has an abundance of navigable rivers, coastlines, and harbors along the Atlantic Ocean and the Mediterranean, North, and Baltic Seas. In the High Middle Ages, these fostered the revival of trade and the rise of towns, a money economy, and a middle class opposed to the feudal structure dominated by the nobles and Church.

Kings also opposed the nobles and the Church, so the middle class townsmen provided them with valuable allies and money. With this money, kings could buy two things. First of all, they could raise mercenary armies armed with guns to limit the power of the nobles. Secondly, they could form professional bureaucracies staffed largely by their middle class allies who were both more efficient since they were literate and more loyal since they were the king's natural allies and dependant on him for their positions. As a result, kings in Western Europe were able to build strong centralized nation-states by the 1600's.

Eastern Europe, in stark contrast to Western Europe, provided practically a mirror image of its historical development before 1600. Being further inland compared to Western Europe hurt Eastern Europe's trade, since the sea and river waterways vital to trade did not exist there in such abundance as they did in Western Europe.

Factors limiting trade also limited the growth of a strong middle class in Eastern Europe. This meant that kings had little in the way of money or allies to help them against the nobles. That in turn meant that peasants had few towns where they could escape the oppression of the nobles. Therefore, strong nobilities plus weak, and oftentimes elective, monarchies were the rule in Eastern Europe before 1600. At the same time, the nobles ruled over peasants whose status actually was sliding deeper into serfdom rather than emerging from it.

However, there was one geographic factor that favored Eastern Europe's rulers after 1600. That was the fact that Eastern Europe is next to Western Europe. As a result, some influence from the West was able to filter in to the East. In particular, Eastern European rulers would emulate their Western counterparts by adopting firearms, mercenary armies, and professional bureaucracies. As a result, they were able to build strongly centralized states in the 1600's and 1700's. This was especially true in three states: Austria-Hungary (the Hapsburg Empire), Brandenburg-Prussia in Germany, and Russia.

However, the lower incidence of towns and a strong middle class has continued to hamper the development of Eastern European states in the modern era, since rulers there have had to build their states with less of the strong foundation of a money based economy, basing their states on less developed agricultural economies. While the strong middle class in Western Europe would provide the impetus for further developments in the West, notably the emergence of democracy and the Industrial Revolution, these two things have had a harder time taking root in Eastern Europe, making its overall political and economic development more difficult.

A Comparison of European and North American Climates

Below are the latitudes and average high and low temperatures in January and July for some select cities in Europe and North America.

Western Europe

	Latitude	January	July	Avg. rainfall	Record temps
<u>Amsterdam</u>	52° 18N	34-41°	55-69°	32.1"	3° & 93°
<u>London</u>	51° 09N	34-44°	53-71°	29.7°	7° & 95°
<u>Oslo</u>	59° 54N	20-31°	55-71°	28.7"	-15 & 95°
<u>Tromso, Nor.</u>	69° 41N	20-29°	48-59°	40.1"	-3 & 82°

Mediterranean

<u>Madrid</u>	40° 27N	32-51°	61-90°	17.8"	14° & 105°
<u>Rome</u>	41° 48N	38-55°	64-83°	31.6"	19° & 100°
<u>Athens</u>	37° 54N	44-55°	72-88°	14.6"	25° & 108°

Central and Eastern Europe

<u>Berlin</u>	52° 23N	26-35°	56-73°	23.7"	-11° & 95°
<u>Munich</u>	48° 08N	24-36°	54-72°	36.5"	-16° & 97°
<u>Prague</u>	50° 06N	24-34°	54-72°	18.8"	-13° & 97°
<u>Warsaw</u>	52° 10N	24-33°	55-73°	21.6"	-23° & 99°
<u>St. Petersburg</u>	59° 55N	15-24°	56-70°	21.2"	-36° & 91°
<u>Moscow</u>	55° 58N	11-21°	55-71°	23.6"	-44° & 95°

N. America

<u>Chicago</u>	41° 59N	13-29°	63-84°	35.3"	-27° & 104°
<u>New York</u>	40° 47N	25-38°	68-85°	46.7"	-15 & 106°
<u>San Fran.</u>	37° 46N	46-56°	54-66°	20.4"	27 & 103
<u>Calgary</u>	51° 06N	9-28°	51-72°	16.6"	-33 & 93°

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HAPSBURG AUSTRIA RESURGENT (c.1650-1700)

"We came, we saw, God conquered."- Jan Sobieski's announcement of the relief of the siege of Vienna in 1683

After the Thirty Years War and Peace of Westphalia had stifled Austrian ambitions in Germany, the Hapsburgs expanded eastward against the Ottoman Empire. Ever since the death of Suleiman the Magnificent in 1565, the Ottoman Empire had been in decline, with a corrupt government, rebellious army, obsolete military technology, and decaying economy. Such a faltering empire was a tempting target for its neighbors. However, the Hapsburgs were never able to concentrate solely on the Turks. This was because France under Louis XIV posed a constant threat of invasion to the various German states, which forced the Hapsburgs to divide their attention between east and west.



A coin of Leopold I dated 1677, showing Leopold with the distinctive Hapsburg chin (obverse) & the double-headed eagle, symbol of the house of Hapsburg, (reverse)

The Hapsburg ruler at this time was Leopold I (1657-1705), a mediocre ruler, but one lucky enough to have capable generals to lead his armies. Leopold's main goal was control of Hungary, which had been divided between Turkish and Austrian rule for over a century. When Leopold supported rebels in Transylvania against the Turks, war and an Ottoman invasion resulted. At this time, the Turks were ruled by an able family of viziers, the Koprulus, who started reforming the state in order to make the Ottomans a power to contend with once again. As a result, when the Turkish army started to advance westward, the alarm went up all over Europe, with even Louis XIV sending 4000 troops to help the Hapsburgs (and make himself look like a good Christian). In 1664, a much smaller, but better equipped and trained allied army caught and destroyed a Turkish army while it was crossing the Raba River. This was the first major victory of a

Christian army over the Ottomans. However, it encouraged Leopold's allies to feel secure enough to take their troops home, leaving him to face the Turks alone. Instead of continuing the fight, he signed a humiliating peace that damaged his reputation considerably. As a result, the Hungarian nobles under his rule rebelled and called in the Turks to help them.

This triggered the Turks' last major invasion of Europe, climaxing at the siege of Vienna in 1683. A huge Turkish army of possibly 150,000 men, but with no large siege artillery, was faced by only the stout walls of Vienna and a garrison of 11,000 men. The siege lasted two months as the Turks gradually used the old medieval technique of undermining the walls. Just as they were poised to take the city, a relief army from various European states arrived and crushed the Turkish army.

After this, Hapsburg forces and their allies advanced steadily against the Turks, only being interrupted by having to meet French aggression in the West. In 1697, the allied forces demolished another Turkish army at Zenta and watched as the once proud Janissaries murdered their own officers in the rout. The resulting treaty of Karlowitz (1699) gave Austria all of Hungary, Transylvania, and Slavonia. Karlowitz re-established Austria, now also known as Austria-Hungary, as a major European power. From 1700 until the end of World War I in 1918, the Hapsburg Empire would dominate southeastern Europe, while the Ottoman Empire staggered on as the "Sick Man of Europe."

Although the Hapsburg Empire had regained its status as a military and diplomatic power, it still had serious internal problems, namely a powerful nobility ruling over enserfed peasants, a hodge-podge of subject peoples with nothing in common except that they all called Leopold their emperor, and a variety of states that each had their own rights, privileges and governmental institutions. The Hapsburgs dealt with these problems in three ways. First of all, they neutralized the nobles politically by making a deal that let them continue to oppress the peasants as long as they did not interfere in the government. This left the nobles fairly happy while giving the Hapsburgs a free hand to run the state, largely with soldiers and bureaucrats recruited from other parts of Europe. Unfortunately, this also left the empire socially and

economically backward. Second, they tried to unite their empire religiously and culturally by imposing the Catholic faith and promoting the German language throughout their empire. Trying to submerge native cultures, such as that of Bohemia, under Catholicism and German culture mostly caused resentment against Hapsburg rule. Finally, they ruled each principality (Austria, Hungary, Bohemia, etc.) separately with its own customs and institutions. This kept nobles of different provinces from being able to combine in revolts against the Hapsburgs, but it also left the empire fragmented into a number of separate provinces. A large standing army and bureaucracy also held the empire together.

For the next two centuries the Hapsburg Empire would be a major power in Europe. However, it had a number of serious problems that it never adequately solved, being socially and economically backward and fragmented into a large number of provinces and increasingly restless ethnic groups. Together, these problems gradually ate away like a cancer at the Hapsburg Empire, rotting it out from within until there was hardly anything left to hold it together by the twentieth century.

The 2nd Turkish Siege of Vienna (1683)



An overview of how Vienna probably looked in the 1600s

The first siege of Vienna in 1529 was only a temporary setback for the Turks, who remained, especially in the European imagination, the biggest threat to Western civilization and Christianity. Therefore, when the Turks were on the move again in the 1660s, various European rulers rallied to Leopold of Austria's side, even Louis XIV of France sending 4,000 soldiers. In 1664, Austria's general, Raimund Fürst Montecuccoli, caught the Turks foolishly crossing the Raba River into the teeth of his army and finished them off regiment by

regiment before they could amass together on his side of the river.

Unfortunately, Leopold's allies thought this victory ended the war, and went home, leaving Leopold in the lurch. The Turks thought differently, however, and forced Leopold, now without his allies, to buy them off with an annual payment of 200,000 gold florins. This discredited Leopold and made it harder to drum up support the next time the Turks attacked.

In 1678, the tighter control Leopold tried to exert over Hungary upset a number of Hungarian nobles who, led by Emmerich Imre Thököly von Késmark rebelled against Hapsburg rule and called in the Turks. In 1683 this led to another Turkish invasion and the second siege of Vienna.

The Turkish army was said to number between 150,000 and 200,000 men along with assorted camels, elephants, and the vizier's harem. Among them were hordes of Tartar and Magyar cavalry. The Tatars were Turkic-speaking peoples who had been conquered by and probably ethnically mixed with the Mongols. They had several khanates, successor states of the Golden Horde, on Russia's eastern and southern borders. The Khanate of the Crimea was allied with and tributary to the Ottomans and sent forces to help them in 1683. They typically preceded the main army, pillaging and wasting enemy lands in their path. While destructive to the Austrians, this also deprived their Ottoman allies of valuable forage.

Anti-Turkish propaganda, such as the 17th century print below, played up (and exaggerated) the atrocities committed by the Ottomans. Perceived as the primary threat to Christianity, the Turks, were portrayed in the most terrifying terms in the European press, which has heavily distorted the West's view of them specifically and Islam in general ever since. Such propaganda also inspired what was essentially the last of the crusades, the War of the Holy League.

Because of Leopold's poor showing in 1664 there was little response to his call for help this time around. Consequently, he abandoned Vienna, leaving it with a garrison of only 11,000 men commanded by an able and determined officer, Count Ernst Rüdiger von Starhemberg. Before leaving, Leopold's brother-in-law, the Duke of Lorraine burned any houses and buildings outside walls to destroy any cover for Turks approaching the city. Unfortunately, sparks from these fires got inside Vienna and spread across the city, heading toward the arsenal holding 1800 barrels of gunpowder. Luckily, the wind shifted just before the conflagration reached the arsenal, thus saving the city. Meanwhile, through the smoke of this fire, the Viennese could see the smoke of distant villages in flames, signaling the approach of the Ottoman army.



Vienna's fortifications consisted of four layers of defense that the Turks would have to get through in slow succession:

- 1) A banked earthen grade;
- 2) Behind it an escarpment or wall with a palisade on top;
- 3) A Dry moat with blockhouses in it; and
- 4) The main wall reinforced with massive bastions at angles to one another.

The squiggly lines on top represent the Turks' siege trenches that gradually worked their way forward as a prelude to undermining the walls

In addition, the Turks had only brought light and medium artillery, but no heavy siege guns for pounding the city walls. While these were useful for firing over the walls into the city to make life as dangerous and miserable as possible for the inhabitants, the Turks would have to resort the slow and tortuous process of digging a zig-zag pattern of trenches (below) to avoid a direct line of fire from the enemy, undermining the walls, and then collapsing the mines so that

the fortifications above would also collapse, leaving a breach through which they could storm into the city. For this they concentrated on the western side of the city where suburbs still stood and the ground wasn't too marshy for digging mines.

On July 14, while their artillery opened fire on the city they started digging trenches in a snaking pattern to approach the walls, quickly closing the gap between their camp and the city from 400 to 200 meters. By July 17 they had the city surrounded by land and the river (with two bridges). On July 23 they exploded their first mines leading to a continuous series of assaults and counterassaults. On August 3rd, the Turks broke through part of the outer escarpment, triggering a series of furious battles until the defenders had to abandon the moat. Now, all that stood between the Turks and the city was the last, though most formidable, line of fortifications.

Life inside the city during the siege was, in many ways, typical of sieges throughout history. The most immediate danger was cannonballs setting buildings on fire. This led to an order to strip the roofs of all buildings within range of the Turkish guns. The roof timbers were then used for two things: repairing damage to the fortifications, and soaking them in pitch and lighting them in the moat during night attacks. As a result, by the end of the siege, Vienna presented a strange spectacle of roofless buildings.

Another hazard came from bombs exploding and shells shattering cobblestones, which sent potentially lethal fragments of rock flying in every direction. Therefore, the Viennese stripped their streets of cobblestones, which were also used for repairing fortifications or throwing down onto the attacking Turks.

Housing was an acute problem for homeless refugees who had flocked into the city to flee the approaching invasion. By the same token, a number of people, especially rich ones, had fled the city, so the refugees were put into their now empty homes.

Sanitation, in particular, the disposal of waste and the bodies of dead people and horses was an even more serious problem. Being summer, the Danube was too low to wash away waste. Therefore a town ordinance was issued to remove all dirt, rubbish, blood, and animal waste from the streets, since it was believed that an epidemic was caused by filthy streets "*in which soldiers and poor sick people lie bleeding over whom other people have to step.*" In addition, the large pits they dug for the waste soon filled up, triggering a dysentery epidemic that probably killed more of the city's inhabitants than the Turks did. Similarly, cemeteries soon ran out of room, forcing the Viennese to resort to mass burial pits.

Hospital and medical facilities were also inadequate, despite the bishop's efforts to turn the monasteries into hospitals. In particular, a lack of straw forced the sick and wounded to lie on the bare floor or ground. By mid August 30 people were dying each day; by late August it was double that. Not surprisingly, by the end of the siege, a poisonous stench permeated the city.

As in all sieges, the food supply was among the most acute problems. In the siege's first weeks, people ate well, not knowing how long the siege would last and therefore how much they should ration. In addition fresh vegetables and meat had to be quickly consumed before they spoiled. For whatever remained, mainly bread, prices skyrocketed.

Also, as was typical for sieges, bakers were a source of trouble, partly for cutting the quality of their bread with non-nutrients to expand their stock, partly for raising prices, and partly for improper baking since there wasn't enough fuel or ovens for baking enough bread for the crowded city. As a result, each baker had to put a mark on his bread for quality inspection, and sell it for a reasonable price. However, despite strict price controls, prices continued to skyrocket.

In a desperate search for food, some women sneaked out of the city to trade whatever goods or services they could to the Turks for food. In

response, Starhemberg, fearing someone might betray the city for food, erected three gallows in a prominent place to stop this activity.

Another aspect of enduring siege was the psychological effect of constant bombardment. Surprisingly, rather than going crazy, people more or less got used to it. For example, at the great Church of St. Stephen, a cannonball crashed through the roof during mass and landed in one of the organ's pipes. Soon after clearing the building, the congregation returned, figuring they were as safe there as anywhere else from random cannonballs hitting them.

The siege grinds on. By August, the siege had developed into an exhausting pattern of the Turks inching their trenches forward, setting off mines, and assaulting the breach, then the Austrians to driving them back and repairing the breaches. The pattern would then start all over again. All this time, the Ottoman commander, Kara Mustapha, was growing increasingly enraged at the slowness of his army's progress as this tiny garrison inflicted mounting casualties on the Turks in this grim slugging match. Still, the Turks were making progress and methodically demolishing Vienna's fortifications.

By September, they were working on the main walls against a garrison reduced by casualties and disease to around 4,000 men who were totally worn out by seven weeks of relentless fighting and wall repairs. Starhemberg did enlist 5000 civilians for guard duty, but the exhausted regulars still had to face the much more hazardous combat and repair duties. Luckily for the defenders, the Turks were concentrating only on the western walls.

Everyday, Starhemberg would mount the tower of St. Stephen, scanning the horizon for any signs of the relief army he had been promised. Indeed, a relief army of 60,000 Poles, Germans, Austrians, and other nationalities under the Polish king, Jan Sobieski, had been assembled and sent signals and messengers to the beleaguered city that they were on their way.

On September 10th, an advance party of this relief army, twenty soldiers, was captured. After seeing all 19 of his comrades killed, the twentieth soldier talked, convincing Kara Mustapha that an army of 100,000 Christians was on its way. So the clock was ticking down.

Two days later, final preparations were in place to blow the mines that would demolish the remaining fortifications and open the way for the final assault. Just then, the Christian army broke through a heavily wooded area to the west and attacked the Turks. The Turks, already weakened by the siege, held for a while, but eventually their line disintegrated into a rout and the city was saved.

Sobieski's message announcing the victory to the rest of Europe was short and to the point: "We came. We saw. God conquered."



Charge of the Polish winged hussars at Vienna (1683). When they charged the winged structures on their backs created an eerie whirring noise designed to terrify their enemies. The Hussars suffered such heavy losses from Janissary gunfire in this battle that they were disbanded soon afterwards, marking the final end of shock cavalry in European history.

A Short History of Pastries

After the siege of Vienna, Viennese bakers celebrated their victory by concocting a new crescent-shaped roll, the croissant, to mock the crescent moon on the Turkish flag. Thus two sieges of Vienna (in 1529 and 1683) combined to give us coffee and croissants, a good tasting part of a nutritious (if fictional) breakfast.

The history of pastries didn't start there, however. In the middle ages, "waffles of forgiveness" were sold outside of churches. In Paris, certainly one of the spiritual homes of

pastries, bakers weren't supposed to wear pants six days a week in order to keep them on the job, although it was probably more to ensure the supply of bread rather than bon bons.

When the Spanish first encountered chocolate in the New World, they kept it so secret that when Dutch pirates captured a Spanish ship, they dumped its cargo of cacao beans, thinking they were sheep droppings.

The War of the Holy League (1683-99)

The victory at Vienna led to the Holy League, an alliance of Austria, the Pope, Poland, Venice, and even Russia, which agreed to attack the Turks if Poland would let it keep the disputed city of Kiev. This was the last of the great popular crusades, its popularity fed by mass production of pamphlets and pictures showing Christian victories and promising salvation for recruits fighting the infidel. This drew soldiers from all over Europe, but especially Germany and Bohemia.

The wrecking of the Acropolis. In 1685, the ceremonial entrance to Athens' Acropolis, the Propylaea, which at that time was being used to store gunpowder, blew up when hit by lightning. Therefore, the Turks, needing a new arsenal, moved their gunpowder into the Parthenon. In 1687, the Venetians were besieging Athens when one of their shells hit, you guessed it, the Parthenon, detonating its store of gunpowder. The resulting explosion was responsible for most of the damage the Parthenon has sustained in its long history.

Hapsburg triumph. Meanwhile, the Holy League's forces slowly moved up the Danube, reducing Turkish fortresses one by one. However, in 1688, Louis XIV took advantage of Austria's preoccupation in the East and invaded Germany, starting the War of the League of Augsburg (1688-97). As a result, the Turks were able to advance back through Hungary and Transylvania until the Holy League was free to take them on again.

On September 9, 1697 the Imperial Army led by Prince Eugène caught an Ottoman army, led by Sultan Mustafa II, as it was crossing the Tisza

River on a pontoon bridge near Zenta. The Turks suffered a devastating defeat, 25,000 of them supposedly being killed or drowned, compared to only 430 dead and 1,600 wounded Austrian soldiers. Even the Janissaries, desperate to get away, killed their own officers right under the eyes of the Sultan and Grand Vizier. Making matters worse, the Sultan's vast treasure was also captured.

Mecheln; Duke of Lorraine and Bar; Grand Duke of Tuscany.”

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Two years later (1699) the Treaty of Karlowitz was signed, giving Hungary and Transylvania to Austria. With the renewal of war in the West by Louis XIV in 1700, the Hungarians raised the standard of revolt, which didn't collapse until the end of the war with France in 1713. In that year, the three thrones of Austria, Hungary, and Transylvania were made hereditary, signaling the consolidation of the more substantial Hapsburg Empire of Austria-Hungary. While the Hapsburgs would continue to hold the crown of the Holy Roman Empire until Napoleon Bonaparte declared it defunct in 1806, their real balance of power had shifted eastward.

The nightmarish political and ethnic complexity of Austria's empire can be seen in the full title and coat of arms of the Hapsburg ruler, Joseph II (1780-90):



“Roman Emperor, Apostolic King of Hungary, Bohemia, Dalmatia, Croatia, Slavonia, Galicia, Lodomeria, Archduke of Austria, Duke of Burgundy, of Styria, of Carinthia, and of Carniola, Grand Prince of Transylvania, Margrave of Moravia, Duke of Brabant, of Limburg, of Luxemburg, of Geldern, of Wurtemberg, of Upper and Lower Silesia, of Milan, of Mantua, of Parma, of Piacenza, of Guastalla, of Auschwitz and Zator; Prince of Swabia, Prince-Count of Habsburg, Flanders, the Tyrol, of Hennegau, of Kyburg, of Gorz and Gradisca, Margrave of the Holy Roman Empire, of Burgau, of Upper and Lower Lusatia, Count of Namur, Lord of the Windisch March and of

BRANDENBURG-PRUSSIA & THE ROOTS OF MODERN GERMANY (1640-88)

"...men under 60 years of age shall not be admitted to monasteries...Priests & curates (if not ordained), & the canons of religious establishments, shall marry...Every male shall be allowed to marry two wives; & each & every male is earnestly reminded, & shall often be warned from the pulpit, to so comport himself in this matter."—Declaration of the German Diet, 1650

As badly as the Thirty Years War had treated Hapsburg Austria, it was much worse for the German states comprising the Holy Roman Empire. Some estimates of population loss in the war go as high as 35-40%, with material damage at an equally frightening level. However, human beings are a resilient species in the face of such adversity, and recovery was soon underway. Travelers in Germany a few years after the war noted a marked absence of men of military age, but an unusually high number of children. By 1700, Germany's population was back to its pre-war level of 20,000,000. Similar resilience was shown by the tiny state of Brandenburg-Prussia in northern Germany. In 1648, no one looking at this poor little state devastated by war would have believed it was destined one day to unite all of Germany and become a major world power.

Brandenburg had lived under the rule of the Hohenzollern dynasty since 1411 when Frederick of Hohenzollern had purchased the territory and one of the seven electoral votes of the empire along with it. In 1618, the elector, as the ruler of Brandenburg was known, also got control of Prussia some 100 miles to the east, holding it as a vassal of the king of Poland. Brandenburg especially suffered during the Thirty Years War, since it was caught between the Catholic imperialists to the south and Swedes to the north, not to mention its own rapacious mercenaries. This was the situation when Frederick William, known as the Great Elector, took power in 1640.

Frederick William found an imposing array of problems that fell into three basic categories: geographic, military/diplomatic, and economic. Frederick William's main geographic problem was that the territories of Brandenburg and Prussia were separated by 100 miles of Polish territory, making it very difficult to control and administer. Economically, Brandenburg was a poor country with few resources and a sandy soil that earned it the nickname "the sandbox of Germany". There were several factors aggravating the military and

diplomatic situation. Worst of all was the devastation suffered at the hands of the Imperialists, Swedes, and Brandenburg's own troops. An estimated 60% of population was lost from the war, falling from 1.5 million to 0.6 million. Not only that, but Swedish troops were still on Brandenburg's soil in 1640, with other powerful threatening neighbors, such as Poland to the east and France to the west. To meet these threats, Frederick William's army consisted mainly of unruly mercenaries as likely to plunder his lands as defend them. And he also faced a powerful class of nobles known as *junkers* who were a constant obstruction to the government.

Frederick William figured that, above all else, he needed to tackle his military and diplomatic problems by building a good army to protect himself and his realm. The first step was to use what few reliable troops he had in order to destroy his old army of worthless mercenaries. One by one, he eliminated his old regiments until he had only an army of 2500 men, but it was a loyal core upon which to build. Through diligence and hard work, Frederick William built an excellent army of some 8000 men by 1648. This was enough to give him a voice in the treaty talks at Westphalia. His main goal was to get Pomerania which, although legally Brandenburg's, was occupied by Swedish troops. He had to settle for half of Pomerania, but that was more than he could have expected eight years earlier, and it did give him a coastline on the Baltic Sea.

Inspired by his success, Frederick William kept building up his army and bureaucracy. For an officer corps and civil officials, he turned to the junkers. Like his contemporary, Leopold I of Austria, he let the nobles maintain their dominance over the serfs. But unlike Leopold, who did this to keep the nobles out of the government, Frederick William *required* service to the state in return for those privileges. The junkers were expected to serve in the army as officers or as a highly efficient civil service that could provide better support for the army in the way of tax collection and supplies. They received fancy uniforms and excellent training, and soon had developed a high morale and pride in themselves as *the* officer class of Brandenburg-Prussia. That tradition of a proud Prussian officer class as the backbone of the state would continue all the way down to the twentieth century. As a result of this policy, Brandenburg-Prussia was the only state in Europe where the government successfully allied with the nobles and used them effectively in government service.

For recruits, Frederick William and his successors started to rely increasingly on peasant draftees rather instead of undependable and expensive foreign mercenaries. Such soldiers were much cheaper than mercenaries and much less prone to looting, although not as efficient. During peacetime, they could be kept in training for a few months each year while letting them farm and be productive the rest of the time. By the end of his reign, Frederick William was able to field an army of 45,000 men, with a smaller, but still sizable standing peacetime army.

In addition to defense, the army also helped Frederick William increase his power internally, since he could use it to demand taxes and enforce his policies. With those taxes, he could increase his army, which further increased his authority, and so on. As a result, Frederick William laid the firm foundations for absolutism in Brandenburg-Prussia.

As far as Brandenburg-Prussia's divided geography was concerned, Frederick William developed a postal system, which better tied together his scattered realm and also generated more revenue for the government. Even so, Brandenburg-Prussia was still a small fish in a big pond, and a turbulent pond at that. The later 1600's were hardly more peaceful than the early 1600's, with an aggressive Sweden to the north and Louis XIV's France to the west keeping Europe's armies constantly on the march. Thus, Brandenburg-Prussia's geography and revived army both forced and allowed Frederick William to pursue a foreign policy that was, in a word, opportunistic.

Throughout his reign he skillfully switched sides whenever convenient and sold his army's services to the highest bidder or most useful allies. For example, in the fighting between Louis XIV and the Dutch Republic, he switched sides three times. Likewise, in the Northern War between Poland and Sweden (1655-60), Frederick William at first was neutral, then on Sweden's side, and finally on Poland's side in return for recognition of his title to Prussia being totally independent of his overlord, Poland. This independent title gave Frederick William special status among German princes, who in theory were still under the power of the Holy Roman Emperor. In fairness to Frederick-William, it should be said that switching sides so often was typical of European diplomacy at this time. Although his policies gained him some land and the independent title to Prussia, his major accomplishment was holding his original realm together in the midst of such powerful neighbors while rebuilding its prosperity.

At the same time, Frederick William was every bit as talented in economic matters as he was in military and diplomatic affairs. He did several things to restore Brandenburg-Prussia's prosperity. For one thing, he took an active interest in the development and use of new agricultural strains and techniques that would allow crops to thrive in Brandenburg's sandy soils. Since the vast majority of the populace was engaged in agriculture, this was especially significant. Also, Frederick William encouraged immigration to repopulate his realm. Louis XIV's revocation of the Edict of Nantes in 1685 (which took religious freedom from the French Huguenots) certainly helped Frederick William here, since some 20,000 Huguenots found their way to new homes in Brandenburg-Prussia. This was largely with the help of the Great Elector, who supplied the Huguenots with traveling money, guides, land, tax exemption for six years, and various other privileges. Thus, France's loss was Brandenburg-Prussia's gain, since the Huguenots were some of the hardest working and most highly skilled people in Europe. Finally, the government controlled monopolies on the production and sale of such commodities as salt and silk. The efficient management of these monopolies raised important funds for the government.

Frederick William also used the army during peacetime to develop public works projects. For example, the army built a canal connecting Berlin, the capital, to the Oder River, thus increasing trade and tax revenues. Much of that extra revenue surely went back into the army. But at least it was partially able to pay for itself in peacetime. This also kept the army from causing trouble during times of peace and idleness.

By Frederick-William's death in 1688, Brandenburg-Prussia was in better shape than before the Thirty Years War. Its population was back up to pre-war levels, while its tax revenues had increased from 59,000 thalers in the 1640's to 1,533,000 thalers in 1689, over twenty-five times its original revenue. Its army provided more security than ever before while also giving Brandenburg-Prussia an unprecedented amount of international prestige and respect. However, this was only the beginning. Frederick William's reforms set the stage for two centuries of steady growth and expansion that would culminate in the unification of Germany and its rise to the status of a world power in the nineteenth and twentieth centuries.

Background to the Great Elector's Reign



Henry the Fowler originally established Brandenburg in the 900's as the Northern March (military frontier) of the Saxons on the Elbe River against the Slavs to the east. For centuries it changed hands between Germans and Slavs before the German element prevailed.

Prussia came into the Hohenzollern fold in 1618 just as the Thirty Years War was starting. However, it was held as a vassal of Poland and was outside the jurisdiction of the Holy Roman Empire. Besides Brandenburg and Prussia, the Hohenzollerns also ruled the tiny principalities of Cleve, Mark, and Regensburg scattered across the western part of Germany.

Frederick-William's early life was no picnic. Despite being the ruler of a principality, his father couldn't afford a proper baptism for several months. (Because of the high infant mortality rates, babies were baptized as soon as possible after birth to ensure they went to heaven if they suddenly died.) Even worse, his family had to flee Berlin when he was eleven years old.

Three years later, Frederick-William, whose great grandfather was William of Orange, fled to the Netherlands. At age 18, he had to return home to spend two years of unhappy inactivity while his father was under the influence of the Austrian minister, Schwarzenburg. In 1640, he inherited control of Brandenburg-Prussia, or what was left of it.

The next eight years were the worst period of the Thirty Years War, especially for Brandenburg, which lay in the path of the big aggressive power of the day, Sweden. Frederick-William's own army was so bad that one of his colonels threatened to burn the town he was defending if

it didn't pay off his men. Another regiment of supposedly 2200 men in fact had only 100. By the end of the war in 1648, Brandenburg had lost roughly 60% of its population, but Frederick-William had rebuilt a reliable army that secured his borders and earned him a place at the peace talks in Westphalia.

Frederick-William's Army

The chicken or the egg? So what came first: Frederick-William's army or the money to build his army? In this case it was the money. In 1653 the Brandenburg estates (assembly of towns and nobles), probably concerned about their country's security, granted Frederick-William taxes for building his army six years in advance in return for the right to run their own estates and appoint their own local pastors and police. Normally, taxes were only granted one year at a time, which kept rulers somewhat dependent on their estates. However, after six years of living without having to rely on the estates, Frederick-William had built up enough of an army that he had the leverage to demand taxes from a position of power.

Adding to his leverage was the fact that North German nobles (AKA junkers) were relatively poor compared to nobles in other parts of Europe and needed the employment from the state.

Fancy military uniforms were such a special mark of status in the 1600s that men's civilian fashions, in particular hats and boots, copied them.



Prussia's peasant recruits. Frederick-William started developing a canton system, where each canton (district) was responsible for supplying one regiment for the army. In fact there were enough recruits for two regiments, but the extras were kept as a reserve to replace any losses, thus

keeping each regiment up to full strength. By 1733, this system was fully developed, so that Prussia was able to keep a large standing army (still mainly of professional mercenaries) along with substantial trained reserves at a much lower cost than other states that relied solely on mercenaries.

This system especially would prove its worth in the Seven Years War (1756-63) when Prussia's ruler, Frederick the Great, would face vastly superior forces from Austria and Russia, even suffer a number of defeats, and yet constantly bounce back with new armies to surprise and defeat his enemies. To the Russians and Austrians, it seemed as if Frederick was producing new armies from the soil itself. In a sense he was, replenishing his ranks with trained peasants who normally worked the soil.

The Northern War (1655-60)

The Northern War was typical of the problems Frederick-William faced in the late 1600's. In a sense, it started with Sweden's Queen Christina (below) who had succeeded her father, Gustavus Adolphus, after his death at the Battle of Lutzen in 1632. At the time she was a young girl, so Gustavus' minister, Axel Oxenstierna had largely guided Sweden through the rest of the Thirty Years War.



Christina was sickened by the violence of the war and wanted to end it as soon as possible. She was also one of the more unique personalities of the age. Refusing to be limited to the normally constricted roles of women then, Christina wore men's clothing, rode horses in the straddling (not lady-like sidesaddle) position, went hunting, swore like a sailor, and seemed to do anything else calculated to shock her contemporaries.

In 1654 she shocked Europe in a whole new way by abdicating her throne, converting to

Catholicism, and moving to Rome to live as a nun. Her successor was Charles X, another in the line of warlike Swedish kings in the 1600s. One of the things pushing him to war was the end of the Thirty Years War, because, in an age of mercenaries, peacetime was often anything but peaceful with a bunch of unemployed professional killers on the loose in society. The obvious solution to such a problem was to start another war, which is what Charles did.

For his victim, he settled on Poland where Sweden's Vasa Dynasty had claims to the throne. In addition, success in such a venture would give Charles control of the Baltic. So in 1655 the Swedish army landed in Pomerania and marched across Brandenburg to invade Poland.

At this point, Frederick-William had three options:

- 1) Stay Neutral;
- 2) Join Sweden to throw off Polish over lordship of Prussia; or
- 3) Join Poland and fulfill his duty as a loyal vassal and try to get W. Pomerania

He did all three, although not at the same time.

At first, he stayed neutral, since his peacetime army at the time was down to 4,000 men. Therefore, he had to let the Swedes, who landed in West Pomerania march across Brandenburg to get to Poland. This bought him time to build up his army, which by war's end, would number 27,000 men and win respect for his neutrality.

Meanwhile, Charles had marched victoriously across Poland, winning recognition as its king. However, the Swedes' savage treatment of the Poles led to a revolt and Charles was forced back to the Prussian border. Desperate for help, he bought Frederick-William's support. Together, their combined army of 18,000 took on and defeated a Polish army of 70,000 poorly armed and disciplined men in a three-day battle. However, disease struck their army and they had to retreat again, with Frederick-William forcing Charles to recognize him as the sole ruler of Prussia in return for his continued support.



As in the Thirty Years War, much of the fighting in the Northern War consisted of skirmishes and ambushes, such as this Polish ambush of a Swedish supply convoy. These tactics especially suited the Poles whose light cavalry, many of them Cossacks, were very mobile and adapted to this sort of warfare.

Then, in 1657 the emperor, Ferdinand III, died. Frederick-William, as one of the electors, quickly became involved in all sorts of intrigues and deals to elect a new emperor. Finally, he cut a deal with the Hapsburgs and their Polish Catholic ally to vote for Leopold as emperor and switch sides in the war in return for being recognized as the independent ruler of Prussia.

By 1660, the Poles and Frederick-William had slowly driven back the Swedes until pressure from France and the Dutch along with Charles' death brought about peace and recognition of Frederick-William as the independent ruler of Prussia, a status no other German ruler outside of the Austrian Hapsburgs could claim.

Poland's Liberum Veto and Great Deluge
Poland, a large and powerful state in the 1500s, started coming apart in the 1600s. Much of its weakness came from a weak central government controlled by powerful nobles and a law known as the Liberum Veto. According to this, all laws had to be passed by the *Sejm* (legislature) unanimously. This may have come from an old Slavic practice where villages would resolve all matters by consensus.

Maybe this worked on the level of a village, but using it to run a nation was entirely impractical, especially when one considers the second part of the Liberum Veto. This stipulated that, even after passing several bills unanimously, if there was only one dissenting vote on a succeeding

bill, not only did that bill get thrown out, but all laws previously passed by that session of the Polish Diet were also thrown out and the Diet was dismissed for two years. Not surprisingly, this proved a useful tool for foreign powers or disruptive elements within Poland to paralyze its government by bribing just one member of the Sejm to exercise his veto.

As a result, the period of Polish history after 1650 is typically referred to as the Great Deluge, since Poland, already hobbled by the Liberum Veto, faced wars against Sweden, Russia, and the Turks, as well as a massive rebellion by the Cossacks in the Ukraine. These wars along with its weak government led to Poland's steady decline until it was finally partitioned by its neighbors in the late 1700s and briefly disappeared altogether from Europe's political maps.

The Polish Hussars

The pride of the Polish army was its heavy cavalry, known as Hussars, whose shock tactics proved surprisingly effective against pike formations and musketeers. Before entering the Thirty Years War, Gustavus Adolphus, who had fought for years in Poland against Polish hussars, adopted their tactics, and briefly revived the use of shock cavalry in Western Europe.

"We saw it.... the hussars let loose their horses. God, what power! They ran through the smoke and the sound was like that of a thousand blacksmiths beating with a thousand hammers. We saw it...Jezus Maria! The elite's lances bent forward like stalks of rye, driven by a great storm, bent on glory! The fire of the guns before them glitters! They rush on to the Swedes! They crash into the Swedish riters.... Overwhelm them! They crash into the second regiment - Overwhelmed! Resistance collapses, dissolves, they move forward as easily as if they were parading on a grand boulevard. They sliced without effort through the whole army already. Next target: the regiment of horse guards, where stands the Swede King Carol. And the guard already wavers!" description from *Deluge* Henry Sienkiewicz

THE GEOGRAPHY AND PATTERNS OF RUSSIAN HISTORY

The last and easternmost state to assume a place in European culture and diplomacy was Russia. Three aspects of Russia's geography have had a major impact on its history. First of all, its location on a high northern latitude and far inland gave it a cold and dry climate. That, combined with large areas of poor or mediocre soils, made it a cold dry steppe in which it is difficult to survive, let alone prosper. Famine has affected Russia on an average of one year out of three throughout its history.

Second, Russia lies on the vast Eurasian Steppe with no formidable natural barriers, which has invited a number of invasions with tragic results. In its early history, the main threat would come from the nomadic tribes to the east, making Russia a battleground between nomads and farmers. Only more recently have Russia's neighbors to the west been the more serious threat, as seen by the loss of an estimated 27,000,000 people in World War II. Ironically, Russia's harsh climate has saved it from invasion more than once. Napoleon and Hitler both found out the power of "General Winter" when they made the mistake of trying to conquer this vast northern giant.

Finally, Russia's inland location to the north and east of Europe has left it largely isolated from the mainstream of developments in Europe. Altogether, Russia's geographic features have made it a harsh land facing constant invasions. As a result, Russians have historically been torn between needing and wanting foreign ideas with which they could better compete and survive on the one hand and a suspicion of foreigners bred by the continual threat of invasions they have faced on the other.

This love-hate relationship with foreign ideas has created recurring stress throughout Russian history all the way to the present. In its early history, one can see three major stages of development where it has taken place. The first of these was when the first Russian state, centered on Kiev, was confronted with Byzantine influence from the south. The Cyrillic alphabet, Russian Orthodox Christianity, and Russian art and architecture all bear the distinctive marks of Byzantium. The next major influence came from the Mongols who conquered Russia in the 1200's and introduced the harsh absolutist strain that became a hallmark of later Russian government. The last phase, highlighted by the reigns of Ivan IV and Peter I, witnessed growing influence from Western Europe. Ivan IV's reign saw the first attempts to gain access to the West for its technology, the use of Western

artillery in the conquest of two Mongol khanates, and the attempts to replace the traditional Russian nobility with a new nobility of service. While his efforts had only limited success, they helped set the stage for the more widespread and concerted efforts of Peter I to westernize Russia. Despite the conservative backlash that followed Peter's reign, Russia from that time on was an integral part of Europe and European civilization.

Russia's Physical Environment

A Russian joke about Siberia and its primitive conditions:

Q: What's the only moving part on a Siberian toilet?

A: A stick to drive off the wolves.



Steppe and forest. Steppe (above) is generally defined as dry grassland receiving between 10-20 inches of rain per year. The Eurasian steppe extends all the way from the Pacific into Central Europe, only slightly interrupted by the very old and worn down Ural Mountains. Steppe grasses could get so tall that sometimes only the head of a man on a horse would be visible. However, that only describes the southern part of Russia. The northern part was more forested and, especially after the Mongols came in the 1200s, Russians became more a forest people, the woods providing them logs for homes, firewood for warmth, moss to chink cabins, bark for shoes, and meat, honey, and berries for food.

Russians were also a communal people and Russia an empire of lonely villages with a few cabins and an onion-domed church. Most cabins consisted of one room without a chimney leading to everyone and everything being constantly black from soot. As a result, public baths were a common institution in almost every Russian village where men and women washed together. After the bath, they would step outside, even in winter, to let the wind dry them off.

The round of seasons. Russia is especially known for its winters, which would last 160 days, alternating between bleak grayness, blinding snowstorms, and even more blinding sunlight reflected off the snow. Furs worn for warmth also carried lice (which spread typhus) and fleas (which spread plague). Spring brought the thaw...and mud. But May 1st was still a day of celebration to welcome the warm weather. However, spring's moderation would quickly give way to summer's long, hot, dust-choked days and very short nights. The heat and humidity of summer also brought rats and insects, such as swarms of mosquitoes in low-lying areas, which means most of Russia since it is so flat. In September came the rains and with them more mud, soon followed by frost, ice, and once again winter.

Travel in winter by sleigh over hard ice and snow was often preferred to travel in other seasons when roads were muddy or dusty and full of potholes.



Siberia. As extreme as the climate in European Russia (basically west of the Ural mountains) may seem, it pales in comparison with Siberia, which is further removed from the moderating effects of large bodies of water than any other landmass on earth. That is if one does not count the Arctic Ocean, which until the twenty-first century has mostly been a frozen icecap.

Temperatures tend to get colder the farther east one goes. Outside of a few bases in Antarctica the Sakha district of Siberia is probably the coldest inhabited region on earth, with permafrost reaching down 1,493 meters (4,898 ft). The town of Oymyakon has recorded temperatures as low as -96.2° F. While mainly noted for its cold climate, parts of Siberia reach 100°F in the summer, also a result of not having the moderating effects of large bodies of water.

When temperatures fall below a certain point, nothing seems to work. Cars and trucks are kept running 24 hours a day to keep the engine blocs from freezing. Windows need to be triple paned, and car windows double paned.



Construction of roads, railroads, and buildings is especially complicated by the permafrost, which thaws into a virtual mush down to certain depths in the summer. Therefore, foundations must be especially deep to keep structures from settling and sinking. In some cases, steam hoses are used in conjunction with pile drivers to melt the permafrost to depths of fifty feet. Once the permafrost re-freezes, it locks the foundations permanently into place. Given such huge challenges, the construction of something like the Trans-Siberian Railroad stands as a marvel of Russian perseverance.



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THE EARLY HISTORY OF RUSSIA TO 1725

Early history. The earliest written references to inhabitants in Russia were the Scythians, nomadic horsemen who inhabited the southern steppes in the time of the classical Greeks. Russia's grassy plains provided ideal grazing for these nomads' sheep and horses. Some time after 500 A.D., various Slavic tribes, ancestors of most of today's Russians, moved in and settled down in Russia. Then, around 900 A.D., Vikings, known as the Rus, came in and united the Slavs under a state centered around Kiev.

The Rus used Kiev and other Russian cities as bases from which to raid their more civilized neighbors to the south, in particular the Byzantines. The first such raids were successful in forcing tribute from the emperors in Constantinople in order to make the Rus go home. Later raids were met by the dreaded Greek fire, which set the Rus' navy and the very sea itself ablaze. In the wake of Greek fire came Byzantine missionaries, who converted the Rus and their Slavic subjects to Greek Orthodox Christianity. Byzantine civilization has had a profound impact on Russian culture. Many Russians today still cling to the Orthodox faith in spite of over seventy years of Communist disapproval. The Cyrillic alphabet and the onion domes that grace the tops of the Kremlin also bear solid testimony of Byzantine influence on Russia to this day.

Russian civilization and the Kievan state flourished until 1223, when the most devastating wave of nomadic invaders in history arrived: the Mongols. In 1223 C.E. at the Kalka River, the Russian princes were overwhelmed by a small Mongol army whose numbers were exaggerated by panic and confusion to some 150,000 men. Europe itself was only spared Asia's fate by luck rather than the prowess of its armies. Upon Chinghis Khan's death his far-flung hordes returned to the Mongol homeland to elect a new khan. However, the Mongols returned to Russia in 1237 to finish its conquest. They even struck into Poland and Hungary, giving Europe a taste of things likely to come. Amazingly, fate intervened again when Chinghis Khan's successor died. Thus Europe was spared a second time, and the incredible energy that had sent the Mongols to the corners of the known world started to fizzle out.

However, Russia remained the western frontier of Mongol power.

Mongol rule was exercised indirectly through whichever Russian princes were most willing and able to carry out the will of their masters. This meant doing things in the rough and brutal Mongol way, so that after two centuries of Mongol rule, much of the Mongol character and way of running a state had rubbed off on their Russian vassals. The Mongols' expectation of blind obedience to authority and the use of such things as a secret police to enforce their will and inspire terror, a postal relay rider system for better communications, and regular censuses and taxation became a major part of the Russian state that would later evolve.

Muscovy. The most successful of the Russian vassals to adapt Mongol ruling methods were the princes of Muscovy (Moscow) who earned the sole right to collect taxes and dispense justice for the Mongols, while increasingly resembling their Mongol masters in their ruling and military techniques. Eventually, the Muscovite princes turned against their Mongol masters and ended their rule in 1390. It was around Moscow that the modern state of Russia would form.

Mongol rule was gone, but the Mongol terror was not. Nearly every year, the horsemen of various neighboring khanates would ride in to spread a wide swathe of death and destruction, taking thousands of Russian prisoners to the slave markets back home. These raids would depopulate whole regions of Russia. Even Moscow was sacked by the Mongols five different times between 1390 and 1571. While destabilizing Russian society, these raids also forced the Muscovite princes to tighten their grip on society in order to provide better defense. Muscovite absolutism grew even stronger when the metropolitan, or patriarch, of the Russian Orthodox Church moved to Moscow, giving it claim to the title of "the third Rome" after Constantinople and Rome itself. Likewise, Muscovite rulers laid similar claim to the title of tsars (Caesars).

The first truly memorable tsar was Ivan IV, known as "the Terrible" (1533-84). Ivan's reign saw four momentous developments, all of which can be seen as growing efforts to bring in influence from Western Europe. The first, the destruction of the neighboring khanates of Kazan and Astrakhan to

the south and east, was made possible by the use of European artillery. Although the Mongols of the Crimea still remained to carry out their depredations, destroying these other two khanates did relieve the Russian people of some suffering from nomadic raids. It also opened the way for the rapid expansion of the Russians eastward across Siberia to the Pacific in much the same way the United States would spread rapidly westward to the same ocean in the 1800's.

Second was Ivan's long but unsuccessful war against Poland and Sweden to conquer Livonia and gain closer access to Western Europe. Compounding this failure was the third development, the Orthodox Church's growing fear of the Roman Catholic Church. Causing this was increased missionary activity by the Jesuits in the Ukraine and eastern Baltic. Using Western scholarship in debates with the less educated Orthodox clergy, they were able to convert growing numbers of people in these regions. Naturally, the Orthodox clergy saw this as an especially serious threat to their religion and became the most ardent opponents of contact with the West.

Finally there was Ivan's fight against the *boyars*, the powerful Russian nobles. Blaming them for the death of his beloved wife, he launched a concerted campaign against them by setting up the *Oprichnina*, or state within a state, where Muscovy was split between the traditional state and his own Oprichnina. Ivan then began an eight-year reign of terror (1564-72) against anyone he suspected of disloyalty. He also tried to replace the boyars with a new nobility of service that would be more subservient to the crown. Since Russia's economy was still quite backward, the tsar had to pay this service nobility with land worked by peasants. Consequently, many peasants fled to the freer lands in Siberia, now opened for settlement by Ivan's wars. The government reacted with a series of laws that tied the free peasants to the soil and made them serfs.

The "Time of Troubles". Ivan's reforms and purges made his reign a turbulent and costly one. Also, Ivan's accidental slaying of his most able son in a fit of passion left the throne to the feebleminded Feodor, who liked to spend most of his time praying and ringing church bells. The reins of government thus fell to the boyar, Boris Gudonov, who

succeeded Feodor as tsar in 1598. At this point, everything in Russia seemed to go wrong at once. The Boyars resisted his attempts to increase royal power. The Orthodox Church thwarted Boris' early attempts to bring Western European knowledge and culture to Russia. And, worst of all, in 1601 a horrible drought and famine killed millions of peasants who revolted out of desperation and the belief that the famine was the tsar's fault. The rebels got help from the Poles, who supported a supposed son of Ivan IV as tsar. Boris successfully defended his realm until, right on the verge of victory, he suddenly died, capping off a remarkably unlucky reign. The Poles had little better luck in holding the throne, their candidate being assassinated and replaced by another boyar. More peasant revolts and another Polish invasion, which took Moscow, tore Russia further apart. Finally, the Church managed to rally the people, drive out the Poles, and set up a stable government. A national assembly called the Zemsky Sobor set up a new dynasty, the Romanovs. However, the boyars were as independent and troublesome as ever while increasing their hold on the serfs below. The Church blocked any progressive reforms that it saw as irreligious even making it illegal to play chess or gaze at the new moon. This was the condition of Russia when its most famous zar, Peter the Great, took the throne in 1682.

Peter I (1682-1725) is one of the most interesting characters in Russian history. An enormous man (6'8" tall) with incredible physical strength, he had a strong drive and will to match his physical stature. From an early age, Peter was fascinated with anything from Western Europe, especially technology. He was an amateur clockmaker and dentist (to the dismay of anyone in court with a toothache), and especially loved ships. His early exposure to western ways made him realize how backward Russia was compared to the rest of Europe. Therefore, he was determined that Russia should modernize, which meant it must westernize.

The first step was the Great Embassy, a grand tour of Europe where Peter traveled in disguise so he could experience its culture and technology more freely. The huge tsar's identity was the worst kept secret in Europe, but he did learn about such things as Prussian artillery and Dutch and English shipbuilding first-hand instead of from a distance. In their wake, Peter and his wild entourage left a

trail of ransacked houses and enough material to keep Europe gabbing for years about these "wild northern barbarians." But Peter had also gained a much firmer understanding of European technology, further fueling his determination to bring it to Russia, whether Russia wanted it or not. The subsequent transformation of Russia is known as the "Petrine Revolution".

Peter first had to secure better communications with the West. At this time, Poland and Sweden effectively blocked such contact in order to keep Russia backwards and at their mercy. Peter's determination to end Russia's isolation and gain a "window to the West" as he called it, led to The Great Northern War with Sweden (1700-1721). This was a desperate life and death struggle for both Sweden in its attempt to stay a great power, and for Russia in its effort to become one. Despite the brilliance of Sweden's brilliant warrior king, Charles XII, Russia's superior resources and manpower, along with its winter, wore out the Swedes. The "Swedish meteor" which had burned so brightly in the 1600's was quickly fading away. In its place, the Russian giant started to cast its huge shadow westward and make Europe take note that a new power had arrived.

Peter's new capital and "window to the West" was St. Petersburg. Its location was less than ideal, being on marshy land, twenty-five miles from the sea up the Neva River, and in a high northerly latitude that gave up to nineteen hours of sunlight a day in the summer and as little as five hours a day in the winter. Stone for the city had to be brought in on the backs of laborers, since there were no wheelbarrows. As a result, thousands of laborers died while building this new capital, which legend said was built on the bones of the Russian people.

Meanwhile, Peter's other reforms left hardly anything untouched. He more tightly centralized the government and built up a more modern army, navy, and merchant marine along European lines. He dealt with his main obstacle to reform, the Orthodox Church, by not electing a new patriarch when the old one died. Without effective leadership, the Church could do little to fight Peter's reforms. After twenty-one years of this, Peter appointed a council, or Holy Synod, which made the Church little more than a department of state.

Peter tried to westernize the economy by first creating mines to develop the resources needed for industry. By 1725, Russia had gone from being an iron importer to an iron exporter. He brought in western cobblers to teach Russians how to make western style shoes. Anyone refusing was threatened with life on the galleys. As a result of Peter's strict measures, Russian industries grew, and with them an "industrial serfdom" tied to their jobs in much the same way the peasants were tied to the soil. Peter also worked to build up commerce and a middle class like that he saw in Western Europe. He raised the status of merchants to encourage more men to take up trade and started an extensive canal building program that connected rivers and made water transport possible between the Baltic and Black Seas. Peter tried to westernize people's lifestyles as well. He updated the alphabet and changed the calendar to get more in line with that of the West. He established newspapers, libraries, and western style schools, imported music, theater, and art from the West, and imposed European fashions upon the Russian people. Even beards were taxed, because they were not in style in Europe.

By Peter's death, Russia's economy and culture were starting to look much more western. However, many of these reforms were superficial, touching only the nobles or a limited part of the economy. For one thing, such widespread and comprehensive reforms would naturally cause a good deal of resistance and turmoil in a society as traditional as Russia. Therefore, after Peter died, there was a serious reaction against his reforms in an effort to return to the old ways. Nevertheless, Peter, by the force of his character, had so thoroughly exposed Russia to the West that there was no turning back. From this point on, like it or not, Russia was a part of Europe.

The icon and the axe

The icon and the axe have been two of the most prominent symbols of Russian culture through the centuries. The axe was used for everything from felling trees to carving spoons. It was an instrument of execution, a court weapon, and was carried by Russian musketeers, the Streltsy, to stabilize their muskets for firing. Even in modern times after its use was largely abandoned, it remained a symbol of revolution,

much as the forest, which the axe could destroy, was the symbol of traditional Russian culture.



The icon, such as the one of the archangel Gabriel (above) was adapted from the Byzantines and translated Orthodox Christian theology from words to images painted on wood that the people could understand and relate to. Icons gave divine sanction to human authority, but also humanized God, especially through the Virgin Mary.

The third part of the Trinity, the Holy Spirit, was represented in Western Europe by the dove and in Russia by the pigeon, (although the two birds are nearly identical and often referred to by either name interchangeably). This symbolism made the pigeon an object of reverence in Russia and it was forbidden as food.

The cannon and bell were corresponding symbols used in Russian towns. The bell, like the icon, was adapted from the Byzantines, but was used with much greater intensity. Since it was seen as the only proper way to praise God, all other instruments were abolished until the 1600s. There were no fewer than 5000 bells in Moscow's 400 churches. On festival days, their constant ringing drove foreign visitors crazy.

Both the largest cannon and bell ever cast were made in Russia. Both also turned out too big to use. The Tsar Cannon was cast in 1586, being over 5 meters long, weighing 40 tons, and having a caliber of 890mm. It was designed to fire only grapeshot, not the giant decorative cannonballs sitting next to it.



The Tsar Bell is 6.14 meters high, 6.6 meters in diameter, and weighed (when it was cast) 200 tons, making it the largest bell in the world and taking nearly 200 craftsmen to make it. Unfortunately, just as it was being cast in 1737, a fire broke out. The resulting uneven cooling from trying to extinguish the fire caused an 11.5-ton chunk of the bell to break off. It wasn't dug out of the ashes and finally put on a pedestal until 1836. It sounds awful.



Kizhi. While originally adapted from the Byzantines, Russia's distinctive onion domes were likely developed to shed snow.

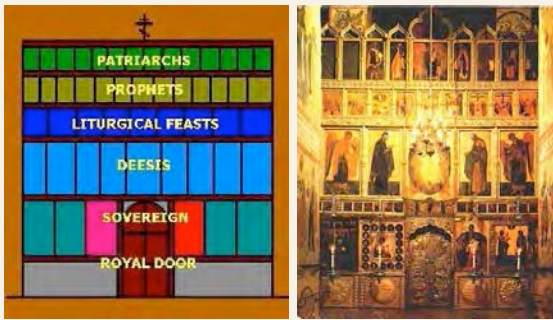
Christianity Comes to Russia

One of the Rus' earliest encounters with Christianity was a raid on Constantinople in 907 that caught the Byzantines completely by surprise. When confronted by the chain blocking the harbor, the Rus dragged their ships overland around the chain and successfully extorted a huge bribe to go away. Encouraged by their success, they returned in 941, only this time to be met by the dreaded Greek fire, which torched half their fleet and sent the rest of the Rus scurrying back north. Hot on their heels were Byzantine missionaries who finally convinced the Grand Prince of Kiev, Vladimir, to convert.

After exploring various religions, including Judaism, which was the state religion of the Khazars, Vladimir, settled on Christianity in 987, probably because, unlike Islam, it allowed consumption of alcohol and pork. Possibly also influencing his decision was the story that his men saw choirboys suspended from the roof of the Hagia Sophia and thought they were angels. Maybe there was something in the communion wine.

Since baptismal fonts only allowed 3 people to be baptized at a time, Vladimir sped up the process by driving his people en masse into the Volga River at sword-point. Despite this somewhat superficial nature of their initial conversion, the Russian people have clung tenaciously to the Orthodox faith through the most turbulent and trying times. Given how difficult Russian history has been through the centuries, their faith has often been all they have had to sustain them.

Iconostasis



Russian Orthodoxy was heavily influenced by strict conformity to ritual and tradition. A major part of this tradition was Iconostasis, the hierarchical arrangement of icons in the Church. It was originally a low fence meant to symbolically separate heaven & the divine (the sanctuary) from earth and the human world (the nave). It would display icons of the saints' days, which were rotated with the calendar of saints' days. Since constantly changing the icons was somewhat tedious, the icons were permanently installed on the fence and rows were added on top. Thus a custom originally designed to make saints' icons and the service more accessible to the laity evolved into a wall that separated them from much of the service.

Kievan Society and the Rota System



Kievan society and state were much looser and freer than has been typical of Russia throughout most of his history. In contrast to the enserfed peasants in medieval Europe at the time, Russian peasants were free. Slavic peasants also exercised an interesting form of democracy that demanded unanimous consent on important issues. However, unanimity was often obtained by the largest group carrying clubs.

Although some ceremonial influences of Byzantine absolutism were kept, Kievan government was loosely structured. Key to this was the Rota system of succession in which, whenever the prince of one state died, all the princes below him moved to next higher state. The order of succession was as follows:

1. Oldest brother
2. Next oldest brother
3. Youngest brother
4. Oldest brother's oldest son
5. Oldest brother's next oldest son
6. Oldest brother's youngest son
7. Second oldest brother's oldest son
8. Second oldest brother's next oldest son
9. Second oldest brother's youngest son
10. Youngest brother's oldest son
11. Youngest brother's next oldest son
12. Youngest brother's youngest son
13. Oldest brother's oldest son's oldest son
14. Oldest brother's oldest son's next oldest son
15. Oldest brother's oldest son's youngest son
16. Oldest brother's next oldest son's oldest son
17. Oldest brother's next oldest son's next oldest son
18. Oldest brother's next oldest son's youngest son
19. Oldest brother's youngest son's oldest son
20. Oldest brother's youngest son's next oldest son
21. Oldest brother's youngest son's youngest son
22. Next oldest brother's oldest son's oldest son
23. Next oldest brother's oldest son's next oldest son
24. Next oldest brother's oldest son's youngest son
25. Next oldest brother's next oldest son's oldest son
26. Next oldest brother's next oldest son's next oldest son

27. Next oldest brother's next oldest son's youngest son
28. Next oldest brother's youngest son's oldest son
29. Next oldest brother's youngest son's next oldest son
30. Next oldest brother's youngest son's youngest son
31. Youngest brother's oldest son's oldest son
32. Youngest brother's oldest son's next oldest son
33. Youngest brother's oldest son's youngest son
34. Youngest brother's next oldest son's oldest son
35. Youngest brother's next oldest son's next oldest son
36. Youngest brother's next oldest son's youngest son
37. Youngest brother's youngest son's oldest son
38. Youngest brother's youngest son's next oldest son
39. Youngest brother's youngest son's youngest son

With the large number of states involved, princes were constantly moving up in status, but providing little stability on the local level. Since Russia until then was relatively isolated from invasion, this didn't matter so much.

All that changed when the Mongols came to town.

The Mongols



The Mongol invasion of Russia started as a mere scouting mission of some 10,000 Mongols in pursuit of the defeated Khwarazmian ruler Shah Muhammad and exploring the area of the Caspian Sea. At the battle of the Kalka River (1223), this Mongol "scouting party" tore apart an army of Russians after their allies, the Polovtsy, fled, leaving them to bear the full brunt of the Mongol onslaught. After the battle, the Mongols built a platform on top of their Russian

captives on which they had a huge feast, crushing their prisoners to death in the process. Those Mongols were heavy eaters.

Luckily for the Russians, before the Mongols could exploit their victory, word came that Genghis Khan had died and they had to return to Mongolia to elect a new khan, a classic example of how cultures fail to change or adapt older customs to match new circumstances.

The return of the Mongols in 1237 involved a more systematic conquest, and devastation of Russia. Over the next three years they destroyed all of the major cities of Ukraine and Russia with the exceptions of Novgorod and Pskov. Kiev was totally destroyed in 1240. Even winter didn't stop them, as they could easily cross frozen rivers and even use them as highways to track Russians into the forests in the north.



Five years after the fall of Kiev, Papal envoy Giovanni di Plano Carpini wrote:

"They destroyed cities and castles and killed men and Kiev, which is the greatest Russian city they besieged; and when they had besieged it a long while they took it and killed the people of the city. So when we went through that country we found countless human skulls and bones from the dead scattered over the field. Indeed it had been a very great and populous city and now is reduced almost to nothing. In fact there are hardly two hundred houses there now and the people are held in the strictest servitude."

The Mongols also made several attacks deep into Europe, tearing up several armies in Hungary and Poland, their most notable victory taking place at Liegnitz in 1241. The only thing to save Europe from the Mongol onslaught was the death of the Khan, which caused the Mongols to return to central Asia to elect a new leader in 1242.

The Mongols' style of warfare may have kept them from maintaining more than a temporary presence in the more heavily forested areas of Europe and Northern Russia. A Mongolian army of 20,000 men required 50-80,000 horses, which the sparse pasturage of forests could not long support. Therefore, like locusts, such a flock would have to be continuously on the move towards fresh greenery and haystacks. This problem was less acute on the grassy steppes of Central Asia, including Ukraine where they maintained a presence for 200 years.

The most successful of the Russian vassals to adapt Mongol ruling methods were the princes of Muscovy (Moscow) who earned the sole right to collect taxes and dispense justice for the Mongols, while increasingly resembling their Mongol masters in their ruling and military techniques. Eventually, the Muscovite princes turned against their Mongol masters and ended their rule in 1390. It was around Moscow that the modern state of Russia would form.

Ironically, it was another nomadic conqueror, Timur the Lame, whose defeat of the Mongols allowed Ivan III ("The Great") to win Muscovy's independence in 1390. To add irony to irony, five years later, Muscovy's indirect benefactor, Timur, sacked Moscow.

A Continuing Scourge

Mongol rule was gone, but the Mongol terror was not. Nearly every year, the horsemen of various neighboring khanates, known collectively as Tartars (or Tatars) would ride in to spread a wide swathe of death and destruction, taking thousands of Russian prisoners to the slave markets back home. These raids would depopulate whole regions of Russia. Even Moscow was sacked by the Mongols five times between 1390 and 1571. While destabilizing Russian society, these raids also forced Muscovy's princes to tighten their grip on society to provide better defense.

An English traveler passing through an area of Russia noted its prosperity. Several years later, another English traveler noted it was empty

because of Tartar raids. Life on this dangerous frontier was so unstable that the average peasant house was only built to last only about five years.

A Crimean moneychanger watching that year's crop of new Russian captives being brought in asked one of them if there were any people left in his homeland.

Ukraine comes from the word meaning "frontier". During this period, even living in Siberian towns was considered more appealing than living in Ukraine.

The word *slave* comes from the large number of Slavic prisoners enslaved in these raids.

Combating the Tartars was a major task that required total unremitting and ruthless concentration of Russia's human resources. Each spring saw the mustering of 65,000 troops, armed much like their Tartar opponents, for annual wars that gradually pushed Muscovy's line of fortresses southward.

The Tartar menace would last until 1700, during which time preoccupation with the hordes from the East left Russia more isolated than ever from European affairs.

The Third Rome, the Vegetable Lamb, and the West



The double-headed eagle was originally an East Roman (Byzantine) symbol, the two heads representing the eastern (Asian) and western (European) halves of the empire. When Muscovy's Russian rulers claimed the title of Caesar (tsar) they also coopted the double-headed eagle. Meanwhile, so had the Hapsburg rulers of the Holy Roman Empire in Germany. Later the Hohenzollern rulers

of Germany's Second Reich would do the same.

Two events in the mid 1400s combined to inspire Moscow's claim as being the Third Rome. One was the union and subjection of the Greek Orthodox Church to the Catholic Church in 1439, a desperate (and unsuccessful) move by the Byzantines to enlist Western help against the mounting Ottoman threat to Constantinople. As a result, the Russian patriarch, who now resided in Moscow, claimed he was now the supreme leader of the true Orthodox faith.

The other event came in 1453 with the fall of Constantinople to the Turks. Since the ruler of Muscovy was married to the daughter of the last Roman (i.e., Byzantine) emperor, Constantine XI, he claimed to be the successor to Roman power.



Typical of European ignorance of Russia was its "discovery" by Richard Chancellor in the 1550s. During this trip he supposedly also discovered the "vegetable lamb" which apparently sprouted living lambs like flowers that could spin on the stem like an axle and eat anything within reach. Once all the surrounding food was gone, the lamb would shrivel up and die. The plant that inspired this legend is an actual fern known as *Cibotium barometz*. A specimen of its root was preserved under glass in the 1800s (above).

Not that the West had been totally unaware of Russia. For centuries, Western powers such as Poland, Sweden, and the crusading order, the Teutonic Knights had been expanding eastward at the expense of the Russians. In 1240 Alexander Nevski, the legendary Prince of Novgorod and later Grand Prince of Vladimir, defeated Swedes on the Neva River and then the Teutonic Knights at Lake Chud in 1242. Despite these victories, Russia's troubles with the West were far from over.

One of Russia's main points of contact with the West, the city of Novgorod in the North, was viewed by rulers and the Church in Moscow with suspicion as potentially betraying Russia culturally and politically. Ivan IV (AKA the Terrible) would especially punish Novgorod for this reason, however well founded it may have been in reality.

The Livonian War (1558–1583) was largely inspired by the role of Western artillery in conquering Kazan, which led to Ivan IV wanting a better year-round port giving him access to trade with the West. This led to a 25-year long war with Poland and Sweden who wanted to block Russian access to Western military technology. Although the Livonian War ended in defeat for Ivan, it marked the beginning of Russia's long drive to become a Western power.

Russian tradition and xenophobia. The Livonian War also brought to the fore Russia's long love-hate relationship with the West. One factor contributing to this was Russia's isolation and lack of money, resulting in lower rates of literacy, including among its clergy. Thus, every word and movement of the scripture and mass assumed mystical significance in its own right and had to be done exactly as tradition dictated or it was considered invalid.

Compounding this feeling was the Orthodox Church's growing fear of the Roman Catholic Church caused by Jesuit missionary activity in the Ukraine and eastern Baltic. Using Western scholarship in debates with the less educated Orthodox clergy, they were able to convert growing numbers of people in these regions. Naturally, the Orthodox clergy saw this as an especially serious threat to their religion and became the most ardent opponents of contact with the West.

As a result, Russia had a strong anti-intellectual tradition, since that often challenged traditional practices. By the same token, Russian culture often glorified mystics and even fools as being unpolluted by dangerous intellectual ideas. In Russian there was even a saying: "He's gone to books", meaning someone had gone insane.

Admittedly, there were a number of unhealthy things imported from the West, such as syphilis in the late 1400s and vodka around 1650.

Russia and Jewish culture. Traditional Russian culture and religion was more heavily influenced by Old Testament Jewish practices than were other branches of Christianity. One of early Russia's neighbors, the Khazars, had even converted to Judaism, which may have had some influence on Russian practices, including strict rules concerning beards and food preparation.

Until Peter the Great's reforms, Russians even used the Jewish calendar, which started in 5008 B.C.E. The common belief was that the Apocalypse would occur in the year 7000 (i.e., 1492). Adding to the apocalyptic expectations in the late 1400s was the rapid expansion of the Ottoman Turks at the expense of Christianity.

Ironically, Russian culture, which was heavily influenced by Old Testament Jewish practices, developed a strong anti-Semitic strain, largely because new ideas coming from the West were associated with Jewish intellectuals. Therefore, Westernizers in Russia were called Judaizers.

There were numerous instances of popular violence against Jews and Westernizing influences. For example, Ivan introduced the first printing press into Russia, but then let a mob burn it and drive out the printers.

Ivan IV: Terrible or Awesome?



Actually, Ivan's title was Grozny, which in Russian can mean awesome or terrible. In fact, both meanings applied to Ivan at various times. On the awesome side, he did free the Russian people from centuries of slave raids emanating from the Khanates of Kazan (1552) and Astrakhan (1556), although raids did continue from the Khanate of the Crimea in the South.

However, Ivan did have a mean streak, coming mainly from a rough childhood. His father died when Ivan was only three years old, making him tsar. Apparently the boyars (Russian nobles) mistreated him privately, which warped his character somewhat.

Some of Ivan's other atrocities supposedly included:

- Dropping puppies from a tower
- Killing an elephant that failed to kneel before him
- Riding through the streets of Moscow and whipping people in the face, or beheading them if he didn't like their looks
- Skewering people with a pointed stick
- Searing victims' flesh with red-hot pans heated on a stove
- Stripping peasant women naked and using them for target practice
- Drowning hundreds of beggars in a lake
- Detonating a barrel of gunpowder (with one of his boyars on it)
- Boiling a cauldron of water (with his treasurer Nikita Funikov, in it)
- Sewing a bearskin on Novgorod's archbishop & turning the hounds loose to hunt him to death
- Tying Novgorod's women & children to sleighs, driving them into the freezing Volkhov River

Once, when displeased with a delegation's petition, he poured boiling wine on their heads, burned off beards, and had them laid out naked for further fun. Just then, a church bell fell from a tower, causing everyone to run out to see what the commotion was about. The petitioners took the opportunity to run home. Apparently, their petition was not granted.

To commemorate the conquest of Kazan, Ivan had Russia's most famous cathedral, St Basil's, built in Moscow. After its completion, he supposedly blinded the architect so he couldn't design another cathedral to rival this one.



Ivan's early reign was actually quite good. He kept human advisors and listened to grievances of his subjects without torturing them. He reformed provincial government, giving the provinces more self-rule. Most notably, he destroyed the Khanates of Kazan and Astrakhan. To do this, he used scores of artillery and engineers recruited from the Danes.



Cossacks battle Siberians during Russia's rapid expansion to the Pacific in the 1600s.

Russia's rapid expansion to the Pacific in the 1600s was much like American expansion westward to the Pacific in the 1800s, since both peoples settled vast continental interiors inhabited by relatively small populations of native peoples.

Ivan's Reign of Terror: The Oprichnina (1564-72).

While the first part of Ivan's reign can be seen as at least partly good, it fell apart in 1560, when his wife, whom he dearly loved, died. Strongly suspecting the boyars (nobles) had poisoned her, he had two of them executed without trials.

Then, four years later, Ivan loaded up his treasures on a great train of sledges and, with his few remaining trusted aides, went to the small town of Alexandrov sixty miles northeast of Moscow. A month later, two letters arrived in Moscow from Ivan, denouncing the Church and nobles, and saying he had withdrawn from the government, although he still loved the people. The Russians begged him to come back, which he agreed to do under certain conditions.

He set up the *Oprichnina* (literally a state within a state). This included half of Russia, but scattered in different pieces. Some pieces had boyars' estates, but not others. Some, but not all, blocks of Moscow were included. He even set up a puppet tsar, a recently converted Tartar, and paid homage to him.

Ivan's main purpose in this was to crush the boyars in an eight-year reign of terror. To accomplish this, he had thousands of secret police, known as Oprichniks, riding through the country dressed in black and with two objects of terror hanging from their saddles: dogs' heads (to worry Ivan's enemies) and brooms (to sweep Russia clean of his enemies).

Not just individual boyars, but whole cities were terrorized. Novgorod, suspected of treason, underwent a 6-week slaughter in which 1000's were mutilated, roasted in the public square, or thrown into the river where Oprichniks waited in boats to shove their heads under the ice.

At Aleksandrov where Ivan presided over weird parody of a monastery, lecturing to his drunken "monks" or Oprichniks. Even the pious Ivan, who customarily sent names of his victims to monasteries so monks could pray for them, lost count and rationalized "God knows their names". In the midst of this chaos, the Tartars sacked Moscow (1571).

In 1572, Ivan finally put an end to this madness. It's impossible to estimate how much damage the Oprichnina did to Russia.

Ivan's death. Ivan accidentally killed his most capable son and likely heir in an argument over his whipping his pregnant daughter-in-law for the way she dressed. Ivan's eldest son had already died when a careless nursemaid dropped him into a freezing river. Below: Ilya Repin's painting of Ivan IV's grief after accidentally killing his son



In later life, Ivan was addicted to swallowing mercury, probably contributing to his pre-existing mental instability and such behavior as reportedly wandering through the palace howling like a wolf. Ivan died in 1584 while

playing chess. But Russia's troubles were far from over.

Cossacks



The Cossacks were a mix of Tatars, runaway Russian and Polish Peasants, and anyone else who wanted to join them, including some Germans. There were different Cossack hordes stretching from Poland and Ukraine eastward across Siberia. The features common to these various groups were their fiercely independent nature and Orthodox Christian (usually Old Believers) faith.

Russian Cossacks were loyal to the Tsar, but quick to rebel if they thought his rule was tyrannical. They were also ardent Old Believers who resisted Patriarch Nikon's religious reforms in the 1600s. They were especially renowned as horsemen, being perfectly adapted to the open and mobile warfare of the Steppes. The Tsars used them as their main defensive and offensive forces against the Tatars and Turks. Likewise, Poland used them to defend against Turkish and Tartar attacks.

Cossacks also raided Turkish and Tatar shipping on the Black Sea, swarming aboard enemy ships from long boats carrying some 70 Cossacks each. Such raids would typically be launched just before dawn to gain the element of surprise. Below: Zaporozhye Cossacks writing an insolent reply to the Turkish sultan in a painting by Surikov.



The Time of Troubles (1598-1613)



Ivan's reforms and purges made his reign a turbulent and costly one. Also, Ivan's accidental slaying of his most able son in a fit of passion left the throne to the feeble-minded Feodor, who liked to spend most of his time praying and ringing church bells. The reins of government thus fell to the boyar, Boris Gudonov, who succeeded Feodor as tsar in 1598. At this point, everything in Russia seemed to go wrong at once. The Boyars resisted his attempts to increase royal power. The Orthodox Church thwarted Boris' early attempts to bring Western European knowledge and culture to Russia

An unlucky reign. Among Boris Godunov's more unpopular and/or unsuccessful policies were:

- Giving Important offices to foreigners
- Encouraging economic ties with the West
- Encouraging Russian men to shave their beards
- Proposing the marriage of a Danish prince, a Lutheran "heretic", to his daughter, luckily the prince died
- Trying to destroy the boyars who had escaped Ivan's Oprichnina, but some like the Romanovs, escaped
- Trying to set up a university in Moscow, but the Church stopped it as foreign contamination. Therefore, he tried sending 30 Russians to study abroad, but 28 of them defected.

Worst of all, a horrible drought and famine in 1601 killed millions of peasants who revolted out of desperation and the belief that the famine was the tsar's fault. The rebels got help from the Poles, who supported a supposed son of Ivan IV as tsar. Boris successfully defended his realm until, right on the verge of victory, he suddenly died, capping off a remarkably unlucky reign.

After killing Godunov's son, Fyodor II, the Poles installed False Dimitry I. However their arrogant behavior led to False Dimitry I being overthrown and his remains being shot back to Poland from a cannon.

The boyars gave the crown to Prince Vasily Shuysky, a leader of the revolt against Dmitry, with the understanding that he would respect the special rights and privileges of the boyars. While the new tsar had the support of most boyars and of the northern merchants, he could not end the disorders in the south or fighting on Russian territory in the North between Poland and Sweden.

In 1608 a number of boyars, led by the Romanovs, supported a second False Dmitry, who rode a wave of discontent and brigandage from the Cossack south into the center of Muscovy. A kind of shadow government was formed in the village of Tushino, 9 miles (14 kilometers) west of Moscow, in which the boyars and bureaucrats of the Romanov circle took leading posts. It managed to gain Cossack support & manipulate Dmitry's pretensions while negotiating with the Polish king Sigismund III on terms by which his son Wladyslaw IV might become tsar.

Shuysky, in desperation, turned to Sweden for aid, promising territorial concessions along the Swedish-Muscovite border. At this the Polish king invaded Muscovy and besieged Smolensk (September 1609). The Tushino coalition dissolved, and Dmitry withdrew to the south. The position of the Shuysky government deteriorated, and in 1610 the tsar was deserted by his army and his allies.

One of the most famous incidents in the Time of Troubles was the Defense of the Troitse-Sergiyeva Lavra against the Poles in 1610. This monastery guarded the northern approaches to Moscow and was defended by a mix of some 2,200 Russian nobles, peasants, monks, and streltsy (Russian musketeers) against a Polish-Lithuanian army of 15,000. The siege lasted from September 23, 1610 to January 12, 1611. Both sides suffered heavily in this siege, the

Russians mainly from scurvy, until the Poles retreated upon the approach of a Russian relief force.

The boyars formed a 7-man provisional government for installing a Polish tsar, but it couldn't settle its affairs & restore order to the country. A new insurgent army, financed by northern merchants and staffed with Swedish troops, marched on Moscow with the intention of ousting the Polish garrison and of bringing the various Cossack bands under control. It nearly gained Moscow but fell apart because its leadership could make no arrangement with the Cossack leaders.

A year later, a second force, raised in the same northern cities and supported by Cossacks who had been part of the Tushino camp, was able to take possession of the Kremlin. A call was issued for the election of a new tsar.

By this time, the anarchy had gotten so bad, even by Russian standards, that resistance to the foreign invaders coalesced around the Church. By 1613, the foreigners had been ousted and order restored. The popular assembly, known as the Zemsky Sobor, chose Michael Romanov as the new Tsar. His dynasty, the last in Russia history, would rule Russia until its overthrow by the Russian Revolution in 1917.

Russia's Great Schism

As mentioned earlier, the Russians were very strict and conservative in their religious obligations. This was especially true of those known as the Old Believers. Among their customs was to remove the crucifix from one's wife and cover any icons before sex. They also believed they couldn't go to church without first bathing, even in winter. Keep in mind they air-dried themselves outside. Also, the church service had no chairs, so worshippers would stand for hours at a time. Believing God only meant human voices to make music, they rioted and destroyed six carriages of European instruments entering Moscow in 1649.

In 1651, Tsar Alexis I, a very pious tsar, elevated an ardent reformer, Nikon, as Patriarch of the

Russian Orthodox Church. The next year, Nikon introduced a number of reforms that were designed to get the Russian Church back in line with Greek Orthodox practice. The full list of these reforms occupied 400 pages of text, but some of the more controversial ones were:

- Changing “And in the Holy Spirit, the *True* Lord and Giver of Life” to “And in the Holy Spirit, the Lord, the Giver of Life”
- Changing how the number of fingers used in making the sign of the cross from two (symbolizing Christ’s dual divine and human nature) to three (symbolizing the Trinity) and how the fingers are held
- Changing the number of times one genuflects (kneels) at one point in the service from twelve (the number of apostles) to four (the number of gospels)
- Changing the direction of the Church procession from turning clockwise to counter-clockwise.
- Changing the number of Prospiera (loaves of bread used in the liturgy) from seven to five
- Changing the number of times the *Alleleuia* is said from two to three
- Changing the Easter procession from turning clockwise to counter-clockwise.



Boyaryn Morozova being taken to prison for her opposition in 1671 to Nikon’s reforms. Old Believers show her support by making the cross with two fingers, instead of the newly mandated three fingers.

Nikon also tried to make the faithful spend 4 hours a day in church and ban drinking. Eventually he even challenged the tsar’s power and was finally exiled. But the damage was done as the conservative Old Believers continued to protest. Many of them fled to the frontiers to establish new communities. In some extreme situations, whole congregations burned themselves (women and children too) in their

churches. Between 1684 and 1690 an estimated 20,000 Old Believers died this way. The most radical Old Believer, Avvakum, claimed a vision where Christ revealed Fedor’s father, Alexis was in hell for supporting reforms. This split in the Russian Church, know as the Great Schism, would last all the way to the Russian Revolution in 1917.

Moscow in the 1600s

Moscow in the 1600s was a city of wooden houses, many of them pre-fabricated, customers just specifying to suppliers the number and sizes of rooms they wanted. When it rained, Moscow was also a city of mud where people could sink up to their heads in the middle of the street, and many just stayed home. One might see drunks lying naked in the streets, having sold their clothes for one last drink. The poorhouse also doubled as a morgue, where unclaimed bodies lay in coffins made from hollowed out logs, waiting for someone to claim them. Heavy rains and the spring thaw could be dangerous times for Muscovites, since one could not get supplies into the city.

Dominating the city was the Kremlin (Russian for “fortress”). Its triangular wall was sixty-five feet high, twelve to sixteen feet thick, and 1.5 miles long, containing an area of 69 acres. It was also ringed by two rivers, a moat, and 29 massive towers, each a self-contained fortress. False Dimitry held out here for two years during the Time of Troubles before he surrendered and his ashes were fired back to Poland.

Within the Kremlin were three cathedrals, two of them designed by Italian architects. The largest, Assumption Cathedral (Uspensky Sobor) had a huge dome supported by four massive columns. The Cathedral of the Archangel Michael was the Tsars’ burial place until Peter I.

Bells were especially popular with the Russians. The triple consolidated bell tower of Ivan the Great, the Bono Tower, and the tower of Patriarch Philaret had a cupola 270 feet high with rows of bells of copper, silver, bronze, and iron, one weighing 31 tons. Answering the Kremlin bells would be the bells from Moscow’s

other 400 churches so that "the earth shook w/these vibrations like thunder". Moscow's bells would sometimes ring all night, driving foreigners to distraction.

The Tsar

The tsar lived a life surrounded by ritual, especially of a religious nature. Much like the Byzantine emperors on which so much of Russian culture was modeled, the life of the tsar was seen as a stylized reflection of Christ in Heaven. Alexis I, Peter the Great's father, was especially religious, rising at 4AM when he would pray for 20 minutes, kiss the icons and be sprinkled with holy water. He would then get the Tsarina (empress) and go to mass.

"If he be well, he goes to it {every religious rite}. If sick, it comes to him in his chamber. On fast days he frequents midnight prayers, standing four, five, or six hours together, prostrating himself on the ground, sometimes 1000 times, and on great festivals, 1500."-- Dr. Collins, who estimated Alexis fasted eight of twelve months, taking only three full meals a week.

After hearing petitions from boyars, some of whom would bow thirty times before addressing him, he would go to another mass for two hours, during which he would also carry on business. After that came administrative work until the midday meal, most of which he gave to boyars, followed by a three-hour nap and then Vespers mass, where he conducted more business. Then came an evening meal, after which he relaxed by playing chess or backgammon or listening to stories. The tsar also liked to hunt, having 200 falconers to care for his 3,000 falcons and 100,000 pigeons.

When addressing the Czar, one must use his full title. Accidentally omitting just one word was seen as treason. Although a number of these were added after 1700, the tsar's full title according to the constitution of 1906 gives some idea of what addressing him properly would involve:

Emperor and Autocrat of all the Russias, Tsar of Moscow, Kiev, Vladimir, Novgorod, Kazan, Astrakhan, of Poland, Siberia, of Touric

Chersonese, of Georgia, Lord of Pskov, Grand Duke of Smolensk, of Lithuania, Volhynia, Podolia and Finland, Prince of Estonia, Livonia, Courland and Semigalia, Somogotia, Bialstock, Karelia, Tver, Yougouria, Perm, Viatka, Bulgaria, and other countries; Lord and Grand Duke of Lower Novgorod, of Chernigov, Riazan, Polotsk, Rostov, Yaroslav, Belozero, Oudoria, Obduria, Condia, Vitebsk, Mstislav and all the region of the North, Lord and Sovereign of the countries of Iveria, Cartalinia, Kabardinia, and the provinces of Armenia, Sovereign of the Circassian Princes and the Mountain Princes, Lord of Turkestan, Heir of Norway, Duke of Schleswig Holstein, of Storman, of the Ditmars, and of Oldenbourg, etc

Proverbs about the Czar showed the near godlike status he held in Russian society:

"Only God and the Czar know."

"It is very high up to God; it is a long way to the Czar."

"The sovereign is the father; the earth [is] the mother."

Granovitaya Palace in the Kremlin had a massive throne and reception room 70 feet by 77 feet. Very little light in the palace so that candles had to be used even on summer days. Modeled after the Byzantines, it had two bronze lions that rolled their eyes and roared. There was a curtained window toward the ceiling of the throne room so the cloistered women of the palace could watch the proceedings without being seen. The tsar's study had a box he could lower to ground level for petitions.



The Tsar's bedchamber. The fancy white structure to the right is a traditional Russian stove for heating the room. On cold winter nights, peasants would sleep on top of such stoves to keep warm.

Women in Tsarist Russia

Russian women, following the Byzantine model, were treated like helpless children. In good upper class families, boys and girls didn't even play together. Lower class women were more essential to their husbands' economic welfare and typically had more freedom to socialize, etc. To that effect, peasant women preferred working with a distaff, to a spinning wheel since it was portable and could be taken to friends' houses where the women could socialize while working.

Marriages were arranged by the groom and two fathers to negotiate a dowry and determine proof of the bride's virginity. When the girl, wearing a veil, was introduced to her future husband, her father lightly whipped her on her back and handed the whip to her fiancé, who would say he wouldn't need it but hung it on his belt just the same. At the wedding, the girl fell at the groom's feet and touched her forehead to his foot, upon which he benevolently covered her with the hem of his coat as sign of his responsibility to protect her. Right after the ceremony, the happy couple went to bed for two hours, after which everyone crowded in to confirm she was a virgin. Below: a boyar (noble) wedding. Note the submissive demeanor of the bride.



The wife's duty was to tend house, see to her husband's comfort, and bear his children. Displeased husbands typically beat their wives and were encouraged to do so. Divorce involved putting the wife in a convent where she was considered "dead", which allowed the man to remarry. However, the Orthodox Church only allowed a man three wives, so he tended to treat the third one more carefully.

Daughters and sisters of the tsar were especially secluded in the women's quarters known as the Terem. Since they were not allowed to marry

foreigners (who were heretics, except for the Byzantines who were gone) or those below them in social status, there was no one they could marry. Thus they were virtually condemned from birth to a life of seclusion in the Terem. When they were sick, they were even examined through gauze so male hands couldn't touch them. Much of that was about to change with Natalya Naryshkina, Peter the Great's mother.

Peter the Great's Mother



Peter the Great's mother, Natalya Naryshkina, along with Peter's half-sister, Sophie, would lay the foundations for changes in the status at least of upper class women in Tsarist Russia. After them, four women would rule Russia in their own rights as tsarinas.

Natalya's husband and Peter's father, Tsar Alexei Mikhailovich (1645-76), was highly educated, passing a new law code on his own authority in 1649. In foreign policy, he unified Russia and Ukraine and prevented an incursion by the Crimean Tartars. His most controversial act was support of the patriarch Nikon's reforms, which sparked the Great Schism in the Russian Orthodox Church. He had 21 children from his two marriages, although only three of his sons survived him, and only one of those for more than a few years and in good health. That son was Peter.

In 1669, Alexei's first wife, Maria Miloslavskaya, died in childbirth. Although four of her five sons survived her, 2 died only six months later and the other two were feeble. Therefore, Alexis began to look for a new Tsarina to ensure the succession. One of his friends, Artemon Matveev, was fascinated with Western culture and even had a Western wife who shocked Russians by dining with the guests and joining in the table conversation. Matveev also had a young 19-year old ward, Natalaya Naryshkina, who charmed the 40-year old Czar. Although

pleased that Alexis wanted to marry her, Matveev was also afraid of the jealousy from the Miloslavskys (the previous tsarina's family) and other powerful Boyars, since a tsarina's family typically had great power and influence.

Therefore, he insisted the tsar go through the traditional beauty pageant process, another custom going back to the Byzantines where noble families would put their young unmarried women up for the emperor to choose the most desirable (and eligible) woman as empress. Not surprisingly, competition was incredibly fierce. In 1616, one family drugged a rival girl, had her declared ineligible, and her family exiled to Siberia for presenting such a girl to the tsar. Alexis' first choice in the pageant of 1647 had her hair twisted so tightly by rivals that she fainted, so she was declared unhealthy, and her family was exiled to Siberia. Natalya won, even after going through all the traditional motions, but Matveev was still charged with using magic herbs to influence tsar's choice. This delayed the marriage nine months, but didn't stop it.

Natalya, like her step-mother, had a semi-Western education and started making radical changes at court, getting the tsar to revoke his old decrees against dancing, playing or watching games, and singing and playing musical instruments at weddings. Not that this always worked. Her initial attempt to blend a Russian choir with Western style polyphonic instruments was a disastrous cacophony described as sounding like a "*flight of screech owls, a nest of jackdaws, a pack hungry wolves, and seven hogs on a windy day*" (Dr. Collins). The tsar even patronized the theater to please his bride, attending a 10-hour Biblical play.

Natalya preferred the less formal and stuffy atmosphere of the suburban palace, Kolomenskoe, where she could more easily watch embassies and other court functions. Even more shocking was her habit of traveling with her carriage curtains open so she could see outside, but also allowing common people to see her, something forbidden in Russian society.

This was the woman who would give birth to Russia's most famous tsar.

The Young Tsar's Childhood

Peter I was born May 30, 1672. Thanks to the custom of making an image of the patron saint the same size as the tsarevitch (crown prince) at birth, we know that he was 19.25" long and 5.25" wide at birth—a big baby who would grow to a huge size as an adult.

The celebration of Peter's birth included a sugar model of Kremlin. He was tended by a governess, a wet nurse, and a staff of dwarves to act as his servants and playmates. His father, mother, and Matveev lavished all sorts of gifts on him, such as music boxes from Germany and a miniature gilded carriage with dwarf ponies and four dwarf attendants. However, his favorites were military toys (drums, toy soldiers, forts, swords, pikes, arquebuses, etc.), and especially a gift from Matveev, a model ship.

The young tsars. In 1676, when Peter was not yet four years old, Alexis died. Peter's 15-year old half-brother Fedor, who had been named Alexis' successor without any expectation of him surviving his robust father, succeeded to the throne. In fact, Fedor's legs were so swollen he had to be carried to the coronation. More significantly, this brought about the return of Fedor's family, the Miloslavskys, who got Matveev exiled to the Arctic Circle after unsuccessfully trying to get Fedor to have him executed. However, Peter, as a royal prince, was sacrosanct and safe.

As tsar, Fedor did abolish the law of precedence, which automatically gave offices to higher ranked nobles, and even publicly burned the records of rank. Instead, offices were given on the basis of merit. Ironically, many nobles cursed Fedor for his progressive reform and favored the young Peter who would carry this idea much further.

At age 5 Peter started his lessons, memorizing long Biblical passages and the Russian choral litany, which he remembered all his life. Even as an adult, he would walk into a country church, join the choir, and sing loudly. He was also interested in history and battles and commissioned picture books showing cities,

battles, ships, weapons, etc. He also had a giant globe larger than a man brought from Europe.

When Fedor's wife died in childbirth, he was married to the high-spirited 14-year old goddaughter of Matveev, who was brought from exile back to court. Soon afterward, Fedor died, triggering an argument over which brother, the sick but older Ivan Miloslavsky, or the healthy but younger Peter Naryshkin, should be Czar. Since it would take weeks for the Zemsky Sobor (Russian parliament) to gather, it was decided to let "the people" decide, and the Moscow crowd chose Peter.

Revolt of the Streltsy. The Streltsy were 22 regiments of professional musketeers and pike men formed by Ivan IV to supplement his feudal cavalry and peasants. They were mostly Old Believers and very suspicious of growing foreign influences. In peacetime, most of them were stationed in Moscow as the tsar's honor guard. Having little to do, many of them became merchants, since they paid no taxes. Thus, the Streltsy were very wealthy, and Streltsy membership was highly coveted and virtually hereditary. This also made it hard to get them to fight and risk their lives in battle.

Making matters worse, colonels often stole their men's pay, which led to petitions that were usually ignored, while the petitioners were punished. When one such petitioner was about to be punished, he appealed to his fellows, causing seventeen regiments to mutiny against their officers.

When Natalya's new government allowed them to beat their officers the Streltsy had greater sense of their own importance. Then Sophia Miloslavsky, Peter's half sister, spread the rumor that the Naryshkins had poisoned Fedor and were plotting to kill the Miloslavsky's and replace traditional Russian culture with foreign ways. Thus the Streltsy revolted again and stormed into the Kremlin and palace.

Natalya showed that both Peter and Ivan Miloslavsky (Peter's other half brother) were safe and Matveev, popular with the Streltsy,

gave a speech to calm them down. However, after he left, an officer threatened to punish the Streltsy, causing the riot to erupt again. This time, it turned into a bloodbath as the Streltsy scoured the palace for three days, killing all the Naryshkins they could find (below). Sophia, with her enemies now out of the way, had her brother, the feeble Ivan, elected co-tsar along with Peter and herself chosen as regent. As a result of all this, Peter hated Moscow and the old ways in much the same way Louis XIV, who underwent a similar experience as a child, hated Paris.



Peter's games. Except for mandatory rituals as tsar alongside the sickly Ivan, Peter spent most of his time out of Sophia's way in the country at Preobrazhensky Estate. As tsar and a big rambunctious boy, there was no one who could tell him what to do, and Sophia was glad to let him waste his time in the country. Therefore he spent his time exploring and playing wargames, but receiving little formal education.

Peter's interests got him involved in a variety of crafts: type setting and book binding, lathe turning, blacksmithing, clock making, carpentry, stonemasonry, and the use of sextants. However, with no real formal education, he would be a virtually illiterate tsar, something he regretted later.

One day he found the rotting remains of a boat in a shed, which fed his growing fascination with ships and the Westerners who built them. He had the boat fixed up and would sail it around on a lake, which got his mother increasingly worried about her son. Therefore, she arranged a marriage at age 16 to a properly submissive Russian noble girl. But the marriage was a disaster, as she didn't like to sail boats or fire guns, so Peter quickly got bored of her and moved on to other hobbies, in particular, wargames.

Peter's wargames required strict discipline, marches, digging trenches, maintaining supply lines, etc. He took part as one of the men, at first as a drummer and later as a bombardier, since they got to make the most noise and have more fun than the officers. This had an important effect on Peter, fostering in him an attitude of promotion by merit. Peter even formed a regiment of 300 comrades, which in later years would become the tsar's honor guard, the Preobrazhensky Regiment.

As Peter got older, his games got more serious, including the use of live ammunition. This led to growing orders for more weapons and gunpowder, which Sophia obliged him with, probably hoping he'd end up getting killed.

Peter's games also got progressively more dangerous. In one of his elaborate fireworks displays a 5-pound rocket that failed to explode fell on a boyar's head and killed him. His wargames also became more elaborate and dangerous, using live ammunition. Peter himself was wounded, his mentor, Gordon, was shot in the thigh, and a prince was killed. After a bitterly fought 2-day game, Peter was not satisfied with the results, and had it repeated on a rainy day.

The games' growing seriousness (e.g., a complex fort which took a year to build) also led to a growing need for professional officers to run these operations. Sophia apparently felt no threat from these and even loaned officers and streltsy to Peter until her campaign against the Crimean Tatars compelled her to recall them from Peter's games. This brought Peter to the German Suburb.

Founded in 1652 after a Streltsy uprising and attacks on foreigners, the German Suburb was a settlement of about 3000 foreign (i.e., European) mercenaries just outside of Moscow. Although mercenaries from all parts of Europe lived there, it was called German since the first foreigners employed in Russia were mostly German and the Russians felt all foreigners were the same.

This community was an enclave of European civilization just outside Moscow with broad tree-lined avenues, two and three-story brick houses, well ordered gardens, reflecting pools, and fountains. It contained Catholics and Protestants living together in relative peace, their religious differences mollified by the long distance from home. Protestants could have their own churches, but Catholics had to say mass in their homes. Since they were often prohibited from leaving Russian service once they had come there, the mercenaries typically married Russian women, put down roots there, and adopted many Russian ways.

The German Suburb was an important mechanism of change for Russia, drawing more curious and progressive Russians there to learn about the West. Among its most frequent visitors was Peter, for whom this was possibly the closest thing he had to a family and school, teaching him not just about Western military technology, but also the less refined habits of soldiers such as smoking, drinking, and chasing women.

Peter made two especially influential friends there: General Patrick Gordon and Francis Lefort. Gordon (1635-99) was a Scottish Catholic and royalist who left England after the English Civil Wars. He served with the Swedes, was captured by and defected to the Poles, went back to the Swedes and back again to the Poles, all by age 25.

He was then attracted to "three years' service" in Russia, only to find out that three years meant as long as the Russians wanted him, threatening to send him to Siberia if he tried to leave. Therefore, he made a life for himself in Russia with a wife and children, who were held hostage in Russia when he went to Europe on official business. Peter became Gordon's protégé and student, learning all he could of military matters from him. When Gordon died, Peter closed the old soldier's eyes.

Francis Lefort was a Swiss Mercenary who shared Peter's taste for partying.

He was urbane, sophisticated, and had a talent for organizing parties, balls, and banquets. Although not much of a deep thinker, he symbolized much of what appealed to Peter of Western Europe. Lefort was nearly as big as Peter and was one of two people who could calm him down in his convulsions. However, even he couldn't keep up with Peter's wild energetic lifestyle and died around age forty, probably from too much partying.

Lefort also provided Peter with the wild boisterous women he preferred to the passive Russian women of the Terem, including his first mistress, a German woman, Anna Mons, whom he took around with him in public, and who could match Peter drink for drink. Therefore she was his mistress for twelve years.

Of women, Peter had plenty, but he preferred peasant stock, since they were cheaper to keep around and his tastes were less than refined anyway. His one true love and eventually his wife and empress was Catherine I, a peasant whose cheerful, understanding nature won his heart. She accompanied him on campaigns, kept her hair short, slept on the ground, and didn't flinch at sight of men being shot—all the things a man like Peter looked for in a woman.



Peter was given to violent convulsions and contortions of body and neck, possibly epilepsy or the results of venereal disease, and only Anna and Lefort could soothe these. Anna largely overcame court resentment of her origins by interceding to save many of them from Peter's wrath. Peter was careful not to show his temper in front of Anna and would even conceal severe sentences from her.

After Peter, every adult male Tsar married a foreign woman, which would have a great influence on Russia

Sophia's Regency and Downfall (1682-89)



Peter's half-sister, Sophia (above) ruled quite capably as his regent, even participating in council meetings, something virtually unheard of for Russian women. Helping Sophia was her lover and prime minister, Vasily Golitsyn, who was even more heavily westernized than Medvedev had been, probably making him all the more attractive to the progressive regent.

Sophia tried to follow a peaceful policy with Russia's neighbors, realizing that a woman trying to lead the army could be quite risky. One problem Russia had was with Poland over possession of Kiev, which Russia had taken in 1662 and promised to give back in two years. However, since Kiev was primarily Russian and Orthodox, Russia wanted to keep it, which was a sore point with Poland.

Then, in 1683, Poland's Jan Sobieski led the relief of Vienna from the Turks, starting the War of the Holy League. When the Turks beat the Poles in 1685, the Poles needed help, leading to a treaty giving Russia Kiev in return for attacking the Turks' vassals, the Azov Tatars. As a result, Russia's hitherto excellent relations with the Turks were now gone.

In 1687, upon the Boyars' insistence, Golitsyn led an expedition of 100,000 men against the Tatars. Very simply, the Tatars just burned the grasslands in the Russians' path and leaving them no forage for their horses, forcing the Russians to retreat, losing up to 45,000 men.

A second expedition started in December 1688, leading to great suffering from the cold and mud. However, advance parties of Russians had burned the grasslands, so there were new green shoots just emerging by the time the Russian army got to them. Daily raids by Tatar cavalry were driven back by artillery until the Russians

reached Tatar fortifications across the Isthmus of Perekop in Crimea. Golitsyn, unwilling to attack without siege equipment, unsuccessfully tried negotiating and then retreated.

Sophia overthrown. Peter was angry over this fiasco and especially at having to preside over a sham ceremony rewarding Golitsyn for his supposed victory. Tensions were growing between the two sides.

They exploded in 1689 when Sophia ordered a larger than normal escort of Streltsy to gather in Moscow for a pilgrimage to a local monastery where a murder had recently occurred. Concerns grew in Moscow over a repeat of the Streltsy bloodbath of several years earlier.

Then an anonymous letter came to Sophia, warning of Peter taking his play regiments to attack her and Peter's co-tsar, Ivan. As Sophia reacted by gathering more streltsy, Peter's followers hustled him from his sleep at Preobrezhenskoe to the safety of Russia's holiest (and heavily fortified) monastery, Troitsky. Peter gradually tightened noose, summoning Russian and foreign officers to abandon Sophia and come to his side, which they did since he was the tsar. Also, the streltsy and patriarch hated Sophia's westernizing policies, not realizing to what extent the young Peter would go to westernize Russia. But that was all in the future.

Bit by bit, Sophia's support eroded away until she surrendered and was exiled to a convent. Although comfortably imprisoned and not forced to become a nun, she still found these conditions intolerable compared to the unprecedented freedom (for a Russian woman) she had held. Golitsyn, who had acted in good faith and not explicitly against Peter, was exiled to the Arctic where he lived until his death in 1714 at age 71.

Sophia's government had been competent and another step in Russia's westernization, thus paving the way for Peter, whose reign seems more evolutionary than revolutionary in this light. Sophia also signified a giant step for Russian women. After her four women would

rule Russia as Tsarinas, largely, owing their positions to her. Thanks to her, there was an almost unimaginable gulf between Russian women (at least nobles) of the 1600's and 1700's.

The Character of the Tsar



Peter's official court portrait and how he preferred to look

Peter was a huge and powerful man, especially for his times, being 6'8.5" tall. With his bare hands he could supposedly bend iron nails and roll up a silver plate like a piece of paper. He also had a violent temper, and was given to pummeling even his most trusted ministers and friends with his powerful fists. Other than that, he didn't look the part of a divinely appointed ruler, adopting a sloppy lifestyle and dress because he was too preoccupied with more important matters. Although he had little formal education, he did have an intense fascination with anything mechanical, especially clocks, which he could take apart and reassemble.

He especially prided himself on his dental skills and carried around a bag of teeth he had forcibly extracted from people dumb enough to admit to a toothache. Given his size and strength, he was perfectly capable of holding someone down in a chair and extracting teeth until he found the right one. Once when his valet complained that his wife denied performing her marital duties on the pretext of a toothache, Peter summoned her and extracted a perfectly good tooth to teach her a lesson.

Peter also had a crude sense of humor. For example, he forced one aide to eat a tortoise and another to drink a flagon of vinegar. He also found it funny to force little girls to drink large amounts of brandy.

The All-joking All-drinking Synod of Fools and Jesters (AKA The Jolly Company) was a motley collection of foreigners and boyars with whom Peter partied. And, as with anything else in his life, Peter didn't party in half measures.

A typical banquet with the Jolly Company lasted from noon till dawn, though some lasted two or three days, involving gargantuan meals with intervals for smoking, bowling, archery, and target practice with their muskets. Toasts were accompanied not just by cheers and shouts, but also blasts of trumpets and salvos of artillery. Revelers would sink to the floor, pass out, wake up and start partying again, only to pass out again later on.

Peter believed hard drinking was the measure of a man and once arranged a drinking bout between his confessor and a high-ranking French prelate. After an hour, the Frenchman rolled under the table and Peter hugged his confessor for saving the honor of Russia. Peter could maintain a phenomenal pace of heavy drinking all night and then getting up at dawn to work in the shipyards or whatever he was doing that day.

Eventually Peter's parodies were organized for religious mockery, although he specifically mocked the Catholic Church to avoid offending devout Orthodox Christians. He gave his followers mock titles such as "prince-pope", cardinal, bishop, priest, and deacon (Peter's title). The group was devoted to Bacchus, with the prince-pope, Peter's old tutor, blessing drinking bouts by making the sign of the cross with two long-stemmed Dutch pipes.

Holiday rites were especially elaborate. At Christmas, Peter and up to 200 of his friends would ride around hanging out of sleighs, led by the prince-pope wearing a costume of a tin hat and clothes sewn with playing cards, while perched on a barrel in a sleigh drawn by 12 bald men. They would burst unexpectedly into the homes of nobles and merchants expecting food and drink in return for uninvited (and inappropriate) songs. At Lent, this procession of "penitents", dressed in outlandish costumes

worn inside out, rode around on donkeys and oxen or in sleighs drawn by pigs, goats, and even bears.

Peter put on an especially elaborate wedding for his favorite jester, Jacob Turgenev, Jolly Company wearing birch bark hats, straw boots, mouse skin gloves, coats covered w/squirrel tails and cats paws. The celebration, which ended with the triumphal entry into Moscow of the happy couple on a camel, was apparently so much fun that the groom died suddenly a few days later.

Ironically, Peter ran an austere, and downright cheap court, donating his own money to achieve his goals.

Peter's Early Reign Through the War of Azov (1689-97)

Peter's government after Sophia. Although Peter was now undisputed tsar, his reign, which began officially in 1682, did not start effectively at age 17 in 1689 with Sophia's fall, but in 1694 at age 22, resulting in corrupt and disinterested government for five years without Sophia's competent hand at the helm. Instead, Patriarch Joachim and the conservatives ruled, leading to tighter restrictions on foreigners, ordering expulsion of the Jesuits, reading all foreign mail, and stopping them at the border until they got permission to enter Russia. Joachim wanted to destroy the German Suburb's Protestant churches, and was only stopped by Tsar Alexis' decree protecting them.

Xenophobia reached such a peak at this time that a Moscow mob burned one foreigner alive.

When Joachim died, Peter was relieved and wanted to replace him with a more liberal patriarch. However, public pressure forced him to accept another conservative who did not speak barbarous languages, had a beard big enough for a patriarch, and whose coachmen drove his coach riding the horses, not from a seat on the coach.

Peter's war against the Turks of Azov (1695-97). Not surprisingly, Peter's active reign started

with a war, taking on the Tartars of the Crimea who were still carrying off up to 15,000 Russian slaves per year. He also was still obligated by treaty to help Poland and the Holy League against the Turks in return for keeping Kiev.

His first expedition consisted of two armies: one a traditional Russian force of 120,000 men, including a lot of peasant draftees, to divert the Turks away from their capital at Azov. The second force was made up of 30,000 men with Western officers and new guard regiments trained with modern weapons in Western tactics. Peter, as was his custom, served as a common bombardier, although everyone knew who was really in charge.

The Expedition was badly organized (not even having a fleet to blockade Azov), badly disciplined (the *streltsy* refusing to follow Western officers), and poorly supplied since Tatar cavalry raided the Russian supply wagons. There were few experienced siege engineers, so Peter sent for some from Austria.

Even worse, the Russians took a daily nap. Thus when a Dutchman, Jacob Jensen, defected to the Tartars, they attacked while the Russians were snoozing, inflicting heavy casualties. After an ill-advised assault that got 1500 men killed, the Russians embarked on a disastrous retreat without supplies. As a cover-up, Peter held a bogus triumphal parade in Moscow, although it only had one prisoner to display.

However, Peter was far from finished.

First of all, he ordered a fleet of 25 galleys and 1300 more barges built during winter! Not having a galley to serve as a model, he cut a Dutch-built galley at Archangel into parts and took the parts overland to serve as a model for the Russians to copy. They built the galleys in sections and then hauled them overland to Voronezh for assembly.

Thus in the spring of 1696, Peter had the galleys, transports and 70,000 men to sail down the Don River to renew the attack on Azov. This time,

Peter served as a ship's captain rather than bombardier, because that was more fun.

The Turks, not expecting Peter to return, had left their siege works intact so the Russians were able to move right back in and renew the siege. With the help of Austrian engineers who arrived mid-July, Azov fell after a 2-month siege. In his triumphal parade, Peter marched with the other captains, only distinguished by his huge size and a white feather in his hat.

The Azov War had taught Peter that for Russia to become a great power it had to learn as much as it could about Europe. Thus began his life's work to Westernize Russia.

The Great Embassy (1697)

The Great Embassy (1697) was a huge party of some 250 people, including Cossacks, musicians, dwarves, and nobles. Peter himself went "incognito" as a gunnery officer and shipwright, although it was the worst kept secret in Europe since he was 6'8.5" tall and had a distinctive nervous twitch. To cover expenses, he also took a large supply of sables, honey, salmon, and other smoked fish along with his personal drum. The embassy's purpose was to learn from the West and strengthen Russia's alliance against the Turks. Therefore, the Great Embassy didn't go to France, since it was allied with the Turks.

Because regular Russian embassies had no freedom of bargaining beyond the tsar's specific orders, negotiations with Russia took a long time and were not popular. One reason was that Russian ambassadors were required to demand that foreign monarchs receiving them should stand and remove their hats while inquiring about the tsar's health. Another problem was that Russian ambassador's were not paid, instead being given Russian commodities such as furs and honey to sell. This led to an international scandal in 1687 when Sophia's embassy to France smuggled furs into France and were caught trying to sell them.

The Great Embassy's first stop was in Riga Sweden with its modern fortifications, which Peter carefully studied, climbing all over them

and taking measurements. Since Peter was supposedly incognito, a Swedish guard arrested him as a spy. Although the incident was straightened out and Peter got out of the Swedish jail, he was angry about the whole incident and used it later as his pretext for war with Sweden.

Next stop was Prussia, which was interested in allying with Russia against Sweden. While there, Peter took lessons as a simple bombardier from a Prussian artillery officer. He also enjoyed dancing with the German ladies, although he was confused by their whalebone corsets, remarking: "*These German ladies have devilish hard bones.*"

After that, Peter moved on to Holland, where he put off the Dutch king, William III, by approaching him in his shirtsleeves. He was also extremely nervous in large groups of people, and news of the huge incognito tsar led to large crowds turning out to see him. As result, the Dutch put Peter up in a private building inside the Dutch E. India Company shipyards so he could be near his beloved ships.

Dutch shipbuilders had no blueprints, only rule of thumb techniques, which greatly disappointed Peter, since he had no plans or principles to take back for the Russians to follow. He did, however manage to entice 900 Dutch craftsmen to come to Russia to work. Before he left Holland after 8 months, the Dutch king delighted him with the gift of a sailboat (below) and a massive mock naval battle.



Peter found more than shipbuilding to interest him in Holland, notably anatomy and surgery, attending any classes, and operations he could. As a result, he considered himself a qualified surgeon with the surgical instruments for dissecting, bleeding, drawing teeth, and performing minor surgery. As with toothaches, it was dangerous to admit to any ailments

around Peter. He also expected the same level of interest in surgery among his followers. Therefore, when he saw his nobles' disgust while observing a dissection in surgery class, he got so mad that he ordered them to bend over the cadaver to sever the muscles with their bare teeth.

Another skill the Russians picked up in Holland was ice-skating. Unfortunately, several of them fell through the thin Dutch ice in warmer winter. However, instead of changing clothes, they just drank more.

Passing on to England, Peter got to spend more time building ships, setting off to the shipyards at 4AM every day with his ax slung over his shoulder and pipe in mouth. While there, Peter sold the tobacco monopoly in Russia to the British for £28,000, even though smoking tobacco brought the death penalty, or at least a slit nose, in Russia.

Peter was especially impressed with the British royal mint and was determined to adopt the minting of milled coins to prevent clipping. In turn, Europeans were impressed at how this tsar, who was barely literate, was so adept at mechanical things, even being able to take apart and reassemble clocks

Europeans were even more astonished at how Peter and his entourage could party. In particular, they trashed an English mansion where they were staying, tearing the doors off the hinges and using the owner's art collection for target practice. All fifty of the mansion's chairs were gone, probably thrown in the stove to make a fire. The featherbeds, pillows, and sheets ripped to shreds as if by wild animals or a rock band.

Even more entertaining was the "wheelbarrow game". Since there were no wheelbarrows in Russia, they didn't know what they were for when they found some in a shed. They quickly figured it out though, inventing a game where one Russian (often Peter himself) would push his team mate in a barrow at top speed and ram it into the owner's hedge, which was 400 feet long,

9 feet tall, and 5 feet thick—before the Russians invented their game.

Afterwards, the hedge was ruined.

Peter paid for the damages with a huge uncut diamond wrapped in a dirty piece of paper.

Peter by-passed France, since it was allied with his enemy, Turkey. However, he did return on a second embassy several years later, where he shocked the French by picking up the 8-year old crown prince and running upstairs with him, followed by a frantic crowd before the tsar did something like test the boy's aerodynamic qualities by tossing him out a window.

Peter's last stop was Austria, but he got there too late to stop it from making peace with Turks (i.e., the Treaty of Karlowitz). His visit there was cut short by news of a streltsy revolt. However, Peter and the Russian left behind years of gossip about these Russian barbarians with their massive drinking bouts, lechery, and ignorance of tableware.

Upon his return home, Peter dealt with the Streltsy revolt led by his sister Sophia. This time he disbanded the Streltsy, even executing five of them by his own hand. In their place he started building a new modern army, modeled, trained, and equipped like European forces.

Not being able to afford whole armies of mercenaries, Peter conscripted one recruit from every twenty households for a term 25 years, a virtual life sentence. As a result, the Russian army grew from 30,000 men in 1700) to over 200,000 men by 1725.

Similarly, Peter built up the Russian navy, which had 48 men-of-war, 800 smaller ships, and 28,000 men by 1705. However, he needed a saltwater outlet so he could use it. The Mediterranean was blocked by the Turks, but with the rest of Europe preoccupied with Louis XIV, he looked north for a port on the Baltic.

The Great Northern War (1700-21)

Also wanting to bring down Sweden, the rulers of Denmark, Saxony and Poland allied with

Russia to that purpose. Peter had previously supported Poland's King, Augustus, against a French candidate in order to keep Poland allied against the Turks, so they were natural allies and good friends.

Augustus (below left) was a man after Peter's heart, a wild practical joker who supposedly had fathered 354 children. He once gave Peter a gold box with a picture of one of his mistresses clothed on the front, while a secret spring revealed the same woman in a less modest posture. Another time, he brought the prudish Frederick William I of Prussia and his young son (the future Frederick the Great) into a bedroom to reveal a naked woman. Frederick William freaked out and fled with his son.



Peter's main opponent was Charles XII of Sweden (above right), only 18 years old at the time, but a military genius who had already reformed the Swedish army to incorporate the military developments of the last half-century, such as replacing the pike with the bayonet.

Charles was the last in the line of Swedish warrior kings, a great general who won unbelievable victories, but loved war and fighting to an obsessive degree. He seemed impervious to pain and the suffering of others, including his own men, in his relentless drive to win. When war broke out, he vowed to give up women, drink, and other pleasure until he had defeated his enemies. He kept his vow, even though he never won the war.

Charles quickly took Denmark out of the war by means of a daring crossing of a shallow part of the Danish Sound that threatened Copenhagen. The Danish king quickly signed a treaty, dropping out of the war.

Charles, with an army of only 8,000 men, next moved against Peter who had an army four times that size. At Narva (1700) a daring march during a blizzard through the swamps behind Peter split the Russian army and allowed the Swedes to demolish it. Although Peter (who was serving as a “lieutenant”) escaped, the rest of his army was killed or captured. The Swedes lost 667 men.



Luckily, Charles then turned on Poland and Saxony, defeated their forces and replaced Augustus with his own candidate. This gave Peter time to rebuild his army, even melting church bells for cannons. The climatic showdown came at Poltava.

In 1708 Charles crossed the Vistula River on unsafe ice with 44,000 men. Peter drew them in by a scorched earth policy that, combined with a fierce winter, cost the Swedes one-third of their infantry and their entire supply train.

The winter of 1708/9 was legendary in its ferocity. Supposedly:

- Firewood would not burn in open air
- The Baltic froze, allowing heavily laden wagons to cross it.
- Chickens’ combs froze solid and broke off.
- The canals of Venice froze, as did saliva before hitting the ground.
- Trees exploded from the extreme cold.

Charles’ troops took the cold stoically, many losing hands, feet, noses, ears, but still marching on, some even crawling. Somehow, Charles kept winning astounding victories, some against incredible odds. Then, on July 8, 1709, Charles and Peter met at Poltava.

Charles had been wounded in the foot before, fainting after taking the bullet out with his own knife. Even though he had to be carried in a litter, he still went into battle where his litter was

shattered by enemy fire. Peter, though only a “lieutenant”, led his troops into the thick of the fighting, one bullet passing through his hat and another only stopped by a cross around his neck.

At first, the Swedes carried the field, but years of training finally paid off for the Russians as they still held formation while keeping up a continuous rate of fire until the Swedes ran out of ammunition and a massacre ensued. Charles left the field with 1000 men, losing 4,000 killed and 18,600 captured. Poltava is generally considered a turning point for both Russia and Sweden, marking the end of Swedish imperial aspirations and the emergence of Russia as a major power.

Charles, however, was not through, gaining asylum in Turkey and training his remaining troops to renew the war. Therefore, Peter entered Turkey to get Charles, causing Turkey to declare war on Russia. An army of 200,000 Turks surrounded Peter, forcing him to surrender Azov and make peace with the Ottomans. However, Turkey’s treaty with Russia infuriated Charles, who made so much trouble that the vizier asked him to leave. Charles refused, and it took 12,000 Turks eight hours to storm his house and take him and his 40 Swedish comrades prisoner. Charles alone killed ten Turks and it took twelve Janissaries to carry him out.

Charles soon escaped and made a daring ride across Europe back to Sweden where he renewed the war effort, drafting 15-year olds and taxing everything he could think of, including wigs.

When he besieged in Stralsund by a large army, he fought heroically, leading futile sallies out of the walls. As the city was falling, he escaped through enemy fire to Sweden in a small boat.

By 1717 Charles had raised a new army of 20,000 men and invaded Norway to compensate for his mainland losses. The next year, while besieging Frederiksten, he raised his head over the parapet of the trench and was killed by a bullet to the temple. He was 36 years old. The debate continues whether it was a Norwegian or

assassin's bullet that killed him. After that Sweden tried to negotiate a peace to keep some of its East Baltic possessions, but three Russian invasions led to peace and a treaty in 1721 giving Russia Livonia, Estonia, Ingria, and parts of Finland.

St. Petersburg and other Reforms



Peter surveying his new capital, St. Petersburg

The Window to the West. St Petersburg, which symbolized the new direction Peter was forcing Russia to take, was founded in 1703 on or near the sight of another town, Neva, which in Swedish means "mud".

- During its construction, there was a law forbidding building with stone anywhere except at St. Petersburg.
- Summer daylight lasts from 3 AM to 10 PM; in winter from 9 AM to 3 PM
- Some 40,000 laborers were sent there each year, being paid only half a ruble a month, which led to rampant stealing.
- Thousands of Swedish prisoners died there from forced labor.

Nothing comes easily in Russian history.

The calendar. Peter changed the Russian calendar from starting at creation in September 5008 B.C.E. to starting at Christ's birth. Thus the old year 6708 became 1700. However, Peter's use of the Julian instead of the newer Gregorian calendar still threw the Russian calendar off 11 days in 1700's, 12 in 1800's, and 13 in the 1900's. That's why, according to the more modern Gregorian calendar, the so-called October Revolution in 1917 is observed in November.

Russian women. Peter tried to raise women's status, encouraging them to remove their veils, to

dance, make music, and get an education (by private tutors). Also, parents couldn't force women to marry against their wills.

Beard tax. Many Russians, especially the Old Believers, felt they had to keep their beards if they wanted to go to heaven. After all, why would God give us beards if he didn't mean for us to keep them? As a concession to that belief and a means to raise money, Peter let Russian men pay a special tax in order to keep their beards. Others, either too poor or unwilling to pay the tax, saved their whiskers to be buried with them when they died, feeling they couldn't get into heaven otherwise.

Peter's death. Peter died pretty much the way he lived. In November 1724 a ship ran aground in the Neva River. Peter, active as always, jumped into the river to save the sailors and the grounded vessel, working all night in icy waters up to his waist. As a result, he caught a fever that developed complications and he died on February 8, 1725. He was 56 years old.

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THE DUTCH REPUBLIC IN THE 1600'S



An Extensive Landscape with a Road by a Ruin by Philips Koninck (1655)

Introduction. Although it took the Dutch until 1648 to force formal recognition of their independence from Spain, for all intents and purposes, the Dutch Republic was free by the twelve-year truce signed with Spain in 1609. The question arises: how did the Dutch hold off and defeat the biggest military power in Europe? While geographic distance from Spain, foreign aid from France and England, and the occasional desperate measure of opening their dikes to flood out invading armies all certainly played a role, the single most important factor was money. For example, of the 132 military companies in the Dutch army in 1600, only 17 were actually made up of Dutch soldiers. The rest were English (43), French (32), Scottish (20), Walloon (11), and German (9) companies fighting for the Dutch because they had the money to pay them. The war took a tremendous financial effort to win, costing the Dutch 960,000 florins in 1579, 5.5 million florins in 1599, and 18.8 million florins in 1640. Despite this expense, the Dutch were in stronger financial shape than ever by the end of the war and were well on their way to becoming the dominant commercial and economic power in Europe. This economic dominance was the product of a chain reaction of events and processes that, as so often was the case, was rooted in geography.

Geography of the Netherlands. Three geographic factors influenced the rise of the Dutch Republic. First, as the name Netherlands (literally "lowlands") implies, much of the Dutch Republic is below sea level. The Dutch have waged a constant battle in order to claim, reclaim, and preserve their lands from the sea through the construction of dikes, polders (drained lakes and bogs), drainage systems, and windmills (for pumping out water). Roughly

25% of present day Holland is land reclaimed from the sea and still partially protected by hundreds of windmills. The second factor is the Netherlands' position at the mouths of several major rivers and on the routes between the North Sea and Atlantic Ocean. The third factor is the Netherlands' relative scarcity of natural resources. All three of these factors forced the Dutch to be resourceful engineers, merchants, sailors, and artisans. With these geographic factors as a foundation, the Dutch launched themselves on a career that was a classic case of the old saying: it takes money to make money. The whole process started with fish.

In the 1400's, the herring shoals, a mainstay of the Hanseatic League, migrated from the Baltic to North Sea. The Hanseatic League's loss was the Dutch Republic's gain, since, in the absence of refrigeration, salted herring was then an important source of protein in Europe, especially the Netherlands whose population was 40% urban and had to import about 25% of its food. The other half of this trade was salt for preserving the herring. The best sources of salt were off the coasts of France (the Bay of Biscay) and Portugal. These two activities complemented each other well, since the herring season lasted from June to December, so the Dutch could collect salt from December to June.

The Dutch ran large scale operations compared to those of other countries. Unlike the simple open English fishing boats, the Dutch sailed virtual floating factories, called buses, with barrels of salt for curing the herring on board. Although the claims by other competing countries that the Dutch had 3000 ships working the herring shoals were vastly exaggerated (500 being closer to the mark), the Dutch still produced such a volume of salted herring that they could undersell their competition and drive them out of business.

The Dutch pattern of growth. Dutch control of the herring trade touched off a cycle where the Dutch would get profits, invest those profits in new ventures, which generated more profits and so on. This initially led into two general areas of development, foreign trade and the domestic economy, each of which fed back into the cycle of profits and so on. Both of these also led to expansion of trade across the globe to the Mediterranean, West Indies, Africa, East Indies, and

the South Pacific, which also fed back into the cycle of profits.

Concerning foreign trade, the Dutch first expanded their operations into the Baltic Sea where they traded for Norwegian timber, Polish grain, and Russian furs both to consume at home and sell abroad. The Baltic trade became so important that the Dutch referred to it as the "Mother Trade."

All this trade required durable, efficient, and cheaply built ships that could operate in the rough waters of the North and Baltic Seas as well as the shallow coastal waterways that were typical of the Netherlands. What the Dutch came up with was the *fluyt*, a marvel of Dutch efficiency and engineering. The fluyt was both sturdy enough to withstand rough seas and shallow enough for inland waterways. Unlike other countries' merchant ships, which doubled as warships, the fluyt carried few, if any, guns, leaving extra space for cargo. It was cheaper to build, costing little more than half as much as other ships, thanks to the use of mechanical cranes, wind-driven saws, and overall superior shipbuilding techniques.



A Dutch Fluyt

The fluyt also had simpler rigging that used winches and tackles, thus requiring a crew of only 10 men compared to 20-30 on other European ships. This resulted in two things. First of all, the Dutch could carry and sell goods for half the price their competition had to charge, giving them control of Europe's carrying trade. Second, they were able to dominate Europe's shipbuilding industry, which, of course, made them more money.

Meanwhile, the Dutch were developing their domestic economy in two ways. First they invested in a wide variety of industries, some traditional and some new: textiles, munitions, soap boiling, sugar refining, tobacco curing, glass, and diamond

cutting. The need for efficient handling of all the money from this and other enterprises spurred them to develop another aspect of their economy: financial institutions. For one thing, they established the Bank of Amsterdam in 1609, the first public bank in North-West Europe, being modeled after the Bank of Venice (f.1587). The vast sums of cash this bank attracted in deposits allowed it to lower interest rates, which in turn brought in more investments, and so on. Even in wartime, the Bank of Amsterdam was able to lower its interest rates from 12% to 4%. The Dutch also created a stock market. At first this was just a commodities market. Only later did it evolve into a futures commodities market where, by the time a shipload of such goods as wool or tobacco landed, someone had already bought it in the hope of reselling it for a profit.

The success of the Baltic Mother Trade and their domestic economy led the Dutch to expand their foreign trade on a global scale. They did this in three basic directions. First was the Mediterranean, where recurring famines hit in the 1590's, signaling the start of a "Little Ice Age" that would afflict Europe for the next century. This opened new markets for Polish grain, which the Dutch traded in return for, among other things, marble. (Louis XIV would buy this Italian marble from the Dutch for his palace at Versailles.) The Dutch even expanded this Mediterranean trade to include doing business with the Ottoman Turks. As the Dutch rebels had said back in the 1500s: "Better the Turk than the Pope."

Second, when Portugal (then under Spain's rule) closed access to its supplies of salt, the Dutch crossed the Atlantic to find salt in Venezuela. While in the Caribbean, they found that the plantations in the West Indies needed slaves, which got them involved in the African slave trade. While there, they also discovered an even more lucrative condiment than salt: sugar. Soon, the Dutch were founding their own colonies (e.g., Dutch Guiana) and sugar plantations and gaining control of the sugar trade. Soon, sugar was rivaling even the spices of the Far East in value. However, this is not to say the Dutch ignored the Far Eastern trade.

However, breaking into the lucrative Asian Spice market, the third new direction of Dutch expansion, was not so easy. For one thing, they had to find the

East Indies. Amazingly, the Portuguese had kept the South East Passage around Africa a secret for a full century since da Gama's epic voyage. The Dutch looked in vain for a northeast passage around Russia. They also sought a southwest passage, which Oliver van der Noort found (1599-1601), making him the third captain to circumnavigate the globe after Ferdinand Magellan and Sir Francis Drake. But that route was no more practical for the Dutch than it had been for the Spanish and English.

Finally, Jan van Linschoten, a Dutch captain who had served Portugal, showed the way around Africa in 1597. Although the first voyage was not a financial success, the second was, bringing back 600,000 pounds of pepper and 250,000 pounds of cloves worth 1.6 million florins, double the initial investment. Investors rushed to get in on the action, forming the Dutch East Indies Company in 1602. This privately owned company operated virtually as an independent state, seizing control of the spice trade from Portugal's weakening grip. From there, always in search of new markets, the Dutch explored the South Pacific, discovering Australia, New Zealand, and Tasmania, the last two names bearing evidence of their presence.

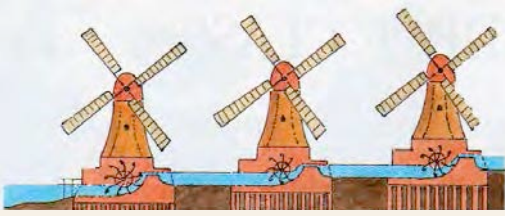
Such a far-flung trading empire required a navy to protect its merchant ships. Therefore, the Dutch developed such a navy, excelling in this as well as their other endeavors. At this point, warships generally followed the principle of the bigger the better. As a result, the man-of-war, as it was called, was a huge and bulky gun platform that did not suit the Dutch needs. For one thing, they needed more of a shallow-draught vessel that could sail in their home waters. They also needed a long-range ship that could protect their far-flung commercial interests. The result was the *frigate*, a sleeker shallow draught vessel with only about 40 guns, but capable of long-range voyages. Dutch frigates, along with their excellent sailors and captains, made the Dutch the supreme naval power of the early 1600's and also helped them dominate the warship-building industry, building navies for both sides in a Danish-Swedish war and for the French.

A cultural golden age. By the early 1600's, Amsterdam was the center of world trade, which allowed the Dutch to engage in one more type of activity: patronage of the arts. The seventeenth century saw the Dutch Republic become the center

of a cultural flowering much as Italy had been during its Renaissance. Along with money to patronize the arts and sciences, the Dutch Republic had both a free and tolerant atmosphere and enterprising spirit willing to challenge old notions and creatively expand the frontiers of the arts and sciences. The Dutch Republic acted as a virtual magnet for Jewish émigrés from Spain and Portugal and Calvinist dissidents from France, some of who would eventually move on to Plymouth Rock, Massachusetts. The Jewish philosopher from Spain, Spinoza, and the French mathematician, Descartes, were two of the shining lights that the Dutch attracted. Notable among Dutch artists were Rembrandt, Vermeer, Hals, Van Dyck, Steen, Ruysdael, and Hobbema, whose portraits, domestic scenes, landscapes, and mastery of light and shadow brought their age to life on the canvass as no artists before them had done.

Conclusion. The Golden Age of the Dutch Republic was to be short lived, once again largely because of geography. It was the Dutch Republic's great misfortune to border the great land power of the day, France. In the 1670's, the French king, Louis XIV, due to a combination of jealousy of Dutch prosperity and hatred of Protestants, launched a series of wars that would embroil most of Europe and put the Dutch constantly on the front line of battle. At the same time, just across the channel, the growing economic and naval power, England, was challenging the Dutch on the high seas and in the market place. Three brief but sharply fought naval wars plus the strain of fighting off Louis exhausted the Dutch and allowed England to become the premier economic, naval, and colonial power in the world by the 1700's. However, England owed the techniques and innovations for much of what it would accomplish in business and naval development to the Dutch from the previous century.

Windmills



“God created the world, but the Dutch created the Netherlands”

Windmills, although originally a Persian invention, revolutionized life and the very ability to live in the Netherlands. The windmills’ most vital task was protecting the low-lying Netherlands by pumping water up and back out to sea. In order to do this, the Dutch would construct a series of windmills, the first driving a waterwheel that scooped up the water and deposited it in a higher lock where the next windmill would move it to an even higher lock, and so on until the water had been raised to above sea level and could be deposited in the sea. After the initial labor invested in building the windmills, locks, and channels, everything else was done automatically and for free by the wind, which is plentiful in this flat land exposed to constant sea breezes.

Windmills (along with watermills and even tidal mills) performed a vast array of other jobs that involved sawing, grinding, pounding, and polishing. The most common day-to-day job was milling grain into flour. Doing this with a hand-powered stone mill was incredibly tedious, requiring several hours of hard work everyday to mill enough flour for one’s family. Thus taking one’s grain to mechanically driven mills was favored by anyone who could afford it.

The windmill itself was attached to a two-story structure that rested on a central hinge post. The miller could turn this structure to catch the wind at the best angle by picking up a long lever also attached to the structure. The miller then filled a hopper with grain leading down to and filling the spiral grooves cut into the bottom millstone on the second floor. Once set and the windmill sails were in place, the miller unblocked the windmill so the wind could turn it.

The drive shaft of the windmill then turned the top millstone and ground the grain in between it and the bottom millstone, turning it into finely ground flour that fell into a flour sack on the first floor. The miller’s assistant would bag up the flour for the customer, taking the miller’s cut, typically 20%...unless no one else was looking.

Exploding windmills. Critical to the safe operation of the windmill was keeping the hopper full of grain to avoid a flour dust explosion. As anyone knows who has ever dumped out a bag of flour, a good part of it flies back up into the air as flour dust. A full day of a windmill milling grain creates a thick cloud of flour dust. If the density of that cloud reaches a critical mass, any spark could detonate it and blow up the windmill in a devastating explosion (as still occasionally happens in grain silos).

Causing such a violent reaction was the grinding of the two millstones when exposed to the open air, which struck the spark to detonate the flour dust explosion. Keeping the hopper full of grain while the mill was turning was the key to keeping oxygen from reaching the millstones and making such a spark possible. There was a bell toward the bottom of the hopper that, when not covered with grain, would ring to remind the miller to refill the hopper or disengage the windmill before things got “blowed up real good.”

“Don’t fear the reaper. Fear the miller.” The way a medieval joke put it, a miller’s shirt was the bravest thing in the world because it held a thief by the collar everyday. (Keep in mind there were no professional joke writers back then.) Of course the question arises: how did millers rip people off? For one thing, they never let anyone up to the second floor of the mill to see what they were doing. What they were doing was sweeping extra grain and flour that had been thrown out of the hopper by the fast motion of the windmill (which could turn 50-60 miles per hour on a windy day). Legally, that extra grain and flour belonged to the customer, but since he was the only one up there, he would collect it as his extra profit margin.

The Sea is a Harsh Mistress



Ships in Distress off a Rocky Coast
(1667) by Ludolf Backhuysen

The relationship of the Dutch to the sea must have been especially ambivalent. On the one hand, it provided trade and resources from which to make a living. However, it was also a constant threat to the land itself as the Dutch worked tirelessly to protect old lands and reclaim new ones. In addition, sailing was a dangerous occupation, from both disease and storms. Dutch artists showed both aspects of the sea in their paintings: calm waters that brought prosperity and carried sailors safely home, and storms that threatened both. We even have a painting of the Schreierstoren (crying tower) where wives made their tearful farewells to sailors leaving Amsterdam.

Dredging rivers of silt was another aspect of the Netherlands' relationship to water in their never-ending process necessary to keep waterways open. This was especially an issue for the Dutch, since they were located at the mouths of several major rivers, which flatten out and slowdown as they approach the sea, dropping silt collected and carried from upriver. Dredging was done by human-powered paddleboats that worked their way upriver dragging stone slabs for scooping up and collecting silt. The silt itself could fetch a good price both for its fertility and as fill used in land reclamation.

Dutch Ships

Dutch shipbuilding. Dutch shipwrights used hull-first construction, heating the oak timbers over a fire to make them more elastic and then fitting them together. Only after the hull was completed did they add an interior frame to give it stability. While frame-first construction was

potentially better since it could be planned out in advance on paper, Dutch hull-first ships remained superior to other countries' frame-first ships at least until the 1700s.

This was largely because educated Renaissance ship designers seem to have relied too much on idealized perfect geometric shapes laid out on paper that weren't really that good for hull designs. Through trial and error, Dutch Shipwrights had learned that certain irregular lines in a hull actually made for better ships. Not until the 1700s was the technique developed for representing irregular shapes with lines like the contours on modern topographic maps, making it practical to design frame-first ships on paper that would translate into faster and sleeker ships.

Just pinch an inch. Such irregular lines could also solve other problems. For instance, Dutch ships had to pay a toll to go through the Danish Sound, the narrow strait between the North and Baltic Seas. Since the Danes estimated cargo space by just measuring the width of the beam at the center of the top deck, the Dutch built their fluyts in a pear shape, with the cargo space at the waterline bulging out and the top deck pinched in at the middle.

Block and tackle (AKA compound pulley) is a system of two or more pulleys with a rope or cable threaded between them to facilitate lifting heavy loads. Most likely it was invented by the Greek mathematician, Archimedes, in the third century B.C.E. The term *block* refers to all the pulleys, or *sheaves*, mounted on a single axle. The entire assembly of those pulleys with rope going through them is called a *tackle*. The most common arrangement is to have one block in a fixed position and another block hanging from it and moving with the load.

During the Dutch East Indies Company's existence 1,581 ships were built at its shipyards. The average lifespan of one of its ships was 15 to 20 years.

Fire pumps, which were a critical piece of equipment on wooden ships, underwent major

improvement with the introduction of Van der Heyden's hose that could pump the water all the way to the fire itself. Van der Heyden's device used a suction pump mechanism with a pressure tank to provide a continuous jet of water all the way to the fire's center.

The leather hose was reinforced inside with brass rings, keeping it flexible while ensuring the suction power wasn't cut. The hose could pump five to six times as much water as older pumps. The spouts and hose connections had standard screw attachments so every hose would fit every machine. It remained in use until the late 1800s.

Sugar and Tobacco

Sugar was the new taste sensation of early modern Europe, and the Dutch controlled much of its trade in the 1600s. Sugar cane was native to South and Southeast Asia where people originally chewed on it for its sweetness. When the process for granulating it was discovered, it became practical to transport sugar for trade. However, it remained a rare and expensive luxury, especially for Europeans, whose main sweetener was honey.

Columbus introduced sugar cane to the New World in 1492, and it became the primary agricultural export from the West Indies as sugar plantations appeared across the Caribbean. However, harvesting and processing it was very labor intensive, made even worse by the Caribbean's tropical climate. First, and possibly worst, was cutting the sugar cane. After that, it was carted to the mill, where it was run through rollers to squeeze out the juice. Then it had to be boiled down to crystals, which were loaded in bags and shipped off to Europe.

The large amount of hard work required to process sugar cane had its tragic side, namely the African slave trade needed to provide the labor force needed on the plantations. Making matters worse was the fact that conditions (both natural and man-made) were so bad that slaves died off faster than they could reproduce, thus prolonging the slave trade for centuries. In fact, the only place where slaves were able to sustain

their numbers through natural increase was in the British colonies of North America.

Tobacco was another popular sensation in Europe at that time. By 1718 there were at least 73 tobacco shops in Amsterdam. One principal branch of the industry was processing leaves into snuff and tobacco for smoking. This took place in workshops known as tobacco spinneries, of which there were about 30 in Amsterdam in 1730.

Tobacco use was particularly popular among sailors. Officers for the Dutch East Indies Company were each allowed to take up to 30 pounds of tobacco for their own use on a voyage to Asia, and it was probably part of the rations allocated to the crew of a Company ship. Because of the danger of fire, tobacco could only be smoked on board during the day, "*with the consent and knowledge of the captain, skipper, or Commander, and that only in the boarding nets and fore the mainmast....*" Anyone failing to keep to this strict rule would forfeit a month's salary.

Snuff was a smokeless tobacco, oftentimes scented, that was sniffed directly into the nose. It was especially popular in the 1600s and 1700s among the rich, and has recently experienced resurgence as tobacco smoking has been banned in more and more places.

Columbus' men first encountered snuff use among natives in Haiti. It gained popularity at the French court of Catherine de Medici in the 1500s as a cure for her son's migraines, and its use spread from there. There were opponents, such as Pope Urban VIII who threatened to excommunicate tobacco users. In Russia, Tsar Michael I set the punishment for snuff use as the removal of one's nose. Nevertheless, its use spread among European royalty, especially Louis XIII of France, and from there to the nobles and rich middle class. It was also supposedly spreading to China by 1640.

Being smokeless, snuff doesn't expose its users lungs to tar and harmful gases such as carbon monoxide. But it still runs the risk of localized cancers where it is applied (e.g., nose and

mouth). As early as the 1700s, a British doctor, John Hill, was warning of the dangers of nasal cancer from snuff use.

The crew and chain of command on Dutch East India Company ships

In theory, the senior merchant held supreme power on company ships, but in reality the shipmaster took over when trade was no longer taking place. The chain of command under him along with their duties went as follows:

- *The chief boatswain* (hogboatsman), roughly equal to a petty officer, supervised whole crew.
- *The boatswain* was responsible for running and standing the rigging, especially for the mainmast.
- *The rigger* watched the foremast sails.
- *The helmsman* also supervised stowage of goods and ship maintenance.
- The steward distributed weekly rations of food and drink for all on board and also supplied the cook with victuals .
- The marshal was in charge of order and discipline.

The ship's company, who made up the bulk of the crew, was divided into three groups or watches, creating a steady rhythm of six four-hour watches each day. Changing the watch was signaled by a drum.

During the Dutch East Indies Company's existence, less than 3% of all its ships sailing from Europe to Asia were lost, either through misfortune or enemy action. For homeward bound ships it was less than 5% .



Heavily armed spice fleet returning to Amsterdam

Severe punishments were considered necessary to keep order among such an unruly group as sailors. For example, pulling a knife in anger led to the offender being nailed to the mast with a knife through his hand, and he had to remain standing there until he pulled his hand off.

Dutch naval officers. Unlike their French and Spanish counterparts who were nobles that saw their positions as a birthright, Dutch officers worked their way up the chain of command, starting as ships' boys around the age of 12. By the time they became captains, they were intimately acquainted with just about every aspect of running a ship.



Take, for example, Admiral Michiel de Ruyter (1607-76), or as he was known to his sailors, Grandpa, one of the Dutch Republic's greatest naval commanders. After one battle, he shocked his French allies by sweeping the broken glass out of his own quarters and feeding his chickens.

Amsterdam :“Venice of the North”



By 1600, Amsterdam had largely replaced Antwerp as the premier trading center of Europe. Amsterdam was located where the Amstel & Ij Rivers flowed into the Zuider Zee. Since it was on marshy ground, the city was built on a system of piles in five concentric rings of canals, creating a virtual archipelago of 70 islands linked by 500 bridges arching high to let boats through. As a result, Amsterdam was dubbed the "Venice of the North". Its city hall alone rested on 13,659 piles, the Dutch calling it the Eighth Wonder of World. Its fortifications

were built inside the outermost canal, which then doubled as a moat. The practical Dutch, not wanting to waste any space, built windmills on their towers to pump out water.

Dutch frugality and the limited space of Amsterdam's urban environment led to very narrow red brick houses since they were taxed on the basis of width. Oftentimes, a beam projected out over the street from the second story of a house to haul heavy furniture up since it was too wide for front doors.

Although Amsterdam was the real economic and cultural center of the Dutch Republic, the Hague was the political capital.

Baroque art

Just as the Italians largely defined art for Western Europe in the fifteenth and sixteenth centuries, the Dutch did much the same during the seventeenth century, although art flourished across the continent. The art of this period is typically referred to as Baroque, a term originally meaning twisted or distorted. However, in this context, it also implied dramatic, even chaotic, motion as well.

Baroque was largely an outgrowth of a movement called Mannerism that started in Italy in the latter half of the 1500s. Having achieved such technical proficiency in Renaissance art with its rational and harmonious composition, Italian artists were anxious to try something new. The result was a style of art that replaced reason with emotion, harmony with dissonance, reality with imagination, and equilibrium with instability. Mannerist paintings might leave a void in the center of the canvas while figures crowded around and were even cut off at the edges of the painting. Their figures were often writhing and twisting with bodies that were elongated or grossly muscular. They also might use lurid colors and unreal lighting to create a heightened impression of tension and motion. Probably the most famous practitioner of this style was El Greco in Spain.

While Baroque artists incorporated Mannerism's elements of dramatic motion and

tension, they kept to the more realistic perspective and proportion pioneered by Renaissance artists. Baroque artists, in particular the Dutch, might create tension in otherwise placid scenes through relatively innocuous elements in a painting, such as dramatic cloud formations. Many of them were also masters of light and shadow, which they used to dramatic effect.

Michelangelo Caravaggio (1571-1610) was to a large extent the father of Baroque, breathing new life into Italian art after the sterile artificiality of Mannerism. Disdainful of artistic convention & tradition, he painted saints as ordinary people and miracles as events often set in seamy slums, pubs (*The Calling of St. Matthew*), or wine shops (*Supper at Emmaeus*). Many thought he went especially too far when he used a drowned corpse with bare feet and swollen body for *The Death of the Virgin*.

Caravaggio's use of dark backgrounds and harsh single sources of light focused viewers' attention on the main subject and/or events. His *Conversion of St. Paul* (below) shows the saint fallen from his horse with a rear view light illuminating mundane details such as the veins in his legs and rivets on his armor.

In his painting, *Amor Victorious*, he portrays Cupid as mischievous, if not somewhat evil, and shows wrecked musical instruments in the background to symbolize how love disrupts the harmony in our lives. In his portrayal of *Bacchus* (below right) he shows the god of wine and revelry as dissipated, thus paying the price of his party lifestyle.



Caravaggio's life was as unconventional as his art. He was constantly brawling in pubs and fleeing from city to city to avoid the law. Once he

even stabbed a man in the groin over a tennis wager. Enemies called him the "anti-Christ of painting" and many patrons refused to accept his work as too vulgar and profane. But his use of lower-class folk in religious paintings expressed the Counter-Reformation's belief that faith was open to all. Caravaggio Influenced artists like Rubens, Velasquez, and Rembrandt by showing how to give paintings an overwhelming immediacy.

Gian Lorenzo Bernini (1647-1652). What Caravaggio did for Baroque painting Bernini did for sculpture and even more, since no other sculptor of the age could even compare to him. More than any other sculptor, including Michelangelo, Bernini could make the stone seem to come to life with vibrant dramatic motion as in *Apollo and Daphne* (below). He was also an accomplished architect, his most notable achievement in that field being the colonnade embracing St. Peter's Square in Rome, the intended effect being to make pilgrims feel enfolded in the arms of the Church. Bernini also adorned Rome with several spectacular fountains.



Diego Velazquez (1599-1660) and the Spanish Baroque. While Spain has not usually been at the center of Europe's cultural movements, it has generally produced one or two outstanding artists each century: El Greco in the late 1500s, Velasquez in the 1600s, Goya in the 1800s and Picasso and Dali in the 1900s.

Velasquez was very precocious, being qualified as a master by age 18. While in Madrid, he did a portrait so perfect it caught the attention of Philip IV who declared Velasquez as the only

painter to do his portrait. He would remain the official court painter for thirty years.

Velasquez' paintings were masterpieces of realism, but used no visible outlines, creating forms with fluid brushstrokes and applying spots of light and color. In a sense, he was a precursor of Impressionism two centuries later. Whether painting the king or a court dwarf, he showed them with humanity and dignity, using natural poses without gaudy accessories. He preferred understatement to ostentation, and realism to idealism.

His portrait of Pope Innocent X (belowleft)was possibly his finest portrait showing him with a sharp glance so lifelike and even predatory that Innocent himself declared it "troppo vero" (very truthful).



Velasquez' *Las Meninas* (above right) was voted in 1985 by a poll of artists, and by considerable margin at that, as the world's greatest painting. Ostensibly it is a painting of the five-year old princess, Margarita, with her ladies in waiting (*meninas*) and two dwarfs. Therefore, it is like a group portrait on the theme of a visit to the artist's studio. In the middle is the mirrored reflection of the king and queen, while to the left is a self-portrait of the artist painting this scene from a mirror. Although the figures seem informally grouped, the painting actually consists of a carefully balanced series of overlapping triangles. Only the lower half of the canvas has portraits, with the rest filled by a range of light and shadow, giving the illusion of space. One contemporary exclaimed that while others' work was art, Velazquez' alone was truth.

Sir Peter Paul Reubens (1577-1640) was the epitome and spirit of the Flemish Baroque. Since

the Spanish Netherlands remained Catholic, it produced more religious paintings than did artists in the Protestant North. Reubens was truly a European rather than a Flemish figure and painter, going to courts in Italy, France, Spain, and England, as both a painter and diplomat. As a result, his work synthesized the styles and concepts of Catholic and Protestant Europe. He was called "a prince of painters and a painter of princes", being multi-talented, classically educated, fluent in six languages, handsome, vigorous, and well traveled.

Reubens had seemingly inexhaustible stamina, rising at 4AM and working nonstop until evening. His studio in Antwerp was open to visitors and had a balcony he designed so customers could watch him paint huge his huge paintings. It was compared to a factory where he did small color sketches in oil or outlined work in full size to be painted by his assistants and finished by him. Supposedly he would stare at a blank canvas with his arms crossed, then suddenly explode into a flurry of quick brushstrokes covering canvas. In the process he completed 2,000 paintings, which is an accomplishment only surpassed by Picasso. A visitor recalled visiting his studio while Reubens painted, listened to Ovid in Latin, carried on a learned conversation with someone else, and dictated letter, all at once.

Reubens is probably best remembered for his full-bodied sensual nudes. Even today we refer to such a body type as *rubenesque*. It is also an excellent reminder of how standards of beauty have differed from time to time and from culture to culture.



Reubens, *The Three Graces*

Reubens himself was happily married to two women, the second only sixteen years old. Both embodied his ideal of feminine beauty: buxom, plump, smiling with golden hair and luminous skin, which was especially tricky to paint. His promise to customers of "many beautiful nudes" was a big selling point. Unlike most artists who worked in the classical style from plaster or antique sculptures, Rubens preferred to sketch live models.

Among his most famous paintings was the Marie de Medici series, commissioned to immortalize the life of Louis XIII's mother in 21 large painting. Totally undaunted, he exclaimed: "*My talent is such that no undertaking, however vast in size...has ever surpassed my courage.*" True to his boast, he finished the 21 large-scale paintings in three years (1622-25), largely because he made extensive use of his apprentices to do a lot of the work on paintings while he did the finishing touches and signed them.

Creating epics out of such inglorious and petty subject matter, he portrayed Marie giving birth as a solemn nativity scene, her education being overseen by the Greek deities Hera, Aphrodite, Athena, and Apollo. He showed Marie's arrival at Marseilles as epic pomp, diplomatically omitting her double chin, although later paintings did portray her queen-size corpulence. *Sir Anthony Van Dyck (1599-1641)* was the other big name in Flemish art. A child prodigy, he was an accomplished painter by age 16 and worked with Rubens for a few years in Antwerp. However, not content to act as second fiddle, he went to Italy and then to England as the court artist for Charles I. Handsome, vain, and addicted to high society, he was something of a snobbish dandy who strutted around with a sword and adopted the sunflower as his personal symbol.



He was popular as an artist, because he painted the ratio of the head to the body as 1:7 rather than the usual 1:6, making his subjects seem taller and more slender and producing more flattering portraits. The ease of composition and sense of arrested motion with which he painted his subjects made them seem as if they were pausing rather than posing, giving a natural realism to an otherwise stilted scene. Most notably, he portrayed the stubby and plain Charles I (below) as a dashing and warlike king.

The Dutch Baroque (fl.1610-1670). Two things made the Dutch Baroque unique. For one thing, Holland was a Protestant country, so there was no Catholic Church to commission the creation of huge paintings. On the other hand, Holland was very rich, with a wider distribution of wealth, thus creating a larger market of moderately affluent consumers, people like butchers, bakers and craftsmen. This, in turn, helped support some 500 artists who could specialize in certain genres of painting: landscapes, still-lives, architecture, home interiors, etc., the sorts of mundane subjects their customers were more interested in, thus providing us with remarkable details concerning the daily lives of the Dutch. These artists were known as the little masters, because their customers could only afford small paintings.

What made the Dutch excel was their ability to capture the play of light on different surfaces and suggest textures from matte to luminous. Three artists especially stood out among the Dutch: Rembrandt van Rijn, Franz Hals and Johannes Vermeer.

Franz Hals (1580-1666) specialized in portraits, in particular of men and women caught in moments of rollicking high spirits. These informal poses brought his subjects to life, capturing a moment in time as well as a face. Much of this was the result of his technique of "alla prima" (at first), where he applied paint directly to the canvas without an undercoat, completing a painting with a single application of brushstrokes, thus capturing the immediacy of the moment.



The Jester and The Drunkard by Franz Hals

Johannes Vermeer (1632-75) is best remembered for his interiors and mastery of light and is now considered only second to Rembrandt among Dutch artists. Only 35 to 40 of his paintings survive, partly because he worked so deliberately and partly because he died at a fairly young age.

Perhaps only Van Eyck was as skillful as Vermeer in his masterful use of light. While most artists used a gray/green/brown palette, Vermeer's colors were brighter, purer, and glowed with greater intensity. He also used dabs and points of paint that would reflect more light, so his paint surface has been described as being like "crushed pearls melted together". Vermeer was also a master of varying the intensity of an object's color in relation to its distance from the source of light. He achieved serenity and stability through subtly balanced compositions. For example, he avoided monotony in *The Kitchen Maid* by putting stains, holes, and a nail in the walls.



Left: Jan Vermeer (1632-75), *View of Delft*, ranked by an art critics' poll as the 2nd best painting ever. Right: *The Kitchen Maid*

Rembrandt Van Rijn (1606-1669) may be the best-known painter in the Western world. It's almost as if he were two artists, since his career breaks down into two very distinct styles. For the first 20 years of his career when his paintings

were at the height of fashion, his art was intricately painted and dramatically lit.

One of his most famous paintings, *The Nightwatch*, shows his technical skill with light, composition, and color. Its title, which was given later by the way, is misleading because the dark varnish coating it gives the false impression it was at night. Like Hals' work, this painting revolutionized the group portrait. Instead of showing stiff orderly rows of men, it captured a lively moment of communal action along with a sense of hectic motion through the Baroque use of light and movement. The captain and lieutenant seem to step into the viewer's space while flashes of light contrasting with the dark background keep the eye zigzagging around the picture. Crisscrossing diagonals of pikes, lances, rifles, and the flag make the scene appear chaotic, but since they converge at rt. Angles, there is a hidden geometric pattern holding everything together. Color harmonies of the yellow in the captain's uniform with the girl's dress and of the red sash with the uniforms of two others in the painting also unify the design.



Supposedly each member of the company paid equally to have himself painted, so Rembrandt' obscuring some of the sitters' faces made them angry and marked the decline of his popularity



The turning point in styles came in 1642, the year of the completion of *Nightwatch* and also when his beloved wife died (having already lost

three infants). After this, Rembrandt's art (such as *Landscape with Mill* (above) exhibited a quieter, deeper style that was less physical and more psychological. He turned more to biblical scenes, and painted with more restraint, his paintings dominated by reds and browns, broad brushstrokes, solitary figures, and a feeling of loneliness.

In addition to painting, Rembrandt was also an accomplished etcher, handling a needle with such skill and speed that his work seemed to have the spontaneity of a sketch. One etching, "Six's Bridge", was a landscape, supposedly "done between courses of a dinner while waiting for a servant to fetch some mustard from a nearby village.

Rembrandt painted nearly 100 self-portraits over his career of 40 years, ranging from the vitality and optimism of his youth to the physical decay and loneliness of old age, a visual chronicle of his life that remained unparalleled until van Gogh did much the same over two centuries later.

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THE “TULIPMANIA” OF THE 1630s



Hans Bolliongier, *Still Life with Flowers*, 1639. Because of their rare beauty, tulips became the subject of a number of still-life paintings by Dutch artists.

There are few things more resilient than greed, as seen by the succession of “boom and bust” speculative markets in the modern era over such things as stocks in the 1920s, dot.com’s in the 1990s, and real estate in the 2000s. The grand daddy of all these speculative markets took place in Holland in the 1630s and focused on, of all things, tulips.

The tulip seems to have originated in the harsh wind-blown environment of the Himalayas. It was originally a short, stubby flower, but was admired for its beauty and as a symbol of the tenacity of life. Tulips spread westward and became especially popular among the Arabs who cultivated gardens of them. Their popularity spread to the Turks, Suleiman the Magnificent even having a tattoo of a tulip to serve as a protective talisman.

The tulip first arrived in Antwerp in 1562 by way of trade with the Turks. By this time, the influx of money from the Americas and expanding trade routes were pushing rich Europeans to look for new ways to spend and invest their money. One area was botany and gardening, thanks largely to the circulation of new scientific knowledge by the printing press. This and two other factors made the tulip seem like a lucrative investment. One was that it was difficult for many Dutch artisans at the time to make a profit, so they were also looking for another source of income requiring little capital investment. The other factor was that tulips reproduce slowly, thus creating a limited supply that could be sold for a high profit.

At first, the tulip trade grew at a reasonable rate, as demand for this new sensation grew while the supply remained constant, thus driving prices up. This would draw more people into the speculative market, further increasing demand, driving prices up more, and so on. However, what started as a somewhat rational trend soon turned into a frenzy of buying and selling, with each new buyer expecting to be able to sell at a higher price. People were paying outrageous prices, such as plots of land, a whole trade ship, and, in one case, an entire mansion, for a single bulb. They were also borrowing heavily and going into debt to buy tulip bulbs, counting on future profits from other people caught up in the same frenzy.

Unfortunately, a major problem with tulip bulbs was the fact that the most beautiful designs in tulips tend to be recessive traits, so there was no guarantee that a tulip bulb’s offspring would have the same traits as its parent. Eventually, as people realizing this and saw that tulips were extremely over-priced, the seller’s market turned into a buyer’s market. Unfortunately, there were no buyers, so prices dropped rapidly. This led to panic selling, since so many people were in debt for tulip bulbs they hoped to sell, driving prices down more, leading to more panic selling, and so on. By the end of 1637, the tulip bubble had burst and “tulipmania had collapsed as suddenly as it had bloomed.

Even though the speculative bubble popped, tulips regained much of their value. Louis XIV would buy 2,000,000 tulips a year from the Dutch for his palace at Versailles. They continue to be a major export for Holland (the Dutch Republic).

Tulip Fun Facts

The first tulip bulbs to arrive in Antwerp in 1562 were mistaken for onions, so most of them were chopped up and eaten.

The word tulip comes from *tulipan*, a corruption of the Turkish word *dulband*, meaning turban, because of their shape.



In Rembrandt's famous painting, *The Anatomy Lecture-of Dr Nicolaes Tulp* (above), the doctor's original name was Claes Pieterzoon, but he had his name changed to Tulp (tulip) to show his love of the flower.

Although people in the 1600s did not realize it, the most beautiful and sought after designs in tulips, such as the Semper Augustus shown here, are the results of a virus. At one auction in 1637, one bulb cost 5200 guilders, at a time when a university professor's annual salary was 1200 guilders.

A single Viceroy tulip bulb was traded for four fat oxen, eight fat pigs, twelve fat sheep, four loads of rye, four barrels of eight-florin beer, two loads of wheat, two hogsheads of wine, two barrels of butter... one thousand pounds of cheese, a complete bed, a suit of clothes and a silver beaker, worth a total of 2,500 florins.

To top that, one Semper Augustus bulb, an even rarer variety which was very rare during those times (so rare that only two horticulturists in Holland currently carry them,) brought twice that sum, plus a new carriage to boot. Another one was traded for an entire brewery.

Today Holland annually produces three billion tulips, one billion for domestic use and another billion going to the United States.

Tulips are only available from November to May and have a life span of just 3-7 days.

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LAYING THE FOUNDATIONS FOR ABSOLUTISM IN FRANCE AND EUROPE

Henry IV (1598-1610). As we have seen, a major outcome of the French Wars of Religion (1562-98) was the willingness of the French people to recognize the king's power in order to ensure the peace. The new king, Henry IV (1598-1610), and his minister, Sully, used this new attitude favoring absolutism and various economic measures to restore the power of the monarchy. First of all, they repudiated all foreign debts, while repaying French creditors at a much lower rate of interest. Second, they established the *Paulette*, a tax on hereditary offices that would partially make up for lost revenues when commoners bought such offices. Third, they practiced a new economic theory called mercantilism.

Mercantilism was the dominant economic theory of the 1600s and 1700s, seeing gold & silver as the sole measures of a society's wealth. Therefore, to cut imports and raise exports the state should develop and support industries, roads, merchant marine, colonies, etc. Given the limited consumer market back then, states especially promoted luxury industries, such as silk and tapestries, to compete with foreign industries.

Mercantilism was a mixture of good news and bad news. It was good in the sense that kings were showing increased interest in their states' economies by developing roads, industries, etc. On the other hand, it could be bad when kings showed *too much* interest in their states' economies by exercising too heavy-handed control that stifled initiative and cut productivity. Overall, by the end of Henry's reign, the royal government was probably as financially solid as it had ever been.

Louis XIII (1610-43) and his minister, Cardinal Richelieu, continued building royal power. They particularly focused on breaking the nobles' power by destroying their castles, quickly crushing any of their conspiracies, and infringing on their privileges (such as dueling). They also excluded them from royal councils, using more reliable middle class officials. In 1634 Richelieu also created two new institutions with which to make the nobles increasingly obsolete: *generalites* and *intendants*.

Generalites were the 32 non-feudal provinces designed to undercut the authority of the old feudal provinces and their noble officials. Since the boundaries of the *generalites* partially overlapped with but did not totally conform to those of the old feudal provinces, disputes over jurisdiction between the two types of provinces were inevitable. This

could be especially useful for any disputes between two parties from different feudal provinces but the same *generalites*.

Intendants were the main royal officials Richelieu placed in every one of the *generalites* in 1634. At first their job was mainly to report corruption and make sure the tax farmers got their money. Naturally, both the financiers and *intendants* were quite unpopular, getting them involved in numerous court disputes. However, since the *intendants* were new *royal* officials with no tradition of being tried in local or Church courts, all their cases went to the royal courts, which naturally favored them as representing the king's interests.

Eventually, Richelieu expanded the *intendants'* duties to include supervising justice and tax collection, getting recruits for the army, and regulating commerce, trade, the guilds, and other financial activities. They also transmitted messages directly between local authorities and the king, to whom they were solely responsible. This neatly sidestepped the firmly entrenched interests of local authorities and laid the foundations for more thorough royal control of the provinces and France under Louis XIV, making them the most reliable element in royal government until the French Revolution in 1789.

Sully, Richelieu and Intendants



During the 17th century, it was common for rulers to appoint ministers to run the affairs of state for them, such as Count Olivares for Spain and Oxenstierna for Sweden. For Henry IV of France, it was Maximilien de Béthune, Duke of Sully (1560-1641). Sully favored indirect taxes, such as sales taxes, the *gabelle* (a salt tax), and tolls, which everyone (i.e., even nobles and clergy) had to pay. He also instituted the *Paulette*, an annual tax worth one sixtieth of the original price of an office. Paying it made the office hereditary so one could pass it on to his heirs.

Sully also started a nationwide highway system to facilitate trade. Thanks to Sully's stringent financial measures, Henry IV had a huge surplus in his treasury by his death. Sully even wanted to establish what he called the Great Design, an international body of all Christian rulers to help guarantee the peace, although he attributed the design to Henry IV. Sully resigned as minister in 1611, soon after Henry's assassination.



The next truly prominent minister for France was Armand Jean du Plessis, cardinal-duc de Richelieu (1585-1642). As the third son of a somewhat impoverished noble, he had limited prospects for a career. But he made the most of those opportunities through hard work, rising up in the ranks of the Church to bishop of Lucon at age twenty-one (for which he had to get a special papal dispensation, since the minimum age for a bishop was supposedly twenty-six.)

When Henry IV was assassinated and Marie de Medici became regent for her nine-year old son, Louis XIII, Richelieu attached his fortunes to Marie's advisor, an Italian named Concini. However, Concini proved to be very unpopular, especially with the young king, who had him arrested and killed. Deprived of his patron, Richelieu skillfully managed reconciliation between Louis and Marie and worked his way back to a position of influence.



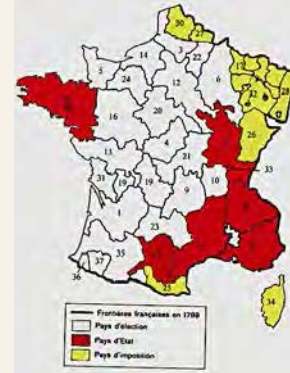
In 1624 he commanded a royal army against the Protestant Huguenots, besieging their main city, Rochelle (above), for 14 months before it finally surrendered with its population reduced by fighting, hunger, and disease from 27,000 down

to 5,000. Although the Huguenots kept their religious freedom according to Henry IV's Edict of Nantes, their power was broken as they were deprived of their political liberties and fortified towns.

In 1630 Marie de Medici's jealousy of Richelieu's influence led to her downfall in what became known as the Day of the Dupes. Sure of her influence over her son, she demanded that he choose between her and the cardinal as his minister. To her surprise, Louis chose Richelieu and Marie was effectively exiled from the court.

Richelieu had two main goals for his king and France. One was to break the Hapsburgs' power, which seemed even more threatening by 1634 after defeating the Bohemians, the Danes, and the Swedes in the Thirty Years War. Despite being a Catholic cardinal, Richelieu allied with various Protestant princes against the Catholic Hapsburgs, eventually wearing them out, although at great expense for France as well. This helped set up French dominance of the continent by Louis XIV twenty years later.

His second goal was to build up the king's power at the expense of the nobles. To that end, he destroyed their castles, kept them out of royal councils, and instituted a new administrative system for France: the *generalites* (below).



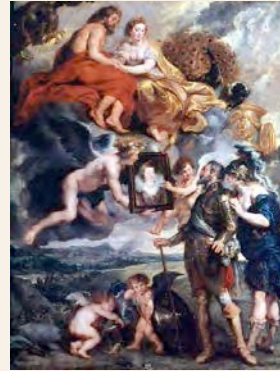
Generalites were the 32 non-feudal provinces designed to undercut the authority of the old feudal provinces and their noble officials. Since the boundaries of the generalites partially overlapped with but did not totally conform to those of the old feudal provinces, disputes over jurisdiction between the two types of provinces were inevitable. This was especially useful for any disputes between two parties from different feudal provinces but the same generalites.

Intendants were the main royal officials Richelieu placed in every one of the generalites in 1634. At first their job was mainly financial, including keeping an eye on the tax farmers, but it quickly expanded to include supervising tax collection, supervising the courts, getting recruits for the army, and regulating commerce, trade, the guilds, and other financial activities. They also transmitted messages directly between local authorities and the king, to whom they were solely responsible.

Intendants were appointed directly by the king and were generally drawn from former middle class subjects who had recently bought their way into the Nobility of the Robe, thus being more loyal to and dependent on the crown. They were never assigned to their home provinces, where they might have an independently established power base. However, intendants tended to stay in the same province for long periods of time, sometimes decades. As a result they could get to know local conditions and people and provide more responsible and responsive government, especially since they answered directly to the king.

Marie de Medici commissioned Peter Paul Rubens to do a series of no fewer than 21 giant paintings commemorating her life. He finished the entire project in three years, largely through extensive use of his apprentices to do a lot of the work on paintings while he did the finishing touches and signed them.

Left to right: *Fates Spinning the Threads of Marie de Medici's Destiny*; *The Birth of Marie de Medici*; and *The Arrival of Marie de Medici in Lyons*



Rubens, *Henry IV viewing A Portrait of Marie de Medici*. Since kings often did not meet the foreign princesses they were to marry until the wedding day (or after if they were married by proxy), they might have an artist do a portrait of the prospective brides for a sneak peak before choosing the lucky lady.

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THE AGE OF LOUIS XIV, THE "SUN KING" (1643-1715)



"I am the state."-- Voltaire incorrectly quoting Louis XIV

Introduction. From 1643 to 1815 France dominated much of Europe's political history and culture. Foreigners came to France, preferring it to the charms of their own homeland. Even today, many still consider it *the* place to visit in Europe and the world. In the 1600's and 1700's there was a good reason for this dominance: population. France had 23,000,000 people in a strongly unified state compared to 5,000,000 in Spain and England, and 2,000,000 in the Dutch Republic and the largest of the German states. This reservoir of humanity first reached for and nearly attained the dominance of Europe under Louis XIV, the "Sun King".

Louis' early life and reign (1643-61). Louis was born in 1638 and succeeded his father, Louis XIII, as king in 1643 at the age of five. Luckily, another able minister and Richelieu's successor, Cardinal Mazarin, continued to run the government. In 1648, encroachment by the government on the nobles' power, poor harvests, high taxes, and unemployed mercenaries plundering the countryside after the Thirty Years War led to a serious revolt known as the Fronde, named after the slingshot used by French boys. Louis and the court barely escaped from Paris with their lives. Although Mazarin and his allies crushed the rebels after five hard years of fighting (1648-53), Louis never forgot the fear and humiliation of having to run from the Parisian mob and fight for his life and throne against the nobles. This bitter experience would heavily influence Louis' policies when he ruled on his own.

From 1643 to 1661, Cardinal Mazarin ruled ably in the young king's interests, although he provided Louis with a rather odd upbringing for a king. Despite an immense fortune, Mazarin was something of a miser who gave the young king inadequate food, clothing, and attention. (Once the young Louis was left unattended and fell into a fountain where he almost drowned.) Louis also got little in the way of a formal education and, even as an adult, was barely literate. But Mazarin did give Louis a sense of what it meant to be a king. As a result, he turned out to be a hard working ruler, but often lacked much common sense and the willingness to entrust enough freedom of action to his subordinates. From his mother, a full-blooded Spanish princess, Louis learned great religious piety and love of ritual, another trait that would influence his reign. In 1661, Mazarin died. Louis' officials, assuming he would be a "do nothing" king like his father, asked to whom they should now answer. Louis' reply was "To me." The age of Louis XIV was about to begin in earnest.

Louis' internal policies. Louis XIV may not have said, "I am the state", but he ruled as if he had said it. Louis was the supreme example of the absolute monarch, and other rulers in Europe could do no better than follow his example. Although Louis wished to be remembered as a great conqueror, his first decade of active rule was largely taken up with building France's internal strength. There are two main areas of Louis' rule we will look at here: finances and the army.

Louis' finance minister, Jean Baptiste Colbert, was an astute businessman of modest lineage, being the son of a draper. Colbert's goal was to build France's industries and reduce foreign imports. This seventeenth century policy where a country tried to export more goods and import more gold and silver was known as *mercantilism*. While its purpose was to generate revenue for the king, it also showed the growing power of the emerging nation state. Colbert declared his intention to reform the whole financial structure of the French state, and he did succeed in reducing the royal debt by cutting down on the number of tax farms he sold and freeing royal lands from mortgage. Colbert especially concentrated on developing France's economy in three ways.

First of all, Colbert concentrated on developing French internal trade in order to reduce foreign imports. He developed better inland trade routes by building canals and improving ports and river ways, which would connect different parts of the country to each other and open up new markets. Secondly, Colbert worked to develop French industries. Most industries he developed can be seen as being aimed against imports from other countries: mirrors from Venice, lace from England, and iron and firearms from Sweden. He also built a merchant marine to stop foreign powers, especially the Dutch, from carrying French goods and making profits at France's expense. In 1661, France had a merchant marine of 18 ships. By 1681, it was up to 276 ships. Finally, Colbert encouraged the development of overseas colonies much like those of other European powers. During this time, France established and tightened control over colonies in Canada, French Guiana, and Madagascar.

For all his efforts and financial wizardry, Colbert's successes were limited, largely because he was trying to drag a basically medieval economy into the modern world. Guilds were still powerful and held back progress in new production and financing techniques. Local authorities still jealously guarded their rights to charge tolls on trade. Getting across France involved paying up to 100 such local tolls, which of course stifled trade. The tax burden was extremely unfair, with nobles and the Church virtually exempt from taxation even though they controlled much of the land. Colbert's own techniques of having the government control so many aspects of the economy were heavy handed and tended to stifle initiative. His efforts at trying to centrally control France's overseas colonies were especially disastrous.

However, Colbert did make real progress in developing the French economy. A merchant marine and navy were built. Industries were developed. And for a few years Colbert even managed to run the government at a profit. Unfortunately, Louis' desire for glory and conquests led to a long series of wars that embroiled Europe in a new round of bloodshed and wrecked France's economy. Not even Colbert could do anything to stop that.

The army was another primary object of reform. By the mid 1600's, the old system of recruiting armies and fighting wars was clearly outmoded. Mercenaries were disloyal, untrustworthy, and terribly destructive to friend and foe alike. By contrast, the Swedish army of Gustavus Adolphus and the English army of Oliver Cromwell each had loyal native recruits that proved reliable and effective, while Brandenburg-Prussia was transforming its troublesome nobles into a loyal professional officer corps. These lessons were not lost on Louis and his minister of war, Louvois, who built what amounted to one of the first modern national armies. Three aspects of the army they concentrated on were its training and discipline, its equipment, and its supplies.

First of all, soldiers in Louis' new army, whether mercenaries or peasant draftees, found military life was much stricter and more regularized in several ways. For one thing, instead of mercenary captains who recruited, paid, and commanded them, soldiers now answered to the state and its officers. Along these lines, there was also a regular chain of command from the *Intendant de l'armee* (roughly equivalent to our modern secretary of defense) down through field marshals, generals, colonels, and captains. Officers also got regular training and were much more strictly under the rule of the central government than ever before.

Naturally, the nobles claimed the officers' positions as their birthright. However, the government kept tighter control of its army, largely through new positions filled by men of more humble birth. These *lieutenant colonels* performed many vital duties *in lieu* of the noble officers without actually replacing them. In this way, a more modern army helped Louis bring the old troublesome medieval nobility more tightly under his control.

A second reform was that uniforms and equipment were more standardized, which made the army easier to supply, more efficient, and promoted more of a group identity and higher morale. Finally, the army maintained regular supply lines. This reduced the need for foraging, which increased discipline and control over the army and protected the civilian populace from being plundered.

There were two major factors that limited the effectiveness of Louis' military reforms. For one

thing, Louis's standing army was large and expensive, having some 400,000 men at its height. It is estimated that a pre-industrial society such as seventeenth century France could only afford to support 1% of its population in the military. Louis' army at its height was nearly twice that, which was a terrible strain on French society. This became especially apparent in Louis' later wars when supply lines broke down, which led to foraging and a breakdown in discipline. Second, the expense of Louis' wars forced him to sell military offices, which brought in less capable and dedicated officers. Overall, Louis' military reforms were much like Colbert's economic reforms. They made progress, but met severe obstacles that prevented them from being completely successful.

Despite these limits to Louis' economic and military reforms, France was the most powerful state in Europe by the late 1660's. Louis realized this quite well, in fact probably too well, because he embarked on an ambitious series of policies that nearly ruined France by the end of his reign. There were three areas where Louis chose to show his power: religion, his palace at Versailles, and foreign expansion.

Religion was one aspect of Louis' reign that illustrated the absolute nature of his monarchy quite well. Louis himself was quite a pious Catholic, learning that trait from his mother. However, in the spirit of the day, he saw religion as a department of state subordinate to the will of the king. By the same token, not adhering to the Catholic faith was seen as treason.

As a result, Louis gradually restricted the rights of the French Huguenots and finally, in 1685, revoked the Edict of Nantes, which had given them religious freedom since the end of the French Wars of Religion in 1598. This drove 200,000 Huguenots out of France, depriving it of some of its most skilled labor. Thus Louis let his political and religious biases ruin a large sector of France's economy.

Versailles. Louis' religious faith was largely a superficial one attached to the elaborate ritual of the Catholic mass. This love of ritual also showed itself in how Louis ran his court at his magnificent palace of Versailles, several miles outside of Paris. Much of the reason for building Versailles goes back to

the Fronde that had driven Louis from Paris as a young boy. Ever since then, Louis had distrusted the volatile Paris mob and was determined to move the court away from the influence of that city. Versailles was also the showpiece of Louis' reign, glorifying him as the Sun King with its magnificent halls and gardens.

The palace facade was a quarter of a mile across. The famous Hall of Mirrors alone was 250 feet long. Water pumped from the Seine River to hills 500 feet above Versailles fed its fountains. The Orangery had over 1200 orange trees that were moved inside for the winter. All this was built and maintained at tremendous expense. But it was worth it to Louis, regardless of the burden it put on the French people.

As splendid as it may seem, life at Versailles was not always such a picnic. The site itself was on low marshy ground that made it unhealthy to live in. Except for a few magnificent rooms and bedrooms, most people had small cramped rooms with little or no ventilation. Nevertheless, a noble was considered socially and politically dead if he did not live at Versailles. He lived there at his own expense and was expected to keep up a sumptuous life style in order to be a proper ornament for Louis' court. The seemingly endless round of masquerades, plays, operas, and parties eventually grew old to even the most ardent partygoers. For many, life became a bitter series of petty intrigues over such things as who could stand closest to Louis when he held court or got dressed in the morning. Some even saw this as a plot to ruin the nobles by making them go bankrupt while they were trapped in the gilded cage of Versailles. And indeed, Versailles did bankrupt many nobles along with the French government, helping lead to the French Revolution some 75 years after Louis died.

Louis' diplomacy and wars. Just as Louis's palace at Versailles dominated European culture during the late 1600's and early 1700's, his diplomacy and wars dominated Europeans political history. As Louis himself put it: "The character of a conqueror is regarded as the noblest and highest of titles." Interestingly enough, he never led his troops in battle except for overseeing a few sieges from a safe distance.

Louis' main goals were to expand France to its "natural borders": the Rhine, the Alps, and the Pyrenees. This, of course, would make him enemies among the Dutch, Germans, Austrians, Spanish, and English. Therefore, Louis' diplomacy had to clear the way to make sure he did not fight everyone at once. For this purpose he skillfully used money to neutralize potential enemies (such as Charles II of England in the Secret Treaty of Dover) and extracted favorable terms from stalemate or losing situations. But Louis could also make some fateful blunders to hurt his cause. His obsessive hatred of the Dutch dominated his policy too much, as did his own self-confidence and arrogance in trying to publicly humiliate his enemies. However, this just alarmed Louis' enemies more, especially the Dutch, Austrians, and English, who allied against Louis to preserve the balance of power.

Several new inventions transformed the warfare of this period. First of all there was the bayonet, invented in Bayonne, France around 1670. This blade, when attached to the end of a musket, transformed it into a short pike, thus eliminating the need for separate pikemen to protect the musketeers in hand-to-hand combat. Second, there was the flintlock musket, which provided more reliable firing and faster loading than the old matchlock muskets. Finally, there was the introduction of paper cartridges with pre-measured amounts of gunpowder that also sped up the process of loading in combat. With all infantrymen carrying flintlock muskets, premeasured charges of powder, and bayonets for hand-to-hand combat, generals could create much less dense formations and greatly stretch their battle lines.

These new linear tactics vastly increased European armies' firepower and warfare's destructiveness. They also made armies harder to control since they were stretched out over such a great distance. As a result, discipline was tightened even more, which further increased the power of the state over its armies. It also made it harder to attract recruits, leading to a growing reliance on peasant draftees.

The general trend in Louis' wars was for them to become increasingly longer, bloodier, and less successful. His first major conflict, the War of Devolution, lasted only two years (1667-1668). Louis' goal was to conquer the Spanish Netherlands (modern Belgium), which would give him control

of the mouth of the Rhine and much of Germany's trade.

At this point, Colbert's financial measures provided Louis a strong economic base with which to wage war. Louis' military reforms had also given him the best fighting machine in Europe. The system of supply lines worked so well that the French officers were even supplied with silverware for their tables. As a result, Louis gained several strategic towns and fortresses in the Spanish Netherlands. However, Europe's suspicion and fear of French aggression had been aroused, and each succeeding war would be progressively harder for Louis to win.

The Dutch War (1672-78) brought in the Dutch Republic, Spain, Brandenburg-Prussia, Denmark, and Austria against Louis. French progress was much slower, and fighting much costlier, as the Dutch in particular fought desperately to defend their homeland, even opening the dikes to flood out the French. Although Louis gained nothing against the Dutch, he did win lands along the Rhine at the expense of various German states, but at considerable cost. France lost its two best field marshals, and the French people endured ever-higher taxes, some peasants even being reduced to making bread from acorns and roots.

Louis' next adventure, the War of the League of Augsburg, also known as the Nine Years War (1688-97), embroiled Europe in an even more prolonged and fruitless conflict. French expansion was directed across the Rhine into Germany while Austria was preoccupied with its Turkish war. Austria put the Turks on hold and allied with the Dutch, English, and several German states to stop French aggression. Fighting raged through most of the 1690's. Peasants were drafted in greater numbers, taxes were raised to intolerable heights, and a major famine in 1694 merely added to the misery. Finally, peace was made in 1697 with little changed, except for everyone being severely weakened by the senseless struggle. By 1700, France's population had declined from an estimated 23,000,000 in 1670 to 19,000,000.

Unfortunately, a new and bloodier war soon arose. This time the prize was Spain and its extensive empire, left without a ruler by the death of Charles II. Louis' grandson had an excellent claim through Louis' wife, a Spanish princess. Predictably, the

rest of Europe would not tolerate a French Empire that surpassing even that of Charles V in the 1500's. The resulting conflict, the War of the Spanish Succession, would bring twelve more dreary years of warfare and destruction to Europe (1701-13).

For the first time, Louis' generals suffered decisive defeats, mostly at the hands of the brilliant British general, John Churchill, the Duke of Marlborough. French armies were thrown on the defensive, and French peasants were drafted in growing numbers to defend their homeland. Resistance stiffened and the war ground down to a bloody stalemate. Exhaustion on both sides finally led to the Treaty of Utrecht in 1713. Louis' grandson took the throne of Spain and its American empire, but the French and Spanish thrones could not be united under one ruler. Austria got the Spanish Netherlands to contain French aggression to the north. Just as the Treaty of Westphalia in 1648 had contained Hapsburg aggression, the Treaty of Utrecht contained French expansion. Two years later Louis XIV was dead, with little to show for his vaunted ambitions as a conqueror except an exhausted economy and dissatisfied populace.

Results of Louis' reign. The age of Louis XIV was important to European history for several reasons. First of all, it saw the triumph of absolutism in France and continental Europe. Versailles was a glittering symbol and example for other European rulers to follow. Any number of German and East European monarchs modeled their states and courts after Louis XIV, sometimes to the point of financial ruin. Second, Louis' wars showed the system of Balance of Power politics working better than ever. French aggression was contained and the status quo was maintained. All this had its price, since the larger sizes of the armies and the final replacement of the pike with the musket took European warfare to a new level of destruction. Finally, Louis' reign definitely established France as the dominant power in Europe. However, the cost was immense and left his successors a huge debt. Ironically, the problems caused by Louis XIV's reign would help lead to the French Revolution in 1789 and the spread of democratic principles across Europe and eventually the world.

Dawn of the Sun King: Louis' Early Life



Louis, known as the Sun King since he was born on Sunday, was supposedly born with two teeth, making him very unpopular with wet nurses. He was called the “God Given” because his parents had been childless for twenty years. Even more surprising, a baby brother arrived a couple years later. Louis came to the throne at the age of 4 years. Supposedly, as he was brought to his dying father’s side, the king asked who was there and his son said “Louis XIV”.

***The Fronde (1648-53)* was a popular revolt caused by several factors: the heavy tax burden during the Thirty Years War, the nobles’ anger at the crown’s steady reduction of their power, and the efforts of the high court (*parlement*) to limit the crown’s growing authority. Triggering it was a government attempt to get the chief judicial magistrates to give up four years’ salary to help pay for the Thirty Years War. When the Paris *parlement* (high court) countered with a petition to limit royal power, Cardinal Mazarin and Queen Anne had the leaders arrested. This sparked an uprising by the Parisians, forcing Anne and Mazarin to give in for the time being (August 1648).**

However, when the Thirty Years War ended in October, Anne, Mazarin and Louis left Paris to join the royal army, now freed to take action against the Fronde. They blockaded Paris until a compromise peace was arranged in March 1649.

A second Fronde, led by the princes and nobles, broke out in 1651 after Mazarin arrested the Prince de Conde, who had helped suppress the first uprising. At one point, the royal family had to flee Paris. However, the victorious nobles had a falling out among themselves, opening the way for the royalist party to defeat them. This was

the last open challenge by the nobles to royal authority. The Prince de Conde was forgiven by Louis and went on to become one of France's most celebrated generals.



The battle of Faubourg in 1652 where the Prince de Conde's army was saved from defeat against royalist forces by timely cannon fire from the Bastille.

Peek-a-boo doesn't work with kings. An early event that had a huge effect on the young Louis took place during the Fronde. The Paris mob, actually concerned for the young king's safety, stormed into the palace to make sure Mazarin hadn't taken him away. Louis' mother met the mob and told them the king was asleep, so they tiptoed into his room to check on him. In fact, Louis wasn't asleep, but he was terrified by the event. He never forgot that night nor forgave or trusted the Parisians. Supposedly, this is what influenced him to move the court outside of Paris to Versailles.



Mazarin (above) never assumed priestly vows and was awarded the title of cardinal for military service he had rendered the pope. He may have been secretly married to Louis' mother, Anne of Austria, after Louis XIII died.

Early on, Louis learned to put aside personal feelings in favor of his duty as a king. Although he had fallen in love with Mazarin's niece, Maria Manzini, he agreed to marry a Spanish princess,

Maria Theresa, whom he had never met in order to seal a treaty with Spain.

One way to understand Louis' reign is to view it as a highly ritualized and scripted play, where each character, including the king, had his strictly assigned role. While this heavily restricted Louis' own daily life, it also restricted the movements of everyone at court, keeping them perfectly in line if they wanted to enjoy the king's favor.

That being said, Louis was a dashing young man well known for his romantic exploits, including climbing the rooftops of Paris to gain entrance to various fair maidens' bedrooms.



Louis may have been as short as 5'3", but he augmented his height with high heels and big hair (wig). Height was considered an important aspect of royal bearing. Artists typically portrayed their subjects as taller than they really were.

Louis' Economic Reforms



The draper's son. As one of the newer nobility of the robe, Louis' finance minister, Jean Baptiste Colbert, indulged in nepotism and enriched himself as well, which was seen as just part of the game back then. He apparently was quite vain (or at least insecure about his lineage), and insisted he had Scottish kings as ancestors. He was also quite imperious, ordering nobles about and angering them as much as Mazarin and Richelieu had. He also may have transformed France as much as Richelieu had. As the dying

Mazarin supposedly told Louis: *“Sire, I owe everything to you; but I pay my debt...by giving you Colbert.”*

The French economy at the time was a mess, still trying to recover from the Thirty Years War, the Fronde, and war with Spain, which continued until 1659. As a result, there was a serious depression in the late 1650s.

One thing especially plaguing it were the separate regional economies with their own weights, measures, and worst of all, tolls and tariffs. There were probably 1500 different toll districts in France at the time. Someone crossing from one end of the kingdom to the other would have to pay up to 100 such tolls, which seriously stifled internal trade. Meanwhile most trade outside the country was carried on foreign ships. In addition, guilds still artificially limited production and kept prices high, while poor transport led to starvation in the midst of plenty.

Colbert also faced a huge royal debt of 60,000,000 livres. By comparison, royal revenue in 1661 only equaled half of that, while 9 million livres were spent on interest payments alone.

He started by setting up a Chamber of Justice to investigate any corruption by fiscal agents, tax collectors, and rentiers since 1635. This resulted in sentencing corrupt officials to property confiscations, time in prison or as galley slaves, and in some cases, hanging. This restored 150 million francs to the royal treasury. Colbert then dismissed about half the officials in the Department of Finance along with numerous court officials. He converted old government debts into new ones at lower interest rates, simplified tax collection and cancelled back taxes dating to 1647, knowing he couldn't collect them anyway.

He also lowered taxes in 1661 and mourned having to raise them again in 1667 to pay for Louis' wars and new palace at Versailles. However, he failed to reorganize the tax system was based on the *taille*, in which the burden rested solely on the Third Estate, leaving nobles and Church exempt.

The most notable of Colbert's infrastructure improvements was the Languedoc Canal to connect the Garonne and Rhone Rivers to create a direct link between the Atlantic & Mediterranean without having to sail all the way around Spain & Portugal. It was 162 miles long and reached an altitude of 850 feet above sea level. Barges going up the canal would be towed by horses, oxen, or humans.

Colbert's heavy-handed state control included hundreds of ordinances prescribing methods of production along with the size, color, and quality of products, and the hours and conditions of labor. Boards were established in all towns to inspect work and to deal out public punishments for failing to meet government standards.

Workers were subjected to a quasi-military discipline that punished laziness, cursing, incompetence, drunkenness, disobedience, and irreverence in church, sometimes by flogging. By the same token, wages were low to make French goods competitive outside of France, workdays were long (12 hours or more), while strikes and unions were strictly outlawed. To a large extent, Colbert was just creating medieval guilds on a national level.

Colbert died September 6, 1683 (just as Vienna was about to be saved from the Turks several hundred miles to the east) and was buried at night to avoid insults by an angry mob. His regulations stifled as much as stimulated the economy, being too concerned with control of quality and production rather than more efficient capitalist practices. As one person assessing Colbert's work told him, *"You found the carriage overturned on one side, and you have upset it on the other."*

While Colbert did create several years of balanced budgets, Louis' extravagance and wars would quickly erase any surplus so that by the end of his reign he would be spending his taxes three years in advance.

Louis' Military Reforms



Francois-Michel Le Tellier, the marquis de Louvois (above), took over the army in 1665 at the age of 24. He did his job with energy, clear-sightedness, and brutality, making him one of the most hated men in France. However, thanks to his efforts, the French army was transformed from a quasi-feudal rabble into a modern national army that answered to the state instead of individual generals.

Purging the old army. Much like Colbert did with France's finances, Louvois started with a purge of the old army. However, instead of wasting energy trying to abolish the sale of commissions, he worked to give the king controlling interest in those sales. Louis had already partly accomplished this in 1661 when the Colonel General of the Infantry died and Louis assumed the office himself so that all infantry officers held their offices directly from the king. Along these lines, Louis and Louvois weakened the positions of the Colonel General of the Cavalry and Grand Master of Artillery in their control of commissions in their respective branches of the military.

Next Louvois worked to end the practice of soldier impersonators who would receive soldiers' pay or bounties for enlisting and then desert so they could enlist again. Offenders caught in this scam faced progressively harsher penalties from flogging (1663) to flogging and branding (1665) to execution. Another problem was captains falsifying numbers in their companies so they could collect extra salaries for themselves. Any officers who did this was imprisoned for one month and had to give the soldier who denounced him the hefty sum of 300 livres. A third practice Louvois worked to extinguish was commissioners warning officers of surprise inspections, which allowed corrupt officers to gather temporary recruits or borrow

soldiers from other regiments to fill out their ranks to the numbers they were getting paid for.

The recruits. Louvois worked hard to improve the quality of recruits by tightening state control of the recruiting process while also improving soldiers' opportunities and status. New recruits signed up for 4 years. They must be physically fit, bachelors or widowers, and under 40 years of age.

But as Louis' reign went on, his wars overtaxed France's ability to supply enough qualified recruits, so standards were lowered or ignored, such as the height requirement. There was also widespread kidnapping of recruits for bounties until the authorities were ordered to stop it.

Even as early as 1676 the Duke of Luxembourg described his recruits as "deplorable; a good half of them mere children whom I shall have to send back to France", while by 1689 Louis was being urged to fight a defensive war because of the declining quality of recruits. In 1703 Louis was so desperate for recruits that he offered 5-year exemptions from taxes for anyone who would enlist for three years

Louvois worked to improve a lot of common soldiers, such as ordering lighter punishments than before. Captains still paid their men, but were closely supervised so that men were paid regularly. This led to fewer desertions, although it was still a big problem. Troops got extra pay for serving in plague areas and tax exemptions (ranging from 6 months to life) for valor in combat.

Another issue the state has wrestled with has been long and short-term care of the wounded. Under Louis, field hospitals for the wounded were still privately contracted, being paid per wounded soldier treated. Unfortunately, this system led to many abuses and the state, although still not running its own medical service, kept a closer eye on those who did. Offenders were led through the hospital by a hangman and then banished for life.

Long-term care for disabled veterans was a problem typically ignored by the state, since it saw no major return on its investment, at least in a positive way. Before, such men were often billeted in monasteries, where they would steal food and drink, get drunk and disorderly, and even attack the monks. Finally, the Monasteries struck a deal with Louis, paying him to build and run the first veterans' hospital, the *Invalides*, (below) in Paris (1674).



Louis and Louvois established a modern regular chain of command to replace the chaos & bickering of the old feudal chain of command:

- *Field marshal* who commands an army
- *General* who commands a division
- *Colonel* who commands a regiment
- *Captain* who commands a company

However, while Louis had more control of this hierarchy, nobles still claimed these offices as their birthright. In fact, senior military offices were one type of position commoners could not buy into. Unfortunately, all too often, the nobles who claimed these offices as their birthright also didn't think they had to do many of the jobs now required by these new positions.

Therefore, Louvois injected several new positions beneath the officers who would carry out all the required duties in lieu of the regular officers who either thought they were too good to perform those duties or were at Versailles protecting their positions against court intrigue:

- *Field marshal* who commands an army
- *General* who commands a division
 - *Brigadier general* who does much of the general's job
- *Colonel* who commands a regiment
 - *Lieutenant colonel* who does much of the colonel's job
- *Captain* who commands a company
 - *Lieutenant* who does much of the captain's job

Therefore, the old venal offices of ensign, captain, and colonel could still exist without doing as much harm. These new offices created a poor man's ladder of promotion, allowing men of more humble rank to rise through the ranks by merit.

Training & discipline was another area where Louvois was determined to increase efficiency. For this task he hired Jean Martinet who ruthlessly carried out reforms. In fact, even today, we use the word *martinet*, meaning a harsh disciplinarian. One thing Martinet did was to pressure incompetent officers into selling back their commissions by making their continuance dependent on their units' performance.

Officer training. Martinet realized the officers' poor performance was largely due to discharging them in peace when they would lose their edge. It was probably Louis who suggested putting superfluous officers into a few peacetime regiments until the next war, creating an excellent reserve officer corps, which explains France's ability to rapidly mobilize when war broke out.

Another issue that needed addressing was the old system of attaching young officers to regiments under family friends, hoping to pick up what they could (usually bad habits) until the family lawyer got them their own companies. Such a system provided no regular training for officers. Although they may have picked up some personal skills (e.g., riding horses or sword fighting), they rarely got instruction in how to command soldiers or the more technical aspects of being officers in modern (seventeenth century) armies.



Therefore, in 1682, of a modern system of officer training replaced the old system. There were

nine companies of cadets in frontier towns under the command of governors and instructional staff specifically there to train them. There they were taught drill, the manual of arms, musketry, dance and other social graces (for formal social occasions where they needed to represent their king as cultured men), riding, fencing, geography (especially how to read a map), and math for tasks involving logistics. A year later, Louis remarked that not even his musketeers put on a better parade than Besancon Company of officer trainees.

Infantry training. When the French commander of the expedition sent to help the Hapsburgs against the Turks in 1664 reported that many so-called trained soldiers had never fired musket and didn't know its theory, Louvois determined to institute regular training in musketry and the drill and march.

However, Louvois remained conservative about weaponry, keeping the firelock musket over newer more efficient flintlock fusil, even though reports showed all the French firepower at the Battle of Steenkirke came from the few fusils they had picked up from routed infantry. Even as late as 1703, one-third of the French infantry were still armed with pikes, despite the invention of the bayonet (c.1670), which eliminated the need for pikes, thus allowing each soldier to have a musket and increasing the army's firepower immensely.

Cavalry was still considered the arm to win battles, with infantry used mainly for softening up the enemy line to set it up for a cavalry charge. Since officers were nobles who normally rode horses, they understood cavalry training better than they did infantry training. There were some weapons changes, mainly curved sabers replacing swords and two carbineers (carrying short muskets) being added to each cavalry squad in 1679.

Although Louvois tightened discipline in the French army, he operated under the naive assumption that he could tell his men to rape and plunder in enemy territory (which was done as a matter of policy in some cases) and then expect

them to return to normal discipline. Unfortunately this contributed to a rapid decline of discipline in the later part of Louis' reign.

Uniforms, which first evolved on a regimental level, not only helped soldiers distinguish friend from foe on the increasingly smoky battlefield, but also gave them a stronger group identity leading to higher morale and reliability in battle. Until uniforms were imposed throughout the army in 1682, one might find regiments on both sides of the field wearing the same or similar colors. Even in the early stages of the American Civil War in the 1860s, there were Union regiments in grey uniforms and Confederate regiments in blue, not to mention a regiment on each side wearing uniforms modeled after French Zouaves.



Regular supply lines were a radical innovation for the seventeenth century, not having been used since the time of the Romans. Louis' supply magazines revolutionized warfare since cavalry could campaign any time of year, and not have to wait for spring forage.

Infantry on the march were issued six days' worth of hard biscuits with holes in the center they could string on bandoliers. It may have been Louis' idea to create portable ovens that could move with or just behind the army and bake six days' rations in one day. Unfortunately, officers never checked their men's rate of consumption or stopped them from trading biscuits to the locals for wine. Therefore, despite the army's best efforts, the soldiers often went into battle hungry, and sometimes drunk.

Higher officers were often no better in rationing food. For example, General Boufflers who was defending Lille (1708) kept issuing the same amount of rations for his garrison during the siege despite mounting casualties and a declining number of men to feed. As a result, he ran out of food and surrendered.

Other problems included troops looting the store houses and dishonest contractors who would only half bake bread so it weighed more and they were paid more.

In fact the private contract system still hampered every aspect of the army, since the state still didn't have the means to do everything itself. Therefore, until 1672, the artillery was a civilian enterprise where contractors hired soldiers to move their batteries and were paid for every gun they brought into action. This was still better than the Spanish system where contractors were paid each time they moved a cannon, leading to them constantly moving their cannons but never firing them.



Supply and transport were also on a contractual basis. The French lost the Battle of Consaarbruck in 1705 because the artillery contractor had loaned out his horses to the cavalry, so he was unable to bring a single gun into action. The cavalry very likely had no horses because they were let out for hire to local farmers.

In some cases, when fodder for their cavalry horses cavalry failed to arrive, troopers had to stop to cut their own fodder (below). Such breakdowns in supplying the army inevitably hurt its combat effectiveness.



In one case, Charles IV of Lorraine, needing cavalry horses, summoned a meeting of all the local bishops and rich clergy. While he was inside giving a stirring speech about France's

peril, his troopers were outside stealing the clergy's horses.

Another important element of France's defenses was a ring of 90 fortresses around France designed by the foremost fortifications engineer of the day, the Marquis de Vauban. His fortresses were designed using the latest state of the art math. In addition to defending France, they also served as advance supply bases for invading other countries.



A model of Vauban's fortifications at Neuf-Brisach (left) and how they are still preserved today.

Because of the strength and importance of fortified centers, warfare in the age of Louis XIV typically got bogged down in long sieges, thus prolonging the wars and putting severe strains on the ability of Louis' system to keep supplying its troops.

There were two major factors that limited the effectiveness of Louis' military reforms. For one thing, Louis's standing army was large and expensive, having some 400,000 men at its height. A pre-industrial society such as seventeenth century France probably could only afford to support much more than 1% of its population in the military. Louis' army at its height was nearly twice that, which was a terrible strain on French society. This became especially apparent in Louis' later wars when supply lines broke down, which led to foraging and a breakdown in discipline. Second, the expense of Louis' wars forced him to sell military offices, which brought in less capable and dedicated officers. Overall, Louis' military reforms were much like Colbert's economic reforms. They made progress, but met severe obstacles that prevented them from being completely successful.

Micromanagement by the king was another serious problem. Largely because of his bad

experience with rebellious generals as a boy, he had a near obsession with reducing his generals to impotence, or at least making them constantly aware of his guiding hand. Louis took flattery seriously, which made him fancy himself a great commander who could as easily direct and win battles from Versailles as from the field, which led to ever stricter control from Versailles. In the War of the Spanish Succession, French generals couldn't move without the king's permission, so that by the time a request was sent to Versailles and permission was brought back to the front, the situation had changed.

The End of Religious Freedom in France

"I king, I law, I faith" is how Bishop Bossuet summed up what he thought the king's position on the Huguenots should be. At first, Louis' relations with the Huguenots had been good. They had supported him during the Fronde, and he had reciprocated with a public thanks. However, as Louis' reign progressed and his ego grew, he found himself under growing pressure from his bishops to bring the Huguenots in line with the rest of Catholic France.

Louis proceeded slowly at first and then gradually turned up the pressure. In 1661, he outlawed Protestantism in Gex, an almost totally Protestant area that had come under French rule since 1598. Therefore, in his mind, this region did not come under the protection of the Edict of Nantes. However, for those paying close attention, Louis was showing his hand.

Over the next twenty-five years, the king progressively tightened the screws on the Huguenots with series of new restrictions:

1664- Louis made advancing to guild master harder for Protestants.

1666- Huguenots were forbidden to establish new academies.

1669- Huguenots caught trying to emigrate had their property confiscated, and anyone helping them was sent to the galleys for life.

1677- Louis changed his tactics and offered cash inducements for converting.

1679- Relapsed converts lost their property and were banished.

1681- Louis instituted the *Dragonades*,

quartering his troops only with Huguenots.

Quartering troops on private citizens was always unpopular, creating an unfair burden on families who may or may not be compensated. Even worse, it put civilians at the mercy of soldiers who typically came from disreputable, if not criminal backgrounds. Normally, they were under strict orders to respect the families they were living with, but billeting, such as in this case, could be a form of punishment to pressure people into falling into line with the government. The soldiers involved understood this perfectly and often exploited it ruthlessly, using supposed apostolic zeal as an excuse to rob, beat, and rape members of their host families.



Huguenots fleeing religious persecution

The *Dragonades* had their effect, leading to thousands of Huguenots converting and thousands more emigrating from France. As a result, Louis believed few Huguenots were left in France and he could move against the rest with impunity. From 1682 to 1685, out of 815 Huguenot churches, 570 were closed, many of them torn down.

In fact, for whatever reasons, between 1600 and 1685, when Louis finally revoked the Edict of Nantes with the Edict of Fontainebleau, thus ending religious freedom for Protestants, the number of Huguenots in France had already fallen by two-thirds, from 1.5 million down to 500,000. And of that remaining half-million, nearly 200,000 (40%) would leave France for other more tolerant countries.

A New Home for the Sun King



Louis' religious faith was largely a superficial one attached to the elaborate ritual of the Catholic mass. This love of ritual also showed itself in how Louis ran his court at his magnificent palace of Versailles, several miles outside of Paris. Much of the reason for building Versailles goes back to the Fronde that had driven Louis from Paris as a young boy. Ever since then, Louis had distrusted the volatile Paris mob and was determined to move the court away from the influence of that city. Versailles was also the showpiece of Louis' reign, glorifying him as the Sun King with its magnificent halls and gardens.

Besides a dislike of Paris, Louis also built Versailles from a love of outdoors and/or a desire to show his power by building an unfortified palace in the open country. Until the court officially moved to Versailles in 1682, Louis used Versailles as an escape from the crowded activity of his palace in Paris.

During the *ancien regime*, a hat and sword could be hired at the front gate in order to be properly attired to visit the Grand Apartment. Monks were not allowed in.

The palace facade was a quarter of a mile across. The famous Hall of Mirrors alone was 250 feet long. Water pumped from the Seine River to hills 500 feet above Versailles fed its fountains. Of course, all this was built and maintained at tremendous expense. But it was worth it to Louis, regardless of the burden it put on the French people.

Symbolism in numbers. The palace wings had 153 windows, that being the theosophical sum of 17 (i.e., the sum of all the integers from 1 to 17). Seventeen symbolized the path to spirituality, as in the number of rows of columns in the Parthenon and windows in the Hall of mirrors. The garden facade of the central part of the chateau is architecturally deceptive, because there are no rooms behind the windows on the top floor.

The central walkway in the South Garden is lined with 16 yew trees, the number symbolizing

material power. Each garden bed has 6 yew trees, the number for Satan and dispersal. The yew tree also symbolizes death. All of these serve as an allegorical warning against the dangers of materialism.



To celebrate the scientific revolution then taking place, Versailles was even aligned 23.5° off of true north to correspond to the tilt of the earth's axis.

The Orangery in Louis' time had 2000 Orange trees (1800 presently) that were moved indoors for the winter. Since they were pruned closely for more geometrical shapes in the manner of French gardens, they bore no fruit.

Neptune's fountain, with 22 jets and 99 vases, lies at the north end of the North-South axis of the palace grounds. As Louis, his artists, and most of his courtiers knew, north was the direction where life began.



The Fountain of Latona (above) in the center of the grounds, showing the mother of Diana and Apollo pleading to Zeus to punish the villagers trying to deprive her and her children of water. It also shows the evil villagers being turned into frogs. Just as Apollo, the Sun god represents Louis, the Sun King, Latona represents Louis' mother, Anne of Austria. Her triumph may also represent the triumph in the Fronde over the vulgar populace (i.e., frogs), as does another statue of Apollo killing the Python at Delphi.

This fountain looks toward the far end of the Versailles lawn and the Apollo Basin, a statue of the Sun God emerging to cross the heavens.

In addition to the references to Louis, Apollo also had several parallels with Christ: being born after a journey imposed on his mother, receiving lavish gifts shortly after being born, a forced exile caused by the wrath of the mighty, devotion to his mother, and defeat of the serpent.

The extensive hydraulic systems for bringing water to Versailles' fountains used 10 windmills and 120 horses working in relays of 40 around the clock. There were 200 kilometers (130 miles) of subterranean channels and aqueducts built to supply the fountains of Versailles. To conserve water, fountain guards were ordered to whistle when Louis XIV approached, so that the fountains could be turned on.

The various statues around the pool represent the great rivers of France. They are reclining so they don't interrupt the majestic view of Louis' palace. The grounds are also lined with numerous classically inspired statues.

However, most of the chateau's grounds retained their natural simplicity so Louis could enjoy his hunts, among other things.



Inside the Palace, the most striking room is The Hall of Mirrors, which has 17 windows (the number symbolizing the quest for spirituality) opposite 17 mirrors. In front of each of the windows was a solid silver tub with an orange tree and between them were 16 solid silver tables. There were also 17 great silver chandeliers, 26 smaller ones and countless candelabra on gilded stands.

The Palace was so poorly policed that thieves stole gold bullion from curtain fringes of a salon and the king's silver chamber pot from under his

bed. Supposedly nobles were allowed to hunt foxes in the palace during winter.

The overall theme for the ceiling paintings in the Hall of Mirrors was a history of Louis' reign. (Colbert advised the king not to glorify himself in a way that would insult other countries.) The central ceiling painting was originally titled "*Louis the Great in the flowering of his youth, took the helm of the State, and forgoing repose and pleasure, gave himself over entirely to the love of true glory.*" Luckily, Louis chose the simpler title *The King Rules Alone*, so we wouldn't have to waste our time reading the longer one.

As splendid as it may seem, life at Versailles was not always such a picnic. The site itself was on low marshy ground that made it unhealthy to live in. Except for a few magnificent rooms and bedrooms, most people had small cramped rooms with little or no ventilation. Nevertheless, a noble was considered socially and politically dead if he did not live at Versailles. He lived there at his own expense and was expected to keep up a sumptuous life style in order to be a proper ornament for Louis' court. The seemingly endless round of masquerades, plays, operas, and parties eventually grew old to even the most ardent partygoers.

For many, life became a bitter series of petty intrigues over such things as who could stand closest to Louis when he held court or got dressed in the morning. Some even saw this as a plot to ruin the nobles by making them go bankrupt while they were trapped in the gilded cage of Versailles. And indeed, Versailles did bankrupt many nobles along with the French government, helping lead to the French Revolution some 75 years after Louis died.

There were countless squabbles at Versailles over who outranked whom, who walked closest to the king, helped him dress or undress, who had to pass the collection plate in mass, which churchyard one was entitled to be buried in, and who got to hold Louis' potty chair Other examples abounded:

- A woman visiting another of superior rank at her toilette was only entitled to have one door of

the double doors opened for her.

- A man receiving the servant of a superior still had to remove his hat as if that superior were present.
- Even a simple meeting between two nobles was preceded by a meeting of their servants to decide who got to sit in a chair with arms, a chair without arms, a stool, or have to stand.

Once, a planned meeting between Louis and visiting Austrian royalty never took place because they couldn't agree on whether or not the Austrian got a chair with arms.

Good manners were also of extreme importance. The polite way to knock on someone's door at the palace was to scratch it with the nail of the pinky finger.

Living conditions. Most apartments were small and poorly ventilated, some of them overlooking the latrines. Smoke backed up into them since raising chimneys would mar the visual effect. Shutters to keep out the cold weren't allowed for the same reason.

Given the lack of adequate or convenient bathroom facilities, stairways often doubled as latrines for the nobles. The palace was so vast that one woman who fell and broke her leg wasn't found for several days.

Living at Versailles was very expensive. A "modest" noble should maintain at least 11 servants & 2 coaches to keep up appearances.

A less modest noble would have up to 75 servants & 40 horses.

The king's bedroom. The balustrade in front of his bed separating the king from the populace serves the same purpose as an altar rail separating god from the congregation. Even when empty, passersby had to kneel as if the king were present.

His bed was crowned with plumes of ostrich feathers, signifying his unearthly majesty. However, just as all ostrich feathers are equal in

length, so are all believers spiritually equal, a slight concession to the public's feelings.

The Queen's bedroom was designed with a parallel, but much less exalted, form and function to the king's bedroom. Her attendants would have to sit on stools, because their dresses were too bulky to fit in chairs. Louis would dutifully "visit" the queen's bed twice a month. Supposedly you could always tell, because the next day she had a certain glow about her.



The king's mistresses. Madame La Valliere (above), the first of Louis' three official mistresses, dressed as the goddess of the hunt, Diana. She was once described as having "a lovely complexion, blonde hair...no ambition, no points of view".

After being replaced as Louis' favorite by one of her handmaids, Madame de Montespan, she still hung on at court for several years as one of Montespan's hairdressers! Apparently she never caught on that Madame de Montespan had used her position to introduce herself to Louis and replace Madame La Valliere as the king's mistress.

She quietly retired at the age of 30 to a convent, as did Louis' other mistresses and many girlfriends after falling from his favor. This sparked the comment that the king's embrace saved many women's souls.

Louis' second official mistress was the Marquise de Montespan, or as her husband caustically referred to her, the "late Madame de Montespan." She kept the court witty and lively before herself retiring to a convent. In one painting she posed with the children she bore

Louis, the position of her hand on her breast indicating she was pregnant again.

Madame de Maintenon became Louis' wife after the death of Marie-Therese of Spain in 1683. Partly due to her influence and partly due to his old age and poor health, Louis ran a much more sober court in his later years.

Since society orbited around him much as the planets orbited the sun, Louis had various apartments leading to his bedroom named for various deities along with the planets they represented: Mars, Venus, etc.

A Day in the Life of the Sun King

The second floor antechamber (above) outside Louis' bedroom was where courtiers would gather each day by 7:45AM to greet the king as he rose for the day. It was important to be there on time, which made it particularly difficult for those who could not secure an apartment in the palace and had to travel in each morning from town.

The king's day began as the royal watchmaker came in to wind the royal clock and the Royal wigmaker entered with a glass-fronted wardrobe carrying all the royal wigs, each on its own pedestal. Two wigs would be chosen: a short dressing wig and a more formal wig of the day.

8:00AM: The first *valet de chambre* woke, or pretended to wake, the king. The news of the king awakening rustled excitedly through the crowd in the anteroom.

8:15: The First Physician, First Surgeon, and the king's old nurse would enter to enquire of his health, rub him down and change his bed-shirt.

At this point, courtiers with the coveted right of *grandes entrees* now entered. This was the best time to ask the king a favor.

The Grand Entree left while the king recited the Office of the Holy Ghost.

The Grand Entree then reentered to watch Louis put on a dressing gown and wig.

Then the common nobles crowded in to watch the king dress, one of them remarking that he put on his breeches "very cleverly and gracefully".



Attending to Louis by holding the royal potty (*chaise percee*, meaning pierced chair, above) was a much-coveted honor among nobles. This was also a prime time to petition him for a favor since he was already in a "giving" mood. Along with many of the decorations in the palace, the original *chaise percee* was also stolen.

10-10:30 AM: Louis attended mass, which he supposedly missed only once during his reign. Therefore, it was a good idea for courtiers also to attend, although they socialized and laughed shamelessly during mass.

After that, Louis held council or (on Thursdays) private audiences where he could loosen up a bit while being away from the public. He then had Dutch newspapers read to him, even though he referred to the Dutch as "maggots". This might also be the time for other public functions (like present-day photo-ops) such as receiving courtiers with their requests....

... or the official founding of the Order of the Knights of St. Louis (1693)...

... or the official founding of the Academy of Sciences in accordance with his role as primary patron of arts and sciences in the newly emerging Age of Reason (even though he could barely read)...

... or receiving foreign ambassadors, which was also a good opportunity for him to show off his wardrobe, such as the diamond-encrusted robe worth \$25,000,000 he wore to receive the ambassador of Siam.

2PM- Back to the king's bedroom where he had lunch by himself or with a select few while gazing out his window. According to Louis' second wife, Madame de Maintenon, "*I have often seen him eat four plates of soup, a whole pheasant, a partridge, a plate of salad, mutton au*

jus or a l'ail, two big slices of ham, a whole plateful of pastry, and besides these, fruit and hard-boiled eggs.” In addition, he devoured oysters by the dozen, while between meals he gorged himself on pastries, preserved fruits, cider and lemonade.

Each morning Louis would announce if his afternoon activity would be a hunt or promenade (either strolling or boating).

Louis was such a brisk walker that few beside Madame de Maintenon (the queen), and Madame de Chevreuse could keep up with him. So, if you couldn't keep up, it was advisable you stayed home.

On the hunt, Louis was reputed to be an excellent shot. Sometimes thousands of game birds would be released for his hunting pleasure. Running after him would be a servant who carried wine and glasses in case the king was thirsty. He rarely was, thus not lightening the servant's load.



In old age, Louis would ride to the hunt in a carriage.

Louis and the nobles kept up to 500 hunting hounds at Versailles. Apparently, they weren't very nice, because one pack was known as the "No Quarter Pack."

Three nights a week, Louis provided all sorts of entertainment: tournaments, hunts, tennis, billiards, bathing and boating parties, dinners, dances, balls, masquerades, operas, concerts, plays, and ballets. Louis himself once performed in a ballet.



The Opera House, built by Louis XV in 1770, had a stage that could be lowered by mechanical means, thus creating a perfectly oval ballroom. To that effect, the backstage area was decorated just like the rest of the theater.

Three other nights a week the king held evening entertainment in the royal apartments. These included dancing, cards, and billiards. Louis kept careful track of who attended each of these events. Being absent, especially in Paris where only disreputable types went, could destroy a noble's career.

Gaming nights were one occasion where court etiquette was loosened a bit. Nobles could shout, curse, spit, and bang their fists on tables as they watched their fortunes go up in smoke. The one thing they could never do was discuss politics. That was the king's sole prerogative. Likewise, women's conversation topics were limited to innocuous subjects such as fashion and court gossip.

The endless round of balls, masquerades, concerts, and gaming nights proved to be tedious to most courtiers. Gambling was one exciting activity that was allowed. Many nobles gambled with reckless abandon, oftentimes to ruinous results.

10PM- Louis went to the Porcelain dining Room for dinner, which he might eat in public. Hordes of spectators would flock from Paris to view this spectacle, at times passing peasants dead or dying from starvation, as during the famine of 1705-8.



(screen shot of a royal supper from the movie *Marie Antoinette*)

Without a kitchen in the palace, meals were prepared in the village and carried past hungry peasants who bowed and marveled that one man

could eat so much. As a result, Louis rarely got a hot meal, even though the kitchen staff numbered 498 people.

Nobles competed for the honor of serving as royal tasters, largely because they got the leftovers. What was left from that was sold in town. That was a lot, since a typical dinner consisted of 8 courses with 8 dishes each. From those 64 dishes, Louis would generally eat only from about 20.

At this point in time, adults ate with their fingers, only children being allowed to use eating utensils.

At Marley, where things were more relaxed, Louis had a habit of rolling bread into little pellets and tossing them at the ladies. Reciprocal behavior apparently wasn't expected as one woman found out when she retaliated by dumping her salad on Louis.

After dinner, the royal potty again. Louis's ritual for going to bed was largely the same as in the morning, only in reverse (the ritual that is, not his bodily functions). After saying goodnight to the ladies and giving the night's password to the captain of the guard, Louis would retire for the night, often taking a bedtime "snack" of three loaves of bread, two bottles of wine, and three cold dishes.

The Chateau de Marley. When the court officially moved to Versailles in 1682, Louis used another, more rustic chateau, Marley (below), as a refuge to which he and specially invited guests could retreat. To be invited here with the king was one of the highest honors.

It could also be a burden since the king would ride with both the queen and his current mistress in the same carriage, even when the mistress was pregnant with his child. In addition, he would constantly offer them food and drink while taking none himself. Since it was impolite to refuse Louis' offers of refreshments and he didn't like to make

"potty stops", one gets the image of a potentially agonizing ride for the ladies.

Versailles by the Numbers

- 800 hectares (2,000 acres) of grounds
- 20 kilometres (12 miles) of roads
- 46 kilometres (27 miles) of trellises
- 200,000 trees
- 210,000 flowers planted every year
- 132 km (80 miles) of rows of trees
- 20 km (12 miles) of enclosing walls
- 50 fountains
- 620 fountain nozzles
- 35 km (21 miles) of water conduits
- 11 hectares (26 acres) of roof
- 51,210 square meters of floors
- 2,153 windows
- 700 rooms
- 67 staircases
- 6,000 paintings
- 1,500 drawings & 15,000 engravings
- 2,100 sculptures
- 5,000 items of furniture & objects d'art
- 3,600 cu. meters of water consumed per hr. during full Play of Fountains
- 23 hectares (55 acres): surface area of the Grand Canal
- 5.57 kilometres (3.3 miles): perimeter of the Grand Canal
- 150 varieties of apple and peach trees in the vegetable Gardens

Louis' Diplomacy and Wars



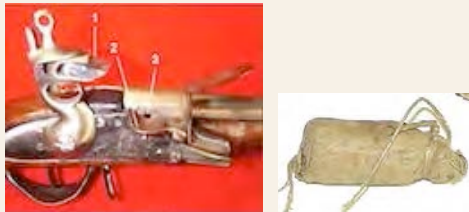
Louis' avowed goal in foreign policy was to take France to its "natural" borders. The Atlantic to the west and the Pyrenees and Alps to the south and southeast were pretty distinctly defined. However, the Rhine to the east and northeast was another matter, at least to Louis, and that was where there was a lot of potential trouble.

In some ways, Louis' diplomacy could be clever and devious, especially in the use of bribes. For

example, Charles II of England (1661-85) had spent much of his early life in exile in France after the Puritan victory in the English Civil War (1642-5). He was secretly Catholic, pretending to be Protestant in order to keep his throne when he was restored to it in 1661. Much of his ability to survive came from the Secret Treaty of Dover whereby Louis secretly funded Charles so he wouldn't have to make concessions to a Puritan Parliament to get money. In return he allied with Louis against the Dutch in the Dutch War and even promised to turn England Catholic if the opportunity presented itself. Unfortunately for Louis, it never did.

However, Louis' ego and obsessive hatred of the Dutch "maggots" seriously hurt him. Paintings gloating about victories over other states, like the one above depicting a defeated Holland, made him few friends and eventually drove Britain, the Dutch Republic, Austria, and various German states to band together to stop him and maintain the balance of power in Europe.

Another Military Revolution. New weapons and new tactics for using them were emerging in the late 1600s. One such weapon was the flintlock musket. When the trigger was pulled, the hammer and clamp holding the flint (1) hit a piece of steel (2). This created a spark that ignited the priming powder in the priming pan, which then ignited the main charge of powder in the barrel through the touch-hole (3). The flintlock was more reliable and efficient than the matchlock as well as being simpler and cheaper to make than the wheel lock. Thus states could afford to equip whole armies with flintlock muskets.



The second innovation was mass-produced paper cartridges, each holding one pre-measured charge of gunpowder and a musket ball. The soldier would rip off one end with his teeth and pour the powder & then the musket ball into the barrel. This saved time by not having to use the

more cumbersome "twelve apostles" or measure an individual charge for each shot.

Finally, there was the bayonet, supposedly invented in Bayonne, France (c.1670), which made the musket into what amounted to a short pike. This eliminated the need for pike men, thus making it possible to arm everyone with muskets and dramatically increase an army's firepower.

In order to maximize an army's firepower, generals replaced the thick blocks of infantry with extended lines stretching a mile or more. These new *linear tactics* vastly increased European armies' firepower and warfare's destructiveness. They also made armies harder to control since they were stretched out over such a great distance. As a result, discipline was tightened even more, which further increased the power of the state over its armies. Tighter discipline and bloodier battles also made it harder to attract recruits, leading to a growing reliance on peasant draftees during the 1700s.



The War of Devolution (1667-8). When Louis married the Spanish princess, Maria Theresa, she was in line to inherit the Spanish Netherlands when the Spanish king, Charles II died. Spain had agreed instead to pay 500,000 gold crowns to Louis in return for keeping these provinces. However, since Spain never paid the money, Louis claimed the Spanish Netherlands *devolved* to him.

At the time, other states were largely preoccupied with other matters, The Dutch and English were involved in the Second Anglo-Dutch naval war. Meanwhile, Leopold I of Austria, still tied down with the Turks in the East, was neutralized by a promise from Louis of a share in the spoils.

On May 24, 1667 55,000 French troops crossed into the Spanish Netherlands against only 8000 Spanish troops and overran most of it. French supply lines worked so well its officers were even provided with silverware. Flanders fell so

quickly that Louis invaded Franche Comte. However, its rapid fall triggered a triple alliance of Sweden, England, and the Dutch to stop Louis.

Louis saw he had moved too quickly and agreed to the Treaty of Aix-la-Chapelle (1668). While he kept strategic forts and towns in Flanders, he gave back Franche Comte making a deal with Austria to get it when the king of Spain died, which was expected any day.



Louis' wars were largely taken up with sieges that were carried out with giant siege guns while soldiers edged their trenches closer to the fortifications for undermining.

The Dutch War (1672-78). In 1672, Louis resumed his march to the Rhine, this time against the Dutch. In accordance with the Secret Treaty of Dover, Charles II of England joined him in what is known as the Third Anglo-Dutch War. As a result, the Dutch found themselves assaulted on two fronts. On the land front, 130,000 French troops marched into the Dutch Republic, taking city after city until only Amsterdam and The Hague remained. In one last desperate measure, the Dutch broke open the dikes, ruining their own land in the process.

With Holland's lands devastated and French and English fleets raiding its shipping, the Dutch leader, Jan de Witt, having till now valiantly led Holland's defense, brokered a treaty giving Louis some cities and paying his war expenses. However, this enraged the Dutch and an angry mob beat de Witt and his brother to death.

De Witt's death led to the accession of William III of Orange, who symbolized uncompromising resistance to the French. When urged by an English diplomat to give in to Louis XIV, William replied: *"My country is in great danger,*

but there is a sure way never to see it lost, & that is to die in the last ditch."



Led by William's staunch defense, the Dutch drove back Louis' army bit by bit.

Meanwhile, in the Third Anglo-Dutch War (1672-74), the Dutch fought the English to a standstill. In 1674, William made a separate peace with England and forged an alliance with Spain, Brandenburg-Prussia, Denmark, and Austria against Louis. William also married Mary Stuart, daughter of the future James II of England. It was a marriage that would have huge consequences on both the diplomatic history of Europe and England's constitutional history.

In 1678, against the wishes of his allies, William made peace with France, getting back all previously held Dutch lands while recognizing French claims to Franche Comte.

Meanwhile, Louis' war effort in Germany had been more successful. His great marshal, Turenne with only 20,000 men, beat an imperial army of 70,000. In 1674, under orders from Louis to teach his enemies a lesson, he devastated the Palatinate, which was a major blot on both Louis' and Turenne's records. In 1675 Turenne led his army on a rare winter march (below) to beat Brandenburg's army at Turkheim.



The next year Turenne was killed on reconnaissance. Louis' other great marshal, Louis de Bourbon, Prince de Condé, took over. However, worn out by years of warfare, he soon retired. After this, Louis' had no generals of Turenne's or Conde's caliber. In 1678, after six exhausting years of war, the remaining combatants signed the Treaty of Nijmegen, which gained Louis Franche Comte and some other lands in the North.

Louis' propaganda art.



While Louis attended many sieges from a safe distance, he never led his troops in battle. However, one might never guess this, since he constantly had himself portrayed in front of his armies in a series of remarkable tapestries he had done glorifying himself, such as this one showing him triumphantly entering Dunkirk after its fall in 1673

Louis at the "height of his glory". The 1680s saw Louis at the height of his power, as symbolized by officially moving his court to Versailles. However, glory came at a price-- a price Louis didn't notice his people were paying.

For one thing, Louis kept a huge peacetime army as a diplomatic weapon, driving taxes up and the economy down. While the partying went on at Versailles, peasants were reduced to making bread from acorns and roots, while some were driven to rebellion.

As a further blow, Colbert died in 1683, leaving Louis surrounded by "yes-men" in awe of the king and not daring to give him advice he needed to hear. The one minister with a mind of his own was Louvois, Louis' minister of war, and his only mantra seemed to be "war, war, war", just what Louis wanted to hear.

On top of these problems, Louis had revoked the Edict of Nantes in 1685, leading to the mass emigration of 200,000 Huguenots, weakening France even more.

War of the League of Augsburg (AKA The Nine Years War) (1688-97). Trouble started when Louis claimed certain German lands, saying they were his since they were dependencies of areas ceded to Louis by the Treaty of Nijmegen. This spawned Louis' Policy of *reunions*, annexing lands by decree of local *parlements (courts)*. Austria, preoccupied with the Turks, acquiesced, prompting Louis to seize the strategic fortress town of Strasbourg despite the lack of any evidence it had ever been French. Next Louis seized the fortress city of Luxembourg (June, 1684) leading to the Truce of Ratisbon (1684) that allowed him to keep lands he'd already taken by his reunions, but froze the borders against further annexations.

However, while Austria was still fighting the Turks, Louis seized the electorate of Cologne and the fortress of Philippsburg in 1688. This was too much, and the Grand Alliance of Vienna was formed between Austria, Britain, Spain, Savoy, and several German states. Thus Europe went to war once again.

On land, France kept winning very costly victories. Yet, no matter how often he was beaten, William III kept coming back to continue the fight. The war's heavy attrition forced Louis to draft French peasants to fill his ranks, thus driving the tax base even further down.

Though French soil was barely touched, the war was taking its toll. France was on the verge of collapse, with internal trade choked by hundreds of tolls and broken bridges. At the same time, enemy fleets were cutting foreign trade. And then, adding to France's misery, famine hit in 1694.

Louis raised his army to 450,000 and navy to 100,000 men. To pay for this he melted his own silverware and urged his subjects to do likewise.

France's coinage was depreciated and new offices were created and sold at a spiraling rate. As one courtier put it: *"Every time your majesty creates an office, God creates a fool to purchase it."*

While state revenue in 1697 was 81 million livres, Louis was spending 219 million, nearly three times that. With France bleeding to death, the Peace of Ryswick was finally negotiated. Louis XIV surrendered Luxembourg and most of the other Réunion territories, leaving him only 82 of the towns, villages, and hamlets he had taken since 1680.

The War of Spanish succession (1701-13)



For thirty-five years, Charles II of Spain had seemed on the verge of dying. This sad product of Hapsburg inbreeding couldn't talk until age four, was so weak he had to be carried around until age eleven, could not chew his food properly, and could not produce children. As king, he wasn't any kind of effective ruler, his only talent seeming to be the ability to stay alive year after year. For thirty years people had been betting on his coming demise, and somehow he kept beating the odds.

There were three main contenders to succeed Charles to the Spanish throne:

- Louis' grandson and Charles' great-nephew, Philip of Anjou;
- Joseph Ferdinand, Charles' great-nephew, and son of the Elector of Bavaria; and
- Archduke Charles, son of the Holy Roman Emperor, and Charles' great-nephew.

Louis was tempted to push Philip's claim, but saw how this could lead to war. Therefore, he negotiated the First Partition Treaty with England and the Dutch in 1698 whereby, if Charles died childless, Philip would get the

Kingdom of the Two Sicilies and some dependencies on the coast of Tuscany; the Austrian prince would get Milan; and Joseph Ferdinand would get Spain and its colonies.

Then, in 1699 young Joseph Ferdinand died of smallpox, leading to the Second Partition Treaty (1700). Louis' grandson Philip would still just get The Two Sicilies, Tuscan lands, and Lorraine, the Duke of Lorraine would get Milan, and Spain and the rest of its possessions would go to Archduke Charles II.

There was one problem with all this. The Spanish king had not been consulted in any of this. Furious at this arrangement, Charles willed everything to Philip of Anjou, Louis' grandson and his own great-nephew, thinking only a prince supported by a strong France could hold his empire together.

Louis was now caught in the dilemma of should he stand by the Second Partition Treaty or abide by Charles II's will and take the whole Spanish Empire for Philip. In the end, he decided to take Spain, and the Spanish people welcomed Philip V on his arrival as their lawful king.

It took him nearly 35 yrs., but, Charles II of Spain finally succeeded in dying on November 1st 1700, and Louis pushed his grandson Philip's claim to the Spanish throne. In response, Holland, England, Austria, and various German states allied against France and Spain. The War of the Spanish Succession was on.

It would be Louis' longest and bloodiest war.

By now Louis' best generals were dead and their successors, while competent, were too scared to move without the king's permission. Meanwhile, two brilliant generals emerged for the allies: England's John Churchill, Duke of Marlborough (rt.) and Prince Eugene of Savoy for Austria.



The allies had major strategic problems in coordinating their efforts:

- **The Dutch wanted to protect the Netherlands.**
- **Austria wanted to protect Germany.**
- **England had to be convinced that any continental involvement at all was in its interest.**
- **And someone had to commit to fighting in Spain.**

In order to keep the Grand Alliance together, Marlborough marched from the Netherlands across Germany to link up with Eugene, thus showing their commitment to protect all their allies. It was as much a diplomatic triumph as a military one.

They followed this up with brilliant victories at Blenheim (1704), Ramilles (1706) and Malplaquet (1709). The French, thrown on the defensive, dug in their heels to defend French soil, even drafting peasants to fill their depleted ranks. Surprisingly, they fought well in defense of their homeland.

Then England got a new Queen, Anne, who was sick of the war and wanted peace. At the same time, England's allies were getting increasingly nervous about a revived Hapsburg Empire if the Austrian candidate were to take the Spanish throne.

Therefore, the resulting Peace of Utrecht (1713) gave Louis's grandson the Spanish throne, but France and Spain could not be united under the same monarch.

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96. THE ENGLISH REVOLUTION: (1603-88)

"The state of monarchy is the supremest thing on earth; for kings are not only God's lieutenants on earth, but even by God himself they are called gods."-- James I of England

"A king is a thing men have made for their own sakes, for quietness' sake. Just as in a family one man is appointed to buy the meat..."-- John Selden

Introduction: a century of change. As the Greek philosopher, Heraclitus, said, nothing is so constant as change. While history has always seen changes taking place, few times and places saw more dramatic changes in such a wide variety of areas ranging from fashions and diet to the Scientific Revolution as England saw in the 1600's. But nowhere were there more sweeping changes than in the realm of government. In 1600, the absolute monarch believing in the concept of Divine Right of Kings was becoming the most fashionable form of rule. By 1700, a new more democratic government with checks and balances between the executive (king) and legislative (Parliament) branches had emerged in England, setting the stage for modern democracies.

Background to the Revolution. There were three main factors that came to the surface in the reign of Elizabeth I (1558-1603) to set the stage for the English Revolution. For one thing, going back to the Magna Charta (1215) which itself drew upon even more ancient Anglo-Saxon traditions, England had a long tradition that no one, not even the king, is above the law. Secondly, Elizabeth reigned in a period of intense religious strife, both within England itself as well as triggering an expensive war with Spain. Finally, the 1500's and 1600's were a period of rampant inflation, which made monarchs everywhere increasingly desperate for money.

The convergence of these factors during Elizabeth's reign generated problems in two critical areas: money and religion. As far as money went, the Queen knew how to get money from Parliament while outwardly showing respect to that body's rights and privileges. However, such treatment gave Parliament a growing sense of its own power and importance, which it was unlikely to give up peacefully. Elizabeth also partly paid for her rising expenses from the struggle with Spain by selling up to one-fourth of the royal estates. This left her successors with even less of an independent financial base, which in turn made them more dependent on Parliament for funds, thus leading to fights over money.

In religion, Elizabeth skillfully maintained peace in England while much of Europe was embroiled in religious wars. She did this by grafting moderate Protestant theology onto Catholic style ritual and organization. She also blunted the ferocity of the religiously radical Puritans (Calvinists) by incorporating many of them into the hierarchy of the Church of England. However, this put many Puritans into positions of authority where they could demand more sweeping reforms beyond the Queen's lukewarm Protestantism. In addition, many of these Puritans were also members of the gentry (lower nobles) and middle classes who controlled the House of Commons in Parliament and voted on taxes. Thus the issues of religion and money became even more tangled.

Religious wars, which threatened everyone's peace and security, and inflation, which made maintaining armies too expensive for rebellious nobles, also combined to help with the rise of absolutism in Europe. This rising tide of absolutism would influence the Stuart kings of England to try to establish absolutism in their own realm in spite of popular opinion. A less skillful and diplomatic ruler than Elizabeth would have trouble dealing with these new forces rising up in England. Such an undiplomatic ruler succeeded Elizabeth in the person of James I (1603-1625).

While Elizabeth had so skillfully kept the issues of money and religion in check, James' absolutist beliefs and abrasive personality brought them to the surface. As far as religion went, James fought the largely Puritan Parliament to keep the Church of England's Catholic style ritual, decorations, and hierarchy of clergy, over which he as king had control. In money matters, king and Parliament clashed over James' growing requests for money to support his lavish lifestyle. He also angered the middle class by raising customs duties, one of his main sources of revenue, to keep pace with inflation. While James and Parliament never completely broke with one another over these issues, their constant squabbling did set the stage for the revolution that was to follow.

Pattern of events (1625-88). While the individual events of the English Revolution could be somewhat involved and complicated, they did fit into a basic pattern. Parliament and the ruler of England would clash over the issues of religion and taxes as the government became less decisive and/or reasonable. This would trigger a reaction by Parliament that would bring in a new ruler, and then the process would start all over again. This cycle would repeat itself three times over the next sixty years, with each successive stage feeding back into

the aforementioned cycle as well as into the next stage.

The first stage would see England plunged into civil war (1642-49) that would result in the beheading of Charles I and the rise of the Puritans and Parliament to power. In the second stage, continued fighting over religion and money, this time between Parliament and its army, would bring in military dictatorship under Oliver Cromwell in the 1650's. After Cromwell's death (1658) would come the third stage with the restoration of the monarchy (1661-88). However, the old conflicts over money and religion would resurface in the reign of James II and lead to his overthrow by Parliament with the help of William III and Mary of Holland in 1688.

This time, Britain would resolve its cycle of conflicts in what is known as the Glorious Revolution (1688) This established a constitutional monarchy where the law is above the king, not the other way around as often happened in absolute monarchies. The Glorious Revolution would have three important results. First of all, it would lead to the political triumph of the rich middle class and nobles in Parliament which had the sole right to grant taxes for one year at a time, thus forcing the king to call Parliament each year if he wanted taxes. Also, in order to keep the king from packing Parliament with his own men for an extended period of time, Parliamentary elections were to be held every two years. While the Glorious Revolution resulted in a political victory for a narrow upper class oligarchy, it opened the way for further reforms over the next 200 years to make England a more truly democratic society.

Second, the Glorious Revolution gave all Englishmen a Bill of Rights guaranteeing such civil liberties as speech, assembly, religion (except for Catholics and Unitarians at this time), and due process of law. Both the political and civil liberties gained by the English would help lead to the French Revolution which in turn would spread the ideas of democracy across Europe and the globe.

Third was the establishment of the Bank of England (1694), which was modeled after the Bank of Amsterdam. This national bank would both provide the government with the funds it needed while repaying its loans with interest. This helped foster a more prosperous economy and encourage more investment in the bank, which in turn helped provide the government with more funds, and so on. This feedback of growing profits would eventually provide Britain with the money to start the other revolution that would spread worldwide: the industrial revolution. had plunged into civil war.

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JAMES I, CHARLES I, AND THE ROAD TO THE ENGLISH CIVIL WAR (1603-1642)

James I (1603-25) Elizabeth I's successor, James I (who also ruled Scotland as James VI), was much more overbearing and prone to make enemies than Elizabeth had been. He lectured Parliament on the Divine Right of Kings and even wrote a treatise on it, *The Trew Law of Free Monarchies*. Such an attitude did not set too well with Parliament. James' abrasive manner, absolutist beliefs, more Catholic concept of what the Church of England should be, and demands for money to support his lavish lifestyle made him many enemies who dubbed him the "most learned fool in Christendom."

In religious matters, the king headed the High Commission, which exercised powers of censorship and excommunication and appointed the higher clergy who in turn chose the local clergy. News of the outside world came mainly from the clergy who got their news from the higher clergy and ultimately the king. As Charles I: put it: "People are governed by the pulpit more than the sword in times of peace." No wonder that religion became the main focal point of trouble at this time. There was also the issue of observing the Sabbath. Puritans felt that Sundays should be reserved for strictly religious activities and discussions. The king, fearing that such discussions might breed revolution, encouraged more frivolous sports on Sundays to keep people militarily fit and harmlessly occupied. Such a policy outraged the Puritans and turned them further against the king.



A cup & ball festival, the sort of fun the king would like to see the Puritans indulge in on Sundays.

Money was the other big source of conflict, and the House of Commons in Parliament was the primary battlefield. Among Parliament's most jealously guarded liberties was the right to grant taxes. This

had not been such a vital issue when kings could largely get by on the revenue from their estates, various feudal fees, and the right to sell monopolies and titles. However, inflation further reduced the value of the royal estates after Elizabeth sold a quarter of them, and James' own extravagant lifestyle and the rising cost of warfare in the 1500's and early 1600's led to growing friction between king and Parliament over money.

Parliament then was not so democratic in makeup as today. Even the House of Commons consisted solely of gentry (merchants and lower nobles) with an annual income of at least 40 shillings, a sizable sum back then. The rights and privileges they jealously guarded and fought for, such as free speech and immunity from arrest and flogging, were reserved for them alone, not the lower 90% of society. As one Member of Parliament put it: "He that hath no prosperity in his goods is not free." Still, the rights and privileges Parliament fought for and won in the 1600's set a precedent, and eventually would extend to all of society.

James did have one growing source of revenue: customs duties from a rapidly expanding foreign trade. In order to take advantage of this, James raised the taxable value of various commodities to keep up with their real market value, which had risen due to inflation. Naturally, the merchants in Parliament disliked this tactic and disputed James' right to revise those values without Parliament's consent.

Another problems for James was the lack of an efficient bureaucracy such as was developing in continental states. Taxes were collected by tax farming, where local merchants paid a lump sum to the king in advance and then collected however many taxes they could get away with. This, of course, led to lower royal revenues, more corruption, and rising tensions.

Thus the stage was set for a conflict between the king on one side and Parliament and the Puritans on the other. During James' reign, relations with Parliament were generally stormy. Constant haggling over money and such religious issues as the existence of bishops in the Church of England would reach fever pitch and then subside with an occasional compromise to patch things up. There was even a temporary alliance between king and

Parliament when a proposed marriage alliance with Spain (which was very unpopular with Parliament) fell through and got England involved in the broader conflict known as the Thirty Years War. For the time being, this drove king and Parliament together against the common Catholic enemy. However, the overall situation was deteriorating, and by James' death in 1625, relations between the two parties were, at best, strained.



Van Dyck's most famous portrait of Charles I (1625-49). Van Dyck was an especially popular portrait artist, largely because, instead of using the usual 6:1 ratio of body to head size, he used a 7:1 ratio. This made his subjects, such as Charles, appear taller and more regal. In reality, Charles was supposedly somewhat short and dumpy.

It was said that James steered the ship of state for the rocks, but left it for his son, Charles I, to wreck it. Charles was undiplomatic, insensitive to public opinion, and a weak monarch who let events get out of control and send England drifting toward civil war. In addition to dealing with inflation, Charles, like James, was caught between the rising aspirations of Parliament and the Puritans on the one hand and his own ideas favoring Catholicism and absolutism on the other. He even resorted to forcing loans out of men and imprisoning those who refused to cooperate. In 1628 Parliament reacted by forcing him to sign the Petition of Right in which he agreed not to levy taxes without Parliament's consent, imprison free men without due process of law, or quarter his troops with private citizens. After this, he dissolved Parliament and ruled on his own.

For the next eleven years (1629-40) Charles managed to get by without Parliament by stretching various royal rights and fees to the limit. One of these methods was selling monopolies. Under this system only the man who bought a monopoly on a particular type of goods had the exclusive right to

sell or grant the right to others to sell those goods. This wreaked havoc with prices and caused a good deal of discontent, especially since the monopolists controlled a wide range of products including buttons, pins, dyes, butter, tin, beer, barrels, tobacco, dice, pens, paper, gunpowder, feathers, soap, lace, and hay to name just a few. Another method was extending the traditional ship's tax (previously levied only on coastal towns) to the whole countryside. As unpopular as these measures were, they raised enough money to keep the king going.

Charles might have continued like this indefinitely, but in 1637, he tried to impose the English Prayer Book on the Scots and triggered a revolt instead. Unfortunately for Charles, many of the Scots were battle-hardened veterans from the Thirty Years War who made short work of his largely untrained rabble. Desperately in need of money to continue his war, Charles called Parliament in 1640. However, after three weeks of arguing with Parliament over the last eleven years' religious and monetary policies, the king dismissed this "Short Parliament." However, the Scots did not go away. Instead, they occupied part of the north and made Charles promise a large sum of money every day until a final settlement was reached. Charles had no choice but to call Parliament again. This Parliament, known to history as the Long Parliament, would sit for over a decade and preside over a civil war and the end of absolute monarchy in England.

Charles, desperate for money and support to take care of the Scots, initially agreed to Parliament's demands: to call Parliament at least every three years and not to levy taxes or dismiss Parliament without its consent. He even let Parliament execute one of his chief ministers, Sir Thomas Wentworth, Earl of Strafford.

However, there was hardly peace between king and Parliament, only an uneasy truce until November 1641 when a revolt broke out in Ireland, with Irish Catholics killing thousands of English and Scottish Protestants who had taken their best lands. An army was needed, but neither king nor Parliament was going to allow the other to command such an army. When Parliament refused Charles his army, he sent troops to arrest five Parliamentary leaders. When they found refuge in London and support

from other towns, Charles left London, and England had plunged into civil war by August 1642.

The “Most Learned Fool in Christendom”



James I (1603-25). Since Elizabeth never married, and thus had no direct heirs, she was succeeded by James I, who was her first cousin twice removed and the son of Mary, Queen of Scots, who also ruled Scotland as James VI. As a result of this union of England and Scotland, the term Great Britain was first used to describe England.

James didn't look or act much like a king. His tongue was too big for his mouth and he was pop-eyed, giving him a constant expression of anxiety or apprehension. He wore padded clothing to protect himself from assassins, while on the hunt, he tied himself into the saddle to keep from falling off his horse. He also had the disturbing habit of slashing wildly at the carcasses of fallen game with his knife and throwing the entrails about.

In fairness to James, his problems and idiosyncrasies were not all his fault. For one thing, the violent family and court history of Scotland made him understandably paranoid. Also, in Scotland, speaking face to face, including making personal threats, was an effective way to rule where there weren't so many people to deal with. In England, with its larger population, such tactics and long speeches were not so effective. Also, making personal deals and favors, which worked in Scotland, were an unpopular tactic in England. Finally, since there was no real credit economy developed in Scotland, James didn't understand the financial situation in England.

Parliament



Parliament was originally any meeting between the English king and subjects he had summoned to discuss whatever issues he had at the time, most commonly local taxes.

In 1295 Edward I summoned what became known as the Model Parliament, since it consisted of members of all three estates (clergy, nobles, and townsmen). The purpose was to discuss taxes for the whole kingdom rather than having to go around and summon a bunch of local parliaments. Although this served as the model makeup for future parliaments, the king summoned and dismissed parliament at his discretion. For example, between 1603 and 1629, Parliament only sat for a total of 4.25 years. Thus the eleven year hiatus imposed by Charles I (1629-40) wasn't as unusual as it might seem today.

Parliament sat in two groups: the House of Lords, consisting of the upper nobles (aka Peers) and the House of Commons consisting of lower nobles and rich townsmen who together were known as the Gentry, although this was not legally a class, but a property qualification for being a member of the House of Commons. Unlike in other countries, noble titles could not be bought in England. By the same token, there was no stigma for nobles, especially lower nobles, to engage in trade and business. These two factors blended the lower nobles and rich townsmen into a more uniform group who tended to invest more of their money in business enterprises than did their counterparts on the continent, since they couldn't waste it on noble titles anyway. Another leveling element was the fact that everyone but the clergy paid taxes, thus creating more common interest between classes. All this made the gentry a particularly powerful and dynamic group, especially by the 1600s when inflation and other factors forced England's rulers to depend increasingly upon Parliament to meet their expenses.

The Royal Court Politics in Seventeenth Century England

At the time of James I, the entire royal bureaucracy of England consisted of two secretaries of state and 25 clerks. As a result, the king handled the most trivial matters, including family squabbles, which led to huge delays in getting things done. This also led to a rush of people to the court at London, which swelled to a population of around 2,000 courtiers and court employees. Between 1560 and 1580 business for royal courts quadrupled, and doubled again by 1640. Judges were so overloaded and had to rush through cases so that they probably could spend on average only twenty minutes per case.

On top of that, anyone out in the country wanting something done had to come to London. But the crush of other people with their own business made it essential to find an influential patron with strings to pull. Of course, such services didn't come free, so bribery and corruption were rampant at court.

Old and Outdated Laws

Ship money was a tax going back to the middle Ages when England's ports, such as the five seaports, known as the Cinque Ports (Hastings, Romney, Hythe, Dover, and Sandwich) paid their taxes to the king by providing him with transport and naval service. By the 1600s, however, England had its own specialized navy, rendering the ports' services somewhat outdated. In 1634, when he was trying to get by without Parliament, Charles I extended the tax to all of England, the logic being that the navy protected all of England, so all of England should pay for it. Although meeting widespread resistance, ship money provided enough cash for the king until he got into a war with the Scots.

Outdated laws and customs that were still on the books provided Charles another avenue for raising money. For example, an old medieval law provided that any noble worth over £40 had to be knighted at king's coronation or pay a fine. Enforcement of this law alone raised £165,000 for Charles.

Such laws are nothing unique to seventeenth century England. Virtually every legal system has old laws on the books that have become absurdly obsolete, but no one bothered to get rid of them. Here are a few examples from the U.S.

- In Marshalltown, Iowa, horses are forbidden to eat fire hydrants.
- In Devon, Connecticut, it is unlawful to walk backwards after sunset.
- In Denver it is unlawful to lend your vacuum cleaner to your next-door neighbor.
- In Santa Clara, California it is forbidden to dedicate parking spaces to the patron saint of television.
- In Ohio, if you ignore an orator on Memorial Day to such an extent as to publicly play croquet or pitch horseshoes within one mile of the speaker's stand, you can be fined \$25.00.
- It is illegal for a man to give his sweetheart a box of candy weighing less than fifty pounds in Idaho. (Maybe they wanted him to give her potatoes instead.)
- In Urbana, Illinois, it's illegal to bring monsters inside the city limits or urinate in your neighbor's mouth.
- Hunting camels or plowing fields with an elephant is prohibited in Arizona.

Of course, most of these laws originally had some rationale for being passed. For example, the law against hunting camels in Arizona goes back to the aftermath of the Mexican War (1846-8) and the Gadsden Purchase (1854) when the U.S. had taken over the desert Southwest. Since a transcontinental railroad was decades away, Secretary of War, Jefferson Davis (and later president of the Confederacy during the Civil War) sent people to the Middle East to buy camels and form the U.S. Army Camel Corps for running caravans and chasing Indians across the desert.

Unfortunately, when the Civil War began, troops were pulled back east, and the camels were either sold to mines and circuses or turned loose in the desert where they roamed until they had died off by the early twentieth century. Thus the law against hunting them.

Natural history note: Camels apparently evolved in the Western Hemisphere millions of years ago and then spread across the Alaska-Siberia land bridge a million years ago. While some varieties, such as the llama, survived in South America, they seem to have died off in North America about 15,000 years ago, partially the result of Native Americans hunting them. If only Arizona had that law 15,000 years ago.



Laws against monsters were probably the result of continued belief in creatures such as the Hodag (above), a 200-pound, seven-foot-long, lizard-like beast covered with horns that is supposedly a resurrection of the restless spirit of dead lumber oxen. . The Hodag was first seen by Eugene Shepard in 1893 in the woods outside of Rhinelander, Wisconsin. When he failed in an attempt to capture it, he blew it up with dynamite (in self-defense, of course). His second attempt in 1896, with a backup crew of lumberjacks, was more successful, cornering a Hodag in its den and knocking it out with a chloroform sponge on a pole. An early specimen of the Hodag is on display at the local Logging Museum.

Monopolies in 17th century England

Selling royal monopolies was a lucrative source of income for both the Stuart monarchs who sold them and the men who bought and squeezed exorbitant profits from them. Christopher Hill, in his book, *A Century of Revolution*, gives an exhausting, if not exhaustive, account of the various monopolies one would encounter in England at this time:

“It is difficult for us to picture to ourselves the life of a man living in a house built with monopoly bricks, with windows (if any) of monopoly glass; heated by monopoly coal (in Ireland monopoly timber), burning in a grate made of monopoly iron. His walls were lined with monopoly tapestries. He slept on Monopoly feathers, did his hair with monopoly combs. He washed himself with monopoly soap, his clothes

in monopoly starch. He dressed in monopoly lace, monopoly linen, monopoly leather, monopoly gold thread. His hat was of monopoly beaver, with a monopoly band. His clothes were held up by monopoly belts, monopoly buttons, monopoly pins. They were dyed with monopoly dyes. He ate monopoly butter, monopoly currants, monopoly red herrings, monopoly salmon and monopoly lobsters. His food was seasoned with monopoly salt, monopoly pepper, monopoly vinegar. Out of monopoly glasses he drank monopoly wines and monopoly spirits; out of pewter mugs made from monopoly tin; he drank monopoly beer made from monopoly hops, kept in monopoly barrels or monopoly bottles, sold in monopoly-licensed ale-houses. He smoked monopoly tobacco in monopoly pipes, played with monopoly dice or monopoly cards, or on monopoly lute-strings He wrote with monopoly pens, on monopoly writing-paper; read (through monopoly spectacles, by the light of monopoly candles) monopoly printed books, including monopoly Bibles and monopoly Latin grammars, printed on paper made from monopoly-collected rags, bound in sheepskin dressed in monopoly alum. He shot with monopoly gunpowder made from monopoly saltpeter. He traveled in monopoly sedan chairs or monopoly hackney coaches, drawn by horses fed on monopoly hay. He tipped with monopoly farthings. At sea he was lighted by monopoly lighthouses. When he made his will, he went to a monopolist. (In Ireland one could not be born, married, or die without 6d to a monopolist.) Peddlers were licensed by a monopolist. Mice were caught in monopoly mousetraps. Not all these patents existed at once, but all come from the first four decades of the seventeenth century. In 1621 there were alleged to be 700 of them.”

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THE ENGLISH REVOLUTION: FROM CIVIL WAR TO MILITARY DICTATORSHIP (1642-60)

"Trust in God and keep your powder dry."-- remark attributed to Oliver Cromwell

The English Civil War (1642-45). Few people on either side wanted civil war. However, the issues involved were so important and the differences between the two sides so great that each party felt itself forced into war. Although both sides had support from all classes, one can generalize about where each side got its support. The king's centers of power were in the more agricultural regions of the North and West. His main supporters tended to be the upper nobles, known as *peers*, from the House of Lords. In the war they were referred to as *Cavaliers* since they mainly fought as cavalry. Parliament's support came mainly from the gentry concentrated in the towns and ports in southeastern England. They were known as *Roundheads* for their short haircuts, as opposed to the long hair of the Cavaliers. (In fact, many parliamentary leaders, being from the upper classes, kept their hair long.) Both sides also looked outside of England for help. The king hoped for support from the Catholic Irish, while Parliament was allied to the Scots. Since the Roundheads controlled the ports and the navy, the king was largely cut off from his Irish allies. Meanwhile, the Scots could provide very effective aid to Parliament.

Historians used to think that both sides fought poorly in the early stages of the war, since England, being an island, had no standing army and little in the way of a military since the Hundred Years War. However, recent research shows that both sides drew heavily upon veterans from the Thirty Years War and fought more effectively than previously supposed. Despite inferior manpower and resources, the king's forces did have superior cavalry, led by the king's dashing German nephew, Prince Rupert of the Rhine, and could more than hold their own against the Puritans in the early stages of the war.

The first battle, Edgehill (1642), was a bloody draw, probably cut short by lack of gunpowder. Both sides came out of this realizing the need for training, discipline, and supplies. Ultimately, Parliament's superior resources and the Puritans' greater willingness to submit to military discipline would be decisive in the war's outcome. It was here that one

of the key figures of English history first emerged: Oliver Cromwell.

Cromwell was an obscure country gentleman and stern Puritan, typical of many gentry who sided with Parliament. After Edgehill, it was apparent that the Puritans needed better cavalry to face Prince Rupert's wild cavalry charges. Cromwell raised and trained such a regiment, later known as Ironsides for its steadiness in battle. Rather than taking mercenaries drawn from the dregs of society, Cromwell relied mainly on men of a religious nature and committed to the cause instead of looting and plundering. Their first test came in 1644 at Marston Moor. Ironsides held fast against the cavaliers, and the king's forces were crushed.

In January 1645, Parliament passed an ordinance to form the New Model Army. Contrary to the myth of being a body of "Bible warriors," the New Model Army was made up of draftees and mercenaries fighting for money. However, following Cromwell's example, it was a highly trained and disciplined professional force with regular pay and equipment. In the 1650's it was probably the best army in Europe. Later that year, it met and destroyed the king's last army at Naseby. Charles surrendered to the Scots hoping to turn them against Parliament. However, they turned him over to Parliament.

More bickering and a second civil war (1645-1648).

Charles was right in assuming he could split the victors, and the reasons for that split were largely the same reasons that had first led to civil war: money, religion, and government. The civil war, like most wars, had been expensive, and Parliament did not have the money to pay the New Model Army it had raised. It tried to disband the army, promising to repay it later, which did not set too well with the troops, who refused to disband. Instead, they set up a General Council of the Army composed of generals, officers, and "agitators", elected from the rank and file. This council took custody of the king, occupied London, and forced 11 parliamentary leaders out of the House of Commons.

Religion was another point of controversy between Parliament and army. Both parties were Puritans, but of somewhat different types. Most of Parliament wanted a state run, or Presbyterian, church, while most of the army, including Cromwell, wanted independent churches with freedom of religion. This

was what many of them had fought for, and they were not about to give it up to Parliament.

Finally, there was the issue of what sort of government the victors would establish. Parliament and most of the officers, including Cromwell, were property owners who felt that they were most fit to rule since they had so much property to be responsible for. The rank and file in the army, sensing their power, pushed for a much more radical and democratic government. The most radical of these, the Levelers, wanted the vote for all men, a bill of rights, and the abolition of the monarchy and House of Lords. A meeting of the General Council of the Army led to a deadlock between the officers and common troops. Cromwell ended the discussion and ordered the agitators back to their regiments, having one of them shot in order to convince the others to submit.



At this point, events forced army and Parliament to reunite, because Charles had escaped and raised the Scots and English royalists in revolt with promises of establishing a Scottish style Presbyterian Church if he regained his throne. This second civil war was a short and decisive affair. Cromwell, leading the New Model Army, annihilated any opposing Scottish and royalist forces in quick succession.

Cromwell's Dictatorship (1649-60). Once this war was over, Cromwell and the army moved just as decisively to resolve the problems in London. First, there was Parliament, which the army especially disliked, since some Parliamentary members had entered into negotiations with Charles to restore the monarchy. This led to Pride's Purge, named after a Colonel Pride who used the army to expel some 100 Presbyterian members. This left a "Rump Parliament" of about 60 members who were more agreeable or submissive to the will of Cromwell and the army. Next came the king, who was tried for treason and executed on January 30, 1649. Bishops

and the House of Lords were abolished and the religious independents prevailed.

However, the democratic reforms that the Levelers and much of the army hoped for never materialized. Resulting mutinies were quickly put down and Leveler demonstrations led to the arrest of their leaders. At first, Cromwell ruled through the Rump Parliament and a government known as the Commonwealth (1649-53). However, frustrated by what he saw as Parliament's lack of fervor for his type of rule, he established a more blatant dictatorship known as the Protectorate with himself as Lord Protector.

Outside of England, Cromwell faced a war with Scotland, which he conquered and ruled with some moderation since the Scots were fellow Protestants. Catholic Ireland, another enemy, was not so lucky. Cromwell's conquest of Ireland was methodical and brutal, leaving wounds that still have not healed today. Like it or not, Scotland and Ireland were incorporated into the greater Commonwealth of Britain, something no English king had been able to do. Cromwell also had an aggressive foreign policy outside of Britain, fighting successful wars against the Dutch and Spanish and making England a military and naval power to be reckoned with.

Inside England, people felt Cromwell's heavy hand as well. His wars, standing army of 30,000 men, and navy required taxes three times higher than any which James I and Charles I had ever imposed. Churches were more locally controlled, but people were expected to live good religious lives. Theaters, taverns, and racetracks were all closed down. People dressed in somber colors to reflect the mood of the ruling regime. Life under Cromwell seemed like Calvinist Geneva, except on a much grander scale. Rather than put up with this regime, many cavalier families, such as the Washingtons, Madisons, and Monroes, left England for the American colonies, especially Virginia, much like the Puritans had fled to New England from royal repression thirty years earlier. These two ways of life, the aristocratic nobles in the South and the capitalist Puritans in the North, would take root and clash with one another two centuries later. Thus the American Civil War was largely an extension of the English Revolution.

Oliver Cromwell died on September 3, 1658. He was certainly one of the greatest figures in English

history, although his motives and the nature of his greatness are still disputed by historians. However, no one of his caliber emerged to take firm control of England after him. His son Richard tried, failed, and resigned. This led to various generals wrangling over power, but people in general were tired of the strict Puritan rule. They also longed for a king, since that was the traditional ruler for a country. Finally, a certain General Monk led the army in Scotland to London, restored the Long Parliament, which asked Charles II, Charles I's son who had escaped to France, to come back as the king. England's experiment in government without a king was about to end.

“England’s Wolf with Eagle’s Claws”



Prince Rupert of the Rhine, Charles’ nephew and the Cavaliers’ most brilliant cavalry commander was the son of James I’s daughter Elizabeth and the ill-fated Frederick of the Palatinate whose bid for the throne of Bohemia had started the Thirty Years War. He had spent much of his life in a Hapsburg prison where he studied cavalry tactics. He was only 22 when he assumed command of his uncle’s cavalry.

Rupert dressed flamboyantly and made enemies with his tactlessness. He also terrorized the English countryside with his raids, earning him the title “England’s wolf with eagle’s claws”. Outside London and a few other towns, little was safe from Rupert.

Rupert had a pet poodle that he had taught to dance to the following tune and then lift his leg to urinate:

*“Who name but Charles he comes aloft for him
And lifts his malignant leg for Pym.”*

* John Pym was a Parliamentary leader.

Roundhead propaganda claimed Boy was a witch, a witch’s familiar, or even the devil himself and that he was invulnerable to bullets, able to catch bullets in his mouth, and could himself invisible to spy on the enemy.

His supposed invincibility was disproven when he was killed by enemy fire at Marston Moor in 1644. Not surprisingly, Puritans celebrated his death.

Despite his prissy little dog, Prince Rupert was one of the best cavalry leaders of the war, forging the inexperienced cavaliers into an excellent fighting force that fought in three ranks and charged as shock cavalry in the manner the Swedes had learned from Polish hussars in Eastern Europe.

First blood at Edgehill (1642)



Trained bands. One of the myths of the English Civil War was that neither side knew how to fight well at its start. However, in addition to the large numbers of Scottish and Irish veterans from the Thirty Years War who took part, there were the “trained bands” of militia (below) the king had required to train. While they weren’t hardened veterans, they weren’t totally raw recruits either, and they adapted to warfare fairly quickly.



At Edgehill, the first major battle, there were about 14,000 men on each side, with the cavalry on the flanks where they could best maneuver. Theoretically, in such battles, the cavalry would come to grips first while the infantry was still

moving up, and thus resolve their part of the battle first. Whichever cavalry won, was supposed to finish the battle by attacking the enemy infantry on their exposed flanks.

However, Edgehill assumed the all too familiar pattern where the victorious cavalry (in this case the Royalist Cavaliers led by Rupert) found it more appealing to loot the Roundheads' undefended camp than get their hands dirty from fighting lowly infantry. What they didn't see were two Roundhead cavalry regiments in reserve who did their job of attacking the Royalist infantry in the flank.

Thus the day's fighting ended in a draw, probably because both sides ran out of gunpowder (something neither side would openly admit).

Most likely shortages of powder cut short several battles in the English Civil War.

The Puritans could claim one success at Edgehill: the capture of the King's flag.

The two armies spent the next day staring at each other, neither with the stomach to resume the fight. Edgehill did wake up many, especially the rank and file, to the awful realities of war.

Part of the tragedy of civil war is that it often divides families. At Edgehill there were two fathers on the king's side fighting against their two sons on the other side.

Although a draw, Rupert's subsequent move on London put Parliament into a panic, causing it to try to negotiate with Charles, but the king refused. Therefore, Parliament had London fortified with eighteen miles of packed-earth fortifications, including a moat that was nine feet deep and wide, and 24 star-shaped forts connected by walls and redoubts, etc. No trace of it currently remains.

Stalemate (1643-4)



After Edgehill, the war turned into a series of localized conflicts, largely because the trained banks refused to leave their home counties to fight a broader war. Skirmishes and sieges of manor houses became the most common type of fighting.

With their men gone to war, women often had to lead the local defense. For example, Lady Harley of Brampton organized a garrison and led its defense for 6 weeks, while a certain Mrs. Purefoy with only 4 men, 3 maids, and her daughters shot 3 captains and 15 troopers before Prince Rupert finally took the place. Impressed by Mrs. Purefoy's courage, Rupert showed the defenders rare mercy.



By 1644 both sides were exhausted and desperately seeking outside help. With France still preoccupied with the Thirty Years War and the accession of the 4-year old Louis XIV to the French throne in 1643, Charles could expect little help from France. In addition to the Irish army left over from the revolt in 1640, the Irish sent 17,000 more troops to the king. However, in order to avoid Parliament's navy, they arrived piecemeal and then were parceled out among various Royalist armies. Complicating matters was the fact that many of these soldiers were English Protestants who mutinied against the king and/or deserted to the other side.

Parliament had an easier time getting 22,000 Scots after Pym's treaty gave them religious

concessions, promising, among other things, to make the Church of England a Presbyterian church on the Scottish model. While Pym's treaty, would provide the means to win the war now, it also laid the seeds of dissension between Presbyterians and Independents after the war.

Stretching the sinews of war. In 1642 when the war started, motivated recruits were relatively easy to get. But by 1643 and 1644 many of the initial recruits were dead or gone and were hard to replace with volunteers. Therefore, both sides resorted to conscription, at first drafting the dregs of society. However, they typically deserted and plundered the countryside, causing peasants to form vigilante bands of "clubmen" who attacked any soldiers they caught. Since the trained bands resisted leaving their home counties, Parliament started to draft laborers and peasants, which made the war very unpopular.

Part of the problem was the lack of money. Despite its superior resources, Parliament had as much trouble feeding, clothing, and equipping its army as did the king, who set up factories for clothes and shoes, while getting arms and powder from overseas.

Getting gunpowder was especially a problem, in particular its active ingredient, saltpeter or potassium nitrate, which was a bi-product of bird droppings or human urine. Previously, royal monopolists had the right to enter any man's premises and dig in his henhouses, dovecotes, or privies. Although this led to widespread resentment, Parliament resorted to similar methods during the civil war.

In lieu of money Parliament promised to give its veterans Irish lands. Another extremely unpopular practice by both sides was quartering troops in people's homes. By 1644, the desperate measures both sides were being forced to use were driving the war to a crisis.

The Rise of Oliver Cromwell



Cromwell's early life. (1599-1658) As with any famous person in history, especially those with humble origins, there are numerous apocryphal stories about Cromwell. In one legend he was stolen from the cradle by a monkey, and in another he gave baby Charles a bloody nose over a toy when the royal family was visiting Cromwell's grandfather.

Born in 1599, he was virtually unknown before the Civil War, an obscure country gentleman who married a rich leather merchant's daughter, Elizabeth Bourchier, and struggled to raise a family of six children on a modest estate. In 1631, he had to sell his estate and to rent a farm.

He first attended Parliament in 1628, the year of the Petition of Right. His first recorded speech was in defense of his old teacher who had been reprimanded for criticizing the "popery" of the Church of England. (It was quite typical for such local issues to take up Parliament's time.) Cromwell was also involved in local politics, in particular leading a fight against the Earl of Bedford who was enclosing and draining some fenlands to create more farmland, but less hunting and fowling for the poor. Because of this campaign Cromwell was called "Lord of the Fens".

In November 1640 he went back to Parliament along with 18 of his kinsmen. Therefore, he was present at the crisis that led to the outbreak of civil war. While becoming more actively involved, he was by no means a major player yet.

After Edgehill (1642) Cromwell went home and formed a cavalry regiment, later called Old Ironsides by Prince Rupert. Its members were highly trained and inspired with a religious fervor that some thought bordered on fanaticism. However, religious they may or may not have

been, they were effective in much the same way the Union cavalry could finally stand up to Confederate cavalry two years into the American Civil War.

By 1644, Cromwell was calling for more decisive action from his superior officers whom he could publicly criticize, since he was a Member of Parliament. He also supported the Self-Denying Ordinance where a Member of Parliament couldn't also be an officer in the army. At the same time, all Peers were removed from commands since they couldn't renounce their hereditary titles and positions in the House of Lords, while members in the House of Commons could resign from Parliament and keep their commands, which is what Cromwell did.

*"God made them as stubble to our swords":
The Battle of Marston Moor (1644)*



On July 2nd, 1644 a Parliamentary army of 27,000 troops met an army of 17,000 Cavaliers under Prince Rupert at Marston Moor. The Royalists broke for supper at 6PM, thinking it was too late to fight. The Roundheads, however, weren't hungry and attacked. Cromwell's Ironsides drove Rupert's cavalry back, Cromwell himself being wounded in the neck.

Meanwhile, on the other flank, the Royalist cavalry, using the Swedish tactic of mixing 500 musketeers in with 2,000 cavalry, drove off the Parliamentary cavalry. True to form, the Cavaliers broke ranks to loot the enemy camp. Having driven off Rupert, Cromwell and Ironsides swung across the field and hit the Royalist infantry in the rear. One Royalist regiment, known as Newcastle's lambs or the Whitecoats for their undyed woolen coats, had vowed to fight to victory or until their coats were stained red with their own blood. They fought and died to the last man.

Much like Gettysburg did in the American Civil War, Marston Moor, marked the turning point in the English Civil War. There was still plenty of hard fighting and bloodshed left, but the tide had definitely turned.

A dog's death. Among those killed at Marston Moor was Rupert's dog, Boy, whom he apparently forgot to tie up before the battle. Puritans, who hated Rupert, rejoiced at Boy's death, claiming the dog had been a witch's familiar.

The New Model Army and Victory (1645)



In a final push toward victory, Parliament created the New Model Army of 14,000 infantry, 6000 cavalry, and 1,000 dragoons, mobile musketeers who traveled on horseback but fought on foot. Generally, one dragoon in four would hold the horses while the others formed a skirmish line, fired a few volleys to slow the progress of the enemy, and then rode off.

The new general, Thomas Fairfax, was slight, self-effacing, and quiet, but of iron will. He demanded iron discipline and regular pay for his men, which encouraged experienced veterans to re-enlist. The New Model Army generated a myth of being highly dedicated and religious men, since it was largely modeled on Cromwell's regiment, Ironsides. In reality it was a professional army motivated more by regular pay than religious or political conviction. In fact, Parliament resorted to forcible conscription, even kidnapping men off London streets in broad daylight.

Dutch and Swedish influence can be seen in the army's organization and its regular equipment and uniforms, in England's case red. At first, it had one pike man for every two musketeers, until flintlock muskets became standard issue for all in 1685. Each cavalry trooper carried a sword, two

pistols, a helmet, and a breast and back-plate. Around 1650, the helmet and armor would be replaced by a hat and coat of buffalo hide.

Following the lead of other countries, a modern officer corps and chain of command were also put in place. Similarly, the artillery was also put on a firm basis with standard organization.

The New Model Army proved its worth in 1645 by crushing Charles at Naseby. As usual, Rupert pursued too far while Cromwell came round and hit the Royalist infantry in the rear to win the battle. Next year, Charles surrendered to the Scots, hoping to split the victors.

The Army as the radicals of the revolution



If the English Revolution had a radical element corresponding to the Sans Culottes in the French Revolution or the Soviets in the Russian Revolution, it would have been the army rank and file, more specifically the faction among them known as the Levelers. Therefore, when the Presbyterian majority in Parliament moved to impose their style of church on all of England, there was widespread dissent among the troops who had fought for religious freedom. A multitude of pamphlets, sermons, and discussions to stir up new ideas led some preachers to expand religious equality to political and social equality as well.

In fact, the army was split into two groups of Independents: those, such as Cromwell and many army officers, with a solely religious agenda, and those, known as the Levellers and led by John Lilburne, who combined religious and political agendas. A few, possibly influenced by the pacifist Quakers who let women preach, even advocated equal rights for women. New elections in 1645-6 to replace members of Parliament expelled or lost during the war led to a more vocal group of

Independents in Parliament, although Presbyterians still held the majority.

Besides pushing for a more radical leveling of society, the troops pushed for execution of the king. This would prove both shocking and unpopular with the general populace who couldn't imagine their society without a king. It also showed that the radicals in the English Revolution, much as in the French and Russian revolutions, were somewhat out of touch with the feelings of mainstream society. Therefore, it wasn't long before pamphlets started appearing that, as Charles had foretold, portrayed him as a martyr of the people.

Caught in the middle of this was Cromwell, who favored freedom of conscience, but also had conservative political and social views that clashed with the more radical Levellers. Seeing monarchy, although not divine right of kings, as a reasonable form of government, he entered into negotiations with the king, which lost him and his followers the confidence of the rank and file troops, who started calling the officers Grandees (i.e. nobles).

The Trial and Execution of Charles I

"We shall cut off the king's head and the crown with it."--Oliver Cromwell

"I am a martyr of the people."--Charles I at his execution.



Charles trial by Parliament, much like the conciliar movement that solved the Great Schism in the early 1400s, raised a very real legal question. As the king constantly pointed out, if he indeed was the head of state and appointed by God, who on earth had the authority to try him? This was the crux of his defense, not even recognizing the authority of the court to try him,

and thus refusing to cooperate with the proceedings. This attitude also largely sealed his fate.

Cromwell, who was the third to sign Charles I's death warrant, did a bit of arm-twisting to pressure other members of Parliament to sign as well. Still only 59 of 135 Members of Parliament signed it, maybe because the other 75 members had been purged.

Charles I's execution (1/30/1649) was much less popular than Cromwell and the radical Puritans had anticipated. At the same time, another anti-royalist revolt, the Fronde, was raging in France, although ultimately with very different results from its English counterpart.

Cromwellian England from Monarchy to Military Dictatorship



The palace at Whitehall where Cromwell held court Cromwell's government. Cromwell did not see himself as a political revolutionary and instead strove for normalcy in government. He made continuous efforts to maintain the rule of law through Parliament, but felt constantly frustrated by its unwillingness or inability to act decisively on matters he felt had to be dealt with decisively. At one point he referred to Parliament as more of a prayer meeting than a government. As a result, he constantly felt compelled to tighten his grip on government to make things run the way he thought they should.

For example, soon after the execution of the king, he faced the climax of the crisis with the Levellers whose hopes for a democratic government were raised by the king's fate. When about 1,000 of them rose up to push for a more broadly based democracy, Cromwell dealt ruthlessly with them, arresting and executing eleven of their leaders.

When no one new stepped forward to lead them, the rest of the agitators backed down.

The Commonwealth (1649-53), with the "Rump" Parliament as the main governing body, was Cromwell's first attempt at establishing constitutional government. The next year he obliged every freeman over 18 to take an oath of loyalty to the Commonwealth, which was described as the "supreme authority of the nation...without any king, or House of Lords". However, in April 1653 Cromwell, disgusted with the Rump's lack of fervor, brought in a squad of musketeers and dismissed it after a fiery speech. This led to a new, more radical Parliament, known as the Barebones Parliament, named after a popular preacher Praise-God Barbon (AKA Barebones). However, moderates in this body met separately, dissolved it and turned all power over to Cromwell.*

*Not to be outdone by his father, Praise-God named his son Nicholas Unless-Jesus-Christ-Had-Died-For-Thee-Thou-Hadst-Been-Damned Barbon, who seems to have pioneered fire insurance, after the Great Fire of London in 1666.

The Protectorate (1653-8) was Cromwell's next government. It had a written constitution, the Instrument of Government, but, for all intents and purposes, it was a military dictatorship under Cromwell as Lord Protector. In addition to a Secret Service, Cromwell's secretary of state, John Thurloe started the British civil service, which carried on from ruler to the next, providing England with a new level of continuity and stability.

Cromwell's court. In an effort to look legitimate and in accordance with what he felt his position demanded, Cromwell ran a very formal court at Whitehall Palace. Even his former comrades had to bare their heads and address him as Your Highness. There were numerous concerts there, typically to entertain foreign dignitaries. Representatives from Venice and the Dutch Republic both described Cromwell's court at Whitehall as one of the most formal courts in Europe.

Life in Cromwell's England. Inside England, people felt Cromwell's heavy hand as well. His wars, standing army of 30,000 men, and navy required taxes three times higher than any which James I and Charles I had ever imposed. Churches were more locally controlled, but people were expected to live good religious lives.

Theaters, taverns, and racetracks were all closed down. People dressed in somber colors to reflect the mood of the ruling regime. Life under Cromwell seemed like Calvinist Geneva, except on a much grander scale.

Although Cromwell outlawed such things as dancing, cards, theatres, and sports, Catholics were allowed to worship in the privacy of their homes.

Surprisingly, he also invited the Jews, exiled since the 1200s, to return to England. Rather than religious tolerance, this was inspired by the somber belief that for the End of Days to occur as predicted in Revelations, the Jews had to return to their homeland. While most people figured that homeland was Palestine, Cromwell, maybe just to play it safe, thought it might be England, at least for any Jews who had lived there previously.

More recently, many modern fundamentalist Christians have supported the state of Israel for the same reason.

"To Hell or Connaught": A Brief History of Ireland



With his troops wavering, Cromwell personally led the final assault on Drogheda, which subsequently suffered a massacre at the hands of the New Model Army.

A brief history of Ireland. In 1169 the Normans invaded Ireland, gradually extending their control over the following centuries. For most of the Middle Ages Ireland was ruled as a separate kingdom under the British crown. By 1300, the area controlled by the Anglo-Normans had reached its greatest extent. However, by 1450, the Irish had regained control over much of their land. In the 1500s, the English started to regain control of parts of Ireland. In 1603 the defeat of the Irish in Ulster gave Britain complete control of Ireland.

Unfortunately, the Protestant Reformation added a new and volatile element to the struggle: religion. Now it wasn't just a struggle about land. It was a struggle about God.

In 1641, the Catholic Irish rebelled against their Protestant English masters. In England, Anti Irish-Catholic propaganda showed supposed Irish atrocities committed against English and Irish Protestants in Ireland. However, the English Civil Wars delayed English efforts to respond to the uprising and come to the aid of Irish Protestants being besieged at Drogheda.

Finally, in 1649, Cromwell landed in Ireland to quell the revolt. His bombardment and storming of Drogheda was one of the most notorious of his acts. With his troops wavering, Cromwell personally led the assault on the gates of the city. When it fell, all soldiers, priests, and a number of civilians were massacred.

"I wish that all honest hearts may give the glory of this to God, to whom indeed the praise of thy mercy belongs."--Cromwell

Cromwell hoped one massacre could intimidate the Irish into submission. It didn't.

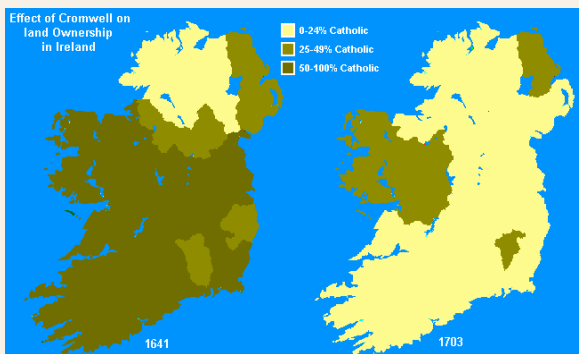
Therefore, 1500 more were massacred when Wexford was taken.

Other towns offering resistance suffered the same fate.

When Cromwell had to leave Ireland to take care of Scotland, his policy of massacres was abandoned. However, another policy that would prove in the long run more destructive to the Irish people was now implemented: land confiscations.

Cromwell's confiscations were the result of the lack of cash to pay his troops at the end of the war. Therefore, he confiscated land and gave it to his troops in lieu of money. Any Irish unable to prove loyalty to the Commonwealth had their property confiscated. To ensure continuing control over the troublesome province of Ulster, the land was confiscated and given to small Scottish farmers. Dispossessed landowners were given poor quality land in Connaught in exchange, leading to the Irish expression "To Hell or Connaught."

By 1692 the English had seized two-thirds of Irish land for themselves. As a result, starvation and disease may have killed 50% of the Irish population by 1692. According to one traveler, "...a man might travel 20 or 30 miles and not see a living creature."



The drastic effects of Cromwell's rule on Irish land ownership between 1641 and 1703

Cromwell's religious policies outlawing Catholicism were no less disruptive. Priests were ordered out of the country in 20 days. Anyone harboring a priest could be executed, although this was not strictly enforced after the war. Magistrates could even take Irish children and ship them to England for a proper Protestant education.

The long-term results for Ireland were also devastating. The one thing the Irish could grow on the land left to them was the potato. This sustained them well until the 1840s when the Potato famine hit. Although English landlords, who controlled the best two-thirds of Ireland's land, had extra food, they exported it to England while maybe a million Irish starved to death.

Outrage over their plight would eventually lead to the Irish Revolution in 1916.

This was the source of the religious strife still afflicting Northern Ireland today.

"A contemporary song by the group, the Pogues, reflects the bitterness still found in Ireland:

*A curse upon you Oliver Cromwell
You who raped our Motherland
I hope you're rotting down in hell
For the horrors that you sent
To our misfortunate forefathers
Whom you robbed of their birthright
'To hell or Connaught' may you burn in hell tonight"*

The First Anglo-Dutch War (1651-53)

In 1651, Cromwell passed the Navigation Act, which said imports to England had to come either on English ships or ships from the countries where the goods were made. This was an obvious blow against the Dutch who profited greatly from the carrying trade. The result was the First Anglo-Dutch War. Since the Dutch up to liberation in 1648 had concentrated on trade and defeating the Spanish Army, they didn't have as powerful a navy as Britain's, and did poorly in this war. However, in the next two Anglo-Dutch wars they would more than hold their own by building large warships and adopting the English tactic of fighting in one long line to make best use of the broadsides from their cannons.



In 1653, the two countries' fleets of 120 ships each met in a bloody and indecisive battle at Scheveningen (above). Although a tactical draw, it did break the British blockade of Holland and led to peace. From Cromwell's point of view, this ensured that Johan de Witte's party remained in power to prevent the young William III of Orange, Charles II's nephew, from taking over and trying to restore his uncle to the throne of England. Ironically, it would be William who would overthrow the Stuart monarchy and seize the throne in 1688 in the Glorious Revolution.

Cromwell's Later Rule



Anti-Cromwell propaganda portraying him as the Anti-Christ

As people grew increasingly tired and resentful of Cromwell's dictatorship, resistance increased, which caused Cromwell to tighten up even more, leading to more resistance and resentment, and so on. Parliament, which still had the power to grant taxes, dragged its feet to give him those taxes, so he dismissed it in 1655. But his need for money forced him to call Parliament the next year, although he kept 100 elected members from taking their seats, so they delayed some more. However, a plot against Cromwell's life woke Parliament to his importance, and it granted him his money.

Outside of Parliament, resistance might take the form of non-cooperation or sabotage. Secretly printed pamphlets attacking Cromwell multiplied. Plots and rising by Levelers and other religious sects led to curtailing religious liberties. In opposition to Cromwell's policies, several judges resigned their posts in protest.

Although Cromwell did refuse an offer to take the crown, probably realizing its unpopularity with the army in particular, he did increase his power in other ways. He had gold coins minted showing his head crowned with a laurel wreath on the front. He also mimicked royalty by maintaining a lavish court and having himself treated as a virtual king. In 1657 he passed the Humble Petition and Advice, giving him the power to nominate a successor, much like a king would do. The next year he selected some members of Parliament to form a new Upper or Other House, which many saw as a revival of the House of Lords. That same year, reacting to further resistance, he dismissed Parliament for the third time in five years.



A British gold crown from 1658 with Cromwell's head crowned with a laurel wreath on the front. Cromwell also mimicked royalty by maintaining a lavish court and having himself treated as a virtual king.

Three years after his death and a year after the restoration of the monarchy, a mob dug up Cromwell's body and hanged it from a gallows.

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96C. THE ENGLISH REVOLUTION FROM THE RESTORATION MONARCHY TO THE GLORIOUS REVOLUTION (1660-1688)

*"Here lies our lord and sovereign king
whose promise none relies on.
He never said a foolish thing
nor ever did a wise one."*

-- court jest concerning Charles II

*"That is very true, for my words are my own, and
my actions are my ministers'."-- Charles' reply*



Charles II & the Restoration Monarchy (1660-85).

The above quoted poem says a great deal about the reign of Charles II. The English people were ready to throw off Cromwell's strict Puritan rule and enjoy life again. Theaters, taverns, and racetracks opened up again. Flamboyant fashions and hairstyles became the rage. And Britain once again became "Merry Old England". Charles, the "Merry Monarch" seemed to be just what the English people needed. However, despite all this, there still remained an undercurrent of tensions in the areas of politics, money, and religion

In politics, things seemed much calmer than they had been for decades-- at least at first. King and a largely cavalier Parliament seemed reconciled. Charles was voted a sizable income. The army was paid off, and most of the crown's enemies from the civil war were granted pardons. However, many of the old tensions between king and Parliament still existed. For one thing, the Restoration not only restored the king. It also restored Parliament, which Cromwell had suppressed. In fact, it was the restored Parliament that formally summoned Charles back to England, not the king who summoned Parliament. Parliament itself was divided into two parties: the *Tories* who favored a

strong king and a Church of England largely resembling the Catholic Church, and the *Whigs* who favored a strong Parliament and more Protestant Church and ritual.

As far as money was concerned, England's wealth was rapidly growing. Cromwell's aggressive foreign policy had intensified England's commercial and naval rivalry with the Dutch, largely due to the Navigation Act, which excluded foreign, and particularly Dutch, ships from carrying English goods. This led to three short but bitterly fought naval wars with the Dutch (one under Cromwell and two under Charles II). Although the Dutch held their own, the expense and stress of their wars against England and France allowed the English to replace them as the premier naval and commercial power in Europe by 1700. Between 1670 and 1700, England's foreign trade grew by 50 per cent, and the king's customs revenues tripled. Despite this new prosperity, Charles' allowance from Parliament still could not satisfy his extravagant personal tastes and style of living. Instead of letting this lead to a clash with Parliament, as it had led to Civil War in 1642, Charles neatly sidestepped Parliament by signing the Secret Treaty of Dover with Louis XIV. This gave Charles a handsome pension in return for the promise to turn England Catholic when the time was ripe.

Concerning religion Charles II was sly enough to keep to himself his beliefs in the Divine Right of Kings and the Catholic faith. Although he did not openly profess his Catholic faith until he was on his deathbed, he did restore lands confiscated since the civil war to the Church, crown, and nobles. He also restored the power of the Church of England, re-establishing the church courts and persecuting anyone, especially Puritans, not conforming to the Church's doctrines.

Much more unsettling was the fact that Charles had many children, but none of them were legitimate. That left James, Charles' brother and an avowed Catholic, next in line for the throne. This alarmed the Puritans, who put pressure on Charles to disinherit his brother. Puritan pressure intensified with Titus Oates' "Popish plot," a preposterous rumor that the Jesuits were plotting to kill Charles and massacre all the Protestants in England. This

led to two years of anti-Catholic persecutions and hysteria, which put Charles in an awkward position, since he did not want to be exposed as a "papist" himself. Rumors of his funds from France made his position that much more delicate. In the end, the slippery Charles managed to avoid disinheriting his brother. He even ruled without Parliament the last few years of his reign, getting by on his subsidies from Louis XIV. By Charles' death in 1685, it seemed the king was as strong as ever.

James II and the Glorious Revolution (1685-88).

As strong as the new king, James II, may have appeared, there was no way he could undo the changes of the last 80 years. Charles II was a capable monarch quite adept at handling the Whigs. Unfortunately, James had nearly all the qualities to ensure getting himself dethroned, being bigoted, stubborn, and quite inept. His worst mistake was his open preference for Catholicism. He suspended laws keeping Catholics out of public office and even recruited Irish Catholics for his army. When his own bishops tried to advise him to reconsider his openly favoring Catholicism, he jailed seven of them in the Tower of London.

Even the Tories came to fear the king's religious views more than they did the Whigs' political views. Finally, they joined with the Whigs in inviting James' Protestant daughter, Mary, and her husband, William the Prince of Orange, to come from Holland and dethrone James. What followed is known as the Glorious Revolution, partly for being virtually bloodless (except for James' nosebleed), but mainly for what it accomplished. William and Mary's Dutch army landed unopposed and marched to London. James' army deserted him, and he fled to France.

Royalty and Parliament then came to an agreement whereby William could use England's resources to help stop Louis XIV's drive to dominate Europe. In return, William and Mary guaranteed Parliament's rightful place in the government and signed the Bill of Rights, precursor to our own Bill of Rights. This assured Englishmen such liberties as free speech, free elections, no imprisonment without due process of law, and no levying of taxes without Parliament's consent. In addition, the king agreed to call for new elections every three years. The king could still

formulate policy and name his officials. However, the balance of power had definitely shifted in favor of Parliament, especially since it controlled the purse strings. Money was only granted one year at a time, which meant that the king would have to call Parliament each year just to have the cash needed for his policies. This new government where even the king where was subject to the law and certain legal procedures in ruling is called *constitutional monarchy*,

In the years to come, Parliament gradually gained more power at the expense of the kings. This process gained momentum when the German prince, George of Hanover, became king in 1714. His main interests remained on the continent, and he was generally content to let his allies, the Whigs, run the government for him.

Results of the English Revolution. The struggle between kings and Parliament throughout the 1600's ended in a clear-cut victory for Parliament. While a more democratic government emerged as a result of the English Revolution, keep in mind that rather high property qualifications still kept the vast majority of Englishmen from voting.

However, the English Revolution would benefit all England in two areas: civil rights and the economy. For one thing all Englishmen did gain certain civil rights, such as free speech and the right to a fair trial by a jury of peers. Also, all Christians except gained religious freedom, except Catholics and Unitarians, who eventually, would also be tolerated. The English Revolution also opened the way for more democratic reforms over the next two centuries, until England would become a truly democratic society. The power and success of these principles would spread to the American and French Revolutions, and from France to the rest of Europe and the world.

Economically, the English revolution saw the triumph of capitalism in England. One important aspect of this was Parliament's founding of the Bank of England (1694) through which the government did much of its business. The important thing here was that the government guaranteed repayment with interest on any loans it took out. This contrasted sharply with the old

medieval method whereby kings took out personal loans, often did not bother to pay them back, and let the liability for the loans go to the grave with them. Now that government was identified more with Parliament, liability for the loans did not die with the king. Therefore, people were more willing to loan the government money, since they knew they would get it back with interest.

Since hard-nosed middle class businessmen rather than extravagant nobles with no sense of the value of money now ran the government, it would use these loans wisely by investing them in business and new industries. That, in turn would improve the economy, which not only could pay more taxes, but also invest further in the Bank of England, which could invest even more money in economic development, and so on. Therefore, England, along with the Dutch Republic, was one of the first modern states to operate at a profit rather than in chronic debt. And, as a result, England would be the birthplace of the Industrial Revolution in the 1700's, a factor that would make Europe the dominant culture on the globe by 1900.

Merry Old England Once Again



After the dour and repressive rule of Cromwell and the Puritans, England was ready for a break. They got it with Charles II, not the best king Britain had, but probably the best one the Stuart dynasty produced in that at least he knew how to keep his mouth shut & just let the British people relax a bit. Thus Restoration England (1661-88) was an age of Big Hair, flamboyant clothes, and looser morals.

Indicative of this was the series of royal mistresses, including the most scandalous of them, the actress Nell Gwynn, who referred to the king as “my Charles the Third.” The king’s scandalous personal life hurt his public image

and the ability of others, especially Louis XIV, to control him through his mistresses.

Another sign of the times was the reopening of the theaters. Restoration Theater, as it was called, drew heavily upon French influence, largely because the royal family had spent two decades in exile there. In addition to the neo-classic tragedies of Racine and Corneille, the comedies of Moliere were copied and imitated.

Other French influences included the introduction of stage machinery (for seventeenth century “special effects”) and actresses onto British stages. (The first use of French actresses in London in 1629 aroused great indignation, but paved the way for their later acceptance.)



Women were also breaking into the ranks of playwrights, notably Madame Scudéry and the Countess de la Fayette in France who wrote semi-historical romances. Following in their footsteps in England were equally successful women: Mrs. Aphra Behn, Mrs. Manly, and Mrs. Susannah Centlivre, the last of whom successfully adapted a number of French plays into English.

Restoration comedy drew heavily on the comedies of manners made popular by Moliere in France, using fairly stock characters: smooth sophisticated men about town, frail and beautiful women for them to court, dim-witted husbands and fathers for them to fool, and various minor characters, such as gossipy neighbors and clever servants, to fill out the cast. Plots were fairly predictable, often with unlikely coincidences to resolve the plot at the last minute, much as in the New Greek Comedy of Menander and copied by the Romans Plautus and Terence.

The Black Death Returns (1665)



In 1665 the last major outbreak of plague in England hit London, and “Bring out your dead” became more than a line from a Monty Python movie. Because of the large numbers of victims, they were buried in common pits.

A bad decade. The 1660s were a bad decade for Britain, starting with the Dutch victory over the British in the Four Days Battle (1664) where 8000 English sailors died, many in burning ships. After that came the Black Death (1665), the Great Fire of London (1666) and a humiliating raid by the Dutch fleet into the middle of English waters. Many people blamed these disasters on the king’s immoral behavior and suspicions that he was secretly Catholic. (He was.)

In 1665 the last major outbreak of plague in England hit London, and “Bring out your dead” became more than a line from a Monty Python movie. Because of the large numbers of victims, they were buried in common pits.



Above: a doctor’s robe. The beak was meant to act as a filter, being filled with perfumes & alleged disinfectants. The lenses were supposed to protect the eyes from the plague’s poisonous emanations.

Except for those rich enough to leave town and the plague behind, the best option was the quarantine, which involved boarding up windows and padlocking doors of any house where there was a sick person. Guards outside kept the whole family confined indoors until 28 days after the last signs of the plague had passed, at which time all the clothes and bedding of the victims would be burned.

Death and nursery rhymes. It is good to remember that, while European Civilization was progressing, life went on much as it had for centuries and people still had to deal with the same problems they dealt with in the Middle Ages: Plague, fire, and famine. Nothing could better illustrate the significance of plague than how it has come down to us in a famous nursery rhyme:

"Ring a ring-a-rosies
A pocketful of posies
Tishoo Tishoo
We all fall down."*

*Rosies= rash accompanying plague

An alternative version of "Ashes, ashes" could refer either to the ashen color of buboes or ashes from burning bedding & clothes.

The fact that so many nursery rhymes had to do with grim themes such as plague, Bloody Mary, and Vikings tearing down bridges shows how there was a much fuzzier barrier between the worlds of adults and children then, with a corresponding lack of understanding of childhood as a distinct stage of life.

When it finally subsided in December 1666, the plague had killed an estimated 70,000 people in London. But another disaster lurked just around the corner: fire.

Farewell Tour. This was, in a sense, the farewell tour of the Black Death, the last major outbreak of Bubonic Plague in Europe occurring in Naples in 1756. There are a number of theories about why it subsided, including the replacement of thatched roofs (where the Black Rat liked to burrow) with tiled roofs and the supplanting of the Asian Black Rat with the European Brown Rat, which avoided human more than its Asian

cousin did. While none of these theories is mutually exclusive, very likely, a less deadly strain of plague had evolved that didn't kill its host and force it to find a new host. Meanwhile, the more deadly strain killed off all its hosts and reached a dead end, leaving the less deadly strain, which is still with us.

Food for thought: Like microbes, rats, and fleas, humans are a parasite on their host (planet Earth), only becoming a disease if we are harmful or deadly to our host.

The Great Fire of London (Sept. 1-4, 1666)



London in September 1666 had the ingredients for the perfect (fire)storm. For one thing, it began close to warehouses full of combustible materials (brandy, tar, oil, butter, wine). Secondly, that summer had been exceptionally dry. And third, the fire started on the east side of town with a strong easterly that blew relentlessly for four days, thus spreading the fire across the city.

It started when the king's baker was woken by smoke. Finding their escape blocked, he and his wife climbed to the roof and leapt to the next one. Unfortunately, his wife missed and fell to her death in the flames below, the first of only six fatalities from the Great Fire of London. The lord mayor, hung over from the previous night's parties, was slow to realize the seriousness of the fire and organize bucket brigades to fight it. By the time he did, the fire was too intense and widespread to combat. Soon one-third of the buildings on London Bridge were in flames. Down below in the river refugees floated to safety downstream with whatever goods they could salvage.

Since the Lord mayor was so ineffective, King Charles took charge, ordering men to tear down

buildings in the fire's path, even blowing them up with gunpowder. However, the fire was spreading too quickly even for that.

Everywhere there was the sound of women and children shrieking, roaring flames, people pleading with officials not to destroy their homes, and the thunder of buildings crashing to the ground. In the midst of it all was the king who took part in bucket brigades and passed money out to fire fighters, something which revived his reputation somewhat. Adding to the panic were rumors the Dutch had set the fire and were sailing up the Thames to attack. (They would do that the next year.)

Samuel Pepys, an eyewitness to the fire, kept a diary which is one of our best sources for the fire: *"O the miserable and calamitous spectacle, such as happily the whole world had not seene the like since the foundation of it, nor to be out don, 'til the universal Conflagration of it, all the skie were of a fiery aspect, like the top of a burning Oven, and the light seene above 40 miles round about for many nights. God grant mine eyes may never behold the like, who now saw above ten thousand houses all in one flame, the noise and crackling and thunder of the impetuous flames, shreeking of Women and children, the hurry of people, the fall of towers, houses and churches was like an hideous storme.... Thus I left it this afternoone burning, a resemblance of Sodome, or the last day... London was, but is no more!"*

When it finally had run its course, the fire had destroyed 5/6 of London, 13,200 houses, and 87 of 97 churches. Some 200,000 people were left homeless and subsisting in fields outside London.

Amazingly, only 6 people died.

It had started in Pudding Lane and stopped at Pie Corner.

Out of this destruction arose a new London, including the new St. Paul's Cathedral built by Christopher Wren, using the classical elements of the dome and columns in the baroque style of the 1600s. Wren's original design was turned down because it looked too much like churches in Catholic Rome. That was fine with the

secretly Catholic king Charles, but not with the Puritans or even the Anglican cavalier supporters of the monarchy. Wren also had a grand design for rebuilding London as a much cleaner and more organized city. However, officials passed it up, mainly because of its expense.



A Thriving Home and Colonial Economy. During Charles II's reign, one could see the beginning of British prosperity that would vault it into the forefront of the industrial revolution a century later. By 1700, half of England's land had been enclosed to take advantage of the new more productive agricultural techniques being developed. While on the continent, low agricultural prices led to limited production, in Britain both the government and private investors were raising production to make the country agriculturally self-sufficient.

The introduction of the Dutch loom in the 1690s meant a weaver could make 12 pieces of ribbon over 400 meters long in two days, a great boost in productivity. The Immigration of Huguenots expert in the production of textiles, book printing, papermaking etc. after 1685 helped transform the manufacture of watches, cutlery, fine textiles, and glass into industries catering to a larger clientele. The de-regulation of the textile industry's control of such things as apprenticeship, work conditions and wages also help create a flourishing free market.

Better agriculture and more efficient production of goods combined to create more of a "consumer economy" where English yeomen (prosperous farmers) and shopkeepers could buy colorful clothes, coffee, sugar and tobacco.

England was also importing goods from the colonies and re-exporting them for huge profits. Between 1630 and 1700 tobacco exports from

Maryland and Virginia rose by a factor of twenty times. Sugar imports, which were negligible in 1630, reached 4-million pounds between 1699 and 1701. At the same time two-thirds of the tobacco and Indian Calico and one-third of the sugar being imported was re-exported for profit. In the last four decades of the 1600s, the re-export of colonial goods to Europe jumped by a factor of four times.

From 1580 to 1700 the number of brewers skyrocketed from 26 to 180. In the 1700s distilled liquors such as gin would see even more dramatic growth with disturbing results.

"Rock-a-Bye-Baby" and the Glorious Revolution



The "Warming Pan Baby". People were willing to wait for James II (above) to die, since he had no heir to the throne-- until Queen Mary Beatrice announced she was pregnant. Many liked to claim the pregnancy was a hoax, with a baby being sneaked into to the birthing room in a warming pan, which usually held hot coals and was placed under a bed to keep it warm on cold winter nights. Hopefully it wasn't used for both functions simultaneously.

Rock-a-bye Baby was another nursery rhyme that came out this period's history. The baby in the song is the aforementioned "warming pan baby" of James II. The breeze refers to the wind that blew William and Mary's fleet over from Holland. The baby falling represents the fall of the Stuart monarchy.

The Jacobites (supporters of Stuart claims to the British throne) continued to press those claims into the 18th century. Their last good hope for restoring the Stuarts lay with Bonnie Prince Charlie of Scotland, who was finally defeated at the Battle of Culloden in 1746.

96.D THE COMPARATIVE GEOGRAPHIES & HISTORIES OF ENGLAND AND FRANCE IN THE 1600s

While just a few miles of the English Channel separate France and England, their respective histories, while similar in some ways have diverged somewhat in others. Once again, one of the main factors in the equation has been geography, the fact that England is an island and relatively safe from invasion, while France is on the continent and in closer contact with its neighbors, sometimes in hostile ways.

Another factor affecting England has been a longer democratic, or more properly quasi-democratic, tradition compared to that of France, going back at least to the Magna Charta in 1215, although that was drawing upon an earlier charter signed by Henry I around 1100, which itself drew upon older traditions of Saxon liberties. Together, England's protected position, but still very close to the continent, and its quasi-democratic roots blessed it with few invasions and more trade. Therefore it had less need for a strong army, giving it a stronger and richer middle class and a less powerful and distinct nobility than in France. For example, lower nobles and the upper middle class sat together in the House of Commons as a group known collectively as the gentry. While titles of nobility could not be bought in England, neither could they be lost, as in France, for the stigma of working to support oneself like the a commoner.

By 1700, England had worked out a constitutional monarchy that was more democratic, giving all freemen certain civil rights, although withholding the vote from all but about 5% of the men. Two major pillars supported this new order. One was Protestantism, which sees all believers as (at least spiritually) equal in God's eyes. In the early 1600s when one could not separate religion and politics, spiritual equality led the way to political and social equality. The other pillar was free trade capitalism, versus the quasi-socialistic system of medieval guilds, royal monopolies, and mercantilism. Running this was the same Protestant middle class gentry that ran Parliament and claimed that God values all jobs equally. In the 1700s the combined dynamics of middle class capitalism and democracy would vault England into global leadership in terms of finance, naval and colonial power, and eventually industrialization.

France's geography and history took it down a somewhat different path, at least until the 1800s. Its position on the continent presented more threats of

invasion, as well as opportunities for conquest. Either way, it had a greater need for an army, which is expensive and disruptive to trade when it is actually used in wars. Therefore, the middle class had less clout and status in France than its counterpart in England, as witnessed by the more prominent role played by Parliament in English history than that played by its French counterpart, the Estates General. Also, there was no blending of the upper middle class and lower nobles corresponding to the gentry in England.

As a result, France experienced an absolute monarchy that was supported by its religious and economic systems. One was state enforced Catholicism with the doctrine of Divine Right of Kings, which supported the principle of absolute monarchy. The economic counterpart to absolute monarchy was mercantilism, which did recognize the importance of nourishing a strong national economy, but did it in an overbearing absolutist manner that stifled initiative and may have done as much harm as good.

However, instead of continuing on diverging paths, France would follow with its own democratic revolution and the triumph of free trade capitalism for two major reasons. One was political and economic competition from Britain that France had to adapt to in order to survive. The other was a common cultural and historical heritage going back to ancient Rome, which made France and England much more alike than either of them might want to admit.

THE BIRTH OF MODERN SCIENCE

Western science, like so many other aspects of Western Civilization, was born with the ancient Greeks. They were the first to explain the world in terms of natural laws rather than myths about gods and heroes. They also passed on the idea of the value of math and experiment in science, although they usually thought only in terms of one to the exclusion of the other. It is easy for us to be critical of their early scientific theories, but we must remember several things about their world. First, by that time, the human race had learned to exploit the environment for survival (e.g., agriculture, woven cloth, metallurgy, etc.), but knew little about the physical laws that rule nature and the universe. Also, there were no telescopes, microscopes, or other instruments to aid the naked eye in its observations and measurements. Everything they learned about the natural world had to be done with the unaided senses and whatever rational deductions they could make based on them.

Knowing the limitations the Greeks operated under helps us appreciate the scientific view of the world they evolved and handed down to posterity. The Greeks realized the limitations to their observations, and many of them argued that relying on one's senses was a faulty way to unravel the mysteries of the universe. The philosopher, Plato, compared our perception of reality to that of a man chained to the wall of a cave who only sees shadows from the outside world cast against the opposite wall.

However, other Greek philosophers argued that use of the senses for observation, as faulty as it may be, was still worthwhile. One of these Greeks, and by far the most influential figure in Western science until the 1600's, was the philosopher, Aristotle, who created a body of scientific theory that towered like a colossus over Western Civilization for some 2000 years. Given the limitations under which the Greeks were working compared to now, Aristotle's theories made sense when taken in a logical order.

Three basic observations laid the foundations for Aristotle's view of the universe and laws of motion: First of all, there was the theory of the

elements. The Greeks came up with several theories on the elements, including Democritus' atomic theory, the idea that all matter is composed of tiny indivisible particles called atoms (from the Greek *atomon* = indivisible). Other Greeks observed three basic states of matter: solid, liquid, and gas. As a result, they came up with four basic elements to correspond to the states of matter: earth (solid), water (liquid), air (gas), plus fire, which the Greeks saw as an element. Of course, since few objects are made of just one element, it was logical to assume they were compounds of two or more of the terrestrial elements. The Greeks spent a good deal of time figuring out what elements different objects contained by observing the qualities they exhibited. For example, wood is composed of earth (because it is solid), fire (because it burns), and air (because the ash left behind floats on top of water). Second, there was the observation that the stars, sun, planets, and moon *seem* to orbit the earth in perfect circles. Finally, all dropped objects seem to fall toward the center of the earth. These led to several important conclusions.

For one thing, the theory of four elements plus the perfect circular orbits of the stars and planets gave rise to the idea that the celestial bodies were made of a perfect element, *ether*. Ether was weightless or very light so the stars and planets could easily orbit the earth every day. It must also be perfect, incorruptible, and unrelated to the earthly elements since its motions are always in perfect circles, a motion rarely seen on earth.

Second, the motion of dropped objects toward the center of the earth (no matter where on earth they are dropped) and the apparent orbits of the heavenly bodies around the earth led to the *geocentric theory*, the idea that the earth is the center of the universe. Aristotle and most educated Greeks assumed the earth was round since one can see ships disappear over the horizon, the earth casts a round shadow on the moon during lunar eclipses, and the positions of the stars change as we move north or south.

Finally, there was Aristotle's law of motion. Aristotle saw that heavier objects (made of earth and water) have a tendency to fall or sink toward the center of the earth, while lighter objects (made of air and fire) rise or float. He called these

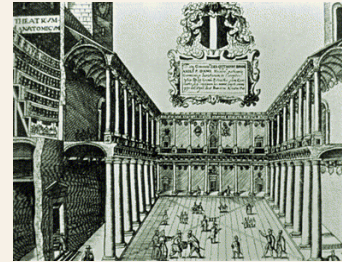
tendencies of the elements to rise or fall *natural motions* and said that all elements have an inclination to rise or fall to their natural resting places in relation to one another. Aristotle called all other terrestrial motions *forced* or *violent motions* since they needed an outside force in constant contact with the object in order to take place. Thus the theory of four terrestrial (earthly) elements and the falling of those elements toward the center of the earth led to a law of motion which said that for forced motion everything must stay in contact with a prime mover to keep moving and could only be stopped by some other intervening object or force.

Toward a new universe: the downfall of Aristotle (1543-1687). There were several factors that worked both to overthrow Aristotle's system and to preserve it. First of all, Aristotle's theories relied very little on experiment, which left them vulnerable to anyone who chose to perform such experiments. However, attacking one part of Aristotle's system involved attacking the whole thing, which made it a daunting task for even the greatest thinkers of the day. Secondly, the Church had grafted Aristotle's theories onto its theology, thus making any attack on Aristotle an attack on the tradition and the Church itself.

Finally, there were the Renaissance scholars who were uncovering other Greek authors who contradicted Aristotle. This was unsettling, since these scholars had a reverence for all ancient knowledge as being nearly infallible. However, finding contradicting authorities forced the Renaissance scholars to try to figure out which ones were right. When their findings showed that neither theory was right, they had to think for themselves and find a new theory that worked. This encouraged skepticism, freethinking, and experimentation, all of which are essential parts of modern science.

Pattern of development. The combination of these factors generated a cycle that undermined Aristotle, but also slowed down the creation of a new set of theories. New observations would be made that seemed to contradict Aristotle's theories. This would lead to new explanations, but always framed in the context of the old beliefs, thus patching up the Aristotelian system. However, more observations would take place, leading to

more patching of the old system, and so on. The first person who started this slow process of dismantling Aristotle's cosmology was Copernicus. His findings would reinforce the process of finding new explanations, which would lead to the work of Kepler and Galileo. The work of these three men would lead to many new questions and theories about the universe until Isaac Newton would take the new data and synthesize it into a new set of theories that more accurately explained the universe.



The University of Padua was where many pioneers of the Scientific Revolution, including Copernicus, worked. Being under Venice, which had bad relations with the Church since it traded with Muslims, it had an unusual degree of academic freedom & was a major center for new scientific findings in the Renaissance.

Nicolaus Copernicus was a Polish scholar working at the University of Padua in northern Italy. The problem he wrestled with was the paths of planetary orbits. Through the centuries close observations had shown that the heavens do not always appear to move in perfect, uninterrupted circles. Rather, they sometimes seem to move backwards in what are known as retrogradations. (This phenomenon occurs when the Earth passes another planet in its orbit, thus making it appear to go backwards.) In order to account for these irregularities, astronomers did not do away with Aristotle's theory of perfectly circular orbits around the earth. Instead, they expanded upon it, adding smaller circular orbits (epicycles) that spun off the main orbits. These more or less accounted for the retrogradations seen in orbits. Each time a new irregularity was observed, a new epicycle was added. By the 1500's, the model of the universe had some 80 epicycles attached to ten crystalline spheres (one for the moon, sun, each of the five known planets, the totality of the stars, a sphere to move the other spheres, and heaven). The second century Greek astronomer, Ptolemy was the main

authority who put order to and passed this cumbersome system of epicycles to posterity.

Copernicus' solution was basically geometric. By placing the sun at the center of the universe and having the earth orbit it, he reduced the unwieldy number of epicycles from 80 to 34. His book, *Concerning the Revolutions of the Celestial Worlds*, published in 1543, laid the foundations for a revolution in how Europeans would view the world and its place in the universe. However, Copernicus' intention was not to create a radically new theory, but to get back to even older ideas by such Greeks as Plato and Pythagoras who believed in a heliocentric (sun centered) universe. Once again, ancient authorities were set against one another, leaving it for others to develop their own theories.

It took some 150 years after Copernicus' death in 1543 to achieve a new model of the universe that worked. The first step was compiling more data that tarnished the perfection of the Ptolemaic universe and forced men to re-evaluate their beliefs.

Meanwhile, two celestial phenomena added further doubts about the Aristotelian system. First, a bright new star (probably a supernova explosion) suddenly appeared in 1572. Within a year, it was gone from the sky, leaving in its wake doubts about the changeless perfection of the stars. Five years later, a new comet cut across the skies and through the crystalline spheres that were supposed to hold the stars and planets in their orbits. Of course, the question was raised: did such perfect spheres even exist, and, if they did, how could a comet cross through them?

Johannes Kepler. At this time, a Danish astronomer, Tycho Brahe, using only the naked eye, tracked the entire orbits of various stars and planets. Previously, astronomers would only track part of an orbit at a time and assume that orbit was in a perfect circle. Brahe kept extensive records of his observations, but did not really know what to do with them. That task was left to his protégé, Johannes Kepler.

Kepler was a brilliant mathematician who had a mystical vision of the mathematical perfection of the universe that owed a great deal to the ancient

Greek mathematician Pythagoras. Despite these preoccupations, Kepler was open minded enough to realize that Brahe's data showed the planetary orbits were not circular. Finally, his calculations showed that those orbits were elliptical. As important as Kepler's conclusion was his method of arriving at it. He was the first to successfully use math to define the workings of the cosmos. Although such a conclusion as elliptical orbits inevitably met with fierce opposition, the combination of Brahe's observations and Kepler's math helped break the perfection of the Aristotelian universe. However, it was the work of an Italian astronomer armed with a new invention, the telescope, which would further shatter the old theory and lead the way to a new one.

Galileo Galilei (1564-1642). In the year 1608, several Flemish gentlemen arrived in Venice carrying a startling new invention: the telescope. Upon hearing of this, Galileo, who was then working in Venice, quickly figured out its principles and built one himself, increasing its magnification from three times to ten. He got the Venetian senate excited about the telescope as an early warning device that could spot enemy ships at ten times the distance as was previously possible. However, Galileo's curiosity was a bit more far ranging than spotting enemy ships, and eventually he turned his gaze toward the skies. That was when trouble began.

The impact of that first telescope can better be appreciated by imagining how our views of the universe might change if our technology increased our view of the universe by a factor of ten times. Galileo's findings were probably more disturbing. He saw the sun's perfection marred by sunspots and the moon's perfection marred by craters. He also saw four moons orbiting Jupiter. In his book, *The Starry Messenger* (1611), he reported these disturbing findings and spread the news across Europe. Most people could not understand Kepler's math, but anyone with access to a telescope could see for himself the moon's craters and Jupiter's moons.

The Church, trying to preserve the Aristotelian and Ptolemaic view of the universe, clamped down on Galileo and his book, making him promise not to *preach* his views. However, in 1632, Galileo published a new book, *Dialogue on the Great*

World Systems, which technically did not preach the Copernican theory (which Galileo believed in), but presented both views "equally" in a dialogue where the advocate of the Church and Aristotelian view was named Simplicius (Simpleton). He was quickly faced with the Inquisition and the threat of torture. Being an old man of 70, he recanted his views. However, it was too late. Word was out, and the heliocentric heresy was gaining new followers daily.

Galileo's importance to the history of science was immense, adding two critical elements that had largely been ignored. One was his tireless experimentation, observation, and careful measurements concerning astronomy and the laws of motion. This was especially remarkable in light of how little of this anyone else was doing up to that time. The other element was his use of math and the belief that we can understand nature through it. Either of these alone would have been a remarkable contribution to the history of science. Using both of them together and making them integral parts of the scientific method was an epic achievement.

One needs to understand the new problems that the discoveries of the 1500's and early 1600's presented for seventeenth century scientists. Galileo's work had done more to destroy the Aristotelian system than create a new working one. As a result, there was great confusion among scholars as to what the structure of the universe really was. There were three major problems confronting them. One problem bothering seventeenth century scientists concerned the nature of motion. Aristotle's law of inertia said a moving object had to be in constant contact with the moving force. This raised such questions as how could an arrow keep flying once removed from the force driving it. This was explained by saying the air being displaced by the arrow went around behind it and pushed it along. This seemed unlikely, since the same air driving the arrow also would also be slowing it down.

Renaissance scholars, bothered by this concept of a prime mover, came up with the new theory of Impetus. According to this, moving objects were carried forward by some vague force within the object or imparted to it like the heat in a red-hot piece of iron. The theory of impetus allowed

people to discuss motion after contact with a mover was broken. There was just one problem with this theory: it was wrong. Nevertheless, it was important, because it challenged Aristotle's authority and freed scientists to work on other problems until a better theory of motion came along. The great French mathematician, Descartes, finally came up with the modern theory of inertia, which said a moving object will keep moving in a straight line until something interferes to stop it or slow it down.

The second problem bothering philosophers was what kept objects from flying out of their orbits and into space. Descartes, like Aristotle, did not believe in the existence of vacuums, since they would create no resistance to moving objects, thus allowing them to accelerate to infinite speed, which, of course, is both impossible and absurd. Space, according to Descartes, was filled with ether and cosmic whirlpools that kept the planets in orbit. Not everyone discounted the existence of vacuums, especially since the experiments of Galileo's student, Toricelli, with barometric pressure proved that vacuums can and do exist. Once again this raised the problem of what keeps the planets and stars in orbit if ether did not

The Englishman, William Gilbert offered a solution in 1600, suggesting that magnetism was the answer. He saw the earth as a giant magnet, keeping both terrestrial and celestial objects from flying off into space. Although his theory was basically wrong, it did open people's minds to the idea of objects exerting a pull on one another. As a result, in 1643, the Frenchman, Roberval, suggested a theory of universal gravitation, the tendency of all matter to have an attraction for all other matter. However, he did not have the math to prove the theory.

Even if Roberval's theory of gravity were right, it raised a third problem: what keeps the moon and other celestial bodies from falling to earth? For Roberval, it was the resistance of ether in space. In 1665, Alphonse Borelli suggested centrifugal force. A mathematician named Huygens figured out the formula for centrifugal force, but he also believed in circular motion. And there was still the problem of what kept the sun, moon, planets, and stars in their orbits. That was where Isaac Newton came in.

The story of Newton being hit on the head by an apple may very well be true. However, the significance of this popular tale is usually lost. People had seen apples fall out of trees for thousands of years, but Newton realized, in a way no one else had realized, that the same force pulling apples to earth was keeping the moon in its orbit. Of course, Roberval had suggested this before, but Newton proved it mathematically. In order to do this, he had to invent a whole new branch of math, calculus, for figuring out rates of motion and change. The genius of Newton in physics, as well as William Harvey in medicine and Mendeleev in chemistry, was not so much in his new discoveries, as in his ability to take the isolated bits and pieces of the puzzle collected by his predecessors and fit them together. In retrospect, his synthesis seems so simple, but it took tremendous imagination and creativity to break the bonds of the old way of thinking and see a radically different picture.

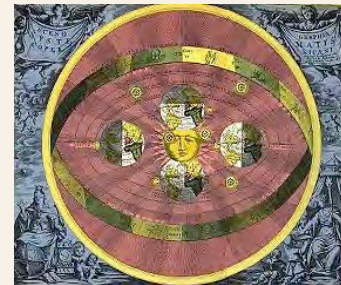
The implications of Newton's theory of gravity can easily escape us, since we now take it for granted that physical laws apply the same throughout the universe. To the mentality of the 1600's, which saw a clear distinction between the laws governing the terrestrial and celestial elements, it was a staggering revelation. His three laws of motion were simple, could be applied everywhere, and could be used with calculus to solve any problems of motion that came up.

The universe that emerged was radically different from that of Aristotle. Thanks to Newton, it was within our grasp to understand, predict, and increasingly manipulate the laws of the universe in ways no one had been able to do before. Newton's work also completed the fusion of math promoted by Renaissance humanists, Aristotelian logic pushed by medieval university professors, and experiment to test a hypothesis pioneered by such men as Leonardo da Vinci and Galileo into what we call the scientific method. This fusion had gradually been taking place since the Renaissance, but the invention of calculus made math a much more dynamic tool in predicting and manipulating the laws of nature.

The printing of Newton's book, *Principia Mathematica*, in 1687 is often seen as the start of

the Enlightenment (1687-1789). It was a significant turning point in history, for, armed with the tools of Newton's laws and calculus, scientists had an unprecedented faith in their ability to ***understand, predict, and manipulate the laws of nature*** for their own purposes. This sense of power popularized science for other intellectuals and rulers in Europe, turning it into virtual religion for some in the Enlightenment. Even the geometrically trimmed shrubbery of Versailles offers testimony to that faith in our power over nature. Not until the last century has that faith been seriously undermined or put into a more realistic perspective.

Copernicus' Heliocentric Theory



The University of Padua was where Copernicus and many other pioneers of the Scientific Revolution worked. Being under Venice, which had bad relations with the Church since it traded with Muslims, it had an unusual degree of academic freedom and was a major center for new scientific findings in the Renaissance.

While working at Padua, Copernicus formed his heliocentric theory as early as 1512, thirty years before he published it, probably because he either wanted to make sure of his theory or he feared backlash from the Church. Supposedly, he was presented with a copy of the first edition of his book, *Concerning the Revolutions of the Celestial Worlds*, while on his deathbed in 1543.

In the spirit of the Renaissance, Copernicus wasn't trying to develop a new theory, but just draw upon other Greek philosophers' ideas, in particular, those of Plato and Pythagoras who saw a central fire as the center of the universe.

One implication of this theory was that, with the sun at the center, the earth must turn on its

axis, which was a lot simpler than making everything orbit the earth. A major objection to this was that, since the stars and other celestial objects were supposedly weightless, it made more sense to move them instead of the earth where all the weight of the universe was concentrated. One implication of this was that the universe must extend much further beyond the solar system than previously thought, because the stars seem more fixed (or move more slowly) than the planets, and so must lie at a greater distance from earth.

Copernicus' theory raised two other questions. First, what is the real center of the universe when earth still has all the weight of the universe? Copernicus, maybe to satisfy the Church, said it was the center of the earth's orbit (which would be the sun, but still be determined by the earth.

Secondly, if the earth rotates from west to east, why don't all winds blow east to west? According to Copernicus, since the air in the winds is a terrestrial element, the winds move in sympathy with the earth's rotation, which is basically true.

Apparently, the book was not that controversial since Copernicus was well connected in the Church. Also, he presented his theory as a mere mathematical exercise, not a real world model.

Tycho Brahe



Tycho Brahe was a Danish astronomer and flamboyant character who once got into a duel with another mathematician over a mathematical formula. Since neither could prove the other wrong, they decided to settle the matter with a duel in which the front part of Tycho's nose got chopped off. Therefore, he had a new one made of brass, carrying glue with him to reattach it when necessary. Tycho also had a pet moose or elk that he used for

entertaining guests. Unfortunately, one night it got drunk on some beer, fell down the stairs, and died.

In addition, Tycho's right eye was larger than his left from squinting while making observations through his armillary sphere, a celestial globe used to plot the motion of the stars around the Earth. It was the prime instrument of all astronomers in determining celestial positions until the invention of the European telescope in the 1600s. As a reward for saving Frederick II of Denmark from drowning, he was awarded with his own island where he could build an observatory with oversized armillary spheres for more accurate observations. His great equatorial armillary, built in 1585, was 3 meters in diameter with an estimated accuracy of 38.6 seconds of arc.



Most astronomers agreed that the supernova of 1572 took place inside the moon's orbit, and thus was made of changeable terrestrial materials. However, based on his own observations that showed no daily change against the background of other fixed stars, Tycho claimed that the supernova existed beyond the moon's orbit. This would put it in unchangeable ethereal space, which would be impossible according to current theories of the cosmos. Using similar measurements, he also showed that comets must exist beyond the terrestrial sphere in "unchanging" ethereal space. This was the first major challenge to Aristotle's theory of immutable space.

In addition to his observations, Brahe created a modified geocentric system with the planets orbiting the sun while it orbited earth. His model was geometrically identical to that of Copernicus. All that changed was what was moving and what was fixed-- the sun or the earth. In the Tychonic model of the universe, the Moon and Sun circled the Earth, while

Mercury, Venus, Mars, Jupiter, and Saturn traveled around the Sun. Around all of these was a sphere of fixed stars.

The legend surrounding Brahe's death was that he was at a party and, out of politeness to his host failed to get up to relieve his bladder. By the time he did try to go, his bladder was blocked from waiting too long. An infection developed and he died eleven days later. When his body was exhumed in 1996, analysis of his hair follicles showed he most likely died from mercury poisoning, a common enough malady back when people thought mercury had medicinal qualities. Ivan IV of Russia probably died from the same thing.

Tycho wrote his own epitaph: "He lived like a sage and died like a fool"

Johannes Kepler (1571-1630)



Kepler's music of the spheres. Kepler, who barely got his mother acquitted of witchcraft charges, was obsessed with the mystical qualities of numbers. In addition to first supporting his family by making astrological charts, he also tried to correlate the relative

distances of the planets from each other by fitting different regular geometric solids inside one another. He also believed in the Pythagorean idea of the "music of the spheres" and proposed that the eccentricities (degree of flattening) of the planetary orbits were determined by the tunes they hummed as they made their way through the heavens. Amazingly, his figures corresponded closely to Tycho Brahe's measurements.



*In the Tychonic model of the universe, the Moon & Sun (blue orbits) circle the Earth, while Mercury, Venus, Mars, Jupiter, & Saturn (orange orbits) revolve around the Sun. Around all is a sphere of fixed stars. Tycho's model is geometrically identical to that of Copernicus. All that is changed is what is moving & what is fixed-- the sun or the earth.***

For the figures below, 1.000 is taken as the mean distance of the earth to the sun.

Kepler's Harmony

Brahe's measurements

Planet	Aphelion distance	Perihelion distance	Aphelion distance	Perihelion distance
Mercury	0.476	0.308	0.470	0.307
Venus	0.726	0.716	0.729	0.719
Earth	1.017	0.983	1.018	0.982
Mars	1.661	1.384	1.665	1.382
Jupiter	5.464	4.948	5.451	4.949
Saturn	10.118	8.994	10.052	8.968

Kepler's laws. Kepler's first and best-known law is that a planetary orbit is defined by an ellipse where one of the foci is inside the sun. Most

planets' orbits are almost circular, the exceptions being Mercury and Pluto whose orbits are sufficiently flattened as to be seen as ellipses upon observation.

Kepler's second law states that a line joining the sun to a planet sweeps out equal areas in equal times. However, since orbits are elliptical, not circular, the distance (and length of the line) between a planet and the sun varies. Therefore, if an equal area is swept out when the planet is closer to the sun, the planet must be moving faster during that span of time than it was when

it was farther from the sun. A century later, Newton would show that the gravitational pull of the sun accelerates a planet's speed as it is being pulled toward the sun and slows the planet's

speed as it moves away, until it reaches its furthest point and starts pulling it back.

Kepler's third law states that the square of the time of an orbital period is proportional to the cube of the length of the distance of the planet from the sun at the furthest point of the ellipse. If we use the distance from the earth to the sun (one astronomical unit or A.U.) as the unit by which we measure other planets' distance to the sun, we get the following figures:

Planet	Distance in A.U.	R^3	Period in years	P^2	P^2/R^3
Mercury	0.387	.0580	.241	.0581	1
Venus	0.723	.378	.615	.378	1
Earth	1.00	1.00	1.00	1.00	1
Mars	1.524	3.54	1.881	3.538	1

Galileo Galilei (1564-1642)



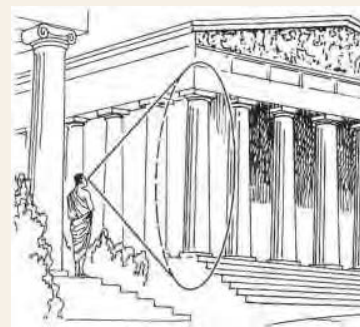
Galileo originally wanted to be a monk, but his father pressured him to study medicine. After giving that up, he pursued his real passion, math, setting himself up as a private tutor and later getting a public appointment in Florence. His fame rapidly spread, and he was even invited to give a lecture on the size and location of Hell. After his father's death in 1591, he got an appointment at the University of Padua. Much of Galileo's work had to do with motion. His work on pendulums influenced the Dutch scientist, Christian Huygens, whose clock helped lead to the later development of the chronometer.

Some of Galileo's most famous experiments had to do with the velocity of falling objects. According to Aristotle, if one dropped two objects, the heavier object would fall faster in proportion to its weight. Amazingly, in the 1800

years since Aristotle's time no one had bothered to test this theory until Galileo took it on and disproved it. He did it by rolling balls of different weight down various inclined ramps, timing their speed and acceleration with a series of bells that rang as the balls passed them. Contrary to popular belief, Galileo did not actually drop objects from the Leaning Tower of Pisa.



Theories on sight



Most Greeks, such as Euclid and Plato believed that light was something that emanated from

the eyes to the object seen. Democritus and the atomists claimed light went from the object to the eye. Galen discounted this with the common sense argument that it's absurd to think that the light encompassing a mountain could fit in your eye or that one object viewed by thousands of people could generate enough light for everyone to see. (Many children and even college students still conceive of light in this fashion.)

In the 11th century, the Arabs had largely debunked this idea about sight, using the refraction of light to show that the light goes from the object to the eye. The image to the left is a study of eyes from Ibn al-Haytham's *Optics* showing the principal tunics, humours and the optic nerves connecting the eyeballs to the brain.

Invisible worlds above. No one knows for sure how magnifying an image with a concave lens was discovered. One theory is that a medieval glassmaker looked through some accidentally warped glass and got the idea. Since he was most likely an illiterate artisan, he probably didn't write about it. However by the 1300s eye glasses were in common use among the rich and were a sign of status and literacy as seen in Raphael's portrait of Pope Leo X.

Crystal reading stones were seen as superior to glass. In Venice in the 1300s, there was a law against eyeglass makers telling customers they were selling them crystal when it was only glass.

However, the Church viewed lenses somewhat suspiciously, since, by magnifying images they distorted the true image of God's creation. Besides that, theologians pointed out that God's first creation was light. Thus treating light as a mere physical phenomenon was enquiring into the physics of transubstantiation. This wasn't a major problem until Galileo pointed his telescope toward the stars.

The first telescope is attributed to a Dutch lens maker, Hans Lippershey. Supposedly, it was an accidental discovery by children playing with Lippershey's lenses and inadvertently viewing

through one convex lens lined up with a concave lens to produce the magnifying effect.



Galileo soon had made his own telescope with a magnification of 10X (later 32), even grinding his own lenses. Getting people just to look through his telescope was often hard because of the common belief that it distorted the true image and even created mirages. However, the Venetian Senate bought one of Galileo's telescopes as an early warning system against attack. Venetian merchants wanted to use it to get first shot at buying incoming cargoes.

The impact of that first telescope can better be appreciated by imagining how our views of the universe might change if our technology increased our view of the universe by a factor of ten times. Galileo's findings were probably more disturbing. He saw the moon's craters, the sun's perfection marred by sunspots, and four moons orbiting Jupiter. In his book, *The Starry Messenger* (1611), he described and sketched (below) these disturbing findings and spread the news across Europe. Most people may not have been able to understand Kepler's math, but anyone with access to a telescope could see for himself the moon's craters and Jupiter's moons.

The phases of Venus were a convincing demonstration of the heliocentric solar system, showing how the phases of Venus result from its position in the solar system between earth and the sun. Mercury also exhibits phases but it's much harder to observe than Venus. By contrast, the Ptolemaic system could explain only some of the phases exhibited by Venus.

The Church, trying to preserve the Aristotelian and Ptolemaic view of the universe, clamped down on Galileo and his book, making him promise not to *preach* his views. However, in

1632, Galileo published a new book, *Dialogue on the Great World Systems*, which technically did not preach the Copernican theory (which Galileo believed in), but presented both views "equally" in a dialogue where the advocate of the Church and Aristotelian view was named Simplicius (Simpleton). He was quickly faced with the Inquisition the threat of torture. Being an old man of 70, he recanted his views. However, it was too late. Word was out, and the heliocentric heresy was gaining new followers daily.

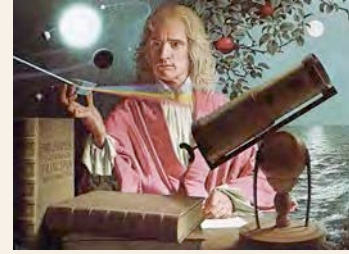


Galileo's trial largely centered on whether the ban of 1616 prohibited him from preaching Copernicus' theories (as he claimed, even producing a signed Church certificate to that effect) or from discussing it at all (as the Church claimed). In the end, he was found guilty of "vehement suspicion of heresy", his *Dialogue* was added to the *Index of Prohibited Books*, and he was put under house arrest for life.

Some of Galileo's most important work took place in the last ten years of his life while he was under house arrest. In 1638, he published *Discourses on the Two New Sciences*, having sneaked out the manuscript despite the Church's ban on him publishing anything else. This new book contained much of his work on laws of motion, including a mathematical formula on the motion of projectiles that described a parabola. He also hypothesized that matter was made up of particles that were infinitesimally small.

Galileo died on January 8, 1642. In 1822 the Church finally lifted the ban on the Copernican theories. In 1992, Pope John Paul II finally announced Galileo had been wrongly convicted.

Newton's Synthesis



Just consider the list of the various ideas Newton had to deal with in synthesizing a new scientific paradigm while also weeding out the parts that were wrong:

- Copernicus' heliocentric theory, but still clinging to many old elements of the Ptolemaic worldview
- Kepler's elliptical orbits but without gravity to explain a planet's variable speed Using Kepler's 3rd law, Newton figured that gravitational force is inversely proportional to the square of the distance between two masses.
- William Gilbert's theory of magnetic gravity, which though wrong, replaced the old idea of objects moving to a natural resting place
- Roberval's theory of universal gravity, but without mathematical proof
- Alphonse Borelli theory that centrifugal force kept planets from falling into the sun, but without mathematical proof.
- Huygens' mathematical proof for centrifugal force, but belief in perfect circular motion
- Descartes's discovery of the law of inertia, but belief in space full of ether
- Galileo's monumental work in astronomy, the laws of motion and math

Fluxions or calculus? Fluxions is what Newton called his new type of math that could dynamically plot rates of change over time. He invented it in 1665 (supposedly in one night) in order to solve a problem that the conventional math of the time couldn't handle. For the next twenty years, he kept his fluxions secret, even publishing papers without showing the advanced calculations it took to solve problems.

In the meantime, however, a German mathematician, Gottfried Leibnitz, invented this new type of math independently and publicized it, calling it calculus. Not until 1687, with his

publication of *Mathematica Principia*, did Newton finally publicize his fluxions, triggering a dispute that still goes on between British and German mathematicians over who discovered it first. Of course, the answer is they both probably did it independently. And if they hadn't, someone else probably would have done it soon afterward, because Western Europe was ready for it and needed it to push the boundaries of science to the next level.

There is evidence that Archimedes may have invented calculus in the third century B.C.E. Even if he did, the culture wasn't ready for it, so it was forgotten for 1900 years. Similarly, the Vikings may have discovered America around 1000 C.E., but it was Columbus' discovery 500 years later that made it stick. And if Columbus hadn't done it, the Portuguese explorer, Cabral most likely would still have crashed into Brazil eight years later.

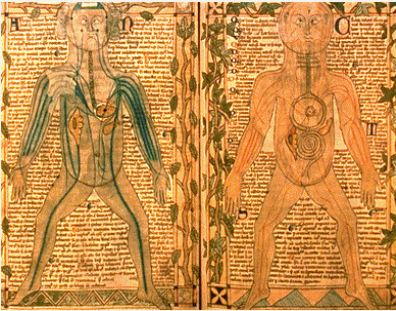
Newton also delayed publishing the *Principia Mathematica* until 1687 because he wasn't sure if one should measure the gravitational pull of objects from their surfaces or centers. He thought the center, and was correct, but he wanted to be sure.

Among Newton's many interests was the nature of light. Previously, people thought that prisms created different colors of light. However, by shining a light through two prisms and showing the second prism had no further effect on the colors of the light, Newton showed that, rather than creating different colors of light, a prism merely separated a beam of light into its different colors corresponding to their wavelengths.

Another of Newton's innovations was his reflecting telescope. By using mirrors instead of refracting lenses, it could get a much clearer and more magnified image in a smaller chamber.

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UNRAVELLING THE MYSTERIES OF THE HEART: WILLIAM HARVEY AND THE DISCOVERY OF THE CIRCULATORY SYSTEM



13th century depiction of arteries & veins

It seems amazing that the basic functions of the heart, circulatory system, and other bodily organs remained such a mystery to humans for so long, since they are so close to us and so vital to our very existence. However, early doctors faced serious obstacles in determining those functions. Religious taboos seriously limited the amount of human dissections taking place. Surgery's low status and primitive state is seen by the fact that barbers would typically double as surgeons, since they had the necessary cutting tools. Another major limitation was the lack of anesthetics to kill the pain. Heavy doses of liquor or a blow to the head were the closest thing to painkillers that doctors had before the 1800's.

As a result, people would rarely submit to surgery except in the most extreme circumstances (e.g., amputation for gangrene). And by then it was often too late. Without willing patients, surgery was rarely performed and could not advance. And without such advances, few people would risk operations. Caught in this vicious cycle, doctors had to resort to the dissection of animals. However, inferences made from animal dissections about human anatomy were often incorrect. Also, the practice of dissecting animals bled to death led to the misconception that only air flowed through the arteries and left side of the heart. This plus Aristotle's theory of four terrestrial elements led to various conclusions about human biology as seen in the theories of the dominant medical authority since the second century, the Greek physician Galen.

Galen's physiology. While Galen did clear up the misconception that only air flowed through the arteries, he also passed on several misconceptions.

For one thing, he said that air passes directly from the lungs to cool the heart, which is the seat of the soul, a furnace to heat the body, and the source of intelligence and blood in the arteries, while the liver is the source of blood in the veins. His second contention was that blood then flows out to the body, which absorbs the blood and does not recirculate it. Third, Galen said that air mixes with the blood to form a spirituous substance called *pneuma*. There are three kinds of *pneuma*, formed in the liver, heart, and brain, and controlling such things as the passions, senses, and consciousness. According to Galen, *pneuma* is the main source of the life process and consciousness in an organism. Finally, drawing upon Aristotle's theory of four terrestrial elements, there was the theory of the four humours (blood, bile, black bile, and phlegm), which must be in balance in order for one to be healthy.

These incorrect conclusions about human biology in turn led to two major misconceptions about disease. First of all, scholars saw sickness as a sign of an imbalance of the four humours that should be treated by bloodletting or other forms of purging. This supposedly would rid the body of imbalanced humours and cause it to restore the balance. This tied in closely with the second misconception: that disease is purely a result of internal balance, not external factors. Therefore, each person's disease was seen as a purely individual matter having no relationship to anyone else's disease, no matter how similar the symptoms may be

Despite the Church's support of Galen and feelings against dissection, problems started to arise with Galen's theories over time just through normal observations. This and two other factors, both leading out of the Renaissance, led to new research to figure out what the nature of the heart was. For one thing, the Renaissance artists placed increased emphasis on accurate representation of nature and human anatomy. Leonardo da Vinci's notebooks are the best-known examples of this emphasis on realism. Also, the printing press helped publicize and popularize these ideas within the medical community.

Second, in biology, as in physics and astronomy, the Renaissance oftentimes was not so important for breeding new ideas as for discovering other ancient authors that contradicted the accepted authority,

thus forcing scholars to seek the truth for themselves. Interestingly enough, the opposing authority was Aristotle, who differed with Galen on several points, claiming the life process was the product of all the various organs in the body, not of *pneuma*. This helped open up discussion on the life process and the nature of disease.

As with Aristotle, the combination of these factors generated a cycle that both undermined Galen and slowed down the creation of a new set of theories. New observations would be made that seemed to contradict his theories. This would lead to new explanations, once again framed in the context of the old beliefs, thus patching up the system. However, more observations would take place, leading to more patching of the old system, and so on. Eventually, the system would be so full of holes that someone would take the new data and synthesize it into a new set of theories that more accurately explained the universe.

Much of this research was done at the University of Padua, which was one of the main centers of research and new theories in the 1500's and 1600's. Being controlled by Venice, which had a bit of an anti-clerical tradition, the University of Padua encouraged the intellectual freedom needed to develop new theories that better explained nature. Copernicus and Galileo, had both worked there, as did most of the men who discredited Galen's theory and formed the modern theory of circulation. Two men in particular opened the way for challenging the old theories: Vesalius and Paracelsus.

Paracelsus (1493-1541) never received a medical degree, but he continued to teach, write about, and practice medicine. However, he taught from his own experiences, not Galen's books, and he taught in the vernacular. This was contrary to the Hippocratic Oath by which doctors were supposed to teach in Latin to prevent any trade secrets from getting into the wrong hands and being popularized. Paracelsus' actions made him an outsider to the medical community and caused him to challenge many of its most honored (and mistaken) theories and practices. One thing he claimed was that disease was the result of outside forces acting on the body, not an internal imbalance. Although he had no concept of germ theory, this idea opened the way for a new approach to diagnosing and treating disease. Paracelsus was reviled by the medical

establishment of his day, but became something of a folk hero to later generations and inspired further challenges to Galen.

Vesalius (1514-64) also took steps in overthrowing Galen and opening the way for a new theory on the heart and circulatory system. Unlike most medical scholars, who had assistants do the actual dissection while they read the appropriate passages from Galen, Vesalius did his own dissections and saw things for himself. He even saw things he was not looking for and that disagreed with Galen. He had a hard time believing that what his eyes saw was true and that Galen could be wrong. Nevertheless, in 1543, the same year that Copernicus (who also worked at Padua) published his book proposing a heliocentric universe, Vesalius published *De Fabrica*. This book, which was illustrated by the great artist Titian's own art students, provided anatomical drawings of unprecedented accuracy for medical manuals and set the standard for years to come. It also proved many of Galen's anatomical descriptions to be completely wrong.

Thanks to Vesalius and Paracelsus, more evidence kept coming in to cast doubts on Galen. In 1559, one of Vesalius' students, Colombo, published a description of how blood went from the right side of the heart to the lungs and then to the left ventricle. However, he still kept the traditional view that blood flowed *out* of the heart through both the arteries and veins. In 1574, Fabricius published a work describing valves in the veins preventing the outward flow of blood from the heart. Still, he refused to see that this meant the blood flowed from the veins *to* the heart. Instead he said the purpose of the valves was to keep too much blood from flowing to the veins from the heart. In 1606, Cesalpino observed blood flowing from the arteries to the veins and toward the heart. However, he also failed to grasp the meaning of this. As obvious as it should have been that Galen's system was not working, scientists' minds were too rigidly set to admit it. Finally, a man came along whose genius, like that of Newton and Mendeleev, was to synthesize the recent evidence into a new system that shattered the old views. That man was William Harvey, an Englishman also working at Padua.

Harvey, who was influenced by Fabricius' work on valves in the veins, developed very modern methods of observation and experimentation. In 1628, nine

years after his experiments confirmed his suspicions about Galen's system, Harvey published his findings in *De Motu Cordis* (Concerning the Motion of the Heart). The wealth of evidence it brought to bear effectively shattered Galen's theory forever.

Harvey showed that there was no septum (membrane) in the heart keeping arterial and venous blood separate while mixing blood and oxygen into *pneuma*. One thing he was not aware of was oxygenation. He pointed out that animals without lungs also had no right ventricle and, that in developing embryos, the blood took a shorter route from the right to left side of the heart. Harvey's most important and astounding contribution was the calculation that, in one hour, the heart pumps more than the body's weight in blood. This could only mean one thing: that the blood circulated from the left side of the heart, through the body, then to the right side of the heart, and from there through the lungs and back to the left side of the heart.

It took nearly half a century for Harvey's work to be accepted by the medical community. Once it was accepted, it provided a much better framework for studying the rest of the body. With the mysteries of the circulatory system unraveled, the respiratory and digestive systems could be better understood. And with those in place, other functions of the body could be figured out. Thanks to Harvey's brilliant synthesis, the way to modern biology was opened.

Galen: Better Living Through Pigs



Galen dissecting a sow

Galen (130-199 C.E.) of Pergamum was originally a surgeon in Asia Minor (modern Turkey) for gladiators, thus giving him plenty of opportunities to see the insides of humans. (In fact, for much the same reason, military surgeons have made many of the medical advances down to the 1800s.) His growing reputation advanced him to the “big leagues” of

gladiatorial matches in Rome, where he eventually became the primary physician for the emperor Marcus Aurelius.

Since autopsies were banned in Rome, Galen practiced mainly on monkeys and pigs (below), whose anatomies were seen as being closest to that of humans. In addition, Galen supposedly had opportunities to examine the corpses of victims of bandits or drowning. Ironically, while later physicians would insist on blindly following Galen’s ideas as found in his books, he himself was a strong advocate of doing one’s own dissections.

The role of the heart. Aristotle considered the heart the most important organ, being the seat of intelligence, motion, and sensation. Other organs, such as the brain and lungs existed merely to cool it. Galen largely agreed with Aristotle, but said its importance was secondary to the liver, which he said produced the bodily humours. He also disagreed with Aristotle, who said the heart was the source of the nerves. Most medieval authorities agreed with Aristotle that veins connect the liver to the heart, which distributes the vital fluids (pneuma) to the body through the arteries.

The four humours (blood, bile, black bile, and phlegm) corresponded to the four terrestrial elements in their qualities as follows:

Blood: corresponded to air (which is hot and wet), and also to the planet Jupiter, the apostle Mark, morning, spring, the heart, and the astrological signs of Gemini, Taurus, and Aries. Theophrastus, the successor of Aristotle in the Peripatetic school, stated that people with too much blood were bound to be sanguine (contented, positive) individuals.

Yellow bile corresponded to fire (which is hot and dry) Mars, the apostle Paul, noon, summer, the liver, as well as to Virgo, Leo, and Cancer. People with too much yellow bile, which medieval doctors claimed was manufactured in the gall bladder, were said to be bold and exuberant, but also choleric (cantankerous) individuals.

Black Bile corresponded to earth (which is cold and dry), Saturn, the apostle John, the afternoon, autumn, the spleen, and to Sagittarius, Scorpio, and Libra in the Zodiac. Individuals suffering from a disproportionately large amount of black bile in their bodies were said to be melancholic (gloomy).

Phlegm corresponded to water (which is cold and wet), the moon, the apostle Peter, evening, winter, and the signs of Pisces, Aquarius, and Capricorn. Individuals with too much phlegm in their bodies were said to be phlegmatic: not easily excited to action or display of emotion; apathetic, and sluggish.

Treatments. Before administering the notorious purgatives, such as bloodletting, to restore the balance of humours, physicians would generally prescribe other treatments. For example, if someone had a fever, he had too much hot and dry bile. So to increase his phlegm, which is cold and wet, he would have the patient take cold baths. If the patient had a cold, indicating too much phlegm, he would be told to bundle up in bed and drink wine to increase his bile.

Dissections before the late 1800s

Dissections were banned in Rome and the Muslim world, but not by the Church, and more public dissections were starting to take place in Western Europe in the 1300's. However, there was still a general uneasiness there about the appropriateness of dissecting cadavers.

Because of the lack of refrigeration, dissections were done quickly, continuously in one session, and outside over four days and nights, taking out the stomach and more perishable organs first and the bones last. They were also done publicly to ensure no malpractice. Fabricius made the first indoor amphitheater for dissections that could accommodate 300 observers. Because of the poor lighting, students would hold candelabras.

Typically, students would do the actual dissections, often by a body of water for convenient disposal of body parts. Meanwhile, the physician would be sitting at a safe distance

reading from Galen's text about what the students should be seeing. If students didn't follow directions (e.g., taking a right turn instead of a left turn at the spleen), what they saw wouldn't correspond to what Galen said. When told by students that what they saw didn't correspond with what he was reading from Galen, one physician, Jacob Sylvius, who was particularly attached to Galen's text, simply replied that this showed how much people had degenerated in 1400 years.

Most of the subjects were condemned criminals who were often dismembered or beheaded. Sometimes physicians, such as Vesalius, would know judges sympathetic to their work who would schedule executions at convenient times for dissections and even make the bodies available. Otherwise, getting cadavers was hard, often forcing physicians to rely on grave robbers. Dissections were well-attended public events, often held in amphitheaters to accommodate the huge audiences.

The aforesaid Jacob Sylvius Sylvius would sometimes show up with body parts up his sleeve to dissect. While this produced a sickening stench, his students wouldn't dare show their disgust. Noted for his greed Sylvius' gravestone has the following inscription:

*"Here lies Sylvius who never did a thing w/o a fee
Even in death, he grieves that you read this for free."*

Since there were few women criminals, there was relatively little information on female anatomy, a situation that would persist into the twentieth century.

The Outlaw Doctor: Paracelsus



"The universities do not teach all things, so a doctor must seek out old wives, gypsies, sorcerers, wandering tribes, old robbers...and take lessons from them."—Paracelsus

Doctors at that time kept their texts in Latin or Greek so no one else could understand them and they could prescribe drastic and powerful treatments and charge high prices. The world of doctors was one of separation: separation of books from bodies, separation of knowledge from experience, and separation of learned healers from those needing healing. Since it was unlikely that doctors would work to destroy their own establishment, an outsider was needed to shake things up, much as Galileo did in astronomy. Enter Paracelsus.

The name "Paracelsus" probably meant "equal to Celsus" (another Roman medical authority). Instead of a formal university education in the theories of Galen, his experience came from working in the Fugger mines in Tyrol and as a surgeon in the Venetian army. He never received a diploma of medicine or settled down.

Paracelsus had a mystical faith in the divine order in the human body, much like Kepler had in the harmony of the celestial spheres. He was also articulate, arrogant, and self-righteous, boldly announcing he would teach his classes based on his own experience. He even threw texts by Galen and Avicenna (a prominent Arab physician) into a student bonfire. Most controversial of all, he taught in the vernacular, which was against the Hippocratic oath, which prescribed teaching in Latin to protect the laity from incompetent practitioners.

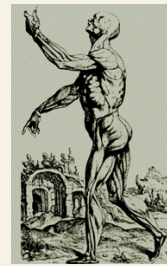
Instead of internal imbalance of humours, Paracelsus said outside factors, such as minerals and stellar influences, caused diseases. Therefore, he largely analyzed from astrology. Although his specific arguments were wrong his general insights were right. So were many of his treatments. For example, his therapy for mercury poisoning (plasters and baths to draw out the mercury) are still used today.

Not that all his treatments were legitimate. He prescribed inorganic minerals and even metals for some ailments. He also claimed a plant's shape and color suggested what organ it was

suitable for (e.g., yellow plants for treating liver ailments).

Paracelsus' activities angered the medical establishment, which prevented most of his books from being printed while he was alive. After losing a case against a churchman who had promised a huge reward for curing him and then reneged on the promise, Paracelsus spent the rest of his life wandering around. After his death he became widely published and something of a folk hero celebrated by Christopher Marlowe, Goethe, and in the music of Berlioz.

Vesalius Turns Anatomy into Art



Vesalius (1514-64) was born under such favorable astrological signs that his mother saved his "magic" placenta. Growing up near the site of public executions, he saw lots of bodies and became fascinated with human anatomy. He read old medical texts avidly, but wanted to see for himself. He was a student of Jacob Sylvius of Paris, who was avidly pro-Galen. He was also one of the first to oppose Sylvius, earning the eminent professor's hatred ever since.



The amphitheater in Padua where doctors performed public operations, a popular form of entertainment before medical advances made it likely patients would survive such operations.

He then left Paris and did his own dissections on newly hanged criminals, introducing the practice of displaying newly removed organs to his students. In 1537, he became professor of anatomy at Padua, where he made anatomy

charts to help his students. Besides doing his own dissections, Vesalius, also created new surgical instruments or adapted existing ones for surgery.

In 1543, he published *De Humani Corporis Fabrica* (*On the structure of the Human Body*) with illustrations by Jan Stephan van Calcar, the artist Titian's favorite disciple. The front piece showed Vesalius doing a dissection, a human skeleton and a naked man. To further emphasize this was about human anatomy, not animals, the cover had two sullen barber-surgeons demoted to merely sharpening their instruments, and a dog and monkey in the bottom corners getting no attention.

Vesalius' book led to a violent quarrel with the rest of the academic community led by Sylvius. Since then, his book has made many medical authorities' top 10 list of important contributions to medicine, since it entirely reformed surgery. After this, medical students no longer had to endure the stench of flawed dissections to see what the human body looked like. Thanks to Vesalius, they could study accurate and detailed images of separate aspects of the body (nervous system, circulatory system, etc.) without having their views obstructed by other organs or systems, let alone blood and gore.

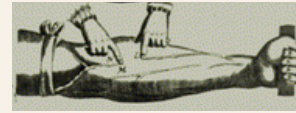
Vesalius served as the personal physician to both Charles V and Philip II of Spain. Supposedly he was once dissecting a woman and found her heart still beating. When her parents brought charges, the king just made him go on pilgrimage during which he died.

William Harvey Pulls it all Together



Harvey was educated at Canterbury, Cambridge, and Padua and worked at St. Bartholomew's Hospital in London (1609-43). He was very thorough in his experiments, using very modern methods: intense observations and experiments on which to base his hypothesis. In

one experiment he tied off an extremity, causing the arteries above and veins below to swell. In another, he had a strong man with clearly visible veins grasp a cylinder, making it easy to see blood in the veins flowing *toward* the heart. After a demonstration of blood circulation, a Swiss colleague declared: "I see it, but don't believe it."



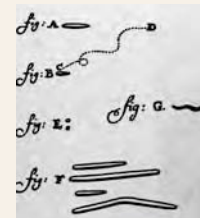
As early as 1616, he had developed his heretical ideas about recirculation of blood, but delayed publishing his findings until 1628 from fear of the reaction. He had his book printed by an obscure printer in Germany, who used poor paper and made many mistakes. As Harvey feared, people called him mad, and his practice declined accordingly.

Invisible Worlds Below



Some early microscopes

*"We can easily conceive that in all rainwater which is collected from gutters and in all waters exposed to the air, animals may be found, for they may be carried thither by the particles of dust blown about by the winds."--
Antoine van Leeuwenhoek's first description of microbes*



The first image of bacteria

The invention of the microscope in the early 1600s revealed a world as startling as the moons of Jupiter that Galileo had

discovered, the major difference being that this was a world that surrounded and even existed within us.

One of the great pioneers was Antoine van Leeuwenhoek, who built over 400 microscopes, the most powerful of which could magnify an object 275 times. His descriptions of this new world capture the sense of wonder it inspired at the time. Leeuwenhoek described *“an unbelievably great company of living animalcules, a-swimming more nimbly than any I had ever seen up to this time. The biggest sort...bent their body into curves in going forwards.... Moreover, the other animalcules were in such enormous numbers, that all the water...seemed to be alive....”*

“And this being so, we must say that according to the rules of geometry a barley-corn or mustard seed is a thousand-million times larger” ...“thus we have reason to state that those very little animals are equipped with tails as well as limbs, mouth-parts and muscles, as the tails of Rats and Mouses .”

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FROM FAITH TO REASON: DEISM AND ENLIGHTENMENT PHILOSOPHY

*"Nature & Nature's laws
Lay hid in night
God said Newton be
And all was light"
--Alexander Pope*

*"If God did not exist, it would be necessary to
invent him."--Voltaire*

Blinded by Science. Alexander Pope's short poem largely summarizes the impact that Isaac Newton's work had, not just on science, but also on the imaginations of his contemporaries. The 1700s abounded with heightened interest and discoveries in the sciences. Nobles and monarchs pursued different sciences as hobbies as well as funding serious research. In a popular play of the era, a woman even refuses to elope with her lover because she would have to leave her microscope behind. There were serious advances as well.

In astronomy, William Herschel showed that Uranus is a planet, not a star, that space is more vast than previously believed by demonstrating the Milky Way is not a cloud of gas but a whole galaxy of stars, and that so-called fixed stars were actually entire distant galaxies. Carl Linnaeus, using his system of binary nomenclature, catalogued the huge numbers of new plants and animals being discovered across the planet. In chemistry, Henry Cavendish isolated hydrogen; Joseph Black discovered carbon dioxide, and Antoine Lavoisier, separated water, supposedly an indivisible element, into oxygen and hydrogen. This destroyed Aristotle's theory of four elements and opened the way for the emergence of modern chemistry in the 1800s. And in medicine, Edward Jenner created a vaccine against the deadly disease, smallpox, although germ theory would not be developed for another century.

However, not everyone was impressed with the scientific progress of the day. Among them was Jonathon Swift who satirized much of contemporary society, including its obsession with science, in his book, *Gulliver's Travels*. In the following selection, Gulliver visits the science academy of the mythical Laputa, a land where everyone is so absorbed in

theoretical speculation that they have lost all touch with reality. Supposedly, he based this fictional account on real experiments being conducted at the time.

"The first Man I saw was of a meagre Aspect, with sooty Hands and Face, his Hair and Beard long, ragged and singed in several Places, His Clothes, Shirt, and Skin were all of the same Colour. He had been Eight Years upon a Project for extracting Sun-Beams out of Cucumbers, which were to be put into Vials hermetically sealed, and let out to warm the Air in raw inclement Summers. He told me, he did not doubt in Eight Years more, that he should be able to supply the Governors Gardens with Sun-shine at a reasonable Rate; but he complained that his Stock was low, and entreated me to give him something as an Encouragement to Ingenuity, especially since this had been a very dear Season for Cucumbers. I made him a small Present, for my Lord had furnished me with Money on purpose, because he knew their Practice of begging from all who go to see them.

"I went into another Chamber, but was ready to hasten back, being almost overcome with a horrible Stink. My Conductor pressed me forward conjuring me in a Whisper to give no Offence, which would be highly resented; and therefore I durst not so much as stop my Nose. The Projector of this Cell was the most ancient Student of the Academy. His Face and Beard were of a pale Yellow; his Hands and Clothes dawbed over with Filth. When I was presented to him he gave me a very close Embrace, (a Compliment I could well have excused.) His Employment from his first coming into the Academy, was an Operation to reduce human Excrement to its original Food, by separating the several Parts, removing the Tincture which it receives from the Gall, making the Odour exhale, and skimming off the saliva. He had a weekly Allowance from the Society, of a

Vessel filled with human Ordure, about the Bigness of a Bristol Barrel.

“There was a most ingenious Architect who had contrived a new Method for building Houses by beginning at the Roof, and working downwards to the Foundations; which he justified to me by the like Practice of those two prudent Insects the Bee and the Spider....

“I was complaining of a small Fit of the Cholick; upon which my Conductor led me into a Room, where a great Physician resided, who was famous for curing that Disease by contrary Operations from the same Instrument. He had a large Pair of Bellows with a long slender Muzzle of Ivory. This he conveyed eight Inches up the Anus, and drawing in the Wind, he affirmed he could make the Guts as lank as a dried Bladder. But when the Disease was more stubborn and violent, he let in the Muzzle while the Bellows was full of Wind, which he discharged into the Body of the Patient; then withdrew the Instrument to replenish it, clapping his Thumb strongly against the Orifice of the Fundament; and this being repeated three or four Times, the adventitious Wind would rush out, bringing the noxious along with it (like Water put into a Pump) and the patient recovers. I saw him try both Experiments upon a Dog, but could not discern any Effect from the former. After the latter, the Animal was ready to burst, and made so violent a Discharge, as was very offensive to me and my companions. The Dog died on the Spot, and we left the Doctor endeavouring to recover him by the same Operation...”

Another, even more biting satire by Swift was *A Modest Proposal Preventing the Children of Poor People in Ireland from Being a Burden to Their Parents or Country, and for Making Them Beneficial to the Public*, which suggested the Irish sell their children to rich British ladies and gentlemen for food. He sets up his readers by describing the plight of the Irish poor, and then shocks them with his outrageous suggestion. Not

only that, he sustains the irony by discussing ways to cook these children. "A young healthy child well nursed, is, at a year old, a most delicious nourishing and wholesome food, whether stewed, roasted, baked, or boiled; and I make no doubt that it will equally serve in a fricassee, or a ragoust."

Deism. The Enlightenment saw more than new advances in the sciences. In fact the very revolutionary nature of those scientific discoveries ensured that no field of thought would remain untouched. This was especially true of religion and philosophy, which had been so closely intertwined with the old scientific theories.

Starting with the rise of towns in the High Middle Ages, several historical forces converged to produce a revolution in European religion and philosophy. First of all, there was the Protestant Reformation. As we have seen, the Reformation led to a series of religious wars that ravaged Europe for nearly a century (c.1550-1650). One result of those religious wars was that many people grew tired of religion and looked for less restrictive modes of thought. Second, the Renaissance, with its interest in ancient Greek philosophies, gave rise to secular ideas that helped spawn the scientific revolution of the Enlightenment. This helped discredit the Church's old ideas on the universe and raise the status of humanity and its ability to reason on its own. Finally, the rise of towns led to resurgence of feudal monarchies into nation states. We have seen how they started challenging the Church's power during the turmoil of the Later Middle Ages. By the seventeenth century, some states were turning Protestant, while in Catholic lands rulers were using the doctrine of Divine Right of Kings to undercut the Church's authority in order to elevate their own.

All of these factors converged to undermine the role of blind faith in the Church's authority. While faith was still of prime importance, human reason was also an important element, especially in recognizing and avoiding the pitfalls of religious fanaticism and intolerance. After all, if God gave us the power to reason, should we not use it? As time went on the role of reason in religion increased while the role of faith declined correspondingly. Finally, reason completely replaced faith in a philosophy known as Deism. This was based largely on a Greek

philosophy, Epicureanism, which saw God as detached from worldly affairs. Our main purpose in life was to avoid pain, not through sensual self-indulgence, which ultimately brings pain, but through a reasonable and moderate way of life.

While Deism incorporated the Epicurean ideas and added its own twists, it was not an organized religion with a central dogma and places of worship. However, despite differences on various points, their beliefs can be summarized as follows:

- 1) God exists, but is detached from the affairs of this world. Drawing upon the mechanistic views of Newtonian science, they saw the universe as a giant clocklike machine that God had set in motion and then left to run on its own.
- 2) Religious truth can only be found through reason, not divine inspiration or clerical authority.
- 3) Miracles do not exist, only natural phenomena for which we have not yet found reasons.
- 4) Universal moral laws exist and can be found in all cultures around the globe, not just in Christian Europe. This reflected the exposure of Europe to other cultures in the Age of Exploration.

Deism was a philosophy mainly of an upper crust of intellectuals (known then as *philosophes*). Most people in the Enlightenment stayed devout church members totally untouched by Deistic ideas. However, although Deism was confined to a narrow upper class, including Thomas Jefferson in the United States, its influence was profound, since it was the ideas of these intellectuals who inspired the revolutionary ideas of the later eighteenth and nineteenth centuries. Deism also downplayed the role God plays in this world. This thrust more power and responsibility upon humanity to solve its own social, political, and economic problems, giving rise to remarkable new ideas in those areas as well.

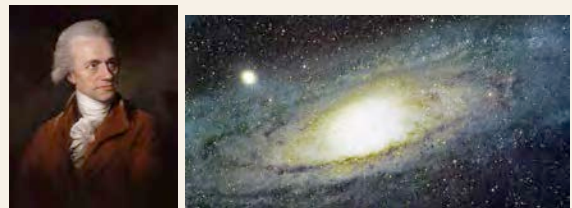
An Age of Scientific Wonders



In the age's spirit of scientific experimentation, a group of people watches a lark suffocate under a bell jar as it is deprived of oxygen in Joseph Wright's *An Experiment on a Bird in the Air Pump*. The bird being suffocated is a cockatoo, probably a family pet based on the older daughter's reaction.

As a result of Isaac Newton's work and the growing belief in humanity's ability to understand, predict, and manipulate the laws of nature, science nearly assumed the status of a religion in the 1700s. It was an age of scientific wonders, not just in astronomy, but also in the other sciences as well.

The big name in astronomy in the 1700s was William Herschel, who made some 2500 discoveries, such as the planet Uranus, the Milky Way's vastness, and the Andromeda Nebula. While Uranus had been observed previously, people considered it a star. Herschel, however, judged it to be a comet because it moved too fast in relation to other stars. Because of its nearly circular orbit, it was eventually classified as a planet. Because of its nearly featureless appearance, Uranus is considered the most boring of the planets.



However, even the most brilliant minds of the day could have some rather eccentric beliefs, at least by today's standards. For example, Isaac Newton was a firm believer in alchemy and wasted a good deal of time trying to create gold out of base metals.

***Calculating the speed of light.* It was a Danish astronomer, Ole Christensen Rømer who first calculated the speed of light by measuring the time it took for Io, one of the moons of Jupiter, to reappear from behind the planet. When his calculations were 8-10 minutes off from his prediction, he concluded the difference was either due to variations in the speed of light or the different distances between Jupiter and the earth at the two times. Figuring (correctly) that**

the speed of light was constant he came up with the figure of 138,000 miles per second. Although his figure was 48,000 miles too slow, his reasoning was correct and, along with Herschel's discoveries, helped give people a much bigger impression of the size of the universe.

Making "elements" out of "compounds". One of the landmark experiments in chemistry was performed by Antoine Lavoisier who created water, which Aristotle claimed was an element, by combining two alleged compounds, oxygen and hydrogen, in a jar and striking a spark. Of course, by definition, creating an "element" by combining two "compounds" is impossible, which discredited the Aristotelian theory of the elements and set the stage for the revolution in chemistry in the 1800s.

Milkmaids and cowpox. Edward Jenner's inoculation against smallpox, although drawing upon older practices by the Chinese and other cultures, was the first successful inoculation against a major disease in Europe. However, it would not be until the 1800's that germ theory would be developed so that doctors actually understood how diseases worked. The line of reasoning leading to this discovery was the observation that milkmaids who contracted cowpox, a milder disease similar to smallpox, would henceforth be immune to the more deadly disease.



Jenner's inoculation consisted of scraping the pus from underneath cowpox scabs and introducing it through a small cut into a healthy subject. While they may get cowpox as well, they were also immune, or at least resistant, to smallpox for much, if not the rest of, their lives.

Initially, such a treatment met with popular resistance but was gradually accepted. Thomas Jefferson gained public acceptance for vaccination by having his entire household, including slaves, inoculated, while Napoleon ordered vaccination for his entire army. In 1979,

the World Health Organization declared smallpox extinct (except for a few specimens kept in selected labs). While plagues and epidemics would grab the headlines, before Jenner, smallpox may have been consistently responsible for as many as one in fourteen deaths year in and year out. As a result, some people claim that Jenner saved more lives than anyone else in history.

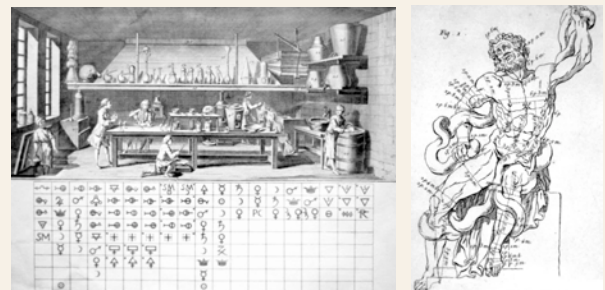
Despite Jenner's work, the theory of Humours and the use of purgatives would still dominate medicine for years.

The Chronometer, grandfather of the GPS.



A major problem for transoceanic navigation was time keeping on ships so that navigators could calculate longitude. Finally the Royal Society of London offered a large reward of £25,000 to anyone who could solve this problem. In 1761 John Harrison (above) won the contest with the invention of the chronometer, building upon Huygens' pendulum clock to create the grasshopper escapement, thus opening a whole new age in global navigation.

Diderot's Encyclopedia.



Two pictures from Diderot's encyclopedia: an alchemist's shop with a table of elements they imagined and measuring the dimensions of the Laocoon

One of the landmark events of the Enlightenment was the publication in 1751 of Denis Diderot's *Encyclopedie*. Its purpose was to

summarize in its 36 volumes the rapidly expanding fields of human knowledge that the Scientific Revolution was creating. It covered a wide and diverse array of topics ranging from history and philosophy to practical arts and crafts such as stitching nets, infantry training, and handwriting. More than 200 scholars assisted in this work, which included 11 volumes of plates to illustrate its topics.

Linnaeus' binary nomenclature. With the vast numbers of new plants and animals being discovered in Europe and abroad came a growing need for a system of classifying all this new data. That system was the brainchild of Carolus Linnaeus, who identified 12,100 species of plants, dividing them by sexual characteristics and placing them into 24 categories. Out of this came his system of binary nomenclature: giving first the genus or family name and second the species name. The full system of classification had five levels: Phylum, Class, Order, Family, Genus, and Species. Linnaeus' *Systema Naturae* would go through twelve editions in his lifetime and is still the basis for classifying living beings.

Toward a theory of evolution. In the realm of Natural History, Georges Louis Leclerc Buffon published a 36-volume Natural History (1749-88). Among his more radical ideas: animals vary according to their natural environments; the earth is 75,000 years old, rather than 6,000; animals have changed since creation and climate change has been partly responsible. He did stop short of claiming common descent with apes (even though he had a trained chimp). The University of Paris forced Buffon to issue a public apology for such preposterous ideas. Despite that, he is seen as the most influential name in natural history in the 1700s and a precursor to the idea of evolution.

Blinded by Science



Nobles on a scientific outing. Notice how they are looking through the wrong ends of their telescopes.

Even the most brilliant minds of the day could have some rather eccentric beliefs, at least by today's standards. For example, Isaac Newton was a firm believer in alchemy and wasted a good deal of time trying to create gold out of base metals. Therefore it shouldn't come as a surprise that many people were duped into believing the most outrageous claims, be they ridiculous scientific theories, financial scams, or just reports of women giving birth to rabbits.

The Great Lunar Man-Bat Hoax. In 1835, a reporter, Richard A. Locke, under the false name of Dr. Andrew Grant, a supposed companion of the astronomer, John Herschel, published a six part article in the New York Sun describing life on the moon, including unicorns, bipedal beavers and bat-winged humanoids as seen through Herschel's giant telescope. Locke also falsely claimed that Herschel believed there was life on other planets, including the sun, whose people had abnormally large heads, since small heads would explode from the heat.



Unfortunately, according to Locke, he couldn't show these wonders to anyone because the sun caused Herschel's giant telescope to act as a burning lens that caught the observatory on fire and burned it down.

Meanwhile, circulation for the New York Sun skyrocketed, establishing it as a major newspaper from the time on. Although the hoax was revealed several weeks later, the Sun never retracted the story.

A popular pseudo-science of the age was physiognomy, and its offshoot, phrenology, which claimed to tell a person's character by his or her facial features and how they compared to other animals. For example, according to the

18th century phrenologist, Johann Lavater, the eagle's "lightning glance" showed a regal character, the camel's jaw showed dullness and lack of courage. The man's strained grimace revealed his stupidity, while the elephant's broad forehead indicated a retentive memory.



A scam of a different sort was that by Mary Tofts (above) who allegedly gave birth to rabbits. She claimed that, while pregnant, she had an intense craving for roast rabbit. Even after a miscarriage, she still was obsessed with the little critters until one day in 1726 she "gave birth" to nine of them. Based on her story, doctors explained the births as a result of "maternal impressions", claiming a pregnant woman's experiences could be imprinted directly on a fetus at conception and cause birth defects. The "rabbit woman" confessed only after a porter admitted to being part of the hoax.

The age also had its share of investment schemes/scams designed to exploit people's gullibility and greed to relieve them of their money. Most notable among these were the South Sea Bubble and the Mississippi Bubble. As the term *bubble* suggests, both of these schemes kept expanding until they burst, ruining a lot of people's dreams with them.

He also had a glass harmonica, also known as hydrocrystalophone, or hydrodaktulopsychicharmonica, which translated from Greek meant "harmonica to produce music for the soul by fingers dipped in water," to provide ethereal and calming music.

A short history of electricity

Let's start with the heavy plow, which dramatically improved agricultural production...

Which led to dramatic population growth in Europe...

That could support the rise of towns...

That led to the rise of kings...

That led to bigger armies for bigger wars between nation states...

That led to the development of gunpowder...

That led to the need for more \$\$\$\$\$...

That led to a mining boom in Germany in late 1400s...

But this led to another problem: water seepage in mines and the fact that a suction pump could only raise water 32 feet.

But why? A student of Galileo's, Evangelista Toricelli, thought he had the answer: the weight of air pressure pushing down on the water.

Since 32-foot long tubes were unwieldy, Toricelli used 6-foot tubes of mercury, which is fourteen times the weight of water. He upended these tubes in a vat of mercury, calculating the air pressure would stop the mercury from dropping at about 30 inches (one-fourteenth of 32 feet). Not only was he correct in that prediction, but also that what was left at the top of the upended tube was a vacuum, which Aristotle and Galileo thought were theoretically impossible, because an accelerating object in a vacuum would continue accelerating indefinitely to infinite speed, which is ridiculous.

Not only had Toricelli invented the barometer, he also triggered all sorts of experiments with vacuums and, by extension, electricity.

One experiment was Von Guericke's demonstration of the power of the vacuum in 1650 where he had two teams of horses try to pull apart two metal hemispheres joined together by a vacuum. They couldn't do it.

Even more intriguing, what would happen if you spun a barometer around in the air?

That's exactly what the famous French astronomer, Jean Picard, did while strolling down a Paris street in 1675. The result: the barometer started glowing, giving off what people called the barometric light or the "glow of life." What Picard had done was generate an

electrical charge, which he didn't understand. But it still excited people all over Europe and inspired all sorts of fun experiments with primitive electrical generators, such as Hauksbee's Influence Machine.

People even went on tour, putting on cheap "dog and pony" shows with Hauksbee's Influence Machine, demonstrating the power of electricity. Such traveling shows were popular in the 1700s. A common stage trick was to charge up a girl on stage and have a man from the audience come up to kiss her, giving him a shock that would knock him off his feet. This also inspired more substantial experiments with electricity.

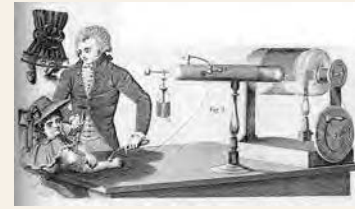


One serious problem concerned all the fires and explosions (of powder magazines) caused by lightning strikes. Previously, a common belief and practice on how to drive off lightning storms was to ring a town's church bells. Unfortunately, a bunch of young men hanging from giant pieces of metal in the highest part of town led to a lot of "dead ringers" (which, by the way, is not the true etymology of the expression).

After hundreds of deaths caused by lightning hitting church bells over the years, the French government outlawed this practice. Still, the problem of lightning starting fires, and especially detonating towns' powder magazines, persisted.



Besides saving people from a lot of lightning strikes, Franklin's lightning rod inspired a new fashion trend in lightning rod bonnets & umbrellas. There are no reliable figures on how many lives they saved.



Another use for electricity was therapeutic, people believing it could solve medical problems. For example, there was James Graham's Temple of Health with its celestial or Magnético-electrico bed on top of an electrical field on which childless couples could conceive (with the help of exotic dancers). More commonly "therapists" would connect electrodes to the ailing parts of patients' bodies and zap them. Even little girls weren't safe from these quacks.

Then there was Franz Mesmer's "animal magnetism", which combined the "therapeutic" effects of electricity with hypnosis. Mesmer believed that the universe is pervaded by a mysterious substance he called "animal magnetism", and that illness was caused when it was out of balance. Thus, he would hook ailing patients up to a battery, then "mesmerize" (i.e., hypnotize) them while also charging them up. He also had a glass harmonica, also known as hydrocrystalophone (below right), or hydrodaktulopsychicharmonica, which translated from Greek meant "harmonica to produce music for the soul by fingers dipped in water," to provide ethereal and calming music.



Patients swore by Mesmer's treatments. Although he claimed it was the electrical treatments that cured his patients, it was probably the post-hypnotic suggestions that

came with his “Mesmerism”. An investigative committee headed by the famous chemist, Lavoisier, discredited Mesmer as a fraud, even his claim that he could magnetize the sun. As off as his claims about “animal magnetism” were, his work with mesmerism inspired later research in the therapeutic use of hypnotism.

The Wit and Wisdom of Voltaire

Among other things, Voltaire was particularly renowned for his short pithy sayings. Following are some of his more memorable ones.

"Theology amuses me. There we find Man's insanity in all its plenitude"

"Killing is murder unless it is done to the sound of trumpets"

"To stop criticism they say one must die."

"All the reasoning of men is not worth the sentiment of one woman"

"It is said God is always on the side of the big battalions."

"If God did not exist, it would be necessary to invent him."

"Self-love never dies"

"Marriage is the only adventure open to the cowardly"

"In general, the art of government consists in taking as much money as possible from one class of citizens to give it to the other."

"I do not agree with what you have to say, but I'll defend to the death your right to say it."

"Anyone who has the power to make you believe absurdities has the power to make you commit injustices."

"Faith consists in believing when it is beyond the power of reason to believe."

"God gave us the gift of life; it is up to us to give ourselves the gift of living well."

"Love is a canvas furnished by nature and embroidered by imagination."

"I hate women because they always know where things are."

"God is a comedian, playing to an audience too afraid to laugh. "

"Judge a man by his questions rather than his answers."

"Every man is guilty of all the good he did not do."

"Anything that is too stupid to be spoken is sung."

"Those who can make you believe absurdities can make you commit atrocities."

"The art of medicine consists in amusing the patient while nature cures the disease"

"No snowflake in an avalanche ever feels responsible."

"If God created us in his own image, we have more than reciprocated."

"If you have two religions in your land, the two will cut each other's throats; but if you have thirty religions, they will dwell in peace."

"It is dangerous to be right when the government is wrong."

"A great many laws in a country, like many physicians, is a sign of malady."

"The best way to become boring is to say everything."

"All sects are different, because they come from men; morality is everywhere the same, because it comes from God."

"England has forty-two religions and only two sauces."

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ENLIGHTENMENT POLITICAL & SOCIAL IDEAS

"Killing is murder unless it is done to the sound of trumpets." --Voltaire

The Enlightenment was a period of nearly unbounded optimism and faith in the human race's ability to solve its own problems, including restructuring government and society along more reasonable lines. There were two main factors leading into this search for a rational approach to creating a better society. First of all, Deism, with its idea of a God detached from our affairs, gave us the ability and responsibility to solve our own problems. Second, this was a time of rapid social and economic change, especially in England with its booming colonial empire and economy. London's population jumped from c.700,000 in 1715 to 2.7 million by 1815. Such rapid growth led to squalid living conditions, alcoholism (gin consumption increasing 10 times), drug abuse, and crime. While Deism may have given us the power and responsibility to reform society, these conditions provided an urgent need for such reforms. The result was a flurry of new ideas in political science, economics, psychology, and social reform.

Enlightenment ideas on politics were rooted in John Locke's *Two Treatises on Government* (1694). Locke's basic idea was that government, rather than being at the whim of an absolute monarch with no checks on his power, existed as a trust to carry out the will of the people and protect their "lives, liberty, and property." If it failed in its duties or acted arbitrarily, the subjects had the right to form a new government, by revolution if necessary.

Locke's ideas largely summarized the achievements of the English Revolution of the 1600's. They had a tremendous impact on political thinkers in France chafing under the corrupt reigns of Louis XV and Louis XVI. Three of these men, Montesquieu, Voltaire, and Rousseau would profoundly influence French political thought and provide the theoretical justification for the French Revolution.



Montesquieu, sometimes seen as the father of political science, looked at various types of

government and analyzed what made them work in his book, *The Spirit of the Laws*. Among the ideas he supposedly derived from England was the separation of powers in government, a vital part of our own constitution.



Voltaire, who first made his name by championing the cause of a Jew wrongly accused and executed for a crime, was probably the most famous of the Enlightenment philosophers. Voltaire wrote on a wide range of topics, but should be remembered here for advocating more civil and political liberties, at least for educated people who can understand the implications of their actions. Voltaire was less clear on what rights the illiterate masses should have.



Finally, there was Rousseau who said that people could only legitimately follow laws they themselves have made. Otherwise, they were the victims of someone else's tyranny. Therefore the ideal state is a small-scale democracy in which everyone participates. Together, the ideas of Locke, Montesquieu, Voltaire, and Rousseau provided the basic ideas we have today on personal rights and liberties and how a government can best be structured to guarantee those rights and liberties.



In economics, the most important figure was Adam Smith, whose *The Wealth of Nations* pushed for a wholly new attitude toward economics. Smith saw people as selfish and willing to work much harder and produce much more if they had the incentive to do so. He saw the mercantilism of the 1600's and 1700's, where the state tried to import gold and silver while exporting its goods, as stifling to an economy. Therefore, doing away with mercantilist monopolies and restrictions would provide more incentive to produce. There was no need to regulate the market since people's greed and the law of

supply and demand would make the market self-regulating. Smith's free market policy, known as *laissez faire* ("hands off") was widely adopted in the 1800's as Britain, Europe, and the United States rapidly industrialized. It is still a vital part of our economic thinking today.

In psychology, there was Helvetius, who claimed our minds and personalities are blank slates at birth and that we are the products of our environment and the sum total of our past experiences. Combining Helvetius' "blank slate" theory with the prevailing optimism of the age was Jeremy Bentham. He felt we could teach people to act in rational ways by providing an ideal environment where they can learn the right sorts of behavior. Bentham's movement, Utilitarianism, became quite popular and pushed for a wide range of social reforms in such areas as prisons, law codes, and public health. Bentham even claimed he could use calculus to quantify how much pleasure someone got from a particular experience.

See the reading on flowchart 1.3 for further discussion of the nature vs. nurture argument.

Another development came in the realm of child psychology. Before the Enlightenment, children were largely seen as miniature adults. Among the upper classes, they were typically dressed in restrictive clothing mimicking that of their parents and turned over to nurse maids right after birth. They might get to see their mothers for a short period each day, but often had little or no more contact than that with their parents. However, two things happened to start changing society's perception of childhood as a stage (or several successive stages) of development.

One was Rousseau's *Emile*, an educational tract that pushed for age appropriate education. For example, instead of making 5-year olds memorize all the countries on the globe, which would be meaningless to them, Rousseau advocated they get a sense of place by exploring their own neighborhoods and gradually branching out from there as they got older. *Emile* still has a profound impact on modern educational theory and practice.

The second factor leading to new attitudes toward childhood also had to do with Rousseau. Spurred partly by the high death rate of babies of poor

working women who could not afford decent child care, he led a movement for better and more natural child-care, including mothers nursing their own babies and personally raising them rather than turning them over to nurse maids and nannies. Since then, there has been a growing tendency for parents to be personally involved in their children's upbringing, a major factor in the modern family.

William Hogarth: Eighteenth Century Britain's Social Conscience

William Hogarth was an 18th century British artist whose work served as a sort of national conscience on the country's various social problems such as alcoholism, financial scandals, and the immoral lives of the rich. Along those lines he did *The Rake's Progress*, a series of paintings on the wasteful ways and demise of a typical son of the newly rich. It starts as he has inherited a fortune and he is being fitted with expensive new clothes. Meanwhile, he is confronted by the angry mother of his girlfriend whom he has gotten pregnant. From there, things go downhill as he squanders his fortune, gets another one by marrying a rich old maid, losing that fortune too, going to debtor's prison and finally ending up in London's insane asylum, Bethlehem Hospital (below), from which we get the word Bedlam.



Treatment of the mentally ill was especially brutal back then as they were often caged, chained to walls, and beaten (to "beat some sense into them"). To help finance the institution, tours were given to during which the inmates would be encouraged to their bizarre antics for the entertainment of the guests. The recently discovered process of distilling liquors helped lead to rampant alcoholism and more people being diagnosed as insane for the resulting behaviors.

Crime was a major problem in eighteenth century London. While poverty was certainly a primary contributing factor, so was the criminal law code, which listed 200 different offenses that carried the death penalty. Since there were so many relatively minor crimes that one could be executed for, juries were often reluctant to convict people for transgressions they obviously had committed. So they walked.

Adam Smith's Pin Factory

Adam Smith's theory on pin manufacture was probably the most dramatic example of how division of labor can increase production. According to Smith, one worker carrying out all the steps in the production of a pin could manufacture a maximum of 20 pins per day. However, dividing the procedure into different tasks between 10 workers would increase production by a factor of 240 times to 4,800 pins per worker per day. This is how Smith described the operation of a typical pin factory of the time.

"One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head: to make the head requires two or three distinct operations: to put it on is a particular business, to whiten the pins is another ... and the important business of making a pin is, in this manner, divided into about eighteen distinct operations, which in some manufactories are all performed by distinct hands, though in others the same man will sometime perform two or three of them."

It's worth noting that before industrialization and the factory system, the production of such labor intensive items as pins and nails made them much more expensive than now. Nails, in particular, were used quite sparingly in wood construction throughout history, variations on the mortise-and-tenon technique being favored, although it drastically slowed down construction.

Pigeon missiles

During World War II missiles, such as the German V-2, could be programmed to hit stationary targets. However, finding and hitting moving targets, in particular battleships, was another matter. Building on his research with

pigeons, B. F. Skinner pitched an idea called Project Orcon using trained pigeons to guide the missiles. The pigeons would be pre-trained to peck at pictures of the chosen target, getting a treat only when they hit the photograph directly. Eventually, they became so good at their job that they could even follow a moving target, engaged in a feeding frenzy of pecking the whole time they could see it.

Being sufficiently trained, three pigeons would be stuffed into the nose of a rocket at 120° from one another to give a 360° view of their surroundings. A series of reflectors inside the nose cone gave the pigeons a view outside of the missile. The reflectors were hinged so that the pecking would alter their orientation and cause the missile to shift in the direction of the target. Skinner received \$25,000 for the experiment, which was initially successful. However, improved electronic guidance put an end to the project.

During the 1970s, the U.S. Coast Guard conducted a similar experiment, this time for search-and-rescue missions. Conditioned by stimulus-response training, whenever they saw the desired target pigeons would go into a feeding frenzy and peck at the screen, which had sensors that turned the helicopter in that direction. The pigeons' success rate was 93% compared to only 38% for humans, partly because they didn't get bored from hours of staring at the featureless vastness of the ocean. The project was abandoned in 1983, however, because it had the unfortunate side effect of causing helicopters to crash into one another.

From Rococo Sensuality to Pre-Revolutionary Sentimentality and Virtue

The age of religious wars helped lead to two things, one cultural and the other political. Culturally, the seemingly endless fighting had discredited religion and fostered a more secular outlook. The result was the age of Enlightenment that especially stressed reason, secular philosophies, and the newly emerging modern sciences. Politically, the turmoil of the last century created a desire for more stability, giving rise to the Age of Absolutism along with

the prominence of the nobles and their values. Together, these produced a very ornamental style of art known as Rococo that typically had lighter, sensual, and more secular themes to suit the nobles' tastes, such as Fragonard's *The Swing* (left) and Boucher's *The Love Letter*.



Toward a new sentimentality. In November 1755, an earthquake that took thousands of lives devastated Lisbon, Portugal (below). It also seriously shook people's largely unbounded faith in our ability to control our lives. This triggered something of a reaction away from unlimited faith in science and toward an emphasis on emotions and feelings.



Typical of this shift was Voltaire's reaction to the Lisbon earthquake of 1755, the satirical novel, *Candide*, where the title character goes through an unbroken string of catastrophes such as the inquisition, war, and the Lisbon earthquake. Besides all this, Dr. Pangloss, *Candide's* mentor, glosses over all these disasters with the Enlightenment belief that all they are all ultimately for the better, while ignoring the suffering continuing all around him.



In the Americas Candide, while viewing a slave with an amputated foot, is confronted with the awful price of sugar Production

The new sentimentality that emerged was largely a reaction against the cold rationality of the earlier Enlightenment. Jean Baptiste Greuze's paintings especially show the late Enlightenment movement towards what we would view as excessive sentimentality, a transitional stage to Romanticism, the next great cultural movement that would accompany the age of revolutions. Besides lots of saccharin sweet pictures of beautiful children, he also portrays the sadness of a widow mourning her husband, young girls weeping over the deaths of their pet birds, and even a woman crying over a broken mirror.



Just as new attitudes toward children were emerging in the later Enlightenment, there was a new middle class attitude toward the family replacing the nobility's notorious lack of marital fidelity. Artists such as Boucher and Fragonard, who earlier were known for doing sensuous paintings devoid of emotion, started focusing on sentimental scenes of family life, mothers with their children, such as Boucher's family breakfast scene below.

The new virtue. Parallel to the new sentimentality was a reaction against the selfish and amoral values of the nobility toward a new emphasis on virtue. Even Fragonard and Boucher, who were famous for their sensuous paintings, switch to doing paintings emphasizing love and virtue. Two of Fragonard's paintings, both entitled *The Stolen Kiss*, illustrate this in two different ways. While one is a somewhat sweet picture of a young man stealing one last kiss from his girlfriend who is obviously worried about getting caught, the other depicts a woman defending her virtue against the unwanted attentions of a young man.



getting the most prestigious seats, meaning those closest to the royal box. However, the most prestigious seats didn't necessarily give the best view. Therefore, seats with a better line of sight to the stage were the most expensive, and went to those with the most money, who were not necessarily high-ranking nobles.

On a broader level, the renewed concern for virtue showed itself in a growing movement promoting civic virtue. Even if artists couldn't openly criticize the monarchy and push for a more democratic society, they could extol the virtues of the democratic and civic spirit of the ancient Greeks and Romans who were willing to, work, fight, and even die for the good of the state and society. The result was another school of art known as Neo-classicism, in which paintings, such as Jacques Louis David's *Oath of the Horatii*, could promote democratic and civic values without facing charges of treason against the king.



Elizabeth Vigee-LeBrun's painting of Marie Antoinette and her Children shows that the new attitude toward children had even influenced the upper classes by the French Revolution.

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Towards a more democratic society and the French Revolution. Various aspects of European culture reflected a growing trend toward a simpler more democratic society. In ballet, stories often concerned simple, but always beautiful, peasant girls. Of course, some, more conservative audience members were outraged at this choice of subject, but overall, audiences embraced this new twist. Helping this glorification of the peasants was the French queen, Marie Antoinette, who had a mock peasant cottage where she could dress up as a peasant, tend her garden, and feed her petting zoo. Although highly contrived and not even getting close to the hard life the peasants actually lived, it did affect fashions and hairstyles, which became simpler as the Revolution approached.

In a way, even seating in the theaters became more democratic. Previously, seating had been based on social status, higher-ranking nobles

ENLIGHTENMENT, REVOLUTION, & WOMEN'S CHANGING ROLES

While women during the Enlightenment made little, if any, visible progress toward equality, there were two lines of development that helped pave the way for the Suffrage Movement in the 1800s. One was philosophical showing changing views about women among intellectuals. The other was social, the phenomenon of intellectual salons held by women, first at Versailles, and later away from court.

Changing philosophical ideas. Crucial to changing views about women were the broader ideas about liberty and equality espoused by men such as Voltaire and Rousseau. While philosophes were talking about equality only between men, this did open up some discussion about how women fit in and whether they should be accorded full status as rational human beings or be treated somewhat like children. One issue relevant to this question was slavery, which Enlightenment philosophes generally condemned, opening the way for women to say the same arguments should apply to their lower status, which some would even characterize as a form of bondage. Along those lines, many philosophes, such as Montesquieu, Voltaire, and Diderot, conceded that women were rational beings just like men, although they didn't go so far as to advocate equality for women.

Another set of discussions revolved around the idea that women were closer to nature than men. While a more positive view of nature was emerging, as seen in much Romanticist art, the view that women were closer to nature led to some contradictory conclusions. One view was that women, being closer to a state of nature, were therefore less rational and should be confined to a domestic role. However, there was also the view that since Nature is good, women were as good as men.

Overall, these discussions led to a more positive view of women, despite the views of Rousseau and various Enlightenment doctors that women were distinctly inferior to men.

Enlightenment salons. In the late 1600s, Louis XIV's court at Versailles dominated France both socially and intellectually. While women were expected to confine their conversations to petty

“feminine” gossip, there were some women of high social status who started holding meetings on intellectual matters in their quarters. At these meetings, known as salons, the guests were men of lower social status, so the hostesses could set the agenda and join in the conversations.

After Louis XIV's death in 1715, the social and intellectual center of France moved from Versailles to Paris, and so did the salons. Although these venues were more public than at Versailles, they were still hosted by women, which was considered compatible with their perceived domestic roles. The hostesses took increasingly active roles in the discussions and, in some cases, even got their own works published. This opened the way for other women, such as the artist Elizabeth Vigée Lebrun, to make their marks.

The Age of Revolutions (1789-1848). Then, in 1789, came the French Revolution, which inspired what until that time was the supreme statement advocating women's equality, Mary Wollstonecraft's “Vindication of the Rights of Women” (1792). Her basic argument was that women are not naturally inferior to men, but only seem to be because they lack the same educational opportunities. Her work is considered one of the cornerstones of the modern feminist movement. The French Revolution also saw significant involvement by women, who hoped their contributions (e.g., the March of the Heroines in 1789) would gain them more rights. Unfortunately, the Revolution gave way to the militaristic culture of the Napoleonic era and a backlash that put women back into subservient status.

Women's fashions during and after the Revolution reflected both the aspirations of some women and how quickly they were dashed. Before the Revolution, a primary element of any upper class woman's wardrobe included huge and ponderous powdered wigs along with the corset, a highly restrictive undergarment going back to the 1500s that shaped a woman's figure to conform to prevailing standards of beauty (as defined mostly by men). Some would say that the highly restrictive nature of the corset reflected women's social status. During the Revolution, women started wearing much looser dresses and natural hairstyles that reflected both the Neo-Classical movement and women's (briefly) improved status. However,

women's behavior and activism during the Revolution shocked many men. Therefore, after Napoleon's defeat in 1815 and through the rest of the 1800s, the corset made a comeback along with a new device to accent another part of a woman's figure, the bustle. Although huge powdered wigs did not make a comeback, women were covering their heads with an array of hats. Ironically, the bonnet was originally designed after ancient Greek military helmets.

There were also marked changes in men's clothing and behavior that would more starkly differentiate their role from that of women. Before the Revolution, men were clean-shaven and their attire was much more colorful and fancy, including silk hose and powdered wigs, (although not as ponderous as what women wore). Behavioral standards were also different. For example, it was more acceptable for men to show emotion, including crying, and even to remark on another man's legs. The militaristic atmosphere of the Napoleonic era and its aftermath changed all that. Facial hair, at first sideburns and later on moustaches and beards, made a comeback in the 1800s. Thanks largely to an Englishman, Beau Brummel, men's attire became duller, largely reduced to black or grey jackets and white shirts. The only concession to color was the necktie.

Therefore, after a brief flirtation with more freedom during the French Revolution, women were pretty much knocked back to their previous subservient domestic status. This situation would last until conditions made possible by the industrial revolution would provide opportunities for the rise of the suffrage movement in the late 1800s.

A day in the Life of an Eighteenth Century Lady of Leisure

For the upper classes, the Enlightenment was largely a time of strict manners and loose morals. Much of this came from the fact that most marriages were arranged on the basis of money and status, rarely for love. Therefore, it was common to find love and passion outside of marriage. For women, this was trickier, for two reasons. For one thing, they were more closely watched and confined than men were. Secondly, they had to be careful about getting pregnant.

There were herbal mixes available that could induce abortions, but they were both extremely painful and dangerous.

However, where there's a will, there's a way, and upper class women found ways to circumvent society's restrictions, and there were plenty of men willing to cooperate. As the philosophe Montesquieu put it: "...a husband who would wish to have sole possession of his wife would be regarded as a disturber of public happiness." Marital separation was simply done by the husband slapping his wife before two witnesses. Less publicized were the many marriages that were happy and faithful.

After rising and taking a bath (typically while still wearing a nightgown), the lady would attend the toilette where she had her hair and makeup done. This was a semi-public affair, with friends, lovers, hairdressers, and maybe even the lady's husband, gathered to relate new rumors or give old rumors clever new twists.



After this might be a promenade in the park. Special days and hours were established for young ladies to display themselves as a public spectacle for any gentlemen who were present, sort of like speed dating, but slower. If a lady caught the eye of a gentleman, he would inquire about the name and status of the lady so he could make his move. If she were interested, she had fewer and more subtle options to show her interest, such as "accidentally" dropping her handkerchief in front of him, so he could pick it up and present it to her.

The lady's day would then be filled with various social activities. One was the music lesson. A truly cultured lady should only practice on a graceful instrument (e.g., harp). Oftentimes she had her lesson in the presence of an attentive gentleman in order to impress him. Later a

friend might visit for conversation, which was also seen as an art typified by *"a gay dialogue in which each listens but little, yet speaks...in a rapid prompt and vivacious manner."* Another popular activity was cards, in particular the game of Whist. Given their otherwise idle lives, many men and women became addicted to cards and gambling. One woman was so hooked that, when attending a friend's deathbed, she brought along her cards, table, and friends.

Of course, the highlight of the lady's day would be when a gentleman came to court her. One picture of the time shows such a man professing his undying love to the lady in the garden, with her mother or aunt listening closely from behind some bushes (below).



The lady might also have the occasion to read love letters from her boyfriend. Some of the meaner spirited women would read them aloud to their friends for laughs. Napoleon's wife, Josephine Beauharnais, did this while he was on campaign in Italy and she was having an affair with a young captain back in Paris. She paid for it when he found out.

Madame de Pompadour



Madame de Pompadour was Louis XV's official mistress, a position that one only obtained after interview with the queen and her approval. Besides an official mistress, Louis had numerous

girlfriends for one-night stands. He especially preferred young virgins so that he could not contract venereal disease from them.

Louis met Madame de Pompadour at a masquerade ball where he and his friends were all disguised as well-trimmed yew trees. Even after he had moved on to other mistresses (whom she herself screened), she remained a close confidante of the king.

This was not necessarily a good thing, as she had a personal grudge against Frederick II (AKA The Great) of Prussia, who had a particular talent at arousing the ire of women, including empress Maria Teresa of Austria and Tsarina Elizabeth I of Russia. Apparently, Frederick had two greyhounds that were constant companions, even sleeping at the foot of his bed. He had named one of them Madame de Pompadour so he could say he had slept with Madame de Pompadour and she was a real bitch. The anger this inspired in the real Madame de Pompadour helped contribute to France turning against its former ally, Prussia, in the Diplomatic Revolution of 1756 and the subsequent conflict known as the Seven Years War. This may have been the source of Voltaire's comment: *"All the reasoning of men is not worth the sentiment of one woman."*

When Madame de Pompadour died in 1764, it is said Louis shed exactly two tears.

A brief history of women's body image and standards of beauty as defined by society

There is evidence of a biological standard of beauty, defined primarily by the ability to bear and nourish healthy children, although that standard has much wider parameters than cultures generally allow and can largely be summarized by the maxim: useful is beautiful.

Our earliest bits of evidence of standards of beauty are prehistoric figurines found throughout the Mediterranean and Europe and commonly referred to as "Fat Venuses". These small Paleolithic statuettes, probably don't represent primitive man's ideal of woman, but they suggest that more curvy or full-bodied

women were preferred. If the Venus of Willendorf (below), which is only four inches tall, were to scale, her bust-waist-hips measurements would be 96"-89"-96".



This makes sense when one considers that women, having more body fat than men, often had to nourish their young and stay alive for extended periods of time without food during the Ice Ages when winters were especially harsh, Presumably, the women who survived and had children that survived were typically large-breasted, making large breasts evolutionary winners.

By comparison, a woman with Barbie doll proportions would have some serious problems. Her 16-inch waist would also be four inches thinner than her head, leaving room for only half a liver and a few inches of intestine. Like her fragile 3.5 inch wrists, her 6-inch ankles would make supporting her body - despite so much of it missing - entirely impossible, requiring her to walk on all fours.

However, beauty has always been as much a matter of cultural preference as biology, and those preferences have changed at a somewhat dizzying pace. Sometimes beauty standards have even defied what was biologically useful, such as bound feet in traditional China, which rendered their victims virtually immobile. Generally, one can say the more affluent a society, or part of a society, has been, the more likely one would see diversions from what nature had intended, since “trophy wives” with no real needs for survival skills have been a luxury only the rich could afford. Thus as Europe’s economy recovered after 1400, wide swings in beauty standards took place more often from one era to the next.

Catherine de Medici, known as the fashion dictator of the 16th century, recommended an ideal waist size of 13 inches. By this time, she

could demand such crazy ideals because corsets had become the rage.



Between the 1500s and 1900s, women’s breasts went through radical mutations in fullness, flatness, position and cleavage. Eighteenth century Europe, in particular, switched breast vogues with wild abandon. However, women, armed with whalebone, iron and padding, tried their hardest to fulfill fad ideals.

The early corset ended just below the bust, pushing breasts up. The added lift was not enough for some, however. Toward the end of the 1700s, an early version of the Miracle Bra pushed the bust high — sometimes near the chin. Later, corsets would flatten breasts by squeezing the upper body. While made primarily of cloth, whalebone and metal, one was even made entirely of metal — the “coat-of-armor” corset.

Big hair is back. Nothing seemed to define fashion more than Big Hair during the Enlightenment. In England, this was largely a reaction against the Puritan style of women keeping their hair covered during the repressive era of Cromwellian rule. Much of this goes back to medieval Europe when it was customary for women to keep their hair covered as a matter of modesty. Even now, the expression “let one’s hair down” implies cutting loose from normal modest standards of behavior. Similarly, the continued use of veils by some brides reflects our culture’s long-standing concern with protecting women’s virtue.

During the Enlightenment, elaborate hairstyles were definitely in vogue, with women trying to outdo each other in magnificence as parodied in the picture below. Some women’s hair would be piled so high that they refused to go out on ballroom floors out of fear it would get caught in

the chandeliers and burn down. One German visitor remarked that a French woman's face was halfway between her toes and the top of her hair. In addition, women would incorporate various objects, such as birdcages with live birds, into their hairdos. For a while a model warship to commemorate a French naval victory was a fashionable hair accessory.



Note the men with big hair as well. In America, such dandies were referred to as *mararonis*, thus the line from *Yankee Doodle*

In the later 1700s, the trend swung back to simpler styles to keep in step with the Enlightenment's move to a more natural values as epitomized by Neo-classical and Romanticist art, then starting to become popular. Marie Antoinette, who was accused of over-extravagance, was actually an example of this more modest trend, her hair being toned down in portraits right before the French Revolution.

For a brief time during the French Revolution and Napoleonic era (c.1789-1815), women got a reprieve from the corset, as the tighter more restrictive fashions of the Old Regime were replaced by the looser, simpler, and "revolutionary" neo-classical style much as older political and social conventions were replaced. Women during this period were also more politically active, some of them expecting more rights, as reflected in Mary Wollstonecraft's "The Vindication of the Rights of Women."



However, the militaristic culture of the Napoleonic era and the conservative backlash against the Revolution after his fall led to a similar fashion backlash. More specifically, corsets made a comeback, along with bustles to accentuate the backside. Thus the nineteenth century was once again a period of lower status, not to mention difficult breathing, for women.

Young girls were sometimes forced to wear corsets, and those who complained were scolded. Besides, after a few weeks, pains (or all sensation) in the ribs and organs typically disappeared. Corsets eventually became controversial for health reasons, including fainting and muscle atrophy. Many women, however, defended corsets:

"(If) the various organs are prevented from taking certain form or direction, they will accommodate themselves to any other with perfect ease," said one woman in a letter to *Queen*, an 18th-century magazine.

After centuries of constrictive fashion, however, women in the 20th century began to choose comfort over the agony of 13-inch waists and bust pinchers. The flappers of the 1920s shocked their mothers by showing their natural shapes, while Coco Chanel (below) introduced clothing that felt as good as it looked.



For whatever reasons, along with the women's vote came shorter hairstyles and preference for smaller busts, causing critics to complain of the increasingly blurred distinction between men and women.

In the 1940s, the fuller figure came back into vogue, as seen in the pinup art popular with GI's during World War II. Marilyn Monroe, the sex symbol of the 1950s, had curves that were a far cry from the "thin is in" fashion of the 1920s.



The current ultra-thin ideal can largely be traced to Twiggy, the first “super-model”, a classic example of the media catering to the youth culture of the 1960s. Since then, women have been starving themselves in pursuit of ideals that for most are impossible to attain.

The Languages of Flowers and Fans



Say it with flowers, but know what you're saying. But just what are you saying when you give that special someone flowers? Following is a key to the symbolism represented by various flowers and colors of flowers.

- Yellow indicated disdainful love or infidelity.
- Red represented passionate love or shame.
- Green symbolized hope.
- Blue stood for heaven.
- Purple indicated power or royalty.

- Primrose, which blooms suddenly and in unexpected places, symbolized first love.
- Roses were associated with love, but also beauty, heartbreak, joy, humility, etc.
- Forget-me-nots were associated with true love from the story of a lover who falls in a river while picking some pretty blue flowers, and as he is swept away, calls " ...never forget me!"
- Crocuses, in antiquity stood for passionate love, and in 1700s represented carefree youth.
- Narcissus was associated with egoism, conceit, and not being able to love others from the Greek myth of Narcissus and Echo
- Passionflower was associated with faith, religious superstition, susceptibility, or token of remembrance since it resembles

Christ's crown of thorns and nails.

The language of the fan. To a large extent, the fan was the 18th century equivalent of the cell phone, “texting” messages across a ballroom floor to one’s secret boyfriend. Below is an introduction to “fan speak”:

- 1) *Fan near the heart: You’ve won my love.*
- 2) *Closed fan touching the right eye: When may I see you?*
- 3) *The number of sticks shown answers: At what hour?*
- 4) *Threatening movements with a fan closed: Don't be so imprudent*
- 5) *Half-opened fan pressed to the lips: You may kiss me*
- 6) *Hands clasped together holding an open fan: Forgive me*
- 7) *Covering left ear with open fan: Do not betray our secret*
- 8) *Hiding the eyes behind an open fan: I love you*
- 9) *Shutting fully opened fan slowly: I promise to marry you*
- 10) *Drawing the fan across the eyes: I am sorry*
- 11) *Touching finger to tip of the fan: I wish to speak to you*
- 12) *Letting the fan rest on the right cheek: Yes*
- 13) *Letting the fan rest on the left cheek: No*
- 14) *Opening and closing the fan several times: You are cruel*
- 15) *Dropping the fan: We will be friends*
- 16) *Fanning slowly: I am married*
- 17) *Fanning quickly: I am engaged*
- 18) *Putting the fan handle to the lips: Kiss me*
- 19) *Opening a fan wide: Wait for me*
- 20) *Fan placed behind the head: Do not forget me*
- 21) *Fan placed behind the head with finger: Goodbye*
- 22) *Fan in right hand in front of face: Follow me*
- 23) *Fan in left hand in front of face: I am desirous of your acquaintance*
- 24) *Fan held over left ear: I wish to get rid of you*
- 25) *Fan drawn across forehead: You’ve changed*
- 26) *Twirling fan in left hand: We’re being watched*
- 27) *Twirling the fan in the right hand: I love another*
- 28) *Open fan in the left hand: Come talk to me*
- 29) *Drawing the fan through the hand: I hate you!*
- 30) *Drawing the fan across the cheek: I love you*
- 31) *Presenting the fan shut: Do you love me?*

THE RISE OF THE MODERN STATE IN ENLIGHTENMENT EUROPE

"It appears that God has created me, pack horses, Doric columns, and us kings generally to carry the burdens of the world in order that others might enjoy its fruits."-- Frederick II, "the Great", of Prussia

Introduction. Just as the Enlightenment *philosophes* saw a rational plan in the laws of nature and the universe, they also influenced rulers in building their states along rational lines. For the first time in European history, there was a general realization of the relationship between economic, administrative, diplomatic, and military factors in state building. Despite their vast differences, there was a general trend in both Eastern and Western Europe toward more tightly run bureaucratic states. Public works projects, such as roads, bridges, dams, and canals, multiplied in the hope of building the economy of the mercantilist state. New government departments also appeared in such areas as postal services, forests, agriculture, and livestock raising. States also took censuses and kept statistics in order to plan out policies better.

In order to understand the evolution of the modern state, one needs to understand that the feudal state was *patrimonial*. In other words, the kingdom was the patrimony (hereditary property) of a dynasty. Likewise, the various judicial and administrative offices that ran the kingdom at the provincial and local levels were the patrimonies of privileged families. The modern concept of kings and officials who were accountable for their actions and responsible for the welfare of their subjects was much weaker in the old feudal state, making the state more a federation of separate principalities that, in theory, owed allegiance to a common monarch. In the High Middle Ages, this concept of one monarch, among other things, provided at least some degree of order, helping lead to the rise of towns and feudal monarchies which supported each other and increased each other's strength. Over the years, a common language and culture along with the spread of nationalism after the French Revolution united many of these states into what we would call nations. The feedback between the rise of towns and kings produced two lines of

development that would help each other in the rise of the modern state.

First, the rise of towns and a money economy helped provide the basis for the Italian Renaissance and Protestant Reformation. Calvinism, in particular, saw all believers as equal in God's eyes, which discredited Divine Right of Kings, helped justify religious/political revolution, and lay the foundations for modern democracy in the Dutch Revolt and English Revolution. By the late 1600's the religious element was fading from theories of revolution. Such political writings as John Locke's *The Social Contract* pushed the idea of the ruler being responsible for the welfare of his subjects on legalistic rather than religious grounds. Secondly, kings were building strong nation-states that, by the 1600's, were assuming greater control over all aspects of the state. For example, the economic theory of mercantilism spurred rulers to work to develop the resources of their kingdoms.

Together these led to a growing realization of the interrelationships between administrative, economic, and political factors in the overall welfare of the state. As a result, more and more royal officials were trained professionals. They had to take competitive exams to gain their positions and did their jobs efficiently and impartially. Kings and their officials also paid more attention to building and maintaining public works such as roads, bridges, and canals to improve the economy. While the purpose of these reforms was to increase the tax base for the kings, they also benefited their subjects. Higher standards of administration made people see their officials as a bureaucracy of service rather than one of privilege. And since they were the king's men carrying out his will, people also saw their king as a public servant working for *their* benefit rather than as privileged owners of the state. Over time, this became the public expectation, which still predominates thinking about the state today. Frederick the Great's quotation at the top of the reading best represents this idea of the king as public servant. As a result, in the 1700's the term absolute monarchy gave way to the term "enlightened despot", a monarch who ruled according to enlightened principles rather than the divine right of kings.

The eighteenth century state still had problems. For one thing, it had a modern political administration

superimposed upon a feudal social order. Nobles were still the privileged social class, holding most of the important administrative and military positions. Peasants in Central and Eastern Europe were still downtrodden serfs. Even French peasants, who were free by previous standards, still were burdened with many feudal obligations.

In spite of this, the centralized states emerging in the Enlightenment were important in the evolution of our own modern states in two ways. First of all, the emergence of a professional bureaucracy, chosen largely for merit, not money or birth, provided the state with a modern administrative structure that continues today. Second, the idea of the rulers and officials being servants, not owners, of the state was central to the revolutionary ideas that swept Europe starting with the French Revolution in 1789. A closer look at several of the major states of eighteenth century Europe will give a better idea of their accomplishments and limitations.

France under Louis XV may at first glance have seemed like a strongly unified state. But it had serious problems at the center of government. First of all, the court at Versailles with its petty intrigues stifled the work of most capable officials. Instead of tending to their appointed duties, officials spent more time defending their positions at court. Under Louis XV there were 18 foreign secretaries and 14 controller generals, most of them eventually ruined by palace intrigue. Their average terms of office were between two and three years. At the center of this was the king, Louis, who was a somewhat intelligent, but weak-willed and disinterested man who let others run the government for him.

Another problem for the central government was the intense competition between the council of state (with whom the king made laws and policy) and the various ministers (justice, finance, war, navy, foreign affairs, and the king's household) who carried out, but often modified the king's policies. Given what court intrigue did to many of the ministers, one can imagine the confusion and lack of direction in France's central government.

By contrast, the provincial government was fairly efficient. The main figures here were the *intendants* that ran the 32 *generalites* (provinces) set up by Richelieu some 100 years before. He was in charge

of tax collection, justice, and policing his province, and he had a fairly free hand to carry out these duties as he saw fit. The intendant was the king's agent in the province and was the man most Frenchmen saw as representing royal authority. He also represented the interests of the people to the central government, and the king's ministers and councilors generally respected his opinion. In contrast to the unfortunate officials close to Versailles, the intendants generally kept their positions for decades, which allowed them to know their territories and peoples more thoroughly and better rule them. The intendants were often criticized for being too powerful and corrupt. There certainly was some corruption, but in general, the intendants represented efficient and conscientious government. Unfortunately, nobles, anxious to preserve and regain their ancient prestige, even took over more and more intendant positions as the 1700's progressed.

The intendants needed help at the local level. These lower level officials fell into three categories. The first category consisted of feudal officials who had bought or inherited their positions. Such men had little training or care for their work and were a burden to the intendants that were stuck with them. Next, there were subdelegates, who were poorly paid, poorly trained, and also of little use. Finally, there were what we might call true civil servants. These were specialists (engineers, architects, physicians, etc.) who had to take competitive tests to gain their positions. These were the men who usually carried out the directives of the intendants and kept the French state running. It was these officials who would survive the French Revolution and become the nucleus of the modern French civil service.



Maria Theresa of Austria

The Hapsburg Empire may have been an absolute monarchy, but it was a far cry from being a unified state. The War of the Austrian Succession (1740-48) especially pointed out the need to organize an administration such as Richelieu and Frederick

William the Great Elector had done for their respective states a century earlier. The central government in Vienna had a number of governing bodies whose functions overlapped, which led to great confusion. A full one-third or more of all taxes collected never made it to Vienna, so no effective budget could be made. Local government consisted of noble estates (assemblies) that granted or refused the central government its taxes. Nobles in Hungary owned 80% of the land and paid no taxes, leaving the full tax burden to the peasants. The nobles also maintained jurisdiction over the peasants on their lands. It was this mess that the Austrian minister, Count Haugwitz, set out to clean up. He did it at the central, provincial, and local levels. The central government was streamlined into five ministries: foreign affairs, commerce, war, justice, and internal affairs. Typical of the prevailing mercantilist philosophy of the day, the minister of finance was deemed most important in both France and Austria.

At the provincial level, an administrative board known as the gubernium largely replaced the power of the noble estates. In 1748, after the disasters of the War of the Austrian Succession, the estates recognized the need to reform the state and granted ten years worth of taxes to the central government. This meant that the empress could rule without the estates for the next decade. As their power withered, that of the gubernium increased. Thus the feudal estates were gradually replaced by a more modern system. Another important principle that took over here was that of the separation of powers within a government, specifically between the courts and the executive/legislative branches. This principle was pushed by the French *philosophe*, Montesquieu, and has remained an important part of the modern state down to this day.

At the local level, a Hapsburg official, the *kreishauptmann*, interfered more and more in the affairs traditionally left to the noble estates. The more such officials became involved in the daily affairs of the peasants, the more concerned they and the Hapsburgs were for their welfare and their ability to pay taxes. Therefore, the *kreishauptmann* became the virtual champion of the peasants against the nobles, preventing them from evicting peasants and taking their lands or forcing them to do extra servile labor.

Maria Theresa's government also effected a major fiscal reform to raise revenue. Even nobles and clergy had to pay regular property and income taxes. This distributed the tax load more evenly, but there were still gross inequities. The average peasant still paid twice the taxes that a noble paid. And Bohemia was liable for twice the taxes that Hungary was. Still, her reforms were a giant step forward for the Austrian Empire, and her system remained the basis for Hapsburg administration to the end of the empire in 1918.



Maria Theresa's son, Joseph II (above), carried the spirit of enlightened rule even further than she had. He was an enlightened ruler who was determined to use his power to make his people live according to enlightened principles whether they liked it or not. Joseph's reforms cut across the whole spectrum of the Hapsburg state and society. In the judicial realm, he had the laws codified, tried to get speedier and fairer trials presided over by trained judges, and outlawed torture, mutilation, and the death penalty. He ordered toleration for both Protestants and Jews and legalized interfaith marriages. Along the same lines, he relaxed censorship, restricting it only to works of pornography, atheism, and what he deemed superstition.

Joseph was a devout Catholic, but saw the Church as a virtual department of state that needed some house cleaning. Therefore, in 1781 he closed down many monasteries or converted them into hospitals and orphanages. He also required a loyalty oath from the clergy to ensure tighter control of the Church. He controlled and encouraged education, especially for the purpose of producing trained civil servants. Through a combination of incentives for families who sent their sons to school and punishments for those who did not, Austria under Joseph had a higher percentage of children in school than any other state in Europe.

Joseph's reforms extended to trying to make his subjects' lives easier. Although he failed to abolish serfdom, he did get the number of days per week that peasants had to work for their lords reduced from four to three and evened out the tax burden

paid by peasants and nobles. He tried to encourage trade and industry through high protective tariffs, tax relief, subsidies, loans, and the building of roads and canals. He rewarded immigrants, but severely punished those trying to emigrate from his empire. Sometimes, his decrees could interfere with the minutest aspects of people's lives, such as forbidding them to drink the muddy water of the Danube or to eat gingerbread and encouraging peasants to mix vinegar with their water.

By his death, Joseph had increased his empire's revenues from 66 million to 87 million florins, while virtually tripling the size of his army. Unfortunately, no amount of reform probably could have solved the Empire's most serious problem: the large number of different nationalities and cultures forcibly held under Hapsburg rule. Although there were attempts to impose German language and culture throughout the Empire, in the long run, the Hapsburg Empire was a virtual time bomb of nationalities waiting to explode and fragment into different states.



Prussia was the state that most people saw as the epitome of the enlightened despotate. To a large extent, poverty built the Prussian state of the 1700's. It created a tightly run and loyal officer class by forcing impoverished nobles into service to the state. It also forced Prussia's rulers to adopt the tight-fisted economic measures that became the basis of Prussian discipline and regimentation into this century.

At the center of this was Frederick II (above) himself, whose incredible energy, drive, and intelligence were more than equal to what all the ministers and rulers of any other state in Europe were capable of. Frederick clearly saw the interdependence of foreign, domestic, military, and financial affairs and was determined to direct all these affairs personally. Therefore, he served as his own foreign minister, finance minister, and general staff. (He even scouted enemy positions by himself, much to the worry of his officers.)

Frederick's workday started at 4 AM and extended to 10 PM. The vast body of work and responsibilities he undertook required an incredibly organized schedule and work routine. His civil servants in Berlin sent him details and data on specific matters, and he sent back orders he expected them to carry out punctually. His court at Potsdam had neither family, court etiquette, religious holidays, nor other distractions to impair the government's efficiency. The court and government resembled a barrack and were run with military precision. If any one man gave us the idea of the state serving the people rather than the other way around, it was Frederick the Great.

Frederick had little faith in either his troops or bureaucracy and subjected them to severe surveillance and discipline to make sure they did their jobs. Royal agents, known as *fiscals*, combined the duties of spies and prosecuting attorneys to keep the bureaucrats in line. Any examples of corruption led to immediate dismissal. Civil servants had virtually no civil rights (including that of a trial) and have been described as the "galley slaves" of the state. Even with the fiscals, Frederick felt he needed better information about his government and kingdom. Therefore, he had subordinates report to him about their superiors. He also made an annual tour of the kingdom from May to August, personally examining officials, interviewing private citizens, inspecting local conditions, and gathering immense amounts of information. There were few things of importance that escaped Frederick's notice for long.

Unlike the rest of Europe, where most public offices were either bought or inherited, Prussia required all of its civil servants to earn their positions by passing a civil service exam. Most candidates had a college education in jurisprudence and government management. All of them, regardless of class, also had to spend one to two years on a royal farm to familiarize themselves with the various aspects of agriculture, in particular the new scientific agricultural techniques being developed and the issues of lord-serf relations.

At the provincial level, there were 15 provincial chambers, each with 15 to 20 members. Since the members were responsible for each other's actions, there was little corruption at this level. The provincial chambers had two main duties: to collect

taxes; and stimulate the economy to raise the tax base. In true mercantilist spirit, they had sandy wastes reclaimed, swamps drained, and new settlements founded. They went to England and Holland to study commercial and agricultural methods there, sought out markets for Prussian goods, and arrested any vagabonds they found, since laziness and indolence were public offenses in Prussia.

At the local level there were the *steurrat* and *landrat*, who administered towns and rural affairs respectively. The *steurrat* ruled from 6 to 10 towns, and left them little in the way of home rule. In addition to collecting taxes, he fixed food prices, enforced government decrees, regulated the guilds, and kept the garrison properly housed. The *landrat* had much the same duties in the countryside, but was not so closely supervised by the central government, largely because the king had too little money to closely control the *Junkers* (nobles). The *landrat* was always a local noble and estate owner and was elected to his position by his fellow *Junkers* as often as he was appointed by the king. The *landrat* exercised all the functions of local government: tax collecting, administering justice, maintaining public order, and conscripting recruits for the army. As long as he did his job and did not abuse the peasants too severely, the central government largely left him alone.



Russia. Catherine the Great of Russia (above) also strived to be an enlightened despot, at least in appearance. However, Russia was too big and far behind the West to transform it into an enlightened society overnight. The court, to be sure, reflected the fashions and manners of courts in the rest of Europe. However, this was a mere facade to mask the still medieval nature of the rest of society in the countryside. Symbolizing this facade was the series of fake villages stocked with healthy prosperous looking peasants that Catherine's prime minister, Potemkin, set up to fool Catherine into thinking her realm was indeed on a par with the West. Unfortunately for Russia, parity with the West was

far from the case, and Russia would pay a heavy price for its backwardness in the years to come.

Frederick the Great's Daily Routine



Frederick's day started at 4AM, although he hated it. If he wouldn't wake up, he told his servants to throw a cloth soaked in cold water on his head. If, out of pity, they let him sleep, he would put them in the army. Frederick, like his father, suffered from a chronic stomach illness and was in constant pain, but hardly mentioned it. He also had little patience with others complaining of sickness, since he drove himself so relentlessly. His court at Potsdam had neither family, court etiquette, religious holidays, nor other distractions to impair the government's efficiency. The court and government resembled a barrack and were run with military precision. Similarly, he had no time for fancy uniforms, usually being dressed in a dirty and shabby uniform. His one luxury was a collection of 1500 snuffboxes, all of them full, which proved a torture for the English ambassador who was allergic to snuff and sneezed constantly.

Once out of bed, Frederick composed music while his hair was curled. He also practiced the flute at least four times a day, claiming that was when political ideas came to him. Frederick was an accomplished composer, whose compositions are still performed and recorded.

After that he examined his mail. The king had a vast knowledge of coats of arms, so he could save time by throwing the unopened letters of people who bored him into the fire. Personal friends' letters he answered personally, the rest going into one of three baskets: granted, refused, or consult further on it. At breakfast, the royal secretary came for the letters, for each of which Frederick gave a summarized answer in one sentence. There were three secretaries who had to have all the letters ready by 4PM.

At 10AM the king either directed military exercises, wrote personal letters, or walked in his garden with a book. His constant companions were two or three Italian greyhounds, who even slept on his bed with him. It was one of these dogs he named after the French king's mistress, Madame de Pompadour, arousing so much ire in the woman that it helped lead to the Seven Years War.



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The king would then dine at noon with various writers, wits, and soldiers. Despite his stomach condition, he liked highly spiced food and drank lots of coffee and champagne. This would last until 3 PM, unless it was sunny (which he loved), in which case he would bolt his food so he could go for his afternoon walk. Frederick's walks were not popular with those who attended since he liked to amuse himself at their expense.

From 3PM to 10PM, Frederick was engaged in administrative work. After that came supper and then a concert. Besides being a composer, Frederick was also a good flautist, but had erratic timing, making it hard to accompany him. One of his personal highlights was when the composer Johann Sebastian Bach visited him.



Frederick and Voltaire. For a brief time, Voltaire stayed with Frederick at his Sans Souci palace (below). However the huge intellects and egos of the two men led to a falling out. Frederick claimed he had squeezed the juice from the orange and thrown away the peel, apparently meaning he got all the wisdom he needed from Voltaire before kicking him out. Voltaire later got his revenge in *Candide* by describing the abuses of the Prussian army, thinly disguised as the Bulgarian army.

THE FLOW OF ENLIGHTENMENT IDEAS

Introduction. Although the Enlightenment spawned ideas on a wide range of subjects from the sciences to religion and the state, it is important to see how all these ideas occurred in something of a sequence that fit together in a fairly unified way. This is especially crucial for us today, since we largely isolate the various academic disciplines from one another rather than see how they relate to one another. Perhaps the twenty-first century will see such a synthesis take place.

Starting with the scientific revolution, we need to go back to the Renaissance with new findings in astronomy and physiology that seemed to contradict old theories, especially those of Aristotle. At first these led to explanations that were still framed in the context of old theories, especially if another ancient authority, such as Plato or Pythagoras, could be used to back it up. However, these natural philosophers, as they were called, kept finding more and more evidence that seemed to contradict the old theories until they had to come up with new syntheses and theories of their own. We have looked at two of these processes in particular: Newton's synthesis in physics and astronomy, and Harvey's synthesis concerning the circulatory system.

In addition to creating the scientific basis for the industrial revolution in the 1800s, they also opened the way for new ideas outside of science. Key to this was the fact that the scientific revolution had discredited the Church and raised the belief in humanity's ability to reason. For some, this led to the philosophy of Deism, the belief that God exists but is not actively involved with this world, leading to the conclusion that humans can and must solve their own social, economic, and political problems. Out of this came a new branch of study, the social sciences.

In the realm of political science, a whole new body of ideas emerged concerning the state and our relationship to it: the belief in civil liberties for everyone (or at least all men), democracy, and the separation of powers within a government. Central to all of these was the idea that the state, instead of being a divinely ordained absolute monarchy, is an implied contract between ruler and subjects, each with mutual rights and obligations. In economics, the prevailing idea, as expressed in Adam Smith's *Wealth of Nations*, was free trade capitalism. In psychology there was the Blank Slate theory that our characters are purely the result of our

environment and experiences. This would spark a nature versus nurture debate that still goes on.

The new theories about the state had a very real impact on many Enlightenment rulers, such as Frederick the Great of Prussia and Joseph II of Austria, who were increasingly aware of the impact of their administrative, economic, and political policies on their own power. Therefore, following the prevailing philosophy of mercantilism, they started establishing better civil services by choosing more of their officials based on merit, sometimes determined by civil service exams. They also created more public works (roads, bridges, canals, etc.) to improve the economy and their tax base. Sometimes these mercantilist policies were too heavy-handed in how they were carried out, but in many cases they benefited society. Unfortunately, at this time, trying to impose these reforms on a society that still had many feudal features also impeded progress: such things as tax exempt nobles, hereditary offices (including the monarchy), and extra feudal dues burdening the peasants.

Of course, these reforms were done in most cases for the benefit of the king, but they also often benefited society as a whole, giving rise to the idea that the state was working for the benefit of the people instead of the other way around. Out of that idea came rising expectations for more benefits from the state. People even started feeling that when those expectations were not met, they had the right to rebel. That is exactly what would happen in France in 1789.

BALANCE OF POWER POLITICS IN THE AGE OF REASON (1715-1789)

"Dogs! Do you want to live forever?"-- Frederick the Great to his troops in the heat of battle.

Introduction. The period from 1715-1789 was one of transition between the religious wars of the 1500's and early 1600's and the wars of nationalism and democracy starting with the French Revolution. This was also the era of *balance of power politics* where Europe operated as an integrated system, so that one state's actions would trigger reactions from all the other states. As a result, it was hard for one state to gain an overwhelming position in Europe without everyone else, in particular Britain, ganging up to restore the balance. Finally, it was a period of intense competition between European states, a competition that would launch Europe into the two bloodiest centuries in all human history.

Diplomatic maneuvering (1715-1740). The death of Louis XIV in 1715 ended the bloodiest and most exhausting period of warfare up to that point in European history. The scale of bloodshed and expenditure was so massive that it would take several years before Europe would be ready for another major war. However, mutual distrust kept the various powers eyeing each other suspiciously and constantly maneuvering to maintain a stable or superior position in case war did break out. Spain and Austria conspired to take Gibraltar from England, causing Britain and France to ally to stop this plot. Britain, Austria, and Holland signed the Barrier Treaty in 1718, by which Austria got the Spanish Netherlands (modern Belgium) in return for manning the barrier fortresses against any future French aggression. Because of this maneuvering (or maybe in spite of it) peace ruled over most of Europe for nearly two decades.

The first major disturbance was the War of the Polish Succession (1733-39). The death of the Polish king led to rival claims by French and Austrian candidates, and these claims led to war. Austria and its ally, Russia, being closer to Poland, emerged victorious over France and Spain. The only compensation was that the Spanish Bourbons got control of Southern Italy and Sicily. The War of Polish Succession symbolized the growing importance of Eastern and Central Europe in diplomatic affairs. In fact, events surrounding two

of these states, Prussia and Austria, would dominate European affairs for much of the eighteenth century.

Frederick William I of Prussia (1713-40)



"No reasoning. Obey orders"
"Salvation belongs to the lord. Everything else is my business."
--Frederick William I of Prussia

Since 1640, Prussia had been quietly but steadily gaining strength. Under Frederick William the Great Elector (1640-88) and his grandson, Frederick William I (1713-40), Prussia evolved from a small war ravaged principality to a highly centralized independent kingdom. Its two pillars of strength were its highly disciplined and efficient army and bureaucracy. Prussia was a poor country, and Frederick William I did a masterful job of making the most from the least through a combination of intense economizing and severe discipline and regimentation of virtually every aspect of Prussian society. History has seen few skinflints of Frederick William I's caliber. He cut his bureaucracy in half, cut the salaries of the remaining civil servants in half, dismissed most of his palace staff, sold much of his furniture and crown jewels, and even forcibly put tramps to work. But he expected no more of his subjects than he did of himself as the first servant of the state, probably a legacy of his Calvinist upbringing.

Frederick William's main expense was the army, which is not surprising when one considers Prussia was surrounded by Austria, Russia, and France, all with large armies of at least 90,000 men. By his death in 1740, Prussia's army numbered some 80,000 men. Frederick William's pride and joy was his regiment of grenadiers, all of them over six feet tall (remarkably tall back then). His friends would give him any six-foot tall recruits they could find, while he kidnapped most of the rest. In spite of this military buildup, Frederick William I followed a peaceful foreign policy and left his son, Frederick II, both a large army and full treasury.



Prussian military discipline: flogging (top) & running the gauntlet. The Prussian army was notorious for its harsh discipline. While it was the most efficient army in Europe, it also had the highest desertion rate.

Frederick-William's son, Frederick, presents a fascinating contrast to his father. While the old king detested anything that suggested France and culture, his son treasured those very things. (To drive this point home, Frederick-William would dress condemned criminals in French clothes.) This made Frederick's childhood very difficult. On the one hand, he was required to wear a military uniform and live the life of an officer. On the other hand, he took every possible chance to learn music, speak French, and curl his hair and dress in French fashion, having to post guards to warn him of his father's approach so he could do a quick costume change..

This infuriated the king who often beat his son in fits of rage. Frederick-William would beat his son in fits of rage. Once he threw a dinner plate at him. On another occasion, he tried to strangle Frederick with a window shade cord and was only stopped by his servants. The king even told his son that if his (Frederick-William's) father had treated him as he treated Frederick, he would at least have been man enough to commit suicide.

The king's chronic illness did not help his temper. Neither did Frederick's tendency to tease his father and see how far he could push him. At one point, Frederick tried to escape from Prussia, was captured, court-martialed, condemned to death, and finally released after a lengthy imprisonment. It is a wonder that one of them did not kill the other. However, when Frederick William I died, father and son had been reconciled. It is interesting to see how similar to and different from his father Frederick II would turn out to be as king.

The War of the Austrian Succession (1740-48).



The French victory at Fontenoy (1744) during the War of the Austrian Succession

Frederick's eyes were turned toward the rich Hapsburg province of Silesia. The timing could not have been better for Prussia. Austria was in pitiful shape to fight a war, having just lost a disastrous struggle with the Ottoman Turks. Its generals and ministers were old men past their prime, while the administration was full of corruption and confusion. And to make matters worse, the old emperor, Charles VI had just died, leaving a young woman, Maria Theresa, to succeed him. Charles had gotten most of Europe's rulers to sign the *Pragmatic Sanction*, a document recognizing his daughter as the legal heiress. But many questioned the legality of Maria and her husband taking the throne, and set up the elector of Bavaria as an alternate candidate. This was the situation for the unfortunate Maria Theresa (below) when Frederick invaded Silesia. Just to add to her difficulties, she was pregnant at the time.



However, as Frederick William I had warned the young Frederick, wars were generally much harder to end than start, and this one did not stop at Silesia. France, Spain, Bavaria, and Saxony all joined Prussia, hoping to pick Austria clean. Austria's ally, Russia, was neutralized when Sweden joined the other side against it and Austria. Only Britain, which generally tried to maintain the balance of power to protect its trade, backed Austria. Unfortunately for Austria, Britain had a small army

and was mainly concerned with defending George II's principality of Hanover from neighboring Prussia. As if Frederick William I had been a prophet, a simple move into Silesia had triggered what amounted to a global conflict, with fighting in India and the American colonies as well as Europe.

Mollwitz, the first battle of the War of the Austrian Succession, was a bit embarrassing for Frederick. His army won, but not until he had fled prematurely from the field. After that, however, he showed a flair for brilliant generalship and decisive movements that were unequalled until Napoleon some fifty years later. His victory at Mollwitz won him Lower Silesia and left Maria Theresa, who had just given birth to a son, somewhat destitute. However, the young queen showed she had some spirit and fight of her own. She rallied the Hungarian nobles to her side, raised an army, and secured an alliance with England. Next, she made a secret truce with Frederick, giving him Lower Silesia if he would drop out of the war. Then, she surprised everyone by invading Bavaria and throwing her enemies, now without Frederick, off balance.

With Austria's fortunes restored, the war still dragged on for eight years. Frederick would occasionally re-enter the war, revive his allies with his brilliant leadership, and then be bought off with more of Silesia. At last, bloodshed and exhaustion led to the Peace of Aix-la-Chapelle in 1748. Frederick kept Silesia, while Maria Theresa had survived and saved the rest of her empire. However, she was burning for revenge against Frederick.

The "Diplomatic Revolution" of 1756. The first thing Maria Theresa needed to do was reorganize the Hapsburg Empire. Therefore, she centralized the government, reorganized finances, and built up the army. Next, she set about looking for allies against Frederick. First, she renewed her alliance with Russia, thus securing her eastern flank and endangering Prussia's at the same time.

With the Austro-Russian alliance already threatening Frederick with a two front war, he saw his choice for allies lay between France and Britain. France, his current ally, was slow-moving and reluctant to fight another war. England, on the other hand, already threatened his western border

and had signed a treaty agreeing to pay for Russian armies. Therefore, by secretly allying with Britain, Frederick felt he was neutralizing the threats to both his western and eastern borders, since Britain would now guard, not threaten, his western borders, and subsidize his armies, not Russia's.

Frederick felt that Russia could not fight without British money and that France would not mind his alliance with Britain to keep the balance of power in Germany. He was wrong on both accounts. Louis XV was furious about Frederick making a treaty with Britain without consulting him. As a result, France allied with Austria and agreed to finance Russia's war effort. This ended 250 years of hostility between France and Austria, bringing about a virtual diplomatic revolution in how the powers in Europe were aligned. Frederick, finding himself surrounded by enemies, took the initiative and invaded Saxony. The Seven Years War had begun. Now it was Frederick's turn to prove himself in the face of overwhelming odds.

Prussia' trial by fire: the Seven Years



The Seven Years War (1756-63) was actually two conflicts combined into one giant war. In addition to the continental war of Prussia against Austria, Russia, and France, there was also the struggle for colonial empire between Britain and France. The war thus assumed global dimensions, extending from Europe to North America, the West Indies, Africa, India, and the Philippines.

Prussia's struggle was especially desperate. Frederick, facing a three front war, was forced to race from one frontier to the next to prevent his enemies from combining in overwhelming force. Even then, he still was always outnumbered. The war started with two disastrous defeats, and it looked like Prussia was finished. Then amazingly, Frederick came back to win two brilliant victories in rapid succession against France and Russia. Britain committed itself to guard Hanover and pay for Prussia's army, thus neutralizing the French war effort on the continent.

France against Britain

Now it came down to a duel against Austria and Russia. The war raged year after year and fell into vicious cycle where Frederick would clear one frontier of enemies. Meanwhile, another enemy would invade Prussia elsewhere, forcing Frederick to rush there to expel this new threat. However, this only exposed another frontier to invasion, and the cycle went on. Against such odds, Frederick lost as many battles as he won. However, his iron will and determination to save Prussia gave him the strength to bounce back, gather a new army, and drive back each new invasion. The Seven Years War became something of a patriotic struggle for the Prussian people, who were called on in greater numbers to defend their homeland. Junkers (nobles) only 14 or 15 years of age rushed to enlist, as did many peasants. The civil service carried on throughout much of the war without pay. The heroic example of Frederick inspired many Germans outside of Prussia to praise him as the first German hero within memory able to defeat French armies. Even French *philosophes* sang his praises.

Equally amazing was Prussia's resilience and ability to keep raising new armies with remarkable speed. This was the result of the system of creating a reserve of peasants who trained in the off-season and could replace casualties in the regular army as they occurred. To Frederick's enemies, it seemed he was raising armies out of the soil. In a manner of speaking, he was. It proved to be Prussia's salvation and would point to a new and much more destructive way to wage war.

But the grim business of war dragged on and on. From Frederick's point of view, this was a war of attrition and exhaustion. If he could hang on long enough and inflict enough casualties, his enemies would tire of the war and go home. As luck would have it, the Tsarina Elizabeth died in 1762. Her successor, Peter, was an ardent admirer of Frederick. Not only did he abandon Austria, but also he offered Russian troops to help Frederick. But Peter was soon murdered by his wife, Catherine, who ascended the throne and pulled Russia completely out of the war. This left only Austria and Prussia, who were both exhausted by the war.



Meanwhile, Britain and France were locked in a colonial struggle, which took place over control of North America (known as the French and Indian Wars), the West Indies, India, and slave stations on the African coast. In each case, British financial and naval superiority proved decisive, cutting French troops off from home support while bringing British colonial armies overwhelming reinforcements. The resulting British victories cut French colonial trade by nearly 90% while British foreign trade actually increased. This both deprived France of the means to carry on the colonial war and gave Britain added resources for it, which led to more British victories, more British money, and so on. Even Spain's entry into the war on France's side in 1762 made little difference. By this time, the British war machine was in high gear under the capable leadership of Prime Minister, William Pitt. Therefore, British forces easily crushed the Spanish and took Havana in Cuba and Manila in the Philippines.

By the end of 1762, both sides were ready for peace. The resulting Treaty of Paris in 1763 was a victory for Prussia and Britain. Prussia, while getting no new lands, kept Silesia and confirmed its position as a major power. Britain stripped France of Canada and most of its Indian possessions, and emerged as the dominant colonial power in the world. Although Russia gained no new lands, it emerged as an even greater European power.

The Partitions of Poland



The Treaty of Paris had effects in both Eastern and Western Europe. In the East, the emergence of Russia as a major power was a matter of concern to other European nations. The country directly in Russia's path of expansion was Poland. At one point, Poland had been a major power in its own right that had picked on the emerging Russian state. Now the tables were turned. Russia was a growing giant, and Poland was crumbling to pieces, largely because of a powerful nobility and weak elective monarchy. Frederick also had his eyes on Poland, in particular the lands cutting East Prussia off from the rest of his lands in Germany. Since Russia, Prussia, and Austria were still exhausted from the Seven Years War, they agreed to divide part of Poland peacefully among themselves in 1771. However, their greed was not satisfied, and there were two more such partitions in 1793 and 1795, which eliminated Poland from the map. Since that time until the collapse of the Warsaw Pact in 1989), Poland has mostly lived under the yoke of foreign (mainly Russian) domination.

The American Revolution. In the West, the last major event before the French Revolution was the American War for Independence (1775-83). For once, Britain, the big colonial power, found itself ganged up on by France, Spain, and Holland. This war had two important results in Europe. First, it left France bankrupt. Second, it established a democratic republic that many Frenchmen saw as an inspiration.

In both cases, the result would be revolution in France, and that would have global repercussions.

The Toll of War on Frederick



The Seven Years War took as heavy a toll on Frederick as anyone else. However, it was his iron determination to fight to the bitter end that kept Prussia going, inspired other Germans, and made Frederick a virtual legend in Germany.

Frederick compared himself to someone afflicted w/dropsy who "from day to day marks the progress of his disease, feels the cold messenger of death in his limbs & calculates in advance the moment when his heart, too, will die."

However, he was determined never to give in, even when urged to do so by the British:

"Never will I survive the moment in which I am forced to sign a dishonorable peace; no eloquence, no inducement can drive me to subscribe to my own disgrace. I will either bury myself beneath the ruins of my country, or, if this consolation is too sweet for the fate which persecutes me, I shall put an end to my misery when I can endure it no longer."

Other Fronts, Other Wars



The Seven Years War was in a very real sense, a global conflict, with fighting taking place in North America, Asia, off the coast of Africa, and on the high seas. Outside of Europe, most of the fighting was between France and England over their colonial empires.

In India, fighting took place between the British East Indies Company and French East India Company. The inhospitable climate and distance from Europe led to both sides recruiting native troops, known as *sepoys*, and training and arming them in European fashion. Although it was the French who pioneered this strategy, the British emerged victorious and drove the French from India. In coming years, the British East Indies Company would conquer and rule most of India until the British government took it over in 1857.

In North America, European linear tactics of were of little use against the hit and run warfare

the French and their Indian allies used. However, the British adapted to these tactics to win the war and would later apply these lessons to forming lines of skirmishers to disrupt their enemies in the Napoleonic Wars.

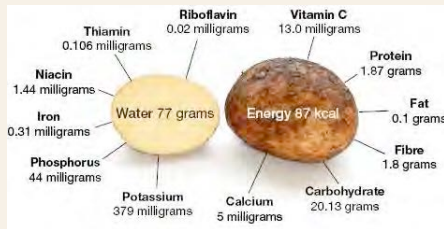
Myth of the Minutemen



While skirmishers had their value, they tended to be over-rated by the Americans who won their freedom from Britain. The first clash in the American Revolution took place at Lexington and Concord in 1775. The colonial militia pretty much held their own in this running skirmish, giving rise to the myth that the irregular tactics of the minutemen won the war. In reality, it took the Continental Army, a regular army trained largely by European officers, and foreign aid from France to win the war.

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THE POTATO AND ITS IMPACT



While one can hardly wonder how peasants survived the depredations of invading armies throughout history, in Europe, part of the answer seems to lie with the lowly potato. The potato is not native to the Eastern Hemisphere and was first noticed by Pizarro's men when they were fighting in Peru. The potato was a staple of the Incas' diet and was what saved many of Pizarro's men from starving on their return trip to Spain. It thrives in the cool damp climate found in the Andes as well as in parts of north-western Europe and can provide from two to four times the calories per acre than grain crops.

Unfortunately, the potato initially met resistance in Europe, because it required more work (i.e., hoeing) than grain crops, and its appearance raised the fear that it could cause leprosy. Some rulers in Europe would actually eat potatoes in public to show that it wasn't linked to such an affliction. However, it slowly gained acceptance and spread as a garden crop.

It gradually spread from northern Italy to the Rhineland along what was known as the Spanish Road, the route Spanish soldiers would take to get from Italy to the Netherlands and northern Germany. Since soldiers typically foraged for food, peasants were especially at risk during wartime. However, while the soldiers would take the grain that was stockpiled, they had neither the time nor desire to dig up something as disgusting to them as potatoes from the ground. And that saved a lot of peasants' lives during the Thirty Years War.

Tragically, the German peasants' problems were not over with the signing of the Peace of Westphalia in 1648, because another huge round of wars raged across Germany in the late 1600s and early 1700s thanks to Louis XIV's ambitions for power and glory. Luckily, the potato had spread across more of Germany, once again saving thousands of lives.

While something as mundane as the potato remained below the radar of most rulers, it showed up clearly in 1732 for the Prussian crown prince, Frederick, while at the siege of Philippsburg in

western Germany. Frederick was the epitome of the Enlightenment ruler, being interested in all the new sciences then emerging, including agriculture and clearly seeing the potato's potential. Therefore, when he ascended the throne as Frederick II (AKA the Great) in 1740, he ordered his peasants to plant it in their fallow fields, thus providing a valuable backup against famine and starvation.

Sixteen years later, it would prove to be one of the wisest things he ever did, because that was when the Seven Years War broke out, a war which proved to be the trial by fire for both Frederick and Prussia, having to face repeated invasions by both Austria and Russia, two powers that were each over twice the size of Prussia. During this war, he lost eight out of sixteen battles, but always had the resiliency and resources to come back after a defeat to drive the invaders out of his lands. The question baffling his enemies was how he and Prussia were able to survive the destruction of all these repeated invasions, and the answer to large extent was the potato.

After the Seven Years War, potato agriculture continued to spread across Europe, including to France by the time of its Revolution in 1789. One of the biggest innovations of the French Revolutionary and Napoleonic eras was the universal draft, which could field armies with hundreds of thousands of men to defeat the ring of enemies ganging up on France. Warfare waged on such a huge scale needed a corresponding jump in agricultural production to support it, and the potato again was at least part of the reason for that jump.

The march of the potato continued throughout the 1800s during the industrial revolution, this time sustaining the rapidly expanding industrial cities dotting the map. The potato did have its downside, namely the potato blight that hit Western Europe in the 1840s. While Ireland was especially hard hit, having no other major crops or a sympathetic government to back up the potato, other parts of Europe weathered the potato famine, often with relief from their governments.

THE ROOTS OF THE FRENCH REVOLUTION

"Walking up a long hill to ease my mare, I was joined by a poor woman, who complained of the times, and that it was a sad country. Demanding her reasons, she said her husband had but a morsel of land, one cow, and a poor little horse, yet they had a franchar (42 pounds) of wheat and three chickens to pay as a quitrent to one seigneur; and four franchar of oats, one chicken, and one franc to pay to another, besides very heavy tailles (income tax) and other taxes. She had seven children and the cow's milk helped to make the soup. 'But why, instead of a horse, do not you keep another cow?' Oh, her husband could not carry his produce so well without a horse; and donkeys are little use in the country. It was said, at present, that something was to be done by some great folks for such poor ones, but she did not know who nor how, but God send us better, 'car les tailles et les droits nous ecrasent' (for the taxes are crushing us).

"This woman, at no great distance, might have been taken for sixty or seventy, her figure was so bent and her face so furrowed and hardened by labor, but she said she was only twenty-eight. An Englishman who has not traveled cannot imagine the figure made by infinitely the greater part of the countrywomen in France; it speaks, at the first sight, hard and severe labor. I am inclined to think that they work harder than the men, and this, united with the more miserable labor of bringing a new race of slaves into the world, destroys absolutely all symmetry of person and every feminine appearance."-- Arthur Young Travels in France during the Years 1787, 1788, and 1789

The French Revolution, along with the Industrial Revolution, has probably done more than any other revolution to shape the modern world. Not only did it transform Europe politically, but also, thanks to Europe's industries and overseas empires, the French Revolution's ideas of liberalism and nationalism have permeated nearly every revolution across the globe since 1945. In addition to the intense human suffering as described above, its

origins have deep historic and geographic roots, providing the need, means, and justification for building the absolute monarchy of the Bourbon Dynasty which eventually helped trigger the revolution.

The need for absolute monarchy came partly from France's continental position in the midst of hostile powers. The Hundred Years War (1337-1453) and then the series of wars with the Hapsburg powers to the south, east, and north (c.1500-1659) provided a powerful impetus to build a strong centralized state. Likewise, the French wars of Religion (1562-98) underscored the need for a strong monarchy to safeguard the public peace. The means for building a monarchy largely came from the rise of towns and a rich middle class. They provided French kings with the funds to maintain professional armies and bureaucracies that could establish tighter control over France. Justification for absolute monarchy was based on the medieval custom of anointing new kings with oil to signify God's favor. This was the basis for the doctrine of Divine Right of Kings. In the late 1600's, all these factors contributed to the rise of absolutism in France.

Louis XIV (1643-1715) is especially associated with the absolute monarchy, and he did make France the most emulated and feared state in Europe, but at a price. Louis' wars and extravagant court at Versailles bled France white and left it heavily in debt. Louis' successors, Louis XV (1715-74) and Louis XVI (1774-89), were weak disinterested rulers who merely added to France's problems through their neglect. Their reigns saw rising corruption and three ruinously expensive wars that plunged France further into debt and ruined its reputation. Along with debt, the monarchy's weakened condition led to two other problems: the spread of revolutionary ideas and the resurgence of the power of the nobles.

Although the French kings were supposedly absolute rulers, they rarely had the will to censor the *philosophes'* new ideas on liberty and democracy. Besides, in the spirit of the Enlightenment, they were supposedly "enlightened despots" who should tolerate, if not actually believe, the *philosophes'* ideas. As a result, the ideas of Voltaire, Rousseau, and Montesquieu on liberty and democracy spread through educated society.

Second, France saw a resurgence of the power of the nobles who still held the top offices and were trying to revive and expand old feudal privileges. By this time most French peasants were free and as many as 30% owned their own land, but they still owed such feudal dues and services as the *corvee* (forced labor on local roads and bridges) and *captaineries* (the right of nobles to hunt in the peasants' fields, regardless of the damage they did to the crops). Naturally, these infuriated the peasants. The middle class likewise resented their inferior social position, but were also jealous of the nobles and eagerly bought noble titles from the king who was always in need of quick cash. This diverted money from the business sector to much less productive pursuits and contributed to economic stagnation.

Besides the Royal debt, France also had economic problems emanating from two main sources. First of all, while the French middle class was sinking its money into empty noble titles, the English middle class was investing in new business and technology. For example, by the French Revolution, England had 200 waterframes, an advanced kind of waterwheel. France, with three times the population of England, had only eight. The result was the Industrial Revolution in England, which flooded French markets with cheap British goods, causing business failures and unemployment in France. Second, a combination of the unfair tax load on the peasants (which stifled initiative to produce more), outdated agricultural techniques, and bad weather led to a series of famines and food shortages in the 1780's.

All these factors (intellectual dissent, an outdated and unjust feudal social order, and a stagnant economy) created growing dissent and reached a breaking point in 1789. It was then that Louis XVI called the Estates General for the first time since 1614. What he wanted was more taxes. What he got was revolution.



French gov't's revenues, expenses, and debt in the years leading to the French Revolution

Marie Antoinette's Peasant Cottage



Apparently, all those idle days of aristocratic life were so boring that Marie Antoinette had a fake peasant cottage built at Versailles where she could play peasant with her friends. Unlike most peasant cottages, it was furnished with Swiss style tapestries, mahogany chairs, stone slab floors, a library, and harpsichord. The queen even had molds of her breasts fashioned into bowls from which to feed milk to her perfumed sheep and goats.

While the cottage did provide a diversion for the queen and a rustic ambience to Versailles, it also had its more serious side, functioning as a real farm that provided dairy products and other produce for the royal table. It was modeled on a similar farm built by the Prince de Conde and was part of a more widespread attempt by France's aristocracy to experiment with more modern agricultural techniques along the lines advocated by reformers, known as the Physiocrats.

Social Classes in Pre-revolutionary France



A Sans Culottes woman as portrayed by Jacques Louis David

At the time of the revolution France had a population estimated at 28 million. Of those, 130,000 (0.5%) belonged to the First Estate (clergy) and 400,000 (1.5%) were in the Second Estate (nobles). Together, those two classes owned about 40% of France's land, twenty times

more than their rightful share if the land were evenly distributed. However, that land wasn't even fairly distributed within those classes, with there being a few fabulously wealthy clergy and nobles and a preponderance of poor to moderately well-off nobles and very poor parish priests.

The other 98% of the population, the Third Estate (those who worked) was further divided into a number of sub-groupings, each of which tried to maintain its status in the pecking order above at least some of the others. At the top, and in some cases wealthier than the richest nobles and clergy, were the bourgeoisie: rich landowners, bankers, and officials who still technically ranked below the nobles and clergy. Naturally, their ambition was to be accepted into the ranks of the higher nobility, who in turn tried to exclude them from their ranks in the spirit of the meanest high school teenagers. One common story was of the bourgeoisie woman invited to a nobles' dinner party, only to be sent to the kitchen to eat with the servants. The most common way to crack the ranks of the nobility was to buy offices and titles, which over 50,000 members of the Third Estate had done by the Revolution.

Next in line were the *petit bourgeoisie*: upper middle class professionals such as doctors, professors, and lawyers. They were educated, had read their Locke and Rousseau, and were especially anxious for change. Maximilien Robespierre, Georges Jacques Danton, Camille Desmoulins, and Jean Paul Marat were all lawyers from this group who would play prominent roles in the Revolution. They were also prime examples of the idea that revolutions are started by those who already have something and want more.

After the *petit bourgeoisie* came the *sans culottes*, basically the class of poor urban laborers, craftsmen, and shopkeepers. Their name literally meant "without knee-breeches", the fashionable short pants worn by the more well-to-do who could afford silk stockings to complement them. Instead, the *sans culottes* wore long trousers, which came to symbolize the

radical democratic ideals they stood for. They provided the "cannon fodder" of the revolution and exerted influence over its events far out of proportion to their numbers, probably representing only about 10% of France's population. Within their ranks the *sans culottes* had their own pecking order. At the top were skilled craftsmen, in particular furniture makers, while at the bottom were common laborers, most notably bakers' assistants, who were described by one contemporary as a "wild and savage breed of cavemen."

Then there were the other 85% of the population who lived in the countryside: the peasants. While on the whole they had gained their freedom from the two or three days of mandatory labor on their lords' land, they still suffered the burdens and indignities of numerous feudal dues and obligations, including having to pay to use the lords' mills and ovens. They, of course had their own pecking order, led by the 30% or so who owned their own land. The rest of them either rented or share cropped the lands of rich bourgeoisie, clergy, or nobles. Fixed rents were generally considered a better deal, since continuing inflation would gradually lower their value and burden.

The "Cult" of Franklin



Upon his arrival in Paris in December 1776 to solicit aid for the American Revolution, Ben Franklin was hailed as the "Apostle of Liberty". He was already seen as sort of a saint for his invention of the lightning rod. In addition Parisians saw his simple life style of living in a modest house outside Paris and wearing a trapper's fur hat instead of a powdered wig as a perfect example of how the colonists had attained a state of natural grace, combining the

best of European culture with living close to nature. Of course Franklin, who had become the object of a virtual cult, did nothing to correct the French public's perception of the colonists.

Prior to, Diderot's Encyclopedia listed ringing church bells as the preferred way to dispel electrical storms, which led to numerous deaths of bell ringers hanging on to ropes attached to the highest piece of metal in town. Thanks to the success of Franklin's lightning rod, Diderot changed the encyclopedia, advising readers to use lightning rods to divert dangerous lightning strikes. However, when a man in St Omer set up such a lightning rod in 1780, his neighbors sued him to take it down, thinking it would have the same effect as ringing church bells. The lawyer who successfully defended him was Maximilien Robespierre, while the prosecuting lawyer was Jean Paul Marat, both of whom would emerge as leaders of the Revolution.

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ANALYZING THE FRENCH REVOLUTION AND REVOLUTIONS IN GENERAL

Introduction. When analyzing the French revolution and revolutions in general, there are several recurring aspects we should keep in mind. For one thing, revolutions tend to develop like a fever that starts mildly, but worsens progressively until it reaches "fever pitch" and then breaks. This cycle may recur several times before matters finally are resolved. A second theory is that revolutions start out rebelling against an absolutist or arbitrary power and end up setting up another arbitrary power in its place. The French Revolution certainly fits into both of these patterns. Finally, the revolutions that succeed do so because the ruling regimes are too weak willed to crush the opposition early before matters get out of hand. That was the case with England in the 1640's, Russia in 1917, and certainly with France in 1789. However, even a corrupt and decaying government, is if it acts decisively at the start, can usually crush a revolution before it can spread and grow.

The French Revolution. All this makes sense when one considers that a revolution is against an order that people have come to depend on over a long time. Most people, however dissatisfied, are still reluctant to get rid of that "security blanket" and take their chances with something new and untried. Therefore, successful revolutions, like fevers, start off small and moderate. This has its good and bad points. For one thing, their moderation makes them seem safer to more people and does not invite a severe crackdown by the authorities. In fact, at this early stage, a revolution may seem more like a reform movement than a revolution. That was largely the case with the very moderate National Assembly that took power in 1789.

However, the very moderation that makes a new regime such as the National Assembly so widely acceptable also creates problems in a couple ways. First of all, in order to seem legitimate, the government feels it must hang onto many of the very policies and symbols that had triggered the revolution in the first place. In the National Assembly's case, it was keeping the king as a figurehead and honoring his debt. In the Russian

Revolution it was keeping Russia in the First World War. In both cases, these policies, while making the new governments look more legitimate, also severely undercut their power. Second, the new regime's moderate policies keep it from taking the drastic measures necessary to solve the problems that led to revolution in the first place, since that would seem to betray the principles of the revolution. Despite these shortcomings, the new regime leads to high expectations that it will solve the nation's problems.

However, a major problem the new regime faces is that the transition to a new government will cause a good deal more confusion and turmoil before it starts turning things around. The new regime's failure to solve the nation's problems quickly just adds to the frustration of people who expect a quick fix to the country's problems and do not understand that solutions to such deeply rooted problems take time. This leads to a vicious cycle that will drive the revolution to a crisis stage.

First of all, more radical elements will exploit the government's problems and weaknesses in order to seize power. In France those "radicals" were the Girondins, who were still relatively moderate. They in turn found themselves faced with many of the same problems the original National Assembly had as well as high expectations that they would solve them. Unfortunately, the more radical the revolution gets, the more alarmed neighboring countries become about the prospects of the revolution spreading. Also the more turbulent the revolution, the more tempting it might be for outside powers to intervene for their own greedy purposes. This results in the other countries ganging up against the revolutionary country, as happened to France in 1792. Naturally, internal anarchy makes the revolutionary regime ill prepared for war and it starts losing. This creates more internal turmoil, giving a new group of radicals the opportunity to gain support and seize control, which is what the Jacobins did in France. This feeds back into alarming foreign powers who increase outside pressure on the revolution, thus triggering more confusion and turmoil, and so on.

At some point, this mounting feedback between internal anarchy and military defeat leads to three things. First of all, the revolution reaches a crisis stage where someone has to take firm control of

affairs if the nation and revolution are going to survive. In the French Revolution, the Jacobins organized France into what was in essence a police state under the "reign of terror". However these measures, including a universal draft that led to huge armies by the standards of the day, did provide the internal order and productivity necessary to support France's armies.

However, the revolution has also unleashed two other factors that will help save it. One of these consists of new ideas and symbols, in particular nationalism, which inspired the French people to fight, sometimes with inspired fury, for a nation they now saw as their own, not the king's. Finally, the revolution freed the French to think in innovative ways, especially in the form of new military tactics introduced by a new generation of officers who had taken the place of the departed nobles. This combination of nationalism, new military tactics, and police state measures saved France in the crisis of 1793-94. But the revolution was not finished yet.

As stated above revolutions tend to go from arbitrary power to arbitrary power. This happened with Cromwell's military dictatorship in the English Revolution and with Lenin's dictatorship in Russia. It also happened in France. With the passing of the crisis of 1793-94 there was a backlash against the radical Jacobins and their reign of terror. A more moderate government, the Directory, took over and found many of the old problems (e.g., food shortages and inflation) re-emerging. It also found a new coalition of foreign enemies ranged against it, even more scared of the revolution after its recent, nearly miraculous comeback. In such a situation, the solution lay with the army, much as it did with Cromwell's New Model Army in England and Lenin's Red Army in Russia. Likewise, in France, it was an ambitious young artillery officer, Napoleon Bonaparte, who seized power and established a military dictatorship.

On the surface, it may seem that Napoleon killed the French Revolution and that nothing had been gained. However, one should keep in mind it was powerful revolutionary forces that brought him to the top and gave his army the power to march across and dominate Europe. Napoleon may have tamed the revolution's more chaotic aspects and

stifled its more radical innovations (especially in the way of democracy), but he also consolidated it. He kept and expanded its administrative and economic reforms. He codified into law its principles of social and legal equality for all men. And he shamelessly used the concept of nationalism to inspire his armies in battle. He also provided the stability necessary for economic growth and the further rise of the middle class. And it was the combination of repressing parts of the revolution and fostering others that gave Napoleon and France the power to conquer or dominate nearly all Europe by 1807.

Whether or not he meant to, Napoleon also spread the revolutionary ideals of liberalism and nationalism across Europe where they took root and grew into a force largely responsible for his eventual defeat. Foreign powers armed the masses and invoked the power of their own nationalism to defeat Napoleon by 1815. Long after Napoleon the ideas of the revolution imbedded in the law codes he had imposed upon Europe continued to take root and grow, first in Europe, and then by way of Europe's colonial empires, across the globe. Then it was the turn of non-Europeans to use the powerful ideas of the French Revolution to overthrow European rule in much the same way that Europeans had used those same ideas to overthrow Napoleon. When put into that kind of perspective, one can see what a powerful force the French Revolution has been in modern history.

The Cult of the Nation



Even before the French Revolution, Europeans were conceiving of the nation in personal terms, portraying it as a young and pure woman for which they would willingly fight and die as martyrs, much as early Christians had been martyred for the Church. The French even had a name to further humanize their symbol: Marianne (above).

Below are several quotations from various men of the 1700s expressing this quasi-religious devotion.

“A nation can only regenerate itself in a bath of blood.”—Diderot

“I long to die for such a true cause; I wish to expire on the bed of glory; I wish to perish at my post.”-- Kasimir Pulaski

“We are ready to let ourselves be buried under the ruins of our liberties”—Etienne Claviere, Genevan revolutionary

“Yes, this delightful land which we inhabit and which nature caresses with love is made to be the domain of liberty and happiness...I am French, I am one of thy representatives...Oh, sublime people! Accept the sacrifices of my whole being. Happy is the man who is born in your midst; happier is he who can die for your happiness.”-- Robespierre

The apotheosis (transformation into deities) of heroes of the nation was another major element of the Cult of the Nation, being bestowed on such leaders as Ben Franklin, Voltaire, and George Washington, whose apotheosis is celebrated in the dome of the Capitol building,

Paintings of heroes who died in the nation’s defense were typically portrayed in the same way as Christian martyrs previously had been depicted. Particularly notable was *The Death of Barra* (below) a painting done in 1881 glorifying the legendary death of a 13-year old French boy who died defending Napoleon’s cavalry horses from brigands. Some 500,000 copies of this painting were distributed to French schoolboys to inspire their patriotism



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THE START OF THE FRENCH REVOLUTION (JULY, 1789 JULY, 1790)

Hopes ran high for widespread reforms when Louis XVI called the Estates General to Versailles in the spring of 1789. While Louis' main concern was to get more taxes to cover France's mounting debts, the delegates from the Third Estate (mostly middle class lawyers and businessmen) came with notes (*cahiers*) from their constituents urging such reforms as taxing the clergy and nobles to even the tax burden. However, before these issues could be addressed, a more basic problem arose: voting procedure.

The First and Second Estates (clergy and nobles respectively) wanted bloc voting where each estate's votes collectively counted as one vote. This would give the nobles and clergy two votes to one for the Third Estate (representing the middle and lower classes who comprised 98% of France's population). Therefore, the Third Estate, whose delegates equaled the combined number of noble and clergy delegates, wanted one vote per delegate. Since a number of liberal clergy and nobles would probably vote with the Third Estate, this would give the Third Estate an effective majority of votes.

The decision belonged to Louis, whose weak and indecisive nature let matters get out of control. On June 17, the Third Estate, seeing the king's indecision, put pressure on him by withdrawing along with many poor delegates from the clergy and declared themselves the National Assembly with the exclusive right to grant taxes. When Louis locked them out of the Assembly Chamber, they withdrew to an indoor tennis court and took what became known as the Tennis Court Oath, vowing never to separate until they had formed a constitution. Somehow, a meeting about taxes had turned into a movement to form a new government. On June 27, Louis gave in and ordered the First and Second Estates to merge with the National Assembly. The Revolution had begun.

Two weeks later, on July 10, Louis, under pressure this time from the nobles, ordered troops to surround Paris and Versailles. The next day he fired a popular finance minister, Neckar, who had advocated taxing the nobles. These acts, plus continued food shortages triggered demonstrations

in Paris that culminated in the storming of the Bastille (7/14/1789), an old prison with so little value that Louis himself had plans for tearing it down. Despite this, the Bastille was a symbol of oppression and its storming has been celebrated ever since as France's Independence Day.

All across France the Bastille's fall touched off the Great Fear, waves of violence in which armed bands of peasants killed nobles and royal officials, burned chateaus, and destroyed records of feudal obligations. This created several effects. First, concerned property owners in cities throughout France took the lead from Paris and formed their own National Guard units to protect themselves and their property. As a result, France now had two armies: the king's royal army and the revolution's National Guard. Also, the mounting violence and chaos started a wave of nobles emigrating to other countries. Successive waves of emigration would bring stories of ever mounting turmoil in France that would stir up foreign fears, hostility, and eventually full scale military attempts to overthrow the revolution. The resulting wars would rage across Europe for a quarter century.

Finally, fear of violence also seems to have affected the National Assembly. On the night of August 4, 1789, nobles and clergy surrendered their feudal rights and privileges in a remarkable show of generosity (or fear). In one fell swoop, feudalism had been abolished in France, although the final draft of the document did give compensation to the nobles and clergy and delayed dismantling the feudal order.

In much the same spirit, the National Assembly issued the "Declaration of Rights of Man and Citizen" (8/27/1789). This remarkable document declared for all men, not just Frenchmen, the basic ideals of the revolution: liberalism (the belief in civil and political rights and liberties for all men) and nationalism (the belief that a people united by a common language and culture should control its own destiny). These two principles have proven to be two of the most powerful ideas in modern history.

Center stage now moved back to the Paris mob of laborers and small shopkeepers, known popularly as the *sans culottes* from their wearing long pants rather than the more fashionable short breeches

(culottes) of the upper class. Partly inspired by the Great Fear and the acts of the National Assembly, but even more by continued food shortages, they marched on Versailles and brought the king and National Assembly back to Paris to ensure they would relieve the suffering of the urban poor. From this point on, the *sans culottes* would exact an ever more powerful and radical influence on the French Revolution, a power and influence far out of proportion to their numbers.

However, the Revolution at this point was still a fairly mild and civilized affair controlled by moderate middle class delegates. It was the enlightened ideas of such philosophes as Rousseau and Voltaire plus the growing need for reforms, not pressure from the *sans culottes*, that mainly influenced the constitutional monarchy they established in July, 1790. Power mostly resided in the National Assembly, with the king having only a weak temporary veto on its actions. In order to weaken old feudal loyalties, France was broken up into 83 new provinces known as *departements*, the basis of France's administration to this day. Jury trials were established, torture was outlawed, and a more humane form of execution, the guillotine, was introduced. Internal tolls were abolished, and a standard system of weights and measures, the metric system, came into use. The new constitution definitely had a narrow middle class bias, as seen by its measures to improve trade plus its property qualifications for voting that shut out all but 4,000,000 Frenchmen from full citizenship. It was a combination of the new government's more progressive measures and shortcomings that would lead to more radical reforms.

One problem the National Assembly did not solve was the huge royal debt that had started the revolution in the first place. Since the king was kept as constitutional figurehead of the government in order to make it look legitimate, the National Assembly could not repudiate the royal debt and still seem credible. Therefore, it came up with one of the more innovative policies of the revolution: confiscation of Church lands, the value of which would back up government bonds called *assignats*. The National Assembly originally sold 400,000,000 francs worth of *assignats* to pay off its most urgent debts.

Unfortunately, many people saw the *assignats* as money and used them rather than hard cash to pay their taxes. As a result, the Government, finding itself still in need of cash, issued more *assignats* and the cycle started all over. There were two main results of the government's Church policies. First of all, the flood of *assignats* triggered an inflationary cycle that destabilized the French economy and political structure. By the end of the revolution, the *assignats* were only worth 1% of their face value. Second, many people were angry over the state's control of the Church that extended to electing priests and making them swear a loyalty oath to France. Both of these would combine to unleash forces making the revolution more radical and violent.

Dress Codes and other Annoyances



Sometimes it's the little irritants in life, like dress codes, that lead to conflict. Among other things, Third estate deputies resented restrictions in the fanciness and color of the clothes that they could wear (black) compared to the clergy's vestments and the nobles' silk fabrics, swords, cloth-of-gold waistcoats, and white plumed hats. In addition, the Third Estate was usually not even allowed to meet in the same room as the other two estates.

Or, if there were a common assembly, such as opened the Estates General on May 4, 1789, they had to wait until the First and Second Estate members had entered and sat down to the left and right of the podium before they could enter and sit in the back. When the king entered everyone would stand and remove their hats until the king had been seated. Then the nobles and clergy could sit and replace their hats while the Third Estate remained standing for some time. In a sense, the first act of the Revolution was when the Third Estate sat at the same time as the other two estates. It was probably a good thing they did, because the initial meeting of the Estates General was so long that Neckar needed help finishing his own three hour long speech.

The King



Louis XVI was just the wrong person in the wrong place at the wrong time. He wasn't evil, even being a devoted family man. But he wasn't much of a king either. Seen as being fat, dull, and stupid, he was the unwitting butt of jokes in his own court. He was so nearsighted that he couldn't recognize anyone more than three paces away. Instead of a kingly gait, he shambled along like a peasant behind a plow. Much more than ruling, he was interested in locksmithing and probably would have been more content if he had been born a simple locksmith.

But Louis' real passion was hunting and he considered a day without shooting a stag as a day lost. Yet he reportedly was too lazy for the chase and would have deer driven by his window where he could shoot them. He was also an obsessive list keeper and during his reign (1774-89) he claimed to have killed 189,251 game and 1274 stags. On July 14, 1789, the day the Bastille fell, he entered one word in his diary: "Nothing," referring to the number of animals he killed that day.

Like Louis XIV, he had a huge appetite, so he was fat, but also quite strong, sort of a gentle giant. A cartoon of the time showed Henry IV meeting his descendant, Louis XVI transformed into a pig wallowing in a wine barrel.



He was also reluctant to order the execution of humans. As a result, when he ordered the Swiss Guards to stop firing against the mob attacking

his palace, he was captured and eventually executed. Worst of all, especially for him, Louis was terminally indecisive letting matters get out of control so that even a simple squabble over voting procedure would lead to revolution and his overthrow.

The Queen



Marie Antoinette was the youngest daughter of the Austrian Empress, Maria Theresa. Although spoiled and somewhat flighty, she was hardly the monster that public opinion and later historians made her out to be.

However, Louis' indecisiveness, her foreign birth, and traditional prejudice against women in power (or perceived to be in power) led people to believe she was a spendthrift misleading the king and France to ruin. Although hardly a saint, she also wasn't the witch of popular imagination.

In fact the court was trying to tone down its image to keep in line with the late Enlightenment's sensitivity to nature and the simple life. Therefore, the official public image we get of Marie Antoinette through the brush of her official court portrait artist, Elizabeth Vigée-Le Brun, is one of a devoted mother instead of a decadent queen.

Unfortunately for Marie, the seclusion of court life gave the French public little opportunity to see this side of her. Only recently have historians begun to reconstruct a more accurate portrayal of this woman.

The First Hot Air Balloon Flight



In place of high society parties, Versailles was host to more events of public interest. Probably the most notable of these was one of the first hot air balloon flights. The king was so concerned about the safety of the balloon's inventors, Joseph and Jacques Montgolfier, two paper mill owners, he wouldn't let them fly with the balloon. Instead, the first passengers were a rooster, a sheep, and a duck.

The Montgolfiers did perform the first manned air balloon flight (above) and the first hydrogen balloon flight, also in 1783. All these events drew huge crowds from Paris and other surrounding towns. The first flight, on June 4, 1783, ascended 6,562 feet in the air.

Not that everyone was thrilled. Peasants, not aware of these balloon achievements, attacked the balloons when they landed in their midst, figuring it must be some sort of alien invasion.

The Revolution Begins: the Tennis Court Oath



On June 17, the Third Estate, seeing the king's indecision over the voting issue, put pressure on him by withdrawing along with many poor delegates from the clergy and, in the spirit of Rousseau, declaring themselves the National Assembly with the exclusive right to grant taxes, since only they paid them. When Louis (an accomplished locksmith) locked them out of the Assembly Chamber, they withdrew to an indoor tennis court. After a day of trying to organize

and get over 500 delegates to agree on one common statement (a remarkable accomplishment in its own right), they took what became known as the Tennis Court Oath, vowing never to separate until they had formed a constitution. It was immortalized in Jacques Louis David's painting (above)

Somehow, a meeting about taxes had turned into a movement to form a new government. On June 27, Louis gave in and ordered the First and Second Estates to merge with the National Assembly. The Revolution had begun.

On June 22, 1789 Louis called everyone together and announced reforms (maybe even taxing the nobles). He ended by "asserting" his royal authority and then left, followed by clergy & nobles. However, the Third Estate refused to leave.

When informed of this, the king sent troops to clear out the protestors. However, joining the Third Estate were 47 nobles sympathetic to their demands. Since custom demanded that nobles at Versailles wear swords, their presence and the threat of violence convinced Louis to let the Third Estate stay.

The scene now shifted to Paris.

Paris before the Revolution



If one city epitomized the 18th century, it was Paris. With a population of 600,000 crammed into an area of six or seven square miles, it presented sharp contrasts between the luxury of the rich and the abject poverty of most people. Being so big by the standards of the day, it struck visitors as almost another planet.

One prominent feature of the city was its fourteen bridges. The busiest and most populous bridge was the Pont Neuf which had 178 stalls and shops where you could get anything money could buy. That also made it very dangerous at night, so the stalls and shops were destroyed in 1756. The Pont Notre Dame had 68 three-story buildings, including 14 goldsmith shops. Those were torn down for safety in 1786. Along the right bank the Seine, one could find more luxury marts.

Population was especially dense in the center of the city on the Ile de la Cite, and in surrounding areas. Living conditions for workers here were particularly bad, with one room for both living and working. There was also the Cour des Miracles behind a cemetery, where, after a hard day of begging, fraudulent beggars would remove their disguises and emerge transformed as if by miracle.

The city was also crowded with churches and monasteries. There was a series of royal edicts prohibiting construction beyond certain points so the population didn't outgrow the food supply, but Paris continued to grow despite these and also without any central planning, which led to various problems and occasional riots.

The major geographical feature making Paris possible was the Seine River, which allowed the transport of vital supplies of food and building materials. To expedite distribution, different ports were reserved for different goods: stone, wood, fresh fish, grain, wine, etc. Of course, all this was jeopardized in times of intense cold, drought, or flood, so such a huge city was especially at the mercy of the forces of nature.

The city's water supply also came from the Seine, which in 1760 supplied sixty fountains, although it needed ten times that number. In response, those who could afford to either dug wells or bought from water carriers. Running water was unknown except to a few very rich and was not even halfway common until 1800.

Streets, were still narrow, winding, dark, and filthy, basically just a maze of alleys and cul-de-

sacs that couldn't handle traffic, commonly leading to fights between two parties each claiming it had rank over the other. There were only two major east-west boulevards and a few more running north-south.

Buildings were asymmetrical and poorly built, causing them to sag, bulge, and sometimes collapse. Because lateral space was so limited, people built up, so that sunlight rarely reached even the windows facing street. A law passed in 1783 mandated the streets to be at least 10 meters wide and building no taller than the width of the street, but no one listened.

Most people walked since coaches and sedan chairs were too expensive. Still, there were too many carriages for the crowded streets, and they often ran people, especially children, down. Many people were of the opinion that life on the streets was depriving children of much needed exercise, leading to bodily deterioration and early deaths.

Besides being crowded and dangerous, Paris' streets had filth everywhere.

Proprietors were supposed to sweep in front of their houses and garbage, which was supposed to be collected daily, instead steadily piled up, attracting vermin of every kind and producing astounding odors. Adding to the smell were open burial pits, an estimated 2,000 decomposing bodies a year, and blood running out the doors of butcher shops and horse skinning establishment into the street gutters, which were just open trenches in the middle of the streets. Another sanitary problem and hazard was ordinary household waste thrown from chamber pots with alarming frequency. Passing police patrols were popular targets. In response, wide brimmed hats, thick boots, and walking to the outside to protect a lady against filth splashing up from the street became customary.

Some streets did have certain social and professional distinctions, but neighborhoods and houses typically had various classes mixed in, social distinction determining the story one lived on: the higher the story, the lower the status and likelihood of escaping a fire.

Getting lost on Paris' streets was another major problem, so ten-foot metal signposts were set up in 1728... and quickly knocked down or stolen by cranky Parisians. So street signs were engraved into buildings' cornerstones. In 1775 buildings were numbered and reflecting oil street lamps were put in to replace the older and more cumbersome candlelit lanterns. By 1789, the city had 3528 lampposts, which proved convenient for lynching. The first sidewalks were also installed in 1789, but that didn't stop the revolution.

The Bastille (July 14, 1789)



On July 10, Louis, under pressure this time from the nobles, ordered troops to surround Paris and Versailles and the next day fired the popular finance minister, Necker. These acts, plus continued food shortages, triggered demonstrations in Paris.

In order to protect their property from the growing turmoil, Parisians formed armed patrols that "would spring up across France's cities and become its revolutionary army, the National Guard.

Adding to the hysteria were radical leaders such as Camille Demoulin who stood on a café table and stirred up growing fears of royal troops attacking Paris and the National Assembly.



On July 14, the *sans culottes* made their move.

The initial target for the crowd of about 8,000 was the Hotel Invalides, which had 30,000 muskets, but no powder. So they moved on to the Bastille, an old prison of so little value that Louis himself had plans for tearing it down. However, along with being a symbol of government repression, it had 30,000 pounds of gunpowder stashed there two days earlier. It also was supposedly full of political prisoners waiting to be freed, always a popular issue in such times.

After milling around for a while in the July heat, which just made the *sans culottes* hotter, hungrier, thirstier and madder, someone cut the chain to the drawbridge of the outer curtain, which fell on a fellow demonstrator and killed him. As the crowd stormed in, the garrison opened fire, killing 94 people.

After a while, De Launay, the Bastille's commander, sent out a note threatening to blow up a large part of the city along with himself, the Bastille, and his garrison, something his men weren't too wild about. For whatever reason, they negotiated a surrender and safe conduct for the garrison.



Despite the promise of a safe conduct in return for surrendering the Bastille, its commander, De Launay (left), and 6 other soldiers were beheaded by the mob, their heads then carried on pikes across the city.

Caesar's return. Despite all the fuss about political prisoners being held in the Bastille, the mob forgot to free them until later that night. By that time, the man to whom the keys to the prison had been surrendered had gone home, so the crowd had to batter down the doors, finding

only seven prisoners, none of whom could be counted as “political”.

Four of the “political” prisoners were in there for forgery, one for debauchery, and one thought he was both Caesar and God. When the sans culottes freed him and carried him in triumph through the streets, he must have thought he was enjoying a Roman triumphal march with all the adoring Roman citizens cheering him for conquering Gaul (aka France) and massacring or enslaving its inhabitants.

Inspired by the storming of the Bastille earlier that day, people on the outskirts of Paris attacked, sacked, and burned the royal customs barriers that taxed any goods or produce coming into the city. Interestingly, the Parisian women at one station paid what they considered a fair price for the food instead of stealing it.

Two days after its storming, the Bastille was demolished, its bricks being turned into miniature models of the old fortress and sold as souvenirs.



On July 17, Louis came to Paris where crowds cheered him as he toasted the Revolution and donned the revolutionary Phrygian cap worn by the Sans Culottes. These hats were derived from liberty caps given by Romans to freed slaves. The red, white, and blue cockade on the side represented Paris (red and blue) and the Bourbon dynasty (white). Liberty caps could also be seen atop every liberty tree and flagpole, during the Revolution.

The Great Fear and End of the Feudal Order (Summer, 1789)



The Great Fear that swept through much of the French countryside in the months following the fall of the Bastille. It was a paranoid and hysterical reaction to rumors that the nobles and Queen were going to sabotage the Revolution.

Poor communications and the absence of hard fact led to wild rumors spreading across France. Even a cloud of dust stirred up by cattle coming in from the fields could raise an alarm across the countryside that armies of brigands hired by the nobles were coming to attack the peasants.

Similarly, even sunsets were mistaken for burning villages. Peasants would stand guard over their fields against any counter-revolutionaries who might try to sabotage the crops

One of the more bizarre rumors during the Great Fear was that the queen was plotting to blow up the National Assembly, sneaking the gunpowder in under her skirts. That would require remarkably big skirts or the invention of C4 explosives.

The violence finally subsided when it was time to harvest the crops. Revolutions are fine, but you still have to eat.

The end of feudalism on the night of August 4, 1789 was brought on by a combination of fear, altruism, and even jealousy between the first two estates. It started with rich liberal nobles who could afford to lose feudal dues. Then a bishop denounced the nobles’ hunting rights, inspiring a duke to call for the end of tithes, pluralism, and other church privileges. Caught up in the moment, various nobles voluntarily gave up the

privileges of their own offices, making them open to merit. Others caught the fever and by 2 AM had swept away the entire feudal order in a fit of revolutionary fervor (and Great Fear).

One can imagine the hangover of regret the next day as nobles and clergy awoke to the realization that they had thrown away all their hereditary rights. In addition, their fellow nobles and clergy might not be overjoyed at the news. Therefore, they tried to soften the blow by making the peasants pay compensation to their lords for the lost labor and privileges. However, the momentum of violence in the countryside propelled peasants to claim equal rights, refuse to work for the nobles, and seize land as their own.

The March of the Heroines (10/5-6/ 1789)



Center stage now moved back to Paris. Although the harvest had been good, it had not reached Paris yet. So the Parisian women took the lead and marched on Versailles to demand food. Women were often at the front of demonstrations, since the king's troops were less likely to fire on them. But these weren't dainty little ladies. When they marched on Versailles (ten miles in the rain, no less), they killed and beheaded guards who tried to prevent their entrance.

Once there, they stormed into the gallery of the Hall of the Constitution at Versailles where the National Assembly was meeting. The next day they broke into the palace and headed for the queen's quarters, tracking her to the king's quarters, where they had the royal family cornered for nearly an hour before being convinced to leave by the king promising to return to Paris with them.

Therefore, a procession of the Heroines, now accompanied by 15,000 National Guardsmen, escorted Louis "the baker," his family, and the National Assembly from Versailles to Paris to ensure they would relieve the suffering of the urban poor. From this point on, the *sans culottes* would exact an ever more powerful and radical influence on the French Revolution, a power and influence far out of proportion to their numbers.

France Goes Metric, but America Doesn't

In 1790, the French Academy determined to simplify weights and measures in France, declaring it should be one ten millionth the measure of the distance from the equator to the North Pole along the Paris meridian. After that, all they had to do was make that measurement. Amazingly, when Jean Delambre and Pierre Méchain completed their survey in 1799, they were only about 0.023% off in their measurement. The next year, France officially went metric.

Currently, the U.S., Liberia, and Myanmar stand alone in the battle against global metric tyranny. Not that there haven't been efforts in the U.S. Most notably, Congress passed the Metric Conversion Act of 1975 "to coordinate and plan the increasing use of the metric system in the United States". Metrication was not mandated however, and the U.S. Metric Board (USMB) lacked the power to enforce metrication. Despite public service announcements and road signs listing both miles and kilometers, the USMB had no real backing from Congress and was disbanded in 1982.

However, the Omnibus Trade and Competitiveness Act of 1988 mandated use of the metric system by government agencies, as well as aiding businesses in the conversion. The military generally uses the metric system since it often has to coordinate actions with other militaries.

In 1998, the Mars Climate Orbiter was lost because, despite requirements that all sub-contractors use the metric system, Lockheed

Martin, provided thruster performance data to the team in pound force seconds instead of newton seconds. As a result, instead of orbiting at a height of 150 kilometers, it descended to 57 kilometers and burned up in the Martian atmosphere.

Priests as Civil Servants



Figure of a clergyman trapped under the Phrygian cap, symbol of the Revolution

The Civil Constitution of the Clergy was the document requiring France's clergy, now state employees, to swear an oath to France that superseded their oath to the Church. Most clergy (130 of 134 bishops and 46,000 of 70,000 priests) refused to take the oath. Those taking the oath were referred to as juring priests, those refusing as non-juring. Some parishes had both juring and non-juring priests. People more loyal to the state would attend masses held by juring priests. Those more devoted to the Church went to masses held by non-juring priests.

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THE REVOLUTION HEATS UP (JULY, 1790-- SEPTEMBER, 1792)

At the first annual celebration of the revolution 50,000 National Guardsmen from all over France and 300,000 Parisians witnessed the king taking an oath of loyalty to the new constitution. However, Louis was not loyal to the revolution since it severely restricted his power and even prevented him from leaving Paris to attend Mass in the country. On June 20, 1791, the king tried to escape to the Austrian Netherlands and seek refuge with the Hapsburgs. Unfortunately for Louis, everything went wrong. Detachments of royal troops failed to meet him in time. Then, despite Louis' disguise as a German servant, a postmaster at Varennes recognized him from his portrait on the assignats. The postmaster called out the National Guard who captured Louis and escorted him back to Paris. Whatever faith most people may have had in their king before was now shattered by his attempted betrayal of the revolution.

Louis' foiled flight was a turning point in the revolution. First, it further alarmed foreign royalty about the mounting revolutionary threat in France. Second, it widened the rift between the radicals who wanted a republic (democracy without a king) and the bourgeoisie (upper middle class) who wanted to keep the king as figurehead to maintain the moderate respectable image of the revolution. To protect Louis and their position, they claimed the king had not fled but had been kidnapped. At the same time they suspended Louis' powers. But the damage had been done. In July, a demonstration of 50,000 Parisians demanding Louis's abdication turned violent and the National Guard killed 50 demonstrators. The revolution was starting to fragment.

On September 30, 1791 the National Assembly dissolved itself after over two years of leading the revolution. One of its last acts was to exclude its members from re-election to the new National Assembly, thus bringing in new blood, but also eliminating many experienced leaders from participation as well.

The elections of 1791 showed how fragmented the revolution was becoming. On the left wing (sitting to the left of the speaker's platform in the assembly) were the radicals led by the Jacobins who wanted a more strongly centralized republic. Next to them and controlling the most votes were the Girondins who also favored a republic, but with more provincial freedom from central control in Paris. Just to the right of them were moderates who were happy with their gains from the revolution and resisted further change. To the far right were the monarchists who wanted to restore the feudal order and the king's power. These were not so much organized political parties as they were loosely organized networks of political clubs united by a common political philosophy.

While the Girondins had been able to exploit the moderates' problems in order to gain power, they soon found themselves faced with the old issues of food shortages, inflation, and debt. A new problem was also surfacing that would soon overshadow the rest: war. Ironically, this was the one issue most people agreed on, but for widely different reasons. Louis and the monarchists saw war as a chance for Austria and Prussia to crush the revolution and restore the king to power. The Girondins saw it as an opportunity to discredit Louis and spread the revolution across Europe. War could also divert attention from France's internal problems. Many Frenchmen saw war as a means of preventing nobles from returning to reclaim their lands and feudal rights. Austria and Prussia wanted war to prevent the revolution from spreading outside of France. With everyone in such agreement, France declared war on Austria and Prussia (4/20/1792). This triggered a series of wars between France and the rest of Europe that would last, with few breaks, for 23 years.

The government was optimistic about the war. It should have known better. The combination of old and new debts plus inflation triggered by the *assignats* had left the treasury in shambles. Likewise, the incomplete transition from the royalist army to a national one had left the army in disarray. Royalist and National Guard units operated separately from one another. Noble officers had either fled or were of suspect

loyalty. And the troops, while enthusiastic, were poorly trained, supplied, and led.

The result was a total fiasco as French troops fled at the first sight of the enemy. Charges of treason flew everywhere, especially against Louis, who probably was plotting with the enemy. An ultimatum ordering the French not to harm the king seemed to confirm suspicions of his guilt. On August 10, 1792, 9000 Parisians and National Guard troops stormed Louis' palace of the Tuileries. Louis, hating the sight of his own people's blood being shed, ordered his Swiss Guards to cease-fire. The mob massacred the guard, looted the palace, and turned Louis over to the Paris Commune who threw him into jail. The National Assembly, under heavy pressure from the *sans culottes*, agreed to new elections for a convention to form a new constitution. The monarchy was abolished and replaced by The First Republic, which would see the revolution through its trial by fire.

Louis' Flight to Varennes



Since Marie Antoinette was from Austria, Louis and his family were to travel disguised as servants of a German baroness to the Austrian Netherlands. Helping them was Count Hans Axel von Fersen, most likely the queen's lover, who arranged for a coach to help them escape. This is where things started going wrong, because Marie Antoinette insisted on a more luxurious coach so she could take the "minimum" two maidservants. They found such a coach, but it was much slower than the original one Fersen had found. Then the queen had to go shopping for new clothes and perfume, which delayed the trip even more.

They finally slipped out through an unguarded gate in the Tuileries palace and were soon rolling toward a rendezvous with a detachment of royal cavalry who would escort

them to the border. Of course, before rapid communications like the telegraph or telephone, trying to coordinate travel schedules from two distant starting points was virtually impossible. Thus, the inevitable delays occurred, with the cavalry arriving at the rendezvous point well ahead of Louis' party. The sight of a large number of cavalry just hanging around town aroused suspicion among the locals as to why they were there. They claimed they were waiting for a payroll train, but it had gone through long before. Not knowing when or even if Louis would arrive, the cavalry finally had to depart, leaving the king without protection against any random son of a postmaster armed with a portrait of the king.

That son of a postmaster was a man named Drouet who, unfortunately for Louis, was a staunch supporter of the revolution, had been to Paris to celebrate the fall of the Bastille, and therefore recognized Louis from his portrait on an *assignats* note. Just to make sure, he brought a judge who had served Louis at Versailles to positively identify him. When the judge knelt to acknowledge his king, the game was up and Louis was arrested at Varennes, just thirty miles short of his destination.

The royalist troops did come back to rescue the king, but were delayed nearly an hour when one of them fell into a hole in the forest. When they finally arrived, Drouet, backed up by a large number of national guardsmen stuck a pistol in an officer's chest, convincing the troops to surrender. (Drouet later revealed that the gun wasn't loaded.)

While it took one day to reach Varennes, it took four to return the king to Paris, as he was escorted by thousands of national guardsmen proudly showing off their prisoner. A strange funereal silence met Louis as he entered the city, indicating any previous sympathy and support he had before was now mostly gone.

On July 17, 1791 some 50,000 Parisians assembled, with 6,000 signing a petition

calling for the king's abdication. When the Marquis de Lafayette brought out the National Guard, the mob started throwing stones, and the troops opened fire, killing fifty men and women.

The Revolution was starting to eat its own children.

Louis "real" intended victim. For some reason Robespierre, the rising Jacobin and future leader during the reign of terror, was convinced that Louis' attempted flight was a plot aimed to kill him. The National Assembly wasn't convinced.



The National Assembly met in the old royal riding school with spectators perched above the speaker's platform in the center and factions of delegates arranged from most radical on the left of the platform to the most conservative on the right. This was the source of our terms right and left wing.

War and the End of the French Monarchy (1792)

The French should have known better than go to war at this time, and a few people, like Robespierre did. The French army was actually two armies poorly mashed into one. One force was the National Guard, poorly armed, led and disciplined militia with little or no military experience.

The other force was the old royalist army, whose morale and discipline had severely slipped in the past two years. Many of its officers, mostly nobles, had fled France, while those that had stayed were under constant suspicion of disloyalty. Aggravating this situation was the practice of charging generals defeated in battle with treason and executing them, not the greatest incentive for continuing with a career in the French army. Adding to

the turmoil was the fact the two parts of the army disliked and distrusted each other.

Despite these problems, war was at first greeted as an opportunity to win glory for France and its revolution, as seen by the young men below marching enthusiastically off to war. Soon, however, the realities of how poorly prepared France was for war became apparent as the French suffered a string of defeats.

The royal family did its best to undermine the revolutionary regime and war effort. Marie Antoinette wrote to her lover, Count von Fersen, asking him to stir up foreign support against the current regime, possibly the only time a queen has asked her boyfriend to declare war on her. Louis used his veto to keep his Swiss Guard, a possible source of support for the invaders, from being disbanded. Similarly, he blocked the movement of 20,000 National guardsmen for the defense of Paris. No wonder the sans culottes decided to storm his palace and overthrow him.

The icing on the cake came after another French defeat, when the Prussian Duke of Brunswick warned the French not to harm Louis or else they would suffer the direst consequences. Given the circumstances, he couldn't have been more effective in getting Louis overthrown and executed. The sans culottes struck on August 10th, 1792.

When they did attack, National Guard units supposedly defending the king had mostly left. Only the king's Swiss Guard provided significant resistance before being overrun (top picture). The mob tore up their red uniforms and made flags of them, which was the origin of red flags symbolizing revolution.



THE REIGN OF TERROR (SEPTEMBER, 1792-OCTOBER, 1795)

Events moved quickly after the fall of the monarchy and quickly got out of hand. For one thing, the weakened National Assembly, still the government until new delegates were elected for the convention, had lost most of its authority to the *sans culottes*. This, combined with growing panic and suspicion of treason with each military defeat, led to large-scale arrests of nobles and non-juring priests (those refusing to take the loyalty oath). Fear of a counter-revolution led by prison inmates triggered the September Massacres (9/2-7/1792) when armed mobs broke into jails, set up makeshift courts to condemn prisoners, and then turned them over to thugs for execution. By the time the September Massacres had swept through Paris and France, between 1200 and 1500 prisoners had been murdered. Only about a quarter of them had originally been jailed on political charges.

Symbolic of the switch from monarchy to republic was a new calendar of twelve months with three 10-day weeks each. It started with Day I, Year I (9/22/1792) and stayed in effect for ten years. This new calendar was largely an attack on the Church and symbolized the revolution's complete break with the past. However, it was quite unpopular with the mass of French people who remained devout Catholics, showing how out of touch with the feelings of most French people the radicals in Paris were becoming.

Another break with the past came with the execution of Louis, whose fate hinged on the growing struggle between the Girondins, who wanted to limit Paris' influence on the revolution, and the radical Jacobins, who supported the *sans culottes* and used them in turn for support and intimidation. The Jacobins' call for putting Louis on trial forced the Girondins into the impossible choice of either giving in to radical pressure to try him or seeming like they were defending a very unpopular king. Louis' correspondence with the enemy sealed his fate as all the delegates voted him guilty of treason, and a narrow majority voted for execution. On January 21, 1793, Louis was executed and over 1200 years of French monarchy came to an end. In the process, the Girondins were quickly losing support to the Jacobins. Mounting

problems of war, inflation, and food shortages would finish them off.

On September 20, 1792, the French Revolutionary armies won their first battle of the war at Valmy against a Prussian army largely preoccupied with the Second Partition of Poland and also ill from eating too many grapes. Inspired by this rather lackluster victory, French armies moved forward and overran Savoy, Nice, the Austrian Netherlands, and Holland. This prompted the National Convention to declare a revolutionary struggle to liberate all people from the tyranny of kings. Naturally, this alarmed kings across Europe and united them in The First Coalition to stop the French radicals. What had been a somewhat half-hearted fight of France against Austria and Prussia, now escalated into total war against practically all of Europe.

The tide of events once again quickly turned against France. Allied armies defeated the French, whose top general, Demouriez, and minister of war defected to the enemy. Meanwhile, western France was rocked by a major revolt of peasants protesting the revolution's church policies and military draft. As enemy armies closed in on France, the economy nearly collapsed. Inflation was rampant and the assignats fell to 50% of their face value. The resulting grain shortages triggered food riots in Paris by the *sans culottes* and the Jacobins, who called for strong price controls. Events were spinning out of control, and with each bit of bad news, the Girondins' position became more dangerous. Finally, on June 2, 1793, a crowd of 80,000 armed *sans culottes* and National Guardsmen overthrew the Girondins. The Jacobins took control and established a dictatorship under the Committee of Public Safety, a group of nine men whose most famous member, Robespierre, symbolized the reign of terror about to unfold.

The Jacobins had their work cut out for them. Rampant inflation and food shortages were wrecking the economy, while France was beset by revolts from within and foreign invasions from without. It was said that Paris and one-fourth of France were fighting three-fourths of France and the rest of Europe. Given these circumstances, the Jacobins assumed dictatorial powers and initiated a number of extraordinary measures to save France.

The government took control of vital resources and production of munitions to ensure adequate military supplies for its armies. Paris alone was producing 1000 muskets a day. Strict wage and price controls were imposed to stifle inflation. Massive forced loans helped finance the effort. Newspapers were strictly controlled to maintain morale. People wore wooden shoes to save leather for French soldiers' shoes. Even scientific research was directed toward the war effort as the famous chemist Lavoisier found a better formula for gunpowder.

The Revolution freed and inspired the French to create powerful new symbols and ideas, in particular nationalism. For the first time in history a people sharing the same language, culture, and government had found a unifying spirit to inspire them in the common defense of their homeland. For this was the France of the French people, not the French king, and that fact motivated the French soldiers to fight with a spirit totally lacking in mercenaries serving merely for money. Nationalism was what allowed these much larger French armies to forage, because desertion was less of a problem or threat to generals who knew their men had a cause to fight for. This, in turn, freed French armies from cumbersome supply lines, making them more mobile despite their numbers.

Probably the most significant changes came in the military realm (covered in FC.105D). For one thing, the crisis of the Revolution forced the Jacobins to institute a universal draft of unmarried men for the army, while married men produced and transported weapons and women made tents and uniforms. This created a huge army compared to the relatively small and expensive mercenary armies that other countries fielded.

However, the draft had importance for French armies that went far beyond numbers. For one thing, the recruits were too numerous and too quickly mobilized to be trained with the strict mechanical discipline and precision of professional armies. Similarly, the huge size of these new armies also complicated the task of supplying them.

Luckily, the powerful new ideas of the Revolution, especially nationalism, meant soldiers were fighting for their own homeland and were less prone to desertion as a result. Therefore, they could be trusted to forage for supplies and return to

camp. This reduced the need for supply lines and increased the speed and mobility of French armies.

French officers, many of whom had been junior officers that had risen through the ranks to command positions left vacant when noble officers had fled France, also had to come up with innovative new tactics and formations to make optimal use of the large armies they commanded. Therefore, they used massed firepower and charging in blocks or columns of men through strategic points of the enemy line. Together, the mobility, new tactics, and spirit of nationalism saved France from the armies of the First Coalition.

Not surprisingly the strict repressive measures used by the Committee of Public Safety were unpopular and met heavy resistance, especially outside of Paris. Therefore, the Jacobins launched the famous Reign of Terror. Special officials, known as Representatives on Mission, went to the army and provinces to maintain the war effort and enforce the government's will with deadly efficiency and the guillotine. They raised money, seized supplies for the army, drafted recruits, cleaned up the army and local governments, crushed revolts, and killed anyone who got in their way. (An estimated 500,000 people died in the Vendean uprising in western France.) Paris especially suffered from the Terror since the Jacobins were caught in a vicious cycle. The more enemies they killed, the more reprisals from the victims' friends and families they feared. This inspired more executions, more fear, and so on. As one observer watching the Jacobins turn on their former allies and devoted revolutionaries put it, the revolution was eating its own children.



Vendean rebels surrender to government forces. Ironically, the biggest issue causing revolts, the draft, also led to their defeat, since few wanted to fight, especially outside their home districts.

By the summer of 1794, the Committee of Public Safety's drastic measures had accomplished their purpose. They had suppressed the revolts, stabilized the economy, and secured France's borders. To many, the end of the crisis should have signaled the end of the government's repressive measures. But the Jacobins were caught up in their own cycle of repression and paranoia that merely intensified the Reign of Terror. Nearly 1400 people fell victim to the guillotine in Paris alone between June and July 1794. The Jacobins, increasingly out of touch with the feelings of most French people outside of Paris, shut down churches or turned them into "temples of reason" for their new Deistic style religion, the Cult of the Supreme Being. Growing fear and dissatisfaction with the Committee of Public Safety's Republic of Virtue finally led to a conspiracy known as the Thermidorean Reaction, which ousted Robespierre and his colleagues (7/28/1794).

The revolution now started to wind down, but its effects did not. The results of the French Revolution can be summarized by the revolutionary motto: "liberty, equality, and brotherhood." Briefly put, liberty referred to the right of all men to live freely with certain guaranteed rights such as free speech and religion. Equality referred to the equality of all men before the law as opposed to the inequities of the old feudal system that the revolution had swept away. Brotherhood (nationalism) referred to the right of a people united by a common language and culture to be autonomous and live under its own laws and government.

In October 1795, a new constitution and government, the Directory, took over, but not without incident. An uprising against the new government threatened it before it even took over. A young artillery officer, Napoleon Bonaparte, was called in to save the day. With his famous "whiff of grapeshot," he saved the new government and launched his own career, which would spread French power across the continent. French power would not last, but the seeds of the revolution's liberal and nationalist ideals that were planted in the process would take root and transform the face of Europe and eventually the world.

The September Massacres (Sept., 1792)



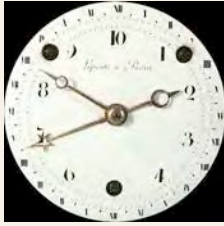
The September Massacres started when a crowd stopped six carriages carrying thirty non-juring priests to prison, hauled them all out and killed them on the spot. Then they started pulling prisoners out of the jail and executing them after quick judgments that were supposed to resemble trials. From September 2nd to 6th, between 1247 & 1368 prisoners were killed this way.

These executions were certainly a brutal event, but they need to be put into context. Despite the Duke of Brunswick's warning that the French would pay dearly for harming the king, they had done just that by storming his palace and locking him up. One can imagine the growing fear as the French army went down in defeat and disintegrated while enemy forces were closing in on Paris. Besides the enemies without, there were also potential enemies within, namely nobles and clergy who opposed the revolution. Thus it was fear, more than brutish human nature, which drove the violence.

Not that there weren't atrocities, such as that told of one executioner who, after withdrawing his sword from a prisoner's chest, reached into the wound, tore out the heart, and put it in his mouth as if to eat it while the crowd cheered him on. Similar scenes reportedly took place during the Cultural Revolution in China in the 1960s.

However, the violence was not totally indiscriminate. The mob did focus on clergy and nobles who were seen as likely collaborators with the enemy. Therefore, the debtors' prison was left alone. There were even trials, of a sort, and some people were even acquitted.

Showing Revolutionary Spirit



A revolutionary clock
converting the day to 10 hours

Revolutionary spirit was displayed in all sorts of ways. Revolutionaries replaced kings, queens, and jacks with revolutionary virtues on playing cards. Parents would name their children after Greek and Roman heroes, while more radical revolutionaries named boys Squitch, Duck, and Dandelion in honor of the peasantry. Girls were named Cow, Carrot, and Rhubarb. There was even serious discussion of legislating the informal use of *tu* (you) in conversation instead of the formal *vous* typically associated with the upper classes.

Metric time. The Revolution's metric calendar also had 10-hour days with minutes and seconds in multiples of 10. There was even a decimal clock in the Convention. At first the days of the week were named after plants, animals, and tools. They were later replaced with numbers.

A close shave. Sometimes, it's the little irritations in life that especially touch us off, such as a scratchy beard. Traditionally, peasants would shave on Sunday, their one free day of the week. However, with the new 10-day decades (i.e., weeks) they only shaved once every 10 days, giving their beards three more days to grow to that scratchy, irritating phase, a constant reminder of another reason to hate the revolution.

The End of the Royal Family (1793)



Louis' trial and execution. Unfortunately for Louis, his enemies did find incriminating correspondence with Austria, leading to his conviction by a vote of 693 to 0. The vote condemning him to death was much closer, with 361 voting for immediate execution, 288 for another sort of punishment, such as prison or exile, and 72 for death, but with a number of reservations or conditions that would delay his fate. On January 21, 1793 Louis was executed and France turned its back on 1200 years of history and a political order that many still believed was divinely ordained. As one person put it: "On that day, everyone walked slowly, and we hardly dared look at one another."

Marie Antoinette met her fate nine months later. Her trial was a grueling 16-hour affair with the foregone conclusion of guilt all along. The main charge was conspiring with foreign powers (which she did), but also committing incest with her 8-year old son (which is less likely).

Getting on the cart that would take her to the guillotine, she remarked how shabby it was, apparently having learned nothing about choosing vehicles since the Varennes episode. Before burying her, the gravediggers took a lunch break, giving Madame Tussaud a chance to do a wax sculpture of her head for her wax museum.

The young royal prince, Louis, would meet an even crueler fate, being beaten to death by his jail-keeper, Simon the Cobbler.



Building a Revolutionary Army



Real Sans Culottes. In 1793 the war effort was faltering badly. Thousands of volunteers, disillusioned by the war, quit after serving their first term, and the French armies dropped from 400,000 to 225,000 men. One problem plaguing morale was an unfair draft that favored the rich who could buy replacements for themselves. The troops were also poorly fed and equipped, many without boots, and some even without pants, having to pin cloaks around themselves. As the radical leader, Georges Jacques Danton, put it upon seeing such soldiers: "Those are real Sans Culottes."

Corruption also hampered the war effort. While civilians wore wooden shoes to save leather for the soldiers' shoes, corrupt contractors used paper for the soles of soldiers' shoes, which wore out almost immediately. Shoemakers then did not differentiate between right and left shoes.

Lazare Carnot (below) was the minister of war whose administrative abilities organized the French revolutionary army into the most effective fighting force of its time. Thanks to his efforts and the Jacobins' drastic measures, the French army grew to 800,000 men.

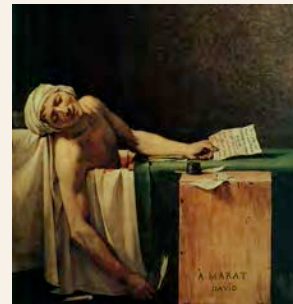
The Amalgame. In 1793, Carnot instituted a system known as the Amalgame, where one old royalist battalion (below left) and two National Guard battalions were combined to make up one regiment. The principle of promotion by merit along with combining experienced troops with less trained ones rapidly trained and developed the French army into Europe's best fighting force.

Cleaning house. At the battle of Hondschoote near Dunkirk (9/8/93), the French general, Houchard proposed retreat, but the Jacobins' Representative on Mission ordered attack and the French won. Houchard and 22 other (mostly noble) officers were then executed for treason. Incidents like this cleared the way for younger officers with new ideas.

Democratization of the ranks. Not every radical reform tried by the Revolution worked, however. Backed by government representatives, troops were encouraged to disobey their officers, with predictably disastrous results. Adding to the chaos was the fact that from 1793-4 the Jacobin government executed 84 generals and dismissed 352 more. By the end of, 1793, nobles made up only 3% of the officer corp. The average age of new generals in the 1790s was just thirty-three.

Cold steel to the extreme. As the French adopted more massed infantry tactics, the minister of war, Joseph Servan de Gerby, had nearly half a million pikes produced for the army. Luckily for the French, the Generals thought the combined firepower and thrust of the musket and bayonet were superior to only pikes.

The Death of Marat



The incident touching off the Terror was the murder of the popular Jacobin leader, Jean-Paul Marat, by the Girondin sympathizer, Charlotte Corday (below). The anger this aroused among the Sans Culottes allowed the Jacobins to seize control of the Committee of Public Safety and institute the Reign of Terror against their enemies. Marat's death was immortalized in a famous painting by Jacques Louis David (above).

Agents of the Terror

In the first months of Jacobin rule, representatives on mission were virtually unrestrained in their use of power, leading to some of the worst atrocities associated with the Terror. In the early months of 1794, the most notorious of the representatives were recalled to Paris. Following are some of the more notorious representatives of mission and their accomplishments:

- Joseph le Bon, when told he was being too merciful for Committee of Public Safety's tastes, "shortened" 542 people in the following weeks. Supposedly, he would mimic the expressions of guillotined victims to amuse his wife at dinner. He himself was "cut short" in 1795
- Jean Baptiste Carrier, considering trials a waste of time, bound prisoners' hands and loaded them onto barges, which he then sank in the Loire R. In four months he disposed of 4000 "undesirables" this way.
- Joseph Fouché, sent to Lyons which had rebelled and been retaken, began a program of vengeance with a mock religious ritual led by a donkey wearing a bishop's mitre and dragging a Bible and crucifix tied to its tail. Fouché then started lining criminals up in front of trenches and mowing them down with cannon fire.

After several hundred of these, he resorted to the more leisurely guillotine. He also defaced the cathedral and destroyed hundreds of beautiful homes in Lyons, which he renamed The Liberated City. Robespierre recalled Fouché for being too brutal, but he escaped punishment, later becoming Napoleon's Minister of Police where he could do some real damage.

A New Religion for the Republic of Virtue



Inspired by such men as the fanatical ex-priest, Joseph Fouché, the Hébertists, a group even more radical than the Jacobins, tried to replace Christianity with their own quasi-Deistic religion called the Cult of Reason, which saw Nature as the priest of the Supreme Being, the universe as his temple and virtue as his worship. They even briefly closed the Catholic Church, putting signs over cemeteries declaring, "Death is an eternal sleep."

The primary purpose of this cult was to provide a moral basis for the utopian Republic of Virtue that was to replace the decadent values of the old regime. Much like the Bolsheviks during the Russian Revolution in 1917, the goal was to create a whole new man as well as world. The logic reconciling the Republic of Virtue with the Reign of Terror was that, if the basis of popular government in times of peace is virtue, in times of revolution, it is virtue and terror. For terror without virtue is tyranny, while virtue without terror is powerless and disastrous.

Figuring the masses would need some sort of visible icon to relate to, they created a Goddess of Reason, portrayed by a live woman to avoid the appearance of idolatry. It was done largely in the hope it could replace the Virgin Mary in people's hearts. It didn't.

Not surprisingly, the Cult of Reason gained little popular support and Robespierre was shocked by its atheistic slant. Therefore, he modified it into the Cult of the Supreme Being, which believed in a more active god and the immortality of the soul, making it a bit less out of touch with popular Catholic beliefs.

Robespierre described the Supreme Being as follows: “He did not create kings to devour the human race. He did not create priests to harness us, like vile animals, to the chariots of kings and to give to the world examples of baseness, pride, perfidy, avarice, debauchery, and falsehood. He created the universe to proclaim His power. He created men to help each other, to love each other mutually, and to attain to happiness by the way of virtue.”

Inaugurating this cult in June 1794 was the Festival of the Supreme Being (above), an event designed by the artist, Jacques-Louis David who even had a fake mountain built for it. After a chorus of blind children sang a hymn to divinity, an effigy of Atheism was burned, only to have a monument to wisdom emerge from its ashes.

Mimicking the Christian Sabbath, the Cult was to be commemorated at the end of each 10-day decade in the revolutionary calendar. Instead of baptizing their children in the name of the Father, Son, and Holy Ghost, many French baptized them in the name of “Liberty, Equality, and Brotherhood,” the motto of the revolution. Other religions were also outlawed, a violation of the principle of freedom of religion, which contributed to the eventual fall of Robespierre and the Jacobins and immediate repudiation of the Cult.

Thermidor and its aftermath (1794-5)



Robespierre who led the Jacobins and the Committee of Public Safety during the Terror. Like Cromwell and Lenin in their respective revolutions, he was a man of simple, almost Spartan, tastes, but a fanatical ideologue, concerned only with carrying out the revolution, no matter what the cost.

The flurry of executions at the height of the Terror claimed some of the revolution’s most illustrious leaders, including the radical leaders Georges-Jacques Danton and Camille Desmoulins. Danton, an extremely popular leader whose face had been trampled by pigs as a child, offered such a powerful and eloquent defense that he could be heard across Seine. Afraid of the trouble he might stir up, the Jacobins had him silenced and quickly executed.

By late July 1794, only 117 of the original 750 members of Convention still attended, the rest either being killed, in hiding, having fled Paris or just avoiding meetings of the Convention. People in general stopped attending executions (normally a popular public entertainment) since they were so commonplace. Similarly, Paris’ social life nearly died as well, since people were afraid of being seen in the wrong place at the wrong time, wherever and whatever that might be that week. A cartoon satirizing the indiscriminate violence of the Terror by showed a forest of guillotines with Robespierre finishing off the only potential victim left, the executioner.



Therefore, when Robespierre left town for a few days, members of the Convention formed a plot to overthrow him and the Jacobins. On July 27, 1794 (Thermidor by the revolutionary calendar) they struck. Robespierre’s right-hand man, Louis de Saint-Just, the so-called Angel of Death was giving a speech when the conspirators pushed him from the podium, denounced Robespierre and called for his arrest. Robespierre and his cohorts fled to the Hotel de Ville where he was arrested. There is still a dispute about whether Robespierre’s shattered jaw (below) came at the hands of the conspirators or from a botched suicide attempt that night. Being declared an outlaw, he was

executed without trial the next day along with 21 of his associates. The Reign of Terror had finally ended in what has been known ever since as the Thermidorean Reaction.



The Thermidorean Reaction led to a more widespread reaction called the "White Terror" where Muscadin, gangs of richer youths armed with metal canes, attacked Jacobins in the street. Meanwhile, in the countryside fanatical gangs calling themselves the "Companions of Jesus" massacred any Jacobins they could find. Much like the September Massacres, they would also empty prisons of suspected terrorists and execute them.

Luckily for France, the war effort was going well, with Prussia and Spain making peace and Holland surrendering in 1795, leaving only Britain and Austria from the First Coalition still fighting France. The aftermath of Thermidor also saw the tight restrictions of Jacobin rule ended and the return of personal liberties. However, this also allowed the return of inflation and financial turmoil. Finally, in October 1795, three years after forming the Convention, a new government, the Directory, took power. Even this transition to power was violent, as a royalist insurrection leading 25,000 people threatened to topple the new government before it even took over. The leaders of the Directory turned to a young artillery officer, Napoleon Bonaparte, who mowed down 2-300 of the rebels and scattered the rest with a "whiff of grapeshot."

No one realized it then, but the future would belong to this young artillery officer.

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THE RESULTS OF THE FRENCH REVOLUTION

Although it would take until 1871 for the French Revolution to play out, it was triggering profound effects in France and the rest of Europe as early as 1789. One touchstone by which to analyze the Revolution's results is its motto: "Liberty, Equality, and Brotherhood. The power of these three ideas would quickly spread to the rest of Europe, especially after Napoleon's final defeat in 1815, and eventually across the globe.

Liberty refers to the basic civil rights we often take for granted as being the natural rights of people everywhere, such as speech, press, assembly, religion, and voting for officials and laws, etc. The last of these, voting, was typically among the last to be extended to all members of society, in particular women.

Equality meant that everyone should be equal before the law, rather than face unjust double standards. At times, some of the more subtle effects of such an idea can magnify across history. This was especially the case with inheritance law in France. Since all men were seen as equal before the law, primogeniture was outlawed, giving all sons equal shares of an inheritance, and even daughters a portion, although less than the sons got. The problem with splitting up family lands into several smaller plots was that repeatedly dividing it into ever-smaller plots would make it impossible for all the heirs to support their families. Therefore, French peasants in the 1800s had a lower birthrate to avoid splitting family lands. This, however, reverberated over the following century in several ways. For one thing, few French people emigrated to places like the Americas compared to other European peoples. Likewise, there were fewer people available for factory work, which slowed France's rate of industrialization. Also, the unification of Germany in 1870 prompted rapid industrialization and population growth that rapidly passed up France in both categories. By 1900 this would generate mounting worries in France about the growing threat of Germany that would help lead to World War I.

Brotherhood (AKA nationalism) was the idea that a people united by a common language; history, culture and geography should have the sovereign

right to choose their own destiny. This would also prove a mixed blessing. On the plus side, nationalism included everyone sharing the traits just mentioned, bringing them into both a larger and more cohesive group. However, it also tended to exclude people not sharing the same nationalistic traits.

Another good news/bad news aspect of nationalism was the competition of the nation state with older institutions, in particular the family and religion, for the loyalty of its citizens. While some argued legalizing divorce and implementing civil marriages and mandatory public education helped nations get past some of the more regressive attitudes and narrow loyalties of the family and religion, the state has had difficulty adequately replacing those institutions in terms of moral and ethical education, social stability, and providing social services that used to be the task of church and family.

Nationalism, by weakening the bonds and influence of family religion, has often been blamed for both domestic and foreign problems. Domestically, many would say the nation state has contributed to rising crime rates and social misbehavior. In foreign affairs, nationalism's exclusive nature has helped create, especially through public education, a sense of superiority over other nations, who reciprocate with their own feelings of superiority. By 1914 such attitudes would raise international tensions in Europe to levels that would trigger two disastrous world wars in the twentieth century.

NAPOLEON AND HIS IMPACT (1799-1815)

Few men have dominated an age so thoroughly as Napoleon Bonaparte dominated his. In many ways he was like Adolph Hitler: charismatic, a master psychologist and politician, and ambitious to the point of self-destruction. Both started wars that led to vast destruction and a new political order. Both men shaped their times, but both were also products of their times who went with the currents of their respective histories and adeptly diverted those currents to suit their own needs. And ultimately, both were dismal failures.

To a large extent, Napoleon's career was a result of the military and political forces he inherited from the Revolution and exploited for his own purposes. In military affairs, he was lucky to inherit the military innovations of the French Revolution, such as mass conscription which made possible the use of block tactics in order to attack in column and eliminated the need for supply lines, thus making French armies much more mobile. Therefore, the two characteristics of Napoleonic warfare, massed firepower and mobility were already present when he started his career. However, it was Napoleon's genius that knew how to use them effectively.

Politically, France had suffered a full decade of revolutionary turmoil by 1799, making the government unstable and corrupt. Church policies were unpopular, especially since they had triggered rampant inflation. People longed for a more political stability and secure lives. Therefore, the interplay of military innovations that made Napoleon a national hero and the secure government he promised allowed him to seize power in 1799. Further military victories, once again against the Austrians in Italy helped him consolidate his hold on power and declare himself emperor of France in 1804.

While we mainly think of Napoleon as a general, he was also a very active administrator whose internal reforms both consolidated some accomplishments of the French Revolution and suppressed others. One way to assess his government of France is to see how it conformed to the revolutionary motto: "Liberty, fraternity (i.e., nationalism), and equality". As far as political and civil liberties were concerned, Napoleon largely

suppressed them with strict censorship and the establishment of a virtual police state in order to protect his power.

However, he saw equality as a politically useful concept that he could maintain with little threat to his position. After all, everyone, at least all men, were equally under his power. Furthermore, he codified France's laws, which made men equal under the law while maintaining their legal power over women. Therefore, any hopes women may have had of the Revolution improving their legal position were thwarted by Napoleon.

Napoleon saw nationalism as indispensable to maintaining the loyalty of the French people to his regime. After all, it was the spirit of nationalism that had inspired its armies in a remarkable series of victories that had especially benefited Napoleon and allowed his rise to power. The trick was for Napoleon to build a personality cult around himself so that the French people would identify him with France itself and therefore make loyalty to him equivalent to loyalty to France. However, by identifying national loyalty with one man, Napoleon inadvertently weakened the inspirational force of nationalism and thus his own power.

Napoleon's internal policies strengthened France and allowed it to dominate most of Europe after a series of successful military campaigns (1805-7). Naturally, he established French law and government in the countries he overran, mistakenly thinking the administrative and legal reforms of the revolution could be separated from the ideas of Nationalism and Liberalism (liberty and equality) that had given those reforms life and substance. Therefore, Napoleon's imperial rule inadvertently spread these ideas of Nationalism and Liberalism.

This had three effects, all of which combined to overthrow Napoleon. First, the empire's non-French subjects picked up the ideas of Nationalism and Liberalism and used them to overthrow, not support, French rule. Second, subject rulers adopted French military and administrative reforms to overthrow French rule.

Finally, Napoleon's power and success up until 1808 apparently blinded him to his own limitations. Therefore, he got involved in a long drawn out war in Spain (1808-14) and launched a disastrous

invasion of Russia (1812). This led to the formation of a new coalition that finally defeated and overthrew him in 1815. The victors met at the Congress of Vienna, hoping to restore the old order as it had existed before the Revolution.

However, despite his intentions, Napoleon had effectively planted the seeds of Nationalism and Liberalism across Europe, and these ideas would spread in new waves of revolution by mid-century. Europeans would take these ideas, along with the powerful new technologies unleashed by the Industrial Revolution, to establish colonies across the globe by 1900. Ironically, these European powers, like Napoleon, would fall victim to the force of these ideas when their subjects would use them in their own wars of liberation after World War II.

Napoleon's Elephant of Revolutionary Oblivion



Even a dictator as shameless as Napoleon realized he had to pay the French Revolution its due. To that end while also commemorating his own victories and obliterating any lingering ideas about the superiority of democracy, he decided to build a great elephant on the site of the Bastille. Why he chose an elephant isn't quite clear, but he intended it to be cast in bronze and be big enough for visitors to climb an interior staircase to a tower on its back, (Maybe its trunk could serve as a slide back down.) However, Napoleon's wars co-opted the bronze for the statue to make cannons and the elephant was cast in plaster. After Napoleon's empire collapsed, the Elephant of the Bastille was left to rot, becoming overgrown and infested with rats and other sorts of vermin. Despite petitions for its removal, it remained in place until 1846, when its tattered remnants were finally removed.

Film note: Napoleon's elephant is a major background prop in the film *Les Misérables*.

THE RISE OF NAPOLEON (1795-1804)

"Clear policy consists of making nations believe they are free."-- Napoleon

Napoleon's career largely resulted from the military innovations he inherited from the French Revolution, such as mass conscription which made possible the use of block tactics in order to attack in column and eliminated the need for supply lines, thus making French armies much more mobile. The Revolution also provided him with young officers who had largely developed these new tactics and were willing and able to successfully implement them on the battlefield. Therefore, the two characteristics of Napoleonic warfare, massed firepower and mobility were already present when he started his career.

Napoleon Bonaparte himself was barely French, his homeland Corsica having just become part of France two years before his birth in 1769. He attended a French military school and, while not a great student, picked things up quickly and finished a three-year program in one year. His Corsican accent and wild appearance set him apart from his classmates. Although sociable, he liked to be alone a lot. At an early age he exhibited the qualities that would earn him and France an empire: remarkable intellect, puritanical self discipline, a virtually inexhaustible energy level, and a willingness to plan things out in such detail as to leave nothing to chance. He admired Caesar, Alexander and Charlemagne and, like them, exhibited the quick decisive manner that made them all great leaders.

At age sixteen, Napoleon became a second lieutenant in the royal artillery, but his non-noble and Corsican origins left him little chance of promotion. All that changed with the French Revolution. In 1789, he went back to Corsica to fight for its independence. After quarrelling with the leader of the revolt, he returned to France and joined the Jacobins. In 1793, the young Bonaparte became a national hero by leading the recapture of the French port of Toulon from the British. The next year Napoleon's ties with the Jacobins and their fall in the Thermidorean Reaction landed him in jail for several months.

It was in 1795 that Napoleon got his big break when his famous "whiff of grapeshot" mowed down rebels in the streets of Paris and saved the new government, the Directory, from counter-revolution. This event catapulted Napoleon into the command of the Army of Italy, a ragtag army without enough shoes or even pants for its men. Nevertheless, he led this army against the Austrians in a lightning campaign that showed all the hallmarks of Napoleonic generalship: rapid movement, the ability to outnumber the enemy at strategic points with men and massed firepower, and a knack for doing the unexpected to keep his enemy constantly off balance. Napoleon drove with characteristic speed through northern Italy and then into Austria, forcing it to sign the Treaty of Campo Formio. However, this victory and the prospect of renewed French offensives alarmed kings all over Europe who formed the Second Coalition of Britain, Austria, Prussia, and Russia against France.

Napoleon saw Britain as his main enemy, because it funded France's other enemies and also had a powerful navy protecting its coasts. As a result, Napoleon came up with a bold, if ill conceived, plan: conquer Egypt and use it as a stepping-stone to invade British-held India. At first, all went well. Napoleon's fleet eluded the great British admiral, Lord Nelson and landed in Egypt in 1798. The French decisively beat the Mamluke army and soon ruled Egypt. Then things fell apart. Lord Nelson found the French fleet and demolished it in the Battle of the Nile, thus stranding the French army in Egypt. Napoleon tried a daring march to Istanbul by way of Syria, but his artillery was captured and he had to return to Egypt with his sick and demoralized army. While the French languished in Egypt, Napoleon got word of political turmoil in France. He thereby abandoned his army (which later surrendered to the British) and slipped across to France. He then took part in a daring plot to overthrow the government. The conspiracy succeeded and Napoleon became First Consul of France in 1799.

Consolidating his power. The government that Napoleon and his allies set up, the Consulate, was a mockery of democracy and aptly reflected the above quotation. People elected delegates who chose other delegates who chose other delegates from whom were appointed legislators who had no power anyway. So much for the legislature. As for

Napoleon's fellow conspirators, Ducos and Sieyes, they were shoved into the background and forgotten within a month, leaving Napoleon firmly in charge of France. However, his position was far from secure, because France was still ringed by the Second Coalition.

Napoleon first attacked Austrian forces in northern Italy, which he barely defeated at the Battle of Marengo (1800). This victory allowed Napoleon to return to France in triumph and further consolidate his position there. Meanwhile, his generals finished up the war against Austria, taking the Austrian Netherlands, northern Italy, and the left bank of the Rhine for France.

That left Britain to face France. Since Britain's navy and France's army were virtually unbeatable by the other side, and several neutral nations including the United States and Sweden had armed themselves against both Britain and France, the two big powers made peace in 1802. Prussia and Russia soon followed suit. Peace settled over Europe, at least temporarily.

Napoleon next turned his attention to Germany in order to settle a number of land disputes. Germany was still a patchwork of secular principalities, free cities, and church states. Since the Church tended to favor Catholic Austria against revolutionary France, Napoleon eliminated all but one church state and 44 out of 50 free cities, giving their lands to various German princes who now saw Napoleon as their benefactor.

Having fought his enemies to a standstill and made France the most feared and respected power in Europe, Napoleon could now pursue his next goal: becoming emperor of France. This was a tricky situation, since the French people might not take kindly to getting a new king so soon after getting rid of the old one. Using the title of emperor rather than king would partly ease people's misgivings and also give them a sense of France's imperial superiority over the rest of Europe. Napoleon approached the title in stages, first getting himself elected consul for ten years, then for life, and then, after a fake assassination plot to make people realize how much they loved him, emperor.

The coronation in 1804 was a splendid affair with even the pope coming to crown Napoleon.

(Napoleon actually decided to crown himself and just let the pope watch.) The next day the emperor gave bronze eagles to his regiments as standards reminiscent of the Roman Empire. He even created a new nobility of dukes and counts from his officers in order to make a court that rivaled the splendor of other European courts.

The Napoleonic state. While Napoleon is mainly remembered for his military campaigns and conquests, much of his importance lies in his government of France and how it consolidated the gains of the Revolution. For one thing, he kept the Revolution's administrative reform of dividing France into 83 *departements* whose governors (*prefects*) he appointed centrally. He centralized the tax system (still used today) and established the Bank of France to stabilize the economy of France. The Revolution's system of free but mandatory education was kept and expanded with military uniforms and discipline being imposed. Napoleon also consolidated many of the Revolution's social and legal advances into five law codes. His civil code maintained the equality of all men before the law, but reasserted the power of the husband over the wife, thus negating some of the influence women had exerted during the Revolution.

Although not a religious man, Napoleon recognized the attachment of most French people to the Catholic Church and how the Revolution's policies against the Church had caused discontent and revolts. Therefore, in 1801 he made peace with the Church, recognizing it as the religion of the majority of Frenchmen and giving the clergy the right to practice their religion within the "police regulations" of France. Those regulations kept confiscated Church lands for the state and still paid the clergy their salaries. Regardless of that, Napoleon gained a great deal of popularity through his Church policy without giving up anything of essence.

Napoleon may have consolidated some gains of the Revolution, but he repressed others, for his "police regulations" in many ways amounted to a police state. Such civil rights as freedom of speech and press were now things of the past as 62 of 73 newspapers were repressed, and all plays, posters, and public conversations had to meet strict standards of what Napoleon thought was proper. Enforcing all this was Napoleon's minister of

police, Joseph Fouche, formerly one of the Jacobins' representatives on mission during the Terror. He was a slippery character who had survived the Thermidorean Reaction and attached his fortunes to those of Napoleon. Fouche's spy network (one of four in France) kept him informed on just about everyone of importance in France (including Napoleon's own personal life). Fouche himself claimed that wherever three or more people were talking, one of them was reporting to him. By 1814 he had an estimated 2500 political prisoners locked away. Napoleonic rule certainly had its darker side.

Napoleon's Character



The earliest known portrait of Napoleon (1785)

Corsica was a rough mountainous island constantly beset by family feuds. Until a year before Napoleon's birth, it was under Genoese rule. However, a rebellion on the island (supported by Napoleon's father) was too much for Genoa to handle, so it sold Corsica to France in 1768. Thus, Napoleon, who was born the next year, was barely French.

The Loner. Being in essence a foreigner (Italian) at Brienne Military Academy probably set him apart from the French nobles' sons at the school. That and a basically solitary nature caused him to keep to himself. He graduated from a three-year program in one year, forty-fourth in a class of fifty-two.

Napoleon had a seemingly inexhaustible level of energy, going on just a few hours of sleep a night and getting up to a steaming hot bath. He also had a lot of nervous energy, habitually carving away at furniture while dictating. (His mother must have sent him outside to play a lot.)

He also had remarkable intelligence and powers of concentration. He could dictate five or six letters simultaneously for eight or nine hours straight. Of course, this was before the invention

of the ballpoint pen, so taking dictation involved a lot of sharpening one's quill and dipping in ink. Therefore, Napoleon would dictate part of letter one, and while that secretary was catching up, dictate part of letter two, then three, four and five. By that time, secretary one had caught up and Napoleon would pick up his train of thought for that letter and dictate a bit more, go on to letter two, and so on until all the letters were finished. He probably spent more time as an administrator than general, dictating between 54,000 and 70,000 letters in his lifetime. He himself admitted that he probably worked his main secretary, Meneval, to death.

Added to these qualities were a puritanical self-discipline and drive to plan out each battle in meticulous detail. As he himself put it: "Every operation must be done according to a system because chance cannot bring success."

Concerning his belief in luck he said: "Is it because they are lucky that great men become great? No, but being great, they have been able to master luck." Napoleon said his preparation for battle was like a woman in labor, although there are no reliable accounts of him actually giving birth.

Napoleonic warfare

It's not surprising that the first of the great modern revolutions would produce the first great modern general. Or, more properly, we should say generals, because Napoleon inherited the military reforms pioneered by preceding generals during the Revolution and relied on other brilliant generals to carry out his orders successfully. However, there were several qualities that distinguished him in particular.

1) The use of quickness and mobility over precise maneuvers was a concept developed during the Revolution when the huge numbers of raw recruits complicated the task of supplying and training French armies, leading respectively to foraging, which increased mobility, and looser formations that required less precision in the ranks. Mobility and massed formations are two qualities rarely combined in armies. Napoleon took these qualities and further perfected them. Key to this was his uncanny ability to figure out

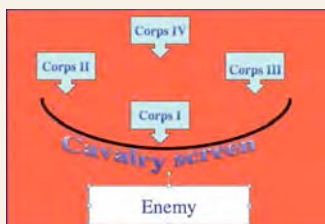
the number of marches it took to concentrate all his forces at one point.

2) The use of massed firepower from artillery just added to the potency of Napoleon's armies. Keep in mind that he started his career as an artillery officer, and the value of cannons never left his consciousness. Crucial to this was the development of lighter field artillery before the Revolution, thus making massed cannon fire on battlefield possible.

When he invaded Russia in 1812, Napoleon took 1000 artillery with him. Many of those cannon barrels, captured by the Russians, can be seen piled up in the Kremlin.

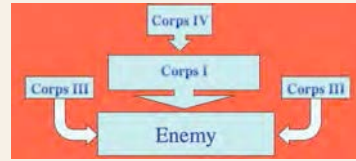
3) The army corps system may have been Napoleon's most important innovation, although it also drew upon ideas put forth since the Seven Years War. Since the armies were so large Napoleon divided them into separate corps, each of which was a self-contained army with its own infantry, cavalry, artillery, and logistics services. Army corps would advance separately along a parallel path and within one or two days march from one another, allowing them to quickly concentrate upon one point of attack.

Spreading out like this allowed the army to feed more effectively off the land and enhanced the army's mobility. It also created a front up to 130 miles across, thus confusing the enemy as to where the main attack would concentrate. To further confuse the enemy, the French used a large screen of cavalry in front of the army mask its movements. Thus opposing leaders would be forced to scatter their forces to meet any possible attack, thus giving the French the element of surprise.



In the first illustration, an army moves in separate corps no more than one day's march

apart. A cavalry screen precedes it to mask its movement and locate the enemy.



In the 2nd illustration, the enemy has been located & the various corps converge to envelop it.

A corps was designed to hold off an enemy attack until the rest of the army to come to its rescue. Its commander had general orders for advancing, but was left a lot of autonomy in handling his corps as different situations arose. Thus the effective functioning of this system required excellent officers, such as the French Revolution had supplied and Napoleon made use of in his early career before they were largely killed off.

Napoleonic Censorship and Propaganda

One modern aspect of Napoleon's dictatorship was his use of censorship and propaganda. Since he couldn't control everything said in Paris' 73 different newspapers, he shut all but 11 of them down. As for any remaining newspapers, books, and other public media, Napoleon expected the following from his censor, Citizen Ripault:

- A daily report of all articles that might affect public opinion
- Analysis every 10 days of all books and pamphlets bearing on moral or political questions
- Similar analysis of any play within 48 hours of production
- Similar analysis of all bills, posters, advertisements and public conversations

One mass medium he especially exploited for propaganda purposes was the striking of a continuous series of medals commemorating his victories. Starting with his first victory in Italy in 1796, where he portrayed himself as Hercules fighting the many-headed hydra (above), Napoleon progressively positioned himself in the public mind as France's greatest hero and the one man who could win military victories, thus setting up the coup where he seized power in 1799.

Interestingly, Napoleon even struck medals commemorating his defeats. Of course, this gave him the opportunity to give his version of those setbacks. For example, one medallion (below) portrays his defeat in Russia as purely the result of natural forces beyond his control (i.e., the Russian winter), showing Boreas the North Wind as the real culprit. Similarly, he explains/excuses his fall from power in 1814 as the result of “adverse fortune” turning her back on him, not any mistakes he might have made.



Public education was another important aspect of information control. In 1807-08, French schools were reorganized under the central authority of the University of France (i.e. the state). As Napoleon put it: "There will be no political stability so long as there is no teaching body based on stable principles. So long as children are not taught whether they must be Republicans or Monarchists, Catholics or Free Thinkers, and so on, that State will not constitute a nation, but rest on vague and shifting foundations, ever exposed to disorder and change.

While the Church did not determine curriculum, Napoleon did have a place for the clergy in his schools: to keep children in line by instilling in them the fear of God. Therefore, religion was a basic feature of public education and the cornerstone of religion was Napoleon's catechism for all French children.

Consider the following question and answer from that catechism:

"Question: What should one think of those who fail in their duties to our emperor?"

Answer: According to the apostle, Saint Paul, they would resist the order established by God Himself and would make themselves deserving of eternal damnation."

Napoleonic Trivia



The real ride across the Alps. While David's famous painting shows Napoleon crossing the Alps on stallion rearing up on its hind legs precariously close to a dropoff, the real crossing was a bit less heroic. Instead of a horse, Napoleon rode a more sure-footed mule.

"The Little Corporal" was a nickname Napoleon earned in the middle of the battle of Lodi (1796), when he dismounted to lay some artillery pieces to cover the French assault over the river, a job that corporals usually performed. On the 2nd day of the Battle of Arcola (11/15-17/1796), Napoleon supposedly seized a standard and led an assault across a bridge, thus adding to his legend. In addition, he knew thousands of his troops by name, which helped his popularity with the army. Even more important, he was a winner, and soldiers love to follow a winner.

Grapeshot was a particularly nasty anti-personnel weapon fired from cannons, consisting of a container, such as a canvas bag, full of pellets. It was shot to land in front of enemy troops where it would break open and spray its victims with the pellets, much like buckshot.

Battlefield urinals. In the heat of battle, a musket could heat up from constant firing to the point it would detonate in a soldier's face before he could fire it. In order to cool it down and keep it from exploding, a soldier would urinate down the barrel. Another good reason to stay hydrated in addition to all the parched throats from the smoke of musket fire.

General mortality rates. Much of Napoleon's success relied on his excellent officer staff. However, The combination of smoke and poor communications forced even generals to lead from the front. Naturally, officers riding on horses and dressed in bright uniforms made them

conspicuous targets and subject to unusually high casualty rates. For example, at the Battle of Borodino in Russia, 12 French generals were killed and another 27 wounded.

The Draft. Each year, as his wars dragged on, increasingly younger recruits were called up to replace the soldiers buried on battlefields across Europe. Overall, there were some 3,000,000 conscripts called up to serve in Napoleon's armies. Between 1801 and 1804, 60,000 men were called up each year. In 1805 that number rose to 210,000 as the War of the 3rd Coalition started. By the end of his regime, Napoleon was reduced to calling up 14-year olds. Not old enough to shave, but old enough to die for their emperor, they were known as the Marie Louise Boys after Napoleon's current wife and empress.

As the annual number of conscripts rose, so did the number of deserters and shirkers. Some got married to escape service. Others mutilated themselves, a common tactic throughout history.

Contrary to popular belief, not all of Napoleon's soldiers adored their emperor.

Josephine: Napoleon's one true love?



Josephine Beauharnais was Napoleon's first wife, and possibly the only true love in his life. The daughter of a plantation owner in Martinique whose lands were ruined by a hurricane, she went to France, where she married the aristocrat, Francois, Vicomte de Beauharnais, by whom she had two children, Eugene and Hortense. Unfortunately, Francois was killed during the Terror and Josephine was briefly imprisoned. Being an adept social climber, she became the mistress of several influential political figures, including Barras, one of the leaders of the Directory. In 1795, she met the rising general, Napoleon, became his mistress, and married him although he was six years her junior and she

doesn't seem to have liked him that much as the picture below seems to suggest.

On the other hand, Napoleon was very much in love with her. During his first Italian campaign he sent her passionate love letters 127 days in a row, writing in one: "I awake full of you. Your image and the memory of last night's intoxicating pleasures has left no rest to my senses." Meanwhile, back at home, Josephine was having an affair with another officer, entertaining him and her friends by reading Napoleon's love letters out loud.

Napoleon did get his revenge. Upon finding out about the affair, he kicked Josephine out of the house. After begging him to take her back and promising to be a good wife, she was allowed back in. Napoleon, however, was hardly the ideal husband, having multiple affairs over the years before divorcing Josephine for a younger woman and dynastic purposes.

Napoleon's Egyptian Fiasco



The Egyptian campaign was a poorly planned affair from the start. Napoleon landed a good distance west of his target, Alexandria. However, he failed to provide adequate supplies for the march, losing a large number of men from dehydration and heat exhaustion before he even fought a battle. This forced the French to plunder the countryside, which led to bad relations with the Egyptians, which in turn confined French control to only part of the Nile Delta. Even Napoleon hinting he might convert to Islam did little or nothing to improve the situation.

Napoleon met the defending Mamelukes at the Battle of the Pyramids (7/21/1798), supposedly telling his men, "Soldiers, forty centuries look down upon you!". As splendid, fierce, and brave

as the Mamelukes may have been, they were no match for the firepower of the French army, which lost only 29 dead and 200 wounded compared to thousands of Mamelukes. As a tribute to their bravery, Napoleon maintained a regiment of Mameluke cavalry after returning to France.

The Battle of the Nile. Two things worked against the French when the British Lord Nelson caught up with Napoleon's fleet. One was the British cannons had flintlocks that would fire immediately instead of fuses that had to be lit. This allowed British gunners to time their firing with the roll of their ships more precisely, giving them better aim. The second problem was Napoleon's neglect to supply the fleet properly, forcing French crews to subsist on half rations. Thus the French crews were weak and sick when the British showed up and couldn't even escape to Corfu, which would have at least saved part of the French navy.



During the Battle of the Nile, the French ship *Orient* exploded when fires reached its powder magazine. Its 15-ton rudder was hurled 1000 meters away from the ship. Blazing bits of the ship fell all around, setting the British ships, *Alexander* and *Franklin* both on fire, although sailors managed to quench the flames. A chunk of mast landed on the *Swiftsure* that was big enough to be made into a coffin (that was later presented to Nelson).

The entire French squadron was either destroyed or captured in this battle, with only three ships capable of being refitted for British service. In human terms, the British suffered 213 killed and 677 wounded, while the French lost between 2000-5000 killed and wounded. One British seaman reported ' An awful sight it was, the whole bay was covered with dead bodies, mangled, wounded, and scorched, not a bit of clothes on them but their trousers.'

A desperate attempt to get home. Having been cut off from France, Napoleon tried the unlikely scheme of marching through the Ottoman and Hapsburg empires to get home. However, his artillery was captured while crossing a river, and the British helped the Turks repulse him at the old Crusader capital of Acre. Therefore, the French had to retrace their steps back to Egypt, where they were still cut off by the British navy.

In order to stretch his supplies for his own troops on the march back to Egypt, Napoleon had 2,441 Turkish prisoners executed. He tried to get his doctors to execute them by overdosing them with opium, but the doctors refused. Despite paintings showing Napoleon doing such things as bravely visiting soldiers stricken by plague in the pesthouse of Jaffa (below), one of his surgeons sent the French government a formal complaint, charging his commanding officer with criminal neglect of his own wounded.

The Rosetta Stone



Although the French invasion of Egypt proved a costly fiasco, it also triggered an intense fascination in anything Egyptian and led to the discovery of the Rosetta Stone and translation of Egyptian Hieroglyphics.

The Rosetta Stone was a bilingual inscription in Greek and Egyptian from 196 B.C.E. that allowed Francois Champollion to crack the code and decipher Egyptian hieroglyphics. The key clues were cartouches, oval boxes containing Hieroglyphics that corresponded in position to the proper names Ptolemy and Kleopatra in the Greek inscription. Champollion then found other examples of those hieroglyphics in the text and used those and words in the corresponding positions of the Greek text to decipher more

symbols, and so on. It took years to completely decipher the Egyptian text, but this was the start.

Napoleon's Irresponsible Younger Brother

Lucien Bonaparte, Napoleon's younger brother was a flighty, irresponsible spendthrift and woman chaser that Napoleon made Minister of the Interior. It was Lucien who rigged the election in 1800 ratifying the new constitution for the Consulate. While the real tally apparently was 3.5 million against and only 1.5 million in favor, Lucien's math came up with 3,011,007 for and only 1562 opposed. This would serve as the model for counting votes in future elections under Napoleon.

Lucien's administrative ineptitude, corruption, public ostentation, and extra-marital affairs extended well beyond counting votes, providing Napoleon's minister of police, Joseph Fouche, with a very thick file. In fact, when Fouche read a summary of this file to Lucien and Napoleon, the younger Bonaparte resigned.

However, something had to be done with him, so he was sent as ambassador to Spain, where, influenced by a huge bribe, he negotiated a poorly written treaty. When Napoleon rejected this treaty, Lucien fled Spain at night so he could keep the bribe. He then published a pamphlet comparing Napoleon to various dictators. His final break with Napoleon came over an affair he was having while his wife died in childbirth. A resulting illegitimate child and quick civil marriage led to a scandal and his exile to Italy.

French society and fashion after the Terror

Revolutions are more than just political events and France during this era was no exception. During the Terror not even prostitutes dared go out at night, and no one had fun (except maybe kids playing with toy guillotines), unless attending propaganda plays put on by the government is considered fun.

After the Terror all that changed, and, much like Restoration England following Cromwell's rule, France experienced a period of excess in reaction to the previous repression. Paris was once again "Fun City", while public depravity supposedly

reached new heights, as men no longer tipped their hats to ladies, obscene graffiti appeared everywhere, and illegitimate births proliferated along with absurd costumes in Paris and 10-day old (i.e., one revolutionary week) beards in the countryside.



The great tradition of French restaurants was one legacy of the Revolution, as private chefs of the now defunct nobility opened cafes to cater to the new rising middle class with money.

Theatre was very popular, especially after the repression of Jacobin rule. Tickets were cheap, so that citizens of all classes might go one or two times a week. Under the Napoleonic dictatorship with its censorship of newspapers, the enthusiasm normally given to politics was channeled into devotion to popular actors.

When a particularly popular actor came onstage his devotees went wild while devotees of another actor were visibly annoyed.



The only thing more popular than attending the theatre seemed to be fighting to get in.

Also popular in the aftermath of the Terror was a craze for dancing. It seemed that everyone loved to dance, dance, dance, and wherever a large enough space was available, dance halls were opened: gardens, palaces of former aristocrats, and unused convents. Paris had hundreds of dance halls, and even the church of St. Sulpice on the Left Bank was painted yellow and had a wooden dance floor erected over the gravestones of its cemetery.



Adding to the frenzy in 1797 was the introduction of a scandalous new dance, the Waltz, which one person described as "a dance of familiarity demanding the amalgamation of two dancers." Making it more scandalous yet were the scanty fashions of the day.

And fashion was where one saw real revolutionary changes. One fashion for women whose relations had been guillotined during the Terror was to wear crossed belts on their backs or thin red ribbons around their necks.

Another way to commemorate friends or relatives guillotined in the terror was to adopt the haircut of the condemned to clear the neck of any hair that might interfere with the guillotine blade. Either all the hair was cut short and choppy, as was quickly done to the condemned before execution, or cut in the "dog's ears" style with long shocks of hair left to fall down the sides of the face while the hair on the back of the neck was cut to the hairline.



Along with these fashion statements came a new type of event: the victims' ball. Only those with a document attesting that its bearer had a spouse or close relative who had been killed in the terror were admitted. Such soirees were so popular that some people even forged documents for admission. Instead of bowing to their partners, men (and some women), would jerk their heads in imitation of the moment when the guillotine came down on one's neck.

Fashions changed at a dizzying pace so that fashion journals (which were already published every five days) couldn't keep up. Leading socialites, such as Madame Recamier (portrayed below by David) and Josephine Beauharnais, called the shots in women's fashions in much the same way movie stars do today.



The dominant fashion of the age was the Neo-classical look, supposedly based on the dresses worn by women of ancient Greece and Rome. Neo-classical gowns, often of the flimsiest materials, clung to the wearers' bodies, revealing their charms in unheard of ways.

At the extreme edges of fashion were young members of the nouveaux riches, the women known as the Merveilleuses ("marvelous ones"), while their male counterparts were referred to as Incroyables ("incredible ones"). They especially enjoyed flouting older social conventions, often for the shock value, by sporting outrageous and exaggerated looks.



The Incroyables liked to mimic the look of untidy old age with spectacles, unkempt hair, baggy trousers and absurdly high collars. Some of them, known as the Muscadin for their heavy musk cologne, roamed the streets in gangs carrying bludgeons and canes with which to attack Jacobins.

The more extreme Merveilleuses would adorn their hair with giant bows and headgear that looked like oversized baseball caps. And even this was too conservative for some who bared even their breasts or wore gowns of transparent materials, despite the warnings of doctors about

the health hazards, since France's climate was not like that of Greece. Their only concession might be to wear a shawl.

A new social order. Despite the Revolution's egalitarian ideals, no one could change the fact that some people are sharper and more ambitious than others. Therefore, after the Thermidorean Reaction, a new social order emerged in France. Many of the new aristocrats belonged to a newly rich (*nouveaux riches*) middle class that had made their fortunes during the Revolution or even off of it: government contractors for the army, smugglers getting such valuable commodities as sugar through British blockade, and speculators buying cheap assignats and abundant Church lands to sell later for profit.

When the Catholic religion had been under attack by the Jacobins, some astute businessmen cornered the market on Bibles and religious books, selling them for outrageous profits when religion was reestablished.

These new aristocrats mimicked the older nobles' tastes to excess, exhibiting exorbitant waste and extravagance on clothes, jewels, and furniture. Some hostesses, one of whom was called Madame Free and Easy, even changed their furniture to match the gowns they were wearing that night.

But the real nobility under Napoleon was the military, and France was permeated with a martial spirit from top to bottom.

- Schoolboys went to classes in uniforms.
- Operas were presided over by dragoons with drawn swords.
- Furniture was decorated with eagles and other military insignia.

France virtually worshipped its defenders, who often took undue advantage of this, elbowing civilians aside and monopolizing the ladies. Any civilians failing to make way might be beaten up. Soldiers even dueled openly in the streets endangering innocent by-standers.

Napoleon even created a new imperial nobility from his officers. His brothers became princes, while his ministers became grand imperial dignitaries: Grand Elector, Grand Chancellor, Grand Marshal of the Palace, Grand Admiral, etc. In 1808 he created new counts, dukes and barons, endowing them with revenue producing property. Although this was an aristocracy of merit, most titles were hereditary.

Women's (lack of) Rights under Napoleon
Whatever aspirations and apparent gains women may have seemed to gain during the Enlightenment and Revolution were quickly dashed by Napoleon. The following quotations pretty much sum up the emperor's attitude toward women.

- "A bride must be made to realize that on leaving the tutelage of her family she passes under that of her husband."
- "Women should stick to knitting."
- "The husband must possess the absolute power and right to say to his wife: 'Madam, you shall not go out. You shall not go to the theater, you shall not receive such and such a person; for the children you will bear shall be mine.'"

Besides his own personal opinions about the place of women, Napoleon may also have seen lowering their status compared to men as a way of helping men reconcile themselves to his exalted status over them by giving them someone to look down on. As a result, wives had no rights in administration of common property. They were forbidden to give, sell or mortgage property and could acquire property only with their husbands' written consent.

"A Tearless Eye"



It was Napoleon's minister of police, Joseph Fouché, who really kept France under lock and key. After murdering nobles and fellow clergy

for the Jacobins, who recalled him because his methods were too violent even for them, he murdered Jacobins for the Directory as their minister of police.

Therefore, it wasn't too hard for Fouché to make the transition to working for Napoleon when he overthrew the Directory. It didn't seem to bother Napoleon either. According to Talleyrand, Napoleon's foreign minister, Fouché was a man "with a heart as hard as a diamond, a stomach of iron, and a tearless eye".

Among those on Fouché's payroll were Napoleon's personal secretary, his wife, Josephine, and the personal chef of Louis XVIII (in exile in Britain). Fouché sometimes knew even more about Napoleon's personal life than he did. For example, he once shocked Napoleon with the knowledge that he was having an affair with an opera singer, Maria Grassini. What even Napoleon didn't know, but Fouché did, was she was having another affair behind Napoleon's back with a violin player. As Talleyrand put it, Fouché minded his own business, and everyone else's too.

Fouché did miss one attempted assassination on his boss in 1800. Luckily, Napoleon's carriage driver was drunk and inadvertently swerved away from the bomb as it exploded. After a good dressing down from Napoleon, Fouché went to work to find the culprits. He traced the horseshoe of one of the exploded horses to its blacksmith, and from there tracked down the would-be assassins.

However, no one had anything on Fouché, who neither drank, nor smoked, or chased other women. His wife shared his values and insensitivity to others' suffering. Ironically, he was a doting husband and father who let his kids run wild at home.

Napoleon Becomes Emperor



Jacques-Louis David's portrayal of Napoleon's coronation as emperor

Having fought his enemies to a standstill and made France the most feared and respected power in Europe, Napoleon could now pursue his next goal: becoming emperor of France. This was a tricky situation, since the French people might not take kindly to getting a new king so soon after getting rid of the old one. Using the title of emperor rather than king would partly ease people's misgivings and also give them a sense of France's imperial superiority over the rest of Europe. Napoleon approached the title in stages, first getting himself elected consul for ten years and then for life.

Realizing the move to emperor was a bit trickier, Napoleon decided he had to make the French people realize how much they loved him. So he engineered a fake assassination plot against himself. To that end, French double agents got British funds to support French assassins in a murder plot that was miraculously "discovered" just before it was sprung! As the French people were recovering from the shock of almost losing their savior and hero, Napoleon sent them to the polls to elect him emperor.

In the "election" he won by another resounding "landslide".

The day after his coronation, the emperor gave bronze eagles to his regiments as standards reminiscent of the Roman Empire. He even created a new nobility of dukes and counts from his officers in order to make a court that rivaled the splendor of other European courts.

Invading Britain

Napoleon planned to invade Britain in 1805 using a fleet of over 2000 gunboats without keels, which were cheaper to build, but unable to withstand the harsh conditions of the English Channel. The ideas of digging a tunnel under the channel or transporting an army by hot air balloon were so far-fetched that even Napoleon didn't consider them. Napoleon's invasion fleet cost France and its subject states a ton of money, largely due to corruption, officials claiming they had 2343 boats, when there were only 1730, of which only 672 were actually seaworthy.

Naval Warfare in the Age of Napoleon

Although the essential nature of naval warfare (i.e., sailing ships delivering broadsides of cannon fire against one another) had remained largely unchanged since 1600, incremental improvements had taken place. Frame-first construction based on blueprints was now used, producing faster and more streamlined hulls. Sails and rigging had become progressively more sophisticated, and artillery was increasingly more powerful and deadly.



The Spanish ship, *Santissima Trinidad* (above), was probably the finest warship of its day. This was largely because Spain's empire gave it access to mahogany, which was stronger than the oak other nations used for their ships. A first rate ship such as the *Santissima Trinidad* might require as many as 5,000 trees to build, with each tree yielding 800 board feet. It weighed 1400 tons and had a two-foot thick hull that stood as high as a five-story building. It also had four gun decks, and 144 guns, 30 of which could hurl a 32-pound cannon ball through a three-foot thick hull at a range of 1.5 miles.

Terms of service. In the British fleet, discipline and living conditions were harsh, while pay and

provisioning were irregular. Large crews were necessary just because most work had to be done by hand. Stores, ammo, provisions and cannons had to be loaded on ships by hand. There were dozens of sails to furl and unfurl, pumps to keep bilge water at a safe level, and extra pumps during battle to put out fires and wash blood off the decks. Since the powder magazine was located in the middle of the ship removed as far as possible from enemy fire (and fire in general), much of the crew was involved in running individual charges from there up to the gun decks.

As a result of these labor needs (900 people on Lord Nelson's flagship, the HMS *Victory*), many sailors were pressed into service from foreign ships, which was a leading cause of the War of 1812) and an undeclared war between France and the U.S. (1798-1800). Adding to France's problems was the fact that many of its best naval personnel had left during the Revolution. Nelson's flagship alone had 70 foreigners, one of them French. Despite regulations, a number of women also served: running powder, tending the wounded, and several even helping "man" the guns at Trafalgar. Along those lines, there would be several "ships' boys" aboard some of whom were on career tracks and advancing to junior officer positions at a very young age.

Communications. Without radios and the ability to move quickly between ships to transmit orders, communication and coordination was limited to signaling by code with semaphore flags. Below is Lord Nelson's final message to his fleet before the battle of Trafalgar.

Tactics. The French and Spanish, still thinking of ships as fighting platforms, packed them with marines, which often created confusion and fights between soldiers and sailors. Along those lines, they usually fired at masts and rigging to slow enemy ships for boarding. The British, in contrast, fired at hulls to sink enemy ships and kill their personnel. British crews were also trained to lie down until ready to fire. The British used flintlocks on their cannons more due to the heavier rolling of their ships.

Breaking the line at Trafalgar. For over two centuries, the standard way of fighting naval battles had been to line up two fleets parallel to one another and slug it out with broadsides. Poor communications and the inability to closely coordinate movement of ships prevented much variation from this pattern.

However, at Trafalgar, the British admiral Nelson had his ships sail between the French and Spanish ships. This had several advantages. First, his ships advancing perpendicular to the enemy line of fire presented smaller targets for them to hit at more oblique angles. Secondly as each ship passed between the prow of one ship and stern (back) of another, it could fire cannons from both sides of the ship against a largely undefended part of the enemy ships. Finally, an entire line of British ships doing this at point blank range, one after the other, would totally devastate the respective sterns and prows of the enemy ships.

The new British tactic of breaking the line proved decisive at Trafalgar, with the French and Spanish losing 19 ships and the British losing none. After this, Britain had undisputed mastery of the seas. However, victory came at a heavy cost for the British, as its great admiral, Lord Nelson was killed by a sniper firing from the ratlines of an enemy ship. Therefore, news of this great victory was met with very mixed emotions in Britain. One of the major centers in London is still named Trafalgar Square in honor of this battle.

The Face of Battle at Sea.



Fighting on the gun deck of a warship was probably as close to Hell on earth as one could get back then. As opposing fleets approached, sailors withdrew their guns into the ships for firing. To maximize their effect, cannonballs were heated red hot and had to be loaded with hand tools. The guns, which got extremely hot

after several shots, also to be manhandled back into position.

The combined effects of a broadside were devastating, even for those firing the cannons. Since the gun decks were only 6' high, the tremendous crash of the guns firing often led to permanent deafness, while the acrid smoke from the black powder quickly filled the confined space.

For those on the receiving end, things were much worse. A single volley of 32-calibre cannon could obliterate a hull and clear a deck of its gunners, tear cannons loose, and send 100's of deadly splinters flying through deck, each one a lethal weapon in its own right. Guns blasted loose from their moorings would roll over and crush sailors blinded by the smoke. Floors made slippery with blood and filled with frightfully cut up bodies further complicated any efforts to continue, while the screams of the wounded were added to the already deafening roar of cannons.



The middle orlop deck was the safest place on ship, but also the most ghastly, since that was where the surgeons operated. Typically it was painted white to reflect what little light there was, but the floor was red to hide the river of blood flowing from the surgeon's table. On the ceiling of a Spanish ship there was a crucifix, the last thing many sailors ever saw. The horrible nature of the wounds often left the ship's surgeon with little to do except amputate limbs or turn the patients over to a priest for last rights. The low ceilings forced surgeons to work on their knees at makeshift tables.

War of the Third Coalition

Icebreakers. During the Battle of Austerlitz, as Russian and Austrian troops were retreating over an ice-covered marsh Napoleon had his artillery fire to break the ice and drown the fleeing soldiers.

Taking his lumps.



No one got beaten up more by Napoleon than Francis I of Austria (1792-1835). Having lost two wars in Italy to the Little Corporal, he lost big time again at Austerlitz and had to surrender lands containing another 3,000,000 of his subjects. Before it was all over, he would lose another war and more land to Napoleon, then get dragged in on the wrong side of the invasion of Russia in 1812. In addition Napoleon declared the Holy Roman Empire defunct. However, seeing something like this coming, Francis had created a separate imperial crown for the Hapsburgs, so the Hapsburg Empire could limp along for another century.

“The only man in Prussia.”



The indecisive Frederick-William III of Prussia refrained from joining Austria and Russia against France until after Napoleon had defeated them at Austerlitz and formed the Confederation of the Rhine, which also infringed on some Prussian territories. Not until then did Frederick-William decide to join the war. However as quickly as Prussia entered the war, its forces were shattered by Napoleon's blitzkrieg (1806). This sparked Napoleon's caustic remark calling Frederick-William's wife, Louise of Mecklenburg, who showed much sterner resolve than her husband during this crisis, the only man in Prussia.

“What a massacre! And for no outcome.”



While Napoleon claimed a glorious victory at Eylau with only 7600 casualties, it was at best a bloody draw. More likely there were 25,000 French killed & wounded as opposed to 15,000 Russians. Marshal Augereau's corps alone, when caught in the flank by the devastating fire of 70 Russian cannons, lost over 12,000 of its 14,000 men in a matter of minutes.

After Eylau, French soldiers no longer spontaneously yelled out “Vive l'empereur” As one French commander put it: “What a massacre! And for no outcome.”

To replenish his ranks for a new campaign in 1807, Napoleon called up not just the class of 1807, but also 80,000 boys from the class of 1808, a disturbing trend that would continue.

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NAPOLEON'S YEARS OF TRIUMPH AND FALL (1805-1815)

"Great empires die of indigestion."—Napoleon

The rest of Europe saw Napoleon's imperial crown as part of a plan to rule all of Europe. This triggered the war of the Third Coalition of Austria, Britain, and Russia against France and Spain (1803-1807). Once again, Napoleon was faced with his old nemesis, Britain, that "nation of shopkeepers" (to quote Adam Smith) whose navy shielded them from his military might. If only the British navy could be removed, Napoleon could slip across the Channel with his army and bring Britain to its knees. His plan for removing the British fleet was to lure it to the West Indies with the combined French and Spanish fleets. This would leave the Channel open for the French to cross. However, the British commander, Nelson, guessed this plan and managed to blockade the French and Spanish fleets in the Spanish port of Cadiz. When they tried to break out, the British crushed them in the Battle of Trafalgar (1805). Britain remained safe as its navy still ruled the waves.

Seeing his failure at sea, Napoleon marched his army eastward where he met the much larger combined armies of Austria and Russia at Austerlitz. Concentrating his forces in the center, he drove through and split the Russian and Austrian armies, winning possibly the most brilliant victory of his career (1805).

Austerlitz gave Napoleon the power to declare the Holy Roman Empire defunct, making him the heir apparent of Rome's imperial grandeur. He also used this opportunity to form the Confederation of the Rhine from the German princes grateful to him for the lands he had given them before. The Confederation consisted of about half of Germany and formed a large buffer zone on France's eastern border. This upset Prussia who had been sitting on the sidelines, but now decided to join the war. However as quickly as Prussia entered the war, its forces were shattered by Napoleon's blitzkrieg (1806).

Finally, there was Russia. After a bloody indecisive battle in the snow at Eylau, Napoleon won a decisive victory at Friedland. Now he could impose

his kind of peace on Europe. Negotiations between Napoleon and Czar Alexander I were conducted on a raft in the middle of the Nieman River while Frederick William III of Prussia had to await his fate along the shore. The settlement for Prussia was not kind, taking nearly half of its land and population to help carve out the Grand Duchy of Warsaw, a revived Poland that owed its existence and lasting loyalty to Napoleon. France and Russia recognized each other's spheres of influence, but France certainly emerged as the dominant power in Europe. Besides France, Napoleon directly ruled Belgium, Holland, the West Bank of the Rhine, the Papal States, and Venice. Then there were the states that were nominally free but lived under French law, administration, and usually French rulers who happened to be Napoleon's relatives: the kingdom of Naples, the Kingdom of Italy, Switzerland, the Confederation of the Rhine, the Grand Duchy of Warsaw, and Spain (after 1808). Finally, there were Napoleon's allies who had to follow him in war: Austria, Prussia, and Russia. Only Hitler ever came this close to ruling all of Europe.

The Continental System and Spanish Ulcer. One power Napoleon could not reach was Britain, whose navy safely sheltered it against any continental invasion. The ill-fated invasion of Egypt and the Battle of Trafalgar both bore this out. But Napoleon was determined to bring Britain to its knees, and this time decided to strike the "nation of shopkeepers" where it would hurt the worst: the wallet. With most of Europe under his control, Napoleon imposed the Continental System to stop all European trade with Britain. Hopefully, this would strangle Britain economically and force it to come to terms. And while it did hurt Britain, it also hurt the rest of Europe wanting to trade for Britain's cheaper industrial goods. By a combination of bribing officials, forging documents to mask the British identity of merchant ships, and outright smuggling, the Continental System leaked like a sieve. Even Napoleon secretly bought British goods.

One big leak in the system was Portugal, which refused to join the embargo against Britain. Napoleon decided to plug this leak by taking over Portugal, which he did in several months. However, in order to reach Portugal, French troops had to cross Spain. Therefore, Napoleon decided to

replace the Bourbon dynasty ruling Spain with a French regime led by his brother, Joseph, figuring the Spanish people would prefer French rule to that of the corrupt monarchy. However, Napoleon had completely misread the spirit of Spain.

On May 2, 1808, a popular revolt in Madrid and the severe French repression following it triggered a general uprising that spread like wildfire across Spain. What Napoleon had figured to be a simple operation turned into a full-scale war that dragged on for five years. The Spanish revolt was the first example of another country's nationalism being turned against France, although it was led largely by priests and nobles who stood for the conservative values of the old regime.

The Spanish method of fighting was ill suited to Napoleon's style of warfare. Instead of meeting the French in large pitched battles on Napoleon's terms, the Spanish launched hit and run raids to cut enemy communications and supply lines and ambush stragglers and foragers. Such warfare (called *guerilla*, meaning "little war") tied down some 360,000 French troops in Spain and Portugal. The desperate fighting for the town of Saragossa alone cost the French 60,000 casualties. Even a simple messenger going to France required an escort of several hundred cavalry. This war came to be called the "Spanish Ulcer" since it slowly bled the life out of the French army. Napoleon himself said the invasion of Spain was the worst mistake of his career.

Making matters worse for the French was British help led by Sir Arthur Wellesley (the future Duke of Wellington) and Sir John Moore. Wellesley in particular was a capable commander who knew how to use the stark Spanish landscape against the French, tying them down to long supply lines that were vulnerable to guerilla raids. Bit by bit, the French forces were worn down and driven back. In 1813 the last French army in Spain was defeated and driven out, leaving behind Joseph's silver chamber pot as a victory trophy to commemorate the "Spanish Ulcer".

Another shock came to Napoleon in 1809 when Austria, apparently inspired by the Spanish revolt, declared war on France again. Napoleon won the war quickly, but not before Austrian forces, showing their own nationalist spirit, inflicted a

sharp defeat on the French. In the ensuing peace, Austria lost still more land and population as the price of daring to fight France. Napoleon also claimed an Austrian princess, Marie Louise, as his bride, hoping she would provide him with a legitimate heir to his throne as well as give him ties to established royalty.



This short war against Austria should have indicated to Napoleon that the tide of revolution was starting to favor France's enemies. Both Austria and Prussia were adopting French innovations such as drafting subjects into their armies, while Prussia went so far as to abolish serfdom. Speeches by such men as Johannes Fichte urged the unification of a strong Germany against France and showed a strong undercurrent of nationalism developing there. However, it was events further east that would be Napoleon's real undoing.

Napoleon's invasion of Russia. There were several reasons for Napoleon's decision to invade Russia in 1812. Czar Alexander I felt snubbed by Napoleon's marriage to an Austrian princess (even though Napoleon had first asked the Czar for a Russian princess and been snubbed). Mutual jealousy between the two rulers, and Russian resentment of Napoleon's revival of Poland (as the Grand Duchy of Warsaw) and the Continental System, which was costing it valuable trade with Britain, also contributed to war.

Whatever the reasons, Napoleon was determined to crush Russia. However, instead of relying on the typical Napoleonic blitzkrieg, he decided to use the weight of numbers, some 600,000 men drawn from all over his empire, to crush his foe. In June 1812, the Grand Army of France entered Russia.

While most people hearing of Napoleon's Russian campaign think of the horrible Russian winter and march out of Russia, the march going in was rough too, with summer heat, flies, and dust plaguing the French and their allies all along. The Russian scorched earth policy of burning anything of use to the French before they could get it also wore them

out. Garrison duty, desertions, and even suicides from despair over the endless march reduced the French army to 125,000 men by September when the Russian General Kutuzov was finally forced to make a stand at the village of Borodino some 70 miles west of Moscow. What ensued was the fiercest, bloodiest, and most horrible day of fighting in the Napoleonic era, and possibly in history up till then. Once again Napoleon discovered that nationalist fervor was not something that could be confined to the French people. After a full day of hammering mercilessly at each other, 40,000 Russians and 20,000 French were lost, including 39 French Generals who were killed or seriously wounded. Even though the Russians eventually retreated, with those sorts of losses, nobody could really claim a victory.

The Russians left Moscow to the French, but little else in the way of food and other supplies. Soon after its occupation, Moscow mysteriously went up in flames, thus denying the French any shelter as well. Napoleon, hoping the Czar would come to terms, waited until October 19 to leave Moscow and head home. By then it was too late. The Russian winter was quickly setting in.

By Russian standards it was not such a bad winter. But for an army that had brought mosquito nets for continuing its campaign into India, it was a disaster. Men froze from exposure to the elements and starved as supply lines broke down and the surrounding scorched earth yielded little or no food. Many of the French horses died simply because Napoleon had refused to let them be shod for ice. With each day, the situation became more desperate and the retreat degenerated into a rout. At the Berezina River, total chaos ruled as the mob of French soldiers crowded frantically onto two bridges to escape oncoming Russian forces. One of the bridges broke under the weight of the crowd and thousands drowned or were crushed in the ensuing panic. An island that formed over the pile of bodies still stands as a grim reminder of the French disaster in Russia. Of 600,000 men who invaded Russia, only 55,000 made it back. Napoleon's message to the French people upon returning to France was: "His majesty's health has never been better."

The end of the Napoleonic Empire. Napoleon's defeat in Russia was a signal to the rest of Europe to rise up against French rule, and Austria, Prussia,

Russia, and Britain formed a new coalition to liberate the continent. Napoleon still had some fight left in him and raised new armies to defend his empire. However, the emperor was not as sharp as he used to be and he wasted men on needless marches and countermarches. The year 1813 saw heavy fighting as the allies pushed the French back across Germany. The decisive battle came at Leipzig in the "Battle of the Nations" where 300,000 allies and 190,000 French desperately fought for three days. When France's Saxon allies turned on them in mid battle, the French were forced to retreat through Leipzig. Unfortunately, the one bridge providing an avenue of escape was prematurely blown up, and thousands of French soldiers either surrendered or were drowned. The remaining French forces quickly retreated across Germany while the rest of Napoleon's empire in Holland, Italy, and Spain threw off the yoke of French rule. In fifteen months of disastrous campaigning, Napoleon had lost one million men.

Yet he refused to accept a settlement that would leave him with France. Maybe he hoped for an upsurge of nationalist fervor such as had happened during the crisis of the Revolution in 1793. In this he was sadly disappointed, because France was worn out by nearly a quarter century of warfare. The ranks were now filled with the "Marie Louise Boys", called that since they were too young to shave, but not too young to die for their emperor. While Napoleon showed flashes of his old brilliance in hurling one invading army after another back from French soil, it was still too little too late. On April 13, 1814, Napoleon was forced to abdicate. The man who just recently had ruled most of Europe now had to leave France in disguise to save himself from mobs of French people bitter over having suffered so much from his wars.

However, Napoleon was not quite through. The allies had generously given him the tiny Mediterranean island of Elba to rule, even with an army of 900 men. In 1815 he escaped to France, seized power, and fought one last battle against the Anglo-Dutch and Prussian armies near the Belgian village of Waterloo. It was a poorly run battle on Napoleon's part and ended in total defeat for the French. This time Napoleon was exiled to the island of St. Helena off the southern tip of Africa. He died there in 1821. . His legend has continued to grow to the present day.

The Spanish Ulcer



Francisco Goya's painting of the outbreak of the Spanish revolt on May 2, 1808

The Spanish revolt was the first example of another country's nationalism being turned against France, although it was largely led by priests and nobles who stood for the conservative values of the old regime.

“Godless” is how many people in Europe viewed Napoleon and the French. After all, one of the primary targets of the Revolution had been the Church. Therefore, it was to be expected that the fight against Napoleon became a virtual crusade to save the Church.

And “holy wars” tend to be among the most vicious.

The Spanish method of fighting (called guerilla, meaning "little war") was ill suited to Napoleon's style of warfare. Instead of meeting the French head-on, they launched hit and run raids to cut enemy supply lines and communications while ambushing stragglers and foragers.

Spanish guerillas wore no uniforms and often included women and children, making it hard to tell friend from foe. This made French soldiers extremely nervous and prone to lash out in retaliation against any citizens. Of course, many of their victims would be innocent bystanders, triggering more Spanish attacks, more retaliation, and so on. Each time this cycled around, the rage and resentment on each side would grow, making this a very frustrating, mean and bitter war.

In a series of 85 etchings known as The Disasters of War, Francisco Goya depicted war as no artist

before him ever had. Goya pulled no punches, showing its stark brutality, idiocy and meaninglessness. Even today, the graphic realism of these etchings shocks us out of our complacency about the true nature of war. Goya didn't even back off from the subject of rape by French soldiers or the savagery that women themselves could exhibit in retaliation.



The countryside was especially hard for to control since, any stragglers and foragers were subject to attacks by roving bands of guerrillas, some only armed with knives. Supply trains had to be protected by large forces of French troops. Even getting a message to France required an escort of several 100 men. Eventually, Napoleon had 360,000 soldiers committed to Spain.

And even that wouldn't be enough.

Saragossa. One of the major struggles the Spanish campaign was the struggle for Saragossa, which was defended by 32,000 regulars and 50,000 men, women and children.

Every house was loop-holed.

Every street was barricaded and peppered with mines.

Avenues of fire were cleared and artillery placed behind barricades to sweep the streets.

What happened here seemed to anticipate the horrors of urban warfare over a century later during World War II in such cities as Stalingrad, Warsaw, and Berlin. A French soldier caught in this fighting probably described it best:

"When we broke into a house we had first to inspect it thoroughly from bottom to rooftop. We learned from experience that a sudden interrupted resistance could be a warlike ruse. Often as we were installing ourselves on one floor, we would be shot at point-blank range

from the next floor up through openings made beforehand in the ceiling. The nooks and hiding places we frequently found in these old-fashioned buildings facilitated such murderous ambushes.

Above all we had to keep a watch on the rooftops. With their serge shoes, the Aragonese would circulate as easily and with as little noise as cats and were therefore able to return to make unexpected forays well behind the front line of operations. It was a veritable war of aerial fighters."

"If the enemy disputed the entry to a room, we would pierce loopholes facing his own and there would be shooting from both sides. As the room separating the combatants quickly filled with smoke, this enabled a sapper to crawl forward on his stomach and make his way under the enemy's musket barrels. The sapper would then stand up, beat with all his might on the musket barrels with an iron bar and force the Spaniards to pull their muskets back. Our grenadiers would then move forward, throw grenades, fill in the loopholes and force the enemy to seek refuge in another, more distant room, where a new battle would begin."

Saragossa was besieged 4 times and cost France 60,000 men. Street fighting in the second siege took approximately a week. Of Saragossa's 82,000 people, 54,000 died before the city fell.

The war in Spain came to be called the "Spanish Ulcer" since it slowly bled the life out of the French army. Napoleon himself said the invasion of Spain was the worst mistake of his career.



Even priests took part in the fighting to stop the "godless" French.

The Spanish did have help, especially from Britain whose navy could keep it supplied. However, the British force of 40,000 regulars was no match for Napoleon. However, the situation changed when war with Austria forced Napoleon to leave Spain.

The British general, Sir John Moore, seized this opportunity and suddenly turned on the French, defeating them in the mountains and snow near Corunna. Although the British won the battle, Moore was killed. His replacement, John Wellesley, better known to history as the Duke of Wellington, would carry on the struggle.

As much as anything, the somewhat dry and barren terrain of Spain and Portugal proved a decisive factor in the Peninsular War. Wellesley's strategy was to build a vast system of earthworks at Torres Vedras along Portugal's west coast and force the French to besiege him there.

While their navy could easily supply the British, the larger French army had to rely on long supply lines to survive. Such supply lines were especially vulnerable to the hit-and-run tactics of the Spanish guerrillas, forcing the French to commit large numbers of troops to protect them.

Nowhere did the term "Spanish Ulcer" apply better than here, as the French strength slowly bled away.

The final defeat of the French forces took place at Vittoria in 1813. Among the spoils of battle, the British took Joseph Bonaparte's silver chamber pot. The following year, the French were finally expelled from Spain.

The Wounded

"I have 300,000 men to spend."--Napoleon



General Kleber who served with Napoleon in Europe called him “the general who consumes 6000 lives a day”. Despite constant pleas from his doctors, Napoleon never created a permanent army medical corps.

On the eve of Austerlitz, the chief surgeon didn't even have a single bandage.

In the Russian campaign wounded soldiers had to be bandaged with tree bark.

Sometimes dirty cannon swabs were used for bandages, often infecting patients with tetanus.

One group of sixty doctors arriving at a field hospital and seeing its appalling conditions immediately went home.

In 1809, Napoleon finally authorized the first permanent field service with ten companies of army nurses (1250 men) and a few ambulances. But it was too little too late. After the Battle of Essling, surgeons had to put the wounded in lean-tos of river reeds covered with coats taken from dead soldiers. They were fed butchered cavalry horses cooked in helmets hammered into pots.

The wounded would be put next to patients with infectious diseases, thus complicating their chances of recovery. The lucky ones would be put on a layer of straw. More often they were just laid in the mud. One wounded officer was put on a pile of straw-covered dung. Many casualties were adolescents whose bodies weren't developed enough to withstand the shock of being wounded along with exposure to infectious diseases.

Orderlies with 3 weeks training had to carry out hundreds of amputations with passing surgeons just marking with a piece of chalk where to cut. Most of those patients died agonizing deaths. All accounts mentioned the horrible stench of a battle's aftermath.

Huge flies soon covered soldiers not rescued from the battlefield, filling their wounds with maggots that ate them away inch by inch.

The victims were unable to do anything except watch and go mad. The bodies of the dead left unburied in the summer heat would swell with gases until they burst. Many soldiers' accounts mention the sound of these bodies exploding after a battle.

Russia



"A single blow delivered at the heart of the Russian Empire, at Moscow the Great, at Moscow the Holy, will instantly put this whole blind apathetic mass at my mercy." --Napoleon

While most people associate Napoleon's Russian campaign with the horrible Russian winter and march out of Russia, the march going in was rough too, with summer heat, flies, and dust plaguing the French and their allies all along. The Russian scorched earth policy of burning anything of use to the French before they could get it also wore them out. Even fresh drinking water was a rare and valuable commodity.

Hardly traveling lightly. One French colonel brought books, maps, a carriage, two wagons, twelve horses, and six servants. Some officers, believing they were going on to Persia and India, even took mosquito nets instead of winter clothing.

As one French soldier described the march:

"Of all the unpleasant things we had to endure one of the most unbearable was the thick dust which enveloped us on the march, much of the way in very dry weather. I recall that at one stage, so as to prevent anyone taking a wrong turning, a drummer was stationed at the head of each battalion and his job was to beat the drum all the time. This fact alone will indicate just how dense the clouds of dust were."

"Not a soul in sight, not an inhabitant in the villages we passed through. One would have said

that even the animals wanted to escape notice." —
French soldier

Even fresh drinking water was a rare and valuable commodity.

"These exceptional marches added to the great shortages we had to put up with, thinned our ranks to an unexpected degree, and thousands of men disappeared within a very short time. Hundreds killed themselves, feeling no longer able to endure such hardship. Every day one heard isolated shots ring out in the woods near the road. Patrols were sent to investigate, and they always came back and reported a cuirassier, an hussar, an infantryman, a Frenchman, or an ally had just committed suicide."-- French veteran

"We passed through the smoking ruins [of Smolensk] in military formation with our martial music and customary pomp; triumphant over this desolation, but with no other witness to our glory than ourselves."

On September 7, The Russians finally made a stand at Borodino in probably the most terrible battle of the Napoleonic wars.

"...on every side one saw nothing but the dead and dying. When I rode over to congratulate one young officer, Monsieur de Gramont, on his good bearing, I witnessed some terrible things. He told me that he had nothing to complain of and that all he wanted was a glass of water. He had barely finished speaking when a cannonball cut him in two. I turned to another officer and said how sorry I was about poor de Gramont. Before he could reply his horse was struck dead by a cannonball. And a hundred other incidents of this kind. I gave my horse to a cuirassier to hold for half a minute and the man was killed. I was covered with earth thrown up by shells."--French Captain at Borodino

"When a Russian soldier has been killed, you still have to push him to make him fall down." — Napoleon

"Those Russians let themselves be killed like machines...They are citadels that have to be demolished with cannon"-- Napoleon.



The carnage was so great that soldiers piled the bodies of the fallen into protective walls. After a full day of mercilessly hammering at each other, 40,000 Russians and 20,000 French were lost, including 39 French Generals who were killed or seriously wounded. Even though the Russians eventually retreated, with those sorts of losses, nobody could really claim a victory.

That night an icy rain added to the misery of the wounded and the number of dead.

On September 14, 1812 the French entered Moscow, only to find it completely abandoned. As they marched through empty streets they were *"filled with wonder at the sight of such complete solitude, they responded to the awe inspiring silence of this modern Thebes by a silence equally solemn....These warriors shivered inwardly at the lonely echo of their horses hooves among the deserted palaces."*

Although there was enough shelter left, it was often used in ways that further angered the Russian people. Most notably, the French used Uspensky Cathedral to stable their horses, something the Russians saw as a sacrilege.



Soon after its occupation, Moscow mysteriously went up in flames, most likely on orders from the Russian governor to deny the French food and shelter. The fire destroyed as much as two-thirds of Moscow.

Looting after the burning of Moscow just made the situation even worse for the French.

"Enormous fires had been lit in the middle of the fields, in thick cold mud and were being fed with mahogany furniture and gilded windows and doors. Around these fires, on litters of damp straw, ill protected by a few boards, soldiers and officers, mud stained and smoke-blackened, were seated in splendid armchairs or lying on silk sofas. At their feet were heaped or spread out cashmere shawls, the rarest of Siberian furs, cloth of gold from Persia and silver dishes in which they were eating coarse black bread baked in the ashes and half-cooked, bloody horseflesh."



The Retreat. On November 9, the French reached the ruins of Smolensk finding few supplies left there. Army regulations dictated that supplies could only be given to military units, not individuals. Therefore, thousands of soldiers that had lost contact with their units were denied what little food that existed.

"When they [the garrison in Smolensk] saw in Napoleon's wake a mob of tattered ghosts draped in women's cloaks, odd pieces of carpet, or greatcoats burned full of holes, their feet wrapped in all sorts of rags, they were struck with consternation. They stared in horror as those skeletons of soldiers went by, their gaunt, gray faces covered with disfiguring beards, without weapons, homeless, marching out of step, with lowered heads, eyes on the ground, in absolute silence, like a gang of convicts."—French soldier

During the crossing of the Berezina River, a Russian shell hit one of the bridges, triggering a panic in the French army. Soldiers in front were pushed into the gap in the bridge and into the freezing river, with others being pushed on top of them. Eventually a mound of bodies formed that let others cross to the far side. Eventually,

an island formed over those bodies and remains there to this day.



The bravest of the brave. Only Marshall Ney, musket in hand, led a heroic rear guard action against overwhelming Russian forces while the rest of the French army had disintegrated into headlong flight. Ney, called the bravest of the brave, was the only French leader whose reputation was enhanced by the Russian disaster. After disappearing with 7,000 men, he re-merged a week later with only 1,000 survivors.



The retreating French and their allies were also attacked by peasants avenging the destruction of their lands and churches by the "godless French"

At night, soldiers would fall asleep by campfires that would melt the surrounding snow. After the fires went out, the water would refreeze, leaving only frozen corpses by morning.

Some soldiers would burn houses just to get warm, while others, crazed by the cold, reportedly threw themselves into the flames.

Only 50,000 out of 600,000 men, made it home. Napoleon sent this message to reassure the French: *"The emperor's health has never been better."*

A Ground-level View of Waterloo



Napoleon's final battle at Waterloo, while maybe his most famous fight, was hardly a masterpiece of strategy. The emperor wasted much of the day with fruitless cavalry attacks against the British infantry squares, interspersed with artillery bombardments that caused frightful casualties. While it was the cavalry charges that captured the artists' and public's imagination, it was the artillery that did the real damage.

As one British veteran recalled: *"We had 3 companies almost shot to pieces, one shot killed and wounded 25 of the 4th company, another of the same kind killed poor Fisher, my captain, and 18 of our company...and another took the 8th and killed or wounded 23...At the same time poor Fisher was hit as I was speaking to him, and I got all over his brains, his head was blown to atoms."*

British troops considered the French cavalry charges a relief, since they were ineffective against solid infantry squares and forced the French artillery to stop their much more deadly work. One officer referred to these "repeated visits from [the] Cuirassiers. I do not say attacks, because these cavalry columns on no occasion attempted to penetrate our square, limiting their approach to within 10 or 15 yards of the front face, when they would wheel about, receiving such fire as we could bring to bear upon them, and, as they retired, en passant, that from neighboring squares.

Concerning the attacks by the French cavalry, one British officer referred to these "repeated visits from [the] Cuirassiers. I do not say attacks, because these cavalry columns on no occasion attempted to penetrate our square, limiting their approach to within 10 or 15 yards of the front face, when they would wheel about, receiving such fire as we could bring to bear upon them, and, as they retired, en passant, that from neighboring squares."

"...the horses of the 1st rank of cuirassiers, in spite of all the efforts of their riders, came to a standstill, shaking and covered with foam, at about 20 yards distance...and generally resisted all attempts to force them to charge the line of serried steel."

"No actual clash was made upon us. Now & then an individual more daring than the rest would ride up to the bayonets, wave his sword about & bully; but the mass held aloof, pulling up within 5 or 6 yards; as if, though afraid to go on, they were ashamed to retire. Our men soon discovered they had the best of it, & ever after would, when they heard the sound of cavalry approaching, appear to consider the circumstances a pleasant change (from being cannonaded)!"

The Murder of Napoleon?



Although the official autopsy report said Napoleon died of stomach cancer, like his father, there has been a popular theory that he was murdered, more specifically, gradually poisoned with arsenic mixed with his wallpaper paste. Since arsenic stays in the body, it built up to toxic levels by inhaling minute amounts of it over time until it killed Napoleon. The evidence supporting this is arsenic found in his hair follicles. (Several locks of his hair were saved and have occasionally come up for auction.)

Another, less diabolical theory concerns Scheele's Green, a coloring pigment used in fabrics and wallpapers since the 1770s. If it gets damp and moldy, the copper arsenite in the pigment transforms into a vapor form of arsenic that can cause Gosio's disease, a malady that did kill a number of people exposed to this pigment in the 1800s. A piece of his wallpaper has survived, and analysis shows it did have arsenic in it. However, it's believed that the amount of arsenic was too small to kill him. Rather, it may have just exacerbated the stomach cancer that doctors originally said killed Napoleon.

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107. PRUSSIAN REFORMS IN THE NAPOLEONIC ERA AND THEIR IMPACT

Prussia provides possibly the best example of how Napoleon's success inspired other countries to copy many of his reforms in order to break free of French rule. Napoleon was especially severe with Prussia joining his enemies in 1806, taking nearly half of its lands while exacting an indemnity equal to 140% of its annual government revenue **before** it had lost those lands. In addition its army was limited to 42,000 men. This humiliating settlement brought home to Prussia's rulers the need to copy the reforms that had obviously given France so much dynamic power and vitality during the revolutionary period. These reforms came in two ways: those imposed by the government from above in order to prevent the need for revolution from below, and those suggested by intellectuals, notably Johannes Fichte, in regard to education.

There were three main parts to the reforms imposed by the government. The most sweeping of these was the Edict of Emancipation in 1807, which ended serfdom, feudal privileges, and all class distinctions. Even Jews were given full civil rights by this document, a rarity in Europe at that time. Along with this came a land reform in 1811 that gave the peasants two-thirds of the land they had worked for the nobles while leaving those nobles the other third of land in compensation for their loss. Finally, there were major military reforms, such as promotion by merit and banning foreign recruits, which hopefully would instill some of the same high morale and efficiency into the Prussian army that had made the French army so effective in recent years.

Later in the century, Otto von Bismarck would unify Germany under Prussian rule and institute similar social reforms in order to remove any need for revolution. In each case, there were few political reforms giving the German people any real power in their government. However, these two waves of reforms in the 1800's would make Germans more willing to accept without question the policies of a government they saw as benevolent and ruling in their interests. This would influence many ideas on the modern welfare state, but also, along with the educational reforms discussed below, make the German people prone to fall victim of political groups posing as their benefactors while

just using this facade to get power for their own purposes.

The major figure in Prussia's educational reforms was Johannes Fichte. In his "Addresses to the German Nation", he tackled two issues: creating a German national spirit and instilling it into the German people. First of all, Fichte blamed Prussia's and the German people's recent humiliations on a lack of national spirit, which gave rise to moral failure and complacency. From the English philosopher, Edmund Burke, he borrowed the idea that the nation is the only enduring thing on earth, and thus the living expression of divine immortality. However, while France and England had strong national traditions and institutions to bind them together, the German people had virtually none and thus must find or create them. For Fichte, the best candidates for such German traditions were the Germanic tribes that had conquered the Roman Empire. It was here that one would find the simple and noble virtues that had made those people great and would make Germans great once again. He also saw the Holy Roman Empire, the so-called First Reich, as a unifying institution that Germans could look back to for inspiration.

As far as instilling these traditions in the German people, Fichte saw the public schools as the place where this could be done. While Prussian schools had been and remained places for technical education, this new agenda of instilling nationalist spirit into its children also became an essential element in public education for many modern nations in addition to Prussia and later Germany.

Just as the government's social reforms made the German people somewhat complacent about their rulers, these nationalist ideas had a similar effect on Germany's intellectuals. Fichte's educational proposals would translate intellectual ideas into action on a national scale and give the intellectual community a major role in implementing these reforms. However, it also made the intellectuals a part of and subordinate to a system that valued action over contemplation. This put pressure on them to affirm government policies with absolute conviction rather than questioning them in the spirit of skepticism needed to keep an intellectual climate fresh and vibrant. Therefore, the intellectuals, along with the German people in general, were prone to falling under the sway of people who would use

their power for less than benevolent purposes. The most notable example of this was the rise of Hitler and the Nazis, which led to World War II. Ironically, Fichte, who proposed many of the reforms that would eventually lead to this disaster, was himself an idealistic liberal, the sort of person that Hitler would work so hard to eradicate.

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108. REVOLUTION AND REACTION IN EUROPE (1815-1848)

"After me, the Revolution- or, rather, the ideas which formed it- will resume their course. It will be like a book from which the marker is removed, and one starts to read again at the page where one left off."--Napoleon

The Congress of Vienna. Despite his defeat, Napoleon had several important effects on Europe. For one thing, he had spread the idea of liberalism, especially in Western and Central Europe. By the same token, he had also spread the idea of nationalism in East and Central Europe. Finally, his defeat prompted the victors to meet at the Congress of Vienna with the goal of turning back the clock to restore the Europe that had existed before the French Revolution. This was especially the goal of the brilliant Austrian minister, Metternich who led much of the deliberations at Vienna.

The most pressing issue was what to do about France: punish it for causing all this trouble, or restore it to its former position as one of the great powers. Realizing that breaking up France would upset the balance of power, destabilize Europe, and lead to more revolutions, the allies restored it to its old position, punishing it with only a mild indemnity and short military occupation. However, the new king, Louis XVIII, was a constitutional, not an absolute monarch. Even in defeat, the French Revolution had made progress.

There were other changes in the political map of Europe and the world. Britain took South Africa from the Dutch to secure its sea route to India. In compensation, the Dutch got the Austrian Netherlands from Austria, which in turn received control of Northern Italy. The Grand Duchy of Warsaw formed by Napoleon, continued to exist as the Kingdom of Poland, although its king also happened to be the Czar of Russia. And Germany, thanks largely to Napoleon's administrative work, was consolidated into 38 states. These last three changes would all contribute to nationalist revolts in succeeding years.

For the time being, the Congress of Vienna did restore the old order and a period of relative international peace known as the Concert of Europe, since it saw the major powers working largely

together for several years to guard the common peace and old order. However, the ideas born in the French Revolution and spread by Napoleon had not been eliminated. The seeds of revolution had taken root and were spreading rapidly across the face of Europe. Like it or not, the age of kings was in its twilight and a new age of democratic and nationalistic reforms and upheavals was dawning.

The pattern of revolts. The period 1815-48 saw periods of apparent tranquility broken by recurring waves of revolution. In two of three cases (1830 and 1848), these revolutionary movements started in France and inspired similar outbreaks all over Europe. Generally, revolutions in Western Europe focused on liberal reforms, since, with the exception of Belgium, nation states with a strong middle class were already established there. Eastern Europe, with its multi-national empires, saw more nationalist uprisings as various ethnic groups wanted independence from the Hapsburg, Ottoman, and Russian empires. Germany and Italy, in the middle of Europe, were especially turbulent since they were striving for both national unification and liberal civil rights.

A basic pattern of events emerged during this period. Authorities would think they had crushed the ideas of liberalism and nationalism. However, they had merely driven these ideas underground where they would continue to spread and revolutions would flare up again. While most of them would be suppressed, one or two would succeed and might prompt more liberal reforms in countries where the uprisings had been put down. Rulers would again think they had suppressed the revolutionary ideas, and the cycle would repeat. There were three major waves of revolutions: in the 1820's, 1830's, and 1848.

In 1820 the revolutions started in Spain and spread to Greece, South America, and Germany. Most of these were put down, but Greece and the South American colonies did win their independence, with a constitutional monarchy established in Greece and republics in South America. The next wave of revolutions would start in France in 1830 and spread to Poland, Belgium, Italy, and Germany. While the uprisings in Germany, Italy, and Poland were crushed, France won a slightly more liberal constitutional monarchy, Belgium won its freedom,

and more liberal reforms were peacefully passed in Britain.

The final, and biggest, wave of revolutions occurred in 1848, with some fifty uprisings taking place across Europe. The French this time established a republic, only to have it taken over by a dictator, Napoleon III, and turned into the Second Empire. Elsewhere, other revolutions collapsed, but they did lead to some reforms. Serfdom was abolished in the Hapsburg Empire while a weak constitutional monarchy was established in Prussia. Despite apparent failure, nationalist reformers would learn from their mistakes and set more realistic goals and strategies toward attaining national unity in Germany and Italy by 1871.

Revolutions in the 1820's. It took only five years before a new wave of revolutions threatened the old order recently reestablished by Metternich and the Congress of Vienna. Ironically, it was one of the more backward countries of Western Europe, Spain, that led the way. A number of liberal army officers, apparently influenced by the ideas of the French Revolution, rebelled against the corrupt and repressive rule of the Bourbon king, Ferdinand VII. As if on cue, riots and revolts broke out all over: in Italy, Germany, Russia (1825), the Spanish American colonies, and Romania and Greece in the Ottoman Empire. In most cases these revolts were put down. Austria suppressed the revolts in Italy and unrest in Germany. France, despite some protests from Britain, put down the revolution in Spain. The new czar, Nicholas I, had no trouble crushing the Decembrist Revolution led by liberal army officers (many of whom thought that their battle cry, "Constantine and Constitution", referred to their liberal candidate for the throne, Constantine, and his wife. Likewise, the Ottoman Turks put down the Romanian uprising.

However, in two cases on the fringes of European power, Greece and the Spanish American colonies, revolutions succeeded for reasons peculiar to each situation. In the case of the Greek revolt, it was largely a romantic sentiment for ancient Greece, home of democracy and Western Civilization that sparked popular support for the Greeks. The fact that the Greek rebels were descendants of Slavic invaders of the early middle ages, not the Greeks from the time of Pericles and Socrates, made little impact on the European public. In fact, many of

them, including the Romantic poet, Byron, went there as freedom fighters. In the end, the European powers, having little regard for the non-Christian Turks and fearing Russian aggression that might threaten the balance of power in southeastern Europe, pressured the Ottomans to grant Greece its freedom. In the style of the day, the Greeks established a constitutional, not absolute, monarchy in 1832. It was the first major break in the old order since the Congress of Vienna.

The Spanish American colonies had taken advantage of the revolution in Spain to throw off the yoke of Spanish rule. Much of their inspiration came from the newly formed republic to the north, the United States. It was the United States that also stood up to protect the Americas from foreign intervention in the famous Monroe Doctrine in 1823. More important than the fledgling American republic's stand was Britain, which supported the revolutions so it could break Spain's mercantilist monopoly on trade and open new markets for British merchants to exploit. Spain could ignore the Monroe Doctrine, but it could not ignore the power of the British navy, so its American colonies went free.

However, independence brought two sources of instability to Latin America (**covered in FC.108A**). For one thing, most Spanish bureaucrats fled back to Spain, leaving few trained bureaucrats to handle government business. As a result, the armies that won the revolutions were often the only means of keeping matters under control. Second, with Latin American markets now open for free trade, Britain and other European countries encouraged the production of one type of commodity in each nation, such as beef in Argentina or copper in Chile. This made each new nation too dependent on international markets for its one product. Therefore, if the market for their product fell, their economy would have nothing else to fall back upon. This happened to El Salvador in the late 1800's when cheaper industrially produced dyes destroyed the need for its indigo dye, thus wrecking its economy. Together, these factors led to unstable economic and political structures in Latin America encouraging rule by military dictatorships. Misrule and poor economic conditions would lead to more military coups and revolutions, that would further destabilize the economy and the new government, leading to more revolutions and so on.

Revolutionary fever spreads: the 1830's. By the mid 1820's, most of Europe was pacified once again. However, the ideas of nationalism and liberalism, still simmering under the surface, broke loose again in 1830. Once again, the trouble started in France. The government of the restored king, Louis XVIII (1815-24), was a conservative constitutional monarchy with a legislature elected by a narrow electorate of 100,000 property owners. Louis realized that, after a quarter century of revolution, he had to treat the French people with care. His brother and successor, Charles X (1824-30) was not so wise. He censored the press, restored the clergy's position in the schools and politics, tried to bring back feudalism, gave pensions to nobles who had lost lands and rights from the Revolution, and dissolved the legislature.

In 1830, the Parisians revolted and barricaded Paris' narrow streets. The army refused to fire on the crowd, and Charles fled to England (a common habit for deposed kings back then). Now the question was: what type of government to set up. Students, intellectuals, and the Parisians wanted a republic. However, the middle class, probably with the backing of the more conservative peasantry, prevailed in its desire for a constitutional monarchy. The new king, Louis Philippe, known as the "Citizen King", was a man with little to commend him except that he was both a Bourbon and a former revolutionary, thus a compromise candidate who satisfied no one. Admittedly, his constitution was a bit more liberal than the previous one, with 200,000 property owners given the right to elect the legislature. Things did settle down in France for a few years, but not before revolutionary turmoil flared up all over Europe.

Word of events in France triggered revolts in Belgium, Italy, Germany, and Poland, plus giving further impetus to a reform movement in Britain. Austria put down the uprisings in Germany and Italy, while Czar Nicholas I easily crushed the Polish rebellion against Russia. The one successful revolution was in Belgium where religious and linguistic differences with the ruling Dutch caused deep resentment that erupted into open rebellion in 1830. Austria and Prussia wanted to put this revolt down, but France and Britain supported the Belgian cause, largely to keep the other two powers from meddling so close to their shores. Since Austria and

Prussia were also preoccupied with the Polish revolt, France and Britain could pressure Holland to recognize Belgian freedom in 1831. As was becoming the norm, a constitutional monarchy was established.

Although Britain did not experience revolution, it did see a strong reform movement that liberalized the criminal code and culminated in the Reform Bill of 1832. Electoral representation was redistributed to reflect the shift in population to the rapidly industrializing northern counties. The vote was extended to about 20% of British men (twice of what it was before). The Reform Bill of 1832 also opened the door for more liberal reforms as the century progressed: extending the vote to urban workers (1867) and miners (1884) and also instituting the secret ballot. Finally, after a long struggle, even women would get the vote in 1917. Although Britain remained technically a constitutional monarchy, by the early part of this century it was essentially a modern democracy.

The Revolutions of 1848. The success of revolutionary and reform movements in Western Europe and frustration at the failure of other similar movements in Central and Eastern Europe led to the spread of liberal and nationalist ideas in the 1830's and 1840's. Economic forces also played a role in spreading discontent. A series of bad harvests in the 1840's caused starvation (with one million people dying in Ireland from a severe potato famine), which led in turn to higher food prices, bankruptcies, unemployment and urban unrest. Once again, events in France sparked a new wave of revolutions.

The government of the "Citizen King", Louis Philippe, had proven to be conservative, corrupt and unpopular, and in 1848 revolution broke out in Paris. Just like in 1830, the barricades went up in Paris' narrow streets, many soldiers refused to fire on the crowd, and the king fled to Britain. And just like before, revolutionary fever spread all over Europe, with close to 50 revolutions erupting in the German states, Italian states, and Hapsburg Empire.

The suddenness and scale of the uprisings caught rulers completely by surprise. In Germany, they agreed to more liberal constitutions, while a convention was held at Frankfurt to establish a national parliament for all of Germany. In Italy, the

Austrians were driven out of Milan and Venice, while rulers in Naples, Tuscany, and Piedmont agreed to liberal reforms. In the Hapsburg Empire, a Hungarian revolt triggered similar revolts by Czechs, Croats, Galicians, and Transylvanians living under Hapsburg rule. Metternich, the conservative prime minister and architect of the Congress of Vienna, was forced to resign, and the emperor fled to Innsbruck. It seemed like the old regime was about to collapse all over Europe. But just as events in France had set off these revolutions, events there led the way in suppressing them.

This time, the French established a republic where all Frenchmen could vote for delegates to a convention to draw up a new constitution. However, it reflected the more conservative views of French peasants and middle class, which touched off riots by the urban masses suffering from lack of food and shelter in the recent economic troubles. The army met the crowd's cry of "Bread or Lead" with a hail of lead from artillery fire, killing 10,000 demonstrators. This was a turning point in suppressing radicals both in France and across Europe.

In France, the establishment of the Second Republic led to the election of Napoleon Bonaparte's nephew, Napoleon III, who, like his uncle, used a military coup to extend his presidency and then make himself emperor of the Second Empire (1852-70). Victor Hugo, in his *The History of a Crime*, described this coup in grim terms that probably would apply to such events at any time:

"Suddenly, at a given signal, a...shower of bullets poured upon the crowd....Eleven pieces of cannon wrecked the Sallandrouze carpet warehouse. The shot tore completely through twenty-eight houses. The baths of Jouvence were riddled. There was a massacre at Tortoni's [cafe]. A whole quarter of Paris was filled with an immense flying mass, and with a terrible cry...."

"Adde, a bookseller of 17, Boulevard Possonniere, is standing before his door; they kill him. At the same moment, for the field of murder is vast, at a considerable distance from there, at 5, Rue de Lancry, M. Thirion de Montauban, owner of the house, is at his door; they kill him. In the Rue Tiquetonne, a child of seven years, named Boursier,

is passing by; they kill him. Mlle. Soulac, 196, Rue du Temple, opens her window; they kill her...

"New Year's Day was not far off, some shops were full of New Years' gifts. In the Passage du Saumon, a child of thirteen, flying before the platoon firing, hid himself in one of these shops, beneath a heap of toys. He was captured and killed. Those who killed him laughingly widened his wounds with their swords. A woman told me, 'The cries of the poor little fellow could be heard all through the passage.' Four men were shot before the same shop...."

"At the corner of the Rue du Sentier an officer of Spahis, with his sword raised, cried out, '...Fire on the women.' A woman was fleeing, she was with child, she falls, they deliver her by the means of the butt-ends of their muskets. Another, perfectly distracted, was turning the corner of a street. She was carrying a child. Two soldiers aimed at her. One said, 'At the woman!' And he brought down the woman. The child rolled on the pavement. The other soldier said, 'At the child!' And he killed the child...."

"In the Rue Mandar, there was, stated an eyewitness, 'a rosary of corpses,' reaching as far as the Rue Neuve Sainte-Eustache. Before the house of Odier twenty-six corpses, thirty before the Hotel Montmorency. Fifty-two before the Varietes, of whom eleven were women. In the Rue Grange-Bateliere there were three naked corpses. No. 19, Fauborg Montmartre, was full of dead and wounded. A woman, flying and maddened with dishevelled hair and her arms raised aloft, ran along the Rue Poissonniere, crying, 'They kill! they kill! they kill! they kill! they kill! they kill!'"

Despite its violent beginning, Napoleon III's rule was much more peaceful than that of his uncle. France's prosperity rapidly grew as he promoted the building of industries and a centralized railroad network. He also put Paris through an extensive urban renewal project, providing the city with wide boulevards that critics were quick to point out could not be barricaded so easily in the event of revolution. Napoleon's reign would come to an end in 1870 after a disastrous war against Prussia in its final stage of unifying Germany. In his wake came the Third Republic of France. With the exception of Nazi rule in the 1940's, democracy has prevailed in France ever since.

Meanwhile, in the rest of Europe, the defeat of the more radical elements in France gave heart to other kings and princes reeling from the current wave of revolutions. Uprisings in Italy, Germany, and the Hapsburg Empire, were crushed as quickly as they had erupted and nearly overthrown established governments. By the end of 1848, the old regimes were back on top, and nothing seemed to have been gained.

Even in failure, the revolutions of 1848 did have positive results. For one thing, several reforms, such as the abolition of serfdom in the Hapsburg Empire and the granting of at least nominal constitutions in the German states signaled some progress. The spirit of reform extended even further east to Russia where serfdom was abolished in 1861. Second, despite their failure, the revolutions spread the popularity of liberal and nationalist causes. Failure also taught reformers to be more realistic in trying to attain more liberal reforms or national unification. Two such men in particular, Camillo Cavour in Italy and Otto von Bismarck in Germany, clearly recognized these lessons and skillfully put them to work in building nations forged, as Bismarck would put it, from "blood and iron".

Nineteenth Century Art to c.1850

Artistic standards in France (and to a large extent, the rest of Europe) had been ruled since the 1600s by the Academies of Painting and Sculpture, Music, and Architecture all founded during Louis XIV's reign. In 1795 these were combined into the Académie des Beaux-Arts, which continued to exercise strong conservative influence on the arts. Painting, in particular was supposed to cover appropriate topics (e.g., history, classical culture, religion, and portraits of important people) and exhibit a polished style.

In the nineteenth century, the Academic style came under increasing criticism as being artificial and limited in subject matter, leading to a split between Neo-Classicism, which continued to follow the Academy's standards, and Romanticism, which forged new paths in technique and subject matter that would influence the Realists and Impressionists later in the century.

Neo-classicism stressed creating precisely painted images from Greek and Roman myth and history to portray the selfless sacrifices of past heroes in order to inspire present day patriots. Jacques Louis David (1748-1835) was especially prominent, doing paintings of such events as the Oath of the Horatii from Roman legend and Death of Socrates from Greek history.

However, as an apologist for the French Revolution and then for Napoleon, he adapted his style to contemporary events such as the Tennis Court Oath and the death of Marat during the Revolution. David's *Leonidas at Thermopylae* (below) was done to encourage the French to fight to the death for their emperor against the ring of enemies closing in from all around. It didn't work, being more than offset by the sight of entire wagon trains full of the wounded straggling through France.



Jean Auguste Dominique Ingres (1780-1867), who studied under David, was another leader of the Neo-Classical movement, as seen in his portrayal of classical subjects such as Oedipus, Romulus, Vergil and Augustus, Thetis and Jupiter. Like David, Ingres was an apologist for Napoleon, even portraying his apotheosis as a god.

Romanticism, which was also seen in the literature and music of the time, stressed our emotional side and idealized nature and everyday themes through the use of broad brushstrokes of color. Critics called the Romantics' work sloppy since the figures were often kind of blurry instead of precisely drawn (e.g., Turner's "Rain, Steam, and Speed"). The Romantics' more down to earth themes also reflected the more democratic spirit sweeping across Europe at the time.

Theodore Gericault (1791-1824) was a founder and leader of the Romantic school of art. Dying at a young age, he is remembered mainly for *The Raft of the Medusa* (1819), which was a reaction to a scandal whereby sailors set some 150 shipwrecked passengers adrift on a raft without food or water. The painting shows the handful of survivors seven days later trying to flag down a rescue ship.



Francisco Goya (1746 –1828) is hard to categorize, since he is considered both as the last of the Old Masters, being the court artist for the Spanish royal family, and the first modern artist in terms of his techniques and oftentimes radical subject matter. But even his portrait *Charles IV of Spain and His Family* suggests a bit of subversive attitude, being described by Théophile Gautier as resembling "the corner baker and his wife after they won the lottery".

On the other hand, Goya's *Executions of the 3rd of May* (1808), not only protests Napoleon's takeover of Spain, but also the Church's insensitivity to the people's suffering. Notice how the Spaniard (in the white shirt) is bathed in light as he assumes a Christ-like pose of crucifixion before the firing squad. In contrast the Church in the background is shrouded in darkness, signifying it offers no hope for the Spanish people.



Goya did a series of some 80 sketches of the Spanish revolt against Napoleon, appropriately named *The Disasters of War*. The graphic portrayal of violence shows a very modern attitude against war to go with the emergence of total war during the French Revolutionary and Napoleonic era, showing even women involved in the violence of war.

Eugene Delacroix, (1798-1863) is probably the best known of the Romantic painters and is best remembered for *Liberty Leading the People* (1830). In the Romantic period, it was popular to portray Liberty or the nation as a woman whom men would be willing to fight and die for.



Another of Delacroix's paintings, *The Massacre at Chios* (1824) especially roused public support in Western Europe for the Greek revolution against the Ottoman Turks

English painters such as John Constable (1776-1837) often idealized the quiet country life in paintings such as *The Hay-Wain* (1821).



J.M.W. Turner (1775-1851) is best known for *Rain, Steam, and Speed, The Great Western Railway*, (1844). Turner supposedly stuck his head out a train car window in a rainstorm to get a better visceral impression for his painting. His

style seems to anticipate that of the impressionists some 20 years later.



Napoleon's campaigns in the East, France's conquest of Algeria in 1830, and the Greek Revolution against the Turks helped spark more interest in the Muslim world, leading to Orientalism, which often focused on Muslim culture's more sensual aspects (e.g., harems) and themes considered inappropriate if portrayed in a European context. Similarly, artists could get away with these paintings since they contrasted supposed Eastern "decadence" with Western "morality".

Orientalism influenced both Romantic and Neo-classical and artists. In addition to Delacroix's paintings publicizing the Greek Revolution in the 1820s, he did several works on even more oriental themes, such as *The Lion Hunt* (1861), which also seems to anticipate the looser flowing brush strokes of the Impressionists. A Neo-classical artist also involved with the Orientalist movement was Jean-Léon Gérôme (1824-1904), as seen in *Unfolding the Holy Flag*.



After the Revolutions of 1848, a new school of art, Realism, emerged which combined Neo-classicism's realistic techniques with Romanticism's contemporary themes. Founded by artists such as Jean-François Millet, Honoré Daumier, and Gustave Courbet, Realism flouted both the dramatic exoticism and emotionalism of

the Romantics and the stiff moralizing and overly polished style of the academics by doing starkly realistic portrayals of such mundane things as a peasant funeral, stone breakers, and even a dead trout, topics that critics considered beneath the dignity of portraying on canvas. Realism helped set up the next big movement in painting: Impressionism. Gustave Courbet's huge painting of a peasant funeral, *The Burial at Ornans* (1849-50), aroused great indignation for its portrayal of such a humble theme on an epic scale. *The Trout* (1872) may symbolize his own stifling experience in prison for six months.



A prominent and exceedingly independent woman artist of the day was Rosa Bonheur, whose father was a socialist who advocated equal rights for women and let her pursue an artistic career. She especially concentrated on painting animals, even going into slaughterhouses and dissecting animal parts obtained from butcher shops.

She was also notorious for wearing pants (for which she had to get a permit renewed every six months), closely cropping her hair, smoking cigarettes, and riding horses in the straddling, rather than the "safer" and more feminine sidesaddle position. Buffalo Bill Cody even gave her a prize horse during his Wild West Show's tour of Europe. Below: *Plowing in the Nivernais* (1848).



The Congress of Vienna (1814-15)



The Dancing Congress is how people referred to the Congress of Vienna. Indeed it was a lavish affair with the Hapsburg hosts having to provide forty banquet tables and the stabling of 1200 horses for a guest list that included two emperors and empresses, four kings, two heirs to thrones and three princesses. Besides an endless round of balls, banquets, concerts, and hunting parties, there were masquerades and even a medieval tournament.

However, all the socializing at such events has a real purpose: to help the rival diplomats get to know one another as human beings in a relaxed and low-pressure environment. There is no telling how much this helped negotiations the following day—after everyone had recovered from his hangover.

The guiding spirit of the Congress was the reactionary Austrian minister, Prince Clemens Wenzel Lothar Metternich-Winneburg (1773-1859), who stood for restoring the old order that had existed before the French Revolution. During the Congress, he shamelessly gathered information from and about other delegates by plying them with bribes, liquor and prostitutes and going through their garbage. His efforts to thwart any liberal or nationalist causes during the eight-month congress worked, as not a mention was made of unifying the German nation.

Charles Maurice De Talleyrand-Perigord (1754-1838) was foreign minister for France under the Directory and Napoleon until he resigned in 1807. As Napoleon's envoy to Russia he convinced the Tsar that his boss was a threat to Europe and must be stopped. From 1807 to 1812, he worked as a secret agent for Russia while taking bribes from other hostile countries.

As Napoleon's regime was collapsing, he secretly negotiated with the allies to keep his position and restore Louis XVIII. Napoleon described him as a "sh*t in stockings" for the way he would shift loyalty from one regime to the next. When Talleyrand once described Brie as the "king of cheeses", a French writer remarked it was the only king he ever stayed loyal to. However, his restless intellect was always in overdrive, analyzing and over-analyzing every little move or nuance. When the Turkish ambassador dropped dead after a night of partying, Talleyrand supposedly asked: "What did he mean by that?"

Getting France back in the game. France's fate largely hinged on a stalemate pitting British and Austrian opposition against Russian claims on Poland and Prussian claims on Saxony. Talleyrand agreed to back Britain and Austria if they would support France getting a voice at the Congress. Even though Russia and Prussia got their ways in this dispute, France did get more of a voice in the settlement.

France's penalty was relatively light, all things considered: pay an indemnity of 700,000,000 francs and agree to a five-year occupation by 150,000 foreign troops, who left after only three years.

Liberalism and Nationalism Move East: Greece and Russia



The Greek revolt against the Ottoman Turks sparked both a neo-classical and romantic sentiment in Europe for ancient Greece, home of democracy and Western Civilization. The fact that the Greek rebels were descendants of Slavic invaders of the early middle ages, not the Greeks from the time of Pericles and Socrates, made little impact on the European public. In

fact, many of them went there as freedom fighters. The Romantic poet, Lord Byron volunteered for the Greek cause and died there, although of sickness, not in battle.

By the same token, paintings such as Eugene Delacroix's *The Massacre at Chios* (above) helped stir up much anti-Turkish and Pro-Greek sentiment in Europe during the Greek Revolution.

In the end, it was fear of Russian expansion into the Balkans, more than any romanticized sympathy for the imagined descendants of Pericles, which aroused the French and British governments to declare war on Turkey. The destruction of the Turkish fleet by the French and Russian fleets at Navarino in 1827 helped convince Turkey to give Greece its freedom and deprive Russia of any excuses for further expansion into the Balkans.

In the style of the day, the Greeks established a constitutional, not absolute, monarchy in 1832. It was the first major break in the old order since the Congress of Vienna. Since various Greek factions couldn't agree on a Greek candidate and the French and British wouldn't accept a Russian candidate, a compromise candidate, Otto of Bavaria, was chosen. Unfortunately, the Greeks didn't like Otto either and eventually killed him.

The Decembrist Revolution in Russia (1825). Even in Russia the revolutionary fever was alive, especially among young educated military officers who had been exposed to and inspired by the liberal ideas of the French Revolution. When the supposedly liberal Tsar, Alexander I died in 1825, his brother Constantine who was next in line for the crown, refused it. This left the throne to the conservative and reactionary Nicholas I,

Rumors that Constantine had met with foul play triggered an uprising led by some officers in December 1825. The crowd picked up the battle cry "Constantine and Constitution", many thinking Constitution was Constantine's wife. The new czar, Nicholas I, acted quickly and decisively, having no trouble crushing the

Decembrist Revolution in St. Petersburg before it could gain any momentum.

The Forged Testament of Peter the Great
A major idea driving Western attitudes toward Russia has been a perception of it having a long-term agenda for world domination. While Russia's foreign policy has been no more angelic than anyone else's, much of the West's fear has been based on a forged document, *The Testament of Peter the Great*, which Napoleon fabricated as propaganda to support his war against Russia in 1812. In it Peter plots out Russian expansion, first to take over Sweden and Poland, then dominate the Baltic and Black Seas, then the Middle East, and then ally with either France or Austria to destroy the other.

Finally, "*Russia must then watch for and seize the favourable moment and pour her already-assembled hosts into Germany, while two immense fleets, laden with Asiatic hordes and conveyed by the armed squadrons of the Euxine and the Baltic, set sail simultaneously from the Sea of Azov and the harbour of Archangel. Sweeping along the Mediterranean and the Atlantic, they will over-run France on the one side while Germany is overpowered on the other. When these countries are fully conquered, the rest of Europe must fall easily and without struggle under our yoke. Thus Europe can and must be subjugated.*"

It is hard to estimate how much this fake document has affected the West's policies since Napoleon, although references to it abound in 19th century writings and are even found in the correspondence of President Truman at the start of the Cold War. The allusion to using "Asiatic hordes" to overrun Europe has proven especially frightening to the West and helped drive its actions and attitudes toward Russia ever since.

Post Revolutionary and Napoleonic Fashions

Women's fashions changed radically during the French Revolution, reflecting the whirlwind of political fashions then. The "male style" of cut, prominent in the early 1790s reflected the conservative style associated with constitutional monarchy in Britain.



Napoleonic and post-Napoleonic fashions for women were especially feminine, reflecting the Neoclassical and Romantic cultural movements of the time, as well as a reaction against the assertive role women had played during the revolution. The corset made a big comeback at this time, being joined by the bustle to restrict women's freedom of movement even more.

Another hallmark of ladies' fashions in the 1800s was the bonnet, which, in truly neo-classical spirit, was originally modeled after ancient Greek helmets. However, as the century progressed, bonnets evolved into much more terrifying creatures that, by the early 1900s, intimidated men in fashionable countries into giving women the vote.



Growing differences in men's and women's status also showed in men's fashions which used duller colors & fewer frills, such as lace and ruffles, the main exception being the necktie. The less aristocratic and lethal sword was also replaced by the more practical and less deadly umbrella or cane, making impromptu duels just as easy to start, but much harder to finish.

In the early 1800s, the top hat replaced beaver pelt hats, causing a drastic drop in the price of American beaver pelts on which trappers in the Rockies had made their livings. As Kit Carson said, "The road to hell is paved with top hats."

For beavers, top hats seemed to have paved the road to paradise.

The top hat's initial appearance on the streets of London by its inventor was anything but auspicious. Women fainted, children ran away screaming in terror thinking they'd seen a monster, and the inventor was promptly arrested for disturbing the peace.

Keeping your Louis's straight

Louis XVIII was Louis XVI's younger brother, which, besides raising serious questions about their parents' lack of creativity in naming their children, also begs the question of who was Louis XVII and where was he.

He was the son of Louis XVI who remained in prison after his father's execution in January 1793. He was put in the charge of one Simon the Cobbler who apparently beat the poor boy to death. Although he never was crowned or ruled France, royalists chose to give him a number (XVII) to maintain the fiction of the dynasty's continuity.

The Barbary Pirates and Algeria

One thing that Charles X did accomplish was the conquest of Algeria in 1830. Piracy along the coast of North Africa had been a problem for centuries. From the 1500s to 1800s, the Barbary Pirates may have enslaved as many as 1 million people. When the United States rebelled against Britain, it lost the protection of the British Fleet. After paying ransoms of up to 40% of the federal budget to release American prisoners, the U.S. founded its navy and went after the pirates in two wars (1801-5, and 1816) to clear the way for its shipping in the Mediterranean.

One of the most famous events in those wars was the burning of the U.S.S. Philadelphia, which the pirates had captured in 1803 and used as a gunboat guarding the harbor of Tripoli. One night a party of Americans led by Stephen Decatur stormed aboard the ship and burned it to deny its use to the pirates. Lord Nelson called it the boldest act he had ever seen.

In 1830, Charles X decided to conquer Algeria. While piracy was the main issue driving France to conquer Algeria, the triggering event was supposedly when the Algerian ruler hit a French diplomat in the head with a fly swatter. Algeria would remain a French colony until 1962 when it finally won its independence after a long and bitter rebellion and civil war.

Thanks to slower population growth caused by the abolition of primogeniture, relatively few French emigrated from France during the 19th century, and many of those went to Algeria instead of the Americas.

Punch and Judy

Punch and Judy was a popular puppet show that involved a lot of violence, typically starting with Mr. Punch being abusive to his wife, Judy, and then escalating from there as other characters like the Constable, the Crocodile, and the Ghost. Much of the violence popular then (such as hitting the baby with a stick, dropping it, or letting it go through a sausage machine) today is considered too politically incorrect to portray.

Freedom of the Press

“Freedom of the Press” was a growing factor in liberal politics in the 1800s. This was especially true thanks to the invention of the steam powered printing press which could print 1400 pages per hour, allowing for much broader distribution of newspapers (usually one page broadsheets)



This picture of a cobbler reading his newspaper is indicative of the rising political consciousness newspapers brought and the growing influence of newspaper editors.

The multiplication of newspapers led to a rising political consciousness and the growing influence

of newspaper editors in the absence of actual political parties. When faced with censorship, one way of protesting was to publish blank spots where a censored article would have gone.

To the Barricades: Revolution in the 1800s



As typically happened with revolutions, the triggering event in 1830 was a crop shortage resulting in widespread hunger and unemployment (1827-9). In lieu of public relief for the poor, rich people would give out free doles of wine, not always with the best results, as seen in this picture of such a handout in 1822. While providing people with much-needed calories, getting large crowds of hungry and angry people drunk doesn't always have the best results.

Usually the first response to the cry of revolution was to barricade the narrow city streets with overturned carriages, cobblestones and anything else at hand. In addition to barricades, people on upper stories along the street might throw washtubs, furniture, roof tiles, and anything else that could presumably harm the king's troops.

Also leveling the playing field was the fact that many insurgents had their own muskets with which to meet the king's troops, as in *The Insurgent Grocer* by Honore Daumier (below). Revolutions could also be family affairs, with women and even children taking part.



Favoring the king's troops was their better training and expertise with weapons, tighter discipline, and artillery with which to blast away the barricades.

Oftentimes, the decisive factor in an uprising is the level of loyalty displayed by the government's troops. In 2011, the refusal of the Egyptian army to back the government allowed the insurgency to triumph. Similarly, the defection of 1500 royalist troops with their weapons helped decide the day in the July Revolution of 1830. However, this still proved to be anything but bloodless, as 1800 Parisians were killed and 4500 more were wounded.

The Peterloo Massacre

The so-called "Peterloo massacre" in St. Peter's Field in Manchester (1819) was where the Duke of Wellington crushed a demonstration of textile workers protesting postwar unemployment & high food prices caused by the Corn Laws (tariffs on cheap foreign grain).

British cavalry charging into a crowd of 60,000-80,000 people killed fifteen and injured 400-700 more. It was called Peterloo as a reference to Wellington's victory at Waterloo in 1815. The demonstration was an early indication of the disruptive effects of modern wars on nations' economies as they make the transition from a wartime back to a peacetime economy.

The End of Slavery in the British Empire



Above right: a medallion created as part of Wilberforce's anti-slavery campaign.

Another sign of the times was the abolition of slavery throughout the British Empire thanks to the tireless efforts of William Wilberforce (above) from 1787 to 1833. After getting the slave trade abolished with the Slave Trade Act of 1807, Wilberforce turned his efforts to ending slavery itself throughout the empire. He died only three days after achieving his lifelong goal.

The Irish Potato Famine (1845–1849)



When the Potato was imported from the New World, it seemed ideally suited to the needs of the Irish confined to the poorer 1/3 of Ireland's fields, the other 2/3 being owned and operated by rich English landlords. It was fairly nutritious, grew well in Ireland's cool and wet climate, and stored fairly well. Unfortunately, it was also highly susceptible to the fungus *phytophthora infestans*, which started wiping out potato crops in Ireland and Northern Europe in 1845.

In the German states, where the potato blight also hit, governments provided relief to keep their peasants from starving.

The Irish weren't so lucky.

Although there was enough food grown in the English landlords' fields to feed Ireland's people, it was exported for profit to the markets of British industrial cities. Sometimes it was literally hauled past starving Irish peasants along the roadside, their mouths stained green from eating grass.

The British also refused to send any aid to the Irish, claiming such aid would make them lazy and dependent on British welfare.

Some Irish were so desperate for food that they deliberately let themselves be caught, committing crimes knowing that prisoners in the jails were fed at least something.

In 1847, British Prime Minister, Robert Peel, finally got Parliament to send some relief. Irish laborers were employed building roads. However, owners of toll roads objected to the construction of competing roads, so the Irish built roads that basically went from nowhere to

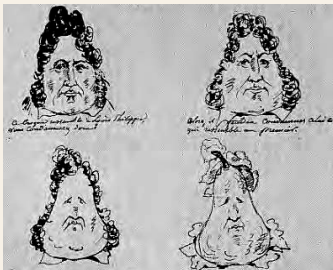
nowhere. In addition, the backbreaking labor proved deadly to many workers, already weakened by hunger and disease.

Around one million Irish died from starvation, disease, and forced emigration caused by callous landlords evicting them when they couldn't pay their rent. Another two million left Ireland looking for new homes, in most cases America. Because of overcrowding, unsafe conditions, and disease, especially typhus, many more perished from the Atlantic crossing, their vessels being dubbed the "coffin ships".

Lamponing the Citizen King

Almost from the start, Louis Philippe's reign was faced with protest and rebellion. One of the earliest uprisings against him was by the silk workers of Lyon (1832). Being one of the oldest trades in France, the silk workers were also among the best organized, politically aware, and radical of the various labor groups.

Political cartoonists had a field day with Louis Philippe. One cartoon showed the evolution of his heavily jowled face into a *poire*, the French word meaning both pear and dolt or idiot. Another showed him as being two-faced, wearing a mask with a benign expression while his truly evil face lay hidden behind.



More serious artwork criticizing the king also circulated, such as Honore Daumier's *Massacre in the Rue Transnonain* (1834), showing a father and child lying dead in their home after being gunned down by the king's troops. Such works helped galvanize public opinion against the king early in his reign and pave the way for the February Revolution in 1848.

The February Revolution and "Springtime of the Peoples"



As usual, the revolutions started in Paris. When Louis Philippe outlawed banquets where participants would protest his policies, the Parisians skipped dinner and went straight to raising barricades. In the resulting riots, fifty people were killed and revolution erupted. And, as was the custom, the king fled to Britain.

News of the revolution in Paris spread like wildfire, triggering some fifty similar uprisings across Europe such as Berlin, Vienna, Rome, Naples, Venice, and Genoa. The suddenness and scale of these revolts caught rulers completely by surprise. Metternich and the Hapsburg emperor fled, German princes agreed to more liberal constitutions, and a convention was held at Frankfurt to establish a national parliament for all of Germany. However, these uprisings were far from bloodless. For example, in Berlin 230 people were killed defending the barricades in March 1848.

Because of the revolutions' sudden success people referred to this as the "Springtime of the Peoples" to describe the initial euphoric feeling that typically accompanies the opening stages of a revolution before things get serious and nasty. Catholics hugged Protestants and Christians embraced Jews, at least for the time being.

Different people also had different ideas about what the revolutions stood for. Peasants used revolutionary slogans to occupy forests owned by local nobles. Others used revolution to attack landlords, Jews, Protestants, Catholics, soldiers, taxmen, or anyone else they had a grudge against. In fact, it was the fragmented nature of the revolutions that would prove their undoing.

“Bread or Lead”: the Collapse of the 1848 Revolutions



The answer to “Bread or lead”

After overthrowing Louis Philippe, the French established a new government, the Second Republic, where all men could vote. However, this is where things started going wrong, since the new constitution reflected the more conservative views of middle class and peasants, who had no interest in paying extra taxes to help the urban masses suffering from lack of food and shelter in the recent economic troubles.

This touched off riots in French cities where the army, led by General Cavaignac, met the crowds' cry of "Bread or Lead" with a hail of lead from artillery fire, killing 10,000 demonstrators.

This was the turning point in suppressing radicals both in France and across Europe, as the defeat of the more radical elements in France gave heart to other kings and princes reeling from the current wave of revolutions. Uprisings in Italy, Germany, and the Hapsburg Empire, were crushed as quickly as they had erupted.

In Germany, liberals met at Frankfurt in hopes of unifying Germany under a liberal constitutional monarchy. In their excessive optimism they offered the crown to Frederick William IV of Prussia. Unfortunately, he refused to accept a “crown from a gutter” offered to him by a bunch of starry-eyed liberals, thus dashing their hopes for an easy and peaceful unification. In the Hapsburg Empire, 190,000 Russian troops helped crush the Hungarian revolt near Pest (7/20/1849) to keep the revolutions from spreading into the Tsar's territories. This also freed Austrian forces to quell disturbances in Venice and other parts of Northern Italy.

Despite the self-serving nature of Russia's aid, it felt Austria should repay the favor by joining it against Britain and France in the Crimean War four years later. Austria's neutrality in that war would be a source of future trouble between it and Russia that would last all the way to World War I.

In Italy, Pope Pius IX, who had a reputation of being very liberal, even granting amnesty to political prisoners, was seen as the natural leader for a unified Italy. However, Pius backed away from leading (Italian) Catholic subjects to kill (Austrian) Catholics.

He was also disillusioned with liberal causes when many of the political prisoners to whom he had given amnesty joined the revolutions. The assassination of his Minister of the Interior, Pellegrino Rossi, didn't help either. Of course, when he dropped out, Italian nationalists felt betrayed, as reflected in cartoons portraying him as a two-faced traitor.

After Pius IX abandoned the Italian revolutionaries, nationalists led by Mazzini & Garibaldi drove the pope from the Vatican and declared the Republic of Rome. They were eventually driven out by French troops sent by Louis Napoleon.

The Strange Ascent of Napoleon III



The elections in France brought to the fore, Bonaparte's nephew, Louis Napoleon (aka Napoleon III) who was once described as a “man of mystery without a secret.”

He had already tried on two occasions to use the magic of his name to overthrow the French government. The first time he announced to soldiers in Strasbourg that they should follow

him in his attempt to seize power, but they arrested him instead. In 1840 he tried a second time, landing with 40 men and an eagle (actually it was a vulture) to seize power. He was arrested that time too.

Luckily for him, French jails must not have been too secure, because he escaped again to Britain, only to reappear in France for the 1848 elections. Thanks to some timely help, the charisma of his name, and the rumor that if elected he would pay everyone's taxes from his own pocket, he was elected president of the Second Republic.

The constitution of the Second Republic allowed a president only one term of four years. After campaigning for its repeal, Louis Napoleon pulled off a military coup on December 2, 1851, the 46th anniversary of his uncle's great victory at Austerlitz and the 47th anniversary of his being crowned emperor.

Victor Hugo, a source hostile to Louis Napoleon, described the scene in the streets during this coup: "*Suddenly, at a given signal, a...shower of bullets poured upon the crowd....Eleven pieces of cannon wrecked the Sallandrouze carpet warehouse. The shot tore completely through twenty-eight houses. The baths of Jouvence were riddled. There was a massacre at Tortoni's [cafe]. A whole quarter of Paris was filled with an immense flying mass, and with a terrible cry....*

"Adde, a bookseller of 17, Boulevard Possonniere, is standing before his door; they kill him. At the same moment, for the field of murder is vast, at a considerable distance from there, at 5, Rue de Lancry, M. Thirion de Montauban, owner of the house, is at his door; they kill him. In the Rue Tiquetonne, a child of seven years, named Boursier, is passing by; they kill him. Mlle. Soulac, 196, Rue du Temple, opens her window; they kill her...

"New Year's Day was not far off, some shops were full of New Years' gifts. In the Passage du Saumon, a child of thirteen, flying before the platoon-firing, hid himself in one of these shops, beneath a heap of toys. He was captured and killed. Those who killed him laughingly

widened his wounds with their swords. A woman told me, 'The cries of the poor little fellow could be heard all through the passage.' Four men were shot before the same shop....

"At the corner of the Rue du Sentier an officer of Spahis, with his sword raised, cried out, '...Fire on the women.' A woman was fleeing, she was with child, she falls, they deliver her by the means of the butt-ends of their muskets. Another, perfectly distracted, was turning the corner of a street. She was carrying a child. Two soldiers aimed at her. One said, 'At the woman!' And he brought down the woman. The child rolled on the pavement. The other soldier said, 'At the child!' and he killed the child...."

Exactly one year later, Louis Napoleon declared the Second Empire with himself as emperor Napoleon III. (This was in deference to Bonaparte's son, Napoleon II, who died in prison and never ruled, although he had briefly been declared Napoleon II as child.) Louis Napoleon had the odd distinction of being both the first president and last monarch of France.

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109. THE AGRICULTURAL BACKGROUND TO THE INDUSTRIAL REVOLUTION

The View From Space

I joke with my students that whatever unit we're studying is the most important unit in history. When we get to the industrial revolution, I tell them I'm not joking so much. After all, nothing has transformed our lives so profoundly in so many ways as the industrial revolution.

One way to look at it is to imagine we are aliens from outer space who have been taking snapshots of earth every hundred years for the last million years or so. We wouldn't see things change that dramatically from one century to the next: a tiny bit of continental drift, the creeping expansion and contraction of some forests and glaciers, but not much else... until the nineteenth century.

For example, consider the first map showing railroads in Europe up to 1820. As the map clearly shows, there weren't any.



The second map shows the growth of railroads by 1940. In that short period of 120 years, railroads have virtually exploded across the map, transforming not only the map, but the lives of the people represented on it and their perceptions of the world. Maps or charts showing the changes in other things, such as urban growth, would tell a similar story on the transformative effects of the industrial revolution.



Introduction. No other event or series of events in history has had nearly the impact of the Industrial Revolution. Most likely, people living in the 1700's could more easily relate to the lifestyle of ancestors 2000 years earlier than to our lifestyle a mere 200 years later. Our life expectancies are more than double that of our ancestors. We travel thousands of miles much more easily, quickly, and comfortably than they could travel 20 or 30 miles. We are in much closer touch with events on the other side of the globe than they were with events in the next village. And the price we pay for our medical care, balanced diet, rapid transportation, and mass communication involves much less effort than what they spent for their more primitive comforts and necessities.

Although industrialization happened rapidly, one can see a long steady build-up toward it in Western Europe over many centuries. The extensive use of water wheels, windmills, and other labor saving devices all put the European mentality in touch with exploiting natural forces and laws to increase productivity. The invention of the clock changed Europeans' attitudes toward time, disciplining and regulating their lives to a degree of precision necessary for industrialization. And the Enlightenment's scientific discoveries laid the foundations for the dramatic industrial and scientific advances of the 1800's. All of these developments took place in Western Europe because of a complex variety of forces that fed back on one another to intensify their effects.

A new agricultural revolution. Just as various forces combined to make Western Europe the birthplace of the Industrial Revolution, several factors combined to focus on Great Britain as the specific area of Europe where industrialization would first take root. One of these was a rapid growth in agricultural production and the labor force that started with the agricultural revolution in the Middle Ages. This led to three lines of development that would later converge to create a new agricultural revolution in the 1700's.

First of all, the three-field system developed in the Middle Ages required nearly all the farmland for growing grain crops. This left little land for grazing cattle, which, in turn, produced little manure for fertilizer. As a result, crop yields were down, forcing peasants to use most of the land for grain

crops, and so on. This made the agriculture fairly stagnant and created the need for a better way of feeding Britain's population.

Another medieval innovation, the heavy plow, also generated a vicious cycle. Since peasants were typically too poor to own enough oxen to pull a plow, they had to share plow teams. As a result, they broke their fields into strips in order to ensure that everyone got at least some of his land plowed. This left everyone's lands interlocked in scattered strips of farmland. Because of that, there was little incentive or opportunity to try new agricultural techniques, since all the peasants had to agree on any changes and switch all of the village's lands to the new system. Getting everyone to agree to any such changes was extremely difficult. As with the three field system, this also made agriculture fairly stagnant, keeping individual peasants too poor to farm independently, forcing them to continue sharing plow teams, and so on. This also created the need for better agricultural techniques.

However, another result of the medieval agricultural revolution, the rise of towns in the High Middle Ages, unleashed forces that pushed for change in two ways. First of all, by the early modern era, the rising middle class had bought up much of the farmland in their ambitions for secure investments and noble titles. These landowners were more open to new farming techniques that could earn them more profits. Second, the Enlightenment was discovering new ways to grow better crops. These two factors led to the four-field system that used all four fields rather than leaving one fallow. This had three advantages. First, it made previously useless and marginal land useful, thus expanding the amount of land under cultivation. Second, it used clover and turnips in the fourth field to maintain the soil's fertility. Finally, with the fourth field now in use, it was using all of the land every year rather than having to keep part of it fallow. These factors led to better crop production so that peasants could afford feed for livestock, leading to more meat and protein in the common people's diet. Unfortunately, this new and more efficient agriculture required large open tracts of land.

In the 1700's, the need for better agriculture and the need for large tracts of land for this new type of agriculture led to the Enclosure Movement, whereby wealthy landowners enclosed the common

lands so they could practice the four-field system. This created two effects that helped lead to the Industrial Revolution. First of all, the Enclosure Movement drove many people off their lands, forcing them to flock to the cities in search of homes and jobs. Also, this new kind of agriculture doubled food production, thus leading to dramatic population growth in England in the 1700's. The combination of population growth in the cities created the labor supply for Britain's textile mills when the Industrial Revolution began.

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THE TECHNOLOGICAL BACKGROUND TO THE INDUSTRIAL REVOLUTION

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Surviving Our Technological Adolescence

In the movie *Contact*, the government is conducting interviews to find just the right person to represent humans in our initial meeting with an advanced alien civilization. In the interview, they ask Jodie Foster's character, if she could only ask the aliens one question, what would it be.

Her answer: How did you survive your technological adolescence?

That in essence is the central question for our species and civilization.

The industrial revolution was the period where we entered our "technological adolescence", a period when we rapidly grew in power and a sense of independence without seeing the long-range consequences of our actions. In a sense, like teenagers, our prefrontal cortex had not developed (something which happens around age 25, magically making our car insurance rates go down).

Taking the adolescent analogy even further, we reached our sixteenth birthday in 1914, got our drivers license, and promptly ran the car into a tree (i.e., World War I in case you didn't get the reference). We thought we had learned our lesson, and then drove a faster car into a bigger tree in 1939 (i.e., World War II). So far, we've avoided totaling our newer and even faster car (and taking the entire tree out as well).

But we're more than a one-car family and there are various ways we can destroy the tree (e.g., environmental damage). Without going too far with this analogy, suffice it to say that, like the leap from walking to driving a car, we have gotten hold of a lot of power in a very short period of time and have a lot to learn about how to handle it.

The medieval roots of the Industrial Revolution. If new agricultural developments provided the backbone for supporting the Industrial Revolution, various technological innovations were its heart and soul. And the roots of those innovations and the cultural attitudes so vital for their formation go all the way back to the Middle Ages and the Cistercian monks. What triggered all this was the Cistercians' desire to get away from the evils of the world. This led them to found their monasteries in the wilderness away from civilization, but also away from any outside labor supply upon which they might rely. Being thrown back on their own resources, they rediscovered, probably in an old Latin or Greek text they were copying, the principles of applying water power with a waterwheel. The ancient Greeks had come up with this invention, along with the principles of steam power. However, the abundance of cheap human labor meant there was no real need for water or steam power in the ancient world. As a result, these principles lay largely unused until this time.

However, the Cistercians did need such principles and started experimenting with labor saving waterwheels, first applying them to the milling of grain into flour. Two later inventions dramatically expanded its uses. First, there was the cam, which was a piece of wood set on the drive shaft that struck anything in its way, such as a bellows or trip hammer, with each revolution of the waterwheel. Second, there was the crank that could convert the circular motion of the waterwheel into oscillating motion. These two developments led to applying waterpower to a multitude of tasks: They could drive rip-saws, bellows, and water pumps. They were connected to grinding stones for sharpening and polishing tools, weapons and armor. And they could power trip hammers for fulling cloth, crushing sugarcane, and pounding hemp and rags for rope and paper.

The number of mills that sprang up was astounding. William the Conqueror's census in 1089, the Domesday Book, listed no fewer than 5624 watermills in England alone. That was one mill for every 50 families and is estimated to have saved the average peasant wife two to three hours of work per day once the tedious task of milling grain was

mechanized. The main branch of the Seine River going through Paris had 68 mills. Another sixteen-kilometer stretch of stream had 30 such mills. Wherever rivers were slow, people built dams to increase the waterpower and floating mills to use that power. And where there were no rivers at all, they applied these mechanical principles to harnessing other types of energy, building tidal mills along the ocean and windmills (originally a Persian invention) on flat open land. By 1600, some 40 different types of industries were wholly or partially dependent on water or wind power, mechanizing such tasks as spinning silk, boring the barrels from cannons and muskets, and making gunpowder. In 1694, Louis XIV's main military engineer, the Marquis de Vauban, estimated that France had 80,000 flourmills, 15,000 industrial mills, and 500 iron mills.

As waterwheel technology spread across Western Europe, so did a growing awareness of how to exploit mechanical principles in general. In addition to harnessing the power of the tides and winds, Europeans were also developing better clocks (originally a Chinese invention). In fact, the clock would become the symbol of Europe's increasingly mechanistic view of the universe. However, while Europeans were harnessing time and parceling it out in discrete units of hours, minutes, and seconds, the clock was also more tightly structuring how Europeans lived their lives. This would be another important aspect of the Industrial Revolution as far as conditioning factory workers to the time clock and creating a more precise society.

It was Europeans' rising ability of how to exploit mechanical principles that led to three lines of technological development that together would culminate in possibly the most critical invention of the Industrial Revolution: the steam engine. Those lines of development had to do with mechanical ripsaws, larger bellows, and innovations in the textile industry.

The textile industry in Britain. Britain in the 1700's was the perfect example of the idea that necessity is the mother of invention. The triumph of the mercantile middle class in the English Revolution of the 1600's and the growth of European colonial empires, especially that of Britain, had created global trade links such as had never been seen

before. However, opening up such new vistas often creates problems, and that was the case with European textile production. Europe's higher standard of living made its goods and labor more expensive, which led to an influx of cheaper textiles from India that could undersell European, and particularly British, goods. In order to compete more successfully, British textile producers needed a cheaper and faster way to produce cloth.

The answer came with the invention of the more mechanized handloom (1733) which had a "flying shuttle" that quickly wove the weft thread in between the warp threads. This could double the speed of production, except for one other problem. The spinning wheel used to spin the thread for the loom was too slow. The solution came with two more inventions in the 1760's: the spinning jenny, which could spin seven threads at a time, and the water frame which could use water power to increase the speed of spinning and weaving even more. This series of inventions gave the British textile industry a tremendous boost, and soon textile mills were springing up on just about every available bit of river front property. Unfortunately, the amount of such property was limited, and soon profit hungry businessmen were looking for a new power source to drive their looms and spinning jenny's. Luckily, all this while a new power source had been emerging. That was the steam engine

Ripsaws and bellows, coal and iron. As mentioned above, one important application of the waterwheel was to drive larger bellows. What this made possible was hotter fires with which metal smiths could finally smelt iron. And that provided purer iron for building stronger boilers and steam engines.

Another important development was the water-powered ripsaw. This was a much more efficient way to cut timber, so efficient in fact that, by 1600, most of Britain was effectively deforested. Therefore, the English, largely without their primary heat source, wood (and charcoal processed from wood), had to find something else to burn. They found it in Britain's plentiful coal deposits.

One problem with coal is that it burns much less cleanly than charcoal, making it harder to come up with good iron. This was until 1709 when someone discovered a way to process coal into a cleaner and hotter burning substance known as coke. However,

it was not until 1783 that a smelting technique, known as rolling and puddling, was invented which worked the impurities out of iron and made it strong and cheap enough for widespread industrial use. With stronger and cleaner iron, people could make boilers able to withstand the higher steam pressures needed for more powerful steam engines. This of course was only relevant once the steam engine had been invented, which brings us to another problem with coal.

Unfortunately, most of Britain's coal was buried in deposits that required the construction of deep shaft mines. Eventually coal miners ran into that curse of all deep mines: water seepage. It was here that a crude steam pump was devised to give steam its first practical job. Unfortunately, this early pump was inefficient and burned nearly as much coal as was being mined. More efficient models were designed, notably that of Thomas Newcomen. But a truly efficient design did not come along until 1769 when James Watt introduced a practical two-chamber steam engine that made steam power economical to use in the mines.

Not only was steam power practical for the mines. It also found applications in the textile mills for those businessmen not lucky enough to have waterfront property and the free power that went with it. As a result, British textile production jumped by a factor of 30 times. With each passing year, the hissing, churning, and pumping of the steam engines rang louder in Britain's cities while the black smoke from burning coal steadily darkened its skies. The Industrial Revolution had been born.

The Waterwheel



Greek waterwheels went through various evolutionary phases. At first, they were laid out on a horizontal plane, which was only about 10% efficient. When they stood it up vertically and ran water under it as an undershot, efficiency improved to 20-30%. An overshot model with

the water coming down from above and adding the force of gravity further improved it to 50-70% efficiency.

In one workday (10 hours), a Roman water mill at Monte Cassino could grind 1500 Kilograms of grain, doing the work of 40 men. Similarly, a milling complex at Arles in Roman Gaul had 16 waterwheels that could mill enough grain to feed 80,000 people. Since the local population was probably only about 10,000, we figure the milling complex at Arles was the center of a vast redistribution network, indicating the large scale of trade in the Roman Empire.

Generally, however, ancient societies were not in favor of such labor saving technologies. For example, when someone approached the Roman emperor, Tiberius with an idea for a device that could do the work of forty men, Tiberius told him to keep it under wraps, since every such device would put forty men out of work and generate social turmoil. Therefore, little evidence survives of waterwheel technology from the ancient world. Luckily, monks, such as the Cistercians, preserved and revived the concept.

The original function of the waterwheel was to mill grain into flour, a tedious job typically done by women, (which may explain why mechanizing that one task wasn't seen as threatening to the social order). However, compared to the Roman Empire during the Pax Romana, medieval Europe was a sparsely populated demographic backwash in greater need of labor saving devices, especially for isolated monks up in the hills.

According to the Domesday census of 1085, there were already 5624 water mills in Saxon England, one for every 50 families. Such a device could save a woman 2-3 hours of hand-milling grain every day. No wonder that in Old English the Anglo Saxon word "Lord" meant loaf giver, probably referring to the fact that the peasants had to use the lord's mill and oven for milling and baking bread.

Unfortunately, the rotary motion of the waterwheel had limited applications, so the next

step was to transform that into an oscillating back-and-forth motion to operate devices like trip hammers and bellows. One innovation was the cam, a protrusion coming off the water wheel's drive shaft that upon each rotation would trigger a device. For instance, it could hit the lighter end of a trip hammer on a fulcrum lowering that end and in the process raising the hammer until the cam cleared the light end, thus releasing the hammer.

The other innovation was the crank, a bend in the main drive shaft attached to a vertical shaft that was also attached to something like a bellows. In the course of its rotation, the crank would drive the vertical shaft up and then down, thus operating the bellows in a continuous oscillating motion.

The beauty of all this was that it was harnessing an indefinite source of free energy that vastly multiplied people's productivity, and the medieval imagination ran wild applying these principles. Some of the jobs the Cam and crank helped mechanize were operating rip saws, bellows, and pumps, slitting and polishing metal, grinding glass, spinning silk, and pounding sugar, malt, hemp, flax (for linen), and rags (for paper).

In 1327, there were 130 fulling mills in England, a process that had been almost completely mechanized by 1400.

By the late 1200's, rag pounding to make paper was done by water-powered hammers. Between 1600 and 1763 the number of water powered paper mills grew from 38 to 350.

By 1600 some 40 different industries depended on water power: several steps in the manufacture of linen (e.g., separating the fibers, washing the cloth), threshing grain, operating lathes, drawing wire, slitting metal, boring holes into cylinders and cannon barrels etc and making gunpowder. By 1692, there were twenty-two powder mills in France.

Naturally, the waterwheel made riverfront property prime real estate. For example, there

were 30 water mills along a 16-kilometer stretch of the Seine River. Particularly valuable would be narrow areas, in a river, such as between bridge abutments where waterpower was especially channeled and concentrated.

Mill fever. By the thirteenth century, everyone and his uncle wanted a watermill. The numerous depictions of waterwheels in European art are evidence of their ubiquity. To increase the flow of slow rivers, they would build dams. Near Toulouse, there were 60 floating mills built around such dams in three groups. Unfortunately, such dams and floating mills interfered with navigation and often broke loose during floods, crashing into other boats on river front property and triggering lawsuits. As a result, the floating mills were replaced with 43 mills on the right bank.

Windmills were a perfect alternative to waterwheels in the Low Countries (modern Holland and Belgium) by the sea where the rivers were slow and sluggish, but the coastal breezes were brisk and continuous. The windmill was apparently a Persian invention from around the ninth century. Like the waterwheel, the first versions were horizontal. However, the vertical position was found to be superior, especially when they found a way to put the whole structure of the windmill on a hinge-post that could be turned in the most favorable direction. There were 120 windmills alone around the Flemish city of Ypres. In addition to milling grain and other duties, they were critical for pumping water out of the area, since it was so prone to flooding.

Tidal mills were typical of the growing medieval urge to exploit new energy sources. They were generally built along slow rivers close to the coast, some having dams that enclosed up to 13 acres of water. A tidal mill used different water pressures to function.

Another mechanical innovation was a horse-powered treadmill for threshing wheat.

Keeping Time and Time Keeping Us



While some of the earliest European clocks, such as the town clock in Prague, continued to chart the heavens for astrological purposes, Europeans scaled them down just to keep daily time.

Keeping time. If water, wind and tidal mills powered the age, clocks symbolized it. The first mechanical clock was built during the Sung Dynasty in China around 900 C.E. It was both an astrological and astronomical clock with seven faces to mechanically track the motion of the sun, moon, and five known planets at that time (Mercury, Venus, Mars, Jupiter, and Saturn). It was also a water clock with sophisticated machinery to regulate the flow of water in order to keep time. The clock was a royal monopoly to help emperors decide propitious times for acts of state, such as making war or peace. The emperors relied on it so much that, when an ambassador to the north reported that the heavenly bodies were not in line with the clock, the emperor replied that the clock was right and the sky was wrong.

Somehow, the idea and design of the Chinese clock made its way west, where an Italian, Giovanni di Dondi, built the most sophisticated clock of the Middle Ages between 1348 and 1364 (below). Like the Chinese clock, it had 7 faces showing the movements of the sun, moon and five known planets. It had no hourly dials, which he said were too simple, and was so sophisticated that it wasn't duplicated until the 1800's. One difference from the Chinese model was that his clock was weight driven with a mechanical escapement system since water froze in the wintertime. There is a working model of di Dondi's clock in the Smithsonian Institute.

Clock fever. While some of the earliest European clocks, such as the town clock in Prague,

continued to chart the heavens for astrological purposes, Europeans scaled them down just to keep daily time. The first clock recorded as just striking equal hours was in Milan in the early 1300's. From then on, it was a matter of pride for every medieval town to have its own clock tower, and they appeared in rapid succession in Genoa (1353), Florence (1354), Bologna (1356), Ferrara (1362), and Paris (1370).

Time keeping us. However, it was the clock in Paris that triggered a real turning point in Western Civilization when Charles V of France ordered the churches to ring their bells on the hour in coordination with the clocks, thus subordinating the Church's schedule to that of secular business. While Charles may have thought that he was capturing time, to a large extent time was capturing us, tying us to ever more precise schedules over the coming centuries so we know exactly when we have to get up, be at work, eat lunch, get off work, pick up the kids at soccer practice, and get to watch our favorite TV show. I could continue this list, but I don't have time.

Clocks and clock-like devices even started showing up in medieval art, indicating a more mechanistic view of the universe centuries before Newton. Along those lines, there was an emerging cultural mindset that was tuned into mechanical principles and how to exploit them.

Even more striking was an expectation, replacing the static unchanging view of the universe that such innovations would keep coming indefinitely. In short, people were starting to think in terms of something called progress.

"Never will we find truth if we content ourselves with what is already known... Those things that have been written before us are not laws but guides. The truth is open to all, for it is not yet totally possessed."--Gilbert de Tournai (c.1200-1284)

"Not all the arts have been found; we shall never see an end of finding them. Everyday one could discover a new art...It is not 20 years since there

was discovered the art of making eyeglasses which help one to see well, an art which is one of the best and most necessary in the world. And that is such a short time ago that a new art which had never before existed was invented..."--Fra Giordano (1306)

"We are as dwarfs mounted on the shoulders of giants, so that although we perceived many more things than they, it is not because our vision is more piercing or our stature higher, but because we are carried and elevated higher thanks to their gigantic size."--Bernard of Chartres (c.1115)

Steam

Hiero of Alexandria's aeropile (c.50 C.E.) was the first known steam engine. However, because of the abundance of cheap free and slave labor, the Greeks and Romans never exploited this invention's potential usefulness. It may also be that the metallurgy of the times couldn't create a boiler strong enough to do serious tasks.

The Newcomen Engine was used for pumping water out of mines. Unfortunately, it was so inefficient, it used up nearly as much coal as was being mined. The main problem with the Newcomen engine was that it had only one cylinder for heating and cooling, making it very inefficient, since so much energy was wasted in repeatedly heating and cooling that one chamber.

The major innovation of James Watts' engine was having two cylinders, one for heating and one for cooling. Which saved considerable amounts of fuel by not having to heat and cool the same cylinder.

The Evolution of the Textile Mill



The first new technology to revolutionize the textile industry was John Kay's flying shuttle

(1733). On wider looms, a second person was needed to take the shuttle with the weft thread across the warp threads. The wheeled shuttle (as Kay called it) could be thrown across the loom by one weaver at "a speed which cannot be imagined, so great that the shuttle can only be seen like a tiny cloud which disappears the same instant." (Roland de la Platière, Encyclopédie Méthodique)

Not only did the flying shuttle vastly increase the speed of weaving and cut in half the number of weavers needed per loom, it effectively doubled the number of looms that could be worked by a number of weavers, thus more than doubling production.

Now the weak link in production was the spinning wheel, which only spun one thread at a time, although we should keep in mind that it had revolutionized textile production in its own way when it was introduced in the Middle Ages.

In 1764 James Hargreave invented the spinning jenny, which could spin seven threads at once, although with the right amount of power, it could spin a hundred, or even a thousand, threads at a time. Four years later, Richard Arkwright solved that problem with a much larger spinning machine, the spinning frame. However, it was so big it had to be powered by a water wheel, and thus came to be known as the spinning frame or water frame.

Until now, both spinning and weaving had been handled in homes through a decentralized system known as the cottage industry. Women traditionally would do the spinning, while men did the weaving. However, the water frame was too big for individual cottages, so spinning was moved into factories that could make full use of adjacent waterpower. For the first time, families involved in making textiles were split up, the women working in factories and the men working on looms at home. Since these spinning factories looked like regular water mills for milling grain, they came to be called textile mills. For this reason, and his use of clocks to regulate workers, Arkwright is often credited with inventing the factory system.

From Looms to Computers



In 1728, a new weaving device, the Falcon's loom used the Frenchman Basile Bouchon's invention of perforated paper rolls, the holes operating as binary on/off switches to determine if a particular color thread was used in that row of fabric. A century later Joseph-Marie Jacquard invented an automatic loom (above) using punched cards to control the patterns in the fabrics in a similar way. Despite worker riots against the loss of jobs to these machines, virtually all industrial looms were using this system by 1900. Not only that, it was being applied to other industrial uses, such as riveting patterns on the large steel ships bringing millions of immigrants to America. Just in time, someone found another use for this concept.

The 1890 US census provided the impetus for another step toward inventing the computer. Because of the huge influx of immigrants, people figured the 1890 census wouldn't be finished before the 1900 census came around. To the rescue came the Hollerith machine. Using punch cards like those designed for Jacquard Looms, census takers would punch out chads on the appropriate places for numbers of family members, males, females, etc. Back at the census bureau, secretaries placed the card in an electronic machine with contact points for each space on the card. When the lever was lowered, only tabs for places with missing chads would complete the electronic circuit by touching the electrified plate underneath the card. This would automatically register the appropriate number on a counter. Like the Jacquard loom, this was using a basic binary, on-off, concept that is still central to computer design and still seen on standardized tests.

The history of mechanical calculators, forefathers of the computer, goes back to 1642 when Blaise Pascal created an adding machine, the Pascaline (bottom) that automatically carried digits from one position to the next. It had several dials that could be turned with a stylus. Underlying gears turned as each digit was dialed in, the cumulative total displayed in a window above the "keyboard". However, Pascalines remained little more than curiosity pieces in private parlors until the debut of Thomas De Colmar's Arithmometer in 1820. Able to add, subtract, multiply, and divide, it was the first commercially successful calculator, being the model for calculators into the 1900s.

The Englishman Charles Babbage (26 December 1791 – 18 October 1871) was obsessed with using the steam engine to power a device that would calculate navigational, celestial, and mathematical tables. From 1822 to 1849 he worked on the design for his Difference Machine, which could do four functions (add, subtract, multiply, and divide). He even got a grant from the British government, probably the first government grant for researching computers. Although he never built one, he is often considered the father of the computer. In 1991, to mark the bicentennial of Babbage's birth, a working Difference Machine (below) was built. To prove that it was feasible to build such a machine in the 19th century, the project used only the technology available then.



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111. THE START OF THE INDUSTRIAL REVOLUTION IN BRITAIN (c.1750-1800)

Although the four-field system and steam engine provided the basic foundations for the Industrial Revolution, it took other factors combined with these to create this phenomenon. As it happened, Britain in the 1700's was the place where all these factors converged to make it the birthplace of the Industrial Revolution.

Much of Britain's favored position came from the English Revolution of the 1600's and the triumph of a wealthy middle class with both the money and willingness to invest in new ventures. This created five basic lines of development that together would trigger the Industrial Revolution. The first of was the new steam and textile technology. Second, there was the new agriculture and population growth creating both the labor force for the new industrial factories and the markets to buy their manufactured goods. The third factor was Britain's colonial empire, which provided raw materials for the factories as well as more markets for their goods.

Fourth was the development of a superior transportation system for getting raw materials to the factories and finished products to markets. Britain was especially favored in this respect, being an island with navigable inland rivers further enhanced by a well-developed system of canals. This, along with its colonial empire, prompted the British to build an excellent merchant marine for transporting its goods. Also, as the nineteenth century progressed, a new form of technology, the steam locomotive traveling on steel rails, would make overland transport increasingly economical and efficient for the first time in history.

The fifth and final factor was a large surplus of capital along with the willingness to spend it on new machines and technology. Central to this was the Bank of England, which encouraged investment, stability, and economic growth in both the public and private sectors. Consequently, when the machines and opportunities to exploit them came along, British businessmen were in by far the best position to take advantage of the situation, making Britain the banker of the world for the next century.

Two other factors also helped Britain. One was its excellent position as an island, which not only helped its trade, but also insulated it from continental wars. Also, Britain was blessed with extensive coal and iron deposits. By 1850, one-half

of the world's iron and a full two-thirds of its coal production would come from British mines. Along with providing the resources for producing steam power and heavy industrial machinery, it also triggered a dramatic migration from the more agricultural south to the industrial north where the coal and iron fields lay. In addition to coal and iron, Britain also had access to plentiful supplies of Scottish wool for its textile mills.

Later, Britain would rely on cotton from America. Once Eli Whitney's invention of the cotton gin (1793) solved the problem of cleaning the seeds out of the fiber, the southern United States became a primary cotton producer for British factories. However, the cotton gin had unforeseen and far-reaching consequences since it prolonged the life of slavery in the United States, making it a red-hot issue in American politics and a major factor leading to the American Civil War.

All these various factors (the new steam and textile technology, a large labor force, extensive markets at home and in its colonies, a superior transportation system, plenty of capital, extensive raw materials, and an excellent position for trade) combined to create a textile industry that could produce, transport, and sell vast quantities of cheap cloth by the late 1700's.

The result of all this was an industrial revolution of vast importance in a number of ways. For one thing, it would spawn the steam powered locomotive and railroads which would revolutionize land transportation and tie the interiors of continents together to a degree never before imagined. It would trigger massive changes in people's living and working conditions as well as the structures of family and society. And its momentum would generate a rapid-fire chain reaction of new technologies, a process that is still accelerating today and shows no signs of slowing down. Nor would these dramatic changes be confined to Europe. Rather, their power would spread across the globe to change the way the entire human species lives, for better or worse.

Canal Mania

Until railroads got their start in the 1830s, water was still the most efficient means of travel and transport. Therefore, to complement its excellent navigable rivers, Britain engaged in extensive canal building in the late 1700s and early 1800s. Particularly impressive were

aqueducts, such as the Barton, Chirk, and Pontcysyllte canals that carried cargo on boats over other rivers.

Canal mania spread to America in the early 1800s. While the best known was the Erie Canal, which connected New York City to Lake Erie via the Hudson River, making New York the primary port for the Great Lakes.

In addition, there was a system of canals stretching 280 miles across Pennsylvania using locks, dams, tow paths, and railroads (for towing boats). Charles Dickens wrote an account of traveling on this canal in 1842. He described the crossing of the Allegheny Portage Railroad: "*Occasionally the rails are laid upon the extreme verge of the giddy precipice and looking down from the carriage window, the traveler gazes sheer down without a stone or scrap of fence between into the mountain depths below,*" Overall, he described his trip across Pennsylvania as "*sufficiently disconcerting.*" Such a cumbersome journey was still better than carrying goods on foot until Railroads made it obsolete.

The Road to Hell is Paved with Gravel

Between the fall of the Roman Empire and the 1700s road conditions in Europe were abysmal. When it rained they could turn into a morass of mud. Otherwise they were full of potholes and ruts that were especially hazardous for passengers of stagecoaches with their high centers of gravity, killing many of them in stagecoach flips, although one man reportedly survived nine such flips. Ironically, another survivor of such a flip, William Huskisson, would be the very first railroad fatality.

Then John McAdam (1756-1836), invented a new kind of roadbed with large stones on the bottom with layers of progressively smaller stones on top. The smallest stones could only be 1" in diameter, the idea being the wear and tear of traffic would pack them together, as opposed to larger stones that would crack. Typically they had no binding, but sometimes tar would be used, thus giving rise to the term "tarmack". Macadamized roads, as they would be called, drained well with drainage channels to the side.

They were safe, and durable, vastly improving overland travel in Britain before the railroads.

Typically, the tedious work of stone breaking for Macadamized roads was done by convicts. Thus, the good intentions of his roads proved to be hell for convicts.

The Road to Hell is Paved with Cotton

Ironically, Eli Whitney invented the cotton gin in 1793 as a labor-saving device to expedite the removal of cotton seeds. Unfortunately, it proved a curse to African-Americans. Just as slavery was fading as an institution in the South, the massive new demands for cotton injected new life into that unfortunate institution and triggered a chain reaction of events that has plagued American history ever since.

In the 1800s cotton would replace linen as a primary fabric, since it can be washed more easily and frequently than linen, which has a tendency to crack and wear at the seams and creases. More frequent washing thus provided cleaner clothes, in particular eliminating lice, and probably improving overall public health.

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112. RAILROADS AND THEIR IMPACT (c.1825-1900)

No invention of the 1800's played a more vital role in the Industrial Revolution than the steam locomotive and railroad, triggering the biggest leap in transportation technology in history. The technology central to railroads, the steam engine, needed two major improvements. First of all, a way had to be found to convert the oscillating motion of the steam engine to rotary motion so it could drive the locomotive's wheels. The solution came with James Watt's Sun and Planet gear, which connected the piston to the wheels somewhat off center to drive it forward. Secondly there was a need for stronger iron so boilers could create and withstand the pressure needed to drive steam locomotives. In 1783, the rolling and puddling process was invented, eliminating impurities in the iron and making it much stronger. In addition to creating much stronger boilers, it also led to stronger and cheaper iron rails on which the locomotives could ride.

Another catalyst for the invention of the locomotive was the loss of so many horses during the French Revolutionary and Napoleonic wars. This, along with the rolling and puddling method and Watt's Sun and Planet gear, sparked experiments leading to the first steam locomotive in 1804. However, it was not until the 1820's, when a properly running locomotive had been designed and the rolling and puddling technique had advanced and become widespread enough to make good cheap rails possible, that the first railroads were born.

In 1825, the Stockton and Darlington Railroad carried the first commercial freight of any railroad in history. Five years later, the Liverpool and Manchester Railroad opened operations carrying passengers as well as freight. This quickly sparked a virtual mania for building railroads in Europe and the United States after 1830. The 1800s saw incredible growth in the miles of track being laid. In 1830, Britain had only 95 miles of track. That figure had grown to 1500 miles by 1840 and 6600 miles by 1850. By contrast, Europe in 1850 had only 8000 miles of track. However, after 1850 Europe and the United States rapidly gained on Britain. By 1890, Britain had 20,000 miles of track, while Germany had 26,000 miles and the United

States had 167,000 miles. Even Russia had 48,000 miles of track by 1900, although that was spread out over a vast area.

Such rapid expansion had both political and economic effects. Politically, the power of the state grew considerably. For one thing railroads were expensive to build, leading governments to finance them directly or through massive land grants. Also, everyone wanted railroads to pass through and benefit their regions. At first, this was impractical, and governments often had to step in and decide where the main trunk lines should be laid before less profitable branch lines could be developed. Finally, standard gauges (track sizes) and safety standards had to be set so that different railroads could easily link up and run their trains on other companies' tracks without crashing into one another. Naturally, each railroad wanted to avoid the expense of adapting its own gauge to another company's standard, making it necessary for the government to step in and impose a standard gauge and safety practices. Therefore, as railroads unified their nations economically, the governments directing their development unified their nations politically and increased their own power.

Railroads cut travel time by 90% and dramatically reduced freight costs with three important economic results. First, they made possible the settlement and development of continental interiors. For example, in 1869 the first transcontinental railroad across North America was completed, transforming an arduous and dangerous journey of months into an easy trip of a few days. This linked the countryside more tightly to the cities, production areas to markets and raw materials, and continental interiors to coastlines and waterways. Second, farmers switched from raising subsistence crops to cash crops better suited for their local soils, thus increasing crop yields dramatically. They could then sell the crops, buy the food needed to feed themselves, and still have money for buying consumer goods. Finally, areas previously isolated during famines could now be supplied, leading to fewer deaths from hunger and starvation and corresponding increases in population.

With factories more closely connected to markets and the larger population of potential consumers, many more people could afford consumer goods. This stimulated sales, providing more jobs,

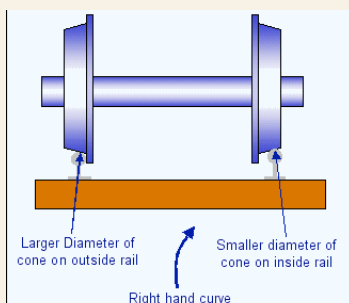
increased production, and lower prices. With business booming, companies developed new products, triggering a virtual explosion of new technological advances, inventions, and consumer products in the latter 1800's. All these advances led to a higher standard of living, which further increased the consumer market, starting the process all over again.

By 1900, railroads had virtually revolutionized overland transportation and travel, pulling whole continents tightly together (both economically and politically), helping create a higher standard of living, the modern consumer society, and a proliferation of new technologies. Although airplanes and automobiles would continue this revolution, it was the railroad that paved the way.

Getting on Track: Solving Various Technical Problems

Stationary steam engines were an early method for hauling loads up steep inclines until locomotives became more powerful. One such engine was used on the last leg of the Charleston-Hamburg line in South Carolina.

Another issue was wheel design. There were two competing designs: flanged wheels that overlapped the top of a flat rail and flat wheels kept on the rail by an L-shaped rail. Flanged wheels with the treads coned down to the outside managed curves better because the momentum of the turn would shift the outer wheel, which has a greater distance to travel, to its larger diameter compared to the inner wheel that has shifted correspondingly to its smaller diameter. Therefore, one rotation of the “larger” outer wheel will take that wheel farther than one rotation of the “smaller” inner wheel, thus compensating for the greater distance to travel on that curve.



Couplers. Early train cars were joined with chains that jerked passenger's necks until the more stable link-and-pin coupler was adopted from the U.S. However, railroad workers had to manually put in or lift out the pins to couple or uncouple the cars, running the risk of getting a hand crushed if the train moved as they guided the link into the socket of the second train car.

One side effect of the injuries caused by the link-and-pin system of coupling was the increased development and availability of prosthetic limbs. Companies that manufactured prosthetic limbs especially advertised in railroad journals and would list of all the railroads that had purchased their products.

In 1873, the more efficient and automatic Janney coupler was patented, which automatically coupled and uncoupled the cars. This saved a lot of railroad workers' limbs, but didn't help business for prosthetic limb companies.

The Birth of British Railroads

The Frenchman, Nicholas Cugnot (below), probably deserves credit for the first steam locomotive. He successfully tested his 3-wheeled steam car in Paris 1769, getting it up to six miles per hour. Unfortunately, with the crowd urging him to go faster, he pushed it up to nine miles per hour, whereupon it either exploded or he ran it into a wall (or maybe it ran into a wall and exploded). Either way, Cugnot was arrested and jailed as a madman.

In Britain, there were concerted efforts by a number of men to come up with a steam locomotive. William Murdock who built a working locomotive in 1784 that ran away from him one night and scared the local vicar who thought it was work of the Devil. Murdock also pioneered gas lighting. No telling what people thought of that.

George Stephenson's first successful locomotive, built in 1804, could travel 4 miles per hour.

The Rainhill Trials were held in 1825 to determine which method (stationary engines pulling trains by ropes, locomotives, horses, etc.) was best to use on the new railroads. The winner

had to haul 20 tons of freight at 10 miles per hour for a prize of £550. Four locomotives and one *cyclopede* (a horse running on a treadmill) competed. The winner was George Stephenson's *Rocket* after two engines broke down, and a third didn't make the required speed.

The first train fatality occurred on the maiden run of the Liverpool and Manchester Railroad in 1830 (above), a gala event that involved eight trains, each carrying 100 passengers, including the Duke of Wellington. William Huskisson, a Member of Parliament, upon stepping off one train when it stopped for water was immediately hit by the *Rocket* on an adjacent track. George Stephenson personally drove Huskisson on a train to get medical help, traveling at the unheard of speed of thirty-six miles per hour. But it was too late for Huskisson, who died an hour later. The Duke of Wellington was so upset that he didn't ride another train until 1843 when he accompanied Queen Victoria on a trip.

Hazards and Humbug About Railroads



Opposition to railroads did exist for a number of reasons:

- A famous race between the Tom Thumb and a horse drawn train showed skeptics the superiority of the horse.
- Religious people, considered the locomotive, with its fire and brimstone, the devil's work.
- Doctors said speeds over 15 miles per hour would suck the air out of your lungs.
- Farmers claimed cows and chickens wouldn't give milk or lay eggs.
- Others claimed flames from the locomotive would ignite cottage and hay stacks.
- Some feared the locomotive's pollution would end all natural life.
- When some mountain people first heard a train whistle, they went out to trap or kill the mysterious beast.

The steam locomotive did have its hazards. An Engineer on the Charleston-Hamburg line, annoyed by the hissing of the steam engine's safety valve, closed it, causing the steam pressure to build up and the engine to explode.

The hazards of train travel (especially in dark tunnels) included mischievous conductors, drunks, thieves, and "mashers" who would steal kisses from unsuspecting women. Ladies were encouraged to carry hatpins, so any man who got fresh would get his eye poked out.

Another hazard of train travel included card sharks whose trickster ways bilked many an innocent passenger of his carrying cash. One railroad even paid a particularly notorious gambler \$25,000 not to ride their trains.

There were also economic casualties, such as local craftsmen and small-scale industries competing with cheaper mass produced industrial goods and local fairs and peddlers whose businesses were hurt by mail order catalogues. Waterway companies also lost business to the much faster and increasingly cheaper railroads.

Train wrecks were another real hazard, especially as locomotives got faster and more powerful. By the late 1800s, the average speed cruising speed of a locomotive was 40 miles per hour, with top speeds of 60-70 miles per hour. In 1893 a locomotive set a new speed record of 112.5 miles per hour.

An even greater hazard was steamboat wrecks along rivers. Riverboats were made of wood, which made them flimsy and vulnerable to fires, especially in an age when smoking was ubiquitous and unrestricted. Along with the usual wrecks caused by fires and hitting rocks and sandbars, riverboats faced the ongoing danger of boiler explosions that could blow them to smithereens. The worst such disaster occurred just weeks after the Civil War on the night of April 27, 1865, when the boilers of the steamer, *Sultana*, exploded, (above) killing 1,547 passengers, most of them returning prisoners of war. By comparison, 1,517 people perished with the *Titanic*.

Setting Standards

One day two railroads met at Gloucester, one with a gauge (track width) of 4'8.5" and the other with 7'4". Obviously, neither company wanted to modify its tracks, so a third party, the national government, had to step in to ensure that railroads across Britain could easily connect and use each others' tracks. Therefore the British government set the standard gauge at 4'8.5" in 1846.

Some countries, like Australia still don't have standard gauges. Neither did the Confederacy during the American Civil War, a factor that contributed to its ultimate defeat.

The Scotsman, Samuel B. Morse invented the telegraph to coordinate trains, hopefully to prevent train wrecks like the one above. Similarly, block signaling to ensure there was only one train on a stretch of track between two signal boxes was established in 1875.

The creation of time zones

Before high speed railway travel and telegraph communication, there was no real need or way to coordinate clocks over large distances. Instead, each town set its clocks based on when the sun was at its highest point over that town. Different towns' clocks and watches would vary by a few minutes each when traveling east or west, but at such slow speeds, it didn't matter.

However, in the 1800s, railroads wanted to create precise timetables for their passengers, which required coordinating clocks over long distances. Luckily, the telegraph could provide instantaneous communication for simultaneously setting clocks at different locations. On December 1, 1847, British railways established the first standard time zone for Britain, based on Greenwich Mean time, which had been set as a standard nautical reference point in 1675.

By 1855, 98% of Britain's public clocks were based on Greenwich Mean Time, although the government didn't officially establish this as the standard time until 1880. Some clocks from the time continued to have two minute hands, one for standard time and one for local time.

In the US, things were a bit more complicated, since each railroad went by its own time, usually based on that railroad's headquarters. Some stations had a different clock with a different time for each railroad serving that station. For instance, Pittsburgh's main railroad station had six clocks with six different times. On November 18, 1883 the railroads inaugurated what constitute the current time zones in the U.S. for the railroad stations. Within a year 85% of the nation's major cities were on standard time. In 1918 Congress passed the Standard Time Act, putting the whole nation on standard time zones.

A single global time zone was proposed at the October 1884 at the International Meridian Conference held in Washington, D.C., but its delegates didn't feel they had the authority to impose it. Another idea, which was eventually adopted, was starting the day at midnight instead of noon.

In 1976, Maharishi Mahesh Yogi proposed a global system of 12 time zones (below) so that the "golden hue of Heaven on Earth will dawn with the sunrise in every time zone, and every nation will enjoy a greater good fortune day by day, around the year, around the globe."

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113. THE SOCIAL IMPACT OF INDUSTRIALIZATION

Right and left a multitude of covered passages lead from the main street into numerous courts, and he who turns in thither gets into a filth and “Right & left a multitude of covered passages lead from the main street into numerous courts, & he who turns in thither gets into a filth & disgusting grime, the equal of which is not to be found - especially in the courts which lead down to the Irk, and which contain unqualifiedly the most horrible dwellings which I have yet beheld. In one of these courts there stands directly at the entrance, at the end of the covered passage, a privy without a door, so dirty that the inhabitants can pass into & out of the court only by passing through foul pools of stagnant urine & excrement. This is the first court on the Irk above Ducie Bridge - in case any one should care to look into it. Below it on the river there are several tanneries, which fill the whole neighbourhood with the stench of animal putrefaction. Below Ducie Bridge the only entrance to most of the houses is by means of narrow, dirty stairs & over heaps of refuse and filth. The first court below Ducie Bridge, known as Allen's Court, was in such a state at the time of the cholera that the sanitary police ordered it evacuated, swept, & disinfected with chloride of lime... At the bottom flows, or rather stagnates, the Irk, a narrow, coal-black, foul-smelling stream, full of debris & refuse, which it deposits on the shallower right bank.

“In dry weather, a long string of the most disgusting, blackish-green, slime pools are left standing on this bank, from the depths of which bubbles of miasmatic gas constantly arise and give forth a stench unendurable even on the bridge forty or fifty feet above the surface of the stream. But besides this, the stream itself is checked every few paces by high weirs, behind which slime and refuse accumulate and rot in thick masses. Above the bridge are tanneries, bone mills, and gasworks, from which all drains and refuse find their way into the Irk, which receives further the contents of all the neighbouring sewers and privies. It may be easily imagined, therefore, what sort of residue the stream deposits. Below the bridge you look upon the piles of debris, the refuse, filth, and offal from the courts on the steep left bank; here each house is packed close behind its neighbour and a piece of

each is visible, all black, smoky, crumbling, ancient, with broken panes and window frames...

“Above Ducie Bridge, the left bank grows more flat and the right bank steeper, but the condition of the dwellings on both banks grows worse rather than better. He who turns to the left here from the main street, Long Millgate, is lost; he wanders from one court to another, turns countless corners, passes nothing but narrow, filthy nooks and alleys, until after a few minutes he has lost all clue, and knows not whither to turn. Everywhere half or wholly ruined buildings, some of them actually uninhabited, which means a great deal here; rarely a wooden or stone floor to be seen in the houses, almost uniformly broken, ill-fitting windows and doors, and a state of filth! Everywhere heaps of debris, refuse, and offal; standing pools for gutters, and a stench which alone would make it impossible for a human being in any degree civilised to live in such a district... Immediately under the railway bridge there stands a court, the filth and horrors of which surpass all the others by far, just because it was hitherto so shut off, so secluded that the way to it could not be found without a good deal of trouble... Passing along a rough bank, among stakes and washing-lines, one penetrates into this chaos of small one-storied, one-roomed huts, in most of which there is no artificial floor; kitchen, living and sleeping-room all in one. In such a hole, scarcely five feet long by six broad, I found two beds - and such bedsteads and beds! - which, with a staircase and chimney-place, exactly filled the room. In several others I found absolutely nothing, while the door stood open, and the inhabitants leaned against it. Everywhere before the doors refuse and offal; that any sort of pavement lay underneath could not be seen but only felt, here and there, with the feet. This whole collection of cattle-sheds for human beings was surrounded on two sides by houses and a factory, and on the third by the river, and besides the narrow stair up the bank, a narrow doorway alone led out into another almost equally ill-built, ill-kept labyrinth of dwellings....

“. . . Here, as in most of the working-men's quarters of Manchester, the pork-raisers rent the courts and build pig-pens in them. In almost every court one or even several such pens may be found, into which the inhabitants of the court throw all refuse and offal, whence the swine grow fat; and

the atmosphere, confined on all four sides, is utterly corrupted by putrefying animal and vegetable substances....

“Such is the Old Town of Manchester, and on re-reading my description, I am forced to admit that instead of being exaggerated, it is far from black enough to convey a true impression of the filth, ruin, and uninhabitableness, the defiance of all considerations of cleanliness, ventilation, and health which characterise the construction of this single district, containing at least twenty to thirty thousand inhabitants. And such a district exists in the heart of the second city of England, the first manufacturing city of the world. If any one wishes to see in how little space a human being can move, how little air - and such air! - he can breathe, how little of civilisation he may share and yet live, it is only necessary to travel hither. True, this is the Old Town, and the people of Manchester emphasise the fact whenever any one mentions to them the frightful condition of this Hell upon Earth; but what does that prove? Everything which here arouses horror and indignation is of recent origin, belongs to the industrial epoch.”

From Friedrich Engels, *The Condition of the Working-Class in England in 1844* (London: Swan Sonnenschein & Co., 1892), pp. 45, 48-53

Today we see the Industrial Revolution as being responsible for the higher standard of living we enjoy. This, of course, is true, but there was a great and, at times, appalling, price paid in human suffering to attain this standard of living. From the start, industrialization meant the transformation of countries' populations from being predominantly rural to being predominantly urban. In England, this involved the migration of millions from the agricultural south to the cities springing up near the coal and iron fields in the north. The population of Manchester, England grew from 25,000 in 1772 to 303,000 by 1850. Liverpool's population rose from 80,000 to 397,000 in the first half of the nineteenth century. Other cities told similar stories of incredible growth. Overall in Britain, the number of cities with populations of 50,000 or more rose from 3 in 1785 to 31 in 1860. By 1850, Britain had become the first nation in history to have a larger urban than rural population. Other countries would soon follow suit.

These early industrial cities created problems in three areas: living conditions, working conditions, and the social structure. First of all, cities built so rapidly were also built shoddily. Tenement houses were crammed together along narrow streets, poorly built, and incredibly crowded. Whole families were packed into attics, cellars, or single rooms, with one house holding 63 people in 7 rooms. Sanitation was virtually non-existent, making clean water a luxury reserved for the rich. Open sewers ran down streets carrying water fouled with industrial and human waste. Diseases such as cholera, typhoid, typhus, and tuberculosis often reached epidemic proportions. Add to these problems air pollution and malnutrition, and one gets a picture of incomparable human misery. Alcoholism, drug abuse, crime, and prostitution were natural outcomes of having to endure these conditions.

Away from home, working conditions were even worse. Depending on the hours of sunlight, the workday could extend up to 19 hours a day, six days a week. The work itself was hard, boring, and tedious. Conditions around the steam engines and in the mines were hot and at times extremely dangerous. In the absence of safety devices, machines often tore off fingers, hands, and even arms. Mine shafts would occasionally explode or cave in, trapping and killing hundreds of workers deep within the earth.

Despite all this, there were often long lines of the unemployed waiting for any available jobs. This surplus of labor kept wages excessively low. As a result, families had to send their women and even their children to work in the factories just to make ends meet. In fact, women and children were preferred as workers because they could be paid less while being worked harder. Occasional depressions in the economy could lead to whole industries shutting down. This left thousands of families with no jobs and no public welfare to see them through such hard times. Even medieval serfs had been assured some rights to a living off their lands, which was more than these people could often enjoy.

The Industrial Revolution also upset old social patterns of life and family. Under the old domestic system of cottage industries, peasants worked in their own homes, produced at their own rates, and were paid accordingly. Under the new factory system, laborers worked in the factories owned by

bosses whom they rarely, if ever, saw. They had to be at work precisely on time and work at the much faster pace of the machines. Nevertheless, they were paid by the hour, not according to their productivity, since that was cheaper for the owner.

Previously, the farm, home and the workplace were one and the same, with men and women sharing in many of the same tasks. In the industrial city, there was a separation of home and workplace and a correspondingly greater separation of the roles men and women played. In middle class families, men went to work while women stayed home with the children. In working class families, men, women, and children all went to work, but usually to separate places. For both middle and working class families, these were added strains that pulled the family apart.

Although the nuclear family had generally replaced the extended family in European society since the Black Death (largely in order to keep from splitting up family lands), there was still a network of close friends and relatives in the village providing each other mutual support. It is true that, when individual families moved to the city, they left behind the support network of the villages, often living in isolation and having little or no support from their neighbors. However, softening the effects to an extent was the tendency for people to follow friends and family to the same cities and neighborhoods and settle in the same crowded tenements, thus maintaining some sense of community.

It would be after World War II that the truly isolated nuclear family emerged when a housing shortage triggered a new phenomenon, the suburbs, that provided millions of small affordable single-family homes to young couples. Instead of the community of the village or even the crowded tenements, each nuclear family lived in its own private home in isolation from its neighbors (who were usually complete strangers), separated by property lines, hedges, and fences.

It is no wonder the growing numbers of people left helpless and destitute by the rapid changes of industrialization often turned to crime, alcoholism, and drugs. All this did not go unnoticed, and reform movements arose from three directions. Some reformers were genuinely concerned industrialists

such as Robert Owen and W. H. Lever, who built model communities in which their workers could live and work. Other reformers were liberal politicians trying to alleviate the sufferings of the masses or conservative politicians trying to avert social revolution caused by such misery. Together such politicians enacted legislation that gradually eased the plight of the working class, such as the Factory Act of 1833, which limited the use of child labor, and the Factory Act of 1850, which limited women and children to workdays of ten and a half hours.

However, many workers felt that for real progress to be made, they would have to work for it themselves. That involved organizing into trade unions, the very existence of which was illegal until 1824. Even then, they could only exist as mutual aid societies to provide their members with insurance against sickness and injury. Not until 1871 could British unions represent their members' grievances and actively work for reforms. The struggle for those reforms was a long, hard, and often violent one. However, by the end of the nineteenth century, trade unions had made substantial progress toward improving the living and working conditions that industrial workers had to endure.

The standard of living for workers in the early Industrial Revolution was certainly horrible, but it did improve in the course of the nineteenth century. Two types of statistics tell us this. First of all, the overall population of Europe rose dramatically from some 187,000,000 in 1800 to 466,000,000 by 1914. Add to that another 60,000,000 who emigrated to other continents, and one gets the distinct impression that the overall standard of living in Europe was getting better.

Another figure telling a similar story of progress is the average life expectancy of Europeans during this time. In 1800, most people could expect to live around 30 years or less, depending on their social class. By 1900, the average life expectancy had risen about fifty per cent to 45 years. Better living conditions and nutrition, public sanitation, and great advances in medical science were all responsible for this jump. However, the price those early generations of factory workers paid for this progress and our own comfortable life styles was a terrible one indeed.

Children's Changing Status in the 1800s

Child labor was among the most blatant abuses of the early industrial revolution, since children were so easy to exploit. Fourteen-hour workdays were common. Orphans and children on the street were rented out to factories, which also made for fewer mouths for orphanages or poor families to feed. In 1767, a law was passed giving money to company nurses for every child laborer who had survived another year of factory or mine work.

Following is a rather grim account of the Death of a girl in a factory:

“A girl named Mary Richards, who was thought remarkably handsome when she left the workhouse, and, who was not quite ten years of age, attended a drawing frame, below which, and about a foot from the floor, was a horizontal shaft, by which the frames above were turned. It happened one evening, when her apron was caught by the shaft. In an instant the poor girl was drawn by an irresistible force and dashed on the floor. She uttered the most heart-rending shrieks! Blincoe ran towards her, an agonized and helpless beholder of a scene of horror. He saw her whirled round and round with the shaft - he heard the bones of her arms, legs, thighs, etc. successively snap asunder, crushed, seemingly, to atoms, as the machinery whirled her round, and drew tighter and tighter her body within the works, her blood was scattered over the frame and streamed upon the floor, her head appeared dashed to pieces - at last, her mangled body was jammed in so fast, between the shafts and the floor, that the water being low and the wheels off the gear, it stopped the main shaft. When she was extricated, every bone was found broken - her head dreadfully crushed. She was carried off quite lifeless.”

In the coal mines, younger children, known as “thrusters”, would push and pull carts of coal through a mine shaft only 20 inches high, while even younger trappers about six years old, would open blast doors, meant to contain coal dust explosions, for them. Girls as young as six would coal out of mines in Scotland, having to climb 370 feet of ladders, the coal being in baskets on their backs and with straps around their foreheads. Each trip was called a rake, and girls

had to make between ten and fourteen rakes a day.

A commission in Nottingham in 1850 reported that children were “dragged from their squalid beds at 2, 3, or 4 o’clock in the morning and compelled to work for bare subsistence until 10, 11, or 12 at night, their limbs wearing away, their frames dwindling, their faces whitening and their humanity absolutely sinking into a stone-like torpor, utterly horrible to contemplate.”

However, conditions did improve for children. Public outrage led to a series of laws limiting the age and hours that children could work in mines and factories. Meanwhile, the nation state was claiming more of the children’s time in public schools to make them better citizens. Another factor was a changing, and often idealized, view of childhood as a separate and more innocent stage of human development, especially among the emerging middle class that didn’t need to send their children to work in the factories. This increased emphasis on children’s welfare led to a children’s industry producing a profusion of reading primers, children’s magazines, and toys.

Charles Dickens’ Description of Coketown, a fictional industrial city

"It was a town of red brick, or of brick that would have been red if the smoke and ashes had allowed it; but as matters stood it was a town of unnatural red and black like the painted face over which interminable serpents of smoke trailed themselves for ever and ever, and never got uncoiled. It had a black canal in it, and a river that ran purple with ill-smelling dye, and vast piles of buildings full of windows where there was rattling and a trembling all day long, and where the piston of the steam-engine worked monotonously up and down like the head of an elephant in a state of melancholy madness. It contained several large streets all very like one another, and many small streets still more like one another, inhabited by people equally like one another, who all went in and out at the same hours, with the same sound upon the same pavements, to do the same work, and to whom every day was the same as yesterday and

tomorrow, and every year the counterpart of the last and the next...

"You saw nothing in Coketown but what was severely workful. If the members of a religious persuasion built a chapel there-- as the members of eighteen religious persuasions had done-- they made it a pious warehouse of red brick, with sometimes (but this is only in highly ornamental examples) a bell in a birdcage on the top of it.... All the public inscriptions in the town were painted alike, in severe characters of black and white. The jail might have been the infirmary, the infirmary might have been the jail, the town-hall might have been either, or both, or anything else, for anything that appeared to the contrary in the graces of their construction. Fact, fact, fact, everywhere in the immaterial. The M'Choakumchild school was all fact, and the school of design was all fact, and the relations between master and man were all fact, and everything was fact between the lying-in hospital and the cemetery, and what you couldn't state in figures, or show to be purchaseable in the cheapest market and saleable in the dearest, was not, and never should be, world without end. Amen." --From *Hard Times* by Charles Dickens

Working Women

Since the first major industry was making textiles, it was natural that women made up a large part of the workforce, since they were so involved with that activity at home, both for domestic consumption and the cottage industry system that had dominated textile production since the later Middle Ages. Besides having nimble fingers for spinning and weaving, they were also easy to exploit. Therefore they found work in other industries, including coal mining. Following is a description of working conditions in a coalmine given by a woman named Betty Harris. She was 37 years old at the time:

"I was married at 23, and went into a colliery (coal mine) when I was married. I used to weave when about 12 years old; can neither read nor write...I am a drawer, and work from 6 in the morning to 6 at night. Stop about an hour at noon to eat my dinner; have bread and butter for dinner; I get no drink. I have two children, but they are too young to work. I worked at

drawing when I was in the family way. I know a woman who has gone home and washed herself, taken to her bed, delivered of a child, and gone to work again under the week.

"I have a belt round my waist, and a chain passing between my legs, and I go on my hands and feet. The road is very steep, and we have to hold by a rope; and when there is no rope, by anything we can catch hold of. There are six women and about six boys and girls in the pit I work in; it is very hard work for a woman...

"My cousin looks after my children in the day time. I am very tired when I get home at night; I fall asleep sometimes before I get washed. I am not so strong as I was, and cannot stand my work so well as I used to. I have drawn till I have bathed skin off me; the belt and chain is worse when we are in the family way. My feller (husband) has beaten me many a times for not being ready. I were not used to it at first, and he had little patience.

"I have known many a man beat his drawer. I have known men take liberties with the drawers, and some of the women have bastards."
From *Great Britain, Parliamentary Papers, 1842, Vol. XV, p. 84, and ibid., Vol. XVII, p. 108*

Sexual harassment is nothing new to our times. Neither is getting caught, although women were much more vulnerable to this kind of treatment and susceptible to being blamed for it as well. If a woman refused to go along with her boss's demands, she would probably be fired. If she did give in to his advances and got pregnant, she would also probably be fired.

The Triangle Shirtwaist Factory Fire (3/25/1911) in New York City was one of the most notorious examples of disregard for the safety and lives of the workers. In order to keep the workers, mostly women and girls, from leaving early, the factory's owners locked them inside. When a fire broke out, ladders could only reach the sixth floor, dooming those above. A total of 146 workers died and another 71 were injured. This fire did spur the U.S. government to implement stricter safety standards for industries.

Life and Death in the Early Industrial Revolution

Living conditions in industrial cities were, if anything, worse than working conditions. Poisonous dyes and plaster of Paris were added to food to make it seem more substantial and nutritious than it really was. Sewers were open ditches running down the middle of streets, while drinking water had brown particles floating in it.

There were no parks or trees. Because of window taxes, there were few windows and virtually no fresh air in houses, a mixed blessing, given the air pollution. Tenements would have up to seven people crammed into a room.

Epidemics of cholera, tuberculosis, typhoid, and diphtheria would rage through cities, while death rates from diseases such as smallpox, measles, scarlet fever and whooping cough were four times higher in industrial cities than in the countryside. Deaths from convulsions were ten times higher. An estimated 94% of urban populations died from infectious diseases. Child mortality before age five was 47%.

Not surprisingly, drugs, alcoholism and crime were major problems. Street gangs, such as New York City's Bowery Boys, often ruled the streets. Manchester, England had 1600 bars where workers, even children, could kill or dull the pain. There were also 26,000 opium apothecaries in Britain. Since opium from India was cheaper than food (and legal), some mothers would dose their children to keep them from crying all night from hunger pangs. When Marx said religion was the opiate of the masses, he knew his audience well.

The Company Store. Many factories and mines sprang up in relatively isolated places, although towns and cities would often grow up around them. Therefore the only source for supplies the workers had was the company store, which typically overcharged customers even for basic necessities. Since workers often came up short on the bill, the company would give them credit towards the next paycheck, which, of course, would not be enough to cover that week's

groceries and supplies, let alone pay the outstanding debt the employees owed. Thus the bill would climb higher and higher with each passing week, with the employees falling deeper and deeper into debt. One other thing: employees couldn't quit and leave until they had paid the debt, thus trapping them into a sort of industrial serfdom. If they did run away, the company had the right to form a posse and drag them back.

*You load sixteen tons, what do you get
Another day older and deeper in debt
Saint Peter don't you call me 'cause I can't
go
I owe my soul to the company store
--'Sixteen Tons' by Tennessee Ernie Ford*

"*Canary in a coal mine*" refers to a practice of bringing a canary into a mine shaft to determine if it was safe for the miners, the primary hazard being toxic gases (such as methane and carbon monoxide). Since canaries are more sensitive to such gases, if they got sick, that was a signal for the miners to get out. Later on, better ventilation systems, besides saving coal miners' lives, also saved the lives of thousands of canaries, much to the chagrin of canary breeders.

The Humphrey Lamp. Another hazard in coalmines was the build-up of coal dust in the air to such a concentrations that a flame or spark could ignite a deadly explosion. (Build-up of flour dust in watermills and windmills presented a similar hazard.) Then Humphrey Davy (1778?-1829) invented the Humphrey Lamp, which used gauze to filter out combustible gases while letting in oxygen to feed a flame, thus reducing the incidence of mine explosions at certain levels of concentration. As a result mine owners could send miners into greater concentrations of coal dust where the explosions would be even more deadly.

One sees similar disregard for the miners' lives in present-day China, where an estimated 40,000 miners are killed each year, it being cheaper to pay minimal death benefits to families than to institute stricter, but more expensive, safety regulations.

Labor's Long Hard Road to Dignity

Robert Owen. Among factory owners who worked for reforms and a more just society was Robert Owen, who established a cotton mill and community of 2500 people in New Lanark, Scotland in 1786. Owen wanted to create a utopian socialist society based on the principles of equal work, equal pay, and no ownership of private property. In that spirit, he reduced work hours, and created safer working conditions in his factories. He also provided his workers decent housing, with plenty of windows for fresh air and even flower boxes.

Owen also worked to combat the worst abuses of child labor, establishing a minimum age of ten years for his workers, young by our standards, but quite progressive back then. Along those lines, he worked to improve the lot and education of New Lanark's 500 children at his New Institution for the Formation of Character (below), which replaced books with more physical activities such as singing, dancing, marching, basic geography, and three hours a day of free play in an open playground. Owen's institution was the inspiration for Great Britain's inaugural pre-school program that opened in New Lanark in 1816.

Owen's experiment was both successful and profitable, generating worldwide interest. However, he was disappointed that his model didn't spread more quickly throughout Britain, so he moved to New Harmony, Indiana in 1824 to establish a utopian commune. Among his more radical ideas was promoting equal rights for women. Although initially successful, inspiring fifteen other Owenite communities to spring up, the experiment at New Harmony ultimately collapsed along with all its imitators, largely because of infighting over various policies. In Owen's case, it was also the result of a business partner absconding with the community's profits.

Relief provided by the Salvation Army included beds that eerily represented coffins. They were designed to help the poor but discourage prolonged stays.

Leading the way in legislative reforms was a series of laws gradually restricting exploitation of children. In 1833, a new law dictated that no one under age nine could work in the mines or factories, while those between nine and fourteen could only work 68 hours per week. This was further regulated in 1848 when no one under ten could work in the mines or factories and those between ten and fourteen could only work on alternate days, and even then for only twelve-hour shifts with two hours off for lunch. Two years later, a maximum shift of ten and a half hours was mandated for children and women. Soon, men were agitating for similar hours, so that by 1900 the ten-hour shift was standard in Britain.

Of course, passing a law and enforcing it are two separate things, so that widespread labor abuses continued for years after they were made illegal.

Unions were illegal in Britain until 1824, and could only function as mutual aid societies until 1870, when they could finally do collective bargaining. Owners saw unions as violation of free contract, and claimed workers couldn't handle leisure time, so were better off working all the time. The Combination Act of 1799 declared anyone joining an organization to improve working conditions was liable to a jail sentence of three months. One of the three magistrates passing sentence could be the defendant's boss. At one demonstration, seven women were jailed just for saying "bah!"

In general, the British labor movement and strikes were less violent than those in the United States, such as the Haymarket Riot, which took place May 4, 1886 in Chicago. Leading to this was growing pressure to make the 8-hour day standard for all workers by May 1, 1886. When that didn't happen, marches and demonstrations continued the following days. Anger in Chicago focused especially on a strike at the McCormick Harvesting Machine Company, which had brought in strikebreakers under police protection. On May 3 two strikers were killed by police, which sparked anarchists to call for a bigger rally at Haymarket Square the next day.

Despite some agitation for violence, the demonstration remained peaceful until about 10:30PM when police arrived in force and moved to disperse the crowd. At that point, someone threw a dynamite bomb that mortally wounded seven policemen. The police then opened fire, killing four and wounding many more, including some of their fellow police by accident. The number of civilians wounded remains unclear, since many were afraid to go to hospitals where they might be arrested.

The whole incident was over in five minutes, but the repercussions were long lasting. For one thing, five of the eight men charged with murder were born in Germany (as was Karl Marx), which fueled paranoia about foreign socialist agitators. It didn't help that the fliers advertising the demonstration were printed in both English and German. Therefore the Haymarket Riot and the Mayday holiday it was associated with, became popularly linked with the idea of the labor movement being a front for anarchists and communists. Conversely, this incident solidified Mayday as an international holiday for workers and was especially celebrated in communist countries such as the Soviet Union.

Another strike famous for its violence was the Pullman Strike (1894), also in Chicago, where thirteen strikers were killed and another fifty-seven were injured when federal troops were brought in to settle things down.

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114. THE RISING STATUS OF WOMEN IN THE LATE 1800'S

One of the most dramatic and unexpected consequences of the Industrial Revolution was the rising status of women by the end of the nineteenth century. At this time there were competing crosscurrents affecting women's goals and aspirations. On the one hand, since the Later Middle Ages women in the West had experienced relatively high status compared to most other cultures. During the Enlightenment more positive attitudes about women had emerged and they had even taken active roles in during the French Revolution that followed. On the other hand, there were the still the traditional gender roles and ideas about a woman's places being in the home. These re-emerged during the Napoleonic era largely in reaction to the more active roles women had been playing. As a result, the 1800s saw women's status knocked back to their traditional domestic roles.

However, the industrial revolution changed the game in several ways. For one thing it created less need for men's greater physical strength, since machines were progressively taking over that role. Therefore, more women were entering the workplace and in some cases competing with men for jobs. Men disliked this, especially since factory owners who could more easily overwork and underpay them often preferred women. Therefore, working class men did what they could to push women out of what they saw as "male" occupations in order to keep their jobs. As a result, a further differentiation between men and women emerged in the 1800s between "male" occupations, which were counted in work statistics, and "female" occupations (especially domestic work outside of the home) that were not counted.

The industrial revolution had two other effects, especially concerning middle class women. For one thing, these more affluent women tended to stay home in what became associated with the "housewife" role. This gave many women more leisure time to read and become aware of society and its problems. Consequently, many of them got involved in political and social issues, typically through participation in church activities concerned with such causes and were considered safe for women to join.

At the same time, since many middle class women were also doing the shopping, they were seen as important aspects of the emerging consumer society. Therefore, the advertising industry targeted many of its campaigns specifically toward women. Ads showing women doing such things as dancing, ice skating, riding bicycles and playing golf created the perception that these were normal activities for women. In this case, life largely imitated art as women actually did go out and do those things. As a result, women's status in society as reflected in such ads started rising in the last half of the nineteenth century.

By the same token this rising status opened up new avenues of activity and expression for women. More women pursued secondary and university educations. Many of them also found their way into the workplace in what would eventually come to be seen as "female" occupations as nurses, teachers, and secretaries. In their leisure time, women took part in casual social dancing and sports. At first these were "feminine" sports such as croquet, bicycling, and horseback riding using the more "feminine" (and dangerous) sidesaddle. Even women's fashions in the early twentieth century reflected their social mobility by becoming increasingly less confining. More adventurous women were also taking part in mixed swimming and tennis. Only six years after the inauguration of men's singles at Wimbledon, women had their own singles tournament. Not only did women's rising status allow them to take part in these activities, but these activities gave women more visibility in society and increased their status, thus opening them more doors, and so on.

All this encouraged many women to work for suffrage (the right to vote). Serious discussion of this topic largely started with the French Revolution. Mary Wollstonecraft's book, *A Vindication of the Rights of Women* (1792), had, argued that women were neither mentally or physically inferior to men and that different standards for women were stifling to both sexes. This gained further support, including from such men as the political philosopher, John Stuart Mill. In Britain, demonstrations to gain the vote occasionally met with harsh reactions from men. When several women were jailed after a demonstration in 1905, newspapers finally broke their silence on the suffrage issue. This gave more

publicity and support for women's suffrage, which sparked more demonstrations, reactions, publicity and sympathy, and so on. Although some women, frustrated at their treatment, turned to more destructive and even violent actions (vandalism, bombs in mailboxes, and one woman even throwing herself in front of a racehorse), most kept to more moderate tactics and continued to gain support.

World War I accelerated this process when so many men were gone and women were needed to fill their jobs. In 1918, women over 30 who were householders, married to householders, or had a college degree won the vote (thus keeping male voters in the majority until 1928 when women over 21 could also vote). Women in other industrial countries soon gained suffrage: Finland (1906), Norway (1913), Russia (1917), and the United States (1919), along with Germany, Sweden, Austria, and the Netherlands. France, Italy, Switzerland and eventually most other countries around the globe would grant the vote later in the century. However, many barriers to equality remained and the struggle to attain equal status continues today.

A Short Guide to Victorian Etiquette



Above: the proper (left) and extremely vulgar way to dance in Victorian society

The informality of modern society would shock people from just about any previous age, but especially people in 19th century Britain during the reign of Queen Victoria (1837-1901). Following are just a few short rules on how to behave if you ever get caught in a time warp and end up in London c.1850.

- A lady never wears pearls or diamonds in the morning.
- A lady should never dance more than three dances in one night with the same gentleman.
- Guests should arrive precisely 15 min. after dictated, thus making them "fashionably late".
- Unmarried ladies under 30 may not be with an unrelated man or go anywhere without a chaperone.
- When meeting in public, a gentleman must wait for the lady to acknowledge him first.
- In a carriage, never sit next to a lady you're not related to and don't step on her dress.
- Weddings should be in AM or at least by 3PM with a wedding breakfast afterward.
- Upon departure for the honeymoon, guests throw shoes at the couple. (Failure to survive this ordeal bodes ill for the marriage.)
- Especially proper couples bring a lady friend of the bride's on the honeymoon.
- Victorian euphemisms: dark & white meat for legs & breast of fowl. Otherwise use "limb" instead of "leg", even if discussing a table limb, which should be covered with a tablecloth to protect the virtue of the table and any other innocent furniture in the room.
- Say "unmentionables" or "white sewing" instead of "underwear"
- Separate visitors to museums by gender in case a nude statue appears.
- People calling shouldn't bring dogs or kids, or call on wet days and drip on the rug.
- A lady being called on can send down a message that she isn't home.
- People with the same eye or hair color or body-type shouldn't marry each other.
- All men in a room should stand if there is one woman standing.
- A man shouldn't take something from a lady who is standing.
- Widows in mourning should wear black

for two years; one year for a child or parents; 6 months for a sibling; 2 months for an aunt or uncle. (15 seconds for a hamster)

- Victorian ladies were expected to make six wardrobe changes a day, depending on the activity: walking, visiting (“calling”), receiving (visitors), morning, mourning, traveling, shooting, golfing, swimming, concerting, dining, dancing, etc.

“Crazy” Women at Work and School

One argument given against women being educated was that insane asylums held more educated women than uneducated ones; therefore, education makes women insane. Of course, the same families that could afford to give their women educations also could afford to put them in such asylums, thus skewing the curve.

Speaking of treatment for the mentally ill, a major pioneer in that field was the American, Dorothea Dix who took up the cause after being told their living conditions were so horrid because "the insane do not feel heat or cold" She was also a major factor in making nursing an acceptable profession for women. As the Union's Superintendent of Female Nurses during the Civil War, she wanted to destroy the stereotype of women being too frail to handle the ghastly conditions of battlefield hospitals. Therefore, she would hire only plain looking women over the age of thirty.

While Florence Nightingale is best remembered for her efforts to make nursing a respectable career for women, Clara Barton did the same for American women during the Civil War. Her independent efforts to relieve the suffering of wounded soldiers (Confederate as well as Union) earned her the nickname “Angel of the Battlefield”. She would work so close to the combat, that one time a bullet passed through her sleeve and killed the wounded soldier she was tending. After the war, she traveled to Europe where she was influenced by the International Red Cross and inspired to start the

American Red Cross, which still thrives as an agency for disaster relief.

Between 1880 and 1900 the number of girls' schools in France went from zero to 138. In fact there were more girls than boys in school after age sixteen, probably because the boys had to go to work. Girls' schools also opened up teaching jobs to women, since it was considered inappropriate for men to teach girls.

The advantage of smaller hands. In the late 1800s, a new technology was taking over the office, the typewriter, which had the advantages of both speed and clarity over handwritten documents. It also was somewhat compact, thus favoring secretaries with smaller hands, which typically were women. As a result, typewriter ads from the time typically showed women working them.

Women's lack of rights. Many women in the 1800s were denied the right to own property or even dispose of their own paychecks. One Northeastern state allowed a husband to beat his wife as long as it was with a reasonable instrument. Men were almost always given custody of children in cases of divorce, mainly because women typically didn't have the independent means of supporting and raising children.

Margaret Sanger and the fight for birth control rights. Women then could also have their children taken from them if they publicly advocated birth control. The leading crusader for women's birth control rights was Margaret Sanger. After seeing so many women burdened with children and trapped in poverty, she became an early and persistent advocate for birth control in the 20th century, efforts which often landed her in jail. Her efforts eventually paid off when she and a researcher named Goody Pinkus developed the birth control pill in the 1950s and had it approved by the FDA in 1960.

Beating Corsets into Battleships



Note that corsets were also marketed for boys and children.

When the U.S. joined World War I in 1917, the U.S. War Industries Board asked women to stop buying corsets to free up metal for war production. This effort actually freed up enough steel to build two battleships, some 28,000 tons of metal. Largely replacing the corset was the brassiere, a much less confining garment, developed in the early 1900s, although it was not mass-produced until the 1930s. Another development in 1911, that of rubberized elastic materials gave rise to another garment to replace the corset, the girdle, which was worn for the purpose of reducing hip size.



In the 1950s, Maidenform started a long-running ad campaign where women would be doing various things in public, such as scaring small children at birthday parties, while wearing nothing over their Maidenform bras.

While the brassiere was much more liberating than the corset, many feminists in the 1970s

would see it as a symbol of the repression of women's bodies.

In a similar vein, while only women of ill repute wore makeup in the 1800s, women in the early 1900s fought to make the use of cosmetics acceptable. Actresses, such as Collene Moore and Clara Bow, especially popularized the use of makeup, which became a standard feature of the Flapper look in the 1920s. Today, a century later, many women again view cosmetics as demeaning.

Life Imitates Art (or the Other Way Around): Advertising and 19th Century Women

Did art, in particular, poster advertisements, imitate contemporary life in the late 1800s or vice versa? The best answer was probably yes, as the two fed back onto one another. Thus posters showing women dancing and engaging in outdoor sports and leisure activities both inspired women to step out into society and reflected the more active roles in which they were engaged, whether it be ice skating, terrorizing geese with a motorcycle, or crushing automobiles in their bare hands.



The Long Hard Road to Suffrage



Susan B. Anthony and Elizabeth Caty Stanton were two of the most important leaders of the Suffrage movement in the United States, starting with the Seneca Falls conference in July, 1848. Of the five women there, three were Quakers, the one Protestant sect that had allowed women to preach.

Suffrage terrorists. Some women went to more extreme lengths to publicize their cause. One suffragette, Emily Davison threw herself in front of the king's horse at the Epsom Derby (below) to publicize her cause (6/4/1913). The attempt cost the woman her life. Other suffragettes went to the extreme of putting bombs in opponents' mailboxes. Generally their protests were non-violent marches and hunger strikes. In the latter case, men would force feed the protestors.

Queen Victoria called the Suffrage Movement a "mad wicked folly".

Anti-suffrage propaganda also proliferated during the campaign to win the vote for women in the U.S. One poster entitled "America When Feminized" warns: "The More a Politician allows Himself to be Henpecked The More Henpecking We will Have in Politics." Then came the following by Dr. William J. Hickson, Chicago University:

"American pep which was the result of a masculine dominated county will soon be a thing of the past. With the collapse of the male ascendancy in this country we can look forward to a nation of degeneration. The suppression of sex will ultimately have its harvest in decadence, a phenomenon already beginning. The effect of the social revolution on American character will be to make sissies of American men—a process already well under way."

Wyoming was the first state in the United States to give women the vote, but not out of sympathy for women's rights. The U.S. constitution stipulated that for a territory to become a state, it needed 250,000 voters. Wyoming didn't have that many eligible *men*, but it did have that many eligible *voters* if it gave women the vote. So it did.

Passing the nineteenth amendment giving women the vote was a very close run affair. Two-thirds of the states had to ratify a proposed amendment for it to become part of the constitution. By 1920, thirty-five states had voted to ratify the amendment, one shy of the required thirty-six out of forty-eight. It all came down to the Tennessee legislature. After the first two roll calls were deadlocked, the youngest member of the legislature, Harry Burns, changed his vote in favor of the amendment and gave American women the vote.

Burns's change of vote enraged anti-suffragists, and there is an apocryphal story that he had to flee an angry mob by exiting through a third floor window and escaping by way of a window ledge to the attic where he hid until tempers cooled. When asked later why he changed his vote, he replied that his mother had sent him a telegram saying, "Don't forget to be a good boy and help Mrs. Catt [suffrage leader] put the "rat" in ratification." The next day he asked to speak to the legislature and explain his vote, saying his mother had always taught him that "a good boy always does what his mother asks him to do." So he did.

Margaret Sanger and the fight for birth control rights. Women then could also have their children taken from them if they publicly advocated birth control. The leading crusader for women's birth control rights was Margaret Sanger. After seeing so many women burdened with children and trapped in poverty, she became an early and persistent advocate for birth control in the 20th century, efforts which often landed her in jail. Her efforts eventually paid off when she and a researcher named Goody Pinkus developed the birth control pill in the 1950s and had it approved by the FDA in 1960.

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115. SOCIALISM AND THE MARXIST VIEW OF HISTORY

"Religion is the opiate of the masses."--Karl Marx

One of the most powerful and influential philosophies of the nineteenth and twentieth centuries has been socialism, a doctrine believing the means of production should belong to the workers. This contrasts sharply with capitalism which has a small but very rich class of capitalists owning the means of production and an underclass of workers with little or no say in company policies. Socialism was a response to the horrible working and living conditions of the early industrial revolution. It was highly idealistic, even drawing inspiration from a tradition of early Christian communal societies. In fact, it was often too idealistic and democratic, which doomed many early socialist communal experiments, such as one in New Harmony, Indiana, to failure.

Much more radical was Marxism, named after its founder, Karl Marx, who published *The Communist Manifesto* in 1848. While early socialists tried to build a new order within the existing one, Marx believed the present order must first be destroyed by revolution before a truly socialist society could evolve. However, Marxism is more than just a revolutionary call to arms for the working class. It is an entire system of thought with its own all encompassing view of society, economics, and history.

To start with, Marx believed in *economic determinism*, the idea that how a society produces and distributes its wealth will determine its social and political structure, laws, and even religion. Thus he saw history as a series of class struggles as humanity evolved through five stages of society:

- 1) *Primitive hunting and gathering societies* which had no extra wealth and therefore no private property, social classes, class struggles, or even the need for government;
- 2) *Slave societies* with a rich ruling class opposed by an oppressed underclass of slaves;
- 3) *Feudal society* with a noble class of landowning lords opposed by an oppressed class of serfs;
- 4) *Capitalist society* with a rich class of factory owners (*bourgeoisie*) opposed by an oppressed class of factory workers (the proletariat); and finally

- 5) *Socialist society* run by the workers with no private property, and thus no social classes, or class conflicts.

Marx saw each type of society as a necessary stage in the evolution toward the socialist society. Likewise, he saw the capitalist society of his own time as self destructive and moving inevitably toward socialist revolution. This largely hinged on his *labor theory of value*, which stated that any product was only worth as much the workers were paid to make it. Anything a capitalist charged beyond this amount was called *surplus value*. And it was here that Marx saw the beginning of the fatal cycle that would destroy capitalism.

If capitalists charged more for a product than their workers were paid to make it, not everyone could sell their goods because, among other things, the workers would not be paid enough to buy them. This would drive some owners out of business and create a smaller business class, although individually they each would be richer. However, to stay competitive, they would have to invest in more efficient, and expensive, machinery, thus laying off workers in the process. Since they would still overcharge for their products and there were now even fewer workers to buy them, more owners would be driven from business and the cycle would repeat.

However, this cycle could not continue indefinitely, since each time around there would be a growing gap between the fabulously rich and desperately poor. Eventually, this would trigger a revolution that would destroy the capitalist order. The triumphant workers would then build a society where people as a whole owned everything in common. Private property would disappear, and with it social classes, conflict over property, and any need for government, family, and religion, which were all seen as instruments of bourgeois oppression. There would be no rich or poor, thus allowing each individual to find true fulfillment. However, for all of this to happen, an intermediate stage of government would be necessary to guide the revolution to this workers' utopia.

Marxism had both its good points and its problems. First of all, it was valuable for pointing out the importance of economics and class struggle in

history. On the other hand, it failed to account for the role of individual genius, stupidity, and especially greed in human affairs, assuming that everyone would voluntarily give up all individual possessions for the common good. Also, Marx assumed his socialist revolution would take place in industrialized countries, when in fact it actually occurred in pre-industrial societies such as Russia, China, and Cuba. This was largely because, by Marx's death in 1883, conditions for industrial workers were starting to improve, thus undercutting any appeal socialist revolution might have for them. However, many subsequent social reforms, both in countries that hated and feared Marxism as well as ones that followed it, could trace their existence back to Karl Marx.

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116. THE SPREAD OF INDUSTRIALIZATION BEYOND BRITAIN (c.1850-1900)

By 1850, Britain had become the first industrialized country in the world, with over half of its people living in cities. It controlled ninety per cent of Europe's steam shipping along with half of the world's iron and two-thirds of its coal production. However, outside of Britain, industrial factories were few and far between. There were several reasons for this. For one thing, the competition of cheaper British goods drained the capital needed for investment in industry from other countries and toward Britain. Internal tolls and political disunity prevented the integration of national economies needed to industrialize. Coal and iron deposits were usually far from each other, making it hard to concentrate the resources needed for industrialization. Britain itself actively worked to keep its technical knowledge from leaking beyond its shores. Finally, there was widespread resistance to industrialization in other countries, as people were reluctant to give up their traditional ways, feared the loss of jobs to machines, and saw the pollution and squalor of Britain's cities at that time.

Being so far ahead of the rest of the world, Britain decided to hold a magnificent trade fair, The Great Exhibition, in 1851 to show off its technological achievements. Other countries also contributed exhibits, but Britain's were the centerpiece of the show. Among these was the exhibit hall itself, the Crystal Palace, a magnificent structure of iron and glass covering 19 acres and even enclosing the trees of Hyde P

ark. The Great Exhibition and Crystal Palace symbolized the completion of Britain's industrialization and the beginning of the spread of industry to other parts of Europe and the world. After 1850, the most spectacular industrial advances would take place in Western Europe, the United States, and Japan.

Despite the edge Britain was showing off in the Great Exhibition, there were five main factors pushing even harder for Western Europe and the United States to industrialize. First, British competition forced these countries to industrialize in order to survive. Secondly, British businesses found ready and cheaper opportunities for building railroads and industries in foreign countries, thus helping them industrialize. Along these lines,

Europe and America shared a common cultural heritage with Britain, including an aptitude for machines extending all the way back to the clocks and waterwheels of the Middle Ages. Along these lines, Britain was geographically close to the rest of Europe (and even the United States thanks to much faster steamships). Finally, constant contact with Britain meant that its knowledge could not be kept secret. Designs for steam engines and locomotives were bound to leak out, and they did with incredible impact. The first step most countries took to industrialize was to build railroads to link coal to iron deposits and factories to markets. Once a transportation system was in place, factory building and production could proceed.

Belgium was the first country after Britain to industrialize, largely because, being small and compact, its coal and iron deposits were near each other. Its government also established a national railroad in 1834 to tie the nation closer together. In France, as well, railroad construction, directed by Napoleon III and largely backed by British capital, led the way. By 1870, an extensive railway network radiated from Paris linking the agricultural south with the industrial centers in the north. Some said France did not experience an industrial *revolution* since it happened gradually and did not affect most Frenchmen who remained farmers. However, by 1900 France was a major industrial power following much the same pattern as other countries. Germany did not seriously start industrializing until after unification in 1871 when it could marshal all its resources in a concerted industrial effort. However, once unified, Germany saw a meteoric rise in its industrial might. Steel production doubled every decade from 1870 to 1900, passing even Great Britain in the 1890's. Its railroad mileage increased from 3500 in 1850 to 26,000 by 1900.

The United States saw even more dramatic industrial growth during this period because of its sheer size and plentiful resources. Railroads (also largely financed by British banks) had developed the interior east of the Mississippi by 1860. The completion of the first transcontinental railroad in 1869 symbolized the opening up of the vast interior west of the Mississippi, with its vast agricultural and mineral resources. Northern factories intensified production during the American Civil War of the 1860's and never let up. In 1870, Europe produced 60% of the world's manufactured goods.

By 1914, it had fallen to 40%, that drop being mainly caused by growing American industries.

One non-Western country, Japan, had also industrialized by 1900. Ironically, Japan had shut itself off from Western influences since the 1600's. But, in 1854 the United States forced Japan to trade with the West, and it decided to beat the West at its own game by industrializing. Few paid serious attention to this until 1903 when tiny Japan shocked the world by defeating Russia with its own largely mechanized forces. Japan had arrived as an industrial power, showing that the West's days as the undisputed masters of the globe were numbered.

Fun Facts and figures about Industrialization by 1850

The nineteenth century was the first century where large-scale statistical studies were carried out. Here are just a few of those statistics.

- From 1750 to 1830, textile production rose by a factor of 300-400 *times* in Britain.
- In 1850, London's coal consumption was greater than Prussia's coal production
- Similarly Britain's energy consumption was 155 times that of Russia

By comparison, the rest of Europe lagged far behind.

- France had 3 million textile workers in 1.5 million establishments.
- There were 6 tolls in the 37 mile stretch between Padua and Mantua, Italy
- A textile mill in Alsace sold its old machinery for scrap to another French company, which then installed it for continued use.

One way of viewing the overwhelming jump Britain had in industrializing is to think of a world map (above) where the size of countries is scaled to their coal production in 1850. On such a map, Britain, which produced two-thirds of the world's coal, would be twice as big as the rest of the world's countries combined:



The Crystal Palace & Great Exhibition of 1851



When the Great Exhibition was first announced, a contest was held to come up with an appropriately modern design of building to house it. However, none of the 240 entries was deemed suitable until a gardener, John Paxton, came up with the winning design: basically a giant greenhouse like the smaller ones he had built for his work.

Fun facts and figures about the Crystal Palace:

- It had 300,000 panes of glass, over 2000 iron girders, and 400 iron roof trusses.
- It was 1848 feet long, 456 feet wide, and 135 feet tall to clear the tops of the trees it would enclose. When sparrows became a nuisance, the Duke of Wellington suggested bringing in sparrow hawks.
- Its iron columns were set in place within 18 hours of casting in Birmingham.
- With no steam driven machinery to lift the girders, everything was done by horse power and a simple three legged hoist.
- It cost £150,000 (worth £12.6 million in 2010) to build and was finished in 17 weeks.
- The cast iron pillars were designed to handle surplus moisture from the trees' condensation
- The Crystal Palace contained the first public toilets (AKA "water closets" or "retiring rooms") that, for a penny, would get you a clean seat, towel, comb, and a shoeshine. Thus the old expression "spend a penny" was a polite way of saying going to the retiring room. The water closets earned 827,280 pennies.
- There were numerous fountains, with two jets spraying water to a height of 250 feet.
- The first two water towers built to power them collapsed from the weight of the water and were replaced by two even bigger ones.

Railroads offered special excursion rates to passengers from all over Britain, and clubs formed to take advantage of low rates.

There were 100,000 exhibits shown by 14,000 exhibitors, including printing presses, preserved pigs, locomotives, French perfumes, and a Prussian stove shaped like an armored knight. British exhibits included both old Medieval artifacts along with high tech locomotives, steam hammers, hydraulic presses, huge power looms, and engines to pull threshers.

There were glittery ornaments from the empire, such as furs, a fire engine, and a 20-man canoe from Canada. From India one could see a stuffed elephant, the Koh-i-noor diamond in a burglarproof contraption, and an official from the British East Indies Company explaining opium production to Queen Victoria, but probably not telling her it had addicted millions of Chinese.

From Europe there were largely luxury goods such as Belgian ruffles; French plates, perfume, carpets, Austrian beds and bookcases, and Spanish firearms. The U.S. showed a sewing machine and a McCormick reaper. The German industrial family, the Krupps, displayed a two-ton block of iron that crashed through the floor of the Crystal Palace, nearly killing several people.

Among the more interesting exhibits were a telegraph that let the Queen send a message to Edinburgh and an alarm bedstead that would hurl a sleeper into a cold bath. The inventor must have had teenage children.

Alarmists warned of anarchists who would assassinate Queen Victoria and Prince Albert and proclaim a Red Republic. Luckily there was no violence in the 23 weeks of the Exhibition, with only 12 pickpockets and 11 petty thieves removing small exhibits being caught. On a more optimistic note, the Crystal Palace inspired predictions that in the future, children would live as cucumbers under glass.

The British humor magazine, *Punch*, came up with the name Crystal Palace. It also showed satirical plans for a Crystal Tower to accompany it.

In 1854, the Crystal Palace was dismantled and rebuilt in Sydenham Hill, an affluent area of London. Unfortunately, it burned down in 1936.

Urban Renewal French style

In the 1850s, Napoleon III, emperor of France, put Baron Eugene von Haussman in charge of modern history's first urban renewal project in Paris. Such a project first required destroying 30,000 buildings, which naturally angered thousands of displaced Parisians who referred to Haussman as "Atilla the Expropriator." Haussman dictated a standard architectural style for the facades of new and surviving buildings to give an overall sense of unity to Paris. He also radically improved Paris' drainage and water supply, providing the city overall with much better hygiene.

Haussman laid down some 70 miles of new road and 400 miles of new pavement, replacing many of Paris' narrow streets with broad boulevards that Napoleon's opponents pointed out would be much harder to barricade during future revolutions. He also had half a million trees planted along the streets, making Paris a much more pleasing environment in which to live.

Napoleon III also built a new opera house (built 1862-75) that covered 120,000 square feet and had a stage that could hold 450 performers.

In 1855, Paris held its own International Exposition. Among its 24,000 exhibitors was the German industrial family, the Krupps, who this time displayed a five-ton block of iron that luckily didn't crash through any floors. So at the 1867 International Exposition in Paris, which had nearly 48,000 exhibitors, the Krupps tried their luck again with a forty-ton block of steel, with similarly unremarkable results. In 1914, the Krupps, then Germany's main arms and munitions manufacturer, would change their approach to damaging Paris by using massive artillery pieces to fire shells into the city from seventy miles away.

A Nation of "Blood and Iron"

If Bismarck dreamt of a strong Germany made of "blood and iron, the Krupp family largely made that dream come true. The Krupps owned a huge complex of factories in Essen, Germany (below) that, besides producing steel, was the primary supplier of arms and munitions to Germany through both world wars.

The conurbation of cities in the Ruhr district that grew up around Essen would contain 3.5 million people by 1910 with the Krupps lording over it as virtual princes. But then again, the superrich industrialists of the late nineteenth century were Europe's (and America's) new aristocracy. After World War II and the disarmament of Germany, the Krupps would hardly miss a beat, moving into the production of a new, more ominous type of product: kitchenware.

The down side of Germany's rapid industrial expansion was that it led to many of the same social problems and tensions experienced in Britain and other industrializing nations. Living conditions were so crowded that two workers would often share a single bed, one working during the day and sleeping at night, and the other following a reverse schedule. One German artist who especially dramatized the plight of the working poor was Kathe Kollwitz, whose sketch (above left) translates roughly as "the survivors of the war of wars." Bismarck's biggest fear was a socialist revolution bred by these conditions.

The Suez Canal

The idea of a direct waterway between the Mediterranean and India had long been around and tried several times: by ancient pharaohs, the Persian king Darius I, and Ptolemy II. Those canals connected the Nile delta to the Red Sea, but encountered various problems such as silting, the Red Sea receding, and the higher level of the Red Sea than the Nile, which would cause salt water to flow into the river.

The modern route, which involved a longer canal, avoids the above problems by connecting two bodies of salt water that are roughly the

same elevation. Work started in 1859 as a joint project between the Egyptians and French, led by the French engineer, Ferdinand de Lesseps. When he started the project, de Lesseps employed 40,000 Egyptian laborers (largely forced labor) to provide the muscle. By the end of the project, he had replaced 30,000 of them with a 10,000 horsepower steam shovel. Finally in 1869, after a decade of hard work, cost overruns, and protests from Britain about forced labor (which De Lesseps pointed out the British themselves had used when building a railroad in Egypt), the Canal was finished, joining the Mediterranean and Red Seas and cutting the trip from Europe to Asia by 4,400 miles.



The canal, originally 102 miles (164 km) long and 26 feet (8 meters) deep, has been gradually enlarged to accommodate the progressively larger ships being built. As of 2010 it was 120 miles (193 km) long and 79 feet (24 m) deep, roughly three times its original depth.

Chicago: the City of Big Shoulders and Balloon Frame Houses

In 1820 Chicago, the city of "Big Shoulders" didn't even exist as a village, let alone have shoulders. By the 1850s a new and more efficient style of house framing, called balloon framing (AKA *light wood*), was turning Chicago into the fastest growing city in America.

Balloon framing got its name because skeptics thought its use of thinner 2"x 4" studs made it as fragile as a balloon. Key to this new style was the Industrial Revolution that could mass-produce iron nails and standard sized lumber. Previously, iron nails were handmade and so expensive that there were laws against burning down one's house in order to retrieve the iron nails for a new home. Thus house construction required the much more labor intensive and excruciatingly slow *post and beam* framing that used hand-sawn wood joined together by means of mortises and

tenons, handmade interlocking dovetail joints, or wooden pegs (below left). Balloon framing cut building costs by 40%, largely because framing a house, which before required 20 men, now supposedly could be done by one man and a boy.



Even the Great Chicago fire (October 8, 1871) barely slowed Chicago's growth. Within a few years, most of the damage had been rebuilt and few traces of the fire remained.

By the 1870s, cast iron construction had created buildings 5-6 stories high, and in 1885, steel and a new invention, the elevator made possible the first skyscraper of 10 stories. By 1891, another skyscraper, 21 stories tall, had been built.

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116A ‘THE ONGOING CYCLE OF FOREIGN INVESTMENT AND SPREAD OF INDUSTRIALIZATION

Since Britain’s industrialization by the mid 1800s, there has been an ongoing cycle of foreign investment by industrial powers in the economies of developing nations that has spread industrialization across the globe. Very simply, as a nation would industrialize, it would experience a rise in the cost of labor and living. This would force it to raise the prices of its goods to keep up with the cost of production, making it less competitive in international markets and even at home. As their profit margins decline, businessmen start building industrial enterprises in non-industrial nations with cheap labor. While the industrialists’ profits rise, the new nation where they are investing becomes industrialized, starting the cycle all over again.

We can see three major waves of this cycle happening, although it has been a continuous process with occasional breaks (such as the two world wars) interrupting it. The first wave came after 1850, when industrialization spread to Western Europe, the United States, and Japan. The next wave came after World War II, at first rebuilding the war ravaged industries of Western Europe and Japan. Along with this came the development of the so-called “mini-dragons in East Asia (South Korea, Taiwan, Hong Kong, and Singapore). The early development by smaller states can be seen as analogous to the early development of the North Italian city-states in the High Middle Ages, while it took larger nation states longer to organize their resources.

The most recent, and still ongoing, wave since the early 1990s has seen the emergence of China and India as new industrial giants in the twenty-first century. Likewise, factories and jobs are being outsourced to South and South-East Asian nations such as Vietnam and Bangladesh.

117. THE QUICKENING PACE OF TECHNOLOGICAL CHANGE (c.1850-1900)

Throughout history, the slow pace of progress and the large gaps of time between new advances have generally made technological progress hard to perceive. However, since the mid-nineteenth century, one could hardly miss seeing the rapid evolution of technology at work. The key to this development was the fusion of science and technology in research laboratories resulting from three lines of development.

First of all, as the standard of living of the common people improved, they had money to buy goods. Sales and profits led to more production and jobs for more people, who also now had money to spend. This further improved the standard of living, leading to more sales, production, jobs, and so on, all of which generated the incentive to create new products to sell this growing consumer market.

The second and third lines of development were the parallel, but separate evolutions of science and technology. On the one hand, the Enlightenment spawned new discoveries and ideas in the fields of physics, biology, and chemistry. At the same time, Europeans' growing proficiency in machines produced the power loom, spinning jenny, steam engine, and locomotive in the late 1700s and early 1800s. However, until the 1800's, scientific and technological developments had rarely touched one another. But as technology became more sophisticated, it became increasingly obvious that further progress would depend on fusing it with the more abstract scientific knowledge that had been developing in the universities and labs.

Because of the more complex science and technology and the growing opportunities afforded by a growing consumer market, private companies and governments set up research laboratories where scientists could develop new inventions. No longer would technological progress rely on the random findings of brilliant but isolated inventors with little or no background in scientific knowledge. From this point on, science and technology were fused together into one of the most dynamic partnerships in history, triggering a cycle of new inventions generating more ideas and needs that led to more new inventions and so on. The result has been an incredible outpouring of new inventions and discoveries at an ever-accelerating pace, which continues to the present day. All this progress bred a new optimism and faith in the ability of science and technology to solve our problems. Some historians have even dubbed the period from 1870 to 1914 as the Age of Progress.

One could hardly give an exhaustive list of the new inventions and discoveries of the later 1800's, but just looking at some of the highlights shows the dramatic technological and scientific progress of this period. In transportation, we have already seen the impact of the railroads. Other developments further accelerated the pace at which the planet was being tied together. Steam powered ships reduced travel time at sea much as the steam locomotives did on land since ships were no longer dependent on tail winds for smooth sailing. By 1900, the automobile, powered by the internal combustion engine, was ushering in an age of fast personal travel that took individuals wherever and whenever they wanted independently of train schedules. In 1903, the internal combustion engine also allowed human beings to achieve their dream of powered flight. The sky was now the limit, and even that would not hold up, as the latter twentieth century would see flights to the moon and beyond.

Developments in communications were even more startling, led by the telegraph, which allowed messages to travel at the speed of electricity rather than the speed of a horse. When transoceanic cables were laid, the time it took to get a message from one side of the planet to the other was literally reduced from months to minutes. The invention of the telephone in 1876 made such communication more personal and accessible to the individual. Twenty years later, Marconi's invention of the wireless radio allowed a message to be broadcast to millions of people simultaneously without having to be directly linked by wire to each receiver. The world was effectively becoming a much smaller place.

Fuelling these new developments were new sources of energy. Petroleum powered the automobile, while natural gas was used extensively for lighting street lamps. Possibly most important of all was electricity, which could be transmitted over long distances and whose voltage could be adapted for use by small household appliances. Among these was Thomas Edison's lightbulb, providing homes with cheaper, brighter, and more constant light than the candle ever could provide.

Medical advances may have had the most significant impact of all on people's lives in the 1800's. Possibly the greatest single breakthrough in medical history was the nearly simultaneous discovery by the Frenchman Louis Pasteur and the Prussian Robert Koch of germ theory, the idea that microbes or germs cause disease. This led to advances in three ways. First, it gave doctors a direction in which to focus their searches for the

causes of various diseases. One by one, vaccines and treatments were found for such deadly sicknesses as malaria, tuberculosis, diphtheria, cholera, bubonic plague, and typhoid.

Secondly, it spawned a public health movement that provided covered sewers, clean water, and an overall more sanitary urban environment. Finally, it led to aseptic procedure, where surgeons practiced their art in a sterile environment, dramatically reducing the chances of a patient contracting further infection on the operating table. Add to this the use of ether as an anesthetic since the 1840's and transfusions and blood typing to compensate for blood loss during surgery, and patients had an excellent chance of survival. No wonder the average life expectancy rose by an unprecedented 15 years or more during the nineteenth century.

Agricultural production skyrocketed thanks to mechanical reapers and combines, steam tractors, hybrid crop strains, and chemical fertilizers. Growing knowledge in chemistry led to a thriving chemical industry, which produced soaps, alkalis, bleaches, dyes, vegetable oils, and a vast number of other products. New building materials were used. The formula for concrete, lost since the time of the Roman Empire, was rediscovered, while the Bessemer Process, which worked iron at much higher temperatures, leading to the production of high-grade steel. Together they made possible the architectural monument that best symbolized the modern age, the skyscraper. In addition, there were numerous other inventions to make life easier or more interesting: refrigeration, cameras, movies, and record players, to name a few.

This rapid and wide range of technological advances had profound economic, political, and even philosophical effects on Western Civilization and eventually the entire human race. Economically, we have become globally interdependent, since industries rely heavily on raw materials found only outside of their countries' borders while less industrialized nations rely on the goods those industrialized nations produce. Global interdependence in the 1800's led to a common worldwide gold standard to smooth over the complications of international trade. Although that gold standard has since been abandoned, the various national economies still operate as one integrated global economy. This has certain dangers as well, since the collapse of one nation's economy can trigger the collapse of others across the globe. The best-known example of this is the Great Depression of the 1930's, starting with the collapse of the United States' economy and then spreading worldwide.

The need for an integrated national economy with common railroad gauges and safety procedures and the elimination of internal tolls and other hindrances to trade has helped create the modern industrial state. New technologies, such as sophisticated and expensive modern weaponry that only governments can afford, faster communication to keep closer track of its citizens, and faster transport for moving its forces quickly to quell any civil disturbances have radically increased the modern industrial state's power over its population. Public education has been another outgrowth of the Industrial Revolution, teaching a nation's population a common body of knowledge and values, such as patriotism and living precisely according to the clock.

The Industrial Revolution has spawned new beliefs and weakened old ones. Longer life spans and the enticements of a higher standard of living have reduced the proportion of people deeply involved in religion. Instead, many people have chosen a more materialistic way of life. In fact, the philosophies of Materialism and Positivism emerged in the late 1800's, showing a growing faith in the potentials and values of material prosperity and modern science respectively. At the same time, Darwin's theory of evolution has emerged, seen by many as a threat to religion. Another powerful idea to emerge was Marxism, an economic and political philosophy that became a major force in the twentieth century.

Technology is certainly a double edged sword that has also created new problems such as pollution, overpopulation, the greenhouse effect, depletion of the ozone layer, and the threat of extinction from nuclear war. It has also been used to give us prosperity our ancestors could never have dreamed about. Whether it is ultimately used for our benefit or destruction is up to us and remains in the balance.

Car Bombs and Stanley Steamers

Riding in a "car bomb". To appreciate what a radical advance in technology the internal combustion engine and automobile were, we need to keep in mind that any such car is in essence an ongoing series of highly controlled explosions powered by a highly volatile fuel with the potential of turning the vehicle into a bomb in case of an accident. As a result, many people feared riding in the first automobiles, or the "internal explosion engine," as producers of the Stanley Steamer put it. That's the bad news. The good news is that the explosions very rarely get out of control. Also, that volatile fuel is a lot

lighter to carry around than a big boiler full of water and a load of coal to heat it to boiling point to produce steam.

Stanley Steamers. However, to be fair, very reliable steam powered cars, known as Stanley Steamers, were produced by the Stanley Motor Carriage Company from 1902-24. Its founders, twins Francis and Freelan Stanley, produced their first car (AKA the Locomobile) in 1897. Over the next two years, they produced and sold over 200 cars, more than any other U.S. carmaker. The Stanley Steamer used a vaporizing gasoline (later, kerosene) burner beneath a vertical fire-tube boiler, mounted under the seat. To keep the boiler light, it was reinforced by piano wire. It was actually quite safe and there are no documented boiler explosions. Greater power and the cheaper production costs of the internal combustion engine after 1910 made the Stanley Steamer obsolete.

There was even a steam-powered airplane that flew in 1933. It burned fuel oil, which was cheaper and less volatile than gasoline and was so quiet that you could hear the pilot yelling down to the crowd. Other reputed advantages over the internal combustion engine were it required less maintenance, was less likely to experience engine failure, required lower temperatures to heat the boiler, and was more efficient at low engine speeds and at higher altitudes where colder temperatures aided condensation to recapture water for the boiler.

The Panama Canal

Even more time-consuming than sailing around Africa was the trip around South America between the Atlantic and Pacific Oceans. Luckily, the Isthmus of Panama offered a relatively short route for digging a canal to avoid that long journey.

The Panama Canal was built in two stages. Between 1881 and 1888 it was a French project led by Ferdinand de Lesseps. Unfortunately, over 20,000 workers lost their lives to disease (especially malaria) and disasters (such as landslides) and construction was halted in 1888.

In 1904 the Americans picked up the banner, seeing the canal as vital to their interests. Since Columbia demanded a high price to let us build the canal through Panama (which it controlled at the time), the U.S. staged a revolution, getting a much better deal from a small and weak Panama

that owed its independence to the Yankees. Thanks to improvements in technology and the introduction of quinine against malaria, the canal was finished in 1914 at a cost of \$352 million.

Fun facts about the canal. At 51 miles in length, the Panama Canal cuts 8,000 miles off the trip from the Atlantic to the Pacific. The Pacific has a tidal range of 20' versus only 1' for the Atlantic, thus making it dangerous to navigate. Therefore they decided to build a series of 6 Locks, taking ships 85' above sea level but also saving 10 million cubic meters of excavation.

As you go from the Atlantic side to the Pacific side you're actually going from West to East. If you don't believe me, look at a map.

The water that used to raise and lower the Canal locks is fed by gravity from nearby Gatun Lake.

As ships have gotten larger, this has put a strain on the ability of the canal to accommodate them. Above, the USS Missouri barely fit through in 1945. It wouldn't even be close for aircraft carriers.

A Shrinking World

The telegraph represented a quantum leap in the speed at which news was transmitted. And it didn't stop at shorelines. The first telegraph cables laid under and across the English Channel (1850) and the Atlantic (1866) allowed news to be transmitted almost instantaneously across the globe, drastically shrinking peoples' perception of the size of the planet overnight. Promoters even called the Tran-Atlantic cable the eighth wonder of the world.

But laying the cable was no easy task. Cable ships laid out several thousand miles of steel-clad cable from coils below deck. Cable in shallower waters close to shore had extra armor to protect it from the greater potential damage caused by rocks, ships, and storms. Cable laid in deeper water was lighter, but still had to be able to support three miles of cable while being laid.

The long road to the telephone. While we tend to give one person credit for an invention, such as Alexander Graham Bell with the telephone, more often than not, such inventions are the result of the work of a number of people over time whose contributions are put together and synthesized into a final invention. Such was the case with the telephone.

I could start by telling how the heavy plow in the Middle Ages revolutionized agriculture, making the rise of towns in Western Europe possible, which helped kings build nation states that needed lots of money for their armies, triggering a mining boom in Germany that led to the problem not being able to pump water vertically more than 32 feet and Toricelli's experiment that gave us the invention of the barometer, which, when spun around generated an electrical current, leading to all sorts of experiments and traveling dog-and-pony shows using electricity. And I could tell you about Ben Franklin's near fatal experiments with flying kites in electrical storms) that saved the lives of billions of bell ringers and also about his attempts to electrocute a turkey (as a more humane way of killing it). But I won't.

Let's start in 1820 with the Danish scientist, H. C. Orsted, who was ending a lecture with an experiment to show there was no connection between electricity and magnetism by showing an electrical current passing down a wire wouldn't affect a nearby compass.

He was wrong, leading him to realize that an electric current had a magnetic field around it.

Five years later, the Englishman, William Sturgeon, was winding live wire around an iron bar, which created an electro-magnet. Michael Faraday reversed the process by spinning a magnet inside metal coil, electrified it. In 1857, the German Hermann von Helmholtz used an electro-magnet to attract a tuning fork, which vibrated with sound.

Finally, in 1876, Alexander Graham Bell put all these together with an invention where one talked into a metal membrane, causing a vibration that in turn created a fluctuation in an electro-magnetic coil that was passed by wire to another electro-magnet, which fluctuated in the same way, and was passed onto another metal membrane that reproduced the original sound. In other words, he had invented the telephone.

Nearly a century later in 1973, Dr. Martin Cooper made the first cell phone call to rival inventor, Joel Engel to tell him he had won the race to invent the cell phone.

Guglielmo Marconi and wireless telegraphy. Despite the seemingly miraculous advances in communications of the 1800s, they were all tied down to wires, thus limiting direct communication to two people, one at each end of the wire. In 1897, all that changed when the Italian inventor, Guglielmo Marconi, demonstrated his wireless radio telegraph in Britain over progressively longer distances. In 1901 he made the first transatlantic broadcast.

Marconi's system was first useful for communicating with ships at sea. It was radio distress signals that allowed other ships to come to the rescue of the Titanic's passengers in 1912. An early commercial use of the radio was a news service that would broadcast news to subscribing ships at sea.

Radio's real future lay in the coming century, when more powerful transmitters could broadcast messages, whether commercial, musical, or political, to millions of people simultaneously. Hitler would be among the first political leaders who would exploit this mass media, albeit for sinister purposes.

Among Marconi's other discoveries was that radio broadcasts travel farther at night than during the day.

Power and Light to the People



Edison's light bulb

The dark side of light. Until Edison's invention of the light bulb in 1878 made artificial lighting cheap and affordable, people generally were awake with the sun and slept when it got dark. Dinner parties were held during the full moon so

guests could find their way home. Abe Lincoln even won a court case by pointing out that the star witness' positive identification of the defendant as guilty of a nighttime crime was not possible because it took place when there was no moon.

The light bulb changed all that, causing modern lifestyles to diverge greatly from this pattern, thus contributing to sleep deprivation, various sleep disorders, and deaths from playing video games all night.

But for all that to happen, we needed electricity.

The first public power plant opened in 1881 in Surrey, UK, being powered by a nearby waterwheel. It ran several streetlights and local shops. The next year, Edison opened the first steam-powered power plant in London. However, these first generators were DC (direct current), which runs a higher risk of electrocution if not heavily insulated. Fortunately, Nicholas Tesla, having a better theoretical understanding of electricity, developed a system for alternating current (AC) that was safer to transmit over long distances and could allow the transformation between voltage levels in different parts of an electrical system. In 1891, using Tesla's patents for alternating current, Westinghouse opened a plant providing electricity to a mine in Telluride, Colorado over a 2.5-mile power line.

How a power plant works. It takes several steps to generate and deliver electricity to homes and factories. In terms of generating electricity, we still live very much in the age of steam. Even nuclear reactors heat water to produce steam and drive giant electro-magnetic dynamos. That's the easy part.

Then the electricity has to be stepped up by transformers to increase the voltage. High-tension wires then carry power to customers. However, to keep toasters and light bulbs from being overloaded by the current and exploding, step down transformers cut the voltage to levels safe for home and factory machines. Each country or region, such as the EU, has its own standard voltage and corresponding type of plug to which all appliances must conform before plugging in to the wall.

Safety tip: Don't take your hair drier to Europe if you want it to survive the trip. Even converters that adapt American 110-volt appliances to European 220-volt outlets have a tendency to overheat hair driers.

A Revolution in Medicine



A depiction of London's miasmatic air during the cholera outbreak in 1851

Miasmatic theory was a popular theory on the cause of many diseases, such as cholera, chlamydia and the Black Death, before being supplanted by germ theory. It held that diseases were the result of bad air (from the Greek word *miasma*) and could often be identified by foul smells, such as one encountered in cities and around swamps. Although not quite right, miasma theory did lead to efforts to clean up foul smelling areas, thus at times reducing incidence of a disease. For example, Florence Nightingale, as an adherent of miasmatic theory, concentrated on cleaning the field hospitals during the Crimean War, which did save untold numbers of lives.

However, belief in miasmatic theory could also prolong an outbreak of disease, such as during the cholera outbreak in London in 1851, since it focused attention on London's air (as represented in the painting below), instead of its water.

John Snow's cholera map. During the 1851 outbreak of cholera in London, the scientist, John Snow came to the conclusion that it was the water, not miasma, that was the cause of the disease. Consequently, he made a map, marking where the heaviest concentrations of outbreak occurred. When he found that they clustered around certain wells, he checked their water quality and found a common bacterium that he correctly surmised was the cause of cholera.

Thanks to the work of people like Snow and Edwin Chadwick, the Public Health Act was passed in 1848, despite opposition from those who believed so much in *laissez faire* and the principle of government staying out of people's affairs.

Ignaz Semmelweis (1818-65), a Hungarian doctor working in Vienna, was another one of the first to draw the connection between hygiene and

patient survival. He noticed that the mortality of young mothers and newborns was much lower at an institution where midwives in training were taught to wash their hands than at a teaching hospital where medical students didn't wash their hands. Expectant mothers already understood there was a huge qualitative difference between the two institutions, begging to be admitted to the midwives' institution rather than the disease-ridden hospital. After observing this, Semmelweis implemented more hygienic practices in local hospitals in 1847, a movement that would spread and become a crucial part of modern medicine as well as public and private health practices.

Robert Koch (1843-1910), along with Louis Pasteur, is given credit for coming up with germ theory. Although just a country doctor, he used his limited resources to design research techniques that virtually invented the science of microbiology. Using these techniques, Koch isolated and identified the bacilli for anthrax (1877) and tuberculosis (1883), the latter accomplishment earning him the Nobel Prize in 1905.

Using his methods, Koch's students would later isolate and identify the organisms causing diphtheria, typhoid, pneumonia, gonorrhea, cerebrospinal meningitis, leprosy, bubonic plague, tetanus, and syphilis, along with a number of others.

Louis Pasteur's sheep. In 1881, building on Koch's work and to test his theory that vaccinating a subject with a mild or dead variety of a disease would trigger production of antibodies that would protect the subject from the more deadly disease itself, Louis Pasteur injected 25 sheep with such a vaccine for anthrax. He then injected the actual disease into those sheep and 25 other sheep that had not been vaccinated. As he predicted, all 25 unvaccinated sheep died while all 25 vaccinated sheep stayed in perfect health.

Entertaining the Masses

Along with being a time of life-saving and life-improving advances, the late 1800s also saw new technologies to entertain people in their spare time: cameras, movies, phonographs, and, later on, talking movies. In photography, the oldest surviving photograph was Nicéphore Niépce's "View from his Window at Gras" (1826), which was obtained by exposing a pewter plate for

eight hours. As a result, no people or other moving objects appear in it.

In 1837, Louis J.M. Daguerre invented a more practical process that only required 10-15 minutes of exposure, while by the American Civil War, exposure time was down to 10-15 seconds. This still forced subjects to maintain the stiff poses we associate with photos from back then. By 1900, the camera was cheap enough for much of the public to buy, so anyone could document their own family histories, much as affordable video cameras do for us now.

One thing the camera provided was more realistic documentation of historical events, such as Matthew Brady's photographs of dead soldiers after battles in the American Civil War, although some of them were live soldiers posing for the photos. Even so, such stark realism made it harder to gloss over the more unpleasant aspects of civilization, such as war and child labor. By the same token, the camera made it less imperative for artists to concentrate on trying to achieve photographic realism in their paintings, opening the way for the first revolution in painting since the Renaissance: Impressionism.

Other innovations followed toward the end of the century. The stereograph used two pictures of the same object taken from slightly different perspectives to give a three dimensional effect. The same principle is used in producing 3-D movies today.

When a process was invented for taking pictures in quick succession, movies were born. The first movies, viewed at nickelodeons (for a nickel), were of such innocuous things as people riding bicycles or doing cartwheels. Soon more serious movies were being made with plots and special effects, although they were silent, forcing actors to use exaggerated gestures, much like Greek drama had.

Recorded music. Along with the revolution in chemically and mechanically reproducing images came a parallel revolution in reproducing sound. For the first time, people could listen to music without having to make it themselves or listen to it live. The gramophone, as it was then called, was the progenitor of all our modern stereos, including the personal stereo. What was once an active and participatory activity became increasingly passive and solitary, often done in total isolation from everyone else.

Below is the text describing this product:

“Home is the place for your boys and girls to have a good time; amuse them and give them what they call fun and they will not want to go out evenings. A talking machine is one of the wonders of the world; Mr. Berliner, of telephone fame, has by his recent invention brought this marvellous machine to a point where it may be purchased by every household. It is simple in construction, anybody can use it and it does not get out of order. It sings solos, duets, and quartette music; it reproduces exactly the cornet, clarinet, the banjo and in fact every instrument including an orchestra or brass band. The talking and singing records are upon indestructible disks, which are easily handled and do not wear out. We have an endless variety of these disks, including practically every song you are acquainted with.

The accompanying illustration shows exactly how the machine looks and how it is operated and the pleasure it is giving the people who are hearing it. \$10.00 purchases this marvel of the ages, including two records. Extra records 60 cents each, \$6.00 per dozen.”

Better Living Through Chemistry

Better living through chemistry. The periodic table of the elements is credited to the Russian chemist, Dimitri Mendeleev. After Antoine Lavoisier repeated Joseph Priestly’s experiment of decomposing water (supposedly an element) into two gases, which he named hydrogen and oxygen, and then reforming them into water, the whole question arose about what were the elements if Aristotle’s theory of four elements (earth, air, fire, and water) was wrong.

In the course of the nineteenth century, new discoveries largely added to the confusion, with 56 known elements in 1863 and a new one being discovered nearly every year. In 1869, Mendeleev published his periodic table of the elements arranging the elements according to atomic weight and creating new rows when elements started repeating the properties of lighter elements. He even predicted the existence, weight and properties of several new elements that were soon discovered.

The next year, the German, Lothar Meyer published a nearly identical table, but Mendeleev is given the lion’s share of credit for the periodic table. Thanks to Mendeleev’s synthesis, chemists could now methodically combine chemicals to produce new ones with predictable properties. Over the next century, the burgeoning chemical industry would create some

100,000 new chemicals, such as soaps, bleaches, and dyes, and become an integral part of modern civilization.

Over, Under, Sideways, & Down:

The 3-D City

Pre-industrial cities, built on a horizontal two-dimensional plane, were relatively small in space, making it possible to move relatively quickly from one end of the city to the other. Otherwise, the city could not operate as an integrated unit and would break down into quasi-independent neighborhoods, which may have happened in some of the bigger cities, like ancient Rome, although a waterway like the Tiber River might alleviate some of this.

However, modern cities, in some cases having over a million people, could not function merely on two dimensions. They would either take up too much space or be intolerably congested. The rapidly growing industrial cities of the late 1800s had to operate on three dimensions to be functional, and to do that they needed new and stronger building materials. Along came steel and concrete.

Steel was the result of the Bessemer Process, developed by Henry Bessemer in 1856, which used forced air to create much hotter temperatures and burn off more impurities from molten iron, producing cheap steel which was stronger, lighter, and more flexible than iron. . In 1850, Britain was producing 60,000 tons of iron per year. By 1870, thanks to the Bessemer Process, Britain was producing one ton of steel every minute.

While masonry could create 300-foot spans for bridges, and iron could double that, steel made possible spans of over 1700 feet. The Golden Gate Bridge, built between 1933 and 1937, was the world’s longest suspension bridge at the time. The steel towers the cables are suspended from are 4200 feet apart and rise to a height of 746 feet. Among other things:

- Its two cables contain 80,000 miles of steel wire, enough to circle the equator three times.
- The concrete poured to anchor the bridge could pave a five foot wide sidewalk from San Francisco to New York City.

Steel made possible a whole new type of building, the skyscraper, and that, by maximizing usable

space on a vertical level so that many times more people could occupy the same horizontal space, made possible the modern city. The skyscraper made the city three-dimensional.

However, few, if any, people wanted or were capable of spending all day getting out of their buildings from eighty floors up or climbing sixty flights of stairs to get to their offices. So, for the skyscraper to be practical, one more invention was needed: the elevator.

The first commercial elevator for moving freight was installed by the Otis Elevator Company in 1857 at the E.V. Haughwout and Company department store in New York City. It rose at a speed of 40 feet per minute (0.2 meters per second). Two years later came the first steam powered elevators which were considered slow and cumbersome. However, by the late 1860s, architects and builders realized elevators could make the upper floors of a building valuable, instead of wasted, real estate. In 1870, the first elevator for customers, initially known as the "ascending room," was installed at Lord and Taylor's in New York City, reportedly carrying 10,000 people up and down to the fifth floor in three days. It was such a popular ride that a second elevator was installed in 1874.

In the 1870s came hydraulic elevators, using water pressure from city water mains instead of more expensive steam power. The car sat on top of a piston that rode the cylinder to a height of 111 feet at a speed of 600 to 800 feet per minute (3 to 4 meters per second). The first electric elevator, using an electric motor adapted from streetcars, was installed in Baltimore in 1887. The first moving stairway, with the patented trademark of Escalator, was also installed by Otis in Yonkers, New York in 1898 and moved to France for the Paris Exhibition of 1900.

However, the real breakthrough for the elevator was the gearless traction elevator, which overcame the 300-foot (90 meters) limit of older designs. It basically resembled a pulley lowering a bucket into a well, using a counterweight along with an electric controller and a grooved sheave over which the elevator's ropes looped. The first of these were installed in 1903 in New York City's Beaver Building and Chicago's Majestic Building. Now the skyscraper could really take off.

Thinking and operating in three dimensions led to two other developments that made the modern city possible and practical. One was the subway.

At ground level there was way too much congestion for one to easily move from one end of the city to another. London was the first with the answer: dig a trench through the city, lay tracks in it, and cover it up. Thus mass transit subways could rapidly take people from one end of the city to another while people at street level above would be undisturbed in their daily lives and even unaware of the high-speed transit going on beneath them.

Three dimensions also made possible another vital aspect of the modern city: infrastructure. All the water pipes, sewers, power lines, phone lines, and gas lines needed to keep the city functioning had to go somewhere, and that was down under the streets where they wouldn't disturb people and people wouldn't disturb them.

Of course, subways and other infrastructure needed something strong to support them so the city above didn't cave in. That brings us to the other building material of the modern city, concrete, which was actually a rediscovery of a Roman invention. Concrete actually does not dry, but is a chemical reaction that is 99.7% set after three days, although it takes seven years for it to set 100%. Being a chemical reaction means that concrete can even set under water, thus making possible the construction of bridge abutments and modern harbors.

To that end, steel and concrete together provided the basis for strong bridges, pavement, and support columns in buildings: reinforced concrete, which consists of steel in the form of bars or a mesh with concrete poured over and around it. The concrete provides strength and covers and entire area with a smooth surface, but is brittle and can break under extreme stress. Steel, while also being strong, gives elasticity to the structure so it won't crumble under stress.

The World's Tallest

Much like medieval towns boasting of the largest cathedral or clock tower, modern cities have vied for the honor of having the tallest skyscraper. Chicago's Masonic Temple which, at 20 stories and 302 feet, was the tallest building in the world from 1892-6 and probably until 1898 since it had the highest "occupied" floor. Discrepancies in claims typically hinged on whether one counted spires and towers or only occupied floors to determine height.

The Park Row Building in New York City became the tallest building in the world in 1899 with 30 floors standing at 338 feet not counting the towers and 391 feet counting them.

By 1908, the Singer Building (New York City) had surpassed the Park Row with 47 floors and an altitude of either 612 feet (counting the towers) or 391 feet (not counting them).

However, the following year the Metropolitan Life Building (New York City), seized the title, have 51 floors and a height of 700 feet not counting the towers and 391 feet counting them.

In 1913 the Woolworth Building in New York City, took the title of the tallest building in the world standing at 750/792 feet with 55 floors (25 in the tower). The Woolworth Building kept the title for 17 years until 1930 when the Chrysler Building (New York City) topped it at 1,046 feet and 77 stories.

But that record lasted only one year until 1931 when the Empire State Building passed the Chrysler Building at 1,250 feet and 102 stories. Serving its inhabitants were 58 Otis Signal Control electric traction elevators.

Not until 1972, did the Empire State Building and New York relinquish the title to Chicago and the Sears (now Willis) Tower, which has 108 stories and is 1451 feet high.

Since then, the U.S. has surrendered the title to other countries. First came the twin Petronas Towers in Kuala Lumpur, Malaysia, completed in 1998 and standing at 1483 feet.

In 2004, the Taipei 101 building became the tallest building in the world at a height of 509 meters (1670 ft.), surpassing the Petronas Towers by 188 feet.

In 2010 the Burj Khalifa in Dubai, United Arab Emirates, opened and currently stands as the tallest building in the world at a height of 828 meters (2717 ft). With 160 stories, it far outdistances its nearest rival, the Willis (Sears) Tower with a mere 108. Its elevators travel 64 km/h (40 mph). Unfortunately, its huge cost in the midst of the financial crisis of 2007-10 left Dubai mired in debt, forcing it to ask its oil-rich neighbor, Abu Dhabi, for billions to bail it out. Nearly a year after its opening, 825 of the building's 900 apartments remained empty.

Burj Khalifa's designers, Skidmore, Owings and Merrill, also designed the Willis Tower, and based the Burj Khalifa's design on Frank Lloyd Wright's plan in 1956 for The Illinois, what would have been a mile high skyscraper with 528 stories. As far as we know, it was never built. Neither was the Chicago Spire (AKA the Fordham Spire) set to be the tallest building in North America at 2000 feet. Unfortunately, the Recession of 2008 halted construction and the project was legally defunct in 2010.

In 2007, Japan came up with its own plan for the world's tallest building, the X-Seed 4000 (top), which should reach 13,123 feet, nearly 700 feet taller than Mt. Fuji, have 800 floors and house 500,000 to a million people.

“Unlike conventional skyscrapers, the X-Seed 4000 would be required to actively protect its occupants from considerable air pressure gradations and weather fluctuations along its massive elevation. Its design calls for the use of solar power to maintain internal environmental conditions.”

Estimated cost: \$300-900 billion...if and when it gets built.

The Eiffel Tower

If anything symbolized the spirit of progress in the late nineteenth century, it was the Eiffel Tower, which was originally to be a temporary monument for the Paris Exposition of 1889 commemorating the centennial of the French Revolution. Although Parisians ridiculed it as an ugly monstrosity when it was built, they were so outraged when it was to be torn down that it was left alone. Now it serves as the primary icon representing Paris.

It took only 300 men only three months to build the tower, joining together its 18,038 pieces of puddled iron (a very pure form of iron) with two and a half million rivets. Incredibly, thanks to stringent safety precautions, only one man was killed in the exceedingly dangerous construction of the tower.

Impressionism: a New Revolution in Art

Impressionism, much like the art of the Italian Renaissance, approached painting in a whole new and revolutionary way. While the Renaissance art looked at the world through the lens of secular humanism, as opposed to religion, Impressionism viewed it through the lens of pure light and color without intellectualizing what one was looking at as a flower, a door, or whatever. This is much how a newborn sees the world

without any intellectual preconceptions or even language to describe what is seen. Only gradually does a baby learn to isolate certain impressions and see them collectively as a door that it can manipulate to get to the outside world.

Learning to see and paint this way first involved the Impressionists “unlearning” or blocking out all they had learned about trees, flowers, etc. and viewing the world as a bunch of light impressions that, when put down on canvas, made a painting of what we would describe as “trees”, “flowers”, and so on.

Naturally, the Impressionists met with a lot of scorn and resistance to this new way of painting. It started with the *Académie des Beaux-Arts*, an outgrowth of the *Académie de peinture et de sculpture*, founded in 1648, which every year or two put on the Paris Salon, the only public art exhibit in Paris and thus the only chance for unknown artists to become known. Artists would submit their work to the Academy in the hopes of being chosen for display. Unfortunately, the jurors were very conservative in their tastes, thinking only paintings with classical or historical themes were worthy to be shown.

In 1863, when the Academy rejected 3,000 of 5,000 paintings as a “serious danger for society”, the public was outraged, so Napoleon III had a separate art show, the Salon of Refused Paintings, in a separate wing of the Louvre. It was a great public success and is seen as the start of modern art. Probably the most well-known and notorious “refused” painting shown was *Le Dejeuner Sur L’Herbe (the Picnic)* by Edouard Manet (1832-83). What made it so scandalous was its matter-of-fact nudity in a contemporary setting where the model looked the viewer in the eye without a shred of shame or stitch of clothing.

Meanwhile, at the “respectable” salon, Cabanel’s *The Birth of Venus*, a much more provocative painting (except for the eye contact), became the hit of the show and was bought by Napoleon III for his private collection. I guess the difference between art and pornography then was that art had fat little babies with wings flying around the subject to make you feel like you’re in ancient Greece.

Two years later at the Salon Manet displayed *Olympia*. This portrait of a prostitute modeled after Titian’s famous *Odalisque*, raised a veritable howl of protest and criticism because it

wasn’t of a Greek goddess and the subject dared to look the viewer in the eye. Stories abounded of men going mad from viewing it and biting strangers in the street, while pregnant women were warned not to look at it because it might cause a miscarriage.



Impressionism and the critics. The term “Impressionism” comes from Monet’s *Impression: Sunrise* (above) displayed in 1874 at the Impressionists’ first independent show. While cartoonists lampooned it as a weapon used by the Turks to scare enemies in battle, the critics themselves were more blunt and to the point, one of them saying it looked like the artists had fired paint from a shotgun.

This is how another critic described it: *"The rue le Peletier is a road of disasters. After the fire at the Opera, there is now yet another disaster there. An exhibition has just been opened at Durand-Ruel, which allegedly contains paintings. I enter and my horrified eyes behold something terrible. Five or six lunatics, among them a woman, have joined together and exhibited their works. I have seen people rock with laughter in front of these pictures, but my heart bled when I saw them. These would-be artists call themselves revolutionaries, "Impressionists". They take a piece of canvas, color and brush, daub a few patches of paint at random, and sign the whole thing with their name. It is a delusion of the same kind as if the inmates of Bedlam picked up stones from the wayside and imagined diamonds."*

Manet once got so upset with an art critic that he challenged him to a duel. The weapon of choice was sabers, something neither of them had any experience using. After hacking away for some time, Manet slightly wounded his opponent, which Manet felt badly about. So the two men patched up their quarrel, and Manet, for some reason, gave his shoes to the art critic.

Claude Monet (1840-1926) is probably the best known of the Impressionists. Like Manet and the others, it took nearly 20 years for Monet’s art to be accepted by the critics and public. During that time, he suffered horrible poverty

for his art, begging collectors to take his paintings at any price. By the same token, he once burned 200 of his paintings rather than have creditors seize them.

Monet once said he wished he'd been born blind and then gained his sight so he could truly paint what he saw without any preconceptions. This largely summarizes the essence of Impressionism: trying to capture the pure sensory perception of a scene without diluting it with one's own intellectual interpretations. As a fellow artist, Cezanne, put it: "Monet is only an eye, but what an eye"

For *Women in the Garden*, (1866-7), which is eight feet high, Monet dug a trench to stabilize the canvas and had pulleys to raise and lower it so he could more easily paint the different parts.

In another painting, *Camille Monet on Her Deathbed*, Monet was so struck by his wife's changing pallor as she lay dying that he did a painting of her. Some might call it morbid, but others might see it as a final tribute to this woman whose image graced so many of Monet's canvases.

Among Monet's more famous paintings were series he did of haystacks, Rouen cathedral, a Japanese footbridge and water lilies in efforts to capture the varying effects of light on them at different times of day and year.

Auguste Renoir (1841-1919) is best remembered for his paintings of beautiful women, flowers, children, and outdoor scenes full of people enjoying themselves, making him possibly the most popular of the Impressionist painters. As someone once said of him, "*Renoir is perhaps the only painter who never produced a sad painting.*" Or as Renoir once put it, "*A picture must be an amiable thing, joyous and pretty--yes pretty! There are enough troublesome things in life without inventing others.*"

In the 1880s, Renoir, dissatisfied with what he thought was the insubstantial nature of Impressionism, turned to more classically inspired subjects and techniques.

Edgar Degas (1834-1917) was another "charter member" of the Impressionists. However, unlike the others, he had no interest in landscapes or the changing patterns of light, detested working outside and once said "Art is not a sport". Degas is best remembered for his paintings of ballerinas and humans in arrested motion. He

would have his models move around a room and then paint them from memory. He also used oblique angles, such as from above the stage as if in a theater box, to give different effects.

Berthe Morisot and Mary Cassatt, despite their gender, were considered full "charter members" of the movement. In fact, for the first twenty years they were considerably more successful in selling their paintings than were their male counterparts. However, they still operated under the same restrictions as previous women artists: being limited to painting women, children and only male relatives.

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117A. A BRIEF HISTORY OF SURGERY

Until the 19th century, surgery remained a brutal craft often left to barbers simply because they had the cutting tools. The lack of anything to kill the pain of surgery, along with continuing reservations against dissection, created a vicious cycle where there were few people willing to undergo surgery, which led to limited research and knowledge, further discouraging people from undergoing surgery and so on. Thus surgery progressed very little through the centuries. All that changed in the 19th century.

It started with the discovery of the anesthetic properties of ether and chloroform in the 1840s, thus making surgeries painless, although there was plenty of pain after the anesthetics wore off. Still, the number of people willing to undergo surgery rapidly multiplied. However this led to another problem: infections from surgery killing patients after presumably successful surgeries. Previously, with so few people willing to undergo surgery, and so many of them dying on the operating table, infections from surgery itself were relatively rare, and their causes (i.e., unclean surgical instruments and operating conditions) remained a mystery. Then came the answer: germs.

When people such as Louis Pasteur and Joseph Lister first linked microbes to disease and infection, they were met by widespread skepticism from people who refused to believe disease and infection could come from things so small we can't see them without a microscope. However, when Pasteur came up with a vaccine against rabies based on his theory, people took notice. Lister applied this theory to surgery by spraying a fine mist of carbolic acid on patients during surgery to kill any germs. As a result, deaths from infections after surgery dropped dramatically.

Unfortunately, some patients and medical staff reacted badly to the carbolic acid. This had two results. First, experiments showed that patients' infections had the same germs as those on surgeons' hands. Secondly, to protect his trusted head nurse's sensitive hands, Lister had the Goodyear Rubber Company make some rubber gloves. Out of these two things came aseptic procedure, where everything in the operating room was sterilized, thus eliminating the need for the annoying carbolic acid. Ironically, the rubber gloves first developed to protect the hands of Lister's head nurse (whom he later married) were now used to protect the patient from germs on the medical staff's hands.

Aseptic procedure drastically reduced the number of infections from surgery and dramatically increased the number of surgeries being performed. This brought up another problem: blood loss. At first, doctors tried random blood transfusions from other people, saving some patients but killing others. This led to new research and the discovery of blood types. Now blood donors' blood could be accurately matched with that of patients.

Then came World War I and the need for blood donors drastically increased. However, donors' blood clotted soon after being taken, preventing its storage or transport long distances to field hospitals where it was needed. Then someone discovered that sodium citrate kept blood from clotting, thereby saving thousands of lives.

In spite of all these advances, invasive procedures like surgery were still a shock to the system and quite painful during recuperation. Fortunately, one more discovery during World War II helped reduce the need for surgeries: penicillin and other antibiotics that could cure infections without the patient having to go under the knife.

Since World War II a staggering number of advances in surgery have taken place. At the same time germs have mutated quickly, so our arsenal of antibiotics is becoming less and less effective. The battle goes on.

Killing the Pain

William Morton first publicly demonstrated ether's use as an anesthetic in 1846. However, Paracelsus had noticed its pain killing properties in the 1500s. Medical students were also familiar with its intoxicating properties and would use ether-filled balloons as social stimulants at "Ether Frolics" (below) in the 1830s and 1840s.

In January, 1842, William E. Clarke applied a towel soaked with ether to remove a tooth painlessly from a certain miss Hobbie. Despite his success, Clarke was convinced the success of the procedure was due to women's naturally hysterical reaction to pain, so he discontinued experiments.

Two months later in Georgia, Crawford Williamson Long (below) painlessly removed several sebaceous cysts from a man's neck. Like Clarke, Williamson let himself be convinced that

the success was not due to the ether, but in this case to the use of mesmerism.

The first public demonstration of ether's anesthetic properties was done in October, 1846 by a Massachusetts dentist, William Morton. After testing it on animals and then in removing a colleague's molar, he did a public demonstration knocking out a patient with ether while the surgeon, John Collins Warren, removed a jaw tumor from a patient who, could remember nothing of the surgery after waking up. After the operation, Warren declared: "Gentlemen, this is no humbug."

Within weeks, the news had spread across the globe and the Scotsman Robert Liston (below) was the first British surgeon to use ether in an operation to amputate a patient's leg. Before the operation, he explained to the audience "We are going to try a Yankee dodge today, gentlemen, for making men insensible." After anesthetizing the patient, Warren, noted for his speed and accuracy performed the operation in 25 seconds. When the patient, Frederick Churchill, awoke, he asked when Liston would begin, prompting peals of laughter from the gallery. After his success, Liston turned to the audience and declared, "This Yankee dodge, gentlemen, beats mesmerism hollow."

Joseph Lister Revolutionizes Surgery

In 1865, Joseph Lister, having heard of Pasteur's work, treated Carlyle Scotland's sewers with carbolic acid to rid them of their stench, the theory being that the stench was caused by microbes and that if his treatment worked on the sewers, it could protect surgery patients from infection. The stench did indeed die down, and Lister then successfully performed surgery on an 11-year old boy with a compound fracture, a particularly serious injury back then, spraying carbolic acid on the patient's wound during the operation. The low infection and high survival rates of Lister's patients radically changed surgery.

However, there was a problem: carbolic acid could be irritating to the skin, not just of the patients, but also Lister's head nurse, whose services he valued so much he later married her.

In the meantime, he went to the Goodyear Rubber Company and had them make a pair of rubber gloves for his nurse. Ironically, a strategy to protect a nurse would become standard procedure for protecting patients.

More importantly, Lister's success in using aseptic procedure showed that germs in the environment (even on surgeons' hands) were the cause of the infections killing so many surgery patients. Eventually he replaced using carbolic acid locally with cleaning everything to create a sterile field to prevent infections. Lister's work revolutionized modern surgery.



The device Joseph Lister used for spraying carbolic acid as an antiseptic on surgery patients. Before operating, Lister would jokingly remark, "Let us spray."

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117B. THE ACCELERATING CYCLE OF MILITARY DEVELOPMENT AFTER 1850.

If the industrial revolution accelerated technological development overall, this was much more true in the case of military technology. Accelerating this process were two other factors. One was the competitive nature of warfare in general, which served as an impetus to coming up with a weapon that would give one side an edge over the other. The other was the competitive nature of nationalist rivalries that became increasingly more intense as industrialization spread to more countries after 1850. The basic problem was that machines multiplied production of goods much more quickly than people could produce babies to consume those goods. As competition in the markets stiffened and unemployment grew, tensions increased between nations whose politicians blamed other nations for their own domestic problems. As those tensions have led to wars, efforts were stepped up even more to develop weapons with which to win those wars. Of course, as the rate of technological growth kept accelerating, especially in the military realm, nation states found, and still find, themselves trapped in a never-ending cycle of rearmament, rapid obsolescence, more rearmament, etc.

A quick rundown of the fruits of those efforts shows the profound effects this process had on warfare in a remarkably short period of time (c.1850-1950). For nearly two centuries before the industrial revolution took off in Europe, the dominant weapon had been the muzzle loading smoothbore flintlock musket with an effective range of up to 100 meters and a firing rate of maybe three shots per minute. In the 1850s (e.g., Crimean War), this was being replaced by muzzle loading rifled muskets with a range of about 500 meters, but the same basic firing rate. In 1866 the Prussians rapidly won the Austro-Prussian (Aka, Seven Weeks) War through the revolutionary use of the breech-loading Dreyse rifle (although it was patented in the 1840s) that increased the firing range by a factor of four to five times. By the Franco-Prussian War (1870-1) the French were using the Chassepot breech-loading rifle, which was more reliable than the Dreyse gun and had twice its range.

While these were all massive changes transforming warfare, the developments that followed in rapid

succession were even more revolutionary. In 1884 came the Maxim gun, the first fully mechanized machine gun, with a firing rate of 600 bullets per minute. With such a rate of fire concentrated in just a few men's hands, combined with the mass production of such weapons and the population explosion also triggered by the industrial revolution, nations could field huge armies wielding a whole new magnitude of firepower. In World War I (1914-18), those armies would be able to spread out and fill a continuous line from the Alps to the North Sea, so that no one could get around, over, or under this continuous front, while trying to assault it frontally proved to be virtually suicidal. The result was a prolonged stalemate in the trenches until two new weapons came along: the tank (inv. 1916) and the airplane (inv. 1903).

While the impact of the tank and airplane was more supplemental than decisive on the outcome of World War I, they definitely defined the nature of the next conflict, World War II (1939-45). Because of the even greater firepower and size of the armies, the continuous front still existed. The main difference was that, instead of confining the damage from conflict to a narrow static front, the continuous front now became mobile, pulverizing nearly everything in its path as the Germans pushed across Europe, and again as they were pushed back. Thus the damage from the Second World War was many times greater than that of the First just twenty years earlier.

However, the end of World War II saw a new class of weapons developed that would dwarf the destructive power of all previous weapons by a thousand times: nuclear weapons. In fact, the industrial revolution had made war so efficient that total war as a rational policy was now effectively obsolete.

118. DISEASE AND THE DECLINE OF THE HAPSBURG EMPIRE IN THE LATE 1800'S

While the multi-ethnic nature of the Hapsburg and Ottoman Empires is often cited as the primary reason for their declines in the nineteenth century, other factors also entered into the equation. One factor that seems to have played a major role in determining the nature of Hapsburg rule and society as well as its decline was disease. In order to understand this we need to look at German expansion into Central and Eastern Europe in the Middle Ages.

As the German people expanded into Central and Eastern Europe and established themselves and the ruling class in such areas as Bohemia, they tended to settle and concentrate in towns and cities from which they could rule the countryside. However, both the crowded and unsanitary conditions in cities then led to serious problems with disease. As a result, the ruling German class could rarely sustain its own population, let alone expand its numbers. Fortunately, there was a gradual influx of native Slavic migrants to the cities to replenish their populations. Since this migration was gradual, the ruling German classes could maintain their dominance until these newcomers had absorbed German culture and values, even adopted German names, and been accepted into the ruling classes. For centuries this pattern of gradual absorption of Slavic migrants served to maintain German cultural and political, if not ethnic, dominance of the cities and power in the empire.

However, two things upset this delicate balance in the later 1800's. One was a cholera epidemic that severely depleted the Germanized populations in Hapsburg cities. The other was industrialization, which created a need for a large factory work force. Together these triggered a huge influx of Slavic migrants into the cities. This much larger Slavic population in the cities proved too much for the Germanized ruling classes to absorb as they had before. It also generated a fear that Slavic culture would overwhelm German culture. This created a growing conservative backlash against the Slavs. That in turn led to growing resistance by Slavic nationalist groups against the Germanized ruling classes which merely caused more conservative reactions and so on.

As this cycle repeated itself, Hapsburg society became progressively polarized between the growing restiveness of its Slavic nationalities and ethnic groups on the one hand and the siege mentality of its increasingly isolated and reactionary ruling classes on the other. Therefore, by the early twentieth century, the Hapsburg Empire was on the verge of collapse. World War I would push it over the edge.

119. NATIONALISM AND ITS IMPACT IN EUROPE (1848-1914)

Introduction. As we have seen, the French Revolution and Napoleon spread the ideas of liberalism and nationalism across Europe. These ideas took root and gave rise to several outbreaks of revolution in the 1820's, 1830's, and 1840's, the most severe being the revolutions of 1848. Although most of these revolutions failed, they continued the spread of liberal & nationalist ideas and also gave reformers a more realistic appreciation of what it would take to achieve their goals. The revolutions of 1848 especially influenced the peoples of Eastern Europe under Hapsburg and Ottoman rule as well as the peoples of Italy and Germany in Central Europe.

Eastern Europe, especially the Balkans in the southeast, saw national independence from foreign rule, rather than national unity, as the critical issue. The spread of nationalist ideas among the various Slavic peoples there after the revolutions of 1848 combined with the steady decay of the Hapsburg and Ottoman Empires to create a particularly volatile situation. These generated growing nationalist movements that destabilized the already crumbling Hapsburg and Ottoman empires. To complicate matters even further, Russia became increasingly involved in Balkan politics, posing as the champion of Slavic liberties and nationalism against the Slavs' Turkish and Austrian masters. This heightened tensions between Austria, Turkey, and Russia and would provide the spark to set off World War I.

Central Europe, Germany and Italy in particular, had been broken into numerous states, a situation which had invited centuries of foreign intervention, conquests, and wars in both countries. Here also, the revolutions of 1848 combined with German and Italian frustration over this situation to generate strong sentiments for national unification in both countries. The middle classes in Italy and Germany especially supported national unification by strong governments that could end internal tolls, build national railroads, and support new industries.

Both Italy and Germany were lucky to have brilliant prime ministers to lead them through unification: Camillo Cavour for the Italian state of Sardinia and Otto von Bismarck for the German state of Prussia.

Both men skillfully combined strong internal developments of their respective states with opportunistic diplomacy and warfare to unify Italy and Germany by 1871. Both nations would also strive to industrialize in the latter 1800's. Germany proved especially successful in this endeavor. However, the presence of two unified nations in place of a multitude of little states, especially that of a strongly industrialized Germany, seriously upset the balance of power in Europe, which would also lead to World War I.

120. THE UNIFICATION OF ITALY (1848-1871)

Italy had last been unified under the Byzantine emperor, Justinian, some 1300 years before. Since then it had been a patchwork of states under Byzantine, Lombard, Norman, German, French, Spanish, and Austrian rulers. Political fragmentation brought economic and cultural fragmentation as well. Without standard gauges, railroads did not cross state boundaries, while numerous tolls and dialects also hindered trade.

Italy's reunification, or *Risorgimento* (literally meaning resurrection), was largely the work of Camillo Cavour, prime minister of the north Italian state of Sardinia (also known as Piedmont). Although not a fiery or charismatic revolutionary leader, he was a cool and clear-headed diplomat and brilliant organizer, one of those realistic politicians who emerged from the failed revolutions of 1848. Cavour skillfully gathered popular support throughout the peninsula by exploiting Sardinia's position as one of the few native ruled states in Italy.

He also saw that Sardinia must be developed internally before it could make any moves against the Austrians, who controlled most of northern Italy, and the Bourbons, who ruled the Kingdom of the Two Sicilies in the south. To that end he reorganized Sardinia's treasury, tax system, and bank system, and then got foreign loans, especially from Britain, in order to build railroads and industries. Careful management of these loans allowed him to turn a profit and pay off the loans, thus expanding Sardinia's credit for larger loans to further develop the economy and so on. By the mid 1850's Sardinia was the most highly developed state in Italy.

Cavour was now ready for the diplomatic offensive to unify Italy. His main opponent was Hapsburg Austria, against whom he realized he needed outside help. Oddly enough, in order to get this, he attacked Russia. This was during the Crimean War (1854-56), one of the more senseless and futile conflicts in history. It mainly involved French and British efforts to stop Russian aggression to the south against the Ottoman Turks. The fighting centered in the Crimean peninsula on the Black Sea where the British and French fleets could supply

armies by sea better than Russia could supply its troops by land. It was a bloody and diseased affair, but it played into Cavour's hands, because Austria had angered France and Britain by refusing to help them against Russia. By sending Sardinian troops to help the French and British, Cavour won Napoleon III's friendship and the promise of French aid if he could make Austria appear the aggressor in a war.

Cavour had no trouble in stirring up rebellions against Austria and drawing it into attacking Sardinia. In the resulting War of 1859, Napoleon III sent 120,000 French troops to Italy by railroad, the first mass movement of soldiers by rail in history. The French won two battles, but suffered such heavy casualties that Napoleon III quickly pulled out, leaving Sardinia in the lurch. Despite this betrayal, the north and central Italian states of Tuscany, Parma, Modena, and Romagna rebelled against their rulers and unified with Sardinia, giving it about half of Italy's population. Events now moved quickly toward unifying the rest of Italy.

The price of Napoleon's aid against Austria was the transfer of Savoy and Nice to French control. This infuriated Giuseppe Garibaldi, a long time revolutionary leader who was as fiery and impulsive as Cavour was cool and calculating. Garibaldi had led the defense of the Republic of Rome in 1848 against French troops who still occupied it. Now the French were taking over Garibaldi's birthplace of Nice, and he intended to attack them there. But Cavour, still needing French diplomatic support, managed to divert Garibaldi and his army of 1000 "Red Shirts" to Sicily in order to overthrow the Bourbon dynasty. Garibaldi's tiny army met with incredible success and swept the Bourbons from Sicily in six weeks. They then crossed to southern Italy and swept the Bourbons from there as well. Practically overnight, southern Italy and Sicily had been liberated, but the question was for whom: Sardinia, who had sent Garibaldi, or Garibaldi himself who bore the title of dictator of southern Italy and Sicily while still wearing a Sardinian uniform?

Between Sardinia and Garibaldi lay the Papal States and Rome, the spiritual capital of Italy and still under French troops. Napoleon III, much preferring Cavour to Garibaldi, told the Sardinians to take the Papal states before Garibaldi got there, but to leave

Rome to the French. Sardinia's king, Victor Emmanuel, did this and moved south to meet Garibaldi. In a dramatic meeting on October 26, 1860, Garibaldi turned his conquests over to Victor Emmanuel. The Kingdom of Italy was born.

Two important pieces of the puzzle remained to complete Italy's unification: Venice and Rome, held by Austria and France respectively. In each case, Italy's alliance with Prussia, then in the process of unifying Germany, proved to be valuable. In 1866, Italy won Venice by helping Prussia against Austria in the Austro-Prussian War. Likewise, Italian help in the Franco-Prussian War earned it Rome (except for the Vatican which remained an independent state inside of Rome). By 1871, Italy was unified.

But, as one politician put it, "Italy is made. We still have to make the Italians." After centuries of disunion huge cultural, political, and economic differences existed in this nation of 22 million people. The biggest gap was between the urban north and agricultural south. The Bourbons in southern Italy and Mafia in Sicily fanned discontent into revolts and violence exceeding that seen in the actual process of unification.

The new government did three things to pull Italy together. It built a national railroad system to physically link its parts. It established a national educational system to give its people a similar cultural outlook and loyalty. And it formed a national army to enforce its policies and also unify men from all over Italy in a common cause. However, 1300 years of disunity were a lot to overcome in a few years, and Italy's efforts at forging a nation met with limited success. Despite this, a patchwork of little Italian states had been unified into a new nation, a nation with ambitions to become a great power. Such ambitions would help lead to World War I.

Pope Pius IX, Papal infallibility, and the Immaculate Conception

Pope Pius IX and the revolutions of 1848. The sudden initial success of the Revolutions of 1848 raised the hopes of Italian nationalists to finally unify Italy. Pope Pius IX, who had a reputation of being very liberal, even granting amnesty to political prisoners, was seen as the natural leader

for a unified Italy. However, Pius backed away from leading (Italian) Catholic subjects to kill (Austrian) Catholics. He was also disillusioned with liberal causes when many of political prisoners he had given amnesty to joined the revolutions. The assassination of his Minister of the Interior, Pellegrino Rossi, didn't help either. Of course, when he dropped out, Italian nationalists felt betrayed, as reflected in cartoons portraying him as a two-faced traitor.

Papal infallibility and the Immaculate Conception. Pius, who reigned longer than any other pope, 32 years from 1846 to 1878, is also known for putting forth two somewhat controversial doctrines: papal infallibility (i.e., the pope doesn't make mistakes) and the immaculate conception, whereby the Virgin Mary conceived the Christ child without engaging in original sin, another polite term for sex) and thus remained without sin her entire life.

The Crimean War (1853-56)

One long-term cause of the Crimean War was Russia's desire to expand toward the Mediterranean and Middle East, leading to its efforts to destabilize an already weak Turkey, referred to then as the Sick Man of Europe. Tsar Nicholas I's aggressive moves soon involved France and Britain who also feared Russian aggression in the region.

Another trigger was a dispute between Catholics, backed by Napoleon III, and Orthodox Christians, backed by the tsar, over who was protector of Christian pilgrims to the Holy Land, who controlled the keys to the Church of the Nativity in Bethlehem, and who could place a star over the exact site of Christ's manger. This dispute even turned to violence as Catholic and Orthodox monks rioted and were killing each other with candlesticks and crucifixes.

While the French and British had little love for the Ottomans, they feared the looming shadow of the Russian bear even more, portrayed below right as an autocratic master of a slave empire. Much of this was the result of the forged Testament of Peter the Great, in which Peter

supposedly outlined a master plan for conquering all Europe.

Thanks to much more widespread influence of newspapers, British and French cartoonists had a field day stirring up public hysteria against Russia. In this sense, along with others, the Crimean War was the first modern war where public opinion, influenced by the press, helped drive government policies. Although probably fabricated by Napoleon as a piece of anti-Russian propaganda for the narrow purpose of justifying his invasion of Russia in 1812, paranoia about Russian aggression stirred up by the forged Testament of Peter the Great would continue throughout the 19th and 20th centuries.

One of the events finally pulling France and Britain into war was the destruction of a Turkish naval squadron by the Russians at Sinope.

While the British secretary of state for war was reading instructions for the generals to cabinet members, nearly all of them fell asleep. Surprisingly, the British didn't adopt this as a strategy against the Russians.

Nicholas expected Austria to side with him, especially after he had sent 100,000 troops to help suppress its revolutions in 1848. Instead Austria backed the allies, ordering Russia out of Moldavia and Walachia along the Danube River, and then occupying them with its own troops. However, that was all Austria did to help its allies, making them a bit mad. By the same token, relations between Austria and Russia progressively soured until finally driving them to war against one another in 1914.

Meanwhile Sardinia seized the opportunity of allying with Britain and France, and actually sending 10,000 troops to help them, hoping this would gain it diplomatic leverage against Austria later on.

Fighting centered on the siege of Sebastopol in the Crimea (thus the name of the war). This was because it was harder for Russia, with no railroads, to supply Sebastopol by land than it was for Britain and France to do it by sea, especially with the new and faster steamships

using the more efficient screw propeller instead of the side-wheeler. On the Russian side, only an estimated one in ten Russians even made it to the front, some being diverted by a peasant revolt, some dropping out from disease or exhaustion, and others just deserting.

A number of military innovations distinguished the Crimean War, among which were ironclad ships (which had to be towed), and exploding artillery shells.

The telegraph also made its debut in warfare at this time. Besides rapidly transmitting and coordinating military information and orders, it provided the home front with daily information on the progress, or lack of it, in the war. This, along with the faster printing press and railroads, which made national newspapers possible, had an impact that can hardly be overestimated in the age of democratic politics. After all, daily reports from the front give the impression of much slower progress than do monthly ones. Therefore, governments have felt pressured either to push for quick victories, often with disastrous military results, or to censor and/or distort information to keep the public calm.

Adding to that impact were political cartoons with images that added little or nothing in the way of facts but could sway opinions of less literate readers on an emotional level.

This was also the first major war to be recorded in part by the camera, although the long exposure times precluded taking any action shots. Thus the grim pictures of the aftermath of battles with which Matthew Brady would shock the American public about the brutality of the Civil War were missing in the Crimean war.

The Minie rifle or rifled musket. Probably the single most significant military development was the Muzzle-loading Minie rifle, developed in France in 1849. The inside of the gun had a spiral groove, known as rifling. It fired a conical shaped soft lead bullet (below) that was hollow in back, had three grooves around it to catch the rifling, and was slightly smaller than the inside

of the barrel to make it easy to load. When it was fired, the heat would expand the bullet, trapping the explosive gases to give it more velocity. In addition the bullet would get caught in the grooves of the spiral rifling, which would put a spin on it, firing it much straighter and farther than before, about 600 meters.



Such a weapon made the old tactic of attacking in massed formations obsolete, since defenders would be shredding their ranks at six times the range of smoothbore muskets. However, generals, being trained in Napoleonic tactics and unable to come up with anything new, continued using the old tactics even through the First World War—with disastrous results. Wounds inflicted by these high velocity lead bullets would shatter any bone and cartilage, often making it impossible to mend shattered limbs and forcing surgeons to resort to amputation on unprecedented levels.

The Charge of the Light Brigade is probably the best-known action of the Crimean War, although it was only a small part of the Battle of Balaklava. General Lord Lucan, viewing the battle from the heights, couldn't see how the plain below wasn't so flat. Thinking the Light Brigade's commander could see the Russians he wanted attacked, he ordered a frontal assault.

A confused aide gave unclear orders to charge a retreating Russian battery, but the only Russian artillery the Light Brigade's commanding officer, the Earl of Cardigan, could see was in a position that was virtually suicidal to attack. Cardigan ordered the attack anyway, possibly to embarrass his commanding officer (and brother-in-law), Lord Lucan, whom he hated and who had originally given the order. The messenger saw his mistake, but was killed before he could redirect the charge. Making matters worse, the bugler was killed so they couldn't call off the charge once it had started.

Somehow 230 of the original 673 men in the Light Brigade made it through the Russian lines. Of those, only 195 survived this tragic blunder unwounded. Cardigan tried to blame Lord Lucan, but the commanding general was not impressed since it was Cardigan who actually carried out such a stupid charge.

The incident was immortalized in Alfred Lord Tennyson's "The Charge of the Light Brigade."

Half a league, half a league,
Half a league onward,
All in the valley of Death
Rode the six hundred.
"Forward, the Light Brigade!
"Charge for the guns!" he said:
Into the valley of Death
Rode the six hundred.
"Forward, the Light Brigade!"
Was there a man dismay'd?
Not tho' the soldier knew
Someone had blunder'd:
Theirs not to make reply,
Theirs not to reason why,
Theirs but to do and die:
Into the valley of Death
Rode the six hundred.

Cannon to right of them,
Cannon to left of them,
Cannon in front of them
Volley'd and thunder'd;
Storm'd at with shot and shell,
Boldly they rode and well,
Into the jaws of Death,
Into the mouth of Hell
Rode the six hundred.

Flash'd all their sabres bare,
Flash'd as they turn'd in air,
Sabring the gunners there,
Charging an army, while
All the world wonder'd:
Plunged in the battery-smoke
Right thro' the line they broke;
Cossack and Russian
Reel'd from the sabre stroke
Shatter'd and sunder'd.
Then they rode back, but not

Not the six hundred.

Cannon to right of them,
Cannon to left of them,
Cannon behind them
Volley'd and thunder'd;
Storm'd at with shot and shell,
While horse and hero fell,
They that had fought so well
Came thro' the jaws of Death
Back from the mouth of Hell,
All that was left of them,
Left of six hundred.

When can their glory fade?
O the wild charge they made!
All the world wondered.
Honor the charge they made,
Honor the Light Brigade,
Noble six hundred.

As one person summed it up, it was grand but it wasn't war.

The lady with a lamp. Much of the tragedy of the Crimean War came from the abysmal supply system for the British and French soldiers who were given little or no clothing to withstand the Crimean winter. Another scandal of the war concerned the squalid conditions of the field hospitals and the high mortality rate of the wounded.

Enter one of the real heroes (or heroines) of the war, Florence Nightingale. In the midst of the scandal over medical care and after incredible persistence in badgering the authorities, she got permission to go to the front. She and the 38 other nurses she brought with her to the Crimea cleaned up the British field hospitals and reduced the death rate from 60% to 1%. Besides revolutionizing medical care for the wounded, she made nursing the first respectable profession open to women.



Pictures of Florence Nightingale in 1851 and 1856 before and after going to Crimea show the physical and emotional toll the war took on her. Some think she was the victim of posttraumatic stress syndrome, a condition usually associated with combat fatigue.

Not that Florence Nightingale was the only woman involved in the Crimean War. Apparently a group of British wives and their husbands showed up to view a battle while having a picnic. High society from Washington D.C. did the same thing at the First Battle of Bull Run in 1861, with disastrous results when they got caught up in the panic and rout of their army back to the capital.

The end of the war. The death of Nicholas I, fall of Sebastopol, and Russia's overall exhaustion finally led to the end of the war and the Treaty of Paris (1856). This temporarily neutralized the Black Sea until new Russian advances nullified its provisions in 1877 and a new round of Balkan turmoil started up.

The Franco-Austrian War and Birth of the Red Cross



French Zouaves at the battle of Magenta. The valor of the French Zouaves inspired at least two American regiments, one from Louisiana and the other from New York, to adopt their uniforms in the opening years of the Civil War.

By sending Sardinian troops to help the French and British, Cavour won Napoleon III's friendship and the promise of French aid if he could make Austria appear the aggressor in a war. He had no trouble in stirring up rebellions against Austria and drawing it into attacking Sardinia.

The War of 1859 (Aka Franco-Austrian War) marked another unfortunate step in the evolution of modern war, not so much for any technological innovations (except the mass movement of French troops by railroad) as by the concentrated scale of slaughter inflicted in a short period of time. As in the Crimean War, this was the work of the rifled musket with its vastly increased range and killing power and the failure of generals to adapt their tactics to it.

The Battle of Solferino (June 24, 1859) took place on broken ground that made it virtually impossible for either army to coordinate troop movements, creating a confused and bloody battle. About 100,000 Austrian troops and a combined total of 118,600 French and allied Sardinian troops fought here, making it the largest battle since the Battle of Leipzig in 1813. Each side suffered a shocking 22,000 casualties.

The French Zouaves' valor in this war inspired at least two American regiments, one from Louisiana and the other from New York, to adopt their uniforms of bright red pants and blue jackets in the opening years of the Civil War.

Sickened by the carnage of the battles of Magenta and Solferino and threatened with war by German states backing Austria, Napoleon III dropped out of the war after only three months. He and the Austrian emperor, Franz Josef met at Villafranca, excluding Sardinia from the proceedings, and concluded the Treaty of Zurich, trying to appease Sardinia with Lombardy. Cavour was so furious that he temporarily resigned as prime minister. However, Victor Emmanuel realized he had to accept it, hoping to hold this over Napoleon for future favors.

Reactions to modern war. Public shock and outrage at the carnage from this war also helped lead to the founding of the International Red Cross in 1864 and the Geneva Convention on establishing rules of conduct in warfare. After the carnage of the American Civil War (600,000 dead), Clara Barton would found the American Red Cross in the United States.

"A heart of gold and the brains of an ox."



"He has a heart of gold and the brains of an ox," is how one person described Giuseppe Garibaldi in the sense that he was passionately devoted to the cause of a unified Italy, but was also extremely impulsive and prone to act without thinking. He seems to have been a good, if not brilliant commander, especially in guerilla tactics, and he certainly inspired intense devotion in his followers. As a result, he still counts as one of Italy's great national heroes.

Garibaldi had a long history of being in and out of Italy. In 1834 he was exiled from Sardinia for revolutionary activity, so he went to South America where he fought in various wars and revolutions and learned guerilla warfare.

The Red Shirts, Garibaldi's followers, got their distinctive uniforms when a blockade left a Uruguayan merchant with a huge overstock of red shirts, which he sold to Garibaldi at a bargain price.

In 1848 he returned to Italy to fight for the Republic of Rome against overwhelming odds. When Napoleon III's troops stormed the Republic's barricades, Garibaldi made a daring escape, although his wife died along the way. He then went into exile again, this time to New York City, where he worked as a candle-maker. He also spent time in Peru and Britain before returning to Italy in 1854. During the Austro-

Sardinian War in 1859, he fought the Austrians for Italian independence, until he was quickly undercut by Napoleon's surprise peace with the Hapsburgs.

Cavour took the long view of a diplomat, seeing that Napoleon III, despite his betrayal in 1859, might be a useful ally in the future. Therefore he diverted Garibaldi and 1000 Redshirts from Nice to Sicily on two old steamers to attack the Bourbon dynasty ruling there. Of course, Garibaldi and his seasick followers were acting in a completely unofficial capacity to keep from angering the Bourbons against Sardinia.

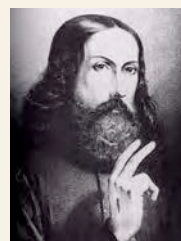
The Redshirts were armed with obsolete muskets and rusty bayonets, but the 24,000 Bourbon troops on Sicily were not devoted at all to their bosses. At Calatafirmi (below) 3000 Bourbons were repulsing 1000 Redshirts and 1600 locals when Garibaldi got hit in the head with a rock. Realizing the enemy was out of ammunition, Garibaldi counter-attacked and won a major victory. Thousands of people now flocked to his standard, and Sicily was cleared out in six weeks. He next crossed into the kingdom of Naples, which he also quickly overran. The Bourbon ruler, Francis II supposedly pouted in his palace while Naples fell without a shot.

Garibaldi, whom Victor Emmanuel favored as a counterweight to Cavour's influence, had declared himself dictator of Southern Italy and Sicily, but also espoused loyalty to Sardinia, even wearing the uniform of a Sardinian general. Therefore, as a precaution and with the blessing of Napoleon III who would rather have the faithful ally, Victor Emmanuel, as his neighbor instead of a loose cannon like Garibaldi, the Sardinian king took over the Papal States with the exception of Rome, which the pope still controlled with French assistance.

***Garibaldi's later years.* In 1861, President Lincoln offered Garibaldi a command as a major general in the Union army. He turned it down because at that point, Lincoln wasn't ready to declare the emancipation of the slaves. After an unsuccessful attempt to take Rome in 1862, the**

Sardinians kept Garibaldi in polite detention on his island of Caprera.

In 1867, he again tried to take Rome, but was driven back by Papal and French forces. He got partial revenge by naming his two mules after Pope Pius IX and the Austrian emperor, Franz Josef. In 1871 he served with his two sons fighting for the Third Republic of France in the Franco-Prussian War. Returning to Italy, he served in the Italian Parliament and worked for various causes, including universal suffrage and the emancipation of women. He died peacefully on his island of Caprera in 1882.



Garibaldi portrayed as a saint with the stigmata.

121. THE UNIFICATION OF GERMANY (1848-1871)

"Not by speeches and majority resolutions are the great questions of the day decided-- that was the mistake of 1848 and 1849--but by blood and iron."-- Otto von Bismarck

Germany had been fragmented into as many as 300 separate states ever since the Investiture Struggle in the Middle Ages had wrecked the power of the German emperors. In the following centuries, it had suffered repeatedly from foreign wars and aggression, most recently Napoleon's rule. However, Napoleon had inadvertently done Germany two favors in the process of his rule. Besides instilling a sense of nationalism in its people, he had also consolidated Germany into 38 states, a giant step toward unification. Since Napoleon's defeat two states had competed for leadership of Germany: Austria and Prussia. Most people would have expected Austria, with its longer imperial tradition and larger territory to dominate. But it was Prussia, with its better organization and more progressive reforms (e.g., its customs union known as the *Zollverein*), which was destined to unify Germany.

The man who would lead Prussia in Germany's unification was its chancellor (prime minister), Otto von Bismarck (1815-94). He was a man of massive size and strength, brilliant mind, and iron will. Childhood stories of Germany's heroes had inspired him with a sense of German nationalism, while stories of foreign conquerors, especially Napoleon, angered him and instilled in him a desire for a unified nation. Bismarck's early career was rather undistinguished, although he did see foreign diplomatic service, which gave him experience in that field. He also witnessed Austrian arrogance toward Prussia in the German Diet (parliament), which set his mind to earn his country respect both inside Germany and outside of it. In 1862, he got his chance.

In 1858, Wilhelm I had succeeded Frederick William IV. The new king wanted to build up and reform the Prussian army. But one obstacle stood in the way: the Prussian *Reichstag* (parliament), formed as a result of the revolutions of 1848, refused to grant Wilhelm the needed money. In

1862, Wilhelm, on the verge of abdicating, appointed Bismarck as his chancellor.

Bismarck, among other things, was no lover of democracy, including the Prussian *Reichstag*, which he said bogged itself down in speeches and resolutions. He believed only clear-sighted decisive policies of "blood and iron" could build a German nation. He figured that once the nation was successfully built, German liberals, inspired by the reality of the long sought for German nation, would come around to his way of thinking. Therefore, he simply ruled without parliament and rammed through his own reforms. Prussia got its army and Bismarck could now turn to unifying Germany. Bismarck was an excellent diplomat who brilliantly manipulated alliances and played different powers off against one another. He was also a master of limited objectives, using each diplomatic step to set up the next one. He started with a revolt in Poland.

The Polish revolt against Russia in 1863 gained a great deal of popular support in Europe. But Bismarck was more interested in power than popular support (unless it was a means to gaining power). He clearly saw that the Czar would put down the revolt, and therefore helped Russia in crushing the rebels. This secured his eastern flank and gained an ally against Austria who had refused to help Russia in the Crimean War even after Russia had helped the Hapsburgs suppress their uprisings in 1848.

With his eastern border secure, Bismarck next championed the liberties of Germans in Schleswig and Holstein, whose Danish ruler was incorporating them more tightly into the Danish state. The resulting Danish War (1864) accomplished three things for Bismarck. First of all, it won him useful popular support among the Germans since he appeared to be defending German liberties. Secondly, it gave the reformed Prussian army valuable combat experience. Finally, it dragged Austria into the war on Prussia's side, since it could not afford to let Prussia be the sole champion of German liberties. This served Bismarck's purpose, since it got Prussia and Austria hopelessly entangled by their joint occupation of Schleswig and Holstein and helped set up a showdown between the two powers: the Austro-Prussian War (1866)

Bismarck laid the diplomatic groundwork for this war with typical thoroughness. Russia, already Prussia's friend and still mad at Austria, was effectively neutral, which suited Bismarck fine. Bismarck kept France out of the war by making vague promises of Rhineland territories if he won. And Italy, wanting to get Venice into its fold, allied against the common Austrian enemy. Prussia's military preparations were equally thorough. The Prussian army was better trained, organized and equipped than the Austrian army. A new breech loading rifle, the "needle gun", gave Prussian soldiers four times the firepower of their Austrian counterparts. A combination of using Prussia's railroad system for rapid movement of its armies with the telegraph to coordinate those movements allowed the Prussians to converge at the point of attack with unprecedented precision and overwhelming force. As a result, the Seven Weeks War, as this was also known, was a rapid and total victory for Prussia, in stark contrast to the drawn out conflict of the Seven Years War a century earlier

Bismarck's settlement looked forward to the eventual unification of Germany. His treatment of Austria was fairly lenient, taking only Venice and giving it, as promised, to Italy. But he also excluded Austria from German affairs, thus clearing the way for Prussian dominance. For Prussia itself, he took Schleswig and Holstein as well as the lands dividing Prussia from its holdings along the Rhine in the West. Bismarck also unified the north German states into a confederation under Prussian leadership, while expecting the south German states to follow Prussia's leadership in war. The confederation was organized along democratic lines to gain popular support, but the real power rested with the Prussian king and chancellor.

Bismarck's next move was to galvanize German support against a common enemy. He found that cause by going to war with France. Napoleon III of France had his motives for war as well. Sagging popularity at home and concern over Prussia's growing power helped drive him on a collision course with Bismarck that erupted into the Franco-Prussian War (1870-1). Once again, Bismarck had laid firm diplomatic foundations. Russia was still Prussia's friend. Italy allied with Prussia in order to get Rome out of French hands. Austria, still licking its wounds from its recent struggle with Prussia,

was neutralized. The one big question mark was: what would Britain do? Bismarck took care of that by taking out a full-page ad in the London Times claiming France wanted to annex Belgium. Public opinion was outraged and Britain left France to its fate.

Few people then would have given Prussia any chance to beat the French, anyway, since France was still considered the foremost military power in Europe. The Franco-Prussian War proved that assumption wrong. Prussian training, equipment, leadership, and organization quickly smashed French armies in rapid succession. Within six weeks the Prussians had surrounded Napoleon III's army at Sedan. After a day of desperate but suicidal assaults against the Prussian positions, Napoleon III was forced to surrender along with 120,000 men. The French mounted sporadic local resistance, especially in Paris whose besieged inhabitants survived on elephant meat from the zoo. In the end, it was too little too late and France had to ask for terms.

The Prussian victory had two main results. First of all, Prussia annexed Alsace and Lorraine, a bone of contention between the two countries since the Treaty of Verdun in 843 A.D. This alone was enough to spark French bitterness. Secondly, Bismarck officially unified Germany by declaring the Second Reich (German Empire) and crowning Wilhelm as *Kaiser* (literally Caesar or emperor). Not only that, he did this at Versailles, for 200 years the symbol of French power and now the symbol of its humiliation. This newly unified Germany would become an economic superpower by rapidly industrializing. For example, German steel production doubled every decade between 1870 and 1910, even passing British steel production after 1900. Both Prussia's treatment of France and its unification and industrialization of Germany would upset the balance of power and trigger a system of interlocking alliances that kept Europe on a knife-edge of readiness for a war that nearly everyone expected to break out. That war, World War I, would be the beginning of the end of European supremacy.

Internally, Germany between 1870 and 1914 presented a picture of seemingly incompatible contrasts. While its economy forged ahead to make it the most advanced nation in Europe, its political

structure resisted any liberalizing trends and remained conservative and autocratic. Likewise, it maintained an increasingly obsolete social structure of rich landowners who had mechanized their farms at the expense of the peasants and even richer capitalists making profits at the expense of a downtrodden working class and shrinking class of small shopkeepers and craftsmen. As the social and political systems lagged behind economic progress, tensions in the form of growing opposition parties (including socialists), protests, and strikes emerged more and more. Discontent was partially diverted away from the government by being focused against such groups as Catholics, socialists, and especially Jews. This and World War I only put off resolving these tensions. Unfortunately, the banner of discontent would be picked up by Adolph Hitler and the Nazis whose terrorist programs would plunge both Germany and the world into a much worse nightmare than even World War I proved to be.

Bismarck's early career



“When you want to fool the world, tell the truth”

Bismarck was the son of a less than ambitious Junker, from whom he got his massive size and physical strength. He seems to have gotten his restless mind and wild temper from his mother. In his early days, he was called the "Mad Bismarck" from his wild drinking and dueling escapades. He supposedly fought twenty-five duels in college, and was only wounded once by what he called a "cheap shot" He once announced his arrival at a friend's by firing a pistol into the ceiling. Another time he released a wild fox into a friend's living room. He supposedly had a dachshund with a flower tied to its tail just to provoke laughter so he could pick fights.

Bismarck married a devout woman and converted to a militant brand of Christianity where he saw himself as God's instrument to do something special. He admired autocracy and

militarism in the tradition of Frederick II. Interestingly, he made a terrible soldier, wanting to give, not follow, orders, declaring, "I will play music the way I like it or none at all."

When asked why he never listened to anyone else, he replied he had enough voices in his head to listen to. Hopefully he wasn't being literal.

After eight boring years as a junker, Otto entered politics in 1848, He served as ambassador to Russia for three years (1859-62) and to France for a few months, although he spent most of that time in London. One thing he learned during that time was the low opinion other powers had of Prussia.

***Bismarck's cigar.* It was the custom in the Reichstag that only the Austrian delegate be allowed to smoke. Then one day the Austrian delegate found Bismarck hovering over him with a cigar in his mouth, “asking” him for a light. Totally intimidated, he lit Bismarck’s cigar who responded by blowing a cloud of smoke back in his face. The Austrian delegate could probably relate to what the British prime minister, Benjamin Disraeli, once said of the young Bismarck: "Take care of that man. He means what he says."**

The Endless Rearmament Cycle



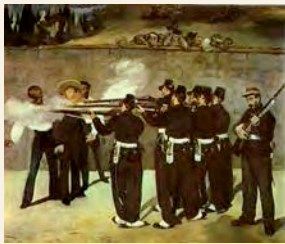
French Mitrailleuse, the 1st machine gun, 1867

In 1858 Frederick-William IV had a mental breakdown and was succeeded by Wilhelm I, who was determined to modernize the Prussian army. This is an issue that has become an ever-growing concern and expense for every modern state, especially with the industrial revolution. As rapid technological growth led to a continuous stream of new and more

sophisticated weapons, governments perceived they had to get these weapons for the state's survival. Of course, as the rate of technological growth kept accelerating, especially in the military realm, nation states found, and still find, themselves trapped in a never-ending cycle of rearmament, rapid obsolescence, more rearmament, etc.

For example, the smoothbore flintlock musket remained virtually unchanged for nearly two centuries. Then in the nineteenth century dramatic innovations replaced it and each other in rapid succession: the muzzle loading rifled musket used in the Crimean War (1853-6) and American Civil War (1861-5), the much faster breech loading and bolt action Dreyse rifle used in the Austro-Prussian War (1866), its much improved successors the Chassepot and Mauser rifles, and the Mitrailleuse, the first machine gun, used in the Franco-Prussian War (1870-1), which could fire 100-125 bullets a minute. Obviously, no state could afford to let itself be left behind by such developments and expect to survive a war.

Napoleon III's Mexican (Mis)adventure (1861-7)



Edouard Manet's painting of the execution of the would-be emperor of Mexico, Maximilian

Poor Napoleon III. Always looking for an opportunity to win glory like his uncle, but never quite hitting the mark. Consider his invasion of Mexico. The excuse for invading Mexico was the refusal in 1861 by Mexican president, Benito Juarez, to continue interest payments to French and other foreign banks. The timing was favorable for Napoleon III, because the U.S. was bogged down in its Civil War and could do nothing to intervene.

On May 5, 1862 the Mexicans defeated a much larger and better equipped French army at the Battle of Puebla (below). This was the basis for Cinco de Mayo, an unofficial Mexican holiday that is observed to celebrate Mexican heritage and culture by ethnic Mexicans both in Mexico and elsewhere. The official Mexican Independence Day is September 16. However, Puebla only slowed the French advance, which took Mexico City in 1863. But this proved of little use since the Mexicans kept control of the countryside.

The next year, Napoleon, with support from some Mexican monarchists and a highly dubious plebiscite run under French supervision, put the Austrian arch-duke, Maximilian, on the throne of Mexico. There is widespread suspicion that Maximilian was not really Hapsburg, but actually the son of Napoleon II, whom he resembled more than his father. He also had a bit of Napoleon III's "man of mystery without a secret" look about him.



After the end of its civil war, the U.S. supplied arms to Benito Juarez and his followers, while Maximilian invited ex-Confederates to come and fight for him. U.S. pressure convinced Napoleon III to withdraw his troops from Mexico in 1866, but Maximilian stayed on, spending much of his time trying to complete a manual on court etiquette (e.g., the most polite way to execute a dethroned emperor). He was captured in 1867. Despite pleas from such prominent people as Victor Hugo and Garibaldi and the fact that he personally liked Maximilian, Juarez had him executed on June 19, 1867.

Maximilian's wife Charlotte, a Belgian princess had accompanied her husband, whom she deeply loved and obsessed about, to Mexico. In addition to being beautiful, she was mentally unstable. Therefore, when Maximilian was executed, Carlota (her Spanish name in Mexico) came

completely unhinged and had to be committed to an insane asylum. For a while, she was so paranoid about being poisoned, that she would keep a live chicken on a leash until it was killed to be cooked for her.

The Needle Gun and Austro-Prussian War

A major factor in Prussia's victories in the Danish and Austro-Prussian wars was the Dreyse Needle gun, patented in 1841. It used a bullet glued in a paper case, known as a sabot, with three parts: a paper cartridge containing gunpowder, a percussion cap or primer, and an acorn shaped bullet. It got its name from a needle that, upon pulling the trigger, would puncture and penetrate the cartridge to detonate the primer, which in turn detonated the powder and expelled the bullet.

The Dreyse was also the first breech-loading rifle using bolt action to open and close the chamber by turning and pulling a bolt. This allowed a Prussian soldier a firing rate of 10-12 shots per minute, at least five times the rate of his Austrian or Danish opponent, and a range of 600 meters. Although no more accurate than its counterparts, hitting opposing soldiers on an average of once every 250 shots, the faster firing rate gave Prussian soldiers a huge psychological advantage. Another advantage was its user didn't have to stand up to reload his gun and present a big target to the enemy. The paper cartridge used for the bullet was known as caseless ammunition, since it burned up upon firing and didn't have to be ejected before putting in a new bullet.

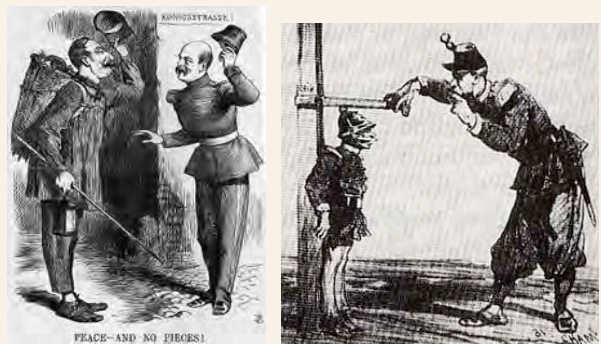
One problem with the needle gun was that a significant amount of gas escaped through the breech, thus limiting its range. This could also burn the soldier's face, forcing him to fire from the hip, thus reducing its accuracy. Also, the fact that the needle was immersed in the powder when the gun fired put stress on it, causing it to break after as few as 200 rounds, making the gun useless until the needle was replaced. Prussian soldiers were equipped with two extra needles for this purpose.

The needle gun revolutionized warfare as much as the rifled musket did and especially proved its worth in the Austro-Prussian War in 1866. At the battle of Podol, 400 Prussians defeated 2,000 Austrians, inflicting ten times the casualties they received. However, by the Franco-Prussian War (1870-71) the Dreyse design was thirty years old and obsolete compared to the Chassepot rifle carried by the French.

Besides excellent weapons, the Prussians also had superior organization, most notably, using the telegraph to coordinate troop movements by rail so they could converge at the point of attack with unprecedented precision and overwhelming forces of fresh troops. Much of this they learned from observing how the North won the American Civil War, concluded just a year before.

The Austro-Prussian War is also known as the Seven Weeks War, comparing Prussia's quick victory in 1866 with its drawn out fight for survival a century earlier in the 7 Years War.

The Ems Telegram and The Road to the Franco-Prussian War



Two cartoons showing French and Prussian feelings about one another by 1870. The one on the left makes fun of how Bismarck duped Napoleon III into staying out of the Austro-Prussian War by promising him "pieces" of Germany. The one on the right shows how Prussia perceived France's dismissive attitude toward it, telling it, "Now you're big enough. You mustn't get any bigger. I'm telling you this for your own health."

In preparing for war with France, Bismarck again laid firm diplomatic foundations. Russia

was still Prussia's friend. Italy allied with Prussia in order to get Rome out of French hands. Austria, still licking its wounds from its recent struggle with Prussia, was neutralized.

That left Britain, which Bismarck neutralized with a full page ad in the London Times saying Napoleon III wanted to annex Belgium. This raised the British public's anger against France to the point that they stayed out of the war. Ironically, it would be Germany's violation of Belgian neutrality in 1914 that would bring Britain into World War I.

Now all Bismarck had to do was convince the German and French people they wanted a war. The opportunity came when the king of Spain died without an heir and the Spanish offered the throne to Prince Leopold, a member of the Catholic branch of the Hohenzollern family. However, Napoleon III, terrified of a Hohenzollern Spain-Prussia alliance, hinted at war with Prussia if Leopold accepted. Leopold withdrew his candidacy in July 1870.

However, Napoleon, also determined to provoke a war with Prussia, had his ambassador to Prussia, Count Vincent Benedetti, confront the Prussian king, Wilhelm I, at Ems and demand he guarantee that no Hohenzollern would ever be a candidate for the Spanish throne.

Bismarck took the Ems Telegram, changed the tone to make both Benedetti and Wilhelm sound more belligerent than they really were, and released this version to the press. Both the German and French publics took this story as an insult to their respective nations.

Bismarck and Napoleon got the war they wanted.

The Changing Face of War in 1870

The Franco-Prussian War served as a transition between the Napoleonic and First World wars. On the one hand, like the American Civil War, generals in it were caught between the older mentality of massed human wave assaults and the greatly enhanced range and killing power of modern rifled muskets and artillery.

On the other hand, rather than understanding the destructive power of modern weapons, generals in World War I would follow Prussia's strategy of a rapid war of movement, thinking it would again produce victory.

They were wrong.

Instead, they should have seen that French blundering in 1870 had lost the war as much as Prussian strategy won it.

And they should have paid attention to the disastrous results of the few frontal assaults made against French soldiers with modern weapons in prepared positions.

Unfortunately, the generals as usual, were preparing for the last war instead of the next.

And, just as unfortunately, it was the common soldiers who would pay the price.

The breech-loading needle gun with a range of 600 meters had given the Prussians a decisive advantage over the relatively archaic Austrian army in 1866. However, by 1870 the Prussian rifle was virtually obsolete compared to the new French Chassepot rifle.

The French Chassepot rifle, patented in 1866, improved on the needle gun in several ways. It used a rubber gasket to seal the breech, allowing it to use all the pressure of the explosion to propel the bullet. As a result, the Chassepot's range was 1100 meters on a flat trajectory, twice that of the needle gun. However, residue from burnt paper cartridges forced frequent cleaning of the gun, so in 1874, the metal cartridge was introduced, which had to be ejected, but overall saved time by not having to clean the gun so often.

First used in 1867 against Garibaldi's troops at the battle of Mentana, the Chassepot inflicted both more numerous and severe casualties than those inflicted by the muzzle-loading Minie rifle. In the Franco-Prussian War, the Chassepot was responsible for most of the Prussian casualties,

forcing the Prussian soldiers to try closing the gap to get within range of the French and taking horrific losses in the process.

Conversely, Prussian artillery, produced by the Krupps, outclassed its French counterparts with a much longer range. It was also breech-loaded, greatly speeding the rate of fire, and fired larger caliber percussion shells that burst on impact rather than the older way of trying to calculate when a time-fused shell would reach its target.

The Mitrailleuse, France's top secret machine gun, could fire 125 bullets/minute at a range of 2500 meters. Unfortunately, it was so top secret that French soldiers didn't know what to do with it. So, since it looked like a cannon, they often lined it up in back with the rest of the artillery where it would be completely useless.

The Franco-Prussian War (1870-1)

One thing that industrialization, and especially railroads, taught Prussian generals was that speed and mobility were vital ingredients to modern warfare. Therefore, a new concept entered military thinking: rapid mobilization. The resulting concentration of 482,000 men at the French border in 18 days gave them the decisive edge for victory. Unfortunately, that lesson overshadowed more sobering ones that both sides should have learned.

Despite these advantages, the Prussians needlessly launched assaults against the French that only produced horrific casualties such as those seen at Fredericksburg, Pickett's Charge, and Cold Harbor during the 1860s in the American Civil War. Ironically, Europeans had followed the American war with great interest, sending military observers to see first hand what modern weaponry could do. However, after taking heavy losses in such assaults, the Prussians did learn to use their superior artillery to bludgeon the French into retreat.

Rapid Prussian mobilization and concentration of its forces led to a series of quick victories against the much more disorganized French. In a sense the war was decided almost before the fighting began as the Prussians deftly

outflanked, outmaneuvered, and trapped one French army inside the fortress of Metz while surrounding Napoleon with another one at Sedan.



However, at this critical time, the French commander at Sedan was wounded. The new commander, Durcot, ordered a retreat, but another general, De Wimpffen, produced orders putting him in command, and he wanted to attack. Supposedly, the French army went through 8 commanders in four hours. By the time the situation was sorted out, the trap was closed and the entire French army, along with Napoleon III, was surrounded. Meanwhile, the Prussian artillery on the surrounding heights was mercilessly pouring shot and shell on the helpless French soldiers below.

French cavalry, trying to break the surrounding ring of Prussian forces, made three charges over broken ground against a devastating hail of fire from Prussian rifles and artillery. A French cavalry officer, when asked after the second disastrous charge if he could mount another attack, replied: "As often as you like mon general, so long as there's one of us left."

After the third charge had been shattered, Prussian officers held their fire and saluted the bravery of their foes, although not necessarily the intelligence of the men who ordered the charges.

Finally, after suffering 17,000 casualties, Napoleon ordered the entire French army, some 104,000 men, along with their guns and equipment, to surrender. The emperor, who was ill, contemplated suicide in the aftermath of this disaster, which also had put an end to his rule.

Three weeks after Napoleon's surrender at Sedan, the French army driven into Metz also

surrendered. By the end of September, there was no effective French army in the field.

After the devastating defeats in the early weeks of the war, very much like their situation against Germany in 1940, French resistance stiffened against the Prussian advance. At Chateaudun 1200 French National Guardsmen held off 5000 Prussians for 9 hours. Unfortunately, also like in 1940, it was too little too late.

Complicating the war were the franc-tireurs (free shooters or freedom fighters), civilians who waged guerrilla warfare against the Prussians. To the Germans with a narrower view of what constituted legitimate combatants, this was a violation of the laws of war.

Never knowing where and when the next attack might come made German soldiers paranoid and prone to acts of brutality either to avenge or to prevent more such attacks. Memories of the franc-tireurs of 1870 would carry over to World War I, when invading German forces would commit pre-emptive acts of brutality against Belgian and French civilians. This would seriously damage Germany's international reputation through much of the twentieth century.

Paris Under Siege (September, 1870-January, 1871). With one French army captured at Sedan and another trapped in Metz, Prussian forces advanced rapidly on Paris and had it under siege by September 19. However, Paris was a formidable target, being surrounded by a 33-foot wall, a moat, a ring of 15 forts, and the will and means to produce 300,000 bullets and 21 cannons a day during the siege.

In addition, France had soon raised 350,000 national guardsmen. Despite their inexperience these raw recruits, gave the Prussians some of the hardest fighting of the war, although they still generally gave way before the more battle-hardened German soldiers.

During the siege of Paris, the American ambassador was the only person in the city allowed to get his weekly copy of the London Times, but only on the condition he wouldn't

share any news with the Parisians. At times crowds of Parisians, desperate for news of the outside world, would surround the American embassy, yelling "We gave you Lafayette...in return...we ask for only one copy of an English newspaper."

One way that Parisians maintained some contact with the outside world was through hot air balloons. During the siege some 65 hot air balloons were released carrying 2.5 million letters. Of those 65 balloons 45 made it. One escapee, Leon Gambetta, raised 100,000 troops and briefly retook Orleans from the Prussians. Unfortunately, his radical views disagreed with those of the new French president, so they didn't join forces to save Paris.

As food started running short, the authorities started slaughtering horses and zoo animals for their meat. In fact, Paris was the site of the first public zoo, an outgrowth of the menagerie of animals the kings had kept at Versailles. It even had a lion that had adopted a dog as its baby. The infamous French taste for horsemeat also supposedly came from this siege.

While only six people starved outright during the siege, diseases resulting from malnutrition claimed another 4800 lives and left others as orphans. Rich Parisians continued to eat well during the siege thanks to a thriving black market. For the poor there was rat meat, although at least one vendor advertised a dish of rats cooked in a rich cream sauce. Only in Paris.

The long-range artillery from the Kruppworks allowed the Prussians to constantly bombard the city. However, these bombardments claimed only 97 lives, and Parisians came to view the nightly bombardments as a sort of fireworks entertainment. Mothers even threatened misbehaving children with not letting them view the bombardment that night. Nevertheless, the bombardment and war did do their damage to Paris and its surroundings.

As the siege wore on, various schemes for saving Paris emerged. Several women claiming to be "reincarnations" of Joan of Arc came forth to

save France. One man suggested attaching a giant hammer to a hot air balloon and dropping it on German headquarters at Versailles. Parisian women prepared to defend themselves against the amorous advances of German soldiers by wearing thimbles with poisoned needles with which they could scratch their molesters.

Much of what made this siege so difficult was the horrible wintry conditions in which it often took place. More soldiers on both sides died from the cold and disease than from battle.

One French army under General Bourbaki made a grueling winter march to seek the safety of neutral Switzerland. In February 1871, some 80,000 French soldiers made it there and were interned for the rest of the war. Bourbaki attempted suicide by shooting himself in the head, but survived.



The Second Reich. As casualties mounted and the siege of Paris dragged on through the winter, Bismarck became increasingly nervous about the German public's support for the war. Therefore, in January 1871, he crowned Wilhelm as Kaiser (emperor) at Versailles and declared the unification of Germany as the Second Reich (the First Reich being the Holy Roman Empire). Bismarck saw Versailles as the only place available for this ad hoc ceremony in the middle of the siege, and probably didn't do it to rub the French people's noses in the dirt. Still, he must have realized the effect it would have on them.

Soon afterwards, Paris finally surrendered. The terms of peace were not kind to France: the surrender of Alsace and Lorraine and payment of a huge indemnity. In addition, on January 28, 1871 the French had to endure the humiliation of the Prussian army marching in triumph through

Paris. Parisian women later scrubbed the streets to rid them of the "Prussian filth."



The Paris Commune (March-May, 1871). The Third Republic, the government created after the surrender of Paris was headed by a very conservative faction led by the historian, Adolf Thiers. This sparked a popular uprising by radicals in Paris who formed the Paris Commune.

As a further humiliation, Germany forced the new French government to use its army to besiege Paris a second time to root out the insurgents.

Some historians, especially Marxists, have viewed the Paris Commune as the first socialist uprising. Upon closer inspection, the Commune's agenda, although radical, wasn't all that socialist or Marxist in nature.

During this second siege of Paris, both sides resorted to escalating levels of executions of prisoners. It started with the Paris Commune executing two captured government generals by firing squad. After retaliatory executions by the government, the Commune executed 51 more prisoners in retribution. Before it was over, reprisals by the Paris Commune claimed more victims than did the Reign of Terror in 1793-4

Even after government troops fought their way into the city, it took another week of hard fighting, known to the French as "Bloody Week", before the Commune's resistance finally collapsed.

Aftermath. The Franco-Prussian War was a bitter pill for the French to swallow. In addition to the defeat and damage France sustained, there was the humiliation of being replaced as the top continental power. The French saw themselves

as innocent victims wrongly crucified by the barbaric Germans.

By the same token, Germans, seeing themselves as disciplined and civilized, viewed the French as decadent. Even Bismarck's wife (who had lost a son in the war) thought all the French should be shot.



French art from this time, such as Edward Munch's *The Scream*, often had a quasi-mystical nature that gave French nationalism an almost religious aura.

For decades, France would be obsessed with revenge against Germany. Unfortunately, the price of revenge, when it came, would be much worse than the cost of defeat had been in 1871.

Revived Anti-Semitism and the Birth of Zionism

As Jews in Europe were emancipated from repression and legal restrictions in the 1800s, many of them joined mainstream society, making them both more visible and vulnerable. However, as the world economy tightened in the late 1800s, anti-Semitism began to surface again, as seen in the cartoon below about Tsarist persecution of the Jews. One man, Theodor Herzl advocated Jews moving back to Palestine to reclaim their homeland. Thus began the Zionist movement, which would start with a trickle of settlers moving to Palestine and become a floodtide after World War II and the Holocaust.

Late 19th Century Art



Vincent van Gogh, *Starry Night*, 1888

Once the Impressionists had broken loose from the confines of traditional art, other artists followed suit. However, rather than taking the Impressionist approach to painting, they explored other avenues. As a result, going along with the rapid technological changes taking place, there was a flurry of new art movements: the "scientific" approach of Seurat, the geometric approach of Cezanne, the emotional and psychological approaches of the Expressionists and Symbolists, the more nostalgic approach of the Pre-Raphaelites, and the more sensuous and commercialized character of Art Nouveau. Together, these are often lumped together generically as the Post-impressionists, although this gives the false impression of some sort of unified movement in art, while in reality art had become, and remains, too fragmented to lump under any one label.

Georges Seurat (1859-91) was the most famous of the Pointillists, who tried to apply a scientific approach to painting by applying individual dots of paint instead of brushstrokes to the canvas. To get different colors, such as purple, other colors of dots, such as red and blue, would be interspersed with one another. Seurat used upward sweeping lines to indicate upbeat feelings and downward sweeping lines to indicate the opposite. Since this was such a time consuming process, Georges Seurat, completed a relatively few paintings compared to the much more prolific Impressionists.



Georges Seurat, *La Grande Jatte*, 1884

Paul Cezanne (1839-1906) was an early member of the Impressionist movement who soon pursued his own artistic direction. In 1886, he was so hurt by criticism saying his canvas was "one of those weird things evolved by hashish", that he left Paris and lived as a virtual hermit for

several years. Much of his approach was to break down and portray a nature scene or still life as a combination of geometric shapes (squares, circles, triangles, etc.). As he put it, saying the painter has both an eye and a brain and should use the two together, “Reproduce nature in terms of the cylinder and the sphere and the cone.” During his career, he did some 30 paintings of Mt Ste. Victoire using the geometric approach. This approach would have great influence on Pablo Picasso and the Cubist movement in the early twentieth century.



Paul Cezanne Mt Ste. Victoire, 1894 Paul Gauguin, Day of the Gods, 1894

Paul Gauguin (1848-1903). Although Gauguin was French born, he largely grew up in Peru. After returning to France and a successful business career, he took up painting as a hobby. He would walk around Paris with an outlandishly dressed Javanese woman and a monkey on his shoulder. Gauguin left Paris for the simplicity of Brittany, which inspired his distinctive primitivism style. Supposedly influenced by Gothic stained glass, his art is best known for its solid fields of color and absence of shading. As he put it: “A meter of green is greener than a centimeter if you wish to express greenness.” Later, feeling more at home in the South Seas, he moved to Tahiti where he spent his last 10 years untainted by “sick civilization”, doing paintings of South Seas life and culture. He summed up his approach to life as: “Eat well, kiss well, work ditto, and you’ll die happy.”

Vincent Van Gogh (1853-90). Van Gogh was one of the more tragic artists in history. After failing at a number of jobs, he turned to art, his goal being to sell paintings for forty cents each, cheap enough to brighten up poor people’s lives. Van Gogh apparently was manic-depressive with alternating periods of lethargic depression interspersed by periods of manic activity. During those periods he would paint non-stop for days

and nights at a time, fixing a candle to his hat so he work at night. He called painting “the lightning rod for my sanity.”

Starry Night (1889) was done in an asylum of Saint Remy in a “dumb fury” of staying up for three nights straight because, as Van Gogh put it: “The night is more alive and more richly colored than the day.” He painted 70 canvases in his last 70 days of life.

Van Gogh’s last painting was Wheatfield with Crows (below). Soon afterwards he went into a field and shot himself. He died two days later, his suicide note saying: “Who would believe that life could be so sad?”



Unfortunately, like so many artists, Van Gogh wasn’t appreciated in his own time and he sold only one of his 800 paintings and drawings before he committed suicide.

In 1990, 100 years after his death his portrait of Dr. Gachet sold at an auction for an unprecedented \$82.5 million.

The famous story of Van Gogh cutting off his own ear apparently started with an argument over a portrait of him by Gauguin, who was staying with him at the time. Van Gogh claimed, “Yes it’s me all right, but me mad.” Later, when they continued the argument in a café, Van Gogh threatened Gauguin with a straight razor, but failing to scare him, he slunk out of the café, cut off his ear, and gave it to a prostitute. Gauguin took the first train out of town, although the two artists were reconciled later.

Henri de Toulouse-Lautrec (1864-1901), contrary to popular belief, was not a dwarf or midget. An accident that broke both his legs stunted his growth to a height of 4’6”. Naturally, this made him quite insecure, so he led a somewhat dissipated lifestyle, consorting with the seedier elements of Parisian society, in particular dancers and prostitutes.

When he turned to painting, his art teacher called his early drawings “simply awful”, which couldn’t have helped his self-confidence any. Lautrec’s portraits tended to be caricatures, often cruel ones. Heightening this effect was his use of artificial interior lighting. He was influenced by wood block prints of Japanese artists such as Hiroshige and Hokusai in his use of different angles of view that might cut off part of a subject by moving it to the side. As he put it: “Only the figure counts. Landscape is, and should always be, only an adjunct.”

Lautrec is best remembered for his lithographs and posters, a new medium that he almost single handedly made a respectable art form, thus making art accessible to many more people. He also popularized a new kind of drink: the cocktail. Like, Van Gogh, Lautrec ended his own life.



Henri de Toulouse-Lautrec, *The Moulin Rouge*, 1892/95

The Arts and Crafts Movement was largely a reaction against Victorian over-ornamentation that borrowed indiscriminately from different periods of history. Its founder, William Morris, formed Morris and Co. in 1861 to try to revive medieval craftsmanship and splendor for everyday objects. Morris’ company and the movement it spawned produced, textiles, tapestries, stained glass, furniture, teapots, and highly decorative wallpaper.

The Pre-Raphaelites were a group formed in 1848 by Dante Gabriel Rossetti and Sir Edward Burne-Jones to protest the low standards of English art. They were admirers of William Blake (1757-1827), a visionary British artist who used asymmetry along with swirling and flame-like lines to create images that were both fanciful, and terrifying, such as *The Dream Of*

Jacob, 1808 (below left). Typically his works had biblical themes, such as scenes from the book of Revelations about the Apocalypse. His technique especially influenced the Pre-Raphaelites and Art Nouveau.



Like Morris, the Pre-Raphaelites admired the art of the Middle Ages and early Renaissance (before Raphael in 1500s). Their art often had a pessimistic world-weariness, as seen in the Virgin Mary’s expression in Rossetti’s *The Annunciation* (above right). It also captured the pessimism increasingly characteristic of European civilization in the years leading up to World War I.

John W. Waterhouse (1849-1917) was a very popular artist of the Victorian era, whose popularity has revived in recent years. He is often included as one of the Pre-Raphaelites, sharing their love of ancient and medieval history, although he was never a member of the group. Still, his paintings, such as *Hylas and the Nymphs* (1896), are probably the best-known examples of the romantic effects the Pre-Raphaelites were trying to achieve.

Art Nouveau: (1880s-1914), a “new art for a new age,” was a reaction to the depersonalization of the Industrial Revolution and the lack of original trends. It stressed sinuous over straight lines and was highly decorative, often with long twisting vines or other types of vegetation. Women were typically portrayed in a both sensuous and somewhat neo-classical way. Art Nouveau’s influences came from several directions: the early 19th century British artist, William Blake, the Arts and Crafts movement, the Pre-Raphaelites, and lithography, a technological innovation allowing mass production of high quality and relatively cheap art prints for the first time. Two noted artists in this genre were Alphonse Mucha (1860-1939)

and Toulouse Lautrec. The Art Nouveau style would experience a revival in the late 1960s in its influence on poster art advertising rock concerts.



Modernisme. The architectural counterpart to Art Nouveau, it was especially centered in Barcelona around the turn of the twentieth century, drawing upon Spanish and Moorish influences as well. Like Art Nouveau, it emphasized curving sinuous lines that had an especially striking effect when applied to architecture. The most renowned architect associated with this style was Antoni Gaudi (1852-1926), especially famous for his Sagrada Familia Cathedral (below left) on which work continues today. It is estimated to be finished between 2020 and 2030. On the right is Casa Lleo I Morera, one of a number of apartment buildings in Barcelona built using the Modernisme style.



The Symbolists, a group of writers and painters who in 1886 issued a manifesto calling for art that suggested reality as it was felt rather than observed. Their influence can be seen in the work of Gauguin, Edvard Munch, and Gustav Klimt. Two of the most famous Symbolists, were Gustave Moreau (1826-98) and Odilon Redon (1840-1916), whose *The Green Death* (1905-16) is seen here.



Gustav Klimt (1862-1918) belonged to a group of artists known as the Vienna Secession. Unlike other such groups, they accepted artists of all different styles. Their patron was Athena, goddess of wisdom and the arts. Like many other pioneering artists, Klimt was trained in classical painting and did his early work in the academic style. However, as he struck out more to define his own style, his work drew increasing criticism. Klimt's portrayal of women, in particular, scandalized many, not so much for their nudity as the independent and even empowered spirit they exhibited.

122. EUROPEAN IMPERIAL EXPANSION IN AFRICA (c.1870-1914)

***"Whatever happens we have got/The Maxim gun and they have not."*—19th century European poem. Actually, the weight of the Maxim gun limited its usefulness in conquering Africa.**

Introduction. Ever since the rise of a capitalist economy and strong nation states armed with efficient military machines (c.1500), Europe had steadily extended its power across the globe. By 1800, European and European derived colonies had extended the dominance of European culture over 35% of the globe. Up until this point, the usual explanation for European expansion was the "three G's": God, gold, and glory. Colonies in South America provided gold and silver. Those in the Caribbean produced sugar, a virtual "white gold", for European markets. West African colonies provided slaves for the Caribbean sugar plantations. And the North American colonies and India provided their governments with markets and raw materials.

In the nineteenth century the nature and motives for colonial imperialism changed dramatically. As with the Industrial Revolution, Britain also led the way in the late nineteenth century in a new wave of expansion (known as neo-imperialism) that would put European civilization in control of 85% of the globe. The classic argument explaining this phenomenon has focused on the Industrial Revolution's growing need for new resources and markets. However, this oversimplifies the case. If one looks at where European colonies expanded, in particular in Africa, one sees little economic sense in doing so. Instead, there were three interrelated causes driving Europeans to go out and virtually conquer the globe: growing economic competition as the industrial revolution spread, internal political stresses caused by industrialization, and rising international rivalries.

1) Economic causes. The 1860's were an economically unsettled time that came to a head with a depression in 1873. While all industrial countries were hurt, Britain especially was feeling the pinch. Its reliance on raw materials was damaging its balance of trade. And it was facing growing competition from newly industrializing nations, especially Germany, who had newer factories and cheaper labor.

2) Internal political stresses. Economic changes have always caused political problems, and Europe in the late 1800's was no exception. Britain in

particular was seeing a transformation of the relatively unified political party system of the pre-industrial era into a more fragmented patchwork of special interest groups: labor unions, land owners, bankers, industrialists, etc. Politicians were desperate for some new cause or ideology to unify the voters behind them.

3) International tensions. In 1871 the fragile balance of power in Europe had been radically altered by the emergence of a strongly unified Germany and Italy, the equally destabilizing process of the rapid disintegration of Ottoman power in southeastern Europe and the Middle East, and the growing rebelliousness in Ireland against British rule. The British public was especially upset by these challenges to the stability of the world they had known and by Britain's apparent inability to act effectively.

Therefore, Benjamin Disraeli, British prime minister in the 1870's, first pushed the idea of renewed imperial expansion as a way to protect vital British overseas markets, resources and jobs, enhance Britain's national prestige, and give it an edge against other European countries without colonies. Never mind the fact that these arguments were grossly exaggerated if not downright false. The lure of new markets was especially misleading since there were often few consumers in Africa and Asia who could even afford European goods. Granted, as Europe's industries diversified in the late 1800's, there was a growing need for certain resources not found in Europe, such as oil, rubber, and non-ferrous metal. However, many of the resources sought by Europeans were unnecessary luxury or consumer items like bananas, coffee, and African palm oil for soap. Despite that, Disraeli had found one issue he could exploit to unify the British voters behind him.

The British public and even Queen Victoria (who was also Empress of India) came to believe in the need for colonies, so opposing politicians conservatives and liberals alike also pushed for imperial expansion to keep voters happy. Justifying these wholesale conquests was easy enough. Britons saw themselves as bringing the benefits of Christianity and European civilization to less developed peoples. The new ideas of Darwinism, in particular "survival of the fittest", were adapted, or distorted, into Social Darwinism. This claimed that human societies, just like some animals, are better adapted to survive than others. Therefore, it was the "white man's burden" to bring his superior civilization to the inferior cultures of Africa and Asia. Social Darwinism was really little more than a polite or pseudo-scientific term for racism.

The "Dark Continent". Before 1870 Europeans had made little headway into Africa, either as conquerors or explorers, mainly because of their lack of resistance to the area's tropical diseases. This left Africa in a shroud of mystery that earned it the title of the "Dark Continent". After 1870, Europeans made rapid inroads into Africa thanks to the industrial revolution which gave them two new weapons: vaccines for combating the diseases and rifles and machine guns for combating the African natives.

Three lines of development got Europeans interested in Africa and triggered a virtual land rush there. First of all was a highly publicized expedition by the journalist, Henry Stanley to find the explorer David Livingston who had been missing for some time. Stanley's best selling account, mostly remembered for the quotation, "Dr. Livingston, I presume", especially interested King Leopold of Belgium who ruthlessly conquered and exploited the Congo (modern Zaire).

The other two lines of development concerned British expansion into Egypt and South Africa. In Egypt, the ruler's lavish lifestyle led to a growing debt and the eventual takeover of his shares of the Suez Canal by British bankers. The loss of revenue from the canal further disrupted Egypt's stability. Therefore, in order to protect the Suez Canal from native revolution, the British government took over Egypt in the 1880's. Control of Egypt led to near hysteria over the outlandish possibility that the government in Sudan could cut off the source of the Nile and turn Egypt into a desert. As a result, the British also conquered Sudan.

Britain had taken over South Africa from the Dutch in 1815 to secure their route to India. The Dutch settlers (known as Boers), unhappy with Britain's abolition of slavery in 1832 trekked inland to settle the Orange Free State and Transvaal. The Boers were left alone until the discovery of diamonds and gold prompted a rush of British prospectors into the Boer territories. Growing friction between the Boers and these newcomers eventually led Britain to take over Transvaal in order to protect British business interests there. This got the British into hostilities with various native peoples, most notably the Zulus. After some hard fighting, including the massacre of one British army by the Zulus and a desperately fought guerrilla war against the Dutch Boers at the turn of the century, the British successfully occupied the area.

In each case, one can see how involvement in one area led to involvement in other areas and so on.

Even more important was that growing British colonial power alarmed other industrializing nations who wanted their own colonies so they could keep up with Britain. Therefore, Disraeli's strategy to mobilize British public opinion also dragged other European countries with economic and political problems similar to Britain's into imperial expansion. The result was a virtual scramble for colonies in Africa and Asia.

The German Chancellor, Otto von Bismarck, held the Congress of Berlin in 1884 to establish the ground rules for all the imperialist powers involved in this land rush. (No Africans or Asians were invited.) The participants agreed to give prior notice before claiming a new colony. However, mutual distrust between the European powers often led them to be more secretive and sneaky in claiming new colonies.

As stated above, largely the same forces drove the other powers in their grab for colonies as drove Britain: a feeling of economic vulnerability that colonies would magically cure, a fear that other powers would get a head start in claiming colonies, and a need to unify the voters behind a common cause. Each country also had its own particular set of circumstances to drive it along.

In Germany, Bismarck saw colonies as more of a nuisance and drain of resources. However, the new Kaiser, Wilhelm II, fired Bismarck in 1890 and pursued an aggressive policy of building an empire (and navy to protect it) in order to claim "Germany's place in the sun." There was also concern about the emigration of Germans to non-German areas, especially America. German colonies would provide homes for emigrants and enclaves of German culture across the globe. France felt the need for a unifying cause after the humiliating defeat in the Franco-Prussian War and the unsettling economic conditions brought on by depression and huge war indemnities to Germany. Colonies would enhance its national prestige and also give it some leverage for future revenge against Germany. Italy, also newly unified in 1871, was still much more politically fragmented and economically undeveloped than Germany. Colonies would provide some focus for national pride and unity.

The partitioning of Africa was one of history's more brutal and insensitive episodes. Europeans came in and carved up Africa along arbitrary boundaries that split some tribes up and threw others together. Europeans legitimized this by having the Africans sign treaties that they did not understand the meaning of. They also used forced labor to build

railroads, etc., killing thousands in the process. By 1914, practically all of Africa had fallen prey to European aggression.

The impact of neo-imperialism was generally negative. For one thing, European colonial boundaries often cut across old tribal boundaries or combined peoples of different (and hostile) tribes. Unfortunately, when African colonies won their independence, it was according to the artificial European boundaries, thus continuing to split up some tribes while throwing other hostile tribes together. Compounding this problem in some colonies was the European policy of favoring one tribe over another, thus creating much more hostility that would be unleashed once the controlling hand of the European colony was released. In the worst-case scenarios, one ethnic group would embark on a campaign of genocide to completely exterminate another group. In 1994 the Hutus tried to exterminate the rival group, the Tutsis, in Rwanda. Although they failed in completely wiping them out, an estimated one million people died before the situation was brought under control.

There was also the humiliation and suffering Africans were subjected to. While Europeans did work to abolish slavery, they still killed thousands through forced labor (slavery by another name) in order to complete their building projects and bring the "benefits" of "superior" European civilization to Africa. For example, Europeans would impose their agricultural techniques on Africans and, in the process, ruin the soil, which was better suited for the traditional slash and burn agriculture. They would teach African school children poems about daffodils, even though Africa had no daffodils. In the end, this cultural policy backfired against Europeans. Many colonial subjects went to Europe to get educated and brought back the dangerous ideas of liberalism, nationalism, and Marxism. That, and the fact that colonials serving in European armies picked up on European firearms technology, helped lead to the ultimate downfall of the European colonial empires.

Even for the European powers, colonies were often more of a liability than an asset. For one thing, many colonies cost more to rule than they brought back in revenues and resources. Second, as the number of available places to take over decreased by 1900, tensions rose between the European powers wanting to take those places. True, by 1914, European or European derived powers controlled 85% of the globe and were definitely sitting on top of the world. But the beginning of the

end was near as the specter of the First World War loomed on the horizon.

Soap and the "White Man's Burden"



"The first step towards lightening the White Man's Burden is through teaching the virtues of cleanliness. Pears' Soap is a potent factor in brightening the dark corners of the earth as civilization advances, whilst amongst the cultured of all nations it holds the highest place—it is the ideal toilet soap."

The White Man's Burden by Rudyard Kipling (1899) expressed the rationalization that it was the "burden" of Europeans to bring civilization to "inferior" peoples around the globe:

***Take up the White Man's burden--
Send forth the best ye breed--
Go bind your sons to exile
To serve your captives' need;
To wait in heavy harness
On fluttered folk and wild--
Your new-caught, sullen peoples,
Half devil and half child***

***Take up the White Man's burden
In patience to abide
To veil the threat of terror
And check the show of pride;
By open speech and simple
An hundred times made plain
To seek another's profit,
And work another's gain.***

***Take up the White Man's burden--
The savage wars of peace--
Fill full the mouth of Famine
And bid the sickness cease;
And when your goal is nearest
The end for others sought,***

*Watch Sloth and heathen Folly
Bring all your hope to naught*

*Take up the White Man's burden--
No tawdry rule of kings.
But toil of serf and sweeper--
The tale of common things.
The ports ye shall not enter,
The roads ye shall not tread,
Go make them with your living
And mark them with your dead!*

Egypt and the Sudan

*"We don't want to fight, but by jingo if we do
We've got the ships, we've got the guns, and got
the money too"*

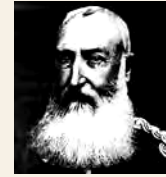
Britain's interest in Egypt lay with the Suez Canal, which opened in 1869. Originally, this canal was a joint venture between France and Egypt. However, the ruler of Egypt fell into debt and had to borrow money from British banks, using his shares in the canal as collateral for the loan. Unfortunately, he defaulted on the loan, and Britain took over the Egyptian half of the canal.

However, Egypt was rapidly destabilizing, so Britain annexed it as a colony to protect its investment in the Suez.

All seemed safe until an engineer named Sam Baker published an article showing how Sudan, Egypt's southern neighbor, could cut off Egypt's lifeline: the Nile. As ridiculous as this fear was, it prompted Britain to take over Sudan as well.

In 1898, the Sudanese, led by a religious leader known as the Mahdi, rebelled against British rule. At Omdurman (9/2/1898), 20,000 British and Egyptian troops, supported by heavily armed gunboats, shattered the suicidal assaults of the Mahdist forces. The rebels lost 10,000 men as opposed to only 48 British soldiers.

African Holocaust: Leopold II and the Congo



"I do not want to risk...losing a fine chance to secure for ourselves a slice of this magnificent African cake."--Leopold II

Leopold II of Belgium (above) was an unhappy king. Having only limited power over a tiny realm, he dreamed of ruling a vast empire. After looking around a bit, he settled on the Congo. He waged a skillful public relations campaign to promote his "Congo Free State" as an effort to drive Arab slave traders from Africa. He even designed a flag for his Congo Free State, a yellow star, representing freedom, inside a blue field. However, this was only a ruse.

The new Congo state is destined to be one of the most important executors of the work we intend to do, and I express my best wishes for its speedy development, and for the realization of the noble aspirations of its illustrious creator."-- Otto von Bismarck



Enter Henry Stanley (above), a journalist and explorer famous for tracking down the "presumed" Dr. Livingstone, (a fairly safe assumption since they were probably the only two white men in Africa's interior). Leopold hired Stanley as his agent to swindle unwitting natives, unfamiliar with European contracts, treaties, and alcohol, out of their lands. Failing that, he would often just kill them.

A typical Treaty handing over African land to Leopold II: Chiefs of Ngombi and Mafela, in return for "one piece of cloth per month to each of the undersigned chiefs, besides present of cloth in hand," they promised to "freely of their own accord, for themselves and their heirs and successors for ever...give up to the said Association the sovereignty and all sovereign and

governing rights to all their territories...and to assist by labor or otherwise, any works, improvements or expeditions which the said Association shall cause at any time to be carried out in any part of these territories....All roads and waterways running through this country, the right of collecting tolls on the same, and all game, fishing, mining and forest rights, are to be the absolute property of the said Association.”. Most African leaders who signed these treaties couldn't read, had a completely different concept of land ownership, and were plied with liquor before signing.

Leopold's men then proceeded to rape the land of its riches, especially ivory, ruthlessly using forced labor to get the job done. "A file of poor devils, chained by the neck, carried my trunks and boxes toward the dock...There were about a hundred of them, trembling and fearful before the overseer, who strolled by whirling a whip. For each stocky and broad-backed fellow, how many were skeletons dried up like mummies, their skin worn out...seamed with deep scars, covered with suppurating wounds...No matter, they were all up to the job."--Congo state official

"It was most interesting, lying in the bush, watching the natives quietly at their day's work. Some women ...were making banana flour by pounding up dried bananas. Men we could see building huts and engaged in other work, boys and girls running about, singing.... I opened the game by shooting one chap through the chest. He fell like a stone...Immediately a volley was poured into the village."--Henry Stanley

"Six shots and four deaths were sufficient to quiet the mocking."--Henry Stanley

What Leopold and Stanley carried out was one of the worst cases of exploitation and atrocities in history. Joseph Conrad grimly portrayed it in Heart of Darkness.

The Matadi-Leopoldville Railroad. One of Leopold's first projects for the Congo was a railroad for hauling out ivory. The line from Matadi to Kinshasa/Leopoldville was 366 kilometers long. The initial stage through the

rugged hills around Matadi was especially costly in lives, giving rise to a legend that every sleeper represented a human life.



Ivory. Before plastics and the petrochemical industries of the 20th century, ivory served as an all purpose material for making a wide variety of products ranging from dentures to cue balls and piano keys. At ivory gathering stations company representatives would pay natives virtually nothing for ivory that they would then turn around and sell for outrageous profits in Europe.

Then Leopold discovered another resource that could bring in even bigger profits, albeit with much more labor and suffering. That product was rubber.

Rubber was harvested by climbing the rubber tree, tapping into it and letting the sap run all over the slave's body, where it would congeal. Later he would peel the rubber off his body, taking any body hair with it. Rubber harvesters were given impossible quotas to fill each month. In addition to enduring the hardships of gathering rubber in the jungle, many of them were killed by wild animals. Meanwhile, Leopold's men raped the women kept hostage to force their husbands to go and gather rubber rather than run off. Villages were often burned and converted into rubber plantations, it being easier to clear villages than deeply rooted jungles.

"The station chief selects the victims....Trembling, haggard, they lie face down on the ground...two of their companions, sometimes four, seize them by the feet and hands, and remove their cotton drawers....Each time that the torturer lifts up the chicotte*, a reddish stripe appears on the skin of the pitiful victims, who, however firmly held, gasp in frightful contortions....At the first blows the

unhappy victims let out horrible cries which soon become faint groans....In a refinement of evil, some officers, and I've witnessed this, demand that when the sufferer gets up, panting, he must graciously give the military salute." -- Stanislas Lefranc, Belgian prosecutor

* Chicotte a particularly vicious type of whip made from rhinoceros hide, used as the primary instrument of punishment.

Many natives lost their hands, either because their wrists were tied too tightly or company militia cut them off to claim them as killed and get a reward.

Below, a father looks at the severed hand and foot of his daughter



Leon Rom was the most likely real life model for Conrad's Mr. Kurtz in Heart of Darkness. Along with displaying a row of severed African heads around his garden, he wrote a book on African customs, painted portraits and landscapes, kept a butterfly collection, and killed elephants for trophies.

In 1904, Leopold's bubble burst. A shipping clerk named Edmund Dene Morel noticed how vast loads of ivory and rubber were coming from the Congo Free State and only guns and ammunition seemed to be going back there in payment. Putting 2 and 2 together, he blew the whistle on Leopold and waged a tireless campaign to get the Congo taken from Leopold.

A contemporary cartoons, showed Leopold discussing atrocities with the Ottoman Sultan, whose massacre of the Armenians was the first major case of genocide in the twentieth century. The sultan assures Leopold the public will soon lose interest and do nothing about the Congo.

In this case the sultan was wrong. The Belgian government took the Congo from Leopold in 1908.

Overall, the atrocities in the Congo killed an estimated 5 million Africans, a disaster sometimes referred to as the African holocaust.

*Listen to the yell of Leopold's ghost
Burning in Hell for his hand-maimed
host.
Hear how the demons chuckle and yell
Cutting his hands off, down in Hell.
Listen to the creepy proclamation
Blown through the lairs of the forest
nation,
Blown past the white-ants' hill of clay,
Blown past the marsh where the
butterflies play --
"Be careful what you do,
Or Mumbo-Jumbo, God of the Congo,
And all the other Gods of the Congo,
Mumbo-Jumbo will hoo-doo you ..."
-- Hoo, Hoo, Hoo by Vachel Lindsay*

"Monsters exist. But they are too few in number to be truly dangerous. More dangerous are...the functionaries ready to believe and to act without asking questions."-- Primo Levi, Auschwitz survivor

The British Conquest of South Africa



*"I would annex the planets if I could"--
Cartoon from Punch showing Cecil
Rhodes straddling the length of Africa*

The Zulus were one of the most formidable opponents facing the Europeans in Africa, being numerous, warlike, mobile, and organized. In 1879, they ambushed the British at Isandlwana (above), winning one of the few victories won by indigenous peoples against European armies during this period. After this, however, the British brought in overwhelming firepower and crushed the Zulus.

Dressed to rule. Having defeated the Zulus, the British reinstalled their king, Cetewayo as a client king in 1883, dressing him in a European coat to symbolize where his power really came from. This became a common practice by European conquerors who often ruled through local leaders.

Cecil John Rhodes was a British diamond-mining magnate in South Africa and one of the most aggressive imperialists of the age. He made his fortune from the De Beers Diamond Company, which cornered the world diamond market by 1880 and still controls 40% of the world's diamond supply. As he expanded his holdings, he founded the state of Rhodesia, later renamed Zimbabwe and Zambia. Among his ambitions was to build a railroad the length of Africa from "the Cape to Cairo. British-Boer tensions especially escalated after a new discovery of diamonds in 1886, which led to a rush of "outlanders" into the Boer republics. Finally, in 1899, the Boer War (1899-1902) broke out.

Concentration camps (below) were one of the more unfortunate innovations from the Boer War. The British would confine civilians in them to keep them from providing Boer forces any help. Over 28,000 Boer women and children and 20,000 blacks, as many as half the inmates would die from these camps' awful conditions.

Sometimes native reactions to European incursions would go to self-destructive extremes. For example, Xhosa prophets in South Africa told their people that to please the gods and improve their lot, they must destroy their cattle and crops. Consequently, 400,000 cattle were destroyed and some 40,000 Xhosa people died.

The Scramble for Africa



A cartoon showing Britain as an octopus, grabbing parts of every continent with its tentacles. In the 1880s, other European countries wanted their "fair" shares as well.

The success of Britain and Leopold in their colonial ventures led other European powers into a land rush known as the Scramble for Africa. In 1884 Bismarck hosted the Congress of Berlin to lay down ground rules for this land grab.

No Africans were invited.

Except for Ethiopia, the last vestiges of free Africa were gone by 1914.

French involvement in Africa actually began with the conquest of Algeria in 1836. Later French conquests in West Africa would build upon this base, as useless as it was to French interests. The Algerian war for independence in the 20th century would be a long and bitter struggle that would make French efforts to rule there seem even more pointless.

Madagascar was another target of French aggression. However, their invasion in 1895 lingered too long in the lowlands building roads to support its army and was hit hard by malaria. This forced them to abandon their cumbersome army in favor of a more mobile one of 1500 men.

By contrast, the French had used gunboats on the Oueme River to invade Dahomey in 1892. Rivers, while providing the best invasion routes, were also more susceptible to the spread of tropical diseases.

Most of France's colonial territory consisted of desert lands in the Sahara. Probably the most valuable resource they gained from these

conquests was manpower for the armies. The French, with fewer people to spare for emigration, especially had to rely on native troops to fill the ranks of their colonial armies as well as filling in the trenches on the Western Front in World War I, where Europe's colder climate caused as much suffering for them as the tropical conditions of Africa did for Europeans.

As opportunities for new lands to colonize dried up, competition increased for increasingly barren lands. Such was the case with the Fashoda Crisis between France and Britain in 1898 over a barren patch of the Eastern Sahara.

Largely in reaction to growing German naval and colonial ambitions, the two countries avoided open war whereby Britain got East Africa and France got a huge barren stretch of the Sahara known as French West Africa.

This agreement also paved the way for the Entente Cordiale in 1904 of Britain and France against Germany in World War I.

Also contributing to rising tensions were two crises (1904 and 1911) between Germany and France over Morocco . While on the surface Kaiser Wilhelm II was posing as champion of Moroccan liberties, his actions only served to alarm both France and Britain, driving them closer into an alliance that would fight Germany in World War I.

Germany, as a late-comer to the colonial game, also found little that was worthwhile to colonize in Africa. One colony was German Southwest Africa (modern Namibia), which became notorious for the brutal suppression of a revolt (1904-7) by the Herero and their virtual extermination as a people. Some have described this as the first case of genocide in the twentieth century and a blueprint for the Holocaust in its use of concentration camps and bizarre medical experiments, such as sterilization of subjects and injecting them with diseases like smallpox and typhus.

Ethiopia was the one African country to successfully resist European invasion, defeating

the Italians at Adowa in 1896. Ironically, the Ethiopians had little food and would have been forced to disband if the Italians could have delayed battle a few more days.

The Ethiopians' victory was the result of their leaders seeing what was happening elsewhere and arming themselves with European guns. Despite their success here, the Italians would be back in 1935 and conquer Ethiopia.

123. BRITISH RULE IN INDIA (c.1600-1947)

Introduction. It has been said that the British Empire was picked up in a "fit of absence of mind." Nowhere was this more true than in the case of India which gradually came under British rule, not by the efforts of Britain's government, but by those of the British East Indies Company, founded in 1599 by a group of merchants in search of nothing more than "quiet trade." However, circumstances would thwart these peaceful intentions, and over the next 250 years the British would find themselves more and more in the role of conquerors and governors than traders. Not only would the British have a profound effect on India's history, but the "crown jewel of the British Empire" would also affect Western Civilization. This is reflected in such English words as bungalow, verandah, punch, dungarees, and pajamas, such customs as smoking cigars, playing polo, and taking showers, as well as more profound influences in the realms of religion and philosophy.

Company expansion (1601-1773). Two main lines of development worked to bring the British East Indies Company to India and make it a power there. For one thing, by 1600, Portugal was losing control of the East Asian Spice trade. Therefore, in 1601, the British East Indies Company started sending ships to the Spice Islands to gain a share of this trade. At this point, there was no intention of even going to India, let alone of conquering it, since the Mughal Dynasty had a firm grip on the subcontinent. However, the Dutch also had designs on the spice trade and rebuffed any British efforts to take part in it. As a result, the British East Indies Company gained the right to set up trading posts along the coast of India. Later, some of these trading posts would grow into major cities such as Madras, Bombay, and Calcutta.

The other factor pushing the British East Indies Company toward conquest had to do with the Mughal Empire. This dynasty had ruled most of India peacefully and tolerantly for a century since the 1500's. However, during the reign of Aurangzeb (1658-1707) all that changed as he started persecuting Hindus. Not only did this trigger centuries of religious strife that still continues, it also began the decline of the Mughal Empire, which suffered from weak and corrupt government from this time on. The resulting

turmoil forced the British East Indies Company to defend its trading posts against local princes, brigands, and a new European intruder, France.

The French, to compensate for the lack of European manpower so far from home, initiated the strategy of training and arming native recruits (*sepoys*) like European armies. Such forces were so effective that local princes would trade large tracts of land for French trained sepoys, thus giving the French control over much of Southern India. In response to this new threat, the British responded in kind by training their own sepoys. By the end of the Seven Years War (1756-63), British naval superiority and sepoys under the leadership of Robert Clive had virtually ended French involvement in India. Clive dramatically demonstrated the effectiveness of European trained sepoys at the battle of Plassey (1757) when his army of 2800 British soldiers and sepoys routed a Bengali army of 100,000 men. Clive's victories over the Bengalis and French made the British East Indies Company a major power in India, able to install its own candidate on the Mughal throne and claim the wealthy province of Bengal for itself. British dominance resulting from these victories had three main effects.

First, British power, plus the fact that their "honorable masters" in England were 7000 miles and nine months travel away, left India wide open to exploitation by the company and its employees. Many British took full advantage of the opportunity to "shake the pagoda tree", as they called the collection of "gifts" from grateful local princes (*nawabs*). While a noble in Britain could live well on £800 a year, even minor company employees were making huge fortunes. One merchant was given a profitable saltworks with 13,000 employees while another was given his own mint. A certain Mr. Watts was awarded £117,000 for bravery at the battle of Plassey. And Clive himself received £211,500 for installing one nawab and another £27,000 a year from another grant. Such opportunities for making quick fortunes unleashed a flood of applicants back home for service in India, some applications being accompanied with bribes of up to £2000. Newcomers from England were often shocked when first encountering their colleagues already in India, since they typically mixed freely with the natives and had adopted their customs, food, and clothing. Service in India had its risks for the British, mainly tropical heat and diseases. As

one local proverb put it, "Two monsoons is the age of a man," indicating that few Europeans survived conditions in India more than two years. Bombay was known as "the burying ground of the British".

Growing parliamentary control and rising tensions (1778-1857). However, while company employees who survived service in India were making their fortunes, the company's loose management was costing it a fortune, forcing it to apply to the Bank of England for a loan in 1773 in order to avoid bankruptcy. As a result, Parliament exercised increasing control over the company, establishing governors-general to oversee its activities. This led to a succession of governors with different attitudes and policies. Some governors, such as Warren Hastings (ruled 1778-88) were known for their tolerance of and willingness to learn about the native languages and cultures and to give Indians posts in their government. However, other governors, such as Lord Cornwallis (1788-98), reversed many of these tolerant policies and dismissed most native Indians from higher posts in the administration. Getting into the nineteenth century, tensions grew between two factions: one advocating tolerance and respect for Indian culture and another claiming the superiority of European civilization over that of India. This created a growing gap between the British and Indians that also fostered growing discontent.

Two other developments in the 1800s led to growing unrest among Indians. One was the growing number of Christian missionaries coming to India to preach Christianity, which clashed with the more flexible beliefs of the Hindu majority and the strong beliefs of Indian Muslims. Secondly, the British were bringing in modern technology (especially railroads) and business methods, which disrupted the traditional, slower paced culture and economy of India.

Things came to a head with the Great India Mutiny in 1857. Sparking it was a misunderstanding about what kind of grease was used on the bullets for the sepoy's new Enfield rifles. Muslim troops thought pig grease, which they abhor, was being used, while Hindu troops thought the British were using grease from cows, which they hold sacred. The resulting mutiny developed into a serious rebellion that the British finally managed to put down. However, this was the final straw as far as the British government

was concerned, assuming direct control over India in 1858 and eventually dissolving the British East Indies Company. Just as one British queen, Elizabeth I had signed the charter forming the British East Indies Company some 260 years earlier, so another queen, Victoria, signed it into extinction. Ironically, its career had started with a group of merchants in search of nothing more than "quiet trade." For the next ninety years, direct British rule would prevail in India.

From the British Raj to independence (1858-1947). Britain ruled about 60% of India directly and the other 40% indirectly through native princes who followed British policies. During their time in India, the British developed tea and cotton agriculture and coal and iron industries. In fact, by 1940, the Tata Iron Works was the world's largest Iron factory. Likewise, the British continued developing India's infrastructure with more railroads and telegraph lines, so that by 1900 India had the longest railroad in Asia. British administration and bureaucracy were efficient, as was the British style education system Britain established.

However, even these developments contained the seeds of problems for British rule. As before, the new industries, railroads, and telegraphs, however progressive they may have seemed to the British, disrupted the traditional culture and economy of India. By the same token, however efficient the bureaucracy was, there were large gaps between the higher ranking British and lower ranking Indians that carried over to society in general. Increasingly, Indians were getting tired of their second-class status and worked increasingly for independence.

The Indian National Congress, founded in 1885, led the independence movement. At first, its goal was to gain more rights for Indians and more say in the British administration. However, as its power grew in the twentieth century, it agitated increasingly for complete independence. This led to a parallel, but somewhat separate independence movement of Muslims in India who feared being a minority in a Hindu-dominated state. Therefore, they wanted a separate independent Muslim state in the northwest.

World War I (1914-18) and World War II (1939-45) further catalyzed India's push for independence, since Britain had to rely heavily on Indian recruits

to fill its ranks. In return, Britain promised more political concessions, thus weakening its hold on India, encouraging more demand by Indians, and so on.

In 1920, a new leader, Mohandas Gandhi emerged as the voice of the Indian National Congress. Educated in both traditional Indian culture and British schools, Gandhi developed very effective non-violent tactics of resistance while protesting British policies. The British, not wanting to risk the bad publicity a violent reaction could generate, had to give in to Gandhi time after time. Therefore, at the end of World War II, Britain promised independence for India. Unfortunately, this revived the issue of whether there would be one large Hindu-dominated state or a separate Muslim state in the North, leading to violent clashes between Hindus and Muslims broke out. Finally, in 1947 Britain the region between Hindu India in the South and Muslim Pakistan in the Northwest that also controlled a separate territory, Bangla Desh, in the Northeast. Despite heroic efforts to keep the peace by Gandhi (who was killed by one of his Hindu followers in 1947), tensions between Hindus and Muslims have continued to the present day and still threaten the peace and stability of South Asia.

Cigars, Polo, and Thugs:

India's Impact on the English Language

Several words in our language reflect Indian influence from the time of the Raj (British rule). Among them are Cigar, polo, shower, bungalow, punch, dungarees, and thug.

The English word thug comes from a Hindi word meaning thief or con-man, but also refers to a group known as the Thuggees who infiltrated caravans, winning their confidence, sometimes over hundreds of miles of travel, before strangling them with yellow scarves (possibly from their turbans) and robbing them. Groups of Thuggees could be fairly large and last for generations, with rites of initiation for new members. Many or most groups seem to have been devoted to the Hindu goddess, Kali, their victims supposedly being seen as sacrifices to the deity.

Sometimes large groups would infiltrate caravans bit by bit to avoid alarming travelers.

By the same token, the Thuggees needed to kill all the travelers quickly to keep word of their existence from getting out. The Thuggee movement lasted from the 1600s to the 1830s when the British systematically eliminated it. Estimates of the numbers of their victims vary from 40,000 to 2,000,000.

Medicinal Uses of Spices

Elizabeth I (1557-1603) chartered The British East Indies Company (BEIC) in 1599 to pursue "peaceful trade" in search of spices for use as medicine as well as food. Nutmeg was used to treat rheumatism, while cloves supposedly would relieve toothaches and bad breath. Suppliants at the Chinese were required to chew cloves to clear their breaths before gaining an audience with the emperor. Peppers imported from India would be mixed with wine to ease stomach pain. The warming qualities of peppers could also supposedly relieve the symptoms of excessive cold humors, such as too much phlegm (as in a cold). Other exotic spices, such as ginger, cinnamon, cassia, malabathrum, galbanum, cardamon, nard, pepper, frankincense, myrrh and saffron, would be used in various combinations against venomous bites.

In addition, asafetida, cardamom, cloves, ginger, mace, nutmeg, pepper, saffron, and vanilla reportedly had aphrodisiacal properties. This tradition continues even today, as such spices are used in massage oils and incense under the modern title of aromatherapy.

Cities of the Raj

Among other things, the British had a significant impact on India's urban landscape, in particular the cities of Bombay (modern Mumbai), Calcutta, and Madras (modern Chennai), all three of which had had humble beginnings as Company outposts.

Bombay was originally a barren island leased in 1661 from Charles II for £10 a year. (Charles had gotten it as part of the dowry for his Portuguese wife, Elizabeth Braganza.) It is currently the largest city in India and fourth largest in the world, with a metropolitan population of around 20.5 million.

Calcutta, a forsaken Bengali mudflat, had a harbor with a treacherous approach by way of the Hooghli River. Originally known as Ft. William (and later Calcutta) it would grow into a city of 10 million. In 1639 the company acquired Madras, which was then a five-mile long strip of coast with no harbor.

Sepoy

As the Mughal Empire fell apart and India destabilized, European traders increasingly had to defend themselves and their interests. Given the small capacity of sailing ships and the high mortality rate among those making the long voyage between Europe and India, it was impractical to try bringing European recruits to India, since so many would die on the way (and many or most of the survivors would die from India's tropical conditions). The solution, first tried by the French, was the use of *sepoys*, (a corruption of *sip-ah*, the Persian word for army) who at this time were any Indian soldiers in the employ of a European power. (Today it is the designation for the rank of private in the Indian, Pakistani, and Bangladeshi armies.)



In addition, the French equipped these native Indian recruits with muskets and trained them in the drill-and-march that had made European armies so deadly. As it turned out, Indian sepoys proved as effective as Europeans using these weapons and tactics, were cheaper (especially since they didn't have to be imported from Europe), and didn't drop dead from scurvy or heat stroke before even making it to the battlefield.

The success of this French innovation quickly convinced the British East Indies Company to do the same, and sepoys became the backbone of British forces in India. In addition they would be used in other colonial wars (such as the Second

Opium War) and even World War I, when over 500,000 Indian troops would serve the British Empire on the Western Front and elsewhere.

The Battle of Plassey (1757)

The Battle of Plassey (6/23/1757) was the first major test of British sepoys and is generally seen as the beginning of the British Empire in Asia. The British commander, Robert Clive had 950 Europeans and 2100 sepoys against 50,000 troops of Siraj Ud Daulah, the Nawab of Bengal. However, Mir Jafar, commanding 16,000 of the Nawab's cavalry, had been bribed with a promise of the Nawab's throne if he would defect. So he didn't take part in the battle, leading to the rest of the Nawab's army being demoralized. So it was actually 3,100 vs. 34,000, less than 9 to 1 odds. Causing further confusion in the Nawab's army was the death of his chief general, Mir Madan.

When a heavy rainstorm hit, the British covered their powder, but the Nawab's troops didn't. Therefore, when the rain stopped, the British had all the firepower and used it to drive the Nawab's forces from the field. Siraj Ud Daulah was replaced by Mir Jafir, who later brought the Dutch in to drive out the British, but was defeated and deposed. The British East Indies Company received £2.5 million, while Clive earned £234,000. By comparison, a British noble could live a life of luxury back home on £800 a year.



Robert Clive meets his ally, Mir Jafir, after his decisive victory at Plassey

Adapting to a Foreign Environment

Thanks to the Battle of Plassey, opportunities opened up for making vast fortunes, a practice referred to as shaking the pagoda tree. Company employees developed extravagant and regal

tastes. For example ice for cooling drinks was packed in straw and sent by sailing ship from Maine. An extreme example of the luxurious lifestyle was that of the governor of Bombay who would emerge from his private quarters carried on a palanquin with forty servants led by underlings waving silver wands. A fanfare of trumpets would announce each course at dinner, with some state dinners having as many as 600 dishes. Even if you didn't die from overeating, you still might go deaf.



A British party, c.1825. It was such wild partying while ignoring Company business that drove the BEIC into debt.

Griffins, as British newcomers were known, adapted poorly to India's hostile and less than comfortable surroundings. Their daily work schedule commonly went from 9AM to noon. Afternoons were spent in eating, napping, gambling, drinking, and more drinking. Nights were spent with dancing girls, drinking, and smoking hookahs (some with opium).

“Two monsoons are the age of a man” was a proverb describing the downside of living in India, for the risks were as high as the rewards. Such things as heat stroke, malaria, cholera, snakebites, and jungle fever finished off many British in their first six months after arriving from Britain. Many others turned to heavy drinking to drown their sorrows and homesickness. Consequently, liver disease was one of the most commonly suffered afflictions.

Below: A company employee, in ridiculously heavy garb, is hosed down to keep cool.



Going native. To be fair, some British did adapt to Indian culture and conditions, adopting local dress and diet and even taking local wives

“Cleaning up” British India



Warren Hastings (above) was the first governor general of the company's Indian possessions from 1772 to 1785. He rode eight miles a day, drank only tea, took cold baths, and was in bed by 10 PM. He ruled the company strictly but fairly, raising employee salaries, while restricting their personal business dealings. Hastings hired young men willing to study and respect local languages and traditions and who were more devoted to king and country than to their own personal profits. He also incorporated Indians into the company bureaucracy, thus laying the foundations of the Indian Civil Service.

Hastings, who knew both Persian and Bengali, believed in treating Indian civilization with respect. In a sense, he was the father of Indian historiography, in that he first treated the history of the subcontinent as a unified whole instead of as a bunch of regional histories. He helped scholars introduce Indian civilization to the rest of the world. As a result, he was able to persuade Indian princes to ally with the company.

By the same token, Hastings worked to create a bit of Britain in the middle of India, except intensified and exaggerated by the long distance from home. Well-heeled nobles replaced old rough and ready merchants living like Indian princes. He replaced tom-toms with a fife and drum corps, curried dishes with English recipes, local clothing with London fashions, and Indian style homes with country houses complete with tidy gardens, such as Hastings' Calcutta home below. For entertainment, the British could go to places like the Bread and Cheese Bungalow, Jockey Club, and Eden Gardens.

Just as in England, the days would pass in a long round of social calls, afternoon naps, evening card games, music recitals, balls, and dinner parties complete w/cherbet. Of course, to maintain all this British culture and decorum, they needed real British ladies, so each October English women arrived in the "Fishing" fleet looking for husbands. Those disappointed in these hopes would return to England with the spring monsoon next spring. The cartoon below, "The Sale of English Beauties", is a satirical comment on the fate of those women.



Despite this influx of British culture, many company employees still chose to live in gilded extravagance. One captain going to war in 1780 took a steward, a cook, a "boy", a horse keeper, a grass cutter, a washer man, his mistress, plus 15 coolies to transport his tent and large bed, camp stools, folding table, up to 6 trunks full of tableware, cases of wine, a hamper of live poultry, a goat, and an extra tent for supplies.

Not surprisingly, disgruntled employees resented Hastings' reforms and had charges of corruption brought against him back home. After a long trial, he was acquitted, but also replaced as governor in 1788.

His successor, Lord Cornwallis (better known for surrendering Yorktown to George Washington), reversed many of Hastings' policies, firing all but one Indian employee and creating a growing gap between The British ruling class and Indian subjects. After Cornwallis came Sir Richard Wellesley (governor-general 1798-1805), who greatly expanded British holdings out of fear of France, especially after Napoleon invaded Egypt in 1798. At this time, India still consisted of 562 states. Wellesley's brother was Arthur, (AKA Duke of Wellington) who defeated Napoleon at Waterloo.

The Great India Mutiny and Beginning of the Raj

Rising economic tensions. When the British first came to India, their goods were not in demand, leading to a poor Balance of trade. However, as the BEIC expanded its power and control in parts of India, it could force exchanges of goods for bargain prices. Artisans were forced to work in company factories and forbidden to leave until they had made their quota. As a general rule they could only work only for the BEIC, making them virtual slaves.

This company monopoly meant Indian merchants couldn't trade directly with Indian artisans, but had to buy from the BEIC at its prices. More and more they also found themselves working as underlings for the BEIC or changing jobs, which ruined many flourishing areas and market towns. If Indians were caught dealing directly with the artisans, their goods were confiscated and they might even be beaten. The BEIC could also trade freely without paying customs duties, which hurt the finances of Indian princes, especially those in Bengal.

When company imports to Britain, especially the lighter more comfortable cotton fabrics, started hurting British textile industries, the government, influenced by Adam Smith's ideas on free trade, abolished the company monopoly in 1813. Even then, Britain still couldn't compete against the superior Indian textiles, so it put huge customs on Indian imports and forcibly flooded Indian Markets with British textiles. In 1826, when the BEIC turned its interests toward China and the tea trade, it forcibly converted many Indian cotton fields to raise opium, which also drastically cut India's competitive edge in textiles.

*"When you're left for dying on Afghanistan's plains
And the women come out to cut up what remains
Just roll to your rifle and blow out your brains."
--Rudyard Kipling*

The Afghan disaster (1842). Afghanistan has always been a problem to control. Alexander the Great conquered it, but needed three years of the

most prolonged and vicious fighting of his career to do it. Not much of anyone else has succeeded since. The Russians tried and failed in the 1980s and the Americans' longest war has still to see victory.

In 1842, the British tried to conquer it, largely as a buffer against Russian expansion, and failed miserably as their whole army was wiped out except for one survivor to take the news back to India.

Even worse, the disastrous defeat of British forces in Afghanistan in 1842 broke the spell of British invincibility in the region and helped trigger the Great India Mutiny.

The Great India Mutiny (1857-8). Things came to a head with the Great India Mutiny. Sparking it was a misunderstanding about what kind of grease was used on the bullets for the sepoys' new Enfield rifles. Muslim troops thought it was pig grease, which they abhor, while Hindu troops thought the British were using grease from cows, which they hold sacred.

Britain may very well have been sensitive to Hindu and Muslim feelings on these matters and ordered the bullets treated with vegetable oil, although the orders may have gotten confused or distorted. As a result 85 sepoys refused to accept the guns with the new cartridges and were arrested, causing their enraged comrades to storm the prison and then set out to kill every foreigner. From there the mutiny rapidly spread, although most of India stayed calm in spite of company employees largely mishandling the situation.

As is typical of such rebellions, atrocities abounded out of frustration from extended misrule. One British force was massacred under truce. At Cawnpore (below), hundreds of European women and children surrendered under promise of safe passage and were promptly and brutally massacred. The most notorious event was the Black Hole of Calcutta, where reportedly 123 of 146 prisoners suffocated from being crammed into an area so tightly they could not breathe. There is controversy over the number of victims listed.

Despite initial successes, prolonged sieges and disunity within the mutiny's disparate elements led to its eventual collapse. One decisive event was the surrender and disarming of 36,000 restive sepoys in the Punjab and replacing them with loyal Sikhs, followed by the brutal storming and sacking of Delhi and other Indian cities.

Only four months after its start and before British reinforcements could arrive, the back of the rebellion was broken, although fighting and guerrilla warfare would continue until late 1858.

In revenge, the British staged mass hangings and bayoneted mutinous sepoys on sight. At Amristar, the incident of the Black Hole was repeated in reverse where 45 out of 332 prisoners waiting for execution in a tiny jail suffocated. As an example to their fellow sepoys, captured rebels were dealt with harshly, some of them being tied to the fronts of loaded cannon barrels that were then shot.



In the aftermath of the revolt, the British government relieved the British East India Company of its last vestiges of control over India, taking direct control of the subcontinent for itself. Thus began the period of British rule in India known as the Raj, from the Indian word for ruler.

British India during the Raj

"The sun never sets on the British Empire". There was a good deal of truth in this saying, since Britain ruled Australia, New Zealand, and extensive parts of North America (Canada), Asia (India and Burma), and Africa. By 1900, in terms of overall territorial extent, the British Empire had become the largest empire in history, although it was scattered across the globe. Therefore, the empire's global extent meant that the sun was indeed always shining on part of it. By the same token, one could say part of the empire was always shrouded in darkness.

In 1876, Queen Victoria was declared empress of India. The next year she toured the subcontinent, which became known as the Crown Jewel of the British Empire.

British rule was secured by a standing army of 250,000 men, four-fifths of them being Indian sepoy taking orders from British officers, such as Sikander's Bengal Lancers, seen here passing in review.



British rule also relied on a modern transportation network of railways and telegraphs. By the end of its rule in 1947, the British built railway system in India was the most extensive in Asia. In addition, the Suez Canal (opened 11/17/1869) proved vital to British and other European countries' hold on their Asian colonies, since this 105 mile long artificial strait of water cut more than 4350 miles off the voyage from Europe to Asia. British rule also helped develop some industry in India, most notably the Tata Iron Works, which by 1914 was the world's largest iron foundry.

On the other hand, there were definite down sides to British rule as well. Even modern developments in agriculture and transportation brought in by the British weren't necessarily good news for Indians, because the more stable food supplies these advances brought triggered dramatic population growth. The resulting burden on the food producing and distribution systems just made more people susceptible to the effects of famine when it did strike.

And as much as the British liked to portray themselves as benign rulers, they still maintained an uncomfortable distance from their Indian subjects, insulating themselves in a carbon copy version of British society back home, with teas, tennis parties, and other social events where the only visible signs of Indians were the servants.



A British tennis party in India in the late 1800s served by Indian servants shows how much the British ruling class segregated itself from the Indian population in order to maintain their customs and way of life thousands of miles from home.

However, the seeds of dissent had hardly been eliminated with the Great India Mutiny, and a new movement for independence was brewing. And like so much else in Indian history and culture, it would be strikingly unique.

Gandhi and Indian Independence



The Indian independence movement can be seen as officially starting in 1875 with the formation of the Indian National Congress. At first, they espoused loyalty to Great Britain, just working for more home rule, but came to be leaders in the movement for independence. Since this was a Hindu dominated group, Indian Muslims soon formed their own corresponding movement. Therefore, from its start, the independence movement was already fractured along religious lines.

The man most associated with India's independence was Mohandas Gandhi (1869-1948). As a young man he was a prosperous lawyer educated in Britain where he learned the best and worst of Western Civilization, supposedly remarking that Western Civilization was a contradiction in terms. He soon became an activist for the rights of colonials, first in South Africa and later in his native India.

The most remarkable aspect of Gandhi's campaign for Indian independence was his tactic of non-violent civil disobedience to protest British policies. If his followers did turn to violence, he would go on a hunger strike until the violence stopped. So great was his moral authority and the loyalty he inspired, that this tactic alone would consistently restore the peace.

earned him the nickname *Mahatma*, meaning "Great soul." It would also be the inspiration for the tactics Martin Luther King Jr. would use in his civil rights movement a decade later.

Gandhi also reverted to the much simpler Indian lifestyle, even spinning his own thread and weaving his own cloth as a tactic to free India from dependence on British manufactured products. To protest India's caste system and show that his revolution was equally for all Indians, he adopted a girl of the untouchable caste. In his efforts to demonstrate regard for all human life, Gandhi would tend to the sick, even lepers, who were thought to be especially unclean.

One of Gandhi's more memorable campaigns was the Dandi Salt in 1930 (below) as a protest against the British salt tax imposed on India. Gandhi and his followers marched 400 kilometers (240 miles) to the sea and evaporated some seawater to get its salt, daring British officials to arrest him for such a normally inconspicuous act.

Gandhi's tireless perseverance in his non-violent campaign finally paid off in 1947, when Britain finally granted India its independence. The sticking issue of whether there should be one unified India or two separate Hindu and Muslim states was resolved by partitioning the subcontinent into Hindu India and Muslim Pakistan.

"Great soul". Unfortunately, India paid a heavy price for its freedom when a Hindu, disgruntled over the partition of India, shot and killed Gandhi. Even in death, Gandhi was thinking of others, being relieved to find that a Hindu, not a Muslim, had shot him, since that would be less likely to renew violence between the two groups. His incredible strength and spirit in guiding India along a non-violent path to independence

124. THE DECLINE OF IMPERIAL CHINA (c.1800-1911)

Introduction. The 1800's were not kind to China. Whereas geographic and technological limitations had once kept China fairly isolated from the rest of the world, other forces, in particular the Industrial Revolution then sweeping Europe and America, were closing in to wrench China out of its self-imposed isolation. As in India, the British East Indies Company would lead this intrusion on China's privacy.

The Opium War and its aftermath (1839-64). In the early 1800's, China, by its own design, was still largely cut off from trade with the outside world. All trade with Europe was channeled through one port, Canton. Even there, Europeans could only trade through specially designated Chinese agents known as *co-hong*. Several Chinese products, such as silk and porcelain, were in high demand in Europe, but the most popular trade item in the early 1800's was tea, consumption of which increased by a factor of 50 times between 1720 and 180. Unfortunately, the tea trade led to a serious drain of silver from Britain. The British East India Company, desperate for something to offset this trade imbalance, found such a commodity in opium, which not only upset China's balance of trade, but the stability of its whole society.

Two other factors revolving around the differing philosophical outlooks of these two cultures added to the growing tensions. First of all, they had two very different attitudes toward trade. On the one hand, the Chinese government viewed trade as a monopoly controlled through its agents, in this case the *co-hong*. Up until the 1800's, this was not such a problem, since most Europeans traded under the mercantilist system that also exercised strong government controls. However, by the 1830's, the British were leading the way in the Industrial Revolution and were pushing for a free trade system known as *laissez faire* ("hands off") that would give their manufactured goods an edge against the more expensive handmade goods their foreign competition was producing. Secondly, there was the relative status of the two nations. The Chinese traditionally saw themselves as the Middle Kingdom and all other peoples as inferior barbarians. Any goods brought as gifts to the

Chinese court were interpreted as tribute that they may or may not graciously acknowledge. By contrast, the British had a strong democratic tradition that refused to recognize another nation's superiority.

The opium problem trapped China in an ever-worsening vicious cycle where the number of addicts each individual's need for opium kept rising. This drained more money out of China and triggered inflation, which landlords and the government met by raising taxes. The increased burden on the poor would drive more of them to turn to opium as an escape from their problems. Thus the scale of the opium problem would grow even more, and so on.

All these economic and philosophical tensions came to a head when the Chinese government had 20,000 chests of the British East India Company's opium burned. This threatened the tea trade, in which the British government had a vested interest, since it charged a 100% customs toll on tea coming into Britain. The result was the First Opium War (1839-42) between Britain and China. The British navy, with its modern weaponry, quickly and easily won a decisive victory. The resulting Treaty of Nanjing (1842) gave the British access to trade through five ports, control of Hong Kong, a huge indemnity from the Chinese government to cover the cost of the war, and abolition of the *co-hong* (merchant guild) system. It also forced China to accept other countries on equal terms, which was a terrible blow to its pride. Finally, the Chinese gentry now assumed the task of quelling any rebellions, which led to the buildup of regional warlords who would be a serious problem in years to come.

Britain's privileged status triggered a rush by other nations such as France, Russia, Germany and Japan to force China to grant similar treaties that gave three main concessions. First of all, they wanted *most favored nation status*, which automatically gave them all privileges that any other nation had from China. Second, they wanted *extraterritoriality*, which allowed their citizens to live under their own laws even when in China, thus making them virtually immune from Chinese justice. In fact, any cases involving a European and a Chinese person were to be tried under the European country's system. Finally, Europeans could recover any debts that the Chinese

government owed them by collecting China's customs dues and other taxes if the customs dues were not enough.

The First Opium War and its aftermath unleashed a vicious cycle that would eventually lead to the fall of the monarchy. China's decline would invite either a disastrous war or intervention in a revolt to push or preserve foreign interests. This would cause many Chinese to wake up to the need for reform. However, the Chinese hatred for foreign barbarian ways would trigger a conservative reaction against the reforms, leading to further decay, and so on. This cycle would repeat itself three times, being triggered by the Taiping Rebellion, war with Japan, and the Boxer Rebellion.

Two other factors would aggravate this cycle even further. For one thing, the introduction of new crops from the Americas and a well-regulated agriculture under the Ming Dynasty had caused China's population to expand to 400,000,000, putting a tremendous strain on China's ability to support itself. Secondly there was the government's recent failure to maintain the flood control projects, which had unleashed terrible floods and food shortages on China.

All of these factors triggered the Taiping Rebellion (1850-64), a peasant revolt started by a frustrated scholar, Hong Xiuchuan who claimed he was the brother of Jesus Christ. Hong inspired his followers with a revolutionary fervor that banned alcohol, tobacco, and drugs, held property in common, and called for the equality of all, including women. His movement swept over much of China before the government finally crushed it with foreign help. The Taiping rebellion was typical of any number of peasant revolts throughout Chinese history in its revolutionary and religious vision of a new world. It was also terribly destructive, probably killing even more people than World War I. Adding to China's misery during this chaos was the Second Opium War (1858-60). This war, fought with Britain and France for the flimsiest of reasons, saw the brutal sack of the Summer Palace in Peking by British colonial troops from India. It is from this event that the Bengali word "loot" entered our language.

Faced with these overwhelming problems from both within and without, a two-fold program of reform

emerged. On the one hand, Chinese scholars tried to revive and stress the old Confucian virtues. However, they also tried to adapt Western technology in order to control the Western "barbarians". This sparked serious debates about how feasible it was for China to be able to adapt Western technology while maintaining the purity of Chinese culture, for the Chinese still despised Western ways as barbaric. Whatever their doubts, reformers set up several factories producing such things as weapons, ammunition, steamships, and textiles. They built railroads and telegraph lines which peasants often tore down since they disrupted the natural harmony of the countryside. The Chinese government even bought one railroad and tore it up for such a reason.

However, several factors seriously limited the extent of China's modernization. In contrast to Japan, which was successfully industrializing in the late 1800's, there was no real central direction to coordinate these efforts. Rather, provincial officials on a local level did them. Also, the influx of Western "barbarians" created a good deal of bitterness against the West and a reluctance to conform to its ways. At the same time, they plunged China further into debt making it more difficult for the Chinese to fund any modernization programs.

Therefore, China saw little progress toward modernization, especially after the rise to power of the dowager empress, Cixi, who ran China's policies for her weak son and nephew (1875-1908). Cixi especially resisted foreign influence and modernization, preferring to spend money on her palace and lavish lifestyle. As a result, by the 1890's, China was more vulnerable than ever to foreign powers carving out spheres of influence. Under this system, the dominant power in that sphere controlled the economy through such things as collecting taxes and constructing railroads and telegraph wires, while still leaving administrative duties and expenses to local Chinese officials. This allowed the various powers to drain China of money without having to assume the more burdensome responsibilities of government.

However, what really shook China out of its lethargy was a war with Japan, which had successfully modernized in reaction to the West over the past 40 years. This clash, known as the

Sino-Japanese War (1894-5) was fought over control of Korea. To everyone's shock, the Japanese navy soundly defeated the Chinese navy and claimed Korea, Taiwan, and a huge indemnity as the price of victory.

Such a humiliating defeat sparked a new movement among Chinese scholars for widespread reforms. This movement was popularly referred to as the Hundred Days Reform because the dowager empress, Cixi, quickly squelched it. As a result, China's problems continued mounting until they triggered another revolt, the Boxer Rebellion (1898-1900). The rebels, fighting under the banner of the Righteous and Harmonious Fists, believed they had magical powers to resist enemy bullets. While their revolt was initially aimed against the government, the empress skillfully turned it against foreign influence. The result was a siege of the foreign embassies in Beijing that was finally broken up by an international force led by the Japanese. Such intervention was not without its price, as China was forced to pay a heavy indemnity for all the recent troubles to the foreign powers, who now installed troops to protect their diplomatic missions.

The renewed humiliation caused by the Boxer Rebellion revived calls for reforms, this time with more success. Between 1900 and 1910, more modern ministries were formed, the old Confucian based civil service exams were abolished, provincial assemblies with the semblance of democracy were established, and a new law code was introduced. More modern schools were set up, while many young Chinese students studied abroad in the West, both of which spread the Western ideas of democracy and nationalism among Chinese intellectuals. Unfortunately, such reforms only raised expectations of more reforms, and a revolution in 1911 overthrew the monarchy and established a republic in its place. However, China's problems were far from over. Almost from the start, the new republic was doomed by the lack of a healthy economy and educated middle class, elements necessary to sustain any strong democracy. As a result, the next 40 years would see China embroiled in two world wars, civil war, and revolution.

China's Sorrow: The Yellow River



To understand China's history, one needs to understand its traditionally autocratic government and the need for massive flood control projects to contain the Yellow River, around which Chinese civilization was born. The main problem has been silting from windblown steppe soil known as loess that fills the riverbed. The response to this has been to build levees to contain the river. However, over the centuries, the riverbed achieved heights up to 10 meters above the surrounding flood plain, precariously held in by levees that were 20 meters high. They were disasters waiting to happen.

One such disaster took place in 1887 when unusually heavy melting snow and spring rains broke the levees and killed thousands from flooding and an estimated 1 million more in the resulting famine.

In 1931, another flood killed between 850,000 and 4,000,000 people, making it the single worst natural disaster in history. Two years later, another flood killed 20,000 more.

And in 1938, the Huang He's levees were dynamited to slow the progress of the Japanese army.

Between 1887 and 1943, drowning, flooding and disease triggered by the Yellow River's floods, claimed an estimated 10 million lives.

No wonder the Yellow River is called China's Sorrow.

Some popular beliefs and practices in Southern China

While most Chinese were Buddhists, they also worshipped a multitude of gods, ghosts and spirits of ancestors and observed a variety of festivals throughout the year. Beliefs would also vary from region to region. Below are some of the common beliefs and practices found in southern China.

For the summer solstice, the Chinese would eat dog meat to ward off malaria. For the winter solstice they would prepare a broth of meat, peaches, and mustard greens to ward off other diseases and also eat dried fish in bulk for good luck. At the end of the sixth lunar month, they carefully watched for signs from Pengzu, China's longest living patriarch, to predict the weather for the coming year.

To gain the Jade emperor's protection they burned bamboo models of houses, stayed awake all night, hung strings of oranges before their doors, and carved peachwood charms for the gods of the gate. Speaking of peaches, their red color was believed to protect against evil, so people would hang red strips of paper from their doors in the absence of peaches. Peach twigs, any crude paintings of tigers, and infants wearing "tiger hats" were used for exorcism and to protect houses from harm.

To greet the mid autumn moon, people would make three kinds of mooncakes (goosefat, hardskin and softskin) ranging from sweet to salty, decorated with colorful pictures of people and animals, which they ate as they hoisted lanterns to greet the moon in the hopes of early marriage and many children. To keep cold winds away, they would eat boiled noodles in ritual vessels.

Roosters were seen as a symbol of universal life, being associated with the sun (thus their crowing) and dispelling disease. Freshly sacrificed roosters were used to guard against demons, except at the new year when a live

rooster was needed to guard against demons escaping from a tiger's jaws.

The Jade Record was a set of books sent to earth by the supreme god after Yan Luo, clarifying what punishments go with what sins in hell and what good deeds could escape them. Those who copy and pass on the Jade Record will avoid the worst punishments of hell and be reincarnated as humans. If really good, men would be reincarnated as higher beings and women as men. Those ignoring, defacing or mocking them will have to go to the lowest depths of hell and pass through all ten hellish palaces before being reincarnated as lower beings such as insects, snakes, or pigeons.

For example, in the first hall, the "Mirror of Reflection," the dead see their own sins, such as committing suicide without good reason, weak faith in the Buddha, stealing, cheating, gambling, drinking, killing live creatures or slaves, drowning baby girls, etc. After the 10th Hall, one went through the Tower of Forgetfulness to forget all previous incarnations before being reincarnated.

The Qing Dynasty tried to suppress the Jade Record because the official state creed, Confucianism, discouraged speculation on the afterlife. Similarly, Hong Xiuchuan banned it when he came to power.

Canton, Co-Hong, and Pidgin Talk



Guangzhou (Canton) was the one port of access for foreigners wanting to trade with China. In addition to various countries' trading facilities and factories, the British East Indies Company's had a garden and terrace considered by other foreign merchants as the port's most elegant spot.

The co-hong were a group of only thirteen Chinese officials who had exclusive rights of trade with foreigners in Guangzhou. Afraid the foreigners would corrupt the Chinese people, it was forbidden, under pain of death, to even teach Westerners the Chinese language. One teacher of Chinese went disguised as a shoemaker and carried poison he would take if caught.

Pidgin was a patois (linguistic mixture or mishmash) of Portuguese, English, and various Chinese dialects that developed from extended trade contacts in the port city of Canton.

The most popularly known adaptations were to transpose the r to l, b to p, and d to j. Therefore, business became pidgin. Thus Pidgin English meant business English (i.e., the language for trade).

Several other examples were:

- Portuguese deos (God) became joss; and religious service was joss pidgin.
- Sex was lof pidgin (love business)
- Chop was document, so chop chop meant urgent document or just urgent.
- Portuguese mandar (command) became man-ta-le (commander or boss)
- Putting ee after dental consonants turned want into wantee and catch into catchee.
- Lac meant 100,000 from the Hindi word for 1000.

A typical sentence in Pidgin might be: “Man-ta-le sendee one piece chop. He come tomollo. Wantee too-lac dollar” meaning: A senior Chinese official is coming to demand a sizable bribe.

The First Opium War (1839-1842)



British ships demolish the Chinese fleet in the First Opium War

The problem Europeans had trading with China was that it didn't want anything the Europeans made while such Chinese goods as silk, porcelain, and tea were in high demand in the West. The only things China would take in trade from foreigners were furs and silver. As a result, some species of seals were nearly driven to extinction. Meanwhile, between 1760 and 1790, Chinese silver imports grew from 3 million to 16 million ounces. Europeans needed something to restore the balance of trade. They found it in opium.

Opium was not a part of Chinese culture until Europeans brought it in starting in 1650. Although China banned it in 1729, smuggling continued, so China reaffirmed the ban in 1799, but to no avail.

Singapore. The British were relatively latecomers to the opium trade, not getting involved until 1819 with the foundation of Singapore (above), which gave them a base closer to China that also controlled trade from the southern tip of the Malay Peninsula. It rapidly grew into one of East Asia's great ports despite the fact that 200 people were eaten by tigers each year. In 1823, Singapore was opened for free trade to all nations, which led to an influx of immigrants that drew trade away from Dutch Indonesia. Its rapid growth at one point created a 15:1 ratio of men to women. In 1946 it was recognized as a Crown Colony and given its independence.

Red Rover, the first British opium ship, arrived in China in 1820. Since opium had been illegal since 1729, the British traded it offshore to corrupt Chinese officials, so they weren't technically guilty of smuggling it into China. Americans also got involved, smuggling lower quality opium that they had bought in Turkey.

History's first international drug cartel is how one could describe the British East Indies Company's opium trade in China. Between 1820 and 1830, the number of chests of opium smuggled in went from 9,708 to 35,445 with each chest worth \$2,000 (not adjusted for inflation). In 1833 the British government ended the

BEIC's Canton monopoly, allowing private merchants to enter the opium trade. In 1838, there were 40,000 chests smuggled in. By then the BEIC had forcibly converted 400,000 acres of land in India from growing cotton to growing opium, which also helped reduce Britain's trade deficit.

By 1835, the number of opium addicts in China was estimated between 4-12 million, including the whole army and many bureaucrats. Chinese addicts were spending two and a half times as much on opium as the entire government budget. By 1837 the opium trade represented 57% of China's imports.



In 1838 the emperor cracked down on addicts, seriously reducing the market and driving opium prices down. Up to 2,000 addicts were thrown in jails and forced to suffer sudden withdrawal, the effects of which were vomiting, cramps, excruciating headaches, nightmares, uncontrollable weeping, nervousness, anger, and paranoia. Many died from this experience.

In 1839 the emperor appointed a rising civil servant, Lin Tse-shu as special high commissioner with extensive powers to stop the opium trade. Lin after researching the trade, the Chinese merchants involved in the trade, opium's effects on users, and even treatments for addicts, arrested 1600 people, confiscated 11,000 pounds of the drug from Chinese merchants, and even wrote a letter to Queen Victoria demanding an end to the Opium traffic.

When that didn't work, Lin confiscated and burned 20,283 chests of opium, costing the British \$40 million. When he refused British demands for compensation and changes in how China dealt with them, British ships launched an

attack to force China to reinstate the opium trade.

The First Opium War was on.

A combination of superior armaments and the addiction of most of the Chinese army led to a quick and easy victory for the British who started with 16 warships and were reinforced by 31 more from India.

When the British government agreed to a ceasefire and treaty, public back home was so outraged at its easy terms they sent a new expeditionary force with 10,000 men to extort better terms. After demolishing coastal defenses (some dating from the Ming Dynasty), shelling several Chinese cities, seizing several ports, including Shanghai, and besieging Nanjing, the Chinese again agreed to peace.

The resulting Treaty of Nanjing (1842) imposed several humiliating terms on China:

- It abolished the Co-hong and Chinese monopolies on foreign trade.
- It opened 5 new ports to British trade: Amoy, Foochow, Ningpo, Xiamen, & Shanghai,
- Import duties were reduced from 65% to 5%.
- Br. could also lease or buy special zones called Concessions, which amounted to virtual spheres of influence where they could collect money and influence policies without taking responsibility for administering or defending its provinces. As a result, the Chinese gentry now assumed the task of quelling any rebellions, which led to the buildup of regional warlords who would be a serious problem in years to come.
- Britain was also awarded a \$21 million ounce silver indemnity to cover the cost of the war and could collect Chinese customs dues to get it.
- Finally, it forced China to accept other countries on equal terms, which was a terrible blow to its pride.

As a result of Britain's expanded trade leverage, tea exports more than quintupled, while silk exports went from 2,000 bales in 1843 to 56,000

in 1855. Because of the lucrative market, many Chinese farmers switched from growing food to raising silk and tea, which further aggravated China's hunger problems while triggering even higher food prices. At the same time, imports from Britain's rapidly expanding textile industry were undercutting China's own textile industries.

The Taiping Rebellion (1850-64)



The Taiping Rebellion was led by Hong Xiuchuan (above) who, after failing the civil service exam several times, fell ill in 1836 and recovered with a somewhat altered personality. He claimed he had a vision (below) that he was the younger brother of Jesus and that an old man in a palace gave him a sword to purge China of the foreign Manchu devils.

Hong believed Confucianism, Taoism, and Buddhism were false teachings of the Devil and that God defeated Confucius in Heaven. Ironically, Jesus wanted Hong to pass the civil service exam that was based on Confucianism and was angry when Hong failed it. Luckily, Jesus' wife softened Jesus' anger for his failure.

Hong's movement in the 1840s grew into full-scale rebellion against the Manchus in 1850. In 1851, after a major victory, he declared himself "Heavenly King" (Tianwang) of a new dynasty, the "Heavenly Kingdom of Great Peace".

Revolution and turmoil spread especially throughout South and Central China where opium addiction was the worst. In reaction against the Manchus who made the Chinese wear pigtails as a sign of submission, the Taiping rebels were instructed to grow their hair long and tie it with a red cloth, leading to the nickname "long haired bandits". They also smashed non-Christian images.

Western mercenary captains trained many Chinese troops, but mainly for local warlords rather than the imperial government. This contributed to the later rise of Chinese warlords and corresponding chaos in the country.

According to some sources, as his palace was being stormed by government forces, Hong swallowed gold leaf (an imperial form of suicide) while several of his wives also killed themselves. By the time the revolt was finally put down, 20-30 million people had died and 600 cities had been destroyed. Meanwhile, America's bloodiest conflict, the Civil War, being fought at the same time, killed 600,000.

The Second Opium War (1858-60)



Adding to China's misery during this chaos was the Second Opium War (1858-60), caused by China's refusal to meet several British demands: renegotiate the Treaty of Nanjing, legalize opium, allow a British ambassador at Beijing, suppress piracy, and release 12 British sailors from the Arrow, a ship flying the British flag but also allegedly involved in piracy. France joined Britain by officially declaring war, while Russia, and the United States were involved to a lesser extent.

The capture of Guangzhou and Tientsin led to the Treaty of Tientsin (1858), giving the British and French the rights to buy land and travel freely in China, guaranteeing Christian missionaries' freedom to actively recruit converts, opening eleven more ports and China's interior to trade, charging indemnities, lowering tariffs, exempting foreign goods from transit taxes, and stipulating foreigners no longer be called "barbarians".

However, that apparently wasn't enough and fighting resumed in 1859 when China refused to instate a British ambassador in Beijing. British and Indian troops sacked the Summer Palace for three days, thus adding the Bengali word loot to our language. China's surrender in 1860 led to the Convention of Peking which opened Tianjin as a port, ceded the port of Kowloon to Britain, established freedom of religion in China, let British ships take indentured Chinese to the Americas, charged another indemnity payable to France and Britain and recognized the legality of the Opium trade.

China and Russia. A parallel Treaty of Aigun with Russia reversed the Treaty of Nerchinsk (1689) and gave Russia lands in the north along the Amur River. This source of tensions would fester for a century and flare up again in 1969, nearly leading to an all-out war between the two countries. American intelligence at the time estimated the chances of such a war going nuclear at one in three.

The Clash of Cultures



The cartoon above satirizes the Chinese as superstitious fools for fearing the modernizing impact of railroads. In fact, Chinese attitudes were probably driven more by reverence for nature than fear of technology. For example, they bought a British-built railroad and tore it up, not out of fear, but to keep it from disrupting the natural harmony of the countryside.

Camera shy. One bit of Western technology that especially frightened the Chinese (and people in other traditional cultures as well) was the camera. After all, how does one explain how your image got on that paper, and is it just your image, or also your soul they have captured? Aggravating such fears were rumors that

Westerners were kidnapping Chinese children and stealing their eyes for the camera lenses.

Attempts to modernize did take place, but only sporadically and on a local scale. One example was Li Hong Zhang who modernized his province with a steam navigation company (1872), a coal mine (1877), a telegraph network (1879), a cotton spinning factory (1882), and a cotton mill (1890). A few other provincial officials also modernized, one building an ironworks at Quhan (1850). However, resistance against railroads delayed the first track being laid in China until 1880. By 1894, there were only 195 miles of track in all of China.

Below: Hiram Maxim (far rt.) demonstrates for the Chinese the use of his machine gun for more efficient harvesting of trees. This was probably one of the less successful uses of technology.



The Boxer Rebellion (1898-1900)

The Boxer Rebellion was especially aimed against Christian influence in China, calling it the "pig-goat" religion and Christian prayers the "squeak of the celestial hog". While mostly careful of foreign clergy, they slaughtered 32,000 Chinese Christians.

Boxers also held the Forbidden City under siege for 55 days before an international force of 16,000 soldiers raised the siege and rescued the foreigners trapped inside. Although only 76 foreign soldiers and 6 children were killed, they massacred thousands of Chinese men in the capital in retaliation,

"The Hun." Kaiser Wilhelm II of Germany had a phenomenal talent for putting his foot in his mouth, as shown as he was seeing off German soldiers to relieve the foreigners trapped by the Boxers in the Forbidden City. As they departed

for China Wilhelm exonerated his men to fight fiercely like the Huns, Asiatic nomads notorious for their savagery. Unfortunately for Germany, the name stuck and Germans were referred to by their enemies in World War I as Huns to emphasize their barbarity.

125. THE EMERGENCE OF MODERN JAPAN (1868-1937)

"Rich country, strong army"--Meiji motto

Decline of the Tokugawa Shogunate. In the early 1800's the peace and stability of Tokugawa rule came unraveled, leading to a period of turmoil and then restructuring from which a modernized and revitalized Japan would emerge. Several forces combined to generate these changes. First, 200 years of peace and being disarmed by the Tokugawa government undermined the power and even the reason for the existence of the Samurai. Second, the encroachment of the British into China and the ensuing Opium Wars led many Japanese to worry about the threat of encroachment on their shores and the ability of the Shogunate to deal with it. Finally, a series of bad harvests in the 1830's triggered inflation, disease, and unrest in Japan. The result of these various forces was a struggle between traditional isolationists who wanted to keep Japan cut off from the outside world and reformers who wanted to open it to the West and institute reforms to shore up the declining shogunate.

However, before Japan could come to a firm policy one way or another, the West intervened to decide the issue. The United States, by taking California in the Mexican War (1846-8), had become a Pacific power practically overnight. In 1853, a flotilla of American warships commanded by Commodore Perry delivered a conciliatory letter from the president to the Japanese head of state and a more belligerent letter written by Perry himself. The gist of Perry's message was that Japan had better open its doors to the West or the United States would kick down those doors and force Japan to trade.

The Tokugawa Shogunate, seeing Japan was no match for the United States, capitulated when Perry returned the next year. The immediate results for Japan, and especially its government, were disastrous. With the Americans came an influx of Mexican silver, which triggered more inflation. A cholera epidemic also hit at this time. These, plus the humiliation this situation brought to the Tokugawa Shogunate, caused its fall in 1868.

The Meiji Restoration (1868-c.1890). Replacing the shogunate was the restored imperial court under the emperor Matsuhito, called Meiji ("enlightened

rule"). The Meiji regime would oversee the transformation of Japan from a largely feudal and agrarian state into a powerful industrial nation. This is often seen as a reaction to and imitation of industrial state building in Western Europe, in particular that of Germany. While this is partially true, Japan during the Tokugawa period had developed in ways that prepared it for the Meiji reforms. For one thing, the Tokugawa Shogunate had maintained a unified Japan for over 200 years, thus helping create a Japanese nation. Also, during this time a strong middle class had evolved along with the financial techniques needed to adapt to industrial capitalism.

As a result, Japan was able to make the transition to an industrial nation state while maintaining its own unique Japanese values of loyalty to the group and the emperor. For example, the Japanese corporation that evolved during this period can largely be seen as an updated version of the paternalistic feudal state, where the workers (peasants) owe lifelong loyalty and service to the company (lord) in return for its protection of their welfare. Japan's transformation into a major power can be seen as taking place in three successive stages: political and social reforms, industrial and military reforms, and early expansion.

Japan went through several Western-style political and social reforms to create the conditions conducive to industrial and military modernization while maintaining a distinctive Japanese character. In order to destroy Japan's feudal structure, the Meiji government replaced Japan's old provinces with seventy-two modern districts. As in the West, all class distinctions were abolished. This especially hurt the Samurai who now were even forbidden to wear their swords or distinctive hairdos. Public education became mandatory for all boys and girls in order to create an educated work force and instill a spirit of nationalism in them. A European style parliament was formed, but like its German model, it had little real power. The emperor kept his exalted position while Shinto was made the state religion, both of these providing points of focus for Japanese national loyalty.

With the political and social reforms in place, the Meiji government proceeded to industrialize Japan, concentrating on heavy and strategic industries: railroads, the merchant marine, mining, modern

agricultural techniques, munitions, and the navy. However, Japan had no large-scale capitalists. Therefore, the government, in keeping with Japan's paternalistic tradition, paid for these industries and then sold them at low cost to a few private investors. These new capitalists, called the Zaibatsu ("money clique"), would come to control 70% of Japan's bank deposits and heavily influence government policies, much as the daimyo (feudal lords) had done in previous times. Thus began the long-time alliance of government and big business, which is still a predominant feature of Japan today. One other reform was that of the military. In 1873 the government began universal conscription, which deprived the Samurai of their privileged position as *the* warrior class. This triggered a Samurai revolt. Surprisingly, the conscripts fought well and crushed the revolt, thus destroying the samurai's aura of invincibility.

Japan's quest for empire. By 1890, Japan had largely industrialized and was ready to look outward to protect what it saw as its interests. In a series of three conflicts, the Sino-Japanese War, the Russo-Japanese War, and World War I, Japan emerged as a major power. Its first concern was Korea, the closest part of the Asian mainland to Japan and which Japan had claimed since the 1500's. The other primary contender for control of Korea was China to the north. In the ensuing war, known as the Sino-Japanese War (1894-5), Japan's modernized army made short work of the outdated Chinese forces, taking Taiwan and establishing its influence over Korea. In addition, this further weakened China's government and helped lead to a revolution in 1911 and eventually to the Communist revolution and victory in 1949.

More shocking was Japan's unlikely victory over the Russian army and navy in the Russo-Japanese War (1903-5). This gave Japan the Liaotang Peninsula and even tighter influence over Korea, which it finally annexed in 1910. It also triggered a revolution in Russia, which, although unsuccessful, helped lead to the Russian Revolution of 1917, and the triumph of the Communists there.

During World War I Japan declared war on Germany, easily taking its possessions in East Asia. However, China, also on the allied side in the war, had claims over those territories. Japan emerged the winner in this dispute, so that by 1919 it had

control of Korea, Taiwan, and the Liaotung Peninsula. Not surprisingly, relations with China continued to deteriorate.

In the 1930's two things made those relations much worse. One was Japan's burgeoning population that forced it to import food. The other was the Great Depression, which cut Japan's trade and its ability to pay for that imported food. This led to growing military influence, violence, and instability in the Japanese government. In 1931, Japan seized control of Manchuria from China. The Western powers, mired in their problems with the Depression, were unable to help China. Throughout the 1930's, military control of the Japanese government tightened. In 1937, that military government invaded China, thus starting World War II in Asia.

Perry's Alien Invasion



A Japanese print showing one of Perry's ships in Tokyo harbor portrays it as a dark ominous presence, much like the alien spaceships in the movie *Independence Day* that nearly blot out the sky. One would think that after all the *Godzilla* attacks Japan has suffered, it would hardly be impressed by a steamship.

The alien ships were commanded by Commodore Matthew Perry who delivered both a conciliatory letter from President Fillmore asking for trade and a much more threatening letter of his own saying he would return next year with more warships for Japan's answer. In 1854 he indeed returned with eight warships and Japan, seeing no alternative, agreed to trade with the U.S.

Techno-geeks. Along with the threat of brute force, Perry also impressed the Japanese with an array of "American" inventions: the steamship, the Colt repeating revolver, the camera (despite the belief that anyone being photographed would die in three years), the telegraph, and the

railroad. For the latter, he brought a one-quarter scale working locomotive and a circular track. Since the Japanese officials were too big to fit inside the locomotive and train cars, they rode on top, looking like a bunch of overgrown children joyously riding a kiddie ride at the carnival, their officials' robes flying in the breeze.

Meiji Tokyo

Edo, the old Tokugawa capital was renamed Tokyo ("Eastern Capital") would become one of the premier cities of the world. At first its population plummeted, as the samurai, who had been required by the shoguns to live there half the time, now left. However, it gradually recovered as the end of isolation sparked industry and drew in foreign trade. By 1910 Tokyo's population was up to 1.8 million.



Not only that, but the nature of Tokyo had been rapidly transformed into that of a modern Western city, with railways, electric tramways, and electric, telephone, and telegraph wires interlaced across the city. Architects, notably the Englishman, Thomas Waters, were commissioned to transform the public face of the city. Thus in the 1870s, a modern business district, the Ginza (above), sprang up with a thousand buildings of cement-faced brick replacing the older ones of wood, along with a Western style newspaper, the Choya News Company, and the Rokumeikan, built in 1883 to entertain foreign diplomats.

As the English authors of Marray's Handbook for the Travellers in Japan (1907) put it: "The two-sworded men have disappeared, the palanquin has given place to the jinriki, and foreign dress has been very generally adopted by the male population."

However, as always, the Japanese put their own distinctive touch on this urban landscape, the rickshaw, invented around 1870 as a convenient form of wheeled transport that could navigate another feature of modern living: gridlock. Ironically, the rickshaw would become the stereotypical symbol of Western exploitation instead of Japanese ingenuity.

As the English authors of Marray's Handbook for the Travellers in Japan (1907) put it: "*The two-sworded men have disappeared, the palanquin has given place to the jinriki, and foreign dress has been very generally adopted by the male population.*"

Below: A model of the Choya News Company office, a popular liberal paper started in 1870



The Real Last Samurai



The real last Samurai was not Tom Cruise, nor even the American, Nathan Algren, who was a fictional character. In fact, believe it or not, he was Japanese. The most commonly cited candidate for the honor was Saigo Takamori (above), on whom Katsumoto, the rebel leader in *The Last Samurai*, is loosely based. Takamori was indeed a high-ranking member of the Satsuma clan, which led the rebellion against the Meiji government.

However, the real history, as usual, was more complicated than the movie, *The Last Samurai*, which conflated into a few months and people the events and a process that took decades.

For one thing, most of the Westerners involved in helping Japan's military modernize were Europeans: French, Italians, and especially Germans, such as those pictured below with Japanese officers they helped train (c.1875).



Secondly, not all samurai opposed modernization, in particular at first. Some, such as the two pictured on the right initially joined the imperial forces to crush rebelling samurai in a civil conflict known as the Boshin War.

However, as more decrees were passed infringing on Samurai rights and privileges, such as the right to carry swords in public and wear the distinctive top knot (known as the Chonmage), samurai resistance stiffened, especially around the leadership of the Satsuma clan.

Bit by bit, the imperial army of some 300,000 men whittled down the Samurai forces from 30,000 to 400 the time of the Battle of Shiroyama, shown as the climatic event in the film. The battle happened much as shown. The samurai charged the much more numerous infantry, hoping to engage them in close order combat where they would have the advantage. However, as the film also showed, their ranks were shredded by gunfire, the last 40 of them by Gatling guns. So that part of the film was accurate.

Japanese Bayonets. While in the West, the bayonet (invented c.1670) was convenient replacement for the common infantry pike, in Japan it assumed greater cultural significance. Since Toyotomi Hideyoshi's Great Sword Hunt, only Samurai had been allowed to carry swords or any kind of edged weapon. Therefore, when Japan modernized its army and equipped its infantry with bayonets to go along with their rifles, it was considered a great honor by the common soldiers to be allowed to once again carry edged weapons.

THE SECRET HISTORY OF THE NORTH POLE

“If events in history are like so many pebbles in a pond, then I’m an avalanche” – Santa Claus

To paraphrase Shakespeare, Santa Claus “doth bestride our times like a colossus”—both literally and figuratively. No single man so dominates a season of the year (from Labor Day to Super Bowl Sunday) like he does. Disregarding what we tell our children, disregarding the two Wars of the Elves which triggered two world wars, disregarding the Great Depression (which he caused), and even disregarding the worldwide flu epidemic of 1919 (which he had nothing to do with), there still is no one who has done so much to ruin such a joyous holiday and turn it into the debt-ridden agony of materialistic overindulgence it has become. Maybe that is why we love him so much.

Geopolitics of the North Pole. The physical environment has always strongly influenced the flow of history, and the North Pole is no exception. For one thing, the North Pole’s cold climate severely reduced the need for refrigerators, which have an unfortunate tendency to fall on top of and kill people. This allowed the Eskimo population to flourish. The money saved from not buying refrigerators could be used to buy guns, a favorite Eskimo pastime, which makes them very dangerous. Also the long winter nights at the North Pole forced the Eskimos to trade light bulbs to the South Pole for extra light trapped by the Antarctic land mass during its equally long stretches of daylight. This also accounts for the fact that light bulbs resemble penguins.)

The North Pole’s position on the International Dateline gave it Christmas twice per year (December 11 and March 3). This inappropriate since the North Pole also has most of the world’s green crude toy ore deposits. Teddy Roosevelt once described a lump of this ore as resembling “a gang of Gumby’s trapped for three hours in a microwave oven,” a remarkable statement since he died decades before microwaves, Gumby, or even accurate time-keeping were invented. The point here is that toy ore needs to be mined and worked. Unfortunately, the one available labor source, Eskimos, refused to work in the mines, preferring

either to hibernate or shoot their guns at any thing that moves or snores.

During the Industrial Revolution in the 1800s when large scale toy mining and processing was taking place, the next closest source of labor for the North Pole toy mines was Canadian Elves who had formed the last wave of migrants from Siberia to America. Central Asia was their ancestral homeland, but in the late 1100s a chain reaction of events starting in Finland displaced them. Finland, of course, was the homeland of the Clowns who, contrary to popular belief, are a highly evolved subspecies of *Homo Sapiens Sapiens* (i.e., me). In addition to such natural features as their large red noses, shocks of brightly colored hair (to attract mates), and big floppy feet, Clowns are also endowed with brilliant minds and superhuman strength. Despite our desire to portray them as good natured and harmless circus performers, they are extremely dangerous. In 1180 their relentless leader, Jingles the Merciless (1178-1213) forcibly unified the Clowns and launched a campaign of conquest unparalleled in both its brutality and physical comedy. Using such unspeakable weapons as seltzer bottles loaded with Greek fire similar to our modern napalm), and catapults firing giant cyanide cream pies, the Clowns carved out a savage empire stretching from Finland to Vladivostok. The Empire of the Bozos (from the clown word meaning “pie throwing maniacs” even handed Genghis Khan’s Mongol Horde a humiliating defeat. The Mongols in turn crashed into the Elves, half of whom fled into Siberia, the other half to North America, where they lived peacefully until the 1800s.

Elves were well suited to toy mining for several reasons. They don’t eat much. They are small and thus easy to push around. And they have big ears that let them hear any stalking killer penguins, a particularly large and vicious type of penguin that inhabits caves, and toy mineshafts. All that was needed was someone to lead the Eskimos in raids to capture the Elves. That someone was St. Nicholas (AKA Santa Claus).

St Nicholas the thirty-eighth son of an impoverished chimney sweep, was born in Norway around 1850. Large size, both in terms of numbers and bulk, was a family trait. His ancestors had been a special

class of Viking berserkers (from the Clown word *Bozo*) who would jump on enemy ships and tip them over with their weight. How he came to be known as a saint is not completely clear, although most accounts revolve around him visiting Rome as a youth and kidnapping the Pope and forcibly extracting the honor from him.

Because of his size, Nicholas (and the rest of his family, for that matter) were ill suited for chimney sweeping, so it remains a mystery why that was traditionally the family profession. In fact, in 1877, young Nicholas got caught in a chimney, a sight that attracted a large crowd of spectators. His solution was both ingenious and lethal. By eating huge amounts of food, his body mass expanded to the point that the chimney exploded, killing 37 people in what has been known ever after as the great chimney massacre. Nicholas was committed to an insane asylum, not just for the killing, but also for thinking he could fit in a chimney in the first place. Son afterward, he jumped a guard, flattened him, and fled to the North Pole.

The Eskimos made St. Nicholas their leader after he mowed five of them down in a gunfight and promised the rest vacations in Florida. (H actually sent them to Cleveland, but they didn't know the difference.) Then, from 1882-85 he launched a series of savage raids into Saskatchewan ("Land of the Big Ears") where he rounded Elves for working in his toy mines. It was at this time that the Elves gave him the name Santa Claus, most likely a Cheyenne word meaning "fat man with a whip".

But a new problem arose: Canadian Elves may not eat much, but they are picky eaters who require the finest of French cuisine. With Elves dropping like flies from self-starvation, Santa launched a new set of raids, this time into Quebec to get French chefs (1889-92). Meanwhile the United States had been watching events with growing concern and in 1900 invoked the Monroe Doctrine against the "Norwegian Nemesis" as the press called Santa. (Contrary to popular belief, the Monroe Doctrine didn't get its name from US President Monroe. Rather, it was the maiden name of Santa's wife.) What ensued was the First War of the Elves (1900-01).

Although it seemed to most that the United States should win an easy victory, Santa's terrible arsenal of "toys" (typically known as toys of Mass Destruction, or TMD) gave him a decisive edge. For one thing, the Eskimos had harnessed and trained killer penguins to use spiked clubs and fight in packs. In addition, there was Santa's alliance with the Clowns who had been on the run since the breakup of the Empire of the Bozos in the 1600s. Because Santa himself was 1/16th clown, the Clowns elected him Grand High Bozo and followed him into battle with all the ferocious defiance of death known to their kind. In addition to their catapults throwing giant cyanide cream pies, seltzer bottles that shot Greek Fire (the Clowns deployed their newly developed tiny tricycles armed with Martian death beams. Last and most decisive, was Santa's domestication of the flying reindeer who, when hitched to the heavily armed D-1 combat and Delivery Sleigh, proved to be the ultimate weapon of the day.

Early attempts to domesticate the flying reindeer met with limited success. Elf trainers first tried to ride their backs, but were too small to see over the antlers. Next they sat on the reindeer's head and tried to steer them using the antlers as a sort of handlebars. However, the elves' tiny feet dangling down blinded the reindeer, causing them to crash into trees (a most puzzling phenomenon to historians, since there are no trees at the North Pole). Finally, the elves tried hitching the reindeer up to a sleigh, and the S-1 Combat and Delivery Sleigh was born. Given Santa's weight and the heavy arsenal of toys such sleighs had to bear, teams of eight tiny reindeer had to be used for each sleigh. Although its turning radius was extremely wide, the S-1 was lightning quick (literally) and more than a match for the hydrogen-filled zeppelins the Americans used against them.

The American army marched northward, totally unaware of the disaster about to befall them. Suddenly, hundreds of Elf-driven sleighs swooped out of the skies, pouring bombs and razor sharp candy canes on the bewildered and stunned Americans. Then a merciless barrage of cyanide cream pies sent them retreating into hordes of killer penguins who had infiltrated their ranks disguised as household servants.

The First War of the Elves was such a total and unexpected defeat for the United States that American history books never mention it. However, the Americans being a resilient lot, were determined to get revenge. First they developed the airplane in 1903 to combat the flying reindeer. Then in 1914, they cleverly manipulated events in Europe to start World War I, merely as a testing ground for the airplane's combat capabilities.

In 1926 the United States invoked a toy embargo against Santa to provoke him into war. The resulting Second War of the Elves (1927-8) reversed the decision of the first war. The airplane proved to be much more maneuverable and easier to mass-produce than the slowly reproducing flying reindeer. Fake Santa's put in Canadian shopping malls confused the Elves and disrupted Santa's command structure by giving absurd orders that the elves mindlessly obeyed. Finally, the Americans cleverly planted peppermint candy canes in the Elves' rations, giving them terrible tummy aches that making them cry.

The victors forced the harsh Treaty of the Tundra on Santa in 1929. Santa could keep his toy mines and slave empire, but his air force was reduced to one sleigh and his eight smallest reindeer (a clause he flagrantly violated). He must also pay a crippling indemnity of free toys each Christmas to all the good children in the world. In the famous "Big Top Clause", the Clowns were dispersed to circuses across the world and forced to do cruel parodies of themselves while their families were held hostage in nearby trailers. Two of these Clowns, Ronald the Ripper and Rambo MacDonald, escaped with some wild dogs from a circus in southern California and started a well known hamburger chain.

The Treaty of the Tundra had far-reaching and unforeseen effects. In order to meet his huge toy payments, Santa called in his loans from Swiss Banks, and act that reverberated across the Atlantic by triggering the Stock Market Crash and Great Depression. By 1934, most toy mines and refineries had shut down, throwing Christmas into a crisis. Santa's response was swift and effective. First of all, he spread rumors that he did not exist, thus pressuring parents to buy toys to keep their children happy. Secondly, he met with American

business and signed the "November Contract, which established the practice of "shopping days early" starting right after Thanksgiving. These measures spurred toy sales and increased profits to vastly exceed the cost of Santa's toy indemnity each Christmas. Santa was back in business, and the world started to emerge from the Depression.

Then came World War II (1939-45), started by Adolf Hitler who had been a very naughty boy, only getting coal in his stocking each Christmas. Among his victims was Santa's native land of Norway, which caused Santa to shift from toy production to that of weapons. It was probably the most decisive development of the war and would have a profound effect on the direction of toy production after 1945.

With the war over, Santa's profits skyrocketed to new heights. The terms of the November Contract successively expanded the Christmas season to Halloween (the October Contract in 1973), Labor Day (the September Contract in 1984) and Super Bowl Sunday (the January Contract in 1987). Negotiations are now underway to extend it further to Valentine's Day. Much stricter behavior standards plus electronic surveillance of all homes and public buildings allowed Santa to severely restrict the number of children getting free toys and cutting into his profits. Children in communist countries were automatically excluded, largely because of Santa's personal dislike of his distant cousin, Joseph Stalin.

In 1982, Santa moved his headquarters to Oak Brook, Illinois, next door to the headquarters of his old Clown ally and hamburger tycoon, Ronald the Ripper. Pipelines pump raw toy sludge from the North Pole to the United States where toy factories, cleverly disguised as military bases and missile silos process this sludge into toys. The leftover toy slag is processed into guacamole and sold in a popular taco chain, which Santa also owns. Distribution of toys is done by Santa Clones who undergo a rigorous program at Camp Santa outside of Birmingham, Alabama. Here they are trained in how to dress and act like Santa, use a whip and various sorts of automatic weapons, and fly the S-20, the latest version of the combat and delivery sleigh. Santa Clones have been traditionally recruited mainly from ex-convicts and the seedier elements of society. This initially created a

problem of Santa Clones looting and trashing people's homes every Christmas Eve. In 1953, the same year Stalin died, Santa signed the Tollhouse Accord whereby Santa Clones would refrain from looting any homes where there were cookies and milk left out for them.

Operating from American military bases and aircraft carriers, the corps of Santa Clones can easily deliver all their toys in one night to the estimated 280,000 good children in the world. This surprisingly low figure is the result of a loophole in the Treaty of the Tundra that allows Santa to set the standard of what constitute a good boy or girl. The specific terms of these criteria remain a highly classified state secret.

Concern about depletion of toy ore reserves led to a failed attempt at mining Martian toy ore, which unfortunately turned out to be radioactive. The movie, "Santa Claus Conquers the Martians" is based on this attempt, although the only authentic footage of Santa in the film is of the battle scenes. The rest of the movie is totally ridiculous and should not be taken seriously.

Overall, the future looks bright for Santa as he maintains an iron grip on our throats and wallets.

As the popular song warns:

*"He's bringing his elves
And his S-20 Sleigh
He'll get you so fast
There's no time to pray
Santa Claus is coming to town"*

Historical Sources on Santa

There are three main sources of information on the North Pole's history:

- 1) The so-called "Snow Chronicles" that were written on snow since there are no trees at the North Pole & polar bears won't willingly give up hides for parchment. Unfortunately the originals were skied into oblivion in the 1960's by a ski resort that was opened on top of them. Therefore, all we have are fragments of copies made by Eskimos who, apparently to maintain the secrecy of these records, wrote them in Sanskrit that was then transcribed into Chinese ideographs. It's still a mystery how the

Eskimos have become so fluent in these two languages.

- 2) Film footage from "Santa Claus conquers the Martians". The plot is ridiculous, but footage of Santa in battle is authentic.

- 3) Hearsay and cheap gossip



Left: Man wrestling a polar bear to get his hide for parchment

Right: Bear resting after eating the man.

Toy Ore

Green toy ore (above) is a naturally occurring mineral found almost exclusively at the North Pole. In its unrefined state, it resembles green Play Dough in color and consistency. When carefully refined, one pound of toy ore can be processed into 100,000-150,000 toys. The current market value of one pound of toy ore is over \$1,000,000.

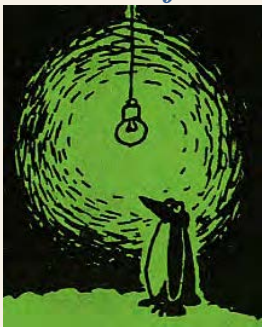
Currently, the toy ore mined at the North Pole is mixed with water into toy sludge and piped to toy factories in the US where it is processed into toys. The dregs (known as toy slag), are further processed into guacamole and piped to Taco Bell restaurants, which Santa also owns.



The only other known source of toy ore in the universe is Mars, which Santa colonized in the 1950s. Unlike the toy ore on earth, which is green, Martian toy ore (below) is red, because it is radioactive.

This came to the public's attention in 1958 when lots of toys that glowed in the dark appeared under people's Christmas trees. When it looked like Santa was going to get sued, he pulled off one of the greatest scams in legal history: he sued himself. Creating a fake public interest group, he filed a class action suit against himself, which he not only won, but profited immensely from, not just from the settlement, but also all the publicity and free advertising it generated.

The Strange Evolution of the Light Bulb



The North Pole, unlike the South Pole, is not on a landmass, which, of course, is necessary for trapping light. In the late 1800s when the light bulb was invented, light trappers first went to Africa, which then had abundant light resources. Unfortunately, the primitive and wasteful mining techniques of the times destroyed more photons than they gathered. By 1920, Africa had been stripped of virtually all its photons, thus the term the Dark Continent. This forced the Eskimos to rely on Antarctica for light. Since then, Africa's photon resources have revived to sustainable levels for the people there, but not for export.

In order to gain better access to Antarctica's photon reserves, Santa has relentlessly promoted global warming to melt the polar ice caps.

Christmas 2.0 and Eskimoes

As any satellite photo will show you, the global lines of longitude all converge at

the poles, so theoretically the North Pole could have up to 365.25 Christmases per year. The reason it's only twice (April 15 & December 25) is simply because that's all Santa needs.

To understand this we need to understand the nature of Santa's information gathering until 1978 when computerized electronic surveillance started being installed in all public buildings and most private dwellings. The old saw that "He sees you when you're sleeping; He knows when you're awake" was pure bluff and one of the great propaganda scams of the twentieth century.

Santa's best and only source of information on children's behavior was a massive form that parents turned in every April 15, known variously as Income Tax day or Christmas 1.0. It would take Santa's staff the full eight months until December 25 (Christmas 2.0) to sort through this information and determine who were the 280,000 "good" children in the world.

The origin of gun shaped candy canes goes back to the Great Ammo Famine (GAF) of 1908 when Eskimos couldn't even arm their children for school. Someone came up with the idea of shaping peppermint candy like guns to trick their children into thinking they were giving them real guns. Eskimos, however are pretty smart, and some enterprising Eskimo child devised a way in shop class to convert the candy canes into real functioning guns. The rest is history.

Eskimos not only love guns, but are also crack shots with them. In the 1950s Hollywood tried to boost sagging revenues lost to TV by using Eskimos firing live ammunition. However, this led to two unforeseen problems.

- 1) First, extra revenues were eaten up by having to invent new special

effects to make the Eskimos look thinner since they insisted on wearing their thick fur coats even in the Nevada heat.

- 2) Secondly, the free use of live ammunition triggered vicious feuds that led to an estimated 706 fatalities, including some big name actors. Many of these feuds escalated into actual lawsuits that remain unresolved today.

Eskimoes are also championship bowlers. It's not unusual for an Eskimo to have an unbroken string of 15 to 20 perfect games. As a result, they have so dominated the sport that it was removed from Olympic competition in 1960.

Killer Penguins



Killer penguins (*Penguines raptors*) are the only species of bird that have teeth. And these are just the babies.

With their prehensile wings Killer penguins can wield spiked clubs and whips. However, without fingers, they have no precision grip, so they can't use guns or type. Even if they could type, they wouldn't have anything interesting to say, except for academic discussions on which species of fish taste best.



Despite being bipedal and having very short legs, they can reach speeds of upwards of 70 miles per hour, although they can only sustain that speed for 20 to 30 minutes at a time. Their normal cruising speed is about 50 mph. Killer penguins have been known to run down and kill cheetahs in the African Savannah. What they were doing in the African savannah doesn't make any sense, but neither does anything else in this paragraph.

Most killer penguins are followers of a radical sect of Eckanar, where they can astrally project themselves across vast distances. This is widely believed to be the source of their ability to fly. However, killer penguins are particularly secretive on this subject.

It's true that killer penguins are especially resentful of the movie *March of the Penguins*, because they think it totally misrepresents penguins as a bunch of peaceful wimps.

More Information on Elves



- Elves originated in Siberia, a Mongol word for "Land of the little people easy to push around". The area where they settled in the Western hemisphere is still known as Saskatchewan, a Native American word meaning "land of the Big Ears". Our word for Bigfoot, Sasquatch, comes from the same root.

- Elves not properly fed suffer from a malady called Siberian Elf Rot where their ears fall off, triggering a growth hormone that makes them really big and mean. Most elves suffering from this disease end up either going into professional wrestling or politics.

- Just as Canadian elves require French cuisine, Siberian elves will only eat Mandarin Chinese cooking. This is because the French refuse to deliver in that neighborhood.

Clowns: Mongols of the Big Top



The Western extent of the empire of Jingles the Merciless, sometimes known as Clowntopia (c.1350). The merciless advance of the Bozo war machine mysteriously corresponded to the spread of the Black Death. Notice how the Clowns respected Switzerland's neutrality, probably to protect Swiss banks holding the vast cash reserves earned from selling tickets to the circus.

Clowns are extremely dangerous, having both superhuman strength and intelligence. The average Clown's IQ tops 150. Safety tip of the day: Never play a game of chess with a clown for money. Similarly, never get into juggling contest with a clown.

Clown Weapons. In addition to Selzer bottles full of Greek fire and catapults hurling cyanide cream pies Clowns deploy four other notable weapons:

- The punching Jack, a Jack-in-the-Box with a fist that knocks out its victim
- Crazy glue suction darts that make their victims look ridiculous. As a result, they can't get dates and their population plummets, setting up their eventual conquest
- Exploding tops
- Clown hats (helmets) topped with red balls (maces). Run for your life if a Clown with a hat starts twirling his head

The end of the Empire of the Bozos. As powerful and seemingly invincible as the Clowns may have

seemed, they had one overwhelming weakness: milk. Although impervious to the effects of alcohol, clowns just can't hold their milk and have a bad habit of picking fights with other clowns, usually over some trivial matter, such as who has the reddest nose or nose the floppiest feet. Unfortunately, the Clown code of honor demands they fight to the death, which led to a drastic drop in population that left them open to their eventual conquest by the Mongols.

The Treaty of the Tundra ending the Second War of the Elves contained what is known as the "Big Top Clause", stipulating that all clowns be put in circuses where they had to do "Stupid Clown Tricks" mimicking their battle tactics. The meanest clowns were put into rodeos, where they were ordered to run and jump in barrels rather than fight the bulls, which they could easily kill with their bare hands.

Clown fun fact: Clowns address Santa as Grand Poubah, meaning Double sized Clown with extra sauce and cheese The significance of this title has been lost for centuries.

Clown art gives insight into how truly twisted their culture is. For example in *Dinner is Served* (below) by an artist simply known as Bruno, we see intense fear Clowns have of cats. Part of the reason circuses feature lions and tigers is to keep their clowns under control. Although regular domestic house cats can do the job equally well, they're not as much of a draw at the ticket booth.



The Great Santa Clone Uprising (1952-5)



Start of the little known Great Santa Clone Uprising (aka Santa's Village Massacre) by Santa Clones over unsatisfied demands to replace milk & cookies with beer. Notice the green creature on the right.

Santa's reliance on ex-cons and common thugs as Santa Clones created serious problems in the early 1950s. Not only did the Santa Clones use their plastic explosives a bit too liberally, they also had a bad habit of looting homes after delivering the toys.

In response to this came the Tollhouse Accord in 1953, whereby Santa promised the public his little "helpers" would refrain from looting homes if their inhabitants left behind milk and cookies as a peace offering.

However, beneath this accord lay a corps of disgruntled Santa Clones seething with revolt, since they had demanded beer and peanuts.

While initially successful, the Santa Clones' overconfidence after seizing control of Santa's Village left them open to Santa's ruthless counter-attack and ultimate victory.



Undercover Santa Clone standing over the body of what the Clones believed to be Santa Claus. In fact, the Clones had been cleverly duped into assassinating a decoy Claus in this, the first act of the ill-fated Santa's Village Uprising



A suicide squad of Santa Clones prepares to assault Santa's bunker. Although the attack was successful, it proved to be an empty victory as the Clones suffered heavy

losses and Santa had made good his escape up the chimney and down Blitzen Blvd.



Rebel Santa Clones fruitlessly try to push in the wall of Coca Cola HQ, Santa's most profitable corporate holding. Unbeknownst to the Clones, inside the building lay a stockpile of nuclear weapons that might have given them some chance of victory.



Santa Clone rebels with an Elf "hostage" that in reality was the spy who provided Santa with the failsafe codes that rendered the Clones' defense systems worthless.



Left: Part of the Santa Clone fleet destroyed in the April 5th air raid
Right: Marines prepare to move in on the Santa Clones' main position after a preliminary bombardment



The final assault on the Santa Clones' command bunker in the bitter fighting at Candy Cane Corner

Rodangate and Mothragate (1956-58)



The aftermath of the bloody Santa Clone Uprising was a shortage of qualified Santa Clones for delivering toys on Christmas Eve. One catastrophic experiment carried out in Tokyo in 1956 was the use of giant flying lizards, known as *rodans*, for delivering toys.

Unfortunately, while the rodans were smart enough to make the proper deliveries and had a good work ethic, their huge wingspans created gale force winds that demolished most of Tokyo. And what the winds didn't destroy the colossal weight of the flying lizards landing on rooftops did. Even worse, it was mating season for the rodans and the horrible screeching of the female rodans in heat woke up and scared all the little Japanese children.

An even more disastrous experiment, also carried out in Tokyo in 1958, was the use of giant moths, known as *mothras*, for delivering toys. Besides the same old problems of hurricane force winds, collapsed roofs and panicked little children, there was the fact that mothras are really stupid and rarely delivered the right toys to the right children. Japan's postal system is still trying to sort out the mess.

Santa issued a public apology for the damage and chaos caused by his rodans and mothras for delivering toys. However, despite his promise of restitution for the damage, he never paid one red cent to the Japanese people. Instead he sued the Japanese film companies for using footage of rodans and mothras in their movies, claiming he had genetically modified these creatures, making any footage of them shown without his permission a violation of copyright and patent laws.

Santa won his case

The Physics of Santa



If Santa had to deliver toys to all the good boys and girls in the world, this is what he'd be up against:

Let's say there are 378,000,000 good children in the world with an average of 3.5 per household. That would still confront Santa with 91,800,000 separate delivery stops.

Assuming he would take advantage of the East-to-West rotation of earth various time zones, he would have 31 hours to get the job done.

That would still require 822.6 visits per second, giving him

$1/823^{\text{rd}}$ of a second to park, hop out of his sleigh, go down the chimney, deliver the toys, eat whatever snacks were left, get back up and into his sleigh, and reach his next destination.

If all the houses were evenly distributed over globe, Santa would have to travel an average of .78 miles between houses, making his entire trip 75.5 million miles.

To make that journey, Santa would have to travel 650 miles per second, which is 3000 times the speed of sound.

Our fastest space probe only goes a poky 27.4 miles per second.

Conventional reindeer can only travel 15 MPH...tops.

Then there's the mass of the payload.

Assuming the average delivery weighs only 2 lbs. (based on a typical lego set), the combined weight of all the toys would come to 321,300 tons.

Assuming a flying reindeer can pull 1.5 tons (10X the capacity of a land reindeer), Santa would still need 214,200 reindeer.

This would increase the total mass of the payload to an estimated 353,430 tons, roughly four times the weight of our largest luxury cruiser.

A mass of 353,430 tons travelling at 650 miles per second would create tremendous air resistance. In fact, the lead reindeer would be absorbing 14.3 quintillion joules of energy per second, causing it to burst into flames immediately and create deafening sonic booms. In fact, the entire team of reindeer would be vaporized in .00426 seconds, while Santa would be subjected to centrifugal forces equal to 17,500.06 times our earth's gravity, some 4,315,015 pounds of force.

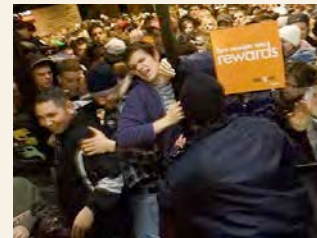
In conclusion, if Santa ever tried do this, he's dead now.

All this assumes that Santa gives toys to all or most of the children in the world... which he doesn't. This is the result of a loophole in the Treaty of the Tundra that dictated Santa give toys to all the good children in the world, but failed to define what criteria determine whether a child is good or not.

Naturally, Santa immediately exploited this oversight by applying his own strict criteria. By the time it was clear what he was doing, the Depression had hit (caused by Santa pulling his gold reserves from Swiss banks), thus preventing the U.S. from doing anything about Santa and the Great Toy Famine of '32).

Santa decided to declare there are 280,000 good children in the world, the result of careful studies to determine the minimum number and proper distribution of homes needed to give the illusion that Santa actually exists (which he does) and gives all good children toys (which he clearly doesn't).

Santa actually saw this indemnity as "seed money" to maximize his profits. For every child that got toys from him, there were a hundred who didn't, and 200 parents who didn't want their children to be traumatized on Christmas day, sending them on massive spending sprees, since parents, like Calvinists, never knew for sure if they were among the chosen few. So they spent heavily on toys to protect their children from the emotional trauma of not getting any toys on Christmas morning.



Santa considers Black Friday the happiest day of the year

Santa FAQ



Santa II meets his fate over N. Korea on Christmas Eve, 1951

Is the current Santa the original one?

That is both the most common and dumbest question we are asked. The original Santa lost his life on April 30, 1945 in the final assault on Hitler's Reichstag in Berlin at the end of World War II. He was only 118 at the time. There have been 3 Santas since then.

Santa II was shot down only six years later over N. Korea on Christmas Eve, 1951.

His successor, Santa III died in a mid-air collision with a Boeing 707 over LA on Christmas Eve, 1967. Luckily, no reindeer were hurt.

His son and successor, Santa IV, the first in the family to graduate from West Point, currently rules over the vast Santa Empire. He is 112 years old and in prime health.

What are Santa's hobbies?

Hunting and macramé. He also has world-class collections of whips, guns, and Barbie dolls. He is an internationally renowned whipster and current holder of the world championship.

Is it true that the letters of "Santa Claus" can be rearranged to spell the more demonic "Satan Slauc"?

No.

How does Santa deal with houses without chimneys?

William Levitt, the inventor of mass-produced low-cost housing after World War II, is the culprit responsible for this. Levitt cut costs by not putting in real fireplaces with chimneys, thus blocking the traditional portal of entry that Santa's clan has used for centuries. (This is why they were chimney sweeps, so they could ensure clean getaways when they robbed people's homes.)

Anyway, since Santa was still bound by the terms of the Treaty of the Tundra, he and his Santa Clones had to find a different way in. He first tried to declare that all the children in the suburbs were spoiled brats and didn't get toys. However, the precedents set by civil rights legislation and court decisions in the 1950s shot that down as unfair discrimination. As a last resort, Santa turned to plastic explosives to blow locked doors off their hinges. I say last resort, not because he didn't like blowing things up (who doesn't?), but because it was expensive. This was 1958 when there was a downturn in the economy, and Santa didn't want to convert his

liquidity to any new ventures. However, his hand was forced, and that's how he got into the plastic explosives industry, which he now controls.

What are Santa Clones equipped with?

- One fully padded bulletproof Santa suit, 2 fake beards, and 2 whips,
- 1 AK-47 w/50,000 rounds of ammo and 5,000 charges of C-4 explosives for locked houses without chimneys
- 1 copy of *1001 Foreign Phrases any American Should Know*, 1 copy of *Bunker's Magic Techniques for Breaking into Restricted Buildings*, vol. II on Priv. Residences (2013 edition), 1 operating manual for the S-18 combat and delivery sleigh, and one Rand McNally Road Atlas
- One S-18 combat and delivery sleigh equipped with the latest stealth cloaking technology, computer guidance systems, and heat-seeking and laser-guided smart missiles. By law, the technology on these sleighs must be at least two generations ahead of our best aircraft.

126. THE CAUSES AND OUTBREAK OF WORLD WAR I

"The lights are going out all over Europe; we shall not see them lit again in our lifetime."-- Lord Grey

Welcome to the Twentieth Century



What could better illustrate how early twentieth century history as 19th century mentalities running up against 20th century realities than a picture of World War I cavalry and their horses wearing gas masks? Gas masks were also fitted out for dogs that served as regimental mascots.

The century from 1815 to 1914 was one of the most peaceful in European history. This was largely because European powers were preoccupied with internal political events (i.e., liberal and nationalist movements) and economic developments (industrialization) which gave them the power and scope to expand their colonial empires without getting too much in each other's way. However, the same forces that kept Europe tranquil in the 1800's also carried the seeds for trouble in the first half of the 1900's, making it a time of war, revolution, and economic turmoil.

On the surface, European society at the turn of the century had never seemed so peaceful, prosperous, and stable, as seen at the Great Exhibition in Paris in 1900, Kaiser Wilhelm II's annual birthday celebration in Berlin in 1913, and family reunions of Queen Victoria's descendants who made up much of Europe's royalty, including Germany and Russia. Despite mounting tensions in the years leading up to World War I, Europe's elite continued living in a

fantasy world of such high society events. But behind the façade of normalcy not all was well.

Emily Davison's fatal attempt to publicize the suffrage issue by throwing herself in front of the king's horse at the Epsom Derby reflected the deeper social unrest underlying European society in the early 20th century. The appeal of socialism to the working classes was growing under the leadership of such popular socialists and anti-war activists as Jean Jaures and Rosa Luxembourg.

Juares was murdered at the beginning of the war.

Luxembourg would be brutally murdered in its turbulent aftermath.

Unfortunately, the mindset of much of Europe was one of rampant militarism.

"War is the great purifier, making for...the ethical health of peoples corrupted by a long peace, as the blowing of the winds preserves the sea from the foulness which would be the result of a prolonged calm."--Georg Wilhelm Hegel

The history of the early 1900s (1914-45) can largely be seen as 19th century mentalities running up against 20th century realities. Then again, any era's history is largely one of old mentalities running up against new realities. It's just that with the 20th century we start seeing things change at an ever accelerating pace that we can notice in the space of a lifetime... or a decade...or a year.

It's as if our civilization had entered its adolescence, gotten its driver's license, and set off behind the wheel with an incredible sense of power...but with no idea of where the brakes were or why they should be used.

The Great War destroyed more than buildings. Nature paid a heavy price, as did many animals and human beings. Many survivors were scarred for life, such as the French veteran (below) who was fitted with a mask to cover faces horribly disfigured by artillery shells. And for many of those who returned physically healthy, the

horrors of modern war had left deep and permanent psychological wounds for some of whom there was only one way out...suicide.



Civilization as a whole also suffered a collective psychological wound, as seen in art by artists such as Otto Dix and Georg Grosz. Yet Otto Dix's last painting, *Flanders* (1934-6), with its strong anti-war message was strongly disapproved of by Hitler's new Nazi regime then ruling Germany and preparing its people to launch the next big war. And so it goes.



Introduction. People often cite the assassination of the Austrian archduke, Franz Ferdinand, as the cause of World War I. This is true as an immediate, short-range cause, but his murder alone could not have triggered a global war. Rather, World War I was the product of two of the most powerful forces driving European civilization in the 1800's: nationalism and industrialization. Together and separately, they would create three factors that led to war: German unification, territorial rivalries, and economic competition.

Economic competition. The spread of the Industrial Revolution outside of Britain after 1850 expanded the consumer markets available for businesses to exploit. But it also expanded the number of producers competing for those markets, triggering more competition for what seemed to be a stagnant economy by the turn of the century. Intensifying this competition in each country were fierce nationalistic feelings fostered by an expanding public school system that preached its nation's superiority over other nations and the dangers they posed to it.

European nations did two things to protect themselves. First, they (especially France, Britain, and Germany) joined in the rush for overseas colonies. However, by 1900, most good places for colonization had been taken, just causing more competition for what few areas were left. For example, Germany and France had two bitter crises that nearly led to war over control of Morocco.

The second strategy was the use of protective tariffs (import taxes) to raise the cost of foreign goods and make the home nation's goods correspondingly more appealing to its consumers. Of course, other nations did the same thing. Prices went up, trade declined, and unemployment grew, causing internal unrest and turmoil. As a result, politicians looked for scapegoats and conveniently blamed other nations. This led to more tariffs, lower trade, rising unemployment, unrest, blame, and so on.

German unification. Nationalism created other problems. The unification of Italy and especially Germany upset the balance of power in central Europe, replacing many small and vulnerable states with two unified and aggressive nations. Germany's rapid rise as a political, economic, and military giant alarmed its neighbors, particularly France, still burning to avenge its humiliating defeat in the Franco-Prussian War. Nations reacted in two ways: the formation of alliances and military build-ups.

In the two decades since the Franco-Prussian War, Bismarck had masterfully juggled alliances to keep France isolated and Europe at peace. But Bismarck was fired in 1890 by the short-sighted and aggressive new Kaiser, Wilhelm II, who let Germany's alliance with Russia, which Bismarck had carefully nurtured for 30 years, lapse. France quickly seized the opportunity to ally with Russia. As in 1756 with Frederick the Great, the nightmare of a two front war fought on German soil loomed as an imminent threat.

Desperate for allies, Germany attracted Austria (Russia's vehement enemy) and Italy into what was known as the Triple Alliance. France lured Britain into its alliance, known as the Triple Entente, by playing on British fears of the growing German economy, navy, and colonial empire. With all the major powers aligned in one camp or the other,

there was the serious danger that if two members of opposing alliances got into a war or crisis, all the other alliance members and their colonial empires would be dragged in, too. That is exactly what would happen in 1914.

The Industrial Revolution's rapid creation of new technologies was by no means confined to peaceful ends. New and improved weapons such as the machine gun, submarine, and steel clad battleship combined with nationalist pride and fear of other nations to trigger an arms race such as the world had never seen. As soon as one nation started building armaments, its rivals would do the same and try to outdo the first nation. This would only alarm the first power, which would further increase its armaments, and so on. Each nation acted in what it felt was self-defense, but what other nations saw as aggression.

Therefore, France built up its forces to avenge the defeat of 1870 and to protect itself against German aggression. Germany armed itself to guard against French aggression and a two front war with Russia as well. The Russian army expanded to protect itself from German aggression. And the Austrian military grew to counter Russian moves into the Balkans. To make matters worse, Wilhelm II, despite Bismarck's advice, wanted a colonial empire to match those of Britain and France. This involved building a navy, which prompted Britain to build up its navy to keep ahead of Germany. Therefore, in addition to a military arms race, Germany found itself involved in an equally expensive naval arms race as well. In the end, this expensive arms race only weakened everyone's security and economies, added to mutual fears and suspicions, and led to a general expectation of war that became a self-fulfilling prophecy as nations prepared for that war.

Territorial rivalries already abounded among the many competing states and peoples in Europe. Fueling those rivalries were strong nationalist feelings further intensified by the ideas of Social Darwinism and militarism (the belief that there was nothing more glorious than to fight and even die for one's nation). Writings of the nineteenth century abounded with militaristic sentiments, or ideas that could be easily misinterpreted to support such sentiments. One very influential philosopher who

was not so simplistically aggressive as suggested by the following quotations was Georg Wilhelm Hegel, whose ideas heavily influenced such diverse thinkers as Marx and Lenin on the one hand, and Bismarck and Hitler on the other. Hegel saw war as the great purifier, making for

"...the ethical health of peoples corrupted by a long peace, as the blowing of the winds preserves the sea from the foulness which would be the result of a prolonged calm."

"...world history is no empire of happiness. The periods of happiness are the empty pages of history because they are the periods of agreement without conflict."

"World history occupies a higher ground...Moral claims which are irrelevant must not be brought into collision with world historical deeds or their accomplishments. The litany of private virtues-- modesty, humility, philanthropy, and forbearance--must not be raised vs. them. So mighty a form [the state] must trample down many an innocent flower--crush to pieces many an object in its path."

Another German philosopher whose ideas were oversimplified and misinterpreted was Friedrich Nietzsche.

"Ye shall love peace as a means to new war, and the short peace more than the long. You I advise not to work, but to fight. You I advise not to peace but to victory...Ye say it is the good cause which halloweth every war. I say unto you it is the good war which halloweth every cause. War and courage have done more great things than charity."

Playing off these ideas was General von Bernhardi. His book, *Germany and the Next War* (1911), had such chapter titles as "The Right to Make War", "The Duty to Make War", "Germany's Historic Mission", and "World Power or Downfall" that

fairly well summed up its thesis. Another German writer, Heinrich von Treitschke, like Hegel, glorified the state, but more brutishly saw its subjects as basically its slaves and declared war as the highest expression of Man.

"It does not matter what you think as long as you obey"

"...martial glory is the basis of all the political virtues; in the rich treasure of Germany's glories the Prussian military glory is a jewel as precious as the masterpieces of our poets and thinkers."

"...to play blindly with peace...has become the shame of the thought and morality of our age."

"War is not only a practical necessity, it is a theoretical necessity, an exigency of logic. The concept of the State implies the concept of war, for the essence of the State is power...That war should ever be banished from the world is a hope not only absurd, but profoundly immoral. It would involve the atrophy of many of the essential and sublime forces of the human soul...A people which become attached to the chimerical hope of perpetual peace finishes irremediably by decaying in its proud isolation..."

Psychologically and militarily, Europe was ready for war.

There were two regional "hot spots" in Europe in 1914. First, there were Alsace and Lorraine, which France desperately wanted back from Germany since the Franco-Prussian War. Second, there was the Balkans, destabilized by numerous Slavic nationalities, with Russia posing as their champion, wanted to break loose from the Hapsburg Empire. As serious as the situation in Alsace and Lorraine was, people saw the Balkans as a disaster waiting to happen, calling it the "powder keg of Europe" which would hurl the whole continent into war. They were right.

The Road to war (June-August, 1914). On June 28, 1914, Gavrilo Princip, a young member of a Serbian terrorist group known as the Black Hand, murdered the heir apparent of Austria, Franz Ferdinand, and his wife in Sarajevo, Austria. Naturally, this created quite a stir in the papers, but few at that time saw it as important enough to lead to a general war. However, behind the scenes, all the forces of nationalist rivalries, economic competition, military buildups, and interlocking alliances were blowing this murder way out of proportion and driving events wildly out of control and toward war.

Nearly a month passed before events picked up. Although there was no firm evidence that Serbia, a Slavic state bordering Austria, had anything to do with the murder, Austria still blamed it for the murder since the Black Hand was a Serbian ethnic group operating from Serbia and trying to stir up the large Serb population, against Austrian rule. With German encouragement, Austria issued severe demands to the Serbian government on July 23, saying that failure to comply with its terms would lead to war. Compliance with its harsh terms would totally humiliate Serbia. However, Russia supported Serbia and, to show it was serious about the Serbian crisis, started mobilizing its armies.

In the past, this would have been a strong, although acceptable, way of exerting diplomatic pressure, since armies and diplomacy moved slowly, giving each side time to resolve a crisis before it was too late. However, times had changed from the leisurely pace of pre-industrial wars and had drastically reduced the margin of error within which kings and diplomats had to work. Two things specifically made Russia's mobilization unacceptable: Germany's geopolitical position and railroad timetables.

As stated above, Germany's geopolitical nightmare was a two-front war. Russia's alliance with France made that a very real possibility. Since Russia refused to cancel the mobilization order, and France would not reveal if it planned to get involved if war broke out, the Germans could only assume the worst, a two front war. That brings us to the Schlieffen Plan.

The Schlieffen Plan was Germany's strategy for turning a two-front war into two successive one-front wars. It assumed that pre-industrial Russia's armies would be slow to mobilize, thereby giving Germany enough time to concentrate its forces and deliver a knockout blow against France and then concentrate its efforts on Russia.

The key to, and problem with, this plan was the precise timing of railroad timetables necessary for the rapid mobilization of Germany's armies. With Russia already mobilizing, Germany felt compelled to put the Schlieffen Plan into action before it was too late. However, that required war with France, so Germany, with no apparent provocation, declared war on France as well as Russia. That left the question of what Britain would do, which brings us back to the Schlieffen Plan.

Germany's high command considered the terrain and string of French fortresses along its western border with France too difficult for launching a quick offensive. The best route lay through the open low country of Belgium. However, Belgium refused passage to German armies, and so Germany, driven by the strict timetable of the Schlieffen Plan, violated Belgian neutrality in order to crush France and stay on schedule. Britain, outraged by this act, declared war on Germany.

And so Europe, dragging its worldwide colonial empires in its wake, blundered into World War I. Not that everyone saw it in such negative terms. Crowds all over Europe greeted the news jubilantly. Most men saw their nation as superior to all others and expected a quick victory much like that won by Prussia in 1870. Each nation's army would occupy the enemy's capital by Christmas, which meant that anyone not enlisting now would miss out on all the fun and glory. Little did they suspect the scope of the disaster about to befall them over the next four years.

The Assassination

"Probably some damn thing in the Balkans."
--Bismarck when asked what he thought would cause the next big war

The heir apparent to the throne was Franz Ferdinand, a man who actually favored more home rule for his Slavic subjects. This alarmed the more radical Serbs who feared his policy might lure his Serbian subjects away from loyalty to an independent Serbia. Therefore, they decided to kill him. It was June 28, 1914 at a place known as Sarajevo. Unfortunately, that was the anniversary of the Battle of Kosovo, a major defeat inflicted by the Turks on the Serbs in 1389. Many Serbs took Franz Ferdinand's choice of this day for a military review as a deliberate insult.

The culprits were a secret Serbian nationalist group, the Black Hand, which got several teenage boys involved in the plot. As the procession went by, the first boy felt sorry for Sophie if she were to become a widow and went home. The second boy threw his bomb but hit the wrong car, injuring several of its inhabitants. However, exploding bombs have a way of prematurely ending parades. Franz Ferdinand, mad over this disruption, ordered his driver to go to the hospital where the wounded victims were taken.

Unfortunately, a wrong turn by chance led right to the third conspirator, Gavrilo Princip (below), who seized the opportunity, ran up onto the car's running board and killed Franz Ferdinand and his wife Sophie at point blank range.



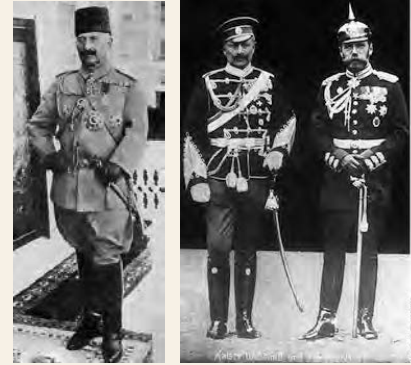
Princip was caught soon after the assassination of Franz Ferdinand. Following two failed suicide attempts (one with outdated cyanide) he was sentenced to 20 years in prison, because he was 27 days short of his twentieth birthday, the minimum age for the death sentence. He was kept in harsh confinement at Theresienstadt (later a notorious concentration camp) where he contracted tuberculosis, leading to amputating an arm and his eventual death on April 18, 1918. At the time he weighed only 88 pounds.

The Kaiser's arm and a world war



Sometimes history turns on the most innocuous seeming events. Take Kaiser Wilhelm's traumatic breech birth, which crippled his left arm. This, plus growing up in the hyper-masculine military climate of the Prussian aristocracy, may have given him a Napoleonic complex which some described as megalomania. It didn't help that he was always dressed in one of the 200 military uniforms in his wardrobe. Neither did the fact that there was a history of insanity on both sides of his family.

Wilhelm seems to have been intelligent, but impatient and quick tempered, which, when he became Kaiser in 1888, quickly put him at odds with his "Iron Chancellor", Bismarck and his carefully designed policies. (Bismarck had even briefly manipulated Russia and Austria into joining the League of Three Emperors with Germany.) Wilhelm wanted Germany to claim "its place in the sun", which meant for him a colonial empire like that of his first cousin, George V of England. Bismarck saw that colonies were expensive luxuries that Germany could not afford. However, after firing Bismarck in 1890, Wilhelm embarked on getting a colonial empire, which also involved building a navy, setting Germany on course toward eventual war with Britain.



Kaiser Wilhelm II in Austrian, Turkish, and Russian army uniforms. On the right he poses with his first cousin, Tsar Nicholas II, who is wearing a German uniform

Last Minute Maneuvering

Diplomatic maneuverings. At one point, the German government sent instructions to their ambassador in Paris to demand France turn over its frontier fortresses to guarantee its neutrality in case of war with Russia. Germany, of course would return the fortresses after the war. Before this provocative demand could be delivered, Berlin realized how ridiculous it was and told the ambassador not to present it to the French. Unfortunately, the French had intercepted the original message and knew of it.

Being careful not to appear the aggressor, France pulled all its forces five kilometers back from their borders to make sure the first fighting took place on French soil.

As war moved ever closer, the Kaiser had a last minute failure of nerve and tried to order the troops back. However, his generals informed him that it was too late, that the machinery of war was rolling forward and couldn't be stopped without jeopardizing Germany's safety at the hands of its neighbors.

The railroad timetables had trumped human judgment and Europe rolled inexorably to war.

TOTAL WAR (1914-1918)

At first there will be increased slaughter--increased slaughter on so terrible a scale as to render it impossible to get troops to push the battle to a decisive issue. They will try to, thinking that they are fighting under the old conditions, & they will learn such a lesson that they will abandon the attempt forever. Then...we shall have...a long period of continually increasing upon the resources of the combatants...Everybody will be entrenched in the next war. --I.S. Bloch (1897)

*You smug faced crowds with kindling eye
Who cheer when soldier lads march by
Sneak home and pray you'll never know
The hell where youth and laughter go."*
-- Siegfried Sassoon, World War I veteran

*We are ready, and the sooner the better for us.
--German General von Moltke*

The war of movement (August-September, 1914). When Europe went to war in 1914, many, although not all, people welcomed it as an opportunity for national glory. Soldiers, especially in Western Europe, also marched, or rather rolled, to war much more quickly than ever before. France alone, with its extensive network of railroads, had 7000 trains, some only eight minutes apart, moving troops to the front. Also, rapid population growth and mechanization from the Industrial Revolution, freed many more men than ever before for war.

Europe also marched to war better armed by far than any previous army in history. Germany seemed particularly armed to the teeth, thanks to the Kruppworks at Essen, Germany, a vast complex of 60 factories with its own police force, fire department, and traffic laws. One new weapon would especially change the face of war. That was the machine gun, which could fire 600 bullets per minute and stop any old-style human wave assaults dead in their tracks, literally. It was the machine gun that would put an end to the illusion of a quick victory in a war of movement--but not at first.

In the opening weeks, the Schlieffen Plan went like clockwork. While stopping a French offensive, known as Plan 17, from driving eastward into Germany, the strong German right flank swept the French, British, and Belgian forces back toward Paris, covering up to 20 miles a day, an exhausting pace for infantry loaded with up to 60 pounds of equipment. In fact, that pace plus the German General von Moltke's weakening of the Western offensive in order to meet a Russian offensive unexpectedly materializing in the East may have doomed the Schlieffen Plan to failure. The French and British allies made their stand to save Paris along the Marne River, many troops being rushed to the front in Paris taxicabs. The allies stood fast and the German offensive ground to a halt. Then, somewhat spontaneously and out of simple survival instinct, the soldiers started digging trenches. The Schlieffen Plan and war of movement had failed. The age of trench warfare had begun along what would ever after be remembered as the Western Front.

The new face of war. Making trench warfare especially bad was the fact that the opposing trenches were generally only 500 yards or less apart. This kept soldiers in constant contact with the enemy and constantly immobilized in the mud trenches to avoid the danger above. This contrasted sharply with previous wars where armies would fight a battle, withdraw, and then regroup for several weeks or months before the next battle. This had given soldiers long breaks from the terrors of battle, a psychological safety net that kept them halfway sane. But that safety net no longer existed as soldiers stayed in constant contact with the enemy and became worn out from battle fatigue, producing a catatonic-like state known popularly as the "thousand yard stare".

Life in the trenches, even during relative lulls in the fighting, was a thoroughly wretched experience. It was hot in summer and especially cold in winter. It was also wet and muddy, giving the soldiers little or no chance to bathe, exposing them to infestations of rats, lice, disease, and infection. One of the worst of these infections was trenchfoot, caused by the soldiers' not being able to remove their socks and boots for long periods of time and often resulting in amputation of the infected foot or leg. The following excerpts from the novel, *All Quiet on the Western Front*, by Eric Maria Remarque, himself a

veteran of the war, capture the misery of life in the trenches.

There are rumors of an offensive. We go up to the front two days earlier than usual. On the way, we pass a shelled schoolhouse. Stacked up against its longer side is a high double wall of yellow, unpolished brand-new coffins. They still smell of fir, and pine, and the forest. There are at least a hundred.

"That's a good preparation for the offensive," says Muller astonished.

"They're for us," growls Detering.

"Don't talk rot" says Kat to him angrily.

"You be thankful if you get so much as a coffin," grins Tjaden, "they'll slip you a waterproof sheet for your old Aunt Sally of a carcass."

The others jest too, unpleasant jests, but what else can a man do? --The coffins are really for us. The organization surpasses itself in that kind of thing...

We are in low spirits. After we have been in the dug-outs two hours our own shells begin to fall in the trench. This is the third time in four weeks. If it were simply a mistake in aim no one would say anything, but the truth is that the barrels are worn out. The shots are often so uncertain that they land within our own lines. Tonight two of our men were wounded by them.

The front is a cage in which we must await fearfully whatever may happen. We lie under the network of arching shells and live in a suspense of uncertainty. Over us Chance hovers. If a shot comes, we can duck, that is all; we neither know nor can determine where it will fall.

It is this Chance that makes us indifferent. A few months ago I was sitting in a dugout playing skat; after a while I stood up and went to visit some friends in another dugout. On my return nothing more was to be seen of the first one, it had been blown to pieces by a direct hit. I went back to the second and arrived just in time to lend a hand

digging it out. In the interval it had been buried

It is just as much a matter of chance that I am still alive as that I might have been hit. In a bomb-proof dugout I may be smashed to atoms and in the open may survive ten hours' bombardment unscathed. No soldier outlives a thousand chances. But every soldier believes in Chance and trusts his luck.

We must look out for our bread. The rats have become much more numerous lately because the trenches are no longer in good condition. Detering says it is a sure sign of a coming bombardment.

The rats here are particularly repulsive, they are so fat-- the kind we call corpse rats. They have shocking, evil, naked faces, and it is nauseating to see their long, nude tails.

They seem to be mighty hungry. Almost every man has had his bread gnawed. Kropp wrapped his in his waterproof sheet and put it under his head, but he cannot sleep because they run over his face to get at it. Detering meant to outwit them: he fastened a thin wire to the roof and suspended his bread from it. During the night when he switched on his pocket-torch he saw the wire swinging to and fro. On the bread was riding a fat rat.

At last we put a stop to it. We cannot afford to throw the bread away, because already we have practically nothing left to eat in the morning, so we carefully cut off the bits of bread that the animals have gnawed.

The slices we cut off are heaped together in the middle of the floor. Each man takes out his spade and lies down prepared to strike. Detering, Kropp, and Kat hold their pocket-lamps ready.

After a few minutes we hear the first shuffling and tugging. It grows, now it is the sound of many little feet. Then the torches switch on and every man strikes at the heap, which scatters with a rush. The result is good. We toss the bits of rat over the parapet and again lie in wait.

Several times we repeat the process. At last the beasts get wise to it, or perhaps they have scented the blood. They return no more. Nevertheless, before the morning the remainder of the bread on the floor has been carried off.

In the adjoining sector they attacked two large cats and a dog, bit them to death and devoured them.

Next day there is an issue of Edamer cheese. Each man gets almost a quarter of a cheese. In one way that is all to the good, For Edamer is tasty--but in another way it is vile, because the fat red balls have long been a sign of a bad time coming. Our forebodings increase as rum is served out. We drink it of course; but are not greatly comforted.

For days we loaf about and make war on the rats. Ammunition and hand-grenades become more plentiful. We even overhaul the bayonets--that is to say, the ones that have a saw on the blunt edge. If the fellows over there catch a man with one of those he's killed at sight. In the next sector some of our men were found whose noses were cut off and the eyes poked out with their own saw-bayonets. Their mouths and noses were stuffed with sawdust so that they suffocated.

Some of the recruits have bayonets of this kind; we take them away and give them the ordinary kind.

But the bayonet has practically lost its importance. It is usually the fashion now to charge with bombs and spades only. The sharpened spade is more handy and many-sided weapon; not only can it be used for jabbing a man under the chin, but is much better for striking with because of its greater weight; and if one hits between the neck and shoulder it easily cleaves as far down as the chest. The bayonet frequently jams on the thrust and then a man has to kick hard on the other fellow's belly to pull it out again; and in the interval he may easily get one himself. And what's more, the blade often gets broken off.

Total War. Four factors, all arising from the Industrial Revolution, had totally changed the face of war. First of all, the Industrial Revolution provided enough men (thanks to population growth and the mechanization of many jobs) and firepower (especially the machine gun) to dig and fill opposing trench systems stretching from the Alps to the North Sea, a system several hundred miles in length. The result was the *continuous front* which neither side could outflank since it was hemmed in by mountains and sea. Unfortunately, the machine gun and faster loading rifle which made the continuous front possible also made the technology of defense superior to that of offense. There was no way that unshielded infantry could get across that murderous area of flying metal known as No Man's Land. That is not to say that people did not try. They did, and with disastrous results.

Third, most generals either did not understand the nature of this new type of warfare or felt they could not afford to accept it. After all, most of these generals, many of whom were quite old, had not been able or willing to keep up on the rapidly changing technological changes transforming warfare in recent years. It is often said that generals are always fighting the last war, and nowhere did this better apply than to the generals of World War I. Before we become too critical, however, it should be pointed out that at no time in history had warfare been so thoroughly revolutionized in so short a time. The machine gun and continuous front had created a whole new ball game, but no one had a rule book by which to play. And so for four years, the generals just fumbled around the best they could while soldiers continued to die.

The fourth factor, also resulting from the Industrial Revolution and complicating matters further, was the media, in particular the newspapers. Never before had the public back home been so well informed about the progress, or lack of it, in a war. The generals had promised a quick victory, and the public and press had a close eye on how well they were doing. In the more democratic countries of France and Britain the generals found themselves under severe pressure by the public and politicians to win the war decisively and quickly. This was especially true of France, since the German lines contained northern France along with the bulk of its industries, and the French public was clamoring to get it back.

All of these factors combined to create a tragic pattern of suicidal frontal assaults that would prolong the stalemate. The casualties would be so horrible that governments modified or censored news coming from the front. This created a misinformed public and media that, thinking victory was within their grasp, would put more pressure on the generals for a quick victory. As a result, there would be more disastrous offensives more censorship to misinform the public, and so on.

Such offensives were usually conceived by generals behind the lines without any clear idea of what the front was really like. Preceding the attack for several days would be a massive bombardment that did a lot less damage than hoped for and which also told the enemy where the attack was coming. As soon as the shelling stopped, the troops went "over the top" into No Man's Land where the obstacles of barbed wire (left undestroyed by the bombardment) and craters (actually created by the bombardment) held them up so that the enemy machine guns (also unharmed since they had been taken to the dugouts below during the shelling) could cut them down. The men who suffered through this living hell often give us its most graphic and poignant descriptions.

"We listen for an eternity to the iron sledgehammers beating on our trench. Percussion and time fuses, 105's, 150's, 210's-- all the calibers. Amid this tempest of ruin we instantly recognize the shell that is coming to bury us. As soon as we pick out its dismal howl we look at each other in agony. All curled and shriveled up we crouch under the very weight of its breath. Our helmets clang together, we stagger about like drunks. The beams tremble, a cloud of choking smoke fills the dugout, the candles go out." --Verdun veteran, 1916

."the ruddy clouds of brick-dust hang over the shelled villages by day and at night the eastern horizon roars and bubbles with light. And everywhere in these desolate places I see the faces and figures of enslaved men, the marching columns pearl-hued with chalky dust on the sweat of their heavy drab clothes; the files of carrying parties laden and staggering in the

flickering moonlight of gunfire; the "waves" of assaulting troops lying silent and pale on the tapelines of the jumping-off places.

"I crouch with them while the steel glacier rushing by just overhead scrapes away every syllable, every fragment of a message bawled in my ear...I go forward with them...up and down across ground like a huge ruined honeycomb, and my wave melts away, and the second wave comes up, and also melts away, and then the third wave merges into the remnants of the others, and we begin to run forward to catch up with the barrage, gasping and sweating, in bunches, anyhow, every bit of the months of drill and rehearsal forgotten.

"We come to the wire that is uncut, and beyond we see gray coal-scuttle helmets bobbing about...and the loud crackling of machine-guns changes as to a screeching of steam being blown off by a hundred engines, and soon no one is left standing. An hour later our guns are "back on the first objective," and the brigade, with all its hopes and beliefs, has found its grave on those northern slopes of the Somme battlefield." --Henry Williamson, age 19

"Verdun transformed men's souls. Whoever floundered through this morass full of the shrieking and dying...had passed the last frontier of life, and henceforth bore deep within him the leaden memory of a place that lies between life and death." -- Verdun veteran

The first day's butchery in an offensive, such as the 60,000 British who fell on the first day of the Battle of the Somme in 1916, should have been enough to convince the generals to call off the attack. But that would be admitting failure for all their months of plans and preparations. Therefore, the offensives continued, in some cases for months, with the casualties piling up into the hundreds of thousands. Each successive battle followed the same pattern and would continue that way until someone figured out how to solve the problems that the machine gun and continuous front had created. Until that day, it remained stalemate on the Western Front.

New fronts and new weapons. The continuing cycle of stalemate on the Western Front forced the warring powers to realize modern war is total war, demanding activities in all possible directions to sustain their own efforts and wear down those of the enemy. This led to efforts in five areas: control of material resources at home, control of human resources (including the media and morale), continued attempts to break through on the Eastern Front, the search for victory by opening new fronts, thus making it truly a world war, and the search for victory through the development and use of new weapons.

Material and human resources on the home front. World War I devoured enormous amounts of material resources, forcing governments to closely control production and distribution of those resources. Blockaded Germany, in particular, had to ration food strictly. It also controlled mineral resources and even scientific research, which developed synthetic nutrients and ways to derive nitrates from the atmosphere for explosives. France also had to exert strong central control over production, since its industrial north was largely behind German lines, forcing it to rebuild much of its industry further south by 1918.

Human resources had to be controlled to ensure enough men for the front and a labor force for the strategic industries at home. With so many men gone to war, women entered the work place in unprecedented numbers, taking over many occupations previously reserved solely for men before the war, such as secretaries. After the war, when many husbands and fiancées did not return, many women stayed in the workplace, giving them more economic power and eventually the vote. To maintain morale, governments assumed more control of the media, limiting or distorting the information available to the press and public. Governments also actively tried to harness popular support for the war with brightly colored and illustrated posters that glorified the war effort and portrayed the enemy as less than human.

As the homefront became more of an integral part of the total war effort, governments saw enemy factories and civilians as legitimate war targets. In 1915, a German Zeppelin launched a bombing raid on London, killing several people. Although the damage from this raid was small by later standards,

it pointed the way for much worse to come for civilians in wartime.

The Eastern Front. Allied hopes for a quick Russian victory in the East were quickly dashed in August 1914 when the Germans annihilated invading Russian forces at Tannenberg. (This was the first and only time allied forces set foot on German soil during the war.) Germany also bolstered Austria against the Russians in the south, causing a much looser version of the Western Front to evolve in the East, since the armies (except Germany's) were less mechanized and thus less successful in stopping a war of movement. The Russians were particularly poorly armed (many of them even without rifles), and their offensives against the German positions met with especially disastrous results. By 1917, Russia, bled white by the war, stood on the verge of revolution.

New Fronts. Each side also tried to divert and drain the enemy's strength by opening up new fronts. Turkey was the first new power to enter the war, in this case, on Germany's side. This threatened to cut off British and French supplies to Russia by way of the Black Sea and prompted a British offensive known as the Gallipoli Campaign. This was one of the worst run operations of the war. At least twice, the British generals had victory within their grasp, but chose to nap or have teatime rather than press their advantage, giving the Turks time to bolster their line. For several months, the allies were pinned down to the beaches until disease and casualties forced them to withdraw.

After this, the main British strategy against the Turks was to stir up and support rebellions. In that regard, one of the most celebrated figures of the war was T.E. Lawrence, known as Lawrence of Arabia, a charismatic figure who succeeded in organizing the Arabs and destabilizing the already decrepit Ottoman Empire. The British issued the Balfour Declaration in 1917, which promised a Palestinian homeland for the Jews in return for their help. This promise, in conjunction with conflicting promises to the Arabs, would be (and still is) the source of intense conflict in the Middle East.

Italy, despite being part of the Triple Alliance, joined France and Britain in order to take disputed lands from Austria. However, Austria managed to defeat Italy, making it more of a burden to Britain

and France, who had to keep it supplied with guns, money, and fuel just to keep it in the war. Meanwhile, Bulgaria joined Germany and Austria in order to take Macedonia from Serbia, which it accomplished quickly. Serbia's British and French allies responded by landing 500,000 men at Salonika, Greece, where they did nothing until 1918, earning it the title of Germany's "biggest internment camp."

Europe's African and Asian colonies were also dragged into the war, making it a truly global war. The British were able to seize Germany's African colonies except for German East Africa. In Asia, the Allies persuaded Japan to attack German holdings and spheres of influence in China. This gave Japan a foothold in China that it would expand in the 1930's, laying the foundations for World War II in Asia. Overall, despite mixed results, Germany's allies gradually weakened as the war dragged on.

There was also the naval front. In the years preceding the war, Germany had built a fleet second only to Britain's. In 1915, the two navies clashed at Jutland. It was an indecisive battle, with Germany getting a slight advantage. But the Kaiser, not wishing to damage his nice new navy, called it into port where the British kept it blockaded for the rest of the war. The blockade was soon extended to all German ports and slowly starved Germany to death.

New Weapons. Meanwhile, each side looked desperately for new weapons to solve the problem of the continuous front. Poison gas and flame-throwers, pioneered by Germany, became all too common and horrible features in trench warfare, but failed to achieve a breakthrough. After the war, the Geneva Convention outlawed both weapons as inhumane. However, two other weapons had a big future in warfare. One was the tank, which gained the allies at least limited success in breaking through enemy trenches. Despite their slowness (3 mph) and unreliability (only half making it to the starting line in their first major battle), tanks shielded allied troops, helping them cross No Man's Land with relatively few casualties.

The airplane, first used for observations of enemy lines, was adapted to combat use, being armed with a machine gun to shoot down other planes. At first, aerial warfare consisted mainly of

individual combats (dogfights) between pilots. It was very limited, polite (at least by warfare's standards), and the most glorified aspect of World War I, a sort of chivalry in the skies. Even that changed by war's end, with the allies sending up hundreds of planes to sweep the skies and strafe and bomb the German lines, a strategy that would be developed with much more deadly effect for the next war.

The submarine was Germany's great equalizer in the naval war. While Britain ruled the waves after Jutland, German U-boats (submarines) could still lurk beneath the waves and prey upon allied shipping in retaliation for the blockade on Germany. However, some of the ships Germany sank were from the United States, technically a neutral power but actively trading much needed food and other supplies to France and Britain. While Germany felt justified in sinking any ships supplying its enemies, the United States saw these attacks on its ships as barbaric and unprovoked acts of aggression.

Germany eased up on its attacks for a while to keep America neutral. But in 1917, as the war effort got more desperate, U-boat raids resumed. Then the British intercepted and publicized the Zimmerman Telegram, in which Germany offered Texas, New Mexico, Arizona, and California to Mexico if it would attack the United States and divert its attention from the war in Europe. American public opinion was outraged, and the United States declared war on Germany in March 1917. That same month another ally, Russia, after three years of defeats and shortages, became engulfed in Revolution.

The end of the "war to end all wars" (1917-18). Alexander Kerensky's moderate government that replaced the Czar, needing to look legitimate to the outside world, kept Russia in the war, which only weakened it further and led to its overthrow by Lenin and the Bolsheviks in November, 1917. The following March, Lenin signed the treaty of Brest-Litovsk, taking Russia out of the war while giving up Poland, Ukraine, Latvia, Estonia, Lithuania, and Finland. This also freed one million German troops for the Western Front. The question was: Could the addition of the United States compensate for the loss of Russia?

With virtually no standing army when it declared war in 1917, the United States needed a year to mobilize its industrial and military might. Therefore, in 1918, the war became a race to see who could first arrive on the Western Front in force: the newly mobilizing Americans or the Germans freed from the Eastern Front.

At first, the Germans won the race and launched an offensive, attacking with smaller tactical units to punch holes in the enemy lines and drive them back bit by bit. Also, the attacks were not preceded by artillery bombardments that could warn the enemy where the attack was coming. This strategy succeeded in driving the allies back toward Paris. But, as in 1914, the allies, now bolstered by newly arrived American units, stopped the Germans at the Second Battle of the Marne.

Now the allies went on the offensive. Using the very tactics the Germans had just used, the growing numbers of fresh American troops at their disposal and large numbers of tanks to shield their soldiers crossing No Man's Land, they sent the Germans reeling back step by step toward Germany. At the same time, the British blockade was gradually starving the German homeland to the limits of its endurance.

At this point, all the pressures building elsewhere caved in on Germany, as its allies collapsed one by one: first Bulgaria, then Turkey, and finally Austria. Exposed to attack from the south and east, Germany finally asked for an armistice (ceasefire). On the eleventh hour of the eleventh day of the eleventh month of 1918, after one final flurry of artillery fire, the guns fell silent. Here and there, opposing soldiers met in No Man's Land to pay their respects to men who, like themselves, just happened to be wearing different uniforms, and then turned toward home. The First World War was over. However, its effects would be long-lasting and varied, including the Second World War a mere twenty-one years later.

Marching to war



German soldiers singing on their way to war

Many greeted the coming of war in 1914 as a great adventure. As the German General von Moltke put it: “We are ready, and the sooner the better for us.” In the jubilant crowd celebrating the war in Munich, Germany was a young Austrian, Adolf Hitler, who quickly joined the German army, where he served with distinction.

Never had states been better armed for a war. Already, in 1914, there were some 6,000,000 men under arms including 2,000,000 Germans and 1.65 million French. Germany also mobilized 715,000 horses for cavalry and draught animals in 1914, while Russia mobilized over one million.

And yet never were nations more unprepared for what was to come, as symbolized by the French soldiers who still wore the same bright red and blue uniforms as those worn by the French army since 1830, the colors of a perfect target.

But, as seen in Marc Chagall’s *Leave-taking Soldiers*, not everyone welcomed the coming of war as a grand adventure.



In France, when church bells announced the news, peasants rushed into the villages, the women weeping as if their husbands, fathers, and sons were already dead. Some, such as the artist Kubi in *The Torch of War*, even saw the coming of war as the prelude to a disaster of apocalyptic proportions.



They were the perceptive ones.

The War of movement (August- Sept., 1914)

“If we must die, let us die gloriously.” -- King Albert of Belgium who chose to resist the Germans rather than allow them free passage through his country

Belgium. Once at the Belgian border, the Germans’ access to railroads ended and they had to go on foot. Carrying 60 pounds of equipment on their backs, those on the outer arc of the right flank had to march at an exhausting pace of up to 30 kilometers per day to keep up with the rest of the army.

The initial German assaults on Belgium’s massive concrete fortresses were disastrous. One German general commented on the peculiar thud of bullets hitting human bodies. Therefore, the Germans turned to a whole new generation of monstrous siege guns that quickly demolished the Belgian forts and any claims of their invincibility. At Liege The German general Ludendorff even crashed open the gate of the fort with his car. Overall, Belgium’s forts barely slowed down the German advance.



German Railroad gun for shelling long-range targets, including cities, and the sort of damage such guns could do to Belgian forts

The “Hun”. Bitter memories of French guerrilla actions in 1870 made the Germans particularly nervous and prone to overreact to any perceived civilian resistance, which they saw as illegal rebellion. In Louvain, Belgium, a false alarm over snipers triggered a Germans reaction that

killed over 200 civilians and destroyed 1000 buildings, including the town’s medieval architecture and university, with its library of 230,000 priceless books.



Cartoons showed alleged German atrocities against Belgian and French civilians: plundering homes, raping the women, and even tossing babies in the air and catching them on their bayonets. However true, false, or exaggerated, such images tarnished Germany’s reputation as a civilized nation for years and branded the Germans as the barbaric Hun.

Plan 17. While the Germans advanced quickly through Belgium, the French put into motion their own ill- fated counterpart to the Germans’ Schlieffen Plan: Plan 17 which was to advance eastward through the Rhineland and on to Berlin. However, this went through much rougher ground and met with immediate disaster. On August 22, 1914 alone, 27,000 French soldiers died, making it the single bloodiest day in French military history.

Taxis to the Marne. Meanwhile, to the West, the German offensive marched on. British evacuation in the face of the German advance was so rapid that they had little time to prepare an effective line of defense before having to fall back again. However, the unexpected appearance of Russian forces in East Prussia caused the German commander, von Moltke, to pull forces from France to defend the Eastern front. This shortened the arc of Germans advancing on Paris, exposing their right flank to a French and British attack at the Marne River.

One of the most legendary events of World War I was the transportation of French troops to the Marne in Paris taxis. However, only about 5000 soldiers were actually transported to the front in this manner.

More important in blunting the German offensive was the French 75, a recoilless cannon that eliminated the need to reposition it each time after firing. By September 12, the Germans had been stopped and the Schlieffen plan lay in ruins along the banks of the Marne.

The Hollow Click of Deadlock Called the Western Front

After the Germans were stopped at the Marne, each side spread out trying to outflank the other until both armies stretched in an unbroken line of trenches from the North Sea to the Swiss border. Thus was born a grim state of perpetual deadlock that would drag on for the next four years along what would ever after be remembered as the Western Front.

Since both sides had counted on a quick war of movement, they had only stockpiled six weeks worth of munitions, which were gone by October, 1914. This gave soldiers the relative calm needed to build their trench lines.

Not that all areas were suited to trenches, especially the lowlands in Belgium. The area near the Yser River was so prone to flooding that trenches could not be dug. Rather, the lines were built up with sandbags, making them more vulnerable to artillery fire. Luckily, this was a fairly quiet sector of the lines throughout the war.



The unofficial Christmas truce of 1914 started with British and German troops singing Christmas carols to one another. From there it developed into the two sides meeting in No Man's Land to exchange chocolates and tobacco and eventually a soccer match. As many as two-thirds of the troops in the British-German sector of the line may have participated (above). However, when they tried to extend the truce the next day, their officers forced them to start fighting again.

War in a Ditch



The trenches weren't part of some grand strategy. They were just a natural reaction by the soldiers to escape the metal flying overhead. At first they were just simple ditches, but they quickly evolved into sophisticated systems with multiple layers of defense and 40-foot deep dugouts to escape the especially intense bombardments preceding major enemy offensives.

But the trench wasn't just a temporary device to stay alive. It became a way of life, and death, for millions of men stuck in what was euphemistically called "The Western Front."

There were many ways trench life could kill you.

You could freeze in the winter or die from pneumonia during the spring rains...

...or standing in the muck without changing your shoes or socks for months you could contract a fungus infection called trenchfoot, which would kill you unless the infected limb was amputated.

Or, with plenty of other infectious diseases thriving in that squalor, you could just get sick and die.

Then, of course, there was the business of killing. With the continuous front, there was no maneuvering around the enemy, so you stayed in constant contact with him 24/7. And he had plenty of ways to kill you.

You could be mowed down by machine gun fire with thousands of other men in a huge offensive.

Or you could be blown to pieces in an artillery barrage. That's how 70% of the fatalities in the Great War met their fate.

You could suddenly be exposed by enemy flares and gunned down like a wild animal while on a night patrol in No Man's Land.

You might drown while lying wounded and immobile in a bomb crater in No Man's Land, helplessly watching as it gradually flooded from the spring rains.

Maybe you would suffer a fiery death from a flamethrower....or the prolonged agony of poison gas burning you to death from the inside out.

Then again, a random artillery shell might drop into your section of trench while you were reading a letter from home, or shaving, or just scratching the lice from your body.

The shell's concussion could rupture your internal organs without leaving any outside trace of being hit.

Or it might leave no trace that you had ever existed at all.

Maybe you'd be lucky and a shell's shrapnel would only take part of you: an arm, a leg...or your face.

There seemed to be no justice or logical pattern to the killing. Good men died while scoundrels survived. So most soldiers eventually resigned themselves to fate, whatever it was, and took it.

Even if you escaped the bullets and artillery shells, you could just go crazy. Unrelenting contact with the enemy only 100 yards away meant you could never let your guard down with some sniper always waiting to make you pay for that one unguarded moment. Sooner or later, even the toughest soldier would crack, his nerves and psyche fried by the constant overload.

In World War I they called it shell shock. Other wars of the 20th century had their own names for it: the 1000-yard stare, combat fatigue, or post traumatic stress syndrome.



Whatever you called it, you could no longer function in combat, or even as a normal human being.

Death was written on your face and even your buddies avoided you as a marked man and the sniper's next victim.

Even if you survived the war physically intact, you were often a changed and broken man.

To some, it seemed as if Dante had created a 10th circle of Hell just for them....and there was no way out....except one very desperate way....suicide.



Otto Dix, *Trench Suicide*

"...a place that lies between life and death." : Verdun

In 1916, while the allies planned more offensives like those in 1915, the Germans struck first against a useless salient in the French line near Verdun. Although the Verdun salient was exposed to attack on three sides and encompassed forts that had been stripped of their guns since 1914. The Germans were betting the French would go to any lengths to protect this symbol of national pride.

They were right.

In February, the Germans opened their assault with a tremendous bombardment that drove the French defenders nearly mad. French staff officers tried to explain that Verdun was of no strategic importance, but political pressure forced them to defend it at any cost. Soon they had fed 76 divisions into the "mincing machine"

of Verdun, supplying it via one road heavily exposed to enemy artillery fire. In the first 6 weeks, they lost 90,000 men, averaging over 2000 a day.



So determined were the French to defend this nearly hopeless position that the Germans also convinced themselves that Verdun was a great prize. Eventually 115 divisions from both sides were crammed into a five-mile front.

Supply lines broke down

Medical services broke down

Even the trench lines broke down.

Only the men caught in this madness endured.

And not all of them made it.

“Verdun transformed men’s souls. Whoever floundered through this morass full of the shrieking and dying had passed the last frontier of life

and henceforth bore deep within him the leaden memory of a place that lies between life and death.”--Verdun veteran

In the end, the French lost 315,000 men, while the Germans lost 281,000, making this the only major battle in the war where the attackers lost fewer men than the defense.

However, the French had held Verdun...so they figured they had won.

Anatomy of an Offensive: The Somme (July-November, 1916)



Up till now, the Somme had been a relatively inactive sector. In 1916 it was chosen as the point of attack because it was where the French and British lines met, so the two armies could cooperate in an offensive. However, with the French tied down by the German offensive at Verdun, this became a primarily British operation.

Britain had just begun a draft to fill the trenches with raw recruits. However, to attract volunteers, men from same village could enlist together. As a result, whole towns would have virtually all their young men wiped out in one day. After the Somme, friends and relatives were split up to avoid any more such disasters.

The British prepared a vast infrastructure of roads, RR’s, camps, supply dumps, water stations, and medical aid stations for the 1000’s of casualties the generals were now resigned to and willing to accept.

Some 2,960,000 artillery shells were stockpiled for the initial bombardment. Compare that to Napoleon a century earlier at Waterloo, who had only used 20,000.



The Bombardment. The prelude to an offensive was a massive bombardment lasting up to a week to soften the enemy and tear up his trenches, machine guns, supply lines, and any barbed wire blocking the way across No Man’s Land. Three types of shells were used in a rotating succession.

Trench mortar bombs were used first to destroy trenches and machine guns.

Chlorine gas shells came next. Since the gas was heavier than air, it would seep into the dugouts, but if the defenders were ready, they could disperse it with water sprayers.

Finally aerial torpedoes were fired into a high arc to burrow deep into the ground. Exploding with tremendous force, they could create craters 12' deep and 15' across. The concussion from these shells could put out candles and acetylene lights in the deepest dugouts which "rocked like the sides of a ship" in the foul smelling, sometimes poisoned darkness.



The cycle of aerial torpedoes, trench mortar bombs, and gas bombs continued with only brief respites designed to lull the enemy to relax before being shaken by the next round of explosions.

Over that week, the British hit the Germans with 1.5 million shells along a 15-mile front.

Unfortunately for the British infantry, it had little real effect and did more harm than good in several ways. For one thing, two-thirds of the shells were trench mortar bombs that did only superficial surface damage.

Secondly, it missed the machine guns, which were portable and taken below until the end of the bombardment. Likewise, large sections of barbed wire were left untouched, forcing the advancing British troops to stop and cut their way through or find a way around. Either way, they would be easy targets for the enemy machine guns now back in place and firing.

Finally, the bombardment created huge craters in No Man's Land, thus making more obstacles for the soldiers trying to get across.

Final Preparations. In the nerve wracking hours before the assault, soldiers prepared in different ways.

Some prepared for the end with a church service and/or prayers.

Others wrote their wills or final letters home.

For any who wanted it there was a ration of rum to steady their nerves.

"Over the Top": 7:20 AM, July 1, 1916. After the bombardment stopped, the signal to go "over the top" into No Man's Land was the detonation of eight enormous mines of TNT dug under the German lines.

The Barrage. Preceding the troops was a *creeping barrage*, a moving artillery bombardment with the British troops following only 15 yards back. The idea was to keep the enemy in their dugouts until the British were almost to their lines, thus making it easy for them to jump down into the trenches and take them.

Since the enemy had multiple lines of defense, the barrage would follow a scheduled advance that the British troops would have to keep up with. Unfortunately, if they got delayed by enemy resistance, there was no way to let the artillery far to the rear know. So they would keep advancing the barrage according to schedule.

"...the ruddy clouds of brick-dust hang over the shelled villages by day and at night the eastern horizon roars and bubbles with light. And everywhere in these desolate places I see the faces and figures of enslaved men, the marching columns pearl-hued with chalky dust on the sweat of their heavy drab clothes, the files of carrying parties laden and staggering in the flickering moonlight of gunfire, the "waves" of assaulting troops lying silent and pale on the tapelines of the jumping-off place. I crouch with them while the steel glacier rushing by just overhead scrapes away every syllable, every fragment of a message bawled in my ear. I go forward with them...up and down across ground like a huge ruined honeycomb, and my wave melts away...and the second wave comes up, and also melts away...and then the third wave merges into the remnants of the others...and we begin to run forward to catch up with the barrage, gasping and sweating, in bunches, anyhow, every bit of the months of drill and rehearsal forgotten...

...We come to the wire that is uncut, and beyond we see grey coal-scuttle helmets bobbing about, and the loud crackling of machine-guns changes as to a screeching of steam being blown off by a hundred engines, and soon no one is left standing. An hour later our guns are "back on the first objective," and the brigade, with all its hopes and beliefs, has found its grave on those northern slopes of the Somme battlefield." --Henry Williamson, age 19

Why these assaults almost always failed. First of all, most of the Germans, although shaken by the bombardment, had survived with their machine guns intact in dugouts as deep as 15 meters. The question was if they could get to the top and start firing before the British.

Generally they did for several reasons.

First, bomb craters filled No Man's Land, making an even advance virtually impossible for the British troops loaded down with 66 lbs of gear. Secondly, most of the barbed wire has not been destroyed by the bombardment, forcing the British to try to find an opening or cut their way through while German machine gun fire has started to fire and is shredding their ranks.

Even though some British troops have made it into the enemy's first line of trenches, the trench lines were dug in a zigzag pattern so attackers would have to take each section separately with no clear line of fire to help them. To do this, they either had to go above ground to attack, or hurl grenades into the enemy section and round the corner just after the blast, both of which were very risky. Besides, the defenders often left an empty section between them so the grenades would fall harmlessly.

Meanwhile, German artillery would have laid a stationary barrage on No Man's Land, blocking any British reinforcements or communications. Likewise, with their communications still intact, the defenders could call down artillery fire on the sections of trenches held by the British.

By this point, any British troops who may have carried the first line of German trenches were

too disorganized, exhausted, and scared to advance any further against the support and reserve trenches which were reinforced by concrete blockhouses.

The first day of the Somme campaign cost the British 21,000 dead and 60,000 casualties total. The generals in back, committed to their plan, continued the battle for 4 more months. By November, when the battle finally fizzled out, the allies had lost 620,000 men, the Germans 450,000. Some put a spin on this that since the Germans couldn't afford as many casualties as the allies could, this battle wore them out more and contributed to the allies' final victory in 1918.



A captured German gun emplacement. It took 82,000 casualties to take 900 meters of ground and this gun.

The Wounded



A hospital ward in Berlin

Each battalion had 16 stretcher crews capable of retrieving 16 wounded per trip into No Man's Land....unless they were also shot. If a battalion lost 300 men, as was common on the first day of the Battle of the Somme, it could take hours, even days, to rescue all the wounded. As many as one-third of the 21,000 British soldiers who died on the first day of the Battle of the Somme might have been saved if rescued earlier. Sometimes a truce would be called for the retrieval of the dead and wounded, with specially trained bloodhounds often used to find bodies under the dirt and rubble.

Once brought in, there was a highly developed infrastructure for care of the wounded. At regimental aid posts battalion medical officers sorted wounds, initially sedating and bandaging the serious ones and sending them back to hospitals for better care. However, there was a growing trend to do major surgery close to the front since serious wounds didn't travel well. By 1916 casualty clearing stations were the main sites for life-saving surgery, and there were even special traveling surgical teams that worked within range of enemy artillery.

Medical advances in the past 50 years ensured much higher survival rates for the wounded. The discovery of blood-typing before the war made transfusions much safer and more common by 1917. Also, techniques for removing damaged and infected tissue greatly reduced the incidence of gangrene, often picked up from the soil when the wounded fell. Still, compared to World War II when skin grafts and reconstructive surgery would become common, there were still large numbers of amputations.

On the down side, high velocity bullets and shrapnel from exploding artillery shells created much more serious wounds than in previous wars. During major offensives, there would be so many wounded that they had to be triaged on the field into three categories:

- 1) those needing immediate treatment;
- 2) those who could be sent ahead; and
- 3) those who were hopelessly wounded and sent to the "dying room" to be washed, sedated, and comforted by nurses until they died.

Authorities tried to hide category 3 from the soldiers, but they knew.

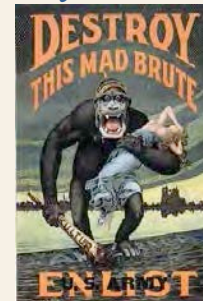
The Girls with Yellow Hands



Women played an increasingly vital role in the war effort, maintaining production in the factories and fields back home while also tending the wounded and dying near the front. Women filling artillery shells in munitions plants were at particular risk, having to handle dangerous chemicals that would stain their hands yellow. Continued exposure to these chemicals often led to sickness and, in many cases, death. However, the sacrifices these women made would not show up in the casualty totals for the war. Neither would those of the women who died in munitions plant explosions or mining accidents.



War's first casualty: the Truth



The print media, especially posters, played a larger role than ever in mobilizing support for the war effort. Some posters used patriotism to influence their audiences. French posters would use shining and patriotic vision of Marianne (the personification of France) to enlist support, although by the end of the war they had much grimmer and more ragged images of battle worn soldiers declaring the enemy would not pass. German posters evoked memories of medieval Knights slaying dragons or holding out a hand to the dove of peace.



The German occupation of Belgium was a popular source of propaganda and moral outrage. While the Germans tried to paint a more humane image of their occupation with pictures of their soldiers playing with and feeding Belgian children, allied posters tried to sway public support with stereotypes of the Germans as the barbaric Hun and drawings of various alleged German atrocities, such as bombing innocent civilians and even tossing babies in the air and catching them on their bayonets.

Some posters used women and children to shame men into going to war with a young woman in a sailor's outfit wishing she were a man so she could join the navy, British women practically kicking their men out the door to enlist with the simple word "Go!" and a little girl asking her father: "Daddy, what did you do in the Great War?"

Gaps of information were easily filled with rumors about German spies disguised as nuns (who could be spotted by their hairy legs) and the one million Russian troops supposedly reinforcing the allies on the Western Front. You could tell they were Russians from the snow still on their boots. Russian troops did come to reinforce the Western allies, but were never used, spending the war in southern France doing nothing. By most accounts, the snow had melted from their boots by the war's end in 1918.

The Eastern Front



Contrary to all expectations, the Russians managed to mobilize two armies that invaded Eastern Prussia in August 1914. However, the two Russian generals' mutual hatred for each other and refusal to cooperate, combined with their failure to encode their radio messages, allowed the Germans to destroy their two armies separately. The magnitude of this defeat convinced Turkey to enter the war on Germany's side against its traditional enemy, Russia.

Although brave, Russian soldiers were poorly led and equipped compared to their German foes. Often, there were not even enough rifles for everyone, so those in back had to pick up those of their fallen comrades. A Russian offensive against Austria in the spring of 1915 succeeded initially until German reinforcements stopped them. While they could beat the Austrians, the better-armed and supplied German armies typically mauled the Russians.

In 1915 Austrian forces, heavily reinforced by Germans from the Western Front, "blew apart" the Eastern Front, costing the Russians 750,000 men and driving them back 300 miles before they established a new defensive line. This did have the advantage of shortening their supply lines from Russia.

As in so many other wars, Russia's saving grace in stopping invaders was its winter which helped slow down its enemies. Therefore, the Eastern Front evolved into a looser version of the Western Front with trenches and poison gas, although during lulls in the fighting, peasants might even plow their fields in No Man's Land.

The Brusilov Offensive in June 1916 surprised the Austrians and captured 250,000 prisoners. However, since Russian railroads only went

from east to west, they failed to reinforce this breakthrough. By the same token, the Germans pulled several divisions by rail from Verdun and broke the Russian offensive, costing the Russians 1 million men.

In 1916, Tsar Nicholas II took personal command of the war effort, thus turning a bad situation into a catastrophic one that would push Russia to the brink of revolution by 1917.

Global War

The Gallipoli campaign (1915). The British general commanding the expedition was chosen on the basis of seniority, having no prior combat experience. When the allied force reached the Hellespont, they realized their weapons were in the bottoms of their ships and had to return to Alexandria to repack.



The difficult terrain encountered by allied troops in the Gallipoli campaign

The allies, largely Australian and New Zealand troops (ANZACS), seized the beach but couldn't proceed to the heights above because the British general was taking a nap and his officers were having tea. In the meantime, the Turks dug in on the heights above. Not surprisingly, the Gallipoli campaign created a lot of bitterness among Australians and New Zealanders toward Britain.

After Gallipoli, British strategy in the Middle East centered on the efforts of T.E. Lawrence (aka Lawrence of Arabia). His charismatic leadership unified Arab resistance against Ottoman rule and was largely responsible for British victories in the Middle East. Unfortunately, British promises of Palestinian liberation were broken after the war.

The Balfour Agreement. In 1917, Chaim Weizmann, developed a method for increasing

acetone production by ten times, whereby Britain promised it would provide the Jews a Palestinian homeland after the war. The seemingly conflicting promises made to Jews and Arabs still resonate in the problems besetting the Middle East.

Germany's overseas colonies were especially difficult to defend with its navy blockaded by Britain, In East Asia, both Japan and China declared war on Germany, each hoping to get its colonial possessions there, seeing them as particularly vulnerable. After the war the victorious allies would favor the Japanese claim, thus adding to Chinese bitterness against the West and decades of strife in that region.

In East Africa, the German commander, Paul von Lettow-Vorbeck, used some 20,000 Askari troops to hold off and elude British forces that eventually numbered 350,000. The Askari were excellent fighters, intensely loyal to von Lettow, and proved more resistant to disease than the British, South African, and Indian troops the British used. Von Lettow held out until 11/25/1918, two weeks after the Armistice was signed.



New Weapons for a New Kind of War
The birth of chemical warfare. On April 22, 1915 the human race crossed a new threshold: chemical warfare. Around 5 AM two greenish/yellow clouds moved toward the allied lines like fog. The African colonial troops in that sector were initially transfixed by the cloud's beauty until it swept over them, blinding and burning out the lungs of more than 1500 men. As they bolted in terror from this supernatural horror panic spread along the line, some Canadian troops even retreating right into the gas.

Soon a 4.5-mile gap had opened in the allied line. Luckily the Germans didn't believe it could be

this effective and failed to exploit the gap before it was plugged back up.

Soon the allies were also using gas, and gas masks, and training for gas attacks became standard for soldiers on both sides. Gas masks were made for everyone, even, marching bands, horses and mascots.

The first gas attack by the allies took place at the Battle of Loos in 1915 was a disaster for the British. Despite the fact that the wind was blowing in their men's faces, British officers in the rear ordered the attack to proceed as scheduled, gassing their own men in the process.



British soldiers blinded by a gas attack

Flame-throwers were another insidious weapon that did nothing except make the soldiers' lives more terrifying and miserable. After the war, the Geneva Convention outlawed the use of both flamethrowers and poison gas. Hitler, who was hit by a gas attack in World War I, refused to let the Germans use gas in combat during World War II, although he would use it extensively against the Jews in his death camps.

The airplane. Although still in its infancy, the airplane was quickly adapted for military purposes. At first both sides used it for aerial reconnaissance and occasionally dropping a few darts, known as flechettes on enemy lines. While it's not clear when or how it was first used in plane-to-plane combat, it probably involved one pilot with a pistol firing at another, although one story had a pilot throwing a brick at another plane.

Some planes had separate gunners, but they blocked the pilots' view. When someone devised a mechanism for timing the gunshots to fire between the propeller blades, the pilot could just aim his gun by aiming his plane.

Through most of the war, aerial combat took the form of "dogfights" between individual pilots. There developed a lore about the "knights of the sky" whose fighting wasn't soiled by the mud and filth of trench warfare. Baron von Richthofen (AKA the "red Baron") was the most successful aerial ace of the war, scoring 80 confirmed kills before being shot down, either by British pilots or ground fire from an Australian unit on the ground. He and his squadron, known as the Flying Circus, flew a type of tri-plane that he preferred it for its rapid climbing ability despite it being slower than some allied planes.

The war saw a variety of aircraft. Hydrogen-filled zeppelins, used for observing enemy lines, were also highly vulnerable and volatile targets, making "zeppelin busting" a popular sport for airplane pilots. Specialized bombers were also developed, One such plane, having a wingspan of 100 feet (that folded in storage), could drop a bomb weighing 1650 pounds. However, the first aerial bombing of civilians was done by a zeppelin over London in 1915. It did especial damage to a tavern and its customers.

The first aircraft carriers also appeared at this time, being older ships with their decks cleared and equipped with short runways.

By the end of the war, the allies were flooding the skies with hundreds of planes that effectively swept the German air force from the skies. From now on, "chivalry of the skies" would be shoved aside as control of the skies would be a major strategic necessity in warfare.

Tanks were first used at the Battle of the Somme in 1916, where half of them broke down before the battle even started. However, by 1918, they were working better and helped drive holes in the German lines in the final offensives of the war. They were not very effective until the end of the war, and probably had no appreciable effect on its outcome. However, they would be a decisive factor in the next war.



Although the Germans hardly developed any tanks in World War I, during World War II they would be leaders in both tanks and the tactics (Blitzkrieg) for their use.

The Naval war. In 1916 at Jutland the German fleet so lovingly built up by the Kaiser fought its only major battle of the war. It was basically a draw, but the Kaiser pulled his fleet into harbor where it was blockaded for the duration of the war. That blockade would gradually starve Germany and be a major factor in the allies' final victory.

The Germans countered with submarines attacking British shipping in an effort to starve Britain of vital supplies. Because they had to surface in order to fire their torpedoes, German U-Boats were extremely vulnerable to enemy fire and abandoned international law, which required warning merchant ships before sinking them. The Germans' unrestricted submarine warfare took an especially heavy toll on allied shipping.

In 1915 the Germans sank the *Lusitania* with some 1200 civilians aboard, many of them Americans. This outraged American public opinion, especially when the Germans struck a medallion commemorating the act. Therefore, Germany temporarily stopped attacking civilian ships, but resumed unrestricted U-boat warfare in early 1917. That would be enough to bring the United States into the war.

By the end of the war, the British would develop a system of convoying trade ships with warships, drastically cutting their own losses while sinking many German U-Boats and rendering their campaign ineffective.

1917: The breaking of armies

Life in America in 1917 continued much the same as it had for years, although events loomed on the horizon that would change the US forever.

Unfortunately, half a planet away, life also continued much as it had since 1914.

Factories kept churning out goods for the war.

Soldiers still suffered and died in the trenches and No Man's Land.

Widows and children mourned the men who would never come home.

And generals kept planning hopeless offensives as they had for years.

The Neville Offensive (April, 1917) was the final straw for the Poilus (French soldiers). Following the usual massive bombardment of 11 million shells that only told the Germans where the attack was coming, successive waves of Poilus were predictably mowed down by the thousands.

But then, something different happened. The remaining troops refused to go over the top.

Some bleated like sheep being led to the slaughter.

Others simply got up out of the trenches and walked away.

Soon whole sections of trenches were devoid of defenders as thousands of Poilus just turned their backs on the war.

Luckily for the Allies, the Germans didn't realize their opportunity before the mutinous Poilus were herded back into their trenches.

Of course there had to be consequences. Some 100,000 French soldiers were court-martialed, 23,000 were found guilty, 432 were sentenced to death, and, officially, 55 were executed.

But the French generals had learned their lesson. The *poilus* were promised more leaves from the

front lines and no more suicidal assaults. The French army had been broken as an offensive weapon, but at least it was restored as a defensive one.

Messines Ridge. On June 7, 1917, after five months of digging and as a prelude to an offensive, the British detonated 600 tons of explosives buried in 19 mines under the German lines. The shock wave, which was felt in London, killed 10,000 Germans. That plus three weeks preliminary bombardment led to virtually no German resistance in this sector. However, this offensive, as usual, stalled, producing no useful results.

Passchendaele, (October, 1917). The initial British bombardment in one sector lasted 15 days and used 4.5 million shells. In the process, it destroyed any remaining drainage systems, turning the fields into impassable quagmires during the heavy rains that year. That, plus the German defense-in-depth system that stretched back 5 miles in 9 levels turned the British offensive into a disaster as men sank to their waists in mud, equipment totally sank, and draught animals drowned.



Duckboard walk, 3rd battle of Ypres, October, 1917

When the British prime minister, Lloyd George came over to stop this nonsense, general Haig tricked him into believing the Germans were close to breaking by showing him POW camps stripped of all but old men and boys. Lloyd was fooled and the slaughter went on.

1918: Armageddon....and the end

Hoping to achieve final victory before American troops arrived in overwhelming force, Germany used the troops freed from the Russian Front to

mount one final desperate offensive in 1918 known as the Ludendorff Offensive.

Instead of long bombardments that allowed the enemy to reinforce the area of attack, the Germans used short intensive bombardments to weaken and surprise them. Special storm troopers attached to each unit would then lead assaults to infiltrate enemy trenches and continue advancing until resistance stiffened, and then they would stop.

They would then repeat the process on another part of the enemy line, pushing the allies back bit by bit until they were at the Marne River, scene of the battle that stopped the Schlieffen plan in 1914. However, German progress was so fast it outdistanced its artillery support. That, lack of tank support, and casualties totaling one million men had sapped the offensive of its impetus by June.

“Lafayette, We are here.” At this point, the United States started making its presence felt. The addition of thousands of fresh American troops, prepared for the Western Front by French trainers, helped the British and French stop the German offensive at the Second Battle of the Marne and go on the attack.

American soldiers, eager to prove themselves, at first did not heed the advice of seasoned British and French veterans to be more careful. They paid dearly for it as 50,000 Americans died in action in 1918. An equal number died of sickness, mostly from the worldwide flu pandemic then raging. However, it was the influx of America’s war materiel that turned the tide of war as much as its soldiers

Using brief but massive artillery bombardments and the “bite and hold” tactics employed by the Germans earlier that year, allied troops pushed the Germans out of France and into Belgium. By this point, teenage boys were typical of the recruits Germany was being forced to draft. Also, by late 1918, the British blockade was starving Germany, forcing women to search through garbage heaps for potato rinds.

In late October, Germany's allies started collapsing like a house of cards: first Turkey (10/30), then Bulgaria (10/31), and then Austria (11/3). On November 9th, worn out by war abroad and starvation at home from the British blockade, a revolution (below) replaced the Kaiser with a republic in the hopes of getting better terms for a ceasefire. Forced to abdicate, the Kaiser went into exile in Holland where he lived quietly until his death in 1940.

Thus ended the War to end all Wars.



In the early hours of November 11th, allied officers received a German delegation seeking an armistice. They told the Germans that for a ceasefire they would have to agree to abandon all occupied territories in Belgium, Luxemburg, and France, including Alsace-Lorraine, and surrender their entire fleet along with 150,000 freight cars, 5000 locomotives, 5000 trucks, 1700 bombers and fighter planes, 5000 heavy and field guns, and 25,000 machine guns. They also had to allow the Allies to occupy the Rhine's left bank and establish a bridgehead on the right bank.

They had 72 hours to agree to these terms.

The Germans returned and signed the Armistice at 5:20 AM on November 11, 1918). It was done in Napoleon III's railroad car as a reminder of the Franco-Prussian War and France's determination to reclaim Alsace and Lorraine.

The Armistice was signed to take effect on the 11th hour of the 11th day of the 11th month of 1918.

People liked that kind of symmetry, even if it meant that for 5 more hours, the fighting continued and some 11,000 more men were killed and wounded.

A few minutes before eleven, there was a final flurry of artillery fire as each side tried to get in the last word.

Then the guns fell silent.

Men timidly emerged from the trenches and met in No Man's Land, trading goods and visiting briefly before going home.

THE RESULTS OF WORLD WAR I

Introduction. At 11:00 A.M., on November 11, 1918, World War I ended. The price it had exacted in lives and material was staggering: 37.5 million casualties, 10 million deaths, and \$300 billion (not adjusted for modern inflation) in damages. People referred to a "lost generation" that never survived to come of age and take their turn in leading their nations. And indeed, the leaders of the next war, World War II, were largely from the same generation that had blundered into World War I.

When the guns fell silent, there were jubilant celebrations by huge crowds expecting life to return to the normal conditions that had existed before the war. However, World War I was like a severe earthquake with devastating aftershocks, leaving the edifice of European economic and political power badly cracked and in no shape for another such jolt that might bring it tumbling down. The results of World War I were varied, far reaching, and interlocking. However, they followed five main lines of development: one of them being concerned with the effects on Europe's colonies, two concerning Western Europe (economic effects and the Treaty of Versailles), and two concerned with Eastern Europe (the Russian Revolution and the collapse of the Hapsburg and Ottoman Empires).

Europe's colonies. World War I had been extremely expensive for the European powers. As a result, they sold many of their colonial mines and plantations for the cash needed to fight the war. This weakened Europe's colonial empires and set the stage for eventual liberation after the next big jolt to Europe's power: World War II.

Western Europe was affected in two ways: the peace settlement and the economic cost of the war. First, there was the question of what sort of peace to impose on Germany. Among the leaders at the peace conference held at Versailles was President Woodrow Wilson of the United States, whose presence symbolized America's growing role as a major power in world politics. Wilson, whose country had suffered little from the war, wanted leniency for Germany along with national self-determination for all nations and a League of Nations to safeguard the international peace. However, many leaders had to justify the senseless carnage of the past four years to voters back home

who wanted revenge for their sufferings of the past four years. This was especially true for France, on whose soil the war had been fought. Therefore, amid much bickering that settled nothing, the prevailing attitude that emerged was that someone must be made the scapegoat and pay for the war. And that someone was Germany.

The resulting Treaty of Versailles (1919) punished Germany materially and politically. Germany lost 13.1% of its pre-war territory, including Alsace, Lorraine, and the so-called Polish Corridor, a strip of land separating East Prussia from the rest of Germany. Its army was limited to 100,000 men and its navy to twelve ships. (The Germans scuttled their fleet rather than let it fall into British hands.) Germany could have no submarines, air force, heavy artillery, tanks, or even a professional general staff. It lost most of its merchant marine, one-quarter of its fishing fleet and a good part of its railroad rolling stock. Each year it had to build 200,000 tons of shipping for the victorious allies and also make deliveries of other commodities such as coal and telephone poles. The final indemnity forced from Germany amounted to \$32 billion (not adjusted for inflation). Germany also had to agree to the War Guilt Clause, according to which it accepted full responsibility for the war.

The German people were furious but, for the time being, helpless to do anything but sign the treaty. However, the Treaty of Versailles remained fixed in German minds as an injustice that must be avenged, especially since it destabilized their economy and helped lead to the Great Depression in the 1930's. This in turn opened the way for the rise of Hitler and the Nazis who started World War II.

Economically, World War I had been horribly expensive, both in its immediate cost to fight and its long-range effects on Europe's industries. In addition to selling colonial holdings, the allies had resorted to borrowing heavily, especially from the United States. By the war's end, European countries owed the United States \$7 billion. By 1922, it would be \$11.6 billion. Thanks largely to World War I, the center of world finance was shifting from London to New York City. However, the economic effects of the war went far beyond borrowing money.

For four years, European countries had been producing guns and ammunition instead of consumer goods. This had allowed other countries, the United States in particular, to take over many consumer markets from the Europeans who were preoccupied with the war. Not surprisingly, the Americans did not willingly give up these markets to the Europeans after the war. Because of this and the huge war debts, the United States became the premier economic power of the world, creating a heavy dependency on the American economy. This, combined with German instability, made the world economy vulnerable to a worldwide depression when the American economy crashed in the 1930's. And, as discussed above, that would help lead to the rise of the Nazis and World War II.

Eastern Europe. World War I also catalyzed the Russian Revolution along with the collapse of Austria-Hungary and the Ottoman Empire in South-eastern Europe. In each case, these events would destabilize their respective regions and lead to future conflicts.

The break-ups of the Ottoman and Hapsburg Empires created problems in two ways. In accordance with the principle of national self-determination, the Hapsburg Empire was broken up into four new democratic nation states: Austria, Hungary, Czechoslovakia, and Yugoslavia, while Poland, Latvia, Lithuania, Estonia, and Finland were formed from parts of the old Czarist empire. In addition there were still the various Balkan states whose squabbles had triggered World War I in the first place. While democratic in form, these new nations generally had little economic strength or history of democracy (both requiring a healthy middle class) on which to base strong democracies. Therefore, Eastern Europe was a patchwork of unstable states, providing Hitler ample opportunity for aggression that would start the Second World War. This instability along with World War II also provided fertile ground for growing anti-Semitic feelings that caused growing numbers of Jews to move to Palestine.

The break-up of the Ottoman Empire also profoundly affected the present day situation in the Middle East. The Arabs, instead of gaining their freedom for helping the allies against the Turks, as they were led to believe would happen, passed under French and British control as mandates to be

prepared for independence in the future. This created a good deal of bitterness, made worse by the Balfour Declaration (1917) which had promised the Jews a homeland in Palestine for helping the allied cause. The influx of Jewish settlers into Palestine after Nazi persecution during World War II only made that bitterness worse in the Cold War period following the defeat of Germany.

The Russian Revolution which replaced a corrupt Czarist Russia with a strong communist state, the Soviet Union, created problems in two ways. First, the hostility it generated between itself and the capitalist democracies of the West undermined any joint efforts to contain future German aggression. With the old Triple Entente threatening Germany from east and west broken, Hitler could feel freer to expand eastward in the 1930's, thus providing another catalyst for the Second World War.

World War II would eventually cause a reunion of the old alliance of Russia and the West to crush the Nazis. However, it was an uneasy alliance that would come apart in the Cold War after 1945. The Russian Revolution would also lead to the spread of communism to China and other non-industrialized nations, contributing still further to the tensions of the Cold War.

As the 1920's progressed, the world seemed to be settling down to the normalcy longed for so much since 1914. Russia withdrew into itself to complete its revolution. Germany, propped up by American loans, seemed to have stabilized. And Europe overall seemed to have recovered its prosperity and maintained control of its colonies. However, World War I unleashed unseen forces that would surface with cataclysmic effect to trigger a worldwide depression and World War II.

Aftermath: End of a World

For the victors who celebrated in the streets of cities across the globe it didn't seem like the end of the world...but in many ways it was.

German soldiers returning from the war received a heroes' welcome in Berlin. The mood in Germany was a mixed one of both relief about the end of the war and anxiousness about the future. On the one hand, German forces, while clearly defeated, had not been driven back onto

German soil at the time the Armistice was signed, giving the public the false impression that Germany had been betrayed into surrendering.

However, Germany was clearly hurting, especially from the British blockade that would continue until the final peace treaty was signed over seven months later. Until then Germany's people starved, surviving on the charity of soup kitchens and rummaging through piles of rubbish looking for cast off potato peels. Germans would remember this time as the Potato Winter.

In order to erase the shame of the Franco-Prussian War, the French victory parade celebrating the end of World War I followed the same route the Germans had in 1871 after their victory over France in the Franco-Prussian War. However, even that couldn't cover the horrible costs of the war. In 1919 the French created a tomb to commemorate nearly half of the war dead that could not be recovered or identified. Britain, the United States and other nations followed France's example of creating tombs honoring their unknown dead.

One of eight British soldiers and one of six French and German soldiers were killed in the war. Twenty-five percent of all Turkish and Bulgarian soldiers died, as did 37% of all Serbian soldiers.

Half of all soldiers in combat were wounded, some more than once, while up to 4% of soldiers in the war had their faces permanently disfigured by artillery shrapnel. There were numerous unexploded shells that lay buried in fields, posing a deadly threat to farmers and tourists for years after the war. Another leftover from the war was abandoned equipment, such as tanks, that some French peasants managed to revive and use as tractors for pulling their plows.

Financially, the war cost \$300,000,000,000 (not adjusted for inflation). During the war, Italy spent twice its combined budgets for all the years from 1865-1913, creating volatile conditions that would lead to Mussolini and the Fascists seizing power in 1923. Continued economic instability,

although masked by an illusion of prosperity, would eventually trigger the Great Depression in the 1930s.

Public monuments and buildings also tend to suffer when in the path of hostile armies. Take, for example, the Cloth Hall (below) of the old Belgian city, Ypres, which was built (the first time) in the twelfth century. After three ferocious battles that left the city in ruins, it was rebuilt exactly as it had been in the middle Ages. This pattern has been repeated numerous times since World War I and World War II.



There was also the social and psychological cost, as millions of men didn't return home or returned totally changed by war. Millions of mothers were suddenly single parents who had to both raise their children and provide for them in a world that gave women few job opportunities. The men who did return often brought with them severe psychological trauma that generated violent behavior and at times even suicide. What is especially remarkable is the fact that so many women managed to nurse these men back to health.

On a broader cultural level, there was a corresponding psychological shock against the horrors of modern warfare, as seen in art, literature, and movies. Many people even questioned the validity of a civilization that could do such horrible things to itself. Unfortunately, dictators like Hitler and Mussolini would suppress such views in their drives to revive their nations' enthusiasm for starting the next big war.



The Last Global Pandemic (So Far)

Spanish influenza, the last major worldwide pandemic, struck in 1918 and 1919. It is estimated to have killed between 50,000,000 and 100,000,000 people, (3-6% of the globe's population, making it the deadliest outbreak of disease in history. More people died in India of Spanish influenza than were killed overall in World War I. Using frozen tissue samples from the dead to recreate the virus, it was found to be especially deadly among young adults by triggering an overreaction of the body's immune system against the body itself.

Beyond the death toll, the pandemic had its more subtle effects. For example, although President Wilson himself survived a bout of influenza, there is evidence that it affected the part of the brain concerned with negotiating and that he agreed to deals he thought were victories for his principles, when in fact they were defeats. Similarly, Franklin Delano Roosevelt was deathly ill when he attended the Yalta Conference with Churchill and Stalin toward the end of World War II, seriously impairing his ability to negotiate effectively with Stalin and contain his expansion into Eastern Europe.

The Treaty of Versailles

"Like a riot in a parrot house". That's how one diplomat described the negotiations at Versailles. I've never seen or heard such a thing, and I don't think I want to. The point was that the negotiations were extremely bad tempered as each country's diplomats felt they had to take enough land and money to justify the horrors of the last four years to their people back home. Negotiations for the Treaty of Versailles began on the anniversary and 1871 in the very same room where the Second Reich and unification of Germany had been declared in 1871, just another dig by the French at the Germans.

Before it was over, the Italians would leave because Yugoslavia got part of the Dalmatian coast that they wanted; the Chinese would leave because their lands that Germany had taken were given to Japan instead of them; and the Japanese would leave angry because the victorious European allies refused to put a racial

equality clause in the treaty guaranteeing equal treatment of all races.

The Big Three who dominated the negotiations at Versailles in 1919 were David Lloyd George of Britain, Georges Clemenceau of France, and Woodrow Wilson of the United States. Wilson's participation was the first time an American president traveled outside of the U.S. during his term of office. It also marked the emergence of the United States as a world power in what would be known as the American Century.

Wilson had Fourteen Points, fourteen ideas or principles, which he hoped would bring a fair postwar solution for all involved. As Lloyd George said, God had only Ten Commandments, and here came Wilson with his fourteen. Unfortunately, although Wilson was greeted as a virtual messiah by European crowds, his efforts proved a dismal failure in the poisoned and bitter atmosphere of negotiations at Versailles. Even his League of Nations, the first attempt at a global organization to preserve world peace, was crippled by the inability of nation states to give up any of their sovereignty.

Wilson himself was hit by influenza. Although he survived, there is speculation that it affected the part of the brain concerned with negotiating and that he agreed to deal he thought were victories for his principles, when in fact they were defeats. Similarly, Franklin Delano Roosevelt was deathly ill when he attended the Yalta Conference with Churchill and Stalin toward the end of World War II, seriously impairing his ability to negotiate effectively with Stalin and contain his expansion into Eastern Europe.

Although the Germans were supposed to be given a chance to review the treaty and negotiate some of its points, the allies were so worn out and frustrated by the negotiations of the past five months that they handed the Germans the treaty with the ultimatum they sign in a week or war would resume. It was finally signed on June 28, 1919, five years to the day after the assassination of Franz Ferdinand.

The Polish Corridor, while it provided Poland with a coastline, also split East Prussia from the rest of Germany, much like Brandenburg and Prussia in the 1600s. In 1939 this would be the issue over which Hitler would invade Poland and start World War II.

Mustafa Kemal Attaturk and the Birth of Modern Turkey

After the war, allied forces occupied Istanbul and, according to the treaty of Sevres (1920), proceeded to dismantle the old Ottoman Empire. Enter Mustapha Kemal Attaturk (1881-1938), the man who is seen as the founding father and national hero of modern Turkey. The last name, Attaturk, was an honorific title indicating the reverence the Turkish people had and still have for him.

He first made a name for himself as an outstanding leader of Ottoman forces in World War I at the Battle of Gallipoli. Defying the Ottoman government, Ataturk organized national resistance against occupying Greek, Italian, British, and French forces, and in the ensuing Turkish War of Independence drove out the foreign forces. With the Treaty of Lausanne (1923), he won recognition of the modern Republic of Turkey with its capital at Ankara.



Ataturk ruled Turkey as a virtual dictator until his death in 1938. During that time he instituted a number of reforms to create a modern secular nation modeled on Western ideals. Among his reforms were adopting the Gregorian calendar, the 7-day week with Sunday as a holiday, European law codes, public education, and the Latin alphabet. He also outlawed several

distinctive Turkish customs, such as wearing the fez, which is now only seen on men riding tiny motorcycles in Fourth of July parades.

Attaturk's policies did put Turkey more in line with the West, especially during the Cold War when it joined NATO as part of a joint effort with the West to block Russian expansion southward. Since the Cold War it has tried to integrate its economy with the West by joining the European Union.

Early Twentieth Century Art (c.1900-1945)

Building upon the dramatic artistic changes of the late nineteenth century, painters in the early twentieth century explored progressively more radical approaches to art. Much of the art of this period should be seen in light of the catastrophic events of the period: World War I, the Great Depression, the rise of fascist dictatorships, and World War II ending with the nuclear attacks on Hiroshima and Nagasaki. These, along with the faster and more mechanized pace of modern life, led to a good deal of alienation and disillusionment with civilization.

The giant of the age was Pablo Picasso, who went through a bewildering number of styles that especially reflected the century's rapid pace of change. One such style was Cubism, taking Cezanne's geometric approach one-step further and reducing a scene to a collage of cubes. Another approach was that of Surrealism, where artists such as Salvador Dali and Rene Magritte, influenced by the work of Sigmund Freud, painted images of the subconscious. Finally, the period also saw increasingly abstract and non-representational art, represented by Joan Miro and Fernand Leger.

Pablo Picasso (1881-1973). Picasso is widely considered the giant of 20th century art. He reflected the century's rapid changes and best epitomized its wide range of styles, constantly jumping to or creating new styles throughout his long career. Among his early influences was the sculpture of the West African kingdom of Benin.

Although to many people Picasso is mainly associated with Cubism, that only dominated his style for a small part of his career. For example, paintings like *La Vie* and *The Tragedy*, both done in 1903, came from Picasso's Blue period, a somewhat down time in his life when he used blue as the dominant color in his paintings to express his sadness.

However, Picasso's best-known style is *Cubism*, representing everything as broken up into cubes, almost seeming to anticipate the pixelated images on computer screens. It was influenced by Cezanne's attempt to break everything down into various geometric shapes. One of its best-known examples is *Woman with a Guitar* (1912). (For those who can't tell which end is up, the word *Jolie* is written at the bottom.)



Picasso also was a sculptor, working mainly in metal and wire, although he also did a cardboard guitar. Among his most famous sculptures is the untitled 15.2-meter tall, 162 ton statue in Chicago's Daley Plaza. Not sure whether it represents an angel, a horse or a woman, Chicagoans just call it the Picasso.



Picasso's most controversial work was the huge mural, *Guernica*, (1937), protesting the aerial bombardment of civilians during the Spanish Civil War. This was one of his few political statements.

Expressionism. Starting in the early 1900s, Expressionism is more a term of reference than a specific movement. It largely reflected Friedrich Nietzsche's theory of the dualism between the Apollonian (rational) and Dionysian (emotional) experiences. Expressionism rejected the older academic standards of art in favor of expressing gut emotions, although it didn't go as far as the nihilism of the Dadaists who asserted art had no meaning. Among its most famous artists was Paul Klee (1879-1940),



Paul Klee (1879-1940), "The Mask with the Little Flag", (1925)

Art and the Great War. Art inspired by World War I, while stylistically fitting in with other art of the early twentieth century, deserves its own category, since it expresses the common theme of the psychological scars that conflict left on our civilization. Some of better-known artists were Wynne Nevinson, Paul Nash, William Orpen, Otto Dix, and Georg Grosz.



Paul Nash, *We Are Making a New World*

Dada was largely a nihilistic reaction in the 1920s to the chaos and turmoil of modern society, especially World War I. Dadaists rejected conventional standards of beauty in art and denied their art had any meaning. The term Dada is a nonsense word in German meaning "nothing at all" to emphasize its lack of meaning. Ironically, some would say that, by rejecting conventional standards of beauty

and meaning in art, Dada just set a new standard and meaning defined by Dada. Dadaism was a forerunner of Surrealism.

Surrealism. Growing out of the Dadaist movement in the 1920s, Surrealism also rejected standard academic art standards. However, the Surrealists asserted that ordinary depictive images were important, but should be open to the full range of human imagination. Especially influential was Sigmund Freud's work with free association dream analysis and the unconscious. In that spirit, Salvador Dali would keep an easel by his bed so he could sketch out his dreams as soon as he awoke.



Rene Magritte (1898-1967), *Time Transfixed*, 1938,

Joan Miro (1893-1983) was a Catalan artist whose surrealist approach was one of improvised art removed from any conscious control. He worked spontaneously moving his brush over the canvas, drawing squiggles in a trancelike state or slapping on paint in a frenzy often intensified by hunger from only affording one meal per day.



Salvador Dali, *The Persistence of Memory*, 1931

Salvador Dali (1904-89) was one of the most flamboyant and unusual artists of the 20th century. He was terrified of insects, trains, boats, the metro, buying shoes, crossing streets, and

baring his feet in public. He was prone to laughing hysterically and uncontrollably, which is how he met his wife. He carried a piece of driftwood to ward off evil spirits and promoted himself with such stunts as lecturing at Sorbonne with his foot in a pail of milk, or giving a press conference with a boiled lobster on his head.

One stunt backfired and nearly killed him when he gave a speech in a diving suit sealed on top by a radiator cap. Unfortunately, the radiator cap cut off his oxygen and he couldn't get it off. When he gestured frantically for help to get it off, the audience, thinking it was part of his stunt, started applauding. Luckily, someone finally saved him.

After World War II, a number of Dali's paintings such as *Nuclear Cross*, *Exploding Madonna*, *Maximum Speed of Raphael's Madonna*, and *Three Sphinxes of Bikini* reflected his fascination with nuclear energy. Despite his weirdness, Dali apparently was also religious, doing paintings of Christ's crucifixion and the Last Supper.

Dali also did a very unflattering portrait of Picasso, his explanation/excuse being that he portrayed beauty while Picasso portrayed ugliness.

Art Deco. Popular in the 1920s and 1930s, this new style drew influences from Art Nouveau, Cubism, and abstract art. The austerity and stark simplicity of its straight lines were meant to reflect, and glamorize, life in the modern machine age.



Art Deco also heavily influenced architecture during this time, one of the most notable examples being the Chrysler Building (1930).



The Wreck of Old '97 by Thomas Hart Benton, *Red Canna* by Georgia O'Keefe, and *Gas* by Edward Hopper

Diego Rivera was a world famous Mexican artist whose work reflected his communist views. He is especially remembered for his work in Mexican Muralism, a movement in the 1930s that had strong social and political undertones relating to Mexico. His work also signaled a more global culture emerging as the 20th century progressed.



La Civilización Tarasca

A great art hoax. Paul Jordan Smith, as his “artistic” alter ego, Pavel Jerdanowitch, was the inventor of *Disumbrationism*, a fake school of art he publicized through the Los Angeles Times in 1924. Originally done as a tongue-in-cheek parody of modern art, it was a hit with art critics for three years until Smith revealed it was a hoax.

For example Jerdanowitch explained that *Exaltation* (below), showing a woman waving a banana, represented the breaking of the shackles of womanhood as she has just killed a missionary (if you look closely you can see the missionary's skull sitting on a pole behind her). In addition, she has just taken a bite of a banana, even though women are forbidden to eat bananas on her island. She is waving the banana above her head to represent her newfound freedom.



American Artists. Just as the 20th century has been called the American Century, a number of its artists worked their way into the mainstream of the art world. Three such artists were Thomas Hart Benton, Edward Hopper, and Georgia O'Keefe, especially remembered for her lush close-up paintings of flowers. All three captured the unique American character with its wide-open spaces and emerging urban culture.

BACKGROUND TO THE RUSSIAN REVOLUTION

Causes and background. One of the most startling and far-reaching results of the First World War was the Russian Revolution. Not only did it affect the largest nation on earth, it also had a huge impact on the rest of the world, helping lead to both World War II and the Cold War following it. While World War I may have triggered this Revolution, its roots go much further back into its history and geography in two ways.

First of all, Russia's flat and open terrain made it vulnerable to invasions that forced the Russian Czars to develop a strong absolutist state in self-defense. Second, Russia's huge size, northerly location, and isolation from Europe kept Russia cut off from the mainstream of political, economic and technological developments taking place in Western Europe. Therefore, Russia's geography and history made it a slow moving, autocratic, and backward giant that was constantly falling behind the more advanced societies in the West.

This triggered a vicious cycle of reforms to catch up with the West, a conservative backlash against the reforms, Russia falling further behind the West, more reforms, and so on. Unfortunately, not all Russians felt the West was worth copying. This led to a conservative backlash that would wreck the reforms, causing Russia to fall further behind, and so on. Peter the Great in the early 1700's, Catherine the Great in the later 1700's, Alexander I in the early 1800's, and Alexander II in the mid 1800's' all tried, or at least espoused, the cause of reform which led to conservative backlashes and the cycle repeating. That struggle is still going on in Russia today.

By the 1890s Russians could no longer ignore the forces of industrialization transforming the rest of Europe and leaving it further and further behind. Therefore, reformers targeted Russia's repressive government that used secret police to track down socialist dissidents, its backward social structure that kept the peasants in virtual , if not legal, serfdom, and its equally backward economy just starting to industrialize. Two other factors also pushed Russia toward change. One was the rising popularity of socialism. A more immediate catalyst for change was Russia's

humiliating defeat in a war with Japan (1903-5) that dramatized Russia's backwardness.

All this set off the Revolution of 1905, which took Czar Nicholas II by surprise and forced him to agree to both political and economic reforms. The main political reform was the establishment of a *Duma* (parliament), which attempted to turn the Czar's absolute government into a constitutional monarchy. However, once the revolution settled down, the czar did all he could to crush and eliminate the Duma. Nevertheless, the Duma, however limited in power, persisted in being a voice for reform even as political repression reasserted itself.

At the same time, substantial economic reforms were taking place. The Czar's chief minister, Peter Stolypin, pushed through reforms that distributed land to some two million peasants. This gave peasants an incentive to produce more, and, by World War I, 75% of Russia's crops were going to market, with 40% of those crops going abroad. This, combined with Russia's political repression, created a gap between its economic progress and political backwardness. All that was needed was a catalyst to trigger a full-scale revolution. That catalyst was World War I.

Many Russians, like other Europeans, greeted war jubilantly in 1914, sure that they would win a quick and glorious victory. In fact, Russia was poorly prepared for war. Its troops, although brave, were barely trained, poorly equipped (many not even having rifles), and incompetently led. Their war minister boasted of not having read a new book on military tactics in twenty-five years. As a result, Russian armies met with one disaster after another. Aggravating the situation was the Czar, Nicholas II, a weak willed man who was controlled by his wife, the Tsarina. She herself was German born and of suspect loyalty as far as many Russians were concerned. She was also under the spell of Rasputin, a drunken, semi-literate Siberian peasant posing as a monk. He did have the apparent ability to control the bleeding of the crown prince, who was a hemophiliac, along with an apparent hypnotic power over women. While scandal reigned at court (at least until Rasputin was murdered), Nicholas took personal command of the war effort, with catastrophic results.

Creating the Proletariat

An early attempt to create an enlightened proletariat was a movement known as “Going to the People”, whereby socialists went out into the countryside to educate peasants about the joys and merits of socialism. However, many peasants, fearing this was a trick by the Tsar’s secret police, the Okhrana, to lure radicals into the open so they could arrest them, would often turn in the socialists to the authorities to protect themselves.

Disillusioned and on the run, socialist groups went underground, sometimes literally, to avoid notice by the Tsar’s agents. In addition to secretly printing seditious literature they were constantly playing cat-and-mouse games with the authorities, carrying documents in trunks with false bottoms and writing the real messages in milk between the lines of more innocuous letters, the recipients reading the real messages by holding the letters up to a candle. More radical socialists (aka Marxists) turned to drastic, and even violent, tactics to gain publicity and stir up support for their cause, successfully assassinating Tsar Alexander II with a bomb in 1881 (above).

Alexander II’s emancipation of the serfs in 1861 still required them to make yearly reparations to nobles, leaving them little better off than before. Therefore, when industrialization started in Russia in the 1890s, it triggered a massive flight from farms to jobs in the cities, although workers still had to labor 15-hour shifts in the factories and in 18-hour shifts in the mines.

Many or most of these workers were seasonal migrants (below), working part of the year on their country farms and migrating to work in the factories and mines the rest of the year. As a result, they came into contact with educated workers who taught them about Marxism. Thus Lenin’s assumption that there weren’t enough urban proletariat familiar with Marxist doctrine to carry out a revolution may not have been so true.

Rule of Thumb

A popular Russian urban legend (i.e., a story that isn’t true but we wish it were) concerns the route for the railroad between Moscow and St. Petersburg. Completed in 1851 (with the usual heavy loss of life plaguing nearly any event in Russian history), it ran straight as an arrow except for an eleven-mile (17 km.) bend. This bend gave rise to the story that the tsar, Nicholas I, planned the route by using a straight edge to draw a straight line on a map between the two cities, but inadvertently drew a bend around his thumb or finger that was holding down the straight edge. Since no one dared point out this mistake or defy the tsar’s wishes, they built the railroad with the bend in it. If only it were true.

In reality, the bend was done to circumvent a steep gradient that early locomotives had trouble dealing with. Locomotives on the way up the gradient toward Moscow needed up to four other locomotives to ascend it. Conversely, those going down built up so much speed they couldn’t stop at the next station.

The “Beer Stampede” of 1896

After Tsar Nicholas’ formal coronation in 1894, there were rumors of a free banquet scheduled for the common people where everyone would receive a bread roll, a piece of sausage, pretzels, gingerbread, and a mug). In anticipation of the handout, a huge crowd (one estimate said 500,000 people) gathered early in Khodynka field in Moscow. Unfortunately, another rumor spread that there wasn’t enough beer for everyone, starting a stampede that trampled 1,389 people to death.

Nicholas thought it would seem insensitive to attend a festive ball held for him at the French embassy that night, but his brothers convinced him otherwise, saying not attending would insult the French, whose alliance the Russians were courting. The Khodynka incident and Nicholas’ decision to attend the ball raised a lot of anger among the public and even predictions of his imminent downfall.

The Russo-Japanese War and Revolution of 1905



A Russian cartoon shows Russia's expectations of a quick and easy victory over the "inferior" Japanese. Reality proved radically different and disappointing for Russia.

The first blow in the war between Japan and Russia was a surprise attack that destroyed the Russian Pacific Fleet at Port Arthur. This forced Russia to bring its Baltic fleet all the way around Europe, Africa, and Asia to the Pacific, only for it to be destroyed at Tsushima Strait (6/27/1905) in one of history's most decisive naval battles.

However, that was hardly the end of it, as the war shifted to a land struggle. Despite Japan's early and easy naval victories, the fighting now boiled down to a bloody and prolonged war of trenches, barbed wire and attrition that seemed to predict the fighting of the first World War, if anyone was listening. Unfortunately, few were.

Hampering Russian efforts was the existence of only one thin rail line for moving all their men and equipment thousands of miles across Siberia. Much like World War I a decade later, the battle of Mukden in 1905 (above) was fought along a continuous hundred-mile front. While it cost Russia 61,000 men, Japan suffered 41,000 casualties and was almost forced out of the war. However, the loss of both its fleets and the staggering effort of fighting a war thousands of miles to the east led to the government in St. Petersburg giving up first.

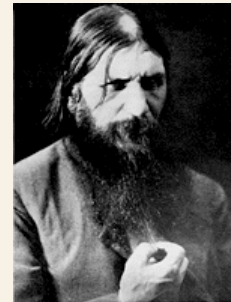
Now watch me make this shot. Supposedly, when a messenger brought news that the Japanese had destroyed the Russian Baltic fleet at Tsushima Straits, Nicholas was playing tennis. He stopped to read the note, crumpled it up, put it in his pocket, and resumed playing.

"Bloody Sunday" (1/9/1905) was the incident that triggered the Revolution of 1905. It started as a peaceful demonstration (below) by the Winter Palace in St. Petersburg to protest bread shortages caused by the war with Japan. However, for whatever reasons, the army opened fire, killing several demonstrators and triggering a stampede that killed still more.

Spoiling for a fight. When officers on the battleship *Potemkin* proposed shooting sailors who refused to eat spoiled meat, the sailors threw them overboard and joined the revolution in June 1905. For a while it was feared the entire Black Sea fleet would revolt.

Despite barring soldiers, sailors, students, and anyone under age twenty-five from membership in the Duma and dismissing it three times, hoping the new Duma would be more passive, each new version proved as independent-minded as the last.

"The Mad Monk"



Rasputin "the Mad Monk" was by most accounts a drunken, lecherous, semi-literate Siberian peasant who claimed to be a monk. He was rumored to belong to the Khlysty, a mystical group that combined flagellation and sexual orgies. Photographs show him having a mesmerizing gaze that gave him incredible power over women, especially the czarina. He also had some influence over Nicholas, convincing him that a comb he gave the tsar before an important meeting was magic and would bring him good luck.

However, Rasputin had an uncanny ability to control the bleeding of the hemophiliac tsarevich, for which reason he became the most

trusted advisor for the already unpopular Czarina. Either hypnotism (which he may have used), some common sense suggestions to relieve stress (which aggravates the condition), or a combination of the two may indeed have helped relieve the tsarevich's symptoms.

Complicating the situation was the royal family's feeling they had to hide the reason for Rasputin's status at court, because revealing the tsarevich's medical condition would make them look weak to their subjects. Not that the tsar Nicholas, who signed letters to his wife "your poor little weak-willed hubby," didn't already appear weak.

The tsarina Alexandra's German origins also created public relations problems concerning whom she was really loyal to during the war. In one joke, the little tsarevich (tsar's son) is found crying. When asked the reason, he replies: "When the Russians lose, my father cries; when the Germans lose, mother cries. When am I to cry?"

Rasputin's murder. On December 12, 1916 Rasputin was murdered by a conspiracy of nobles disgusted with his behavior and influence. But killing him wasn't easy. First, they gave him several cakes and glasses of wine dosed with enough cyanide to kill five people, but with no apparent effect. Therefore, one of the conspirators, Felix Yusupov, got a pistol and shot Rasputin in the back, leaving him for dead. However, when the conspirators returned to check on the body, Rasputin suddenly lunged at Yusopov, trying to strangle him. Therefore the other conspirators put three more bullets in Rasputin, one of them through his forehead. When he continued struggling to get up, they clubbed and castrated him, wrapped the body in a carpet, and dumped it in the icy waters of the Neva River.

Three days later, Rasputin's poisoned, beaten, shot, castrated, and drowned body was discovered. His arms were in an upright position, indicating he had broken loose of his binding and was clawing to get out of the carpet. In addition, he supposedly had water in his

lungs, indicating he was not dead when thrown into the river.

Some believe the British took part in the murder, because one of the bullets came from a British officer's pistol. They had a motive, since Rasputin opposed the war and the British feared his influence would take Russia out of it, thus freeing overwhelming German forces for the Western Front.

Although pressure from the nobles got Rasputin's murderers off the hook, he remained popular with the common people, and legends about the "Mad Monk" subsequently grew and spread. In one of these he supposedly predicted St. Petersburg would change its name three times in the twentieth century, which indeed happened: from St. Petersburg to its Russian form, Petrograd, during World War I, then to Leningrad during the Communist era, and back to St. Petersburg after the fall of Communism.

Rasputin's daughter, Maria, escaped to France after the October Revolution. Later she migrated to the United States, where she worked as a dancer and a tiger trainer in a circus.

AN OVERVIEW AND COMPARISON OF THE FRENCH & RUSSIAN REVOLUTIONS (1917-)

Introduction. As indicated in the discussion of the French Revolution, there is a logical and long-range pattern that revolutions follow. Therefore, understanding the pattern of past revolutions can help us anticipate events in current revolutions, more specifically the final stages of the process now taking place in Russia and China. One word of caution, however: these are likely trends, not absolute certainties. Outside events (e.g., a major war) and other historical forces unique to Russia and China respectively, could divert events in a very different direction from what is indicated here. Still, this pattern generally holds up and should serve as a guide in how we deal with nations still undergoing this process. That being said, following is a comparison of the French Revolution, which after 82 years finally reached a stable democratic form of government by 1871, and the Russian Revolution, which after 92 years is presumably in its final stage of evolution toward democracy.

Forces leading to revolution. Both countries shared three elements that helped lead to war:

1) Both regimes were burdened by heavy debts incurred from wars. In France's case, this was the debt incurred by its support of the American Revolution. For Russia, this was the even higher cost in lives and money suffered during the first three years of World War I.

2) In each country, there was a growing gap between economic progress and social and political stagnation. For the French this was the continued prominence and privileges of the noble class as opposed to the more liberal ideas and progressive economic practices of the middle class. For Russia, this largely came from the peasantry, whose economic progress from Peter Stolypin's agrarian reforms contrasted with the repressive rights and privileges of the nobles. In each case new political ideas aggravated these frustrations. In France these were the ideas of Enlightenment philosophes such as Rousseau and Voltaire. In Russia it was Marxism.

3) Both countries had weak leaders who let events get quickly out of control. In France and

Russia respectively, these were Louis XVI and Nicholas II.

The early stages of revolution. Both revolutions started out with moderate regimes that kept one or more of the old regimes' policies to maintain the look of continuity and legitimacy. In France, that government was the National Assembly, which kept the king as a figurehead and honored the royal debt. In Russia, it was the Duma, which kept Russia in World War I. In both cases these policies just worsened the situation, leading to more unrest. Further aggravating both situations was the fact that replacing an old system with a completely different one (whether in politics, business, or sports) typically sees things deteriorate further before they improve. Unfortunately, the high expectations for rapid improvement did not give the new regimes the time they needed to turn things around.

The crisis stage of revolution. Faced with growing unrest at home and military defeats abroad (the French having rashly declared war on Austria and Prussia in 1792), the moderate governments in France and Russia saw the rise of more radical factions supported by the urban working classes, which alarmed foreign powers and spurred them to intervene before the respective revolutions got out of control. Such intervention (by the First Coalition in France's case and Russia's erstwhile allies in World War I) in the short run just destabilized France and Russia further, which led to more military defeats, more support for the radicals, and so on.

In each case, this was the crisis stage of the revolution, where extreme radicals seized power and imposed harsh dictatorial rule to deal with the current emergency. In France it was the Jacobins, supported by the Sans Culottes, who imposed emergency economic measures, a universal draft, and the reign of terror. Similarly, Russia saw the Bolsheviks, supported by the working class soviets who imposed war communism to deal with the economic crisis and the Red Terror, which they consciously copied from the French Revolution's Reign of Terror.

Conservative retrenchment and the dictator stage. In both revolutions, final victory and

exhaustion from the crisis stage led to a brief conservative retrenchment to help their respective peoples recover. In France this was the period of the somewhat loose and corrupt Directory (1785-99). In Russia, this was Lenin's New Economic Policy that allowed a degree of free enterprise to return so the economy could recover.

However, the overthrow of the Directory by Napoleon Bonaparte and Stalin's rise to power after Lenin's death in 1924 led to ruthless dictators who masked their repressive regimes with the revolutionary ideals they supposedly represented. Although Napoleon was finally defeated and Stalin won World War II and kept power till his death in 1953, both dictators effectively ruined their respective countries with their harsh policies.

Gradual evolution toward stable economy & democracy. Therefore, Russia has taken longer in its evolution toward democracy than France did, because it took another thirty-five years for Russia to finally collapse beneath the weight of the Stalinist system. Despite, this, Russia has continued to follow a path similar to France's. After Napoleon France would undergo two more revolutions (in 1830 and 1848) and abortive attempts at democracy that would lead to a second dictatorship, this time under Bonaparte's nephew, Napoleon III. Unlike his uncle, Napoleon III was much less aggressive in his foreign policy, focusing on France's economic and industrial development. As a result, when Napoleon III fell from power in 1870 during the Franco-Prussian War, he left behind a strong economy and politically active and savvy middle class that ensured the stability of France's Third Republic.

Likewise, Russia would see the overthrow of communism in 1991 and the establishment of a republic. However, as with France in 1830 and 1848, Russia's economy was a shambles and it had virtually no middle class with which to sustain a viable democracy. Since then, Vladimir Putin has taken charge and, much like Napoleon III, has ruled with a firm hand while promoting economic growth. Presumably the middle class emerging from that growth will establish a stable democracy sometime in the future.

THE RUSSIAN REVOLUTION AND CIVIL WAR (1917-20)

"We are not carrying out war vs. individuals. We are exterminating the Bourgeoisie as a class. We are not looking for evidence or witnesses to reveal deeds or words vs. the Soviet power. The first question we ask is to what class does he belong, what are his origins, upbringing, education or profession? These questions define the fate of the accused. This is the essence of the Red Terror-- M. Y. Latsis

The 1917 Revolution and Bolshevik triumph. Not only was Russia bleeding from war, it was also starving. This situation sparked bread riots in Petrograd (renamed that from the German St. Petersburg) in March 1917. Day after day the riots escalated as the government failed to respond decisively to the crisis. Many soldiers joined the demonstrators, Nicholas abdicated his throne, and the *Duma* set up a moderate republic under Alexander Kerensky.

The Russian Revolution followed a course very similar to that followed by the French Revolution. For one thing, its first government, like France's National Assembly, was a moderate government that tried to maintain respectability by following many of the old monarchy's policies. The most ruinous of these policies was its commitment to stay in the war against Germany. This merely intensified the turmoil and anarchy that the war had already generated, which led to more defeats, and so on. The more radical elements agitated for more sweeping changes to undermine the government's power while exploiting its tolerance and weakness.

The most important of these groups was the radical Marxist party known as the *Bolsheviks*. (meaning "majority" although they only represented a minority of Russian socialists, let alone the population). Their leader, Vladimir Ilyich Lenin, was a hardened revolutionary and prolific writer, whose career had involved avoiding the Czar's secret police, spending time in a prison camp, and publicizing Marxism through his writing while in exile. Ironically, when revolution broke out, the Germans sneaked him into Russia, hoping he would

destabilize Russia and knock it out of the war. He did that and much more.

When Lenin arrived in Petrograd, he immediately set to work to organize a revolution that would overthrow Kerensky. The steady deterioration of Russia from the prolonged war effort played into his hands, and the Bolshevik program, summarized in the slogans "Bread, peace, and freedom" and "All power to the Soviets" won many followers, especially among the *soviets* (workers' councils organized in the factories). Finally, on November 7, 1917, the Bolsheviks made their move. Having already seized key strongpoints such as bridges, railroad stations, and telegraph offices, they easily overthrew Kerensky's government.

Lenin acted quickly in both domestic and foreign policies. In foreign affairs, as he had promised, Lenin pulled Russia out of World War I by signing away large territories in the Treaty of Brest-Litovsk in March, 1918. Russia's allies were furious since this freed one million German soldiers for the Western Front. They also feared and hated the Bolsheviks for their claim that they would overthrow Capitalist society. Therefore, the allies, especially Britain and the United States, landed troops in Russia to try to overthrow the Bolshevik government.

Facing strong opposition at home and abroad, much like the Jacobins had in 1793, Lenin followed strict domestic policies. Private property was abolished, industries and banks were nationalized, and the press, briefly free under Kerensky, was once again strictly censored. This combination of internal resistance and foreign intervention led to civil war.

The Russian Civil War (1918-20). At first the Bolsheviks (also known as the Reds), like the Jacobins in the French Revolution, were heavily outnumbered by their enemies (the Whites) and controlled only about 10% of Russia. That was mainly around Moscow, which they had switched to their capital since it was inland and harder for invaders to reach. The fighting was very confused and brutal, with massacres on both sides. However, the Bolshevik leader, Leon Trotsky, starting with a few units of militia known as the Red Guard (similar to the National Guard in the French Revolution) built the Red Army into a strong and effective force of 5,000,000 men.

Desperate for experienced leaders, he forced old royalist officers into service. To ensure their efficiency and loyalty Trotsky held their families hostage and used a system of political advisors, *Commissars*, similar to the French Revolution's representatives on mission. Trotsky's methods were successful, and by 1921, he had cleared Russia of the foreign invaders and crushed the Whites.

The Women's Battalion of Death and Mother Russia



Russia's patriarch blesses the 140 members of the women's Battalion of Death in 1917.

As the war effort became more desperate, the provisional government recruited a special unit of women known as the Women's Battalion of Death. Many women enthusiastically supported the Revolution as an opportunity to raise their own status. While pictures of these women make them seem very modern and military with their uniforms and shaved heads, closer looks show that some of them were still wearing high heels. Sources differ over whether this battalion took part in any serious combat.

However, the battalion's very existence and Russian women's active participation in the thick of combat in World War II, both as partisans and regular soldiers, says a great deal about the traditional Russian view of women compared to that of the West. While the West saw women as frail, dainty, and weak, being unfit for combat nursing, not to mention combat, the Russian stereotype of a woman tended to be larger and stronger than her counterparts in the West, fit for hard work in the fields and even combat if the need arose.



Workers' and Soldiers' Soviets



A meeting of soldiers in March 1917 who have formed their own soviet.

Soviets were councils formed by the workers themselves. In Petrograd workers formed a soviet the same night the Duma's government was established. This threw Lenin for a loop, because, according to his theories of revolution, the workers didn't have the political consciousness to organize themselves. However, since the soviets tended to favor some sort of socialism, he used them to further the Bolshevik cause and then worked to bring them under control after the Russian Civil War.

Soldiers' soviets also formed as a sort of communist fifth column within the ranks. At first, the Bolsheviks just used them to express their views while still showing respect to their officers, with only a few instances of violence. Not until the Civil War did open hostility break out between old and new elements in the army.

Lenin



Lenin (1870-1924) was the pseudonym for Vladimir Ilyich Ulyanov. Like most of the early Bolshevik leaders, he came from a well-educated middle class family that put high value on education and hard work. Young Ilyich was very precocious entering high school at age nine and graduating with a 98% average in his courses.

His older brother's execution as a revolutionary profoundly affected young Ilyich. For one thing, it made it hard for him to get into the University of Kazan, and when he did, his own

revolutionary activities quickly got him expelled. Therefore, he studied on his own, earning a four-year degree in one year. In 1890, he discovered Marxism and pursued revolutionary goals through writing. He was a prolific author, writing some ten million words during his life, most of them presumably in coherent sentences.

Lenin was hard working and physically fit, had no real vices, and liked little jokes and playing chess. However, his brilliant abstract ideas and total devotion to the revolution made him somewhat brusque and insensitive to the more human aspects of what revolution is about.

In 1897 the tsar's secret police caught Lenin, earning him a year in jail and three more years in Siberia, where he met his wife and formed the Russian Social Democratic Party, an underground movement unlike any other in Europe. In 1900 he was allowed to leave Russia and lived in a number of European cities where he edited various socialist journals such as *Istra* (*The Spark*).



Lenin's mug shot after being arrested for political activities

Bolsheviks and Mensheviks. During this time, Lenin's faction split with another group over how they should carry out a revolution. Lenin's group wanted a small rigidly disciplined party to organize workers and peasants for the revolution, ruling them with an oxymoronic sounding government known as the Dictatorship of the Proletariat. The other group wanted a broadly based, liberal, middle class movement. Because Lenin's group had more votes at that particular meeting, they took the name **Bolsheviks** ("*Majority*") while the opposition was stuck with **Mensheviks** (Minority). The irony, of course, was that the Mensheviks represented a much larger section of the population than the Bolsheviks did.

Lenin hailed Russia's defeat in the war with Japan as the beginning of a Russian and European revolution, as "progressive" Asia defeated retarded reactionary Europe. (Radicals in the U.S. did much the same thing during the Vietnam War whenever American troops suffered a setback.) When revolution broke out in 1905, Lenin secretly entered Russia to organize the Bolsheviks. To support the party's activities, he "liberated funds" (AKA robbed banks) along with another young Bolshevik, Joseph Stalin. Two years later he left Russia with the police on his trail and would be gone until the next revolution broke out ten years later.

When Revolution broke out in 1917, the Germans smuggled Lenin and other radicals into Russia in a sealed train, hoping to destabilize it and take it out of the war. (That's a move the Germans probably wished they could take back.)

Upon his arrival in Petrograd (the Russified new name for St. Petersburg), Lenin immediately gave a speech denouncing the war as a capitalist scam:

"Capitalist pirates are destroying Europe for the sake of a handful of exploiters. The defense of the Fatherland is the defense of one set of capitalists against another!"

Growing Anarchy and the October Revolution

"Capitalist pirates are destroying Europe for the sake of a handful of exploiters. The defense of the Fatherland is the defense of one set of capitalists against another!"--Lenin denouncing Kerensky's government after arriving in Petrograd (April, 1917)

At the first All Russian Congress of Soviets in Petrograd (June 1917) the Bolsheviks only had 105/822 delegates and maybe 20,000 followers in a country of 160 million. Yet that didn't stop Lenin from claiming that the one party strong enough to rule Russia was the Bolsheviks, who would publicize the war profits of up to 100 capitalists and pull Russia out of the war. While the Mensheviks drew the most applause from the

Congress' delegates, the mob in the gallery cheered Lenin.

Meanwhile, Russia was coming apart at the seams, as peasants seized lands for themselves and looted the homes of the rich. In the cities, workers, urged on by the Bolsheviks, agitated for bread and control of the means of production. In one case, they tied a factory manager up in a bag and threw him into the Moscow River. Meanwhile, in non-Russian areas such as Finland and Ukraine independence movements were emerging.

The war effort was doing even worse, as discipline deteriorated and the Bolsheviks even urged Russian soldiers to fraternize with the Germans, disobey their officers, and erase any distinctions between ranks. A disastrous offensive by Kerensky led to a million deserters wandering the Russian countryside, creating more havoc and spreading Bolshevik propaganda.



A loyalist soldier tries to stop some of the million deserters as Russia's war effort fell apart

In July 1917 military defeats triggered protests and a failed attempt to overthrow the Provisional government Alexander Kerensky, who took formal control of the government on July 21, ordered Lenin shot on sight as a German agent. As a result the Bolshevik leader went into hiding for the time being.

Soon afterward, Kerensky's top general, the conservative Lavr Kornilov, led a counter-revolution. Kerensky called on the various socialist groups in the Petrograd Soviet, including the Bolsheviks, to unite with him to stop Kornilov. Railway workers, who were largely Bolshevik, managed to divert some of Kornilov's trains and stop others, convincing the soldiers to give up on the coup. This incident

further discredited Kerensky and raised the Bolsheviks' status.



Lenin in disguise to help him sneak back into Russia. He wanted to go as a deaf-mute, but his wife reminded him that he talked in his sleep.

As Bolshevik influence grew in Petrograd and the countryside, they won numerous soviet elections until September 12 when the Petrograd Soviet overwhelmingly supported a resolution to nationalize the land and industries and to make peace. Lenin, who was directing operations from exile, sensed the time to strike was nearing, especially after two Bolsheviks published an article publicly declaring they were about to overthrow Kerensky's government. Lenin returned on October 23, and after a ten-hour meeting to debate whether the time was ripe, decided to seize control of the government.

On the night of November 6-7, the Red Guard (consisting largely of young toughs and the unemployed) seized key strong points (bridges, railroad stations, power stations, and telegraph offices). In addition, the cruiser, *Aurora*, showed up to shell any government resistance. That morning, the Bolsheviks made their move, and it was over almost as soon as it began as Kerensky's quickly collapsed.

"Go where you belong from now on-- to the trash heap of history"--Leon Trotsky to Kerensky's followers after seizing the Winter Palace.

Historical reenactments. Since virtually no fighting took place in storming the Winter Palace, it had to be reenacted (below) with some "professional embellishment." Similar reenactments would be done to "record" the Russians closing the trap on the Germans at Stalingrad in 1942 and the meeting of the Americans and Russians at the Elbe River at the end of World War II.

Russia Drops Out of the War



Russian & German soldiers dance together upon news of the ceasefire in December 1917

Brest-Litovsk. Negotiating the treaty to pull Russia out of the war was complicated by the Bolsheviks' rhetoric openly claiming their worldwide revolution would topple capitalism forever. Declaring one's intention to destroy someone's way of life never helps resolving individual personal differences, and it doesn't help in international diplomacy either.

In addition, Trotsky, the leader of the Russian delegation, refused German demands for territory by declaring a unilateral withdrawal of Russia from the war without a treaty, summing up his position as "no war—no peace." When the Germans responded by resuming the war and seizing more territory, the Russians gave in, surrendering Finland, Lithuania, Estonia, Latvia, Ukraine, and Poland, costing Russia one-quarter of its population and industry and 90% of its coal. Germany took most of these territories, but quickly lost them when it surrendered to the Western allies eight months later. Except for Ukraine, the lost territories became independent nations until World War II, after which Stalin would rule or dominate them again.

Taking all those lands from Russia may have seemed a good idea in March 1918, but it backfired a year later, since it had set a precedent that the allies could use to justify in taking German lands in the Versailles settlement.

Lenin's "Dictatorship of the Proletariat"



"Turning the world upside down". Following is a series of decrees designed for, as Lenin put it, "turning the world upside down" & moving Russia towards being a truly socialist society: Nov. 10- Peter the Great's Table of Ranks was abolished.

Nov. 22- House searches were organized to confiscate fur coats for the poor.

Dec. 11- Schools were taken from the Church and made public for all.

Dec. 14- The state seized the banks and put industries under worker control.

Dec. 16- Army ranks were abolished.

Dec. 21- A new law code was established for "Revolutionary courts.

Dec. 24- All factories were nationalized by the workers (i.e., the state).

Dec. 29- Interest and dividend payments were ended and withdrawals were severely limited.

As one Russian described it: *"Every morning the inhabitants carefully studied the new decrees, still wet & crumpled, pasted on the walls; they wanted to know what was permitted & what was forbidden."*

The reality of what people wanted from the revolution was somewhat different from Lenin's cerebral goals of a Marxist utopia and a dictatorship of the proletariat. Out of 100 petitions submitted by workers in March 1917, 51 wanted shorter work shifts, 18 wanted higher wages, 15 better work conditions, and 12 wanted more rights for workers.

One election every 74 years isn't so bad. In November 1917, right after the October Revolution, the Bolsheviks held free elections for the Constituent Assembly. However, they only got 24% of the vote, while Kerensky's supporters got 58%.

Therefore, on January 5, 1918 the newly elected Assembly found (pro-Bolshevik) sailors from the Baltic fleet guarding the building. Despite this intimidation, the delegates voted 237 to 138 against declaring the Bolsheviks the ruling party, causing the sailors to dismiss the meeting and dissolve the Assembly. In a subsequent peaceful demonstration protesting this, several people were killed, and with them died democracy in Russia.

The next free election would be in 1991, only 74 years later.

Freedom of the press didn't last long either. Claiming they were "sowing sedition through demonstrably slanderous distortions of fact" (i.e., telling the truth), Lenin shut down virtually all newspapers, except the state paper *Pravda*, which, ironically, means *Truth*.

The logic of Lenin's "dictatorship of the proletariat". To see how Lenin justified his harsh rule, just follow the reasoning below step by simple step.

The working class (proletariat) is the voice of the people as a whole

...and the Soviets are the voice of the proletariat

...and the Party is the voice of the soviets

...and Lenin is the voice of the Party.

...Therefore, Lenin's "dictatorship of the proletariat" is the highest expression of democracy.

It's just that easy.

The Russian Civil War (1918-21)



American troops guard Bolshevik prisoners during the Russian Civil War

The Russian Civil War was an especially confused conflict, since it involved foreign intervention, multiple factions, including peasants who were hostile to both sides, and even

a foreign army (the Czech Legion), which was just trying to escape Russia by going all the way east across Siberia and then sailing around Asia and Africa to get home.

Cossacks usually fought for the Whites to gain freedom from the Reds. Therefore, the Whites usually had better cavalry than the Reds, a crucial factor in warfare ranging across Russia's wide expanses of flat land.

Who needs ranks anyway? One of the stranger Bolshevik reforms was abolishing military ranks as part of the bourgeois hierarchy. In addition to electing their officers, soldiers' councils voted on strategy and whether to work beyond one shift or defend a particular position. The only reason the Red Army survived these conditions, which lasted through the first half of 1918, was the weakness of the opposing forces. By 1922, the Red Army had a regular and traditional chain of command.



An armored train typical of those widely used during the Russian Civil War since much of the fighting centered on control of rail lines.

The Czech Legion consisted of 42,000 Czech deserters from the Austrian army who joined the Russians to fight for their homeland's independence. After Russia dropped out of the war, they wanted to go home to their new nation of Czechoslovakia, but the Germans blocked their way.

Therefore, they decided to travel 5000 miles eastward to Vladivostok and sail home all the way around Asia and Africa. To that end, they seized railroads and rolling stock and started fighting their way across Russia.

The Czechs' prosperity and firepower grew over time, especially when they managed to seize the tsars' gold assets, worth \$25 billion (in 2008 currency). Later they traded twenty-nine cars of

this gold for clear passage east. Their train included a post office, daily paper, and cars painted with scenes of the Czech countryside. When they reached Vladivostok, they booked passage home, finally reaching Czechoslovakia in 1920.



A poster shows White leaders as “running dogs” of the American and British imperialists

The Propaganda War. The twentieth century was an age of mass media, and for the Russian Revolution and Civil War, as with World War I, the primary medium was the poster. Thanks to lithography, high quality color posters could be mass-produced to bombard the people with whatever message was being pushed. The Bolsheviks especially made use of this weapon, portraying themselves as heroes and the Whites as short, fat, and cowardly. Artists even incorporated modern abstract techniques, using sharp angles along with lots of red to create a powerful effect.

The disasters of war. The fighting was confused and brutal, abounding with cruelty on both sides.

- At Stavropol, Whites executed 370 officers to get 3000 Red prisoners to join them,
- A Siberian partisan band massacred 6000 Russian men, women, and children.
- Red sailors in Sebastopol killed hundreds of women and children.
- Whites at Omsk massacred 1500 prisoners.
- Reds nailed the epaulettes of White officers to their shoulders.
- Whites roasted a Red guerilla in the firebox of a locomotive.
- Whites in Southern Russia killed 100,000 Jews, equating them with the Bolsheviks.
- Lenin’s secret police, the CHEKA, killed 500 people for killing one Red official.

The Tsar’s fate. As the Czech Legion approached, the Bolsheviks holding the royal family executed their prisoners to keep them from falling into enemy hands. They were more than thorough as they shot, bayoneted, and clubbed the Tsar’s family to death, chopped them up, burned the pieces, and threw them down a mineshaft.

The price of revolution & civil war (1917-23).

- In World War I, an estimated two million Russians died.
- Another 750,000-2,000,000 died during the Civil War.
- In addition 200,000-400,000 died in prison or from the Red Terror.
- Add to that 50,000 executed by the Whites.
- Russia’s industrial workforce fell from 3,600,000 to 1,500,000.
- Up to 3.5 million, many of them educated and skilled, fled Russia.
- Russia lost 35.1% of its draught horses, 24.4% of its cattle, 42.2% of its hogs, and 24.8% of its sheep and goats 1916-1921).
- Fertilizer use fell from 700,00 to 20,000 tons (1913-21).
- Tilled land fell from 214 million to 133 million acres (1916-22).
- Between 1913 and 1921 the grain crop fell 57%.
- The resulting famine (1921-2) probably killed 5,000,000 Russians.
- Typhus, typhoid, cholera, and influenza killed 3,000,000 more.
- *Official* figures say the civil war and its aftermath killed 9,000,000.

That’s a conservative estimate. No one knows the real cost. For example, it’s anyone’s guess how many refugees fled the fighting, hunger, and disease in search of their old homes or new ones.

“Psychologically, this talk of feeding the starving is nothing but an expression of the saccharine-sweet sentimentality so characteristic of our intelligentsia.”—Lenin

Things would get much worse under Stalin.

THE COMMUNIST DICTATORSHIPS OF LENIN & STALIN (1920-39)

Lenin's rule. After the devastation of World War I, the Revolution, and Civil War, Russia was a total wreck. Factories were in ruins and half the working class gone, either dead or returned to the farms. Millions had died, mainly from the famine and disease accompanying war. Two million more, mostly nobles, middle class, and intellectuals, had emigrated to other countries. Now it was up to Lenin to restore some degree of prosperity and order. There were four main policies he followed, one that loosened his control for the time being and three that tightened his control.

Lenin eased up a bit with his New Economic Policy (NEP), which allowed some degree of free enterprise to encourage higher production by the peasants. While Lenin had little choice but to let free enterprise return, he could also justify NEP in Marxist terms since, according to Marx, Russia would have to evolve through a capitalist phase before it was ready for Socialism. For several years in the 1920's, Lenin's Russia saw widespread experimentation in the arts and social engineering as well as economics. Cubist and futuristic art flourished. Avant-garde theater featured acrobats as well as heavy political messages. The family was also under attack as a bourgeois institution with women as the oppressed working class. Therefore, women gained equal rights and pay as well as access to easier divorces and legalized abortions. Some young communists even saw free love and public nudity as revolutionary acts of liberation from bourgeois values. Older Bolsheviks frowned on such acts, but tolerated them in the spirit of creating a new socialist society. Lenin made similar concessions in government, giving tsarist bureaucrats and technical experts more authority in running the government and factories since most communists were uneducated and untrained in the technical expertise needed to run a country.

However, this is not to say that Lenin relinquished any political control over Russia. For one thing, the old non-Russian provinces of the tsarist empire were brought back under tighter control, the rationale being they needed Russia's help in establishing a socialist paradise more than they needed national independence, which would be

irrelevant once the workers' revolutions had swept the globe. Of course, to these subject peoples, this new Soviet Union looked suspiciously like the empire of tsarist Russia.

Lenin exerted greater control over local governments through the Communist Party. One problem he had from the earlier days was that the local soviets had seized control of local governments. Although the Bolsheviks themselves had used the slogan, "All power to the Soviets" and could do little to control the soviets during the crisis of the civil war, Lenin was determined to eventually get tighter control on local matters. What he did was create a party structure parallel to that of the government. The local party officials were much more tightly controlled than the soviets and correspondingly more efficient in carrying out Lenin's directives. As a result, control of the Communist party was as important for the rulers of the Soviet Union as was control of the government as a means for ruling the country.

Finally, Lenin, like Marx, felt the workers could not achieve true revolutionary consciousness on their own, but needed a strong centrally directed party of Marxists to lead them to socialism. Therefore, he had to resort to what he called "Proletarian dictatorship" to ensure the workers got what they deserved. However, this was not rule by the working class, but rather rule by the Communist party with working class members in it. Of course, Lenin strictly ruled the party, thus theoretically making his will that of the party and the people. Enforcing "proletarian dictatorship" and the "Red Terror" was the CHEKA (the All Russia Extraordinary Commission for Combating, Counterrevolution and Sabotage). This was Lenin's secret police, except that it was much larger, more effective, and deadly than the Czar's secret police had ever been.

The harsh and autocratic nature of the Soviet system that emerged was influenced by several factors. First, there was the dictatorial nature of Lenin's personality that largely determined the course of the revolution. Second, there was a certain continuity from the tsars' absolutist regime to Communist rule. Finally, many more Communists had joined the party during the revolution and civil war than before 1917. As a result, they saw the revolution in military terms as a sort of brotherhood in arms, and

it assumed a military aspect with party members wearing military uniforms and using military jargon for political offices and concepts.

However, before Lenin could enact a thorough program of reform in the Soviet Union, he died in 1924. He was a brilliant leader and sincere revolutionary who oftentimes ignored human feelings in pursuit of his Communist revolution. His harsh measures must be seen in light of the harsh conditions that demanded them if the Revolution were to survive. Lenin is remembered as the father of the Revolution, but his early death left to his successor, Stalin, the job of carrying out the real revolutionary transformation of Russia.

Stalin's revolution (1924-40). Lenin's death led to a power struggle between Leon Trotsky, the creator of the Red Army during the Russian Civil War, and Joseph Stalin. Stalin was one of the few real working class members of the Communist party's upper ranks. The name Stalin, meaning "man of steel", reflected his willingness to take on jobs no one else wanted, gathering a lot of power into his hands in the process. He was also a cold and ruthless politician who managed to squeeze out the more intellectual Trotsky. Not content with a mere political victory, Stalin's agents later tracked down Trotsky in Mexico and murdered him in 1940.

While Trotsky had wanted to focus on spreading the Communist revolution worldwide, Stalin wanted to concentrate on building up the Soviet Union internally first. He felt a need for a revival of the revolutionary spirit since many Communists thought Lenin's NEP had steered Russia away from a true socialist society. His first step was to purge the moderate wing of the party that still wanted to continue Lenin's policies. Among his victims were the middle class and non-Communist bureaucrats and technicians that Lenin had relied upon to keep the state and economy working. While this was popular with the more radical Communists, it also deprived Stalin of the very people he needed to develop Russia's industries. Stalin then launched a campaign to build the Soviet Union into a great power. His program had three parts: the transformation of the Soviet Union into an industrial power, collectivization of the farms in order to support the populations in the new

industrial cities, and a purge of any elements Stalin suspected of disloyalty.

Stalin's industrialization was carried out in a series of Five Year Plans where the government set projected goals for economic growth. However, the first Five Year Plan (1928-32) in particular was as much political rhetoric as economic planning, which seriously hampered efforts to meet its goals. For one thing, human and material resources were not adequately figured into the plan, causing constant confusion and work stoppages. However, at least officially, each of Stalin's Five Year Plans more than met their goals. How much of this was the truth, Stalin lying to the world, or nervous officials lying to Stalin is hard to say. There were harsh penalties, even executions, for officials failing to meet their quotas, thus providing strong incentives to meet their quotas by padding their figures or even sabotaging each other's efforts.

Whole new cities and even lakes appeared where none had existed before, many of them named after Stalin himself. Oil production trebled, while coal and steel production rose by a factor of four times. Stalin also established a massive system of public schools and universities to provide a literate (and more easily brainwashed) work force as well as engineers for his factories. By 1940, the Soviet Union had an 85% literacy rate and was the third largest industrial power in the world behind only the United States and Germany.

However, this was done at a price. For one thing, Stalin concentrated on heavy industries, such as steel, electricity, and heavy machinery, and consequently ignored the production of basic consumer goods, including even housing, for his people. He also used virtual slave labor by taking millions of peasants and others whom he saw as threats to his regime and using them in building his massive canal, hydroelectric dam, and factory projects. Thus millions died for Stalin's dream of an industrial state.

Collectivization of the agriculture was mainly a means to an end: to produce enough food to support an urbanized industrial society. Marxist doctrine forbade private property, and Stalin, wanting as much centralized power as possible, used this principle to gather the farms into giant state-run operations. In theory, organizing the farms along

the lines of industrial factories should increase productivity enough to support the Soviet Union's new industrial cities. However, there were several flaws with this. First of all, such a scheme demanded a level of mechanization far beyond the Soviet Union's capacity, which, at that time, still had 5.5 million wooden plows in use. Also, Stalin failed or refused to recognize that people work harder if they feel they are working for themselves instead of a landlord, even if that landlord is the state. Since many peasants had gained possession of their own land before and during the Revolution, collectivization met with strong resistance from these landholders, known as *kulaks*, and that led to untold troubles.

Stalin saw the kulaks as traitors to the Revolution and launched an all out campaign against them. Police and soldiers surrounded villages and hauled the peasants off to collectives, labor camps (which provided slave labor for Stalin's industrial projects), or mass executions. Collectivization was also a disaster for Soviet agriculture and its people. Peasants burned their own grain and butchered their livestock to keep them out of government hands. That and the disruption caused by Stalin's harsh policies led to widespread famine that killed millions more. Any gains Soviet agriculture may have made were probably in spite of Stalin, not because of him. This brings us to the third feature of his regime, the Stalinist terror.

Stalin was an extremely paranoid man who easily imagined both that anyone not meeting his expectations of performance was a traitor to the state and that anyone exceeding his expectations was an ambitious conspirator against him. In 1936 Stalin purged a wide range of people whom he saw as traitors or threats to his regime: government officials, military officers, old Bolsheviks, and teachers in addition to kulaks and inefficient factory managers.

The trials of these people were an absolute farce, where the accused were forced to read contrived confessions of their alleged crimes against the state before being sent to Stalin's labor camps, providing much of the slave labor needed for Stalin's industrial projects. However, the purges did great harm to Russia. Besides stifling initiative and poisoning society with an element of fear, they also eliminated most of the Red Army's top officers,

replacing them with men who were inexperienced and subservient to Stalin. Russia would pay a terrible price for this in World War II.

Those replacing the bureaucrats and engineers eliminated by Stalin's purges were young men from working class backgrounds educated in the new schools and universities established by Stalin. Instead of the radical and somewhat independent-minded Bolsheviks in military uniforms agitating for more revolutionary reforms, Stalin now had an elite corps of educated engineers and bureaucrats loyal to him and more concerned with technical matters and industrialization than factional politics, Marxist ideology, and loyalty to a fighting Marxist brotherhood. Instead of uniforms and eccentric cultural ideas, they wore suits and attended classical concerts and ballets. They were the products of the revolution, but they were hardly revolutionary themselves, being prone to conserving the gains made by their party rather than pushing toward new frontiers. Stalin's two successors, Khrushchev and Brezhnev, both came from this generation and reflected its more conservative tendencies. The revolution had come full circle.

Regardless of the cost, the 1930's saw the Soviet Union emerge as a major power, which seemed all the more remarkable since the rest of the world was mired in the Great Depression. This provided great publicity for Communism when resurgent Russia was compared to the ailing capitalist world. Communist membership grew in the western democracies, while a number of poorer countries adopted their own five-year plans in imitation of Stalin's "socialist miracle." All of these underscored the fact that the 1930's were a time of great economic hardship, which led to rising political tensions and eventually World War II.

The Kronstadt Uprising (1921)

In March 1921 the sailors at the Kronstadt naval base rebelled, claiming the Bolsheviks had betrayed the revolution. While the Kronstadt uprising was put down with typical Bolshevik severity, it was the first time the Bolsheviks had turned guns on their own followers, and it revealed an embarrassing split between the party and workers. This was especially revealing, since Russian sailors were notoriously radical and among the Bolsheviks' staunchest

supporters. Lenin apparently got the message, replacing his unpopular War Communism with the more lenient NEP.



Poster showing Lenin and Trotsky sacrificing Russia on the altar of Marxism

Bolshevik symbolism and Jargon



Constructivism is the term used to describe the art movement in Russia under Lenin. It was often very modern and even abstract in form, rejecting the idea of art for art's sake and trying to instill some sort of social purpose into it. After Lenin's death, his successor, Stalin, would keep the social purpose of Constructivism, but return to a more representational style known as Socialist Realism.

Bolshevik double-speak. Below are some Bolshevik euphemisms and their meanings.
Bourgeois Tyranny: National resistance
Proletarian Self Determination: forced adherence
Democratic Centralism: reuniting tsarist Russia

The hammer and sickle on the Soviet flag symbolized the alliance between the industrial workers and peasants. Numerous posters from the period also emphasized this relationship.



Comintern was the Communist International formed in 1919 to plan and direct the worldwide spread of communism. While it had little success in creating new communist regimes, it did help scare the capitalist West and trigger a serious Red Scare after World War I.

Purging Soviet society of its “insects: The Red Terror

The CHEKA, formed at first to control looting and banditry, consisted largely of the young thugs and Cossack deserters it was designed to fight. But Lenin needed more than that to keep Russian under control, so the CHEKA became the primary instrument of the Red Terror. It was very much a continuation of the Tsar's *Okhrana* (secret police), which itself had roots going all the way back to Mongol rule in the 1200s. However, while the *Okhrana* had around 15,000 agents, the largest in the world at that time, Lenin's CHEKA would grow to 250,000.



Felix Dzerzhinsky, founder of the CHEKA

The CHEKA became a virtual state within a state, with its own headquarters separate from the rest of the government and answering only to Lenin. It acted as police, judge, and executioner all at once, with its own secret courts, firing squads, and concentration camps that would become the nucleus of Stalin's gulag system.

In the last eighty years of Tsarist rule, the *Okhrana* carried out an average of seventeen executions a year. In the last half of 1918, the CHEKA killed an average of 1,000 people a month. In 1919 they executed 10,000 “insects”, that number rising to 35,000 in 1920. Lenin himself advocated shooting one in ten idlers, then speculators, and then takers of bribes.

So who were the “insects” that Lenin wanted to purge? A partial list would include homeowners, teachers, members of parish councils and choirs, priests, monks, nuns, and even trade union officials. As M.Y. Latsis put it: “*We are not carrying out war against individuals. We are exterminating the Bourgeoisie as a class. We are not looking for evidence or witnesses to reveal deeds or words against the Soviet power. The first question we ask is to what class does he belong, what are his origins, upbringing, education or*

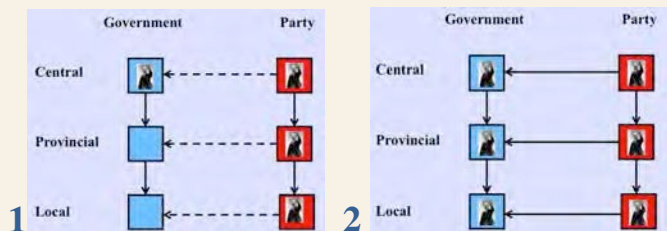
profession? These questions define the fate of the accused. This is the essence of the Red Terror.”

After the Civil War, the CHEKA was replaced by the GPU (Chief Political Administration), which eased up on the terror, relying more on legality, bureaucracy and discretion.

A Top-heavy Government

Even after their victory in the Civil War, the Bolsheviks’ actual authority in local affairs across the vastness of Russia was very limited, forcing them initially to concede a lot of power to local and provincial officials. However, over time, the central government managed to assert its power indirectly through party officials without doing away with them.

Step 1 was to establish provincial and local party offices to “help” government officials.



Step 2 was for party officials, who were professionals and firmly controlled from the top, to gradually take over the duties of local government officials.

Much like Cardinal Richelieu’s creation of intendants in the 1630s to take over the duties of the local French nobles, this created a more efficient, but also a somewhat top-heavy, central government. It also could make it confusing to outsiders when a change of leaders took place and more emphasis was given to who controlled the party than who was head of state. For example, when Khrushchev visited the U.S. in 1959, there was a minor crisis about him only being entitled to a 19 instead of 21-gun salute, since he technically was not the head of state, although it was clear to everyone that he called the shots.

The Rise of Joseph Stalin



“To choose one’s victim, to prepare one’s plans, minutely, to slake an implacable vengeance, and then go to bed...there is nothing sweeter in the world.”-- Stalin

The real Stalin. His real name was Iosif Vissarionovich Dzhugashvili, but he is best remembered by his assumed name, Stalin, meaning Man of Steel. Being from working class rather than intelligentsia background, he did not have the theoretical background on Marx as other Bolshevik leaders, releasing one book of highly derivative ideas to give himself some intellectual credibility.

Physically, his face was badly scarred from smallpox; he had webbed toes, and was only 5’4”. Because of an early accident with a carriage that led to blood poisoning, his left arm was stiff and 3” shorter than his right one.

Although he could be charming when he had to, Stalin’s cruder nature would occasionally come out, such as when he called Lenin’s wife a “syphilitic whore.”

He was also known for his temper, once ripping a phone out of the wall when he kept getting a busy signal.

Note: Phones used to be attached by wires to little boxes in the wall that were connected by wires to central distribution points connected to all other “land line” phones everywhere. I know it sounds silly, but that’s how phones actually used to work back in the Second Millennium.

Another time, when Stalin’s pet parrot mimicked his stomping around, swearing, and spitting, he killed the bird with his pipe.

He had an equally cruel and bizarre sense of humor. When his head of security, Pauker,

impersonated Zinoviev's screams for mercy while being executed, Stalin laughed hysterically.

Soon afterwards, he had Pauker executed.

The struggle for power after Lenin. Stalin wasn't given much of a chance against Trotsky, who dismissed him as the "party's most brilliant mediocrity". However, Trotsky's intellectual arrogance and complacency tended to alienate those whose favor he should have been courting. In addition, younger party members were generally less educated and intellectual than most of the old timers, making them more susceptible to Stalin's cruder tactics and rhetoric.

There were five main players in the struggle for power after Lenin's death: Stalin, Trotsky, Nikolai Bukharin, Lev Kamenev, and Grigori Zinoviev. At first, Stalin allied with Kamenev and Zinoviev to oust Trotsky. Then, in a classic double cross, he allied with Bukharin to get rid of Kamenev and Zinoviev. Having taken care of them, he eliminated Bukharin to seize sole power.



Leon Trotsky

If only Stalin had Photoshop. Stalin was one of the most paranoid characters to walk across the stage of history. This especially showed in his obsession with rewriting history and always putting himself at center stage. To do this he would airbrush himself into, and his enemies out of, older photographs. Numerous photos of Stalin close to Lenin exist, but few are authentic and/or not retouched.

Probably because he didn't want to admit he needed directions, Stalin even altered a simple picture of a common worker giving him direction to a convention hall, air brushing him out of the picture. I'm not sure if erasing the

worker was purely metaphorical. Knowing Stalin, probably not.



One of his more childish alterations was done to a picture of a telescope near the head of Lenin's wife (whom Stalin hated). By slightly moving the telescope, he made it look like a gun was pointed at her head.

Even after he died, Stalin insisted on manipulating his image. The concerned faces of the Politburo members in a photo of his funeral were pasted over their real expressions, which were probably blissful glee that the *vozd* was finally gone.

Stalin's paranoia extended to looking out for his personal safety. He refused to sleep in the same place twice in a row, and all his quarters in the Kremlin were identical to confuse any would-be assassins. He always traveled in motorcades of several identical limousines for the same reason.

One of Stalin's favorite pranks was to call subordinates late at night and talk really weird to them just to make them wonder if they were in trouble and about to die. He also liked to get people drunk and ask them cryptic questions to make them slip up and incriminate themselves somehow.

In his later years, he stayed at his dacha at Kuntsevo. His ministers would gather there like a bunch of court jesters to get drunk and play practical jokes on each other for Stalin's amusement. Then they would watch Hollywood Westerns, Stalin's favorite.

The Stalinist System

Stories abound concerning the absurdity of the Soviet system under Stalin. In one case, two distant furniture factories, each with forests for timber close by, would get their lumber from the other factories' forests. The trains carrying this lumber would even pass each other on the track.

Although Yerevan, Armenia needed teaspoons, the Kremlin bureaucrats told it to make accordions.

Since replacement parts didn't count towards production quotas, factories didn't make them. As a result, entire tractors on the state collective farms were often used for spare parts, severely hampering the actual growth in the supply of factors. Also, because no replacement windshield wipers were made, people would steal them from other cars. Therefore, people kept their wipers locked inside their cars, so that when it rained, everyone had to pull over to the side of the road and attach the wipers in the pouring rain. Another strategy was conserve the wipers by only leaving one attached on the driver's side.

Although massive plans were made for producing things, there were often no plans for providing the resources actually needed to make them, leading to fierce competition between factories to make the list of top priority industries to get what resources there were. Plants and factory managers desperate for supplies even hijacked rival factories' supply trains.

In the intense competition between Sverdlosk and another city for a new state factory, Sverdlosk started building a factory with its own money to pressure the government to give it the grant. Instead, the state was impressed by both candidates and granted each a factory, even though there were only enough resources to supply one factory's needs.

Despite the caption on the poster below, Stalin's dream of matching Henry Ford's assembly line production techniques might have worked if someone had taught the workers what an

assembly line was. Conveyor belts often stood idle for years as workers pulled the parts off the line and painstakingly assembled tractors one by one on the shop floor.

There were a number of industries using Western technicians to train Russians. However, not only would Stalin deport the Westerners, he also had the Russians they were training shot or imprisoned as Western spies, leaving no one capable of running the industries, which then shut down.

*"Tomorrow is the Opiate of the Masses":
Life under Stalin.*



Peasants eating from the same bowl (1931)

"Tomorrow is the opiate of the masses." –Russian commentary on constant government promises to improve peoples' lives and provide them with more consumer products. As late as the 1970s, the average Soviet citizen was only allotted one new pair of shoes every eighteen months. And Soviet shoes were of notoriously shoddy quality.

Thus there was little or no incentive to do a good job, since under the Soviet system, people were paid the same no matter how hard or long they worked, if they were drunk on the job, or were chronically absent.

"We pretend to work and you pretend to pay us."—Soviet saying

Technically, there were strict laws and punishments against absenteeism and laziness on the job, but they were rarely enforced. Stricter laws and enforcement in 1938 and 1940 that punished anyone even twenty minutes late for work just led to more resentment, largely because the unreliability of most Soviet public transport and clocks often made it nearly impossible to get to work on time.



The “success” of Stalin’s economic policies. Despite posters claiming it fulfilled its goals with “maximum overachievement” in only four years, the first Five Year Plan most likely only produced one-third the pig iron, tractors and woolen cloth, one-half the steel and cotton cloth, three-fifths the electricity, one-quarter the linen cloth, and one eighth the mineral fertilizers that Stalin claimed.

“We pretend to work. You pretend to pay us.”— Russian joke. It was generally taken for granted that Russian goods were inferior to any foreign products that might be available (especially in stores reserved for members of the Communist Party), and that anyone buying Russian over foreign goods was a fool.

Soviet-made shirts were sometimes missing sleeves. Shoes fell apart at their first wearing. Matches wouldn’t strike. New pot handles fell off. Bread had non-nutrients baked into it.

And nothing could get repaired, because private businesses for crafts such as shoe repair, carpentry, locksmithing, and plumbing had been outlawed with the end of the NEP. Even those with the skills to do such repairs were banned from getting the materials needed for home repairs: nails, boards, paint, etc. Even needles and thread were unavailable for mending clothes. Recognizing this problem, the state finally re-legalized these crafts in 1936.

This was all based on the false assumption that one could get the basic consumer products that needed to be repaired. Shoes, for example were in extremely short supply because the huge numbers of animals slaughtered by peasants resisting collectivization created an acute leather shortage. State monopolization of metals for heavy industries made forks, spoons, and especially knives nearly impossible to get.

The one readily available product was vodka. After a brief prohibition period, Stalin’s people realized it was a major source of state revenue and brought it back to pay military expenses. Within a few years, vodka was the most important commodity in state cooperative stores, accounting for one-fifth of government revenue.

During the First Five Year Plan Soviet citizens might have money. They just didn’t have anything to buy with it. Purchasing the most basic consumer items might involve standing in long lines for hours, or in some cases, days. It was customary for people to automatically get into a line before finding out what they were standing in line for. Even if they didn’t need it, they probably had family or friends who did.



Women waiting to buy milk (1934)

This was especially true for women who, despite having jobs and careers, still ended up doing the cooking, childcare, and other chores at home, as well as frequent shopping trips for groceries after work. Having to walk or take mass transit limited what a woman could carry, as did wasting time in line, making such trips almost daily. Because most of the women would shop at the same time (i.e., at the end of the daily work shift), the lines and waits were especially long. Sometimes several women would cover the job for one of their number so she could leave midday to beat the rush and do the shopping for everyone.

Soviet housing was no bargain either, there being too little of it and that being cheaply built. Aggravating this was the fact that between 1926 and 1939 the Soviet Union’s urban population more than doubled. Not until the Khrushchev era (1953-64) did the state make any serious effort to alleviate the situation.

Urban dwellers typically lived in apartments with one family per room (the lucky ones), poorly-built and crowded dormitories, or even mud huts. During the 1930s the average living space for someone living in Moscow dropped from 5.5 to 4 square meters (roughly the size of a king-size bed). Some cities, such as Magnitogorsk and Irkutsk had even less, while Krasnoirarsk had only 3.4 square meters per person.

Sometimes families sharing an apartment had no kitchen because there was a family settled in there too, while other families would be living in the hallways. A report in 1933 described how “conversion of coalsheds, warehouses, cellars, and substair spaces has become a mass phenomenon in Moscow.” One Moscow family of six lived in a six square meter cubbyhole under some stairs, leaving only one meter per person.

People had no choice in what families lived with them, so it seemed in each apartment there was at least one boisterous drunk and one crazy person, usually suffering a persecution complex and thinking everyone was conspiring against him or her. After a while, they were often right. A report from 1935 described the sorts of behaviors one found in many or most apartments, including drinking, cursing, threats, fights, and beatings of women and children, immoral sexual behavior, and malicious pranks, such as throwing other peoples’ stuff out of the kitchen and intentionally spoiling food others had made.

One result of such cramped living conditions was higher divorce rates because young couples often had to live with one of their parents in very cramped conditions that easily led to life’s little irritations escalating into major conflicts. Making matters worse, after getting divorced, a couple might have to remain living with each other or one of their in-laws because there was no place else to go, resulting in high rates of domestic violence.

Out of desperation for living space, people falsified marriages or relatives living with them, or paid up to half their wages to rent out a bed

or corner in an apartment. In Simferopol in the Crimea, authorities found the decomposing body of a woman in an apartment for which she had been murdered by relatives.

Those not “lucky” enough to share apartments typically lived in barracks or dormitories, long one or two-story structures that all looked alike, often making it hard to even find where you lived. They often lacked electric lights, plumbing, central heating, and insulation, while the tarpaper roofs leaked. Men and women usually lived in separate quarters, but if they didn’t, flimsy curtains were put up to provide some privacy for women and families.

Outside of the home, things got even worse, as sewer facilities were nearly non-existent, trash was picked up only sporadically, and public transport was woefully inadequate. In addition, many towns had few paved streets, a situation that only got worse as one drove into the countryside.

Blat. So how did Soviet citizens survive in the Stalinist economy? To a large extent, they didn’t. Rather they got by through a “second economy” based on speculation, stealing, bribery, and patronage known as *blat*. A Soviet dictionary from 1935 defined *blat* as “thieves’ jargon” for crime or theft. However, for Soviet citizens, it was a system of reciprocal relationships used for acquiring goods and services that were nearly impossible to get in the official state economy, including apartments, train tickets, and even a pass to a good vacation resort.

Anyone working at any level in the state trade system, from factory production lines to cooperative stores, was likely to be involved in procuring goods either directly through theft or indirectly through trade or bribes from someone who did the actual stealing. Another method was to buy goods normally available only in big cities and sell them for a profit in the country. Train conductors were especially involved in this type of trade. While most people practiced this on a small scale, there were big-time operators, one who was arrested with 70,000 rubles in cash

(a huge sum then) and another worth 1.5 million rubles.

The Kolkhoz markets where peasants could sell produce raised on their tiny personal plots, were the most important sites for illegal trading of all sorts of goods, including ration cards and fake passports. But much of this trade took place in apartments between friends and neighbors. As one Russian put it: "One must have not 100 rubles, but 100 friends."

Although officially tainted with the stigma of being illegal, most Soviet citizens saw blat as based on friendships. Housewives were probably the largest group involved with blat. However, drinking, especially vodka, was a way of establishing a blat relationship. One brought a bottle of vodka, not as a gift, but as something to drink together. Thus the Russian expression "sharing a bottle" applied to sealing a deal.

How to Ruin your Country's Agriculture: Collectivize



The state of Russian agriculture in the 1930s was comparable to that of Western Europe in the 14th century, with 5.5 million wooden plows still in use.

Kulak was the term for the wealthier independent peasants before the Revolution, but no longer existed since peasants had seized their own lands. Although Stalin tried to stir other peasants up against the "kulaks", now a mythical class, most peasants aspired to be kulaks themselves rather than exterminate them.

Some collectives were so big that peasants couldn't even reach the outer fields in time to work. One collective in the Caucasus had 130,000 hectares (over 300,000 acres) with 300 tractors.

Collectives were taxed up to 40% of their crops, double or triple the old quota and contributing to the famine of 1932-3.

Kulaks trying to escape their collectives were rounded up and their possessions taken from them. Some resisting "kulaks" were shot, some arrested and sent into the Gulag camps, and the rest exiled to remote parts of the country.

"I am an old Bolshevik. I worked in the underground against the Czar and then I fought in the Civil War. Did I do all that in order that I should now surround villages with machine guns and order my men to fire indiscriminately into crowds of peasants? Oh no, no, no!"

In 1935 bread rationing was abolished, but prices were ten times those of 1928.

Between 1890 and 1935, the average peasant's annual consumption of grain fell from 419.2 to 261.6 kilograms.

In the 1930s, 20-33% tractors were not working at any given time.

In 1940 private plots equaled 3.8% of the Soviet Union's land while producing 37.25% of its meat, 34.5% of its milk and butter, and 93.5% of its eggs, a total of 21.5% of the country's entire agricultural production.

So the party reduced the size of private plots to reduce dependence on them.

So Peasants illegally farmed collective plots as their own.

During the chaos of World War II, peasants reclaimed 14 million acres of land.

But Stalin recollectivized the farms 1947.

So many peasants fled the collectives, that Stalin tied them down to the land with internal passports restricting their movement.

Stalin's legacy: The Madness of the system continues. Even after Stalin's death in 1953, his

system of collectives continued all the way to the end of the communist era in 1991 with the same dismal results as before.

In the 1950s A. N. Larionov, the First Secretary of Ryazan Province vowed to double the province's meat production in one year. He did...by slaughtering all the cattle in the province.

In 1960 he was forced to commit suicide.

In the 1950s, one collective's peasants, either through indifference, incompetence or both, allowed their entire herd of dairy cows to die from eating wet clover.

In one year, a collective received 773 directives from the government. Even more astounding, the government had sent it over 6,000 such messages, which raises serious questions about the Soviet postal system.

In 1982, the Soviet Union had only 65% of the mechanical harvesters it needed, with over 100,000 out of action.

From 1976 to 1980 the net number of tractors in use in the Soviet Union increased by 200,000 from 2,400,000 to 2,600,000. However, during that same time Soviet factories produced nearly 3,000,000 tractors.

In 1982, one-third of the fodder crop was lost: 12-15% due to failure to harvest it on time, 7% from failing to stack it, and 11% from having only 25-30% of the needed storage facilities.

Still, the mania for large collectives persisted, some of them so big the peasants couldn't reach distant fields, leaving crops untended and cows unfed.

Agitprop



“Let's merge shock detachments to draught brigades.” (1931)

Agitprop was a combination of the words agitation and propaganda. In Russia, the term propaganda originally just meant dissemination of ideas and had no negative connotations. The idea of agitprop was to impact both the intellect and emotions with powerful and striking posters and slogans. Much of Stalin's goal was to keep the Soviet people constantly agitated by fear of an external enemy (i.e., Western capitalists) so they would be more compliant to his will. To emphasize this permanent state of crisis, he used a lot of military terms.



“In the socialist offensive, we'll break class enemy resistance, hardships, and augment our achievements.” (1930)

Even attending conferences was promoted with the urgency of a military offensive: “All to the showing! Take part in the All-Union inspection of production conferences” (1929)

The Moscow Metro



If Stalin did one thing right for the Russian people, it was the construction of the Moscow Metro, a project that combined the modern efficiency of rapid urban mass transit with aesthetic sensitivity by designing each station in

a different artistic and architectural style. In addition, Soviet Metro stations were often built very deeply underground so they could also double as bomb shelters.



Stalin's "Terror Famine" in the Ukraine (1932-3)



In addition to the famine caused by collectivization, Stalin stripped Ukraine of what little food it had to crush its aspirations for national independence. As a result, one in five Ukrainians, an estimated 5,000,000 people, died. One person called it "probably the most massive warlike operation ever conducted by a state against its own citizens."

The case of Maria Tchegotareva was typical of millions. Trying to feed her four hungry children during the massive 1932-1933 famine, the peasant mother allegedly stole three pounds of rye from her former field which had been confiscated by the state as part of collectivization. Soviet authorities sentenced her to ten years in the Gulag. When her sentence expired in 1943, it was arbitrarily extended until the end of the war in 1945. Even after her release, she was forced to live near her Gulag north of the Arctic Circle. She was not able to return home until 1956, after the death of Stalin. She never found her children.

"...The most terrifying sights were the little children with skeleton limbs dangling from balloon-like abdomens. Starvation had wiped every trace of youth from their faces, turning them into tortured gargoyles; only in their eyes still lingered the reminder of childhood. Everywhere we found men and women lying prone, their faces and

bellies bloated, their eyes utterly expressionless."—Former Bolshevik activist

Those not swollen with hunger were suspected of hoarding food and careful searches of their houses were made.

A woman 7 months pregnant was beaten to death with a board for plucking wheat.

A mother of 3 young children was shot for gleaned corn. Her children starved.

The dying were carried to mass graves with the dead to save an extra trip. Some of them lived in the burial pits for days before dying.



People made biscuits and porridge from weeds and bread from nettles.

They ate dogs, and then cats, making meat jelly from their brains.

Those caught collecting acorns to make bread were charged with laziness, a state crime.

They chopped up casks formerly holding fat and boiled them for any residue left in the wood.

They picked through horse manure for whole grains of undigested wheat.

Peasants hiding bread were denounced as fascist terrorists and shot or jailed

Stealing potatoes, corn, onions, or wheat stalks earned a 10-year Sentence.

Several peasants were shot for digging up and eating a horse that had been buried for fear of epidemic.

Ukrainians were reduced to eating frogs, mice, birds, and leaves off bushes and trees. Others, driven to extreme hunger, resorted to

cannibalism...some even eating their own children.

In the United States and Canada, people of Ukrainian descent sent food to relieve the hunger, but all food shipments were stopped at the border. Official Soviet policy was to deny there was any famine. In the Soviet Union, anyone even uttering the word “famine” could be arrested.

Foreign correspondents and celebrities were given carefully stage-managed tours of the Ukraine, which gave them favorable, and misinformed opinions of the Soviet Union. Meanwhile, in some parts of the Ukraine grain was visibly piled up and surrounded by barbed wire and armed guards.

As a diversion, Stalin arrested several foreign correspondents for a show trial. Naturally, the other reporters wanted to cover these trials. Stalin said he would let them do so if they ignored reporting the terror famine in Ukraine.

Stalinist Terror: The Great Purge



“Root out spies and Saboteurs.” (1937)

A classic false flag event. In 1936 the popular party boss in Leningrad, Sergei Kirov, loyally informed Stalin of a plot to replace the Soviet leader with himself. Stalin promptly took care of the conspirators, telling Kirov that he [Stalin] owed him.

Soon afterward, Stalin “repaid” Kirov by having him murdered and then blaming the murder on Zinoviev, Kamenev, and most of the party’s old leadership, probably “repaying” them for old “debts” as well.

Thus began the great purge.

Who was Stalin targeting? One major category of victims was old-time Bolsheviks who were less awe-struck or impressed by Stalin than the younger generation was. Nearly all of them were killed, as were all five surviving members of the original politburo. Similarly, 1108 out of the 1966 delegates attending the 17th Party Congress in 1934 were arrested, and 848 of them were executed. However, over half of his victims (376,202 executed out of 669,929 arrested) were peasants designated as kulaks.

One victim of the purge was tried on charges of casting spells on Stalin.

Wrapping fish in paper that had Stalin’s picture on it could get one purged.

If Stalin suspected someone whose brother was a colonel, and that colonel was friendly with another colonel, and he had patronized a captain, they all had to be purged, along with their families and friends.

Stalin’s “logic”. So what was the logic behind all this seemingly random violence? Constantine Pleshakov in his book *Stalin’s Folly* gives this analysis:

“The vozhd [leader, i.e., Stalin] killed those who could betray him and those who were close to those who could betray him. He killed people who one day might think of betraying him. He killed almost everybody of high rank and their families so there would be no one to retaliate. He killed people who had relatives abroad. He killed former czarist officers. He killed children of aristocrats, priests and shopkeepers. He killed Ukrainians who insisted on speaking Ukrainian and Russians who insisted on teaching Dostoyevsky. He killed police officers so they wouldn’t get the wrong idea about their place in society. He killed people who read the Bible or the Koran, but he also killed people who read only Stalin. He killed people who failed to report political jokes and people who reported them. He killed people in their nineties and people in their teens. He killed Russians and he killed Georgians. He killed marshals, pilots, housewives, journalists, plumbers, peoples’ commissars of the interior (two of them), writers,

gardeners, spies, fishermen. The dreadful progress of his ax seemed irrational, but it was not. He pursued a clear goal: to reach a point where nobody in the country, be it miner or a marshal, could be certain whether he would see the dawn. After he reached that point, he stopped. Then, instead of killing people, he sent them to the eastern wilderness, where the gulag camps were waiting for them.” (Stalin’s Folly, pp.40-41)



"Friend of the Little Children" was the title of this picture of a smiling Stalin holding a little girl named Gelya Markizova who has just presented him with a bouquet of flowers. However, even this has a dark story behind it, as Stalin had executed her father for allegedly plotting against him. Her mother, Dominica, also died under mysterious circumstances.

So what was the toll? According to declassified Soviet archives, Stalin’s police arrested 1,548,367 people, and shot 681,692 of them in 1937 and 1938. That’s an average of nearly 1,000 executions a day. Robert Conquest, one of the top authorities on the Stalinist era, thinks the total should be closer to two million, speculating that Stalin’s secret police falsified documents to give the impression of a smaller death count. Another historian, Michael Ellman, thinks the best total estimate (including those who died from torture, abuse, neglect, and exposure to the elements is between 950,000 and 1.2 million. Unfortunately, in 2008, Russian authorities, probably under Putin’s orders, confiscated twelve computer hard disks containing the entire digital archive of Stalinist atrocities, so we may never know the full cost in lives of the purges.

In one Kiev jail, they reportedly shot between 70 and 120 prisoners each night.

Decoding Stalin. Complicating matters was Stalin’s habit of vaguely indicating directions of policy in speeches and communiqués rather than directly ordering specific actions. That way, he could dissociate himself from disastrous or unpopular policies and blame subordinates for them instead.

In addition, Stalin often secretly sent different messages to two different people or departments, such as an official, but secret, memo to one agency allowing the production of a certain play, while indicating to others his displeasure with the play. Years later the recipient of the memo was begging to be allowed to publish it in defense of his policies.

Of course, this created the problem of trying to interpret just exactly what Stalin wanted done. Add to that the fact that subordinates were often too incompetent to interpret Stalin’s ambiguous signals and too scared to ask for clarification.

Take, for example, "Dizzy with Success", an article in March 1930 in which Stalin seemed to do an about face, denouncing forced collectivization as "stupid & reactionary", blaming officials for exceeding their authority, and even ordering animals returned to the peasants. In response, officials started reversing collectivization, so that by June, peasants had “decollectivized” half of the collective farms. Except that wasn’t what Stalin had intended so officials had to go back to the "stupid & reactionary" policy of collectivization.

Stalin’s Personality Cult

“Q: Why is the swimming pool closed today?

A: They’re developing new pictures of Stalin.”

--Russian joke

Thanks to mass media, Stalin set the pattern for personality cults copied by any number of twentieth century dictators, including Hitler, Mao Zedong, Saddam Hussein of Iraq, and Kim Jong Il of North Korea. His personality cult was a natural outgrowth of his megalomaniacal rule.



“The Soviet country captain is leading us from victory to victory” (1933)

A number of new towns were named after him: *Stalino* (6 of them), *Stalinsky*, *Stalingrad*, *Stalinabad*, *Stalin-Aul*, *Staliniri*, *Stalinissi*, *Stalinogorsk*, *Stalinsk*, *Stalinskoye*, *Stalin Bay*, *Stalin Mt. range*, & *Mt. Stalin* (highest peak in USSR & later for those in Czech. & Bulgaria).

Stalin did stop Moscow from being renamed Stalinodar

He was also honored with all sorts of complimentary epithets:

Man of Steel, the Granite Bolshevik, the Brasshard Leninist, the Iron Soldier, the Universal Genius, the choirmaster of science, Hero of Socialist Labor

The following came from just one speech: *Leader of Genius of the Proletarian Revolution, Inspirer & organizer of the Victory of Socialism, Supreme Genius of Humanity, Experienced Proletarian Commander, Theoretician of Genius and Organizer of Collective Farm Construction, Leader of Genius of the Toilers of the Whole World*

People claimed they had fainted or gone into ecstasy on seeing or hearing Stalin.

*“Thou Bright sun of the nations! The unsinking sun of our times
And more than the sun, for the sun lacks wisdom.”*—Alexei Tolstoy

“When a son is born to me, when he learns to speak, the first word he utters will be ‘Stalin’.”
--Alexander Avdeyenko after being reprimanded by Stalin

Stalin enjoyed endless standing ovations because no one wanted to be first to sit. When an old man

was so tired he had to sit, he was arrested the next day.

An 8-sided record of Stalin speech was released with the 8th side entirely of applause.

“Little Stalins”

As typically happens, especially in tyrannical regimes and organizations, subordinates typically behave in a manner reflecting that of the boss. Stalinist Russia was no exception. For Russians in general, bureaucracy was seen at best as a necessary evil, and, in a system where the state came to control all aspects of production and redistribution of goods, local officials and their bureaucracies were especially burdensome. Below are some of the more ridiculous examples of micromanagement by local “little Stalins”, the results of ideological fanaticism, egotistic power trips, or desire for money from fines.

- A manager, who had opened a hairdresser’s station in the starch factory he ran, categorically forbade his workers from privately shaving and cutting their hair. He even had two officials checking to see if any of the workers were shaving or cutting their hair at home and bring charges for criminal prosecution against violators.
- The chairman of a kolkhoz (agricultural collective) decreed that each house in the village must display pots of flowers, believing the flowers absorbed moisture and thus helped prevent rheumatism. Three days later he inspected several houses and was furious for not finding any flowers blooming, despite pleas by the women that there were no flowerpots available and that it takes more than three days for seeds to germinate, grow, and blossom into flowers.
- Another kolkhoz chairman fined a peasant 25 rubles because “in his hut the floors were not washed.”
- In Stalingrad, in order to push “man into a cultured attitude to himself,” people were fined 100 rubles for wearing dirty clothes in public.

(Keep in mind that in the Soviet Union, people might only have one suit of clothes, pair of socks, or one set of underwear, making it difficult to keep in clean clothes.)

- In Astrakhan, a man was fined 100 rubles for wearing a hat.

- Other decrees ordered people to keep only singing birds in cages and forbade storing food between the outer and inner windows, the only place that was cold enough to preserve food in the absence of refrigerators.

- In Turov districts, 100-ruble fines were mandated for old people and children lighting matches (even though people had to keep fires for heat and cooking).

- Similarly, in the city of Rechitsa, failing to paint one's house the dictated color for that street made one liable for a fine of 100 rubles.

The Gulag Archipelago



The Gulags were a system of Soviet labor camps and prisons that from the 1920s to the mid-1950s housed millions of political prisoners and criminals. The term (an abbreviation of the Russian words for Chief Administration of Corrective Labor Camps) was largely unknown in the West until the 1973 publication of A. Solzhenitsyn's *Gulag Archipelago*.

The secret police controlled the Gulags, which consisted of hundreds of camps where prisoners felled timber, worked in the mines, or labored on construction projects. At least 10% died each year from harsh working conditions, inadequate food, and summary executions.

The Gulag reached its height during Stalin's collectivization of Soviet agriculture (1929-32), his purges (1936-38), and immediately after

World War II. Not until Stalin died in 1953 did the system shrink. Meanwhile an estimated 15-30 million Russians died in the camps.



Stalin's gulag master was Naftali Frenkel a former Turkish merchant who was arrested in 1923 for "illegally crossing borders", a label that covered smuggling as well as being a merchant who was too successful for the Soviet Union to tolerate. While serving a sentence of ten years' hard labor, he was promoted from prisoner to guard in a surprisingly short period for proposing that the low productivity of slave labor could be increased by labor camps that linked rations to productivity. He estimated one could get six months work out of a worker before he was used up. Not only was Frenkel released from prison, he was given a high-ranking post in Stalin's emerging gulag system.

In 1949, Ivan Burylov, a beekeeper, protested the absurd mockery of elections in the Soviet system by writing the word "comedy" on his "secret" ballot. Soviet authorities linked the ballot to Burylov and sentenced him to eight years in camps for this 'crime'.

One of the main differences between Stalin's gulags and Nazi labor camps was that Stalin won World War II, and therefore could keep the world from seeing the atrocities he was committing. Word of the gulags did get out though, largely due to the works of Alexander Solzhenitsyn (below) whose books *The Gulag Archipelago* and *One Day in the Life of Ivan Denisovitch*, exposed this atrocity to the world.

Nikolai Getman, a Ukrainian born in 1917, served in the Red Army during World War II, and then was sentenced to eight years in the gulag, including the labor camps in Kolyma, considered some of the worst. He was released in 1953 after Stalin's death. His art, which captured the agony of life in Stalin's gulags, had

to be smuggled out of the country for the West to see what the Gulags were really like.

Getman did a self-portrait at age twenty-eight, while boarding a ship at the port of Vanino. During spring and summer, up to 6,000 people were transported on every trip from Vanino to the labor camps at Kolyma. Getman was lucky to arrive at the port in the fall when it was icebound thus letting him live in a transit camp until the water became navigable in the spring, a circumstance that he believed contributed to his survival.

Millions of prisoners were transported by rail to the camps. The journey could take up to fifteen days. Fifty or sixty people were packed into each freight car and given water only every three or four days when the train stopped to replenish its water supply for the boiler. Food, when provided, was generally salt herring, which only increased the prisoners' thirst. Not eating the fish however, meant starvation and death. Even minor infractions of the rules brought a death sentence, and the prisoner was left to die on the permafrost. Given the lack of nourishment, inadequate clothing and cramped quarters, only the very strong, usually the young, reached the camps alive.

The journey to the camps left prisoners nearly emaciated upon arrival. Within a month or two, hard labor and further malnutrition often resulted in scurvy and dystrophy. Inmates who worked in the permafrost, in the mines, or in the lime works were more subject to physical ailments than the others. Terminal patients shared special medical barracks with the doctors, who were also prisoners. They tried to help, but had neither proper equipment nor medicines, only iodine and streptocide. All they could do was try to make the prisoners more comfortable until they died. The authorities were indifferent, since new laborers were constantly arriving. Doctors could only grant exemption from work when a convict was too weak to stand or had a life-threatening illness.

Women prisoners were also assigned work for the day, to be guided by armed escort to the

work site and back again at the end of the day. Typically, one woman had been elevated to a favored position, but the price for such power or privilege was steep, having to give the guards whatever they demanded. Such women were detested by their fellow inmates, and their power was often short lived, especially after being cast aside by guards who had grown weary of them.

For even a minor infraction, such as a harsh word to a guard, a prisoner could be stripped naked, hung crucifixion-style to a pine tree and left to be fed upon by mosquitoes, a torture known as komariki (little mosquitoes). After thirty minutes to an hour he would be taken down, by which time he would have lost so much blood that a slow and painful death was almost inevitable. Such executions were carried out beyond the barbed wire, in full view of the other prisoners.



The burial ritual of the zeks (political prisoners) amounted to tagging their toes with ID numbers and dragging the bodies by sleigh to the hills for burial in the snow. The bodies of those who had starved to death were so light that one could often pick up several of them at a time.

"...and no one will ever learn where my grave is."—gulag prisoners' song

"Those who cast the votes decide nothing. Those who count the votes decide everything."—Joseph Stalin

POST WAR BOOM AND BUST (1920-29)

The illusion of prosperity. The 1920's have been popularly seen as a decade of political stability and economic prosperity. Indeed, Germany did settle down, and seemed to stabilize after 1923, new democracies were established in Eastern Europe, and prosperity did seem to return. A whole barrage of new technological breakthroughs and products signaled this: affordable mass-produced automobiles, vacuum cleaners, refrigerators, cellophane, radios, talking movies, and commercial air travel to name a few. But in reality, the 1920's presented largely an illusion of prosperity, for beneath the surface were three serious problems, all arising from World War I and undermining the stability of the world economy.

The first problem largely stemmed from the nature of American dominance of the world economy in the 1920's compared to previous British dominance in the 1800's. The British had maintained a fairly balanced cash flow in world trade since they had to buy raw materials with much of the money they made from selling manufactured goods. This prevented too severe a drain of cash from other countries, thus assuring Britain more stable markets. In contrast, the United States was not only an industrial power selling manufactured goods in markets it had claimed from Europe during the war; it also had its own vast natural resources. Therefore, little money had to leave the United States to buy the raw materials needed to manufacture its products. This created an unbalanced cash flow from the rest of the world to the United States. As a result, European nations, still recovering from the war, needed loans, which they got from American banks. This sent even more money to the United States in the form of repayments and interest, just making an even more unbalanced cash flow, and so on.

The second problem had to do with Europe's recovery from World War I. European industries did revive to their old pre-war levels of production by 1925, but they failed to reclaim their old markets from the United States or create new markets to compensate for the losses. As a result, the intense economic competition between nations that had largely caused World War I continued after it. Therefore, nations still maintained high tariffs,

which raised prices, cut world trade, and further weakened the world economy.

Finally there was an agricultural crisis in the United States. This was the result of dramatic expansion of farmland in order to meet the food demands of the European countries during the war. However, European agricultural production revived after the war, causing overproduction. Grain prices plummeted, and American farmers went into debt, many of them losing their farms when they were unable to maintain mortgage payments on their newly expanded farms. Therefore, although America's industries seemed to be thriving, its agricultural sector, still a large part of its population and economy, was in trouble.

The Crash. Ironically, while all of these problems led to an unstable world economy, they also created an illusion of prosperity. This was especially true in the United States where investing in the stock market had become a virtual national sport. However, the American stock market in the 1920's had a fatal flaw, since investors only had to pay as little as 10% cash for their stocks. Banks financed the balance at 10-15% interest. This made it easy to buy stocks, so the stock market rose at an unprecedented rate in the late 1920's. But this also meant the market must rise 10-15% per year for investors to break even after accounting for their loans plus interest. This created an increasingly uneasy atmosphere as investors worried about how much the already inflated value of stocks could rise. For those realistic enough to pay attention, there were danger signs for the economy in the fall of 1929. In October, the market crashed.

Much of what happened was a classic case of panic psychology running wildly out of control. When some investors started selling stocks, this left other investors in debt to the banks nervous about stock prices falling, something they could not afford. Therefore, when some of them started selling, stock prices fell more, which caused more panic selling, even lower prices, and so on. In a matter of hours, millions of investors were ruined, with some stocks falling \$75 per share. It got worse. By November 1, investors had lost \$40 billion, and by November 13, the stock market had lost half of its value.

This spilled over into the rest of the American economy, causing an overall lack of faith in the

future, which led to a drop in investment and buying. Therefore, production was cut, which cost workers their jobs, further undermining faith in the economy, and so on. This only hurt the stock market, which then fed back into the cycle of economic decline. By 1932, industrial production in the United States had fallen by half, national income by 75%, and the value of some stocks from \$100 to \$.50 per share. This led to the collapse of 5000 American banks, many of which had over-invested in the stock market. These banks called in loans from Europe, whose economies were already unstable and overly dependent on American loans. The result was a worldwide depression spreading from America and Europe to the rest of the world that was tied into their economies.

Any color you like as long as it's black



Henry Ford's assembly line

While mass production and mass consumption were born in the 1800s, Henry Ford took them to a whole new level in the early 1900s with the assembly line process where a car's frame moved along a conveyor belt and workers stationed along it would attach various parts to it until by the end of the line it was a complete car. Although such repetitive work could be mind deadening, it was also very efficient, cranking out 6,000 new cars every day.

Assembly lines also led to more standardized products. As Ford put it, you could have a car in any color you liked, as long as it was black.

This had two major effects. It lowered the price of building (and selling) cars, vastly expanding the potential. It also raised profits, allowing Ford to pay his workers more, thus creating an even bigger market that could afford his cars.

Not only did other car manufacturers, most notably General Motors, adopt the assembly line production, so did other types of products, which just accelerated the process toward a more widely based mass consumption society.

The First Era of Electronic Mass Media



One of the great innovations of the century was the revolution in reproducing sound. For the first time, people could listen to music without having to make it or listen to it live. The gramophone, as it was then called, was the progenitor of all our modern stereos, including the personal stereo. It also began a trend with music, much like the printing press had 450 years earlier, of making its enjoyment a much less social, as well as more passive, experience. Later innovations, such as the iPod, would accelerate this tendency to fragment society in favor of more private experiences.

Talkies. In 1927, the first movie with sound, *The Jazz Singer*, debuted. Although the parts with Al Jolson's singing were the only scenes with sound, *The Jazz Singer* set a new standard for movies, and silent films were soon a thing of the past.

So were a lot of silent film stars. For one thing, some of them didn't have voices suited for talkies. Also, the new type of film required a new more natural and subdued style of acting, because the exaggerated gestures of silent films were no longer needed. Movies from the late 1920s and early 1930s, such as the Oscar winning *All Quiet on the Western Front*, reflect this transition, being more natural than older silent films, but still retaining a bit of their more exaggerated gestures and blocking.

Early films and sound recordings also tended to play back a bit fast, creating a higher pitch and tinny quality to the voices. Only in recent years have the recordings of early blues musicians, such as Robert Johnson, been re-mastered for proper pitch.

Radio came into its own, especially with regular commercial broadcasting in the late 1920s and

became a fixture in millions of homes. In one sense, it helped create a more global community as people listened to the same entertainment and news (starting in the 1930s)

In another sense, radio created less of a sense of local community as families stayed at home gathered around the radio. Like the phonograph, it also made listening to music a more passive and private experience instead of an active and social one.

Radio also provided a medium for politicians to spread their messages to millions of people at once, however benign or malicious those messages might be.

Architects such as Frank Lloyd Wright tried to counter this trend away from the social and toward the private realm by designing houses with small bedrooms to force people together into a central space. However, other inventions in the twentieth century, such as television, portable record players, personal stereos, and air conditioning, would further separate families from their communities and family members from each other.

Power to the People: the Birth of the Electrical Grid



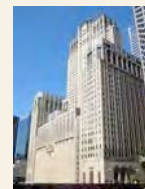
Samuel Insull, creator of the electrical grid

The new technology of the 1920s (light bulbs, telephones, radios, movies, vacuum cleaners, and even lie detectors) all had one thing in common. They ran on electricity. At first, small generators produced power for a limited market at high prices. The belief then was that each street or family needed its own generator. One problem with electricity was that it couldn't be stored, thus making it expensive and limiting its market to a few wealthy people. For example,

Chicago in the 1890s had twenty generators serving only 5,000 customers.

Enter British-born Samuel Insull (1859-1938), who, after working for Thomas Edison, moved to Chicago in 1892. Using more efficient steam turbine generators (that could be stepped up at little cost during times of peak need) Insull saw that if he could generate electricity for large numbers of customers, he could count on more consistent demand, operate more efficiently with less waste, and charge lower prices per kilowatt. The lower prices would attract more customers, allowing him to expand his operations, and so on.

Insull also expanded his customer base by wiring houses cheaply & giving away electric appliances. By the late 1920s, he had wired Chicago, the state of Illinois & had 4,000,000 customers in thirty-two states. Thanks largely to his vision, cheap electrical power became available to the masses as the price of electricity per kilowatt (adjusted to 1992 dollars) went from \$4 in 1892 to \$1.56 in 1912 to 55¢ in 1927 to 9¢ in 1967.



Insull built the Civic Opera House in Chicago in 1929. It was built in the shape of a throne facing west, away from New York City, which had supposedly spurned his efforts.

From capitalist hero to villain. To finance his enterprises, Insull had sold low-price bonds and stocks to over a million middle-class Americans. Unfortunately the stock market crash of 1929 made their investments worthless, and almost overnight Insull went from hero to villain, owing \$16 million dollars more than he was worth, making him "too broke to be bankrupt", as one banker put it. In 1934, he was charged with fraud, acquitted of the charges, and moved to Paris where he died in 1938.

Girls just want to have fun: The New Woman of the 1920s



The new modern women of the 1920s not only had the vote, but an unprecedented amount of social freedom. While most women still followed more traditional roles and lifestyles, there were a number of young women, typically referred to as flappers, who exhibited a freer lifestyle than ever before.

A flapper was typically urban, single, socially free, and affluent enough to pursue such a life, either from having her own job or an indulgent father (known commonly as a dapper).

The flapper's hair was short, typically in a pageboy cut known as a bob. Her dresses were loose (thanks to the demise of the corset) and also short, showing an unprecedented amount of leg up to and even above the knee. Adding to the more liberated and waif-like image was a preference for a more flat-chested look to de-emphasize traditional female roles of the past. This is a trend that has alternated with the more full-bodied look ever since.

From the early 1920s to the early 1930s the standard headgear for women was the cloche hat, which went well with the much shorter hairstyles for women.

Flappers tended to wear a good deal of eye make-up, something only women of ill repute were previously allowed to do. Thus for women in the 1920s, wearing makeup was seen as liberating. A flapper might even be a smoke-eater (i.e., woman who smokes cigarettes).

"Flapper speak." Along with the flapper's new lifestyle came a profusion of new words and expressions. Below are a few select terms that

suggest women's rapidly changing status and attitudes in the twentieth century:

- *Petting party*- Social event devoted to hugging
- *Snugglepup*- Man who likes petting parties
- *Alarm clock*- A chaperone
- *Father time*- Any man over 30 years old
- *Fire alarm*- A divorced woman
- *They*- refers to objecting parents
- *Cat's Pajamas* or *Frog's eyebrows*- Anything that's good
- *Goof*-Flapper's sweetheart
- *Biscuit*- A pettable flapper
- *Barney-muggin*- Lovemaking
- *Drop the pilot*- Get a divorce
- *Police-dog*- Young woman's fiancé
- *Handcuff*- Engagement ring
- *An alibi*- A box of flowers
- *Forty-niner*- Man prospecting for a rich wife
- *Strike breaker*- A woman who dates a friend's "steady" during a coolness
- *Mad money*- Carfare home if she has a fight with her escort

Coco Chanel was a French orphan who revolutionized women's fashions in the 1920s by introducing clothing that felt as good as it looked. Among her innovations were sports clothes, red lipstick, bobbed hair, and even trousers for women. Thanks partly to her pioneering efforts, flappers of the 1920s shocked their mothers by showing their natural shapes.

Prohibition and Cocktails

The 18th Amendment (1920), which prohibited alcohol production and consumption in America, may have been another (fleeting) victory for women, since it was largely pushed by women suffering neglect and abuse because of their husbands' alcoholism. However, Prohibition hardly slowed down alcohol production or consumption. It merely made it the realm of gangsters, such as Al Capone in Chicago, and illegal bars, known as speakeasies, where one could buy "bathtub gin."

Because of their typically poor quality and taste, these drinks were often mixed with each other and different beverages. Thus was born the cocktail and a new character on the social scene: the bartender who knew the secrets of mixing the

hundred or so new drinks made popular at the time. In addition, really good bartenders had their own secret formulas for cocktails that made them especially popular. There was even a novel, Poet's Pub by Eric Linklater about people trying to track down a bartender with the formula to the Blue Cocktail.

132. THE GREAT DEPRESSION (1929-39)

Efforts to solve the Depression. As the Depression spread and deepened, governments desperately sought ways to revive, or at least protect, their ailing economies. One tactic was to raise tariffs and establish import quotas, trading blocs, and bilateral trade pacts. However, by 1933, this had helped cut world trade to one-third of its 1929 level. Another policy was to reduce government spending by cutting public works programs and civil servants' salaries. But this only created more unemployment and fewer consumers to revive the economy.

A third tactic, started by Britain, was to go off the gold standard and then devalue the British currency, which now had no gold backing it up. The idea was to make other nations' currencies and goods more expensive in comparison to Britain's and thus make the cheaper British goods more appealing to British and foreign customers. However, other countries followed Britain's lead, so nothing was gained, and everyone's currencies were devalued and less stable. Therefore, the Depression deepened even more and international tensions grew.

Keynesian economics: a new view of the state's role in the national economy. As the situation worsened, there emerged a growing realization that the *laissez faire* economics of the nineteenth century was no longer working and that governments must take a more active role in reviving their national economies and looking after the welfare of their citizens. Among the more innovative theories along that line was that of John Maynard Keynes, a British economist whose Keynesian Economics has been one of the most influential economic theories of this century.

The problem as Keynes saw it was that during a depression businesses need sales in order to provide jobs to families, while families need jobs to get the money to provide businesses with sales. However, neither individual businesses nor families have the resources to help themselves or each other out of the downward spiral of depression. Keynes saw the modern industrial state as the only institution with the power and resources to help both businesses and families and to revive a national economy.

However, the state's role is not to respond to changing economic conditions in the same way as a

business or family would. Rather, it should act in an almost contrary way in order to maintain stability. Therefore, the state should tax high and spend low in prosperous times in order to build up treasury surpluses. Then, during times of economic hardship, governments would tax low and spend their surpluses to provide jobs for families in such things as public works programs. The money earned from those jobs would lead to increased sales for businesses and an overall revival of the economy. Governments would then go back to taxing high to restore their surpluses in anticipation of the next economic downturn.

While governments generally did assume larger roles in trying to solve the Depression, they did it in different ways. The United States, under Franklin Delano Roosevelt, set up the New Deal, which supported vital industries, banks, agriculture, and public works to provide jobs and stimulate the economy. It also set up a social safety net, Social Security, which provided relief for the aged and unemployed. Later, this would be expanded into a virtual retirement fund, although that was not its original purpose. Britain reversed its earlier austerity policy of cutting government salaries and public works, and funded new industries such as shipping, electricity, and, later, armaments as the clouds of World War II loomed on the horizon. In both cases, the United States and Britain were in better positions to act when war came.

More fascist governments, such as Germany, Italy, and Japan, followed more aggressive and militant policies. Nazi Germany and, to a lesser extent, Italy embarked on rapid rearmament programs that provided jobs, but poured money into weapons industries that are unproductive unless they are used in the one thing for which they are suited: war. Japan was especially hard hit by the Depression since it had virtually no natural resources and had lost the trade needed to buy them. This situation prompted a military takeover of the government and an invasion of China to secure a food and resource base. In both Europe and Asia, these events were already undermining the collective peace and laying the foundations for World War II.

Growing Poverty and Unrest



Squatters' shantytowns in the Depression were popularly named Hoovervilles, a commentary on the unwillingness of President Herbert Hoover's administration to do anything to relieve their suffering.



The Bonus Marchers. In 1932, 60,000 World War I veterans marched on Washington D.C. to pressure the government to give them service bonuses not due until 1945. However, the government, itself mired in the Depression, couldn't meet the vets' demands and managed to send most of them home peacefully. Washington police forcibly drove out those who refused to go.



Labor violence. When factory owners threatened to pay workers lower wages or replace them with jobless men waiting outside, workers would sit down on the job and occupy their factory. Strikes often turned violent, as owners would bring in police, the army, or hired thugs to clear out the strikers.

The apparent success of Stalinist Russia during the Depression made socialism appealing to many workers in the United States, making it even more unpopular with the authorities. Joining the Communist Party and other pro-socialist organizations also became somewhat trendy among intellectuals and on college campuses. Unfortunately, this would come back

to haunt many of these people in the 1950s, when Joe McCarthy would dig up membership lists of these groups, haul their former members before the House Committee on Un-American Activities and ruin their careers.

FDR's New Deal and "Alphabet Administrations"



In his first 100 days of office in 1933, FDR initiated fifteen major pieces of legislation that became the New Deal. Such programs refinanced mortgages and provided emergency relief for those who could not then support themselves.

- AAA (Agricultural Adjustment Act)- Gave money to farmers to curtail production;
- NRA (National Industrial Recovery Act)- Established codes of fair competition to regulate industry, and for the first time in American history, guaranteed the rights of labor to bargain collectively;
- PWA (Public Works Administration)- Constructed roads, dams, and public buildings;
- FDIC (Federal Deposit Insurance Corp.)- Insured deposits in banks;
- TVA (Tennessee Valley Authority)- Developed Navigation, flood control, hydro-electric power and economic development in the Tennessee River Valley, at the time one of the poorest and least developed regions of America;
- SEC (Securities and Exchange Commission)- Regulated stock market practices, such as insider trading;
- CCC (Civilian Conservation Corps)- Planted trees, built public parks, drained swamps to fight malaria, restocked rivers with fish, worked on flood control projects and a range of other work that helped to conserve the environment.

THE DUST BOWL OF THE GREAT DEPRESSION (1929-39)

“Miles to water, miles to woods and only six inches to hell.” The Dust Bowl on the western High Plains during the 1930s was the greatest ecological disaster in American history, if not in history overall. Vegetation of the High Plains of western Texas and Oklahoma, eastern Colorado, and northeastern New Mexico was typically referred to as short grass prairie. On average, it received barely twenty inches of rain per year, so that it was covered largely by short grasses that could grow there and hold the soil in place.

One species that thrived here was the bison, which fed on the grasses and could take the severe winters and hot summers the area had to offer. In the early 1800s, settlers passed up this area because they deemed it too dry for agriculture. They were right, unless you wanted to grow grass.

However, after the Civil War, ranchers started taking cattle into this region, where they ran up against the Plains Indians tribes whose sustenance was the herds of millions of bison inhabiting this region. Therefore, to get rid of the Indians, ranchers waged a methodical ruthless campaign to exterminate the bison. The campaign worked, and cattle were moved in to graze where the bison had once roamed.

Cattle could survive on the grass, but there were two problems. One was overgrazing to maximize profits, which seriously degraded the long-term ability to support cattle. The other was that, while cattle could survive on the prairie grasses, they couldn't survive the harsh winters that occasionally hit the High Plains, in particular the disastrous winter of 1886-7. Thus ranching seriously declined, leaving a lot of open land, if anyone wanted it.

Therefore, speculators started promoting this area as a new promised land, showing pictures of thriving towns they claimed were on the High Plains (which they weren't). They also claimed that the noise of civilization moving westward produced more rain, basing this on the common belief that huge battles, such as Gettysburg, were always followed by rain. The most notorious land grab was the Oklahoma Land Rush in 1889 when the Oklahoma territory was opened to settlers, letting 50,000 people race to

claim the choicest lands as their own.

Unsuspecting immigrants were especially vulnerable to these promotions, including a group of German Mennonites from Russia who had been lured there in the 1760s by Catherine the Great with the promise they would not be drafted into the Russian army. However, in 1871, tsar Alexander II revoked this promise, and the Germans fled again, this time to America.

They brought two things with them. One was a hardy strain of winter wheat that they had grown in the Ukraine where there were similar weather conditions, thus making farming in the High Plains more feasible. They also brought Russian thistle (AKA tumbleweed), which could even survive more severe conditions than wheat could. In the early 1900s, farming in the High Plains did prosper as thousands of settlers tore up the sod to plant wheat.

Then came World War I. As European farmers left their farms for the trenches, the price for American wheat skyrocketed along with the prices it could fetch. So settlers took out mortgages to buy more land and farm machinery and tore up more sod to make room for wheat.

As the war ended and soldiers returned to the land, the price for price of wheat plummeted. However, instead of cutting production, farmers took out more mortgages to buy even more machinery to tear up even more sod, thinking that, if the price of wheat was only half of what it had been, they could make just as much money by producing twice as much wheat. A stretch of years in the late 1920s with unusually abundant rain encouraged further expansion, which produced record crops, but with no one to buy them.

Then came the Depression. The price of wheat dropped further. Banks started foreclosing on farms, while speculators who had developed land when it was profitable moved back east, leaving millions of acres of exposed soil. Worse than that, the 1930s were years of severe drought in the High Plains, farmers could grow practically nothing....except tumbleweed. After June 1931 normal rains wouldn't return for nearly 8 years. This left a vast expanse of once prosperous grassland.... but without grass to hold down the soil.

In the 1930s it started to blow away.

The coming of the “dusters” (1930-2). On September 14, 1930 came the first dust storm. At this point it was a novelty that excited meteorologists as to what exactly it was. Unlike other storms, it rolled, was black, and hurt like being swiped by coarse-grained sandpaper. It also carried enough static electricity to short out a car.

On January 21, 1932, a black cloud 10 kilometers high appeared outside Amarillo, whipped along by 60 mile per hour winds. The storm moved through parts of Oklahoma, Colorado, and Kansas, dropping coal black dust on towns and farms in its path. Weather bureau men were fascinated since it defied explanation, calling it “most spectacular”. Other people just called it a black blizzard.

The weather bureau counted 12 black blizzards in the Oklahoma Panhandle in late winter alone. Sometimes the storms were so bad they blinded cattle. One storm in April 1932 blew out the windows of a school. In the fall, many farmers didn't even bother planting a winter crop.

The second year of drought brought multitudes of bugs into homes: spiders (including black widows), centipedes, and tarantulas, one with legs two inches long and a body the size of an apple. There were also infestations of rabbits that ate what little food there was, leading to periodic rabbit drives that might kill 6,000 rabbits in one square mile. Making life even less tolerable, the 1930s saw record heat, hitting as high as 115 degrees.

In 1933, there were 70 severe dust storms. This was also the driest summer on record, so far. Wells started failing after two years of drought. Dust seeped through the tiniest cracks in houses and covered everything. Sections of roads disappeared for miles under waves of drifting dust, so people always traveled with a shovel and had to use telephone poles as guideposts.

In March and April steady winds killed what little winter wheat had been planted. A dust storm in late April lasted 20 hours, scraping paint off houses and getting into cows' digestive systems. People would wake up some mornings and not recognize their land because of the dunes. At the approach of

storms, people had to take cover or else get lost and choke to death.

In late May a rain and hailstorm on top of a duster rained mud pellets while hail smashed roofs, buckled car hoods and made cows cry out in pain. Then a tornado hit, followed by another hailstorm of mud pellets. Summer winds blew over telephone poles and grain silos. Dust choked chickens or clogged their digestive tracts, killing 90% of them in one county. Milk cows went dry and cattle starved or dropped dead from “dust fever”.

In 1934, the Government offered to buy cattle, slaughtering the good ones for meat and just killing the remaining third as not worth butchering. In March, a snowstorm dropped 21” of dirty snow, earning it the title of a “snuster”. On March 17, a duster obscured the sun for 16 hours. In late March, another duster obscured the sun for six days in a row. In early May, temperatures reached 100° in N Dakota.

On May 9, 1934 a huge duster some 1800 miles wide blew east covering Chicago the next day. On May 11, it reached New York City and Boston plunging them into partial darkness with only 50% normal sunlight, forcing the use of streetlights and headlights in midday. Baseball players had trouble tracking fly balls. Dust reached Washington D.C. and seeped into the White House. It even reached ships 200 miles at sea.

There were 54 dust storms in 1934. And this wasn't even the worst year. None of these storms made the sky go completely black...yet. Respiratory masks were blackened in less than an hour and people still were inhaling dust. Hospitals delayed operations and flourmills shut down because dust was in everything. Dust storms now reached Nebraska, cutting productions from 20 bushels per acre to less than one as 8,000,000 acres yielded nothing and two million more were left fallow, further eroding the soil.

Dust storms generated an incessant crackling of static electricity from metal windmills. Static electricity was so bad men avoided shaking hands. They put cloth on doorknobs and metal oven handles. Car owners dragged chains to ground their cars against static electricity. Static electricity even singed and killed crops. One man claimed he saw a

jack rabbit electrocuted.

The next year, 1934, was the driest year to date, with less than 10 inches rain in the Oklahoma Panhandle. Remaining pockets of grass were smothered with up to 10 feet of sand. To bring grain prices up, the Government started offering cash to farmers to not plant. People started canning tumbleweed in brine for human consumption and harvesting flowering yuccas to feed livestock, which kept milk flowing, but tore up more land.

Crime from petty theft to bank robbing flourished, as people like Bonnie and Clyde became Robin Hood type heroes to common folk. People even abandoned their babies on the doorsteps of churches. The 1930s were the first decade in US history where the number of young children declined. Many believed this was God's punishment for their sins.

In the first four months of 1935, the health board of Dodge City, Kansas counted only 13 dust free days. February 1935 was the coldest in 40 years. By March, less than one-half inch rain had fallen. Late March 1935 saw twelve straight days of black blizzards with the wind clocked at 40 miles per hour for 100 straight hours.

Prairie dust has high silicone content that tears at a lung's honeycombed web of air sacs, leading to silicosis, much like what coal miners get after prolonged exposure. Doctors called it dust pneumonia. It was one of the biggest killers of the 1930s, especially for the very young and very old. An estimated 7,000 people died of dust pneumonia and other dust related ailments. Many families gave up land to the government in return for train passage to a healthier area.

The Red Cross opened six emergency hospitals across the High Plains, but many people in dire need couldn't get to them because dust storms made roads impassable. In April, 1935, over half of those admitted to hospitals in southwestern Kansas were for dust related respiratory ailments. Nine people died in one hospital. The Red Cross advised people not to go outside unless necessary, and then only with respiratory masks.

A train from Kansas City to Dalhart had to stop three times because passengers were choking.

Sunlight took on eerie hues, even green, from the dusters. Shoveling dust from front doors was a daily task. Sometimes it was so heavy that boys had to climb out windows to get to it.

People were driven mad by incessant dust storms. In one case a woman's house was nearly buried in dust and overrun with centipedes and black widows. The winds were incessant and her children were hungry, dirty, coughing, and dressed in soiled clothes. One day she just snapped and wandered the streets crying incoherently. The judge saw no alternative but to send her to an insane asylum and her kids to the care of the state.

The weight of the dust crushed trees, broke windows, and dented cars. It seeped in under pitched roofs and built up, threatening to cave in ceilings. Cars shorted out by static electricity were abandoned and buried in the sand. A caravan of people trying to leave one town was forced to turn back by roads covered in dust for 1/4-mile sections. No sooner had the CCC (Citizens Conservation Corps) dug one drift out and another appeared.

People tried various methods in efforts to coax rain out of skies. One was to kill snakes and hang them belly up on fences, creating miles of such fences in Kansas. Aerial bombing was especially popular, the theory being the noise of battles always led to rain. Napoleon even fired artillery into the sky to muddy roads for approaching enemies. Memories of rainy years during World War I led to the belief it was due to fighting in Europe.

In the 1890s Congress had appropriated money to test the concussion theory in Texas. In 1910, Cereal magnate, CW Post, tried carpet-bombing the skies with dynamite tied to 150 kites, but it started to rain before he could launch them. The next year he tried doing it with howitzers, but with no success. A more practical solution to the water problem was to dig wells to tap into the Ogallala Reservoir.

“Like three midnights in a jug”: Black Sunday. April 14, 1935 started out bright, sunny, and clear with no wind after suffering through 49 dusters in 3 months. For once, people could come out without masks and goggles. Windows were unsealed and opened, if they weren't stuck. People shoveled out rooms & roofs, did laundry & hung it outside to dry. Livestock could stretch out and breathe. A

scheduled rabbit drive proceeded after a month-long delay, though a preacher said they shouldn't club rabbits on Sunday.

Meanwhile, in North Dakota, the collision of a cold front barreling down from Yukon churned up violent winds, forcing temperatures to drop 30° in two hours. Callers bombarded the Weather Bureau about why it was so dark and where had the sun gone? Reportedly 200 miles wide, the storm rolled along like a tornado on its side, hitting without warning with winds of 65 miles per hour.

For some people the first warning was a stampede of birds and rabbits fleeing south. It hit so suddenly, people were knocked to ground, unable to see or even breathe normally. It created a ferocious clanking noise as the dust scraped everything in its path. Spikes on barbed wire fences glowed with electricity. People couldn't even see the person next to them. Some thought it was the end of the world & considered killing their children to spare them the terror of the Apocalypse.

Kerosene lamps indoors went out from lack of oxygen. One small child ran for home, got lost in the blackness and suffocated a half-mile from home. Dust getting under one man's eyelids permanently blinded him. Woodie Guthrie, watching it in Pampa, Texas, wrote "So Long, It's Been Good to Know Ya"

"There goes Oklahoma": Friday, April 19, 1935.

The super-duster rolled eastward toward Washington D.C. Meanwhile, Hugh Bennett who was trying to get Congress to fund soil conservation, kept dragging out his speech while getting frequent updates on the storm's progress. Suddenly, a senator interrupted Bennett: "It's getting dark outside." As senators ran to the window to see the sky darken for the second time in two years, Bennett told them: "This, gentlemen, is what I'm talking about. There goes Oklahoma."

Congress quickly passed an act creating the Soil Conservation Service.

The government started giving loans to families to start over or buy new land. Federal authorities had the power to buy back much of the land it had given in homesteads over the last 73 years. But things didn't get any better in the Dust Bowl, causing

some, but not most, people to pull up stakes and leave. "Okies" typically were met with hostility and the belief they were stupid, prompting H.L. Mencken to call for their sterilization.

Soil conservation efforts were introduced, such as plowing in terraces & furrows so the wind would ripple, not rip off the soil. A couple decent rains in June 1937 plus soil conservation measures led to some revival of crops. But in July, the heat returned to 110° & with it came a new scourge.

But government aid did nothing to stop the record the heat or the dusters. In May 1935, the temperature hit 105°, the earliest it had ever gotten that high. An autopsy on a cow showed its stomach was clogged with dirt. People were urged not to drive unless it was an emergency. One duster caused a fatal head-on collision between two cars going only 15mph.

Between 1930 and 1935, Nearly a million people left the High Plains. By March 1936, one county had only 8 of 136 homesteads left. Broken Bow Kansas went from a population of 3,000 to 3. Four times in July and August temperatures reached 118°, the hottest ever recorded in that area. August 1936 was the hottest month of the century in Oklahoma.

The journalist, Ernie Pyle described the region: "*I saw not a solitary thing but bare earth and a few lonely, empty farmhouses.... There was not a tree or a blade of grass, or a dog or a cow or a human being—nothing whatsoever, nothing at all but gray raw earth and a few farmhouses and barns, sticking up from the dark gray sea like white cattle skeletons on the desert.... It was the saddest I have ever seen.*"

"In Nebraska you don't have to die to go to hell.

Just when they thought they had seen it all, a new scourge hit: grasshoppers. People would first hear a weird buzzing & then saw a cloud some 900 meters across descending on their fields: Grasshoppers which consumed every bit of plant fiber above ground in its path. They would eat 50% of their weight every day. Making matters worse was the fact that farmers had killed off prairie birds & snakes, which fed on hoppers. Drastic efforts to stop them included spraying an arsenic/bran mixture from the air, which killed the hoppers... and

everything else. In April 1938 came another blizzard & then a 3-day duster as dark as Black Sunday, but much longer.

Epitaph. On July 11, 1938, FDR visited Amarillo Texas to kick off Operation Dustbowl where 100,000 people came to greet him. The sky darkened in midday as it had so many other times. Just after FDR's train came in, the skies opened up and let loose a downpour of rain. The worst was over.

FDR's CCC eventually planted 40 million trees as wind breaks across the High Plains. The Government also bought 11.3 million acres & tried to return it to grassland, leading to the creation of 3 national grasslands. One of them, Comanche National Grasslands covers 600k acres.

World War II brought new wheat subsidies for farmers, encouraging agriculture in the High Plains again. In the 1950s a 3-year drought brought back the dusters, but nothing like Black Sunday had been. From 1974-6 there were droughts, but no dusters thanks largely to Hugh Bennett's soil conservation measures.

Efforts to pump water from the Ogallala reservoir led to a new wave of settlers intent on big profits as if the last 20 years hadn't happened. They are now pumping water eight times faster than it can be replenished. Some people think major parts of it may be gone by 2010.

133. BENITO MUSSOLINI AND THE RISE OF FASCISM IN ITALY (1919-25)

"Books are good. Muskets are better."--Fascist slogan

Introduction: the response to Communism. World War I and the Treaty of Versailles apparently solved nothing and satisfied no one. Although the Western democracies, such as France and Britain, were regaining some stability and prosperity, no one else was. Ethnic and territorial disputes arose among the new democracies in Eastern Europe. The Bolsheviks in Russia threatened to spread their revolution and overthrow Capitalism. And Italy and Germany, the one a "winner" and the other a loser in the war, were both bitter about the Treaty of Versailles and anxious to reverse its verdict.

These conditions gave rise to *Fascism*, the belief in a totalitarian dictatorship controlling nearly all aspects of the state: government, army, press, schools, etc. However, unlike the Soviet model of Communism, it allowed free enterprise and private property, thus appealing to the business-oriented middle class since it gave them economic security. Finally, Fascism was also intensely nationalistic and aggressive in its foreign policy.

Mussolini and the rise of Fascism in Italy. The first successful Fascist takeover was in Italy under Benito Mussolini. He was born in 1886 in the rough hill country of North Central Italy. His mother was a devout Catholic and schoolteacher, while his father was an atheist and anarchist who liked to smash ballot boxes on Election Day. Benito himself was a troublemaker who had a bad habit of knifing his classmates. As a young adult, he fled to Switzerland to avoid the draft and was converted to socialism there. In 1904, he returned to Italy and served his time in the army in return for a pardon. He then became the editor of several socialist newspapers in which he advocated both political assassination and pacifist resistance to a war with Turkey, calling the national flag a rag fit to be planted on a dung heap. When World War I broke out, he first advocated neutrality, and then, probably after accepting French bribes, called for Italian involvement on the Allied side.

Italy made a poor showing in the war and paid a heavy price for it. Government expenditure during

the war was twice its expenditure for the whole period 1861-1913. As a result the economy was in shambles and the country was plagued with unemployment, inflation, riots, strikes, and brigandage. It was then that Mussolini first joined and soon became leader of the Fascist Party, which stood for upholding claims of veterans and the nationalist interests of Italy while crushing any anarchist elements in the country. Ironically, the Fascists did more to promote anarchy than anyone else in Italy at that time. Mussolini would send out his gangs of thugs, the Blackshirts, to riot against Communists and other groups while claiming his men were protecting the peace.

Oddly enough, Mussolini's strategy of spreading chaos in the streets while posing as the champion of law and order who could save Italy started paying off. Even without the Blackshirts' antics, Italy needed law and order, and many people, especially the middle class who feared the Communists, looked to the Fascists as the answer to Italy's problems. In October 1922, they made their move.

It was actually the local party bosses who started a series of riots that stormed various city halls and forced concessions from local governments. This encouraged them to march on Rome and seize control of the national government. Benito himself was hesitant to take part, but when the Ras went ahead without him and it looked as if they might succeed, he put himself at the head of the march as if it were his idea all along. The march itself was a fiasco, getting bogged down in a massive traffic jam, but it scared the government enough to offer Benito the power to form a new government, which he did with typical bombast and bluster. Then, through intimidation and rigged elections, Benito tightened his grip on Italy. He bullied the Italian Parliament into giving him emergency powers that allowed him to shut down other parties, censor the press, and end other civil liberties. By 1925, Italy was a fascist dictatorship.

The riots and strikes did settle down after Mussolini took power, but little else went right for Italy and the Fascists. Mussolini claimed he made the trains run on time, but that was a gross exaggeration, as was just about every other claim he made. He did try to build up Italy's aircraft, shipping and power industries, but the Depression and Italy's lack of natural resources, along with poor planning and

corruption, severely limited any economic progress. Mussolini's big dream was to make Italy a major power, thus reviving the Roman Empire. Here again, little progress was made, although Benito made wildly inflated claims about Italy's military strength.

Whatever his failures as a national leader, Mussolini appeared to be a shining example of Fascist strength when compared to the more timid democracies in Europe, and was a hero to other aspiring Fascist leaders of the day. Among these was a struggling German politician by the name of Adolph Hitler.

The Allies' Best Friend (?): How Mussolini Helped the Allies Win the War



In 1941, as Hitler was preparing his surprise assault on Russia, Benito invaded the Balkans, was defeated, and needed Hitler to bail him out. By Hitler's account this delayed the invasion of Russia for a critical five to six weeks, during which the Russian winter set in, bogged down the German advance, and allowed the Russians to mount a counter-offensive and save Moscow. If Moscow had fallen, that could have been the end of Stalin's regime and World War II would have followed a very different course.

A Chip off the old Block

Young Benito was such a hell-raiser that his Mother sent him to a strict religious school, where he was expelled for knifing a classmate. Later, he knifed another classmate while at a state training school for teachers. After teacher's college, he got a job teaching in a small town where he had an affair with a woman whose husband was away with the army. Eventually, in a jealous rage, he knifed her too. On the bright side, he probably didn't have many discipline problems as a teacher.

Father knows best. Thoroughly disenchanted with his son, Benito's

father told Benito's future wife, Alessandra, that she'd be better off throwing herself under a train rather than marrying his son.

The Birth of Fascism

In March 1919, the first meeting to form Fascist party took place. According to Mussolini an estimated 145 showed up of whom about one-third signed up. It announced three goals:

- 1) Uphold claims of veterans
- 2) Oppose any imperialism harmful to Italy

Italy

3) Stop w/all their might anarchists who were "milk & water" Italians

Fascism gets its name from the ancient Roman fasces, a bundle of rods carried before Roman consuls as a symbol of their power.

A major issue after World War I was Fiume, a free city established by the League of Nations, but claimed by Italy. It was seized by Gabriel d'Annunzio, a flamboyant super-patriot who ruled it for 15 months before the Italian government got him out. Everyday his army of Black Shirts would parade in front of him & say in response to one another:

"For whom is the Future?" "The Army of Italy"
"For whom is the power & Glory?" "For us"

Mussolini admired d'Annunzio and even adopted his use of black shirts as the party's uniforms/gang colors and daggers, truncheons, and practice of over-dosing victims with castor oil in street fights.

In their first election for office in Milan in 1920 the Fascists lost miserably to the Socialists 180,000 to 4,000. While the Socialists celebrated at their victory party, a hand grenade flew in through the window, wounding several people. The next day the police searched Benito's office where they found all sorts of bombs and explosives. He was jailed and released only a day later.

Among other things, it seems Benito was a poor loser.

Playing Tag with Knives: Fascist Tactics

With no majority party to take control, Italy was beset with riots, factory takeovers, and 1880 strikes in 1920. Fascist gangs of thugs (squadristi) took to the streets, beating up socialists, communists, and union officials and force-feed them castor oil, a particularly nasty liquid commonly used to calm upset stomachs. As an extra added torture, they carried razors with which they would dry-shave half their victims' moustaches. For those readers who have never shaved their moustaches, suffice it to say that it hurts a lot.

Not It. In addition to starting riots against their enemies, the Fascists played a game I call "Not it". Just like the children's game of Tag where the last person to say "Not It" is It, so it goes in politics. A common political tactic is for one side to blame the other side for its own crimes and faults, because, whatever the truth of the matter, whoever gets blamed first is in a weakened position by right of having to defend themselves. Even if they justly counter-blame the other side, it looks like they're only copying the other side, making them look unoriginal and guilty, since the other side first has already put it into people's heads that the innocent side is guilty. Hitler and the Nazis would copy Mussolini in this and various other tactics.

The March on Rome (1922)



This is the sort of thing you can't make up. It's my Benito Mussolini March on Rome play set that I found in a hobby shop. It has no fewer than four Benito's (in case three of them get lost under the couch or are eaten by your dog). Given how lame this event was, I'm not sure what you do with this, but it could be a worthwhile challenge to kids' imaginations. There are also play sets to recreate mass rallies by Hitler, Lenin, and Mao.

By 1921, the Fascists had 2200 local chapters and 320,000 members. In Milan, they had won 125,000 votes and 35 seats in the Council of Deputies.

The Ras were local party bosses named after Ethiopian party chiefs. Many thought Benito too wishy-washy, wanting to please everyone all the time. For example, for some reason, Benito tried to ally with his foes, the Socialists. When the Ras protested, Benito resigned, thinking they would beg him to come back. When they didn't, he dumped his alliance with the Socialists to reclaim party leadership.

In 1922, when the Ras and 50,000 squadristi stormed the town hall in Ferrara, the government told Ferrara to comply with Fascist demands. sparked similar marches on Bologna, Ravenna, and Parma, and then plans to march on Rome and seize power. When Benito finally jumped on the bandwagon, he gave a speech with his typical bombast and bluster, declaring: "Either the government will be given to us or we will seize it by marching on Rome."

The March on Rome (10/24/1922) was a fairly lame event, being delayed by a lack of cars and buses for transport. Even though the army could have beaten the 14,000 fascists taking part, the premier and high-ranking politicians panicked and offered Benito a government post. Sensing their weakness, he spurned their offer, so the king let Benito form a new government. When Benito showed up in fashionable black pants and shirt and white spats, he told king: "Your majesty will excuse my appearance. I come from a battlefield." Where that battlefield was, no one could say, but it sounded nice for history.

The actual march on Rome materialized several days after Benito took power. It made a nice parade.

"I could have transformed this gray hall into an armed camp. I could have nailed up the doors." -- Benito's 1st address to Parliament

Peace with the Church

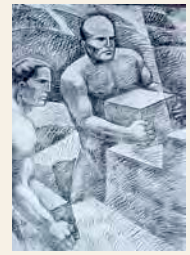
Ever since the incorporation of Rome into the Kingdom of Italy at the expense of the Papacy in 1871, relations between church and state had been strained. In 1929, Mussolini signed the Lateran Treaty by which the Papacy recognized the state of Italy in return for recognition of an independent Vatican state and the right to teach in schools. For Benito, this was a win-win solution, because it gained not only recognition of Italy from the Church, but an influential ally that could be very useful for indoctrinating the nation's youth.

Benito's Cult of Personality



Image was everything to Mussolini and his regime amounted to little else. However, the cult of personality that Benito developed provided the template for similar cults of twentieth century dictators like Hitler, Stalin, and Mao. The key for all of them was mass media. During the early twentieth century, in addition to posters and newspapers, that also meant a new type of technology, the loudspeaker, which allowed politicians to address huge numbers of people at a time, generating a certain mob mentality that could be whipped up into a frenzy, getting more people involved, further increasing the frenzy, and so on.

Mussolini's also made extensive use of posters, which had been vital to the propaganda efforts of the First World War. On the one hand, these would portray Benito as larger than life, while regular photo-ops simultaneously portrayed him as a man of the people: wrestling a lion cub in a zoo, in military uniform visiting a veterans hospital, or riding a horse (with the man leading the horse cropped out). The combined images of superhero and common man were both necessary in the age of mass media democratic politics.



As far as his personal image was concerned, Benito claimed to be a fitness fanatic as well as a sparing eater and drinker. He was a sharp dresser, having an outfit for every occasion. However, he shocked Italians by not shaving everyday, leaving a five o'clock shadow that made him look like a gangster, an image he probably cultivated intentionally for intimidation purposes. Similarly, he had an imposing office with his desk at the far end so visitors had to walk its entire twenty-meter length to talk to him. Hitler would do the same thing, with the addition of a huge window behind him to nearly blind visitors and make him appear as a much more ominous and shadowy figure.

Mussolini was also notorious womanizer, with no attractive woman supposedly being safe alone in a room with him. Even publicity of this sort was probably calculated to add to his image of virility.

Feet of Clay: Benito's Armed Forces



"Good blood doesn't lie."-- Italian recruiting poster

Nothing better illustrates the nature of Mussolini's Italy than the discrepancy between his claims about his military and the empty shell it really was. For example, Benito claimed he had an army of 6,000,000 men in 1934, 8,000,000 in 1936, and 12,000,000 in 1939. In reality, it was never more than 3,000,000

Likewise, he claimed Italy was producing 450 artillery pieces per month, when in reality, it was never more than 200 per month, only one-sixth Italy's production rate in World War I. Even more embarrassing to the dictator was the fact that Italy's best artillery in World War II were Austrian guns captured during World War I.

Tanks. Mussolini claimed he had three armored divisions with 25-ton tanks. In reality, his tanks were mostly 3.5 ton armored cars that were easily pierced by gunfire, and having no weapons larger than machine guns, poor visibility, and no radio, so infantry had to lead it, largely defeating its purpose. For parades, they would borrow armored cars from the police.

When presented with a list of medium tanks, Benito took a quick glance, and with his typical dramatic gesture, pointed to one and said: "Make this one. By the time they rolled off production lines in 1940, they were already obsolete. Nevertheless, Italy kept on making them to the end of the war. In 1945, even Mussolini's chief of staff admitted Italy had nothing that could seriously be called a tank.

Air Force. By 1935, Italians owned most international aviation records, so one might expect Mussolini's forces to excel in this area. He talked about blacking out the sun with the sheer numbers of his planes, which he claimed numbered 8530. As usual, the reality was far different. Italy's air minister lowered the claim to 3,000 planes, while naval sources admitted it was only 1,000.

In reality it was only 583 planes. To impress visiting dignitaries, it would fly from field to field to be counted in multiple reviews. While Benito claimed he was producing 500 planes a month, it never exceeded 150. Italy produced more planes in World War I.

Italy's aeronautical experimental station at Guidonia was hailed as a marvel. Typical of the Fascists' desire for flashy shows, it had nice buildings, but no automatic flying equipment,

gyroscopic instruments, high-octane petrol, anti-icing devices, retractable landing gear, or variable pitch propellers. Similarly, Mussolini's planes were also lacking in quality, being inferior to British planes in speed and equipment.

One of the more embarrassing aspects of Benito's rule was the excessive number of generals he had, largely because he cut divisions from three to two regiments to claim more divisions.



Mussolini, also had three spy services. On the surface that may sound impressive, but in reality it was worse than worthless. Instead of gathering intelligence for the safety of Italy, they spent their time arresting each other, planting false documents in each others' files, cutting out newspaper clippings, and smuggling goods for their officers and Benito's girl friends. Meanwhile, Italy didn't even have an agent in Malta, only 100 miles away.

134. ADOLF HITLER AND THE RISE OF NAZISM IN GERMANY (1919-39)

"The driving force of the most important changes in this world have been found less in scientific knowledge animating the masses but rather in a fanaticism dominating them and in a hysteria which drives them forward."-- Adolph Hitler

Introduction. The most ominous development after World War I and one of the primary causes of World War II was the rise of Adolph Hitler in Germany. The Treaty of Versailles helped lead to this in five ways. First, there was the common belief that Germany had been betrayed, since the Armistice had been signed before allied troops had reached German soil. Germans, looking for scapegoats, blamed bankers, Catholics, and especially the Jews. Second, the Treaty of Versailles angered the German people and destabilized Germany both economically and politically. Third, the Weimar Republic, which succeeded the Kaiser's monarchy, was moderate, but weak, and thus let matters get out of hand. Fourth, the German economy's over-dependence on American loans caused it to collapse with the Stock Market Crash in 1929. Finally, the Depression, especially with the renewed raising of tariffs, created tense international relations. All these provided the conditions for Hitler to seize power.

Adolph Hitler was born in 1889 in Braunau, Austria. His early ambition was to be an artist, but he failed to gain entrance into Vienna's main art academy. Drawing upon strong anti-Semitic sentiments already in Vienna, Hitler blamed the Jews for conspiring to keep him out. He got by as an artist for soap and deodorant ads, having few expenses, since he was neither married, drank alcohol, or smoked. In 1913, having failed to get into the Austrian army, he crossed into Germany. Then came World War I.

Hitler served in the German army with distinction, was wounded twice (once by poison gas) and decorated for bravery. Being a loner, he actually enjoyed the war and the comradeship of the army, since it gave him a sense of belonging. Therefore, he felt especially disappointed and betrayed when Germany surrendered in November 1918. The

Treaty of Versailles the next year merely added to this bitterness. Not surprisingly, he conveniently blamed the Jews for Germany's plight.

After the war, Hitler served as a reservist, spying on political parties to make sure they did not add to the chaos then besetting Germany. One such party was the National Socialist, or Nazi, Party. This right wing group attracted Hitler with its racist ideas about a master Aryan race and the so-called "inferior" races, such as the Slavs and especially the Jews who must be destroyed. Hitler became the Nazis' seventh member and soon afterwards its leader. He also found a new talent, speech making, which attracted large audiences and funds to the new party's treasury.

As disturbing as the Nazi ideas were, they were nothing new or original to European culture. Persecution and hatred of the Jews went back to the Middle Ages where they were often resented as moneylenders, accused of such things as the execution of Christ and conspiring with the Devil to cause the Black Death, and subjected to expulsion from their homelands and at times even massacres. Even such a revered figure as Martin Luther said the Jews should be deprived of their property and that:

"...their synagogues or schools be set on fire, that their houses be broken up and destroyed...and they be put under a roof or stable, like the Gypsies... in misery and captivity as they incessantly lament and complain to God about us.

The idea of an Aryan super-race was also rooted in German philosophy, in particular Freidrich Neitzsche, whose idea of a new superior type of human ("ubermensch") was easily taken out of context and narrowly applied by the Nazis to the German people:

"A daring and ruler race is building itself up...The aim should be to prepare a transvaluation of values for a particularly strong kind of man, most highly gifted in intellect & will. This man and the elite around him will become the 'lords of the earth'"--from The Will to Power

Ordinarily, such ideas would have little appeal in normal prosperous times. However, conditions in Germany after World War I were anything but normal or prosperous. Political strife rocked the country as extremists from both the right and left. Notably the Communists, fought for power. Another problem came as the government printed vast amounts of money to support a strike against occupying French troops trying to force Germany to pay its huge indemnity. However, Germany's inability to back up its currency led to a wildly uncontrolled cycle of inflation. As a result, a single turnip would cost 50 million marks and people literally burned money for fuel, carted it around in wheelbarrows, and shoveled it out of bank vaults.

Given these conditions, it is hardly surprising that many Germans were drawn to the idea of themselves as a super-race that had been treacherously betrayed by "inferior" enemies from within and without. Therefore membership in the Nazi party grew rapidly in the early 1920s, prompting Hitler to try to overthrow the government in 1923. His *Putsch*, as it was called, was a total disaster, but the resulting trial earned Hitler a good deal of publicity as a national hero defending German honor against domestic violence and foreign humiliation. While in prison for nine months, he wrote *Mein Kampf* ("My Struggle"), which outlined his political beliefs and strategies for seizing power.

While its racist ideas were just rehashed versions of older ideas, *Mein Kampf* did provide a blueprint for modern politics through the use of radio, posters, mass rallies, lies, and catchy slogans which appealed to the emotions without really telling anything of substance in order to manipulate the political process. Nazism was a negative philosophy that thrived on Germany's miseries. However, by the mid 1920's, the illusion of prosperity and the apparently fading hostility toward Germany caused Nazi membership to stagnate.

All that changed in the 1930's, as other two effects of World War I created conditions favoring the Nazis. For one thing, the Depression with its higher tariffs raised international tensions, which Hitler could exploit to gain popularity. Also, the war had created an unstable economy that was overly dependent on financial support from the United

States. Therefore, the stock market crash in 1929 dragged Germany down with the American economy. By 1932, six million Germans were unemployed, which played right into Hitler's hands. This time he would use the democratic process to gain power and then use that very democratic process to destroy itself.

The Nazis reacted to these conditions in two ways. First, Nazi thugs, known as Brownshirts in imitation of Mussolini's Blackshirts, started riots with opposing groups, especially Communists, while blaming them for the disorder, embarrassing the government for failing to keep order and portraying themselves as the defenders of the peace. Second, they bolstered their popularity with free food and festivals, making them look like nice concerned Germans, and by staging huge mass rallies to display their popular support.

In late 1932, rich German industrialists, prompted by fear of a Communist takeover, pressured the government to make Hitler chancellor (prime minister), hoping they could control him while he contained the Communists. Little did they suspect that this was just the beginning for Hitler.

From chancellor to dictator (1933-38). Once in power, Hitler worked to increase his own power and German national pride in three ways: destroy any possible rivals to his position, rearm Germany, and launch a campaign of violence against the Jews. In the months following his becoming chancellor, he skillfully used his government powers, propaganda, lies, and brute force to divide his enemies and then destroy them one by one. Needing a majority in the *Reichstag* (German parliament), Hitler immediately called for new elections, hoping his new position as chancellor would win the Nazis more seats. In order to scare people into supporting them, the Nazis burned the *Reichstag* building and blamed the Communists. The resulting hysteria allowed Hitler to suspend civil rights and arrest the Communist leaders, thus gaining the Nazis more seats in the *Reichstag*.

Now it was time to eliminate the *Reichstag* and the democratic process along with it. Hitler planned to do this by passing the Enabling Act, which would give him legislative and executive power for four years, plenty of time to get a stranglehold on power in Germany. With the Brownshirts outside

threatening violence, the law easily passed, giving Hitler the legal framework in which to establish a dictatorship.

In the following months, Hitler used a combination of threats to opposing leaders, alluring promises to their followers, and brute force to eliminate his enemies. One by one they fell: the Social Democrats (with a strong labor backing), the Catholic Center Party, and the German Nationalists (ultra-conservatives who were forced to merge with the Nazi Party). Next came the press and universities, institutions with many educated people who saw through Hitler's lies and might be able to mobilize public opinion against him. In each case, Hitler formed a comprehensive national association that all members of that profession were required to join if they were to keep working. Of course, Nazi officials headed these new organizations, which gradually strangled freedom of speech and thought in Germany.

With Germany firmly under his heel, Hitler moved to gain firm control of his own party. His main rival, Ernst Rohm, was the head of the powerful Brownshirts, the para-military gang of thugs the Nazis used for violence and intimidation. Many army officers and industrialists feared Hitler would replace the army with the Brownshirts, while Hitler himself feared Rohm's power. Therefore, he won the support of the army and industrialists while serving his own interests by having Rohm and his associates murdered in the so-called "Night of the Long Knives." (It is widely believed that Hitler himself pulled the trigger in Rohm's murder.) The Brownshirts were dissolved and replaced by the much more efficient and deadly black-shirted Storm Troopers, commonly known as the *Schutzstaffel* or SS. From now on they would be the main agents of the Nazi Terror.

In August, 1934, President Hindenburg, symbol of the old Prussian order with which Hitler had been careful to associate himself, died. To symbolize the dawn of a revolutionary new order and the 1000-year reign of the Third Reich, Hitler demanded a loyalty oath from the army, not to Germany, but to himself. From now on Germany was to be Hitler, and Hitler was to be Germany.

The growing darkness. Hitler's second goal was the rearmament of Germany. He did this

through a massive arms build-up (in direct defiance of the Treaty of Versailles) and public works projects (such as highways for moving armies from front to front). At least in the short run this did provide jobs and prosperity and restore pride in Germany. However, in order to fund all this, the Government budget grew seven times from 1932 to 1938, with 74% of that budget for the military. This put a growing strain on the German economy, which helped lead to German aggression and World War II.

Finally, Hitler attacked the Jews, whom he imagined had kept him out of art school and betrayed Germany in the war. His Nuremberg Laws in 1935 subjected Jews to an ever-growing number of restrictions and acts of violence. The climax of this stage of persecution was the *Kristallnacht*, or Crystal Night (11/9-10/38), named after the shattered windows of Jewish merchants' shops that were looted that night. Using an incident in Paris between a Jew and German diplomat, the Nazis instigated this wave of violence against Jews across Germany. Nazi-led gangs looted Jewish owned shops, brutally beat their owners, and then rounded them up for the growing number of concentration camps springing up in Germany.

Many Jews, including Albert Einstein, left Germany, costing it many of its brightest minds. The horror stories they took with them led to growing fears of Nazi aggression and eventually World War II. They also took with them talents that the Nazis could have used but claimed were part of a worldwide plot to pollute science and destroy civilization. Einstein's theory of Relativity was especially singled out by one Nazi writer as being:

"directed from beginning to end toward the goal of transforming the living-- that is the non-Jewish-- world of living essence, born from mother earth and bound up with blood, and bewitching it into spectral abstraction in which all individual differences of peoples and nations, and all inner limits of the races, are lost in unreality, and in which only an unsubstantial diversity of geometric dimensions survive which produces all events out of the compulsion of its godless subjection to laws."

Wilhelm Mueller, in his book, *Jewry and Science*, claimed the worldwide acclaim given to Einstein for his theories was really only rejoicing over "the approach of Jewish world rule which was to force down German manhood irrevocably and eternally to the level of the lifeless slave."

"...the Jew conspicuously lacks understanding for the truth...being in this respect in contrast to the Aryan research scientist with his careful and serious will to truth...Jewish physics is thus a phantom and a phenomenon of degeneration of fundamental German physics."-- Nazi, Prof. Philipp Lenard

From 1905 to 1931, ten German Jews won Nobel Prizes in science. Hitler would kill six million more.

Conclusion. Why did Germany go along with this madness? A combination of factors gives at least a partial answer. First, Hitler was a master of dividing and attacking his enemies one by one. He would win over people with tempting promises while eliminating their, leaving them helpless before him. He also effectively used lies and propaganda to deceive the public and turn them against helpless scapegoats, such as the Jews, making people relieved they were not under attack *at that time* and not seeing what was happening until it was too late to save themselves. Finally, Hitler's programs did restore national pride and relieve some of the Depression's misery. Little did they realize the price they and the world would have to pay for this temporary bit of comfort.

The Weimar Republic

Germany's defeat in the war and replacement of the Kaiser with the weak Weimar Republic led to one of the most turbulent, but also culturally vibrant periods in German history. The liberal Weimar Republic, which abolished censorship, also spawned radical experimentation in the arts and lifestyles in Germany in the 1920s.

In the apparent prosperity & free and easy culture of the 1920s, Berlin in particular became associated with decadent partying and disillusionment with the old culture. This was

reflected in Fritz Lang's epic science fiction film *Metropolis* (1927), a dystopic view of the year 2000 where an upper class elite of owners lives in elaborate skyscrapers while the oppressed working class labor underground.

American jazz was especially popular in Germany at that time, opening opportunities for many African-American musicians.

Unfortunately, this seemed to provoke racist reactions that Nazism would thrive on in the 1930s. Overall, Hitler and his followers would use the liberal culture of the Weimar era as a convenient target for their anger.



German versions of the Ziegfeld Follies revue in America showed the growing influence of American culture during the Weimar era, while the famous German film actress, Marlene Dietrich, a staunch anti-Nazi later moved to the U.S. to pursue a successful career there.

Bauhaus. (literally "building school",) was the best-known cultural movement associated with the Weimar Era, founded by Walter Gropius, although it wasn't originally concerned with architecture. The Bauhaus style, also known as the International Style, was partly a reaction against emotional Expressionism. Rather, it reflected the Arts and Crafts movement of the previous century. However, instead of rejecting technology, Bauhaus strived for a reconciliation of art and technology in daily objects so there would be no distinction between form and function. Or, more concisely as its motto from 1923 put it: "art and technology - a new unity".

These efforts to integrate art and mass production on a large scale led to buildings and objects distinguished by clean simple lines and the absence of ornamentation. Instead of just being museum pieces, such objects also served as prototypes for mass production of tea services, chess sets, vases, desk lamps, and so on.

Freikorps and the Spartacist Uprising



Capitalist fears and Bolshevik threats of a global communist revolution seemed to be coming true in 1919 when the German communists, (AKA Spartacists) tried to overthrow the Weimar government.

The Social Democrats leading the government had to rely on the army and free bands of veterans, known as the Freikorps, to crush the uprising. As a result, the army, although severely reduced in size by the Treaty of Versailles, had tremendous influence within Germany. The army, civil service, and judiciary were all overwhelmingly conservative, wanting a restoration of the monarchy. As much as they disliked the radical tactics and beliefs of the Nazis, they hated communists, socialists and the Weimar government even more.

Therefore, Nazi acts against the state, such as Hitler's attempted putsch in 1923, were often lightly punished, giving them a relatively free hand to riot against the communists. Different parties would later enlist many Freikorps members (above) as virtually private armies to attack other politicians and protect their own.

Young Hitler



Hitler's parents and upbringing may be part of the answer to what went wrong. His father was authoritarian and rough on his son, while his mother over-compensated by pampering him. With such mixed messages, no wonder he was so messed up.

Hitler's father, Alois, who was probably his mother's uncle, could have taken the name Schickelgruber from the other side of his family. This raises speculation on whether Adolf could have been a serious candidate in elections with a name like that.

Another factor influencing Hitler (and history) was his rejection from the Vienna art school because his art was too representational. Not that it was bad (as seen below), but it didn't suit the more abstract tastes in vogue the time. Needing someone (besides himself) to blame, he blamed his rejection on the Jews.



Like so many young men of his day, Hitler welcomed the coming of the First World War, supposedly even falling to his knees to thank God for the war. Because he was temporarily blinded in a gas attack toward the end of the war, Hitler refused to use gas against enemy troops in WWII. Of course, this didn't stop him from using poison gas (Xyklon-B) on Jews in his death camps.

By the time he had recovered from the gas attack, Germany had surrendered, leaving Hitler with the feeling of deep betrayal.



Hitler (far left) with his comrades during WWI

Hitler the Lady Killer: Der Fuhrer's Love Life



Left to right: Mitzi Reiter, Geli Raubel, Renate Mueller, and Unity Valkyrie Mitford

Hitler apparently had difficulty bonding with other people, especially women, only feeling comfortable if he could control them. However, he did have a number of love interests or were rumored to have committed suicide.

Mitzi Reiter was 16 in 1926 when the 37-year old Hitler courted her with promises of marriage and blond children (although neither of them was blond). However, his political career kept him from following through on these promises, so Mitzi, depressed by these rebuffs, unsuccessfully attempted suicide by hanging and later married an SS officer. Hitler's sister, Paula, claimed Mitzi was the one person who could have prevented Hitler from becoming a monster.

Hitler's next girlfriend, Geli Raubel, was his half-sister's daughter and 17 years old (nearly legal) when he courted her. He apparently stifled her freedom of movement to the point where Hitler's pistol killed her in 1931 after an argument over her plan to move to Vienna. Whether it was murder or suicide remains unknown. After this, Hitler's personality reportedly became much darker as he had trouble creating meaningful relationships with other people and had to kill them.

Renate Mueller was a popular and suitably Aryan German actress who rose to prominence when the anti-Nazi actress, Marlene Dietrich fled to Hollywood. Mueller was also reluctant to star in Nazi propaganda films and even rumored to be dating a Jew. In 1937, she reportedly had a disastrous one-night stand with Hitler who begged her to kick him so he could be aroused while writhing around on the floor.

Several days later, Renate fell, jumped or was pushed to her death from a hotel window after several Gestapo agents were seen entering her building. Hmm.

Unity Mitford was an English socialite who became obsessed with Hitler, moved to Munich where he lived, and worked her way into his inner circle in the mid 1930s. The fact that her middle name was Valkyrie also impressed Hitler, who called her a "perfect specimen of Aryan womanhood." Eva Braun was extremely jealous of Mitford and won Hitler's attentions back by attempting suicide.

When England declared war on Germany in 1939, Mitford was so upset that she shot herself in the head with a pistol Hitler had given her. She survived the attempt and returned to Britain, where she died in 1948 from complications caused by the bullet that had remained lodged in her skull. Rumor has it that Mitford had Hitler's love child after returning to Britain & gave it up for adoption.

Hitler's longest lasting relationship was with Eva Braun whom he started dating in 1931 when she was 19 (and he was 47). She attempted suicide twice in their early relationship and was his primary mistress until 1945, despite various habits Hitler disapproved of, namely smoking and sun bathing in the nude.



He kept her concealed from public view and scrutiny, typically sending her to her room during parties and other social occasions. Hitler's chauffeur called Eva Braun the "unhappiest woman in Germany" because she spent nearly all her time waiting for Hitler.

Eva was also Hitler's wife for 40 hours before committing suicide with him on their honeymoon in his bunker in Berlin as Russian troops were closing in. This time she was successful in killing herself, but she did have a lot of practice.

The Origins of Nazi Symbols and Ideas



Unfortunately, the history of ideas is often important for the way people misuse them rather than use them. This is especially true for the idea of the Aryan super-race, which was also largely rooted, in a completely twisted way, in the ideas of the German philosopher, Friedrich Nietzsche, idea of a new superior type of human ("ubermensch"):

"A daring ruler race is building itself up...The aim should be to prepare a transvaluation of values for a particularly strong kind of man, most highly gifted in intellect & will. This man and the elite around him will become the 'lords of the earth'" --from *The Will to Power*

Aryans was brought into vogue by the French racist, Joseph Gobineau, transforming it from a linguistic to a racial term, saying survival could only be ensured by racial purity, and that racial intermingling could only lead to cultural, moral, and political decline.

Urbemensch (superman) was a term used by the 19th century German philosopher, Friedrich Nietzsche who argued that some individuals must be free to transcend their time's moral constrictions. Nietzsche was talking about a moral and ethical transcendence rather than a physical one based on brute force and was a vigorous opponent of anti-Semitism and the vulgar worship of power spawned by the German military's forceful unification of Germany.

His "will to power" and "superman" were only meant to apply to ideas, not to politics, but his prose was easily taken out of context and reduced to slogans that contradicted his intentions. His sister, Elisabeth Forster, especially vulgarized and popularized the more elitist and brutal interpretations of his work, giving them a distinctly racist slant that Hitler narrowly applied to the German people.

Anti-Semite was a term coined in 1873 by William Marr in *The Victory of Jewdom over Germandom as Viewed from a Non-confessional Standpoint*. Racist feelings against the Jews went back to the Middle Ages, as seen in this picture from 1476 supposedly depicting the ritual murder of 6 Christian boys by the Jews. Even Martin Luther added fuel to the flames of anti-Semitism:

"...their synagogues or schools [should be] set on fire, that their houses be broken up and destroyed...and they be put under a roof or stable, like the Gypsies...in misery and captivity as they incessantly lament and complain to God about us."

The swastika's use by German nationalists goes back to Germany's unification in the 1800s. Coming from the Sanskrit root, svasti meaning "well being," the ancient Aryan svastika originally represented life, good luck, strength, and power. It only came to have its negative connotations under the Nazis in the 1920s, who also reversed its direction. Its first use in the context made popular by the Nazis was probably by Lanz von Liebenfels, an Austrian Racist who flew a swastika flag over his castle in 1907.

Fuhrer as the term for the leader of the party was first used by Austrian anti-Semitic politician, Georg Ritter von Schonerer, and later by Hitler when describing the fuhrer principle, the idea that there are natural leaders and followers, and that the followers should give unquestioning obedience to their fuhrer. Schonerer also proposed renaming Christmas as Yulefest and instituting a new calendar dating to the Germanic Cimbri's victory over the Romans at Noreia in 118 B.C.E.

Racial Hygiene. Along those lines, the revolution in public health & hygiene led to concerns that modern advances in medicine favored the weak, leading to the conclusion that there was a need for selective breeding &/or elimination of the weak & mentally ill by means of chemical injections or electrocution.

In the early 20th century this influenced mainstream medicine, social work & criminology in seeing social deviants (prostitutes, drunks, etc.) as genetically tainted, leading to calls for forced sterilization even by liberals.



A poster advertising the huge cost of taking care of the mentally ill

The Classic Case of Hyperinflation



Children gaze at stacks of 1000-mark notes needed to equal the value of one dollar during Germany's hyperinflation.

In 1923, when Germany failed to make shipments of coal and iron to France, the French occupied the Ruhr to squeeze out the payments. When German workers went on strike, France brought in its own workers to run the mines. For once, German public opinion and the Weimar government were united in backing the strikers, against France.

Unfortunately, the Weimar government could only support the German strikers by printing money without substantial gold to back it up. This aggravated an already existing inflationary situation and triggered history's most famous example of hyperinflation that created some surreal situations for the German people:

- A 5,000 mark cup of coffee cost 8000 marks an hour later.
- A gramophone that cost 5 million marks at 10AM cost 12 million by 3PM.
- Bankers were literally shoveling money out of bank vaults.

- A turnip cost 50 million marks (but it was a really nice turnip).
- A meal for two at a restaurant cost 1.5 billion marks.
- Prices weren't posted since they changed so often.
- Interest on loans was 35% per day.
 - According to one story a woman with a wheelbarrow full of money to buy bread had to leave the line, asking another person to save her place and watch her stuff. When she came back, the money was still there but the wheelbarrow was gone.

Inflation didn't hurt everyone. For example, industries would borrow money to invest in machinery and repay the loans later with worthless inflated currency. By November 1923 the government was issuing 4000 quintillion marks per day. Eventually the value of the dollar to the mark, which before World War I was 4:1, skyrocketed to 4 trillion: 1.



Money became so worthless that people literally carted it out of banks in wheelbarrows and burned it to heat their homes.

The Beer Hall Putsch (11/8/1923)

The Beer Hall Putsch (11/8/1923) The turmoil from hyperinflation forced the government to call off resistance in the Ruhr, which angered many Germans, including Hitler. Therefore, on November 8, 1923, three days short of the fifth anniversary of the "betrayal" of the Armistice, Hitler burst into a Munich beer hall where local officials were meeting. He set up a machine gun and fired a revolver into the air, announcing that the revolution had begun, the hall was surrounded, and thousands of heavily armed men were marching to his aid.

This was all pure bluff, but it did get the venerated General Eric von Ludendorff, a dabbler in racism and politics and pictured below with Hitler, involved. The next day, Hitler and 3,000 followers marched on the ministry building in Munich. Opposing troops opened fire, killing sixteen and wounding several more. Hitler hit the deck and then fled. Ludendorff himself just marched right through the opposing lines.



Hitler turned his trial into a stage for Nazi propaganda, denouncing the Treaty of Versailles as treason, saying: "There can be no question of treason that aims to undo the betrayal of a country." Although found guilty, Hitler got off with a light sentence of five years (of which he only served nine months) thanks to sympathy from a generally conservative judiciary during the Weimar Republic.

Mein Kampf: Hitler on Modern Politics



Unfortunately, while *Mein Kampf* was a rambling, poorly written and barely readable pastiche of other people's ideas, it did provide the blueprint for much of modern mass democratic politics since the time of Hitler. Below are a few select passages that seem as timely today as they did in the 1930s.

"The driving force of the most important changes in this world had been found less in scientific knowledge animating the masses but rather in a fanaticism dominating them and in a hysteria which drives them forward."

"All effective propaganda has to limit itself to a very few points and use them like slogans...It has to confine itself to little to repeat this eternally."

"The masses do not understand unless they are made aware of their master. The cruder and more brutal your language, the larger the crowd who will be ready to listen to you."

"It would never come into their heads to fabricate colossal untruths and they would not believe that others could have the impudence to distort the truth so infamously."

Hitler's Cult of Personality



Politics as theater. While Mussolini may have created a template for the cult of personality, Hitler refined it and took it much further, largely because of technological advances in the decade between when the two dictators took power.

Much of Hitler's success came from mass rallies. The larger the crowd, the more one lost his individual identity and became easier to control. Hitler's annual party rallies at Nuremberg were textbook cases of how this was done, commanding crowds of up to one million people. Just the logistics of providing transportation, food, and toilet facilities for such numbers was a tribute to twentieth century technology.



But the real key to the experience was the public address system that made it possible for all those people to hear the fuhrer's message at the same time and chant back the appropriate responses as one being. Even people wise to Hitler's tricks and deceptive message found themselves drawn toward and wanting to lose themselves in that "vast bubbling cauldron" of humanity, as one witness put it. For those not privy to such psychological manipulation and how it could

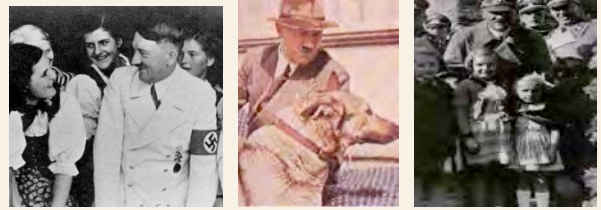
control their behavior, it was much harder to resist.



The Cathedral of Light (above), if not the first special effect for dazzling a crowd, certainly set a new standard for the era. Very simply, it was a series of spotlights arranged around the crowd and shining straight up into the sky. When Albert Speer proposed this idea in 1936, the military objected on the grounds it would require nearly all the spotlights in Germany. Speer countered that such a profligate display would give the world the impression that Germany had many more spotlights than it really did. While meaningless in itself, it created a larger-than-life experience that Hollywood still tries to improve on with each new movie to bring in the crowds.

Bringing their god to Earth. Creating a cult of personality involves what seem to be two mutually exclusive goals. On the one hand, the leader should seem like a god who is larger than life and in complete control of the situation, thus making people feel safe and secure under his care. Hitler's mass rallies and images on posters largely achieved that.

At the same time, he should portray himself as a common man in touch with the people, sharing their simple tastes while laboring tirelessly for their safety and comfort. He should be someone that people would like to have a beer with, someone they feel equal to, but also need to worship. Thus Germans constantly saw images of Hitler having lunch with the boys, Hitler with farmers, Hitler with factory workers, Hitler with the ladies (while maintaining a discrete distance so German men wouldn't feel threatened), Hitler with children, Hitler with dogs, and so on. Sound familiar?



For parades, Hitler liked to put women in the front lines, deeming them more prone to swoon in his presence or at his touch. A woman who merely shook hands with or touched Hitler would be treated like a saint by her neighbors back home.

Get Them While They're Young: The Hitler Youth



Taking a cue from the Jesuits, Hitler realized perfectly that gaining the loyalty of children when they are most impressionable made it easier to keep their loyalty for life. In addition to pushing this message in the schools, there was also the Hitler Youth, which provided paramilitary training that promoted gang loyalty among Germany's boys and youth.

During World War II, no one had a reputation for being more fanatical or vicious than the Hitler Youth. Unlike regular army units, special SS units of Hitler Youth would take no prisoners in battle, and bomber crews shot down over Germany prayed the regular army would capture them instead of the Hitler Youth, who would torture and kill them.

A special place for the women (i.e., at home having babies). As with ancient Sparta, the role of women in Nazi society was to give birth to and raise strong children for the master race. After coming to power, the Nazis even set up special homes to care for young unmarried Aryan women whose task was to get pregnant and have Aryan children.

And to prepare them for motherhood, there was the League of German Maidens, the female

counterpart to the Hitler Youth. Like the Spartans, they engaged in athletic training to build strong bodies for bearing strong children.



Nazi Math. Following are two math problems from a Nazi textbook laced with racist propaganda to reinforce brainwashing in the schools.

1) “To keep a mentally ill person costs about 4 marks a day. There are 300,000 mentally ill people in care. How much do these people cost to keep in total? How many marriage loans of 1000 marks could be granted with this money?”

2) “A bomber aircraft on take-off carries 12 dozen bombs, each weighing 10 kilos. The aircraft takes off for Warsaw, the international center for Jewry. It bombs the town. On take-off with all bombs on board and a fuel tank containing 100 kilos of fuel, the aircraft weighs about 8 tons. When it returns from the crusade, there are still 23 kilos left. What is the weight of the aircraft when empty?”

The Politics of Violence



Communists, Social Democrats, and even pacifists (above) scrambled to match the Nazis' media blitz of posters and other campaign tactics. However, they could never match the dynamic appeal the Nazis had to Germany's youth.

A personal account of a riot in Germany. The following account of a riot that occurred when Communists went to break up a speech & rally

by Goring can be seen as typical of the political violence that beset Germany in the early 1930s:

“A terrifying melee followed. Blackjacks, brass knuckles, clubs, heavy buckled belts, glasses and bottles were the weapons used. Pieces of glass and chairs hurtled over the heads of the audience. Men from both sides broke off chair legs and used them as bludgeons. Women fainted in the crash and scream of battle. Already dozens of heads and faces were bleeding, clothes were torn as the fighters dodged about amid masses of terrified but helpless spectators...”

The psychological impact of a bloody riot on a bystander, such as this German girl, Melita Maschman, is somewhat surprising and disturbing:

“...At one point somebody standing suddenly leaped from the ranks of the marchers and struck a man who had been standing only a few paces away from us. Perhaps he had made a hostile remark. I saw him fall to the ground with blood streaming down his face and I heard him cry out. Our parents hurriedly drew us away from the scuffle, but they had not been able to stop us seeing the man bleeding. The image of him haunted me for days.”

“The horror it inspired in me was almost imperceptibly spiced with an intoxicating joy. ‘We want to die for the flag’, the torch-bearers had sung...I was overcome with a burning desire to belong to these people for whom it was a matter of death and life... I wanted to escape from my childish, narrow life and I wanted to attach myself to something that was great and fundamental.”

A uniform by any other color... When the State, in an effort to curb the gang-style violence in the streets, outlawed the SA from wearing their distinctive brown political uniforms, they wore white shirts.

Hardly blind justice. During the Weimar Republic, police typically favored, and even helped, the Nazis, especially against the socialists

and communists who drew support from the working class poor who lived in districts associated with crime. For example, a Nazi fired a gun at a Social Democrat, Otto Buchwitz, during a meeting, which precipitated a brawl that destroyed every table and chair in the place. Not only did authorities ignore Buchwitz 's pleas for help, they sentenced him to three months in jail for the brawl.

This, in turn, cost him his parliamentary immunity, leaving him open to more harassment. Therefore, each day he would be harassed with threatening songs and slogans by eight to ten Nazis on his way to work, another twenty during lunch, and as many as two hundred going home.



Farewell to Romanticism. In the violent atmosphere of post World War I politics, the Romanticists' female image of the nation gave way to aggressive masculine images of Germany, most of them stripped to the waist to emphasize their strength.

The Politics of Violence



Communists, Social Democrats, and even pacifists (above) scrambled to match the Nazis' media blitz of posters and other campaign tactics. However, they could never match the dynamic appeal the Nazis had to Germany's youth.

A personal account of a riot in Germany. The following account of a riot that occurred when Communists went to break up a speech and rally by Goring can be seen as typical of the political violence that beset Germany in the early 1930s:

“A terrifying melee followed. Blackjacks, brass knuckles, clubs, heavy buckled belts, glasses and bottles were the weapons used. Pieces of glass and chairs hurtled over the heads of the audience. Men from both sides broke off chair legs and used them as bludgeons. Women fainted in the crash and scream of battle. Already dozens of heads and faces were bleeding, clothes were torn as the fighters dodged about amid masses of terrified but helpless spectators...”

The psychological impact of a bloody riot on a bystander, such as this German girl, Melita Maschman, is somewhat surprising and disturbing:

“...At one point somebody standing suddenly leaped from the ranks of the marchers and struck a man who had been standing only a few paces away from us. Perhaps he had made a hostile remark. I saw him fall to the ground with blood streaming down his face and I heard him cry out. Our parents hurriedly drew us away from the scuffle, but they had not been able to stop us seeing the man bleeding. The image of him haunted me for days.”

“The horror it inspired in me was almost imperceptibly spiced with an intoxicating joy. ‘We want to die for the flag’, the torch-bearers had sung...I was overcome with a burning desire to belong to these people for whom it was a matter of death and life... I wanted to escape from my childish, narrow life and I wanted to attach myself to something that was great and fundamental.”

A uniform by any other color... When the State, in an effort to curb the gang-style violence in the streets, outlawed the SA from wearing their distinctive brown political uniforms, they wore white shirts.

Hardly blind justice. During the Weimar Republic, police typically favored, and even helped, the Nazis, especially against the socialists and communists who drew support from the working class poor who lived in districts associated with crime. For example, a Nazi fired a gun at a Social Democrat, Otto Buchwitz, during a meeting, which precipitated a brawl that destroyed every table and chair in the place. Not only did authorities ignore Buchwitz 's pleas for help, they sentenced him to three months in jail for the brawl.

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The Reichstag fire: a classic false flag event.



The fall guy for burning the Reichstag was a half-blind and mentally challenged Dutch communist, Martin van der Lubbe, who was passing through Germany on his way back from the Soviet Union. According to one version of

the story, several Nazis overheard him in a Berlin café talking about how he was going to burn the Reichstag. A few nights later, when the Reichstag did go up in flames, the first people on the scene were Nazis led by propaganda minister, Hermann Goring, who immediately found and apprehended van der Lubbe. Although van der Lubbe admitted to the crime (for which he was beheaded in 1934), the Reichstag had burned down too fast for one person to set the fire. That, plus the speed with which the Nazis exploited the incident to blame the Communists, points the finger at them as the most likely perpetrators of this act of arson.



Marinus van der Lubbe, the half-blind Dutch Communist whom the Nazis used as the fall guy to blame the Communists for the Reichstag fire. He admitted to the crime and was beheaded in January 1934.

The start of the concentration camps. Having rounded up the Communist leaders, Hitler put them away in what was the beginning of the concentration camp system. These camps were first set up just to hold all the extra prisoners that the jails were unable to accommodate. However, they soon would come under the jurisdiction of Heinrich Himmler and the SS, gradually evolving into the death camps associated with the Holocaust.

The Reichswehr (German Army Between the Wars)

The Treaty of Versailles limited the German army to 100,000 men, but set no limits on their pay. As a result, the Reichswehr (German army under the Weimar Republic) paid its soldiers six times what any other country at the time did. This attracted the best and brightest of Germany who had to pass rigorous mental and physical testing to get in. This, in effect, created an army of 100,000 training officers who would help

Hitler rearm Germany quickly when the time came.

The Treaty of Versailles also stipulated that German soldiers be trained in animal husbandry. While beekeeping may have had limited military uses, training in handling horses still had great value. When the German army invaded Russia in 1941, modern tank divisions may have spearheaded the invasion, but behind it were 750,000 horses pulling the massive supplies the army needed.

Not everything was as it seemed with the Reichswehr. Since Germany was prohibited from having tanks, heavy artillery, and an air force, soldiers practiced with wooden artillery and cardboard mockups of tanks (below) and by flying gliders. Therefore, when Hitler's rearmament began, German soldiers were already familiar with how to use the real weapons they now had.



Hitler's Olympics



The 1936 Olympics, which were held in Berlin, were seen by Hitler as an opportunity to show off the New Germany and its Aryan super race. However, even the Nazis realized that, for the sake of public image, they would have to tone down the worst sorts of public abuse of the Jews. Therefore, a public campaign was launched to get Germans to "lighten up" on the Jews. Anti-Semitic signs and posters were removed, although the CBS correspondent, William Shirer, reported a road sign saying, "Drive carefully! Sharp curve! Jews 75 miles an hour!" This "more humane" treatment of the Jews had Hitler worried that it might undermine German hatred of the Jews.

While the Germans won the most medals, the most famous aspect of the games was the African-American athlete, Jesse Owens, winning a record four gold medals in track and field. Having watched his "superior" Aryan athletes being shown up by a non-Aryan, Hitler claimed that it wasn't fair for Germans to have to compete against wild animals.

The 1936 games were the second to use the ritual lighting of the Olympic torch and the first to have an Olympic relay bring the flame from Olympia, Greece. They were also the first games to have live television coverage (below), broadcasting over seventy hours of live events to special viewing rooms in Berlin and Potsdam and a few private television sets. An estimated 150,000 people watched the Olympics this way, although German sets only had a resolution of 180 lines compared to British TV with 405 lines.



Hitler and the churches

Historically, religion, calling upon a higher authority, has often been the one source of opposition to tyranny. However, in Germany, there was a catch. Although illegal under the Weimar constitution, the state had largely subsidized the Catholic and Lutheran churches, making them somewhat dependent on the state. Therefore, Hitler used this funding to pressure the churches to abstain from opposing Nazi policies. In many cases, the churches became major supporters of Nazi policies.

The Lutheran press started referring to the Jews as the "natural enemies" of Christianity. The Catholic Church even agreed to an oath of loyalty similar to the Civil Constitution of the Clergy during the French Revolution: "Before God and on the Holy Gospels, I swear and promise 'as becomes a bishop' loyalty to the German Reich and to the state . . . and to cause the clergy of my diocese to honor it."

Some clergymen resisted Nazi, but most caved in to the pressure. After World War II, there was a major split within the Lutheran Church in Germany between those who had followed state directives and those who had not. Eventually the two sides were reconciled and peace was restored in the church.

Nazi Cars and Freeways



The Great Slug Bug Scam. The Volkswagen (literally “people’s car”) was supposedly Hitler’s brainstorm, the idea of making a cheap reliable car for all the German people. It was also one of the Nazis’ biggest scams. Workers could give part of each paycheck toward buying one of these neat little cars when they became available. The problem was Hitler used all the money to pay for a new navy and no Volkswagens rolled off the assembly lines until after WWII.

The Autobahn was a massive public works project that provided thousands of jobs and a nice superhighway for all those Volkswagens that were never made. Luckily it could also be used for moving tanks quickly in wartime. When Eisenhower saw it at the end of World War II, it would inspire him to create for our present interstate highway system.



Hitler and the Jews

Hitler reserved his most venomous attacks for the Jews, whom he imagined had kept him out of art school and betrayed Germany in the war. He started slowly, subjecting Jewish merchants to

boycotts to drive them out of business. From 1933 to April 1938 the number of Jewish owned businesses in Germany declined from 100,000 to 39,552. The number of Jewish owned retail businesses went from 55,000 to 9,000.

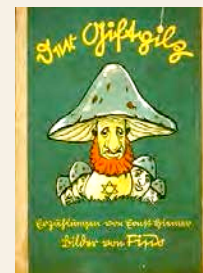
His Nuremberg Laws in 1935 subjected Jews to an ever-growing number of restrictions and acts of violence, depriving them of citizenship and the right of intermarriage, banning them from all but the most menial occupations, forcing them to wear a distinctive Star of David to mark them for public abuse, confiscating their property and forcing them to live in ever more crowded ghettos.



Left: A chart showing different degrees of Jewishness that determined the legal rights of each group.

Right: A German woman and Jewish man are publicly humiliated for violating the Nazi law forbidding marriage or dating between Aryans and Jews.

Nazi Children’s Literature



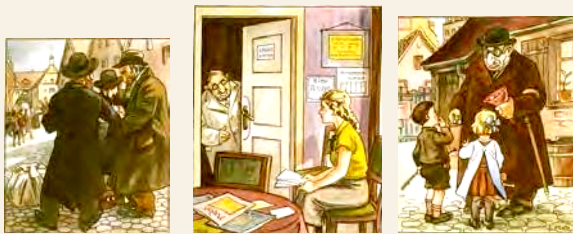
*Cover of the 1935 anti-Semitic children’s book, **The Poison Mushroom**,*

In addition to the Hitler Youth, Nazis also took over the day-to-day education of Germany’s children from an early age. Following are pictures from Nazi children’s books designed to teach Aryan children to hate the Jews.



Left: A mother compares Jews to poisoned mushrooms that are often hard to tell from edible ones.

Right: "Money is the God of the Jews"



Stereotypes of Jews as dirty, sexual predators, and child molesters



"Ugly" Jewish children driven from school as the cute Aryan children mock them from the book, *Trust No Fox in its Green Meadow and No Jew on his oath*.

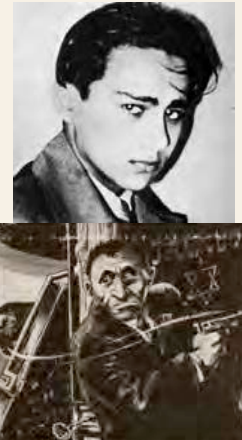
Kristallnacht (11/9-10/1938)



One of the most notorious acts of persecution was the Kristallnacht, or Crystal Night (11/9-10/38), named after the shattered windows of Jewish merchants' shops that were looted that night. Kristallnacht was triggered by the murder of Ernst Rath, a German civil servant in the German embassy in Paris, by 17-year old Herschel Grynszpan. His father, Zindier Grynszpan, had just sent him a letter telling how the German government had rounded up 18,000 Polish Jews, including children from the streets, hospital patients, young and old and herded

them onto trucks and trains and then dumped them across the Polish border with only 10 marks (about \$4) apiece.

Enraged by this, Herschel went to the German embassy with a pistol in order to kill the ambassador. Since the ambassador was not in, Grynszpan killed the desk clerk, Ernst von Rath.



Herschel Grynszpan and a Nazi caricature of him used to stir up the Kristallnacht riots

Hitler immediately promoted Rath (who, ironically, was under investigation for being a Jew), saying, "The SA should be allowed to have a fling." He had his propaganda minister, Joseph Goebbels, stir up public hysteria against the Jews. The pro-Nazi paper, *Der Sturmer*, showed a drawing of Rath on a cross like Jesus, with the Jewish Grynszpan beneath the cross, while the SS ordered a "spontaneous" pogrom across Germany without any police interference.

On November 9, 1938, the fifteenth anniversary of Hitler's Putsch where sixteen "martyrs" died, a large demonstration was held, with the crowd fired up and "present" for each martyr as his name was announced.

At 2 AM (November 10) the real violence started. Thousands of shops were looted or destroyed. Over 1,000 synagogues were burned, while firemen just stood by to protect German property. Likewise large crowds stood by and watched. The police merely directed traffic, although some arrested Jews to protect them from the mob. Tens of thousands of less lucky ones were thrown into concentration camps. The

violence would continue for several days, killing 236 and seriously injuring 600 more.



As a public humiliation, Jews were often forced to shave each others' beards. In the following months, Jews had to turn over any precious metals, radios, or weapons they owned, lost their drivers' licenses, had their pensions reduced, were settled in ghettos, and subjected to curfews.

Jews, not their insurance companies, had to pay for all the property damage, since all the destruction was supposedly their fault.

In a mockery of justice, twenty-four Brownshirts were convicted for murder and given a reprimand. Six more accused of rape were convicted and sentenced to ten years prison, not for rape, but for violating Nuremburg Laws against Aryans having sex with Jews.

Three days after Kristallnacht, there was a meeting of top Nazis to lay the foundations for what would be known as the Holocaust.

World protest, or the lack of it. Around this time, Joseph Goebbels announced, "If there is any country that believes it has not enough Jews, I shall gladly turn over to it all our Jews."

There were some takers, but the U.S. was not one of them, calling its ambassador home for consultation, but continuing trade with Germany. The U.S. had already been criticized for the way it turned a blind eye to Hitler's racist policies and attended the Berlin Olympics in 1936.

However, some countries, notably Britain, the Netherlands, and Belgium, admitted several thousand refugee children, the latter two countries trying to hide them in the midst of the general population. It was easier to identify Jewish boys than girls because the Jews practiced circumcision.



Some of the 14,000 German Jewish refugees resettled in Shanghai

While there was a movement in the U.S. to admit refugees, there was a stronger movement to prevent this by isolationists worried about the number of immigrants, America's racial purity, and getting involved in European affairs. Congress was backlogged with sixty anti-alien bills, one of which proposed to ban all immigrants for ten years. As late as December 1944, Americans believed the Nazis had only killed about 100,000 Jews. Thus there were no efforts to bomb the ovens of Dachau and Auschwitz, although the administration knew what they were being used for.

Between 1938 and 1945, only 250,000 Jewish refugees were let in to the U.S. while six million died in the Nazi death camps.

"Jewish physics". Many Jews, including Albert Einstein, left Germany, costing it many of its brightest minds. The horror stories they took with them led to growing fears of Nazi aggression and eventually World War II. They also took with them talents that the Nazis could have used but claimed were part of a worldwide plot to pollute science and destroy civilization. Einstein's theory of Relativity was especially singled out by one Nazi writer as being: *"directed from beginning to end toward the goal of transforming the living-- that is the non-Jewish-- world of living essence, born from mother earth and bound up with blood, and bewitching it into spectral abstraction in which all individual differences of peoples and nations, and all inner limits of the races, are lost in unreality, and in which only an unsubstantial diversity of geometric dimensions survive which produces all events out*

of the compulsion of its godless subjection to laws."

Wilhelm Mueller, in his book, *Jewry and Science*, claimed the worldwide acclaim given to Einstein for his theories was really only rejoicing over "the approach of Jewish world rule which was to force down German manhood irrevocably and eternally to the level of the lifeless slave."

"...the Jew conspicuously lacks understanding for the truth...being in this respect in contrast to the Aryan research scientist with his careful and serious will to truth...Jewish physics is thus a phantom and a phenomenon of degeneration of fundamental German physics."-- Nazi, Prof. Philipp Lenard

From 1905 to 1931, ten German Jews won Nobel Prizes in science. Hitler would kill six million more.

135. THE ROAD TO WORLD WAR II (1919-39)

Introduction. By far, the most destructive aftershock of World War I was World War II, coming a mere 20 years after the Treaty of Versailles. While the rise of the Nazis in Germany in the 1930's generally took center stage, events elsewhere, some of them as far away as East Asia, also contributed to the outbreak of war. Three main factors, all resulting from World War I, would lead to war: the Treaty of Versailles, the Great Depression, and the Russian Revolution.

France, Britain and the Treaty of Versailles. Along with leading to the rise of the Nazis, the Treaty of Versailles had quite different results on France's and Britain's relations with Germany and each other. Since they shared a long land border with Germany and had suffered a great deal in the war, the French were much more nervous about a resurgent Germany and wanted to keep its power limited. Therefore, in 1935, when Hitler announced that Germany would rearm (they had been doing so secretly for two years), France signed a series of defensive pacts with Germany's neighbors to contain any future aggression by Hitler. Among these pacts was one with the Soviet Union, which France saw as the primary counterweight to German power.

Britain, however, feared Stalin as much as it did Hitler, and signed a naval pact with Germany giving it the right to build a surface fleet 35% as big as Britain's and a submarine fleet as large as Britain's. While Britain apparently did not feel threatened by this, France did. Consequently, the two powers rarely cooperated effectively during the series of crises that occurred in the late 1930s, providing just the sort of disunity and lack of cooperation Hitler wanted.

Aggravating the situation was a sort of shell shock among the British and French caused by the horrible memories of World War I. Just as they had been too eager to go to war in 1914, now they were overly cautious and willing to appease aggressors in order to avoid a war. Unfortunately, dictators such as Hitler thrived on such weakness. Just as the lesson of 1914 was that too much aggression can lead to war, the lesson of 1939 would be that war

can just as easily result from the appeasement of aggression.

The Depression and the Far East (1931-41). The Depression also had unsettling effects outside of Germany. Among other things, it seriously hurt Japan, whose economy depended heavily upon trade to pay for resources and food for its burgeoning population. As tariffs went up and the Depression deepened, Japan grew desperate for resources. This desperation led to a military takeover of the government, somewhat reminiscent of the Fascist dictators in Europe. In 1931, the Japanese seized Manchuria from China on the flimsy pretext of setting up the "independent" state of Manchukuo under Japanese "protection." China protested to the League of Nations, but the League had no power of its own to act against aggression, especially if that aggression were half a planet away. Therefore, Japan kept Manchuria and a foothold in China.

Even before this, China was already deeply mired in its own problems. European and Japanese aggression in the late 1800's had helped lead to turmoil in Chinese society and government. In 1912, a revolution replaced the last Chinese emperor with a republic under the western educated Sun Yat Sen. However, China's experiment in democracy floundered, and, after Sun Yat Sen's death, Chinese politics disintegrated into a three-way struggle for power between the Nationalist government's leader, Chiang Kai-shek, various independent warlords in the countryside, and the Communists led by Mao Zedong.

The Japanese seizure of Manchuria presented the Chinese government with a dilemma: fight Japan right away or crush the Communists and warlords first and then face the Japanese with a united front. Chiang Kai Shek, being strongly anti-Communist, decided to unify China first. For several years he waged intensive warfare against the Communists whom he badly damaged, but failed to destroy. However, Chiang's generals, anxious to turn against Japan, forced him to ally with Mao against the common enemy. Japan, fearing a united China, told the Nationalists to join it against the Communists or it would take "all the steps necessary to assure peace." In July 1937, it "assured" that peace by invading China.

The Chinese army was no match for the more mechanized Japanese forces, which relentlessly and brutally swept across the eastern seaboard of China. Cities were bombed and strafed mercilessly, while their populations were massacred with uncontrolled ferocity. Reeling from these losses, the Chinese switched to a strategy of trading space for time by retreating into the vast interior of China. This drew the advancing Japanese forces further and further inland and stretched their lines to the limit. The war now settled down to a costly stalemate that burnt, bled, and bent China, but could not break it.

As a result, the Japanese decided to look elsewhere for easier conquests. In 1939, they briefly turned north against the Soviet Union. However, defeat at the hands of Soviet forces in a short but sharply fought conflict plus a surprise pact by Japan's ally, Hitler, with Stalin to carve up Poland, convinced Japan to go elsewhere. Therefore, it turned to easier and more lucrative conquests in South East Asia. This involved attacking the colonies of France, Britain, and Holland, all of who were too preoccupied with the war then raging in Europe to effectively stop Japan.

This also brought Japan face to face with the United States. When the United States threatened economic sanctions against the Japanese if they did not pull back, Japan launched a surprise attack on the American naval base at Pearl Harbor in the Hawaiian Islands (12/7/1941). From the American perspective, this was the beginning of the Second World War in the Pacific, although the Chinese and others saw it as starting in 1937 with the Japanese invasion of China. Either way, the war in Asia was on.

Ironically, Japan's decision to turn south rather than north may have saved the allied cause in World War II. If Hitler had kept his Japanese allies informed on his intentions to attack Russia in 1941, they could have tied down enough Soviet forces in the Far East to deny Stalin vital reinforcements that would be a significant factor in the ultimate Russian victory against Germany. And, of course, a German victory against Russia would have seriously altered the course of World War II and subsequent history.

The Russian Revolution and Soviet Union. That leaves Russia, the other big power that should have been opposed to the Fascists. Unfortunately,

relations with the Western powers were poisoned by bitterness over Allied intervention during the Russian Civil War and the deep ideological differences between capitalism and communism. As a result, there was no concerted action between Russia and the West against Fascist aggression. All these factors, the disunity between France and Britain, Russian hatred and distrust of the West, and the unchecked aggression of Japan in the East combined to expose the weakness and disunity of the former alliance against Germany.

The cycle of aggression and the road to war in the 1930's. As a result, the weakening of the old alliance triggered a vicious cycle of encouraging Fascist aggression which the Western democracies failed to react to, thus causing more aggression, and so on. This pattern was sadly played out several times in the 1930's before the West finally took its stand.

It started in 1935 when Hitler announced that Germany was going to rearm itself in defiance of the Treaty of Versailles. (Actually he had been secretly expanding German forces since 1933.) Since he justified this with the principle of national self-determination, Britain and France did nothing to stop him. This merely encouraged more aggressive actions.

Consequently, in 1935, Mussolini sent Italian forces into Ethiopia, using only the weakest of excuses to cover this blatant act of aggression. When the League of Nations threatened economic sanctions against Italy, Mussolini said a boycott on oil (which would have crippled his war machine) would mean war with the League's members. The League, without any real force to back it up, fell for this bluff. Britain wanted to stand up to Mussolini. However, France, still angry about Britain's naval pact with Germany and hoping to stay on good terms with Italy as a counterweight to growing German influence in Austria, refused to support Britain. As a result, Ethiopia fell as the world just stood by and watched.

Therefore, in 1936 Hitler defied the Treaty of Versailles again by moving German forces back into the Rhineland, the demilitarized part of Germany. This especially agitated France, who wanted British backing but received none. Since

German rearmament was just starting, the German generals leading the troops into the Rhineland were under secret orders to turn back if they met any French resistance. They met no such resistance. Once again, Hitler got his way.

The aggression continued when the dictators, including Stalin got the opportunity to intervene in the Spanish Civil War. In 1931, unrest had led to the overthrow of the corrupt monarchy still ruling Spain. At first, a fairly liberal and democratic government took power. But, without a strong middle class and economy, riots and turmoil resurfaced. In 1936, the Fascist Phalangists, led by General Franco, seized power and started the Spanish Civil War.

Any civil war is a terrible thing, but Germany, Italy, and the Soviet Union chose to intervene and make the war in Spain much worse. Hitler and Mussolini backed the Fascists, known as the Nationalists. Stalin threw his support behind the Republicans, also known as Loyalists, who had many socialists and communists in their ranks. The result was a disaster for Spain, as terrorists from both sides murdered civilians and leaders from the opposition, and the German air force practiced the new tactics of aerial bombardment on Spanish towns.

The most famous of these atrocities, immortalized by the Spanish painter, Picasso, was the bombing of the Spanish town of Guernica, where over one-third of its population of 7000 were killed or maimed just because they were in the way. While that was a mere fraction of the millions that would die from aerial raids in the Second World War, it shocked the world since it was documented on film and also because it symbolized a sinister new turn in modern warfare. In the end, the Fascists won again as the Western democracies just watched from the sidelines. The question was: how much further could Fascist aggression go unchallenged? Hitler seemed determined to find out.

Hitler, further encouraged in his contempt for the Western democracies, next moved on to an even bolder objective: the *Anschluss* (unification) of Austria with Germany. Hitler, himself being of Austrian birth, claimed the Austrians were Germans whose drive to achieve national self-determination was being stifled by being kept separate from the rest of Germany. Whether right or wrong, this logic

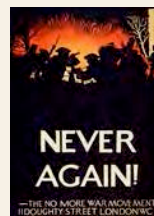
helped paralyze France and Britain into inaction once again. Therefore, Austria became part of Germany in 1938 whether the Austrians liked it or not.

The next target of Nazi aggression was the Sudetenland, a part of Czechoslovakia with a large German population along with much of the country's industry and defensive fortifications. Raising the cry of national self-determination once again, Hitler threatened war with anyone who got in his way. A conference between Britain, France, Italy, and Germany met at Munich where the Fascist dictators bullied and persuaded France and Britain to agree to the Nazi takeover of the Sudetenland. Convinced, or at least wanting to believe, that this was all Hitler wanted and that he also wanted peace, they gave in to him once more, without even consulting their Czech allies. They figured this was all Hitler wanted.

In March 1939, Hitler swallowed up the rest of Czechoslovakia without French or British resistance. This had two effects. First, France and Britain were finally realized Hitler would not stop on his own and were determined to stand up to him the next move he made. Unfortunately, at the same time, Stalin was convinced that France and Britain would do nothing to stop any further Nazi aggression in Eastern Europe. Therefore, he signed a pact with Hitler (August, 1939) that would carve up Poland between them.

On September 1, 1939, believing Britain and France would do nothing to stop him, Hitler invaded Poland. Two days later, France and Britain declared war on Germany. A mere twenty years after the end of the First World War, the Second World War had begun.

Never Again



In order to understand what went wrong in the 1930s, we must appreciate the collective psychological “shell shock” that World War I had left in its wake, especially on Britain and

France. Just as they had been too eager to go to war in 1914, now they were overly cautious and willing to appease aggressors in order to avoid a war.

Unfortunately, dictators like Hitler thrived on such weakness. Just as the events of 1914 had shown that too much aggression can lead to war, the events of 1939 would show that war can just as easily result from appeasement and giving in to aggression.

Below: Signing the Kellogg-Briand Pact in 1928 to renounce war. Eventually 63 countries, including Germany, Japan, and Italy, would sign this pact in the hope it would ensure peace.



It didn't work.

The Rise of Mao Zedong



With the communists was their future leader Mao Zedong, a man who, in terms of sheer numbers, was responsible for more deaths than anyone else in history: over 70,000,000 people.

Mao is popularly seen as one of the ideological leaders of communism. In fact he wasn't even a very good communist. According to other communists of the time: "He is extremely devious and sly, selfish, and full of megalomania. To his comrades, he orders them around, frightens them with charges of crimes, and victimizes them. He rarely holds discussions about Party matters...Whenever he expresses a view, everyone must agree, otherwise he uses the Party organization to clamp down on you, or invents some trumped-up theories to make life absolutely dreadful for you.... Mao always uses political accusations to strike at comrades. His customary method regarding cadres is to use

them as his personal tools. To sum up...not only is he not a revolutionary leader, he is not a ...Bolshevik."

He wasn't much of a team player either. Despite propaganda about the so-called "Autumn Harvest Uprising" led by Mao in 1927, no such uprising ever occurred. Instead, when Zhou En-lai led a mutiny of some 20,000 Communist soldiers in the Nationalist army, Mao talked 1,500 of them into joining his gang of bandits, terrorizing the populace in Hunan's Jinggang Mountains.

He was married four times. His first wife died young. She was lucky. He abandoned his second wife to the enemy who killed her. After mistreating and ignoring his third wife, he sent her to Russia, where she went insane while he married again. His fourth wife, Jiang Qing (AKA Madame Mao) was as much of a monster as he was, which made her useful for attacking his enemies before finally betraying her to his enemies to save his own life. Mao was also a notorious womanizer, having his men procure him an endless string of dates, most of whom he infected with venereal disease.

In 1931 most communist leaders wanted to march westward to link up with another Red force, but Mao wanted to march northeast and got his way. However, he took two-thirds of the army southeast to seize Zhanzhou where he seized books and money for his own personal treasure, hiding it from the party in a cave. In addition, he advertised the capture of Zhanzhou to impress Stalin, which it did. From this point on, Stalin would back Mao against other Chinese communist leaders. This was the real reason for Mao's eventual triumph.

When Chiang Kai-shek was advancing against Zhanzhou with overwhelming forces, party leaders told Mao to retire before his army was crushed. Again Mao disobeyed and stayed so long for his own personal reasons that, when he finally did leave, he needlessly lost thousands of communist troops from battle, heat and disease. Then, he demanded and got (with Stalin's backing) the top post in the army.

Later, he was sent to relieve two bases, but he soon quit fighting and the Nationalists took the bases. The other generals relieved him of command and wanted to expel him from the party, but Stalin vetoed that. In retaliation for being relieved of command, Mao left for his luxurious villa where he ran a competing headquarters, telling his followers to evacuate the front lines and not to fight the Nationalists.

Although told by Stalin to cooperate with Mao, the new party leader, Po Ku, did dismantle Mao's alternate chain of command and unify the party, leading to the first major victory against Chiang Kai-shek and the Nationalists in March 1933. Mao moved back to CCP (Chinese Communist Party) headquarters and, for the time being, was more cooperative with the other leaders, since Stalin insisted the CCP include Mao in its decisions.



Mao got revenge against Po Ku (far left on the right picture) by having him deleted from this photo, a childish prank he may have learned from Stalin.

In 1934, Chiang mobilized 500,000 men to annihilate the Reds. Po Ku recognized the danger and tried to get rid of Mao by declaring him "ill" and asking Moscow to let him send Mao there to recuperate, but Stalin refused. Therefore, Po Ku assigned Mao to the rear guard as a sacrifice, but Mao turned up at headquarters to ensure his escape. In a hypocritical gesture of generosity, he even turned his secret treasure over to the Party, since he couldn't take it with him. Thus began the Long March.

The myth of the Long March (1934-35). In order to understand the Long March, we need to understand the complex diplomatic situation of the time. Stalin's big fear was that Japan would conquer China and use its vast resources and manpower to attack him. Therefore he saw the

survival of Chiang's Nationalists, the main power in China at this time, as vital to his own survival. By the same token, good relations with and the survival of the CCP (Chinese Communist Party) were vital to Chiang for keeping Moscow's favor and support against Japan.

Therefore, instead of trying to destroy Mao's forces, which he easily could have done, Chiang opened a path for them to the north. Along the way they could terrorize and local landlords who would submit to him for protection. Chiang would even broadcast his army's movements openly so the Reds could avoid his forces and move along his chosen path.

This was part of a deal in which Stalin agreed to release Chiang's only son, Chiang Kuo, held hostage by Stalin since 1925. The significance of this hostage situation must be seen in light of the importance of sons in Chinese culture and the fact that Chiang had venereal disease, making him unable to have any more sons. However, claiming Chiang's son wanted to stay in Russia, Stalin didn't give him back yet. That way he could further blackmail Chiang.



General Shao Li-tzu, the Communist mole who delivered Chiang's son to Stalin in 1925, giving him leverage over Chiang's policies for years, most notably forcing him to let Mao's army pass unmolested during the Long March.

For nearly everyone else, it was the Long March, but for Mao it was the Long Ride. Even the posters show him in a commanding position on horseback, although photos show a much less dramatic pose. At least Mussolini had the sense to crop the horse's handler out of the picture. In reality, Mao usually rode in a litter, even in the

mountains where his litter bearers had to climb on their knees, scraping the skin off their bones. Not surprisingly, Mao was not well liked by his soldiers.

The most fabled event of the Long March, the crossing of the Dadu Bridge, is just that, a fable. According to Mao's version, a large Nationalist force was defending the opposite side of a gorge, with a narrow suspension bridge as the only way across. Even worse, Chiang's troops had removed most of the bridge's floor slats. Nothing daunted, a brave force of Communist commandoes managed to cross the bridge in the face of enemy fire, secure the other side of the gorge and ensure safe passage for the rest of their forces.



In fact, while posters commemorate the dramatic storming of the bridge by brave Communist commandos, there was no opposition to the crossing, and the bridge was completely intact. Even Mao's successor, Deng Xiaopeng, admitted in an interview in 1982 that the whole incident was made up.

The Long March was actually several marches by different Communist forces trying to link up in the North. Leading one force was a tough and ambitious general Chang Kuo-t'ao, whom Mao (in the midst of intrigue against the party leader, Po Ku) saw as another threat to his own power. Therefore, he felt he had to delay entering Sichuan until he had firm control of the CCP. Using his ally and stooge, Chou En-lai, Mao convinced the rest of the party leaders to ambush a strong Nationalist force tailing them from Sichuan.

However, this was a ruse where Mao deliberately led the PLA (People's Liberation Army) into a disastrous defeat at Tucheng while watching safely from a mountaintop. Ten percent of the PLA (4,000 men) was lost at Tucheng, but Mao used this defeat to convince CCP leaders they were too weak to enter Sichuan, thus buying

himself time to seize control of the Party and prepare to confront Chang Kuo-t'ao.

Thanks to Mao's strategy, the Reds retreated westward in disarray, plagued by cold, hunger and exhaustion. Finally, a consensus of the other generals voted to press into Sichuan, which Chiang had still left wide open. However, Mao, backed by his ally/stooge and new party head, Lo Fu, got them to turn back, dumping their sick and wounded in the snow where most of them died.

Still, instead of going into Sichuan, Mao led his army around in circles for two more months, progressively exhausting local food supplies with each subsequent visit. For Mao his strategy was a "tour de force". For the Communists it was a disaster.

Chiang, mystified by Mao's erratic strategy, redoubled his efforts to drive the Reds along the open path north into Sichuan while Mao kept trying to force his way south to avoid confronting Chang Kuo-t'ao and his powerful army. Chiang's air force bombed and strafed the PLA, forcing it to abandon its medical supplies and disband its medical corps. One woman even gave birth while running from one of these attacks.

Finally, in April 1935 Mao agreed to enter Sichuan. Not only was there no resistance there, Chiang even left caches of money and food to lure them in. When Mao stopped to besiege Huili, Chiang began bombing again to force them further north. By now Mao had lost 70,000 out of his 80,000 men, who had marched an extra 2,000 kilometers on lacerated feet, all to buy him time for his showdown with Chang Kuo-t'ao.

Mao Seizes control of the Party (1935). In June 1935, the armies of Mao and Chang Kuo-t'ao linked up in Shanxi in the North while Chiang gained control of the southwestern provinces. While Mao's policies had cost his army 70,000 out of 80,000 men, Chang Kuo-t'ao's army had grown from 20,000 to 80,000 and was in good shape and well equipped. However, Mao did have the party leaders Lo fu, Chou en Lai and

Po Ku allied with him in secret against Chang Kuo-t'ao. This was because they had supported Mao's strategy and thus would share either the blame or "credit" for the previous year's disasters, depending on who won the coming struggle for power and wrote the history books. Part of their strategy was political smearing of Chang Kuo-t'ao for "warlordism" and "political backwardness".

However, for complete victory, Mao needed to do two things:

- 1) Wreck Chang Kuo-t'ao's army; and
- 2) Win the race to the Soviet border to feed his story to Stalin and claim his support as head of the Communist party in China.

Mao accomplished both these in an especially devious way. The two leaders' armies took separate paths northward. Mao's path was actually much harder, hampering his army with swamps, fog, storms, quicksand poisonous mud and, at night, below-freezing temperatures. Many remembered these seven days as the worst part of the Long March.

After a week of this, Mao, backed by Party leaders, ordered Chang Kuo-t'ao to reverse direction and follow his path. Chang Kuo-t'ao retraced his steps south and followed Mao's route for two days. Then, seeing how ridiculous this was, he stopped to retrace his steps back to his original route. However, two reversals of direction and the time it wasted had put Mao in the lead in the race to the Soviet Border.

When Chang Kuo-t'ao ordered his officers in Mao's column to rejoin him, Mao spread the rumor that Chang Kuo-t'ao was trying to kill him. Duped by this rumor, Chang Kuo-t'ao's officers followed Mao in the race north. Being a good party member and unwilling to kill fellow communists, Chang Kuo-t'ao let them go. To gain further advantage, Mao even leaked the position of Chang Kuo-t'ao's larger army to Chiang so he could attack it. Mao won the race to the border, but with only 4,000 troops left. However, his strategy paid off as Stalin declared him the leader of the CCP (Chinese Communist Party).

Mao still felt he had to dispose of Chang Kuo-t'ao's army. Therefore, he sent it across 1500 kilometers of desert filled with hostile forces to collect a stash of Soviet weapons. Nearly all of Chang Kuo-t'ao's men died after Mao marched them back and forth with a stream of contradictory orders. Out of Chang Kuo-t'ao's 21,800 men, only 400 survived, whom Mao later had buried alive. Incredibly, Mao even managed to lay the blame on Chang Kuo-t'ao and have his own officers denounce him. And just to rub salt into the wound, Mao even had Kuo-tao's 12-year-old son cast as the Trotskyite villain in school play.

Chang Kuo-t'ao eventually defected to the Nationalists and died in Canada in 1979

Mao had one more potential rival to dispose of: Liu Chih-tan the moderate and popular leader of the local Communist party in Shanxi. Mao used Liu Chih-tan's moderate views to charge him as a "right winger". Liu Chih-tan, taken off guard and not wanting to split the party or defy its leader, submitted to Mao who "purged" Liu Chih-tan's followers with torture and executions, but let the popular leader go for now. Later Liu Chih-tan was killed while fighting Nationalist forces, although most likely one of Mao's men shot Liu Chih-tan in the back.

The abduction of Chiang Kai-shek (1936). Chang-Hsueh-liang (AKA the Young Marshall) was the most powerful warlord in Shanxi province. Although he had good relations with the Nationalist leader, Chiang Kai-Shek, he wanted to rule all China and offered to join Stalin and the CCP against Chiang. Mao favored such an alliance, but Stalin didn't trust him and strung him along.

When Nationalist forces in Shanxi heavily defeated Mao, Hsueh-liang, seeing this as a chance to help the CCP and get Moscow's favor, kidnapped Chiang. Mao knew Stalin, wanting all Chinese parties reconciled against Japan, would oppose this. Nonetheless, he led Hsueh to believe Stalin favored it, especially after Japan allied with Hitler in the Berlin-Tokyo Axis (1936).

Mao wanted Chiang executed, hoping to provoke war between Hsueh-liang and the Nationalists. However, Stalin condemned the act as helpful to Japan and even started suspecting Mao was a Trotskyite cooperating with Tokyo. When Stalin ordered Mao to get Chiang released, Mao pretended not to get the cable or that it was garbled, using the delay to send Chou En-lai to persuade Hsueh to kill Chiang. By this time Hsueh, realizing Mao's game and that he had to release Chiang, put himself in Chiang's custody under whose protection he lived until he moved to Canada where he finally died in 2001.

Meanwhile, Chiang agreed to a truce with the CCP if Stalin would return his son. In June 1937, Stalin made Mao recognize the Nationalist government and agree to cooperate with it against Japan. In return, Chiang gave the CCP land in Shanxi with Yen-an as its capital and paid for the support of 46,000 Red troops.

Almost overnight, the CCP's status had risen from that of mere bandits to that of a major opposition party.

Perpetuating the Mao Mythology



Edgar Snow with Mao

Another common myth is that Mao's Communists were the main group fighting the Japanese, allying with Chiang Kai-shek to create a common front against the invaders.

The blame for this perception mostly rests with an American author, Edgar Snow, and his book *Red Star Over China*, published in 1937. Snow was one of the few Westerners given access to Mao at this time. In fact he most likely was planted there by Chiang as part of the deal with Stalin to get his son released.

Snow, like many Westerners during the Depression had socialist sympathies and thus wanted to believe what Mao told him. His book

was based on heavily manipulated and edited interviews with Mao, whom he called "direct, frank, simple, undeviating". Consequently, Snow's book whitewashed Mao's reputation and won him widespread support in the West.

This would have serious repercussions on US policy once Civil War resumed after Japan was defeated in 1945.

Mao's real role in World War II. War forced Chiang to allow Mao his autonomy in exchange for help against Japan. Instead, Mao's strategy was to attack Nationalist forces instead of the Japanese and to follow in the wake of the Japanese advance to take over the countryside, since the Japanese only had enough forces to hold the cities. The CCP would also exploit Nationalist defeats by rounding up recruits from their beaten army.

Although Stalin pushed the CCP to fight the Japanese, the only major battle against Japan for years was an ambush of a Japanese convoy at Pingxingguan in 1937 that killed some 200 Japanese soldiers. And Lin Biao, who fought this engagement, was acting in defiance of Mao's orders.

An Alternate View on how World War II in Asia Began



In addition to the standard textbook version, there is a very different view of how war started between China and Japan. In their monumental biography, *Mao: The Unknown Story*, Jung Chang and Jon Halliday, using recently uncovered documents, describe how Stalin actually manufactured the war as a diversion for Japan as follows.

Once in control of Manchuria, Japan apparently did not want to expand war to all of China, which it saw would be a monumental task. Stalin, however, did want it expanded to divert Japan's attentions away from attacking him.

This was especially crucial in the event of war with Germany.

The key to Stalin's strategy was a Communist mole (agent), Zhang Zhi-Zhong (pictured above), who was also commander of the Nationalist garrisons protecting Shanghai and Nanjing in the south. Stalin had Zhang urge Chiang to attack a 1500 man Japanese force in southern China.

Chiang would only agree if Japan struck first. Therefore, Zhang manufactured an incident where he killed two Japanese soldiers and then their Chinese prisoner, making it look like the Japanese had killed the Chinese prisoner and that Zhang's men had retaliated. Japan, not wanting war in the South, tried to defuse the situation through diplomacy. However, Zhang kept pushing for war and attacked the Japanese by air (8/14) until Chiang told him to stop. Zhang then faked a press release that Japan had shelled Shanghai, bringing public opinion to his side and finally forcing Chiang to agree to all out war.

China's "Holocaust": The Rape of Nanjing (December 1937-February 1938)



In December 1937 Japanese forces took the city of Nanjing. What ensued there, one of the worst atrocities in history, is what one might call a "soldiers' riot". Normally, the culture of killing inherent in armies is restrained by military discipline to be used only against other armies. However, when the restraints of that discipline are relaxed, raw and uninhibited violence is unleashed, causing even normally civilized men to engage in unspeakable acts.

In December, 1937 that became Nanjing's story.

One of the most shocking examples of these atrocities was the contest between two officers, Sub-lieutenants Toshiaki Mukai and Takeshi

Noda, to see who could kill 100 Chinese first. When they couldn't agree on who had won, they extended the goal to 150 when they reached Nanjing in December 1937. Just as shocking, two Japanese papers, the Osaka Mainichi Shimbun and Tokyo Nichi Nichi Shimbun covered the contest as if it were a sporting event.

The two men were executed by the Chinese for war crimes in 1948.

It used to be we thought 30,000 people were massacred at Nanjing, a shocking figure in itself. But the research of Iris Chang, showed it was more on the scale of 300,000. Her book, *The Rape of Nanjing*, brought any number of Nanjing survivors out who told their stories to her. Apparently, the burden of dealing with all these personal stories was too much for Iris, for she took her own life at the height of publicity for her book.

The massacres at Nanjing were still taking lives 60 years later.



Nanjing wasn't the only city that suffered. Between 1939 and 1943 Chungking was bombed by the Japanese 268 times. The People pictured here were among thousands of victims of a stampede triggered by a lack of air in their shelter during a bombing raid.

“The Cossacks will rule Europe”: A nuanced view of Munich



Britain’s prime minister, Neville Chamberlain, holds up the famous “Peace of Paper” (or piece) that gave Hitler the Czech Sudetenland in return for “peace in our time” (Sept, 1938)

The Munich Agreement and the policy of appeasement associated with it have typically been viewed as the source of continued fascist aggression that eventually led to World War II. While there is some truth to this, there are other ways of assessing this event.

For one thing, some have argued that the extra year of peace gave Britain the time to build up its defenses, in particular its air force (RAF) and radar, to a point where it was able to successfully stave off the Germans in the Battle of Britain (1940-1). While Hitler was also building up his forces, Britain did it with a greater sense of urgency, allowing it to catch up somewhat with Germany. In fact, Hitler would not put the German economy on a full wartime footing until 1943, long after Britain had done the same.

We also have to appreciate the situation as it appeared to diplomats in September 1938. Certainly, Hitler was a menace and a nasty dictator, but many saw Stalin as a greater threat. After all, his armed forces were practically equal in size (although not quality) to all the combined armies of the rest of the world at the time. And even with the veil of secrecy he had drawn over the Soviet Union, people had some inkling of his atrocities, in particular his purges and the Terror Famine in the Ukraine that had killed 5 million people. By comparison, Hitler’s terror was minor league stuff. There were the Nuremberg Laws, but even Kristallnacht had

not happened yet and the start of the Holocaust was still three years in the future.

Therefore, it comes as no surprise that some leaders saw Stalin as the real threat and Hitler as the main bulwark against Stalinist aggression. If Hitler were to lose face at Munich, it could cause the downfall of his government and the destabilization of its army. Or, as one British officer put it: “The Cossacks will rule Europe.”

THE SPANISH REVOLUTION (1931-75)

From unification to revolution (1492-1931).

While the Spanish Civil War is the best known episode of the Spanish history in the twentieth century, it needs to be put into the context of Spain's broader history during that century and be seen as a long-term process of revolution that shares many features with other modern revolutions.

Spain's history as a unified nation goes back to the final conquest of Granada by Ferdinand of Aragon and Isabella of Castile. This itself was the product of the *Reconquista*, the centuries-long struggle, with strong religious overtones, against the Moors. Out of that struggle had emerged two powerful elements in Spanish society: the Church and nobles who were rich landowners. In the 1500s Spain was the main power in Europe, largely by right of its American colonies. However, a century of involvement in Europe's religious wars sapped its strength, and by the end of the Thirty Years War in 1648 it had fallen drastically in power and prestige. A half-century later, a new dynasty, the Bourbons, came to power. At first they tried to implement reforms similar to those of other Enlightenment rulers, by 1800 they were as corrupt as most any other monarchy of the time.

This didn't change over the next century, so that by 1900, Spain was still a backward and feudal society, with a powerful Church and landowning class, a mass of impoverished peasants, and a small but growing poor working class in the country's few industrial cities such as Barcelona, Madrid, and Bilbao.

Since Spain wasn't involved in World War I and therefore escaped its huge burdens of debt, it enjoyed a brief period of industrialization and economic growth, and the corrupt government was replaced by the dictatorship of Primo Rivera (1923-30). Unfortunately, Spain couldn't compete with the bigger European economies once they recovered from the war in the 1920s. The resulting economic decline led to Rivera's overthrow and the brief restoration of the king and a constitutional monarchy, much like the one set up in France in 1789.

Start of the Revolution (1930-36). However, that only lasted a year and, as in the French Revoluti

on, was replaced by a moderate and liberal republic in 1931. Unfortunately, as in most revolutions, the initial moderate regime could not take the drastic measures needed to solve the many and deep-seated problems that triggered the revolution in the first place.

Spain at this time was divided between several factions: separatist Catalans in the northeast and Basques in the north, the Anarchists who wanted no army or central government, the Republicans supported by liberals, intellectuals, and the lower middle class, the Socialists supported by the working class who wanted a centralized state controlling the industries, and the fascist Falangists, supported by the Church, the rich, and the army.

As typically happens at the start of a revolution, the moderate government was unable to keep people at either extreme happy and Spain started to destabilize. In 1933 a right wing coalition won the elections, but, because of their repressive policies and hunger, lost control to the Socialists and Republicans in the 1936 elections. As violence increased on both sides, Spanish troops led by the fascist General Francisco Franco crossed from Morocco to Spain to overthrow the government. The result was civil war.

The Spanish Civil War (1936-39) was a prolonged and confused affair, largely because, as in other revolutions, it attracted foreign intervention. Supporting the Republicans, who represented the legitimate elected government, was a wide range of factions, making it difficult to coordinate strategy: Catalan and Basque separatists, socialists, and anarchists, along with aid from the Soviet Union and various international brigades of volunteers from liberal democracies such as France, Britain, and the United States. The other side, known collectively as the Nationalists drew support from the army, the Church, and rich landowners, along with substantial military aid from fascist Italy and Germany.

It was a vicious war, with atrocities committed by both sides. The Republicans especially targeted and murdered priests and nuns, while the fascists murdered leftist leaders. However, it went much further than that, because Stalin, Hitler, and Mussolini all treated this as a testing ground for their new weapons and tactics. The most notorious

of these was aerial bombardment of civilians, such as that of Guernica in 1937, immortalized by Picasso's painting, *Guernica*. Unfortunately, this was but a mild foretaste of such tactics in World War II.

In the end, Fascist aid and unity proved more effective, as the Nationalists cut Madrid, Catalonia, and the Basques off from one another and gradually took over Spain, piece by piece. By 1939, Franco was in firm control of Spain, which he would keep under his harsh fascist rule until he died in 1975. However, right after his death the Spanish established a liberal constitutional monarchy under which Spain would stabilize and prosper in the following years.

The Spanish Civil War (1936-9)



At the start of the war, the Republicans outnumbered Franco's Nationalist forces, so he asked Germany and Italy for help. Germany sent 10,000 men, 200 tanks, 600 planes, and a number of their excellent anti-aircraft guns. Italy sent 40-50,000 men, 150 tanks, 660 planes, and 800 artillery, along with masses of machine guns and other supplies.

Therefore, Stalin helped the pro-socialist Republicans with 1000 planes, 900 tanks, 300 armored cars and 1500 artillery. Except for 300 planes that France sent, the Western democracies gave the Republicans nothing but sympathy. Overall, Russian armor at that time was heavier, better armed, faster, and all round better than its German and Italian counterparts. However, it was poorly used, leading to entire divisions of captured Russian armor in the Nationalist army by war's end.

The most help the Loyalists got from the West was from unsanctioned volunteer freedom brigades, such as the Abraham Lincoln Brigade from America. The authors Aldous Huxley and Ernest Hemingway served in this way. Hemingway's *For Whom the Bell Tolls* is a semi-

autobiographical novel of his experiences in the Spanish Civil War.

Both sides used the Leninist tactic of focusing on enemy's leaders and terrorizing their followers. Franco's rebels killed some 40,000 civilians, especially targeting any leftists, typically striking at night for greater terrorist effect. Using murder gangs called *checa* the Republicans killed an estimated 75,000 more. They especially targeted clergy, killing 20% of Spain's bishops, 12% of its monks, 13% of its priests, and 283 nuns. Bloody turmoil enveloped the country as churches were burned and priests, nuns, and Republican politicians were executed. Both sides were perpetrators and victims.

The Spanish Civil War was also a propaganda war. The Republicans in particular used the poster medium effectively as seen below:



Franco's more experienced forces advanced rapidly through southern Spain. However, they would have a harder time in the north because the people there were better armed, educated, and informed about the issues. Catalan and Basque separatists provided an especially tough obstacle.

As Franco's forces closed in on Madrid in 1936, its defense at first seemed hopeless, especially against the Nationalists' artillery. Then, just as the defense was beginning to crumble, International Brigades arrived among cries of "No pasarán! Pasaremos!" ("They shall not pass. We shall pass."). By November 9th, a third of the International Brigades' soldiers had been killed, but then more reinforcements arrived. Fighting was intense, with hand-to-hand battles for the possession of every room or floor of a building. By November 23rd, the Nationalists had about three-fourths of Madrid but could take no more. They then tried to cut off Madrid from the rest of Spain. However, after heavy casualties in

taking one town, they abandoned this plan. The people of Madrid had held out and wouldn't fall to the Fascists until 1939.



Republican militia use a damaged tank for cover while defending an approach to Madrid.

Among the more tragic aspects of this war was its use of Spain as a testing ground for new weapons and tactics. Most notable of these was aerial bombing of civilian targets by the German air force in Spain known as the Condor Legion. The most notorious such incident was the German bombing of Guernica, a town of 7000 with two small munitions factories and a bridge. It's main crime, however, was just that it got in the way. As one eyewitness put it, *"A group of women and children were lifted high into the air, maybe 20 ft. or so, and they started to break up. Legs, arms, heads, and bits and pieces flying everywhere."* Picasso protested Germany's brutal aerial bombardment of Spanish civilians in his painting *Guernica* (pictured above), one of the most powerful artistic statements of the 20th century.

Unfortunately this was only a mild foretaste of what civilians would have to endure in World War II.



horses browse and meditate... the men in bowler hats, the pigeons in Trafalgar Square, the red buses, the blue policemen-- all sleeping the deep deep sleep of England, from which I... fear that we shall never wake till we are jerked out of it by the roar of bombs."

His words would prove prophetic.

The Republican cause finally collapsed in 1939 and Franco began a brutal fascist rule that would last until his death in 1975. The author and freedom fighter, George Orwell, summed up the situation upon returning to Britain in 1939: *"Here it was, still the England I had known in my childhood: the railway cuttings smothered in wild flowers, the deep meadows where the great shining*

136. WORLD WAR II IN EUROPE (1939-45)

"What General Weygand called the Battle of France is over. I expect that the Battle of Britain is about to begin. Upon this battle depends the survival of Christian civilization. Upon it depends our own British life, and the long continuity of our institutions and our Empire. The whole fury and might of the enemy must very soon be turned on us. Hitler knows that he will have to break us in this Island or lose the war. If we can stand up to him, all Europe may be free and the life of the world may move forward into broad, sunlit uplands. But if we fail, then the whole world, including the United States, including all that we have known and cared for, will sink into the abyss of a new Dark Age made more sinister, and perhaps more protracted, by the light of perverted science. Let us therefore brace ourselves to our duties, and so bear ourselves that, if the British Empire and Commonwealth last for a thousand years, men will still say, "This was their finest hour." --Winston Churchill, British prime minister

*"If you're going through hell, keep going."--
Winston Churchill*

World War II was the single most destructive war in history, claiming over 60,000,000 lives and untold material damage. In contrast to 1914, most soldiers in 1939 had a better sense of the seriousness of modern war and marched off with grim resolve rather than enthusiasm. The war in Europe can be seen as happening in two phases: the German blitzkrieg (1939-41) and the allied response and counterattack (1942-45). Technological and tactical innovations were central to each phase and affected events on both the Eastern and Western fronts.

Blitzkrieg (1939-41). As in World War I, many generals at the start of World War II were planning to fight the last war rather than the next, hardly taking into account the changes in warfare over the last twenty years. France, in particular, operated with a World War I siege mentality, relying on a giant enclosed concrete trench, the Maginot Line, which covered much, but not all, of its border with Germany. However, the German generals had a very different perspective. Having lost the last war, they were more determined to find a new way to win the next one. In their minds, that way was *blitzkrieg* (lightning war).

Blitzkrieg was largely the brainchild of Heinz Guderian, a German tank expert who convinced Hitler that the future of warfare lay with tanks and airplanes, not immobile lines of trenches. Instead of spreading tanks along the front as infantry support, Guderian's idea was to amass his *panzer* (tank) divisions at strategic points and blast through that part of the line. The German airforce, the *Luftwaffe*, would bomb and strafe the enemy behind their lines, further demoralizing and disrupting them. Meanwhile, infantry would consolidate their hold on the gaps blown open by the *panzers*. This would force the enemy back to a new position that was already weakened and threatened by the *panzers* and *Luftwaffe* wreaking havoc in their rear.

Blitzkrieg did not do away with the continuous front, since the manpower and firepower needed to fill a continuous front were more available than ever. What it did accomplish was to make the continuous front mobile, thereby pulverizing everything in its path. As a result, the fighting was not confined to a narrow static front, as in World War I. Rather, it swept across all of Europe in a broad swathe of destruction. Also, Blitzkrieg was designed for attaining short decisive victories that would avoid the prolonged type of warfare that had worn Germany out in World War I. At first it took its enemies by surprise and allowed the Nazis to overrun their enemies in both Eastern and Western Europe very quickly.

In the East, the German blitzkrieg easily overran western Poland while Stalin took the rest. Then, while Hitler was pre-occupied with defeating France and Britain in the west, Stalin invaded Finland and took the Baltic republics of Latvia, Estonia, and Lithuania (lost since World War I) as well as part of Romania. These events, along with Hitler's long-standing hatred of Russia, prompted a planned invasion of Russia, which was delayed by having to help Mussolini in the Balkans and North Africa. When it did get going in June 1941, the German attack met with incredible success, quickly inflicting tremendous casualties and driving almost to the gates of Moscow. Only the onset of winter temporarily stopped the German advance and bought the Russians time to recover.

In the West, Hitler also met with startling success as the German army rapidly overran Denmark,

Norway, Belgium, Holland and France by June 1940. Not until they reached the English Channel did the Nazi advance halt and give Britain renewed life. The ensuing Battle of Britain was the first major battle ever decided primarily by air power, as the Luftwaffe first bombed British airfields and then concentrated on Britain's cities to clear the way for an invasion of Britain. However, the British grimly held on until Hitler abruptly broke off the raids to turn his attention to the invasion of Russia. Britain's war effort was also bolstered by increasing aid from the United States, which would join the war by the end of 1941. Thus, as 1942 dawned, Germany was faced with two new and formidable enemies: the United States and Soviet Union.

The allied response and counter-attack (1942-45).

However, the benefits reaped by the German blitzkrieg would be short-lived, largely because, while the Germans became complacent and overconfident from their early successes, the allies were urgently adapting to and modifying blitzkrieg to neutralize the German advantage. They did this in three ways. First, they adapted their economies completely to war production. While the Russians were moving entire industries east of the Urals out of Hitler's reach, the United States was building a massive military-industrial complex that by 1944 was more than twice as productive as all its enemies combined. By contrast, Hitler, not wanting to alienate the German industrialists, delayed putting Germany on a full wartime economy until 1943, by which time it was too late.

Secondly, the allies, especially the British and Americans, expanded the use of air power from mainly ground support for tanks and infantry, as the Germans used it, to building large long-range bombers for massive bombing of German cities. Finally, both sides modified their tank divisions by adding mobile assault guns and motorized infantry. This, plus the higher production levels the allies maintained, largely neutralized the German blitzkrieg, slowing it down to a war of attrition that heavily favored Germany's enemies on both fronts.

In the east, the Nazi offensive resumed in 1942 with the coming of spring, advancing eastward until the Russians made their stand in Stalingrad where the Germans found blitzkrieg was totally unsuited for the house to house fighting of urban warfare. The intense fighting there bogged down the German war

machine until the Russians could build their forces for a counter-attack that cut off and destroyed the entire German Sixth Army in February 1943. After that, Russian perseverance and industrial production, helped by supplies from the allies via the Arctic Ocean, slowly drove the Germans back across Eastern Europe.

On the Western Front, the allied effort, increasingly bolstered by American military and industrial might, also met with success, driving the Germans from North Africa and Sicily and invading Italy in 1943. The next year, drawing upon their experiences in Italy, the British and Americans used their overwhelming air and firepower to open a second major front in France.

All this time, the British and Americans had also been launching massive long-range bombing raids on German cities. They used this strategy since they had no major foothold on the continent from which to fight the German army directly until 1944. Although it is still argued whether the allied bombing raids did substantial damage to German war production, which had been largely decentralized away from its cities and the bombing raids, they certainly devastated Germany's cities, demoralized its population, diverted German air power away from the Russian front, and wore down German air defenses, thus giving the allies critical air superiority by the time they were ready to invade France and liberate Western Europe from the Nazis.

By the end of 1944, Germany's war effort was collapsing as American and British air raids devastated its cities from above and allied armies converged from east and west. Finally, in May 1945, Russian forces took Berlin, bringing an end to Hitler's regime and the war in Europe.

THE WAR IN DETAIL

Germany triumphant (1939-41). When the Germans invaded Poland in September 1939, their concept of Blitzkrieg, ran almost flawlessly. The *panzers* burst through gaping holes in the Polish lines while Stuka dive-bombers spread terror and destruction along the front and well behind it. Polish cavalry brigades launched valiant but hopeless assaults against Guderian's tanks, which mowed them down mercilessly. When Warsaw stubbornly fought the Germans to a standstill, the

Luftwaffe came in for round the clock bombing raids until the city finally succumbed.

Meanwhile, France and Britain had declared war on Germany two days after the invasion of Poland, but had done little except sit and wait in what was known as "sitzkrieg" or the Phony War. This gave Hitler the time and initiative to prepare and launch an attack at a time and place of his choosing. He first invaded Denmark and Norway, thus securing his iron ore supply and a long irregular coastline from which to launch submarine raids.

It was not until May 1940 that the showdown with France and Britain came. The Allies expected a repeat of the Schlieffen Plan where the Germans would sweep through the Low Countries into France. The final German plan took advantage of these expectations by launching a diversionary attack into Holland and Belgium that drew the Allied armies north to meet them. However, the real attack came through the supposedly impassable Ardennes Forest between Belgium in the north and the Maginot Line in the south along France's eastern border.

Once again, German plans went like clockwork. The Germans smashed through the lightly guarded French lines in the Ardennes. While the *Luftwaffe* wreaked havoc in the French rear, Guderian's tanks raced toward the sea to close the trap that would cut the Allied forces in the north off from the rest of their forces in the south.

Panic seized the French troops who were being relentlessly strafed by the *Luftwaffe* and pursued and even passed up by the *panzers* (who were in too much of a hurry to stop and take prisoners). Panic also seized Allied High Command, which was virtually paralyzed by this sudden turn of events. Even German Headquarters was uneasy about its plans going too well and wanted Guderian to stop to let his infantry catch up. But Guderian saw first hand the total chaos and panic that ruled the Allies and kept going. He reached the sea in ten days, having gone further than the German army had gone during the whole four years of World War I.

Meanwhile, Allied defensive lines in the north were collapsing around the seaport of Dunkirk. In a desperate bid to rescue their army, the British launched a most unlikely flotilla of military and

civilian craft: destroyers, tugboats, river barges, and even pleasure craft. Braving the dive-bombing Stukas and German shore artillery, they managed to get to and extricate most of the British and French forces pinned against the beach. Britain would live to fight another day.

The remaining French forces in the south formed a new battleline where they bravely fought on. But it was too little too late as Paris fell, and France finally surrendered in June 1940. The surrender was signed in Napoleon III's railroad car, the same car where the Allies forced the Germans to sign the Armistice in 1918. The Battle of France was over. The Battle of Britain was about to begin.

Britain's prime minister at that time was Winston Churchill, a leader of indomitable courage who gave the British spirit a defiant edge during these dark times. As in the past, the British realized that an invasion of Britain (codenamed Operation Sea Lion) required control of the sea. But for the first time in history, that also required control of the air. Therefore, the Battle of Britain was largely determined by air power. The first clashes came over the Channel, and the German pilots, who had more experience from fighting in Spain, Poland, and France, at first did quite well. Then the *Luftwaffe* started concentrating on knocking out the Royal Air Force (RAF) and its bases in order to clear the way for invasion.

In this phase the British had several advantages. First of all, the German fighter planes only had 20 minutes fighting time over Britain after allowing for fuel to get across the Channel and back. In contrast, British pilots had full tanks for fighting. Secondly, the fighting over Britain meant that only British pilots who were shot down and survived could be rescued to fight again, while surviving German pilots became prisoners. Third, the British had a new technology, radar, which let them spot German planes as they were being launched and concentrate their forces against them. Finally, the British had gotten hold of a copy of Enigma, the German decoding machine. This proved to be a decisive element throughout the war since the allies were often able to intercept and prepare for supposedly secret German plans.

This still did not make it easy. Although they suffered heavy losses, German pilots were good and

their superior numbers exacted a toll on the RAF through aerial fights and bombing raids on British airfields. Bit by bit, the RAF was being worn down by casualties, battle fatigue and damage to its airfields. Ironically, what saved the RAF and Britain was Hitler's decision to bomb British cities.

Initially, Hitler did not want to concentrate on Britain's cities. However, on August 24, some of his bombers lost their way and accidentally bombed London. Churchill retaliated by launching an air raid on Berlin, which infuriated Hitler and caused him to turn the *Luftwaffe* loose on London and other cities. This gave the RAF the break it needed to recover its strength.

Thus began the Blitz, nine months of daily bombing raids. At first the raids came by day. But the RAF, now under less pressure, was able to inflict heavy damage on the enemy. Therefore, the Germans soon limited their raids to nighttime when their planes were harder to spot. Since the British could do little against these raids, civilians huddled in their cellars or flocked to the subways for safety. Surprisingly enough, there was little panic. The Blitz became a way of life interwoven with the more normal activities carried on in the daytime. And so, night after night, month after month, the British grimly hung on against these assaults on their cities.

Things looked particularly bleak for Britain in the spring of 1941. In addition to air attacks on their cities, the British also had to contend with German U-boats preying on their shipping in the North Atlantic. They answered this threat to their lifeline by developing sonar to detect German submarines and better depth charges and convoys with naval escorts to combat them.

Meanwhile, the United States, although officially neutral, was becoming increasingly concerned about Britain's survival against the Nazis. President Roosevelt brought America closer to direct involvement through the Lend Lease Act, which provided vital aid to the British in their hour of need. By the end of 1941, Roosevelt's policies and the Japanese surprise attack on Pearl Harbor would bring the United States into the war. However, it was events further east that proved to be Hitler's ultimate undoing. On June 22, 1941, he invaded

Russia, thus ending the Blitz and giving Britain new life.

The Eastern Front (1939-1944). In the East, Stalin had taken his share of Poland according to his pact with Hitler, and then swallowed up the Baltic Republics of Latvia, Lithuania, and Estonia. Next he attacked Finland, which put up a spirited defense that held the vastly superior Soviet forces at bay for several months. In the end, the Finns were overwhelmed and forced to cede part of their land to Stalin.

Stalin's growing power in the East increasingly alarmed Hitler who had intended from the beginning to destroy Russia. Hitler set his attack for May 1941, but events elsewhere delayed his plans. Mussolini, sensing an opportunity for Italian glory, invaded both Yugoslavia and North Africa, got bogged down by stiff resistance, and called on Germany to bail him out. Hitler was furious, but he sent in troops who overran the Balkans, drove the British out of Crete with a daring paratroop operation, and then drove the British back toward Egypt in North Africa. The delay this caused in Hitler's preparations to invade Russia may have been the critical difference that allowed the Russian winter to stop the German advance on Moscow and eventually defeat the Nazis.

The invasion of Russia was probably Hitler's biggest mistake, although at first it did not seem that way. Much of his mistake was being overconfident from his recent victories and not preparing the sort of force the invasion of Russia would require. Stalin, still trusting in his pact with Hitler, refused to heed warnings of an impending German attack. When the attack, codenamed Operation Barbarossa, came, it hit a Soviet army whose officer corps was decimated by the recent purges and Stalin's insistence on personally authorizing all actions any of his generals took. As a result, Guderian's *blitzkrieg* inflicted staggering losses on the Russians and drove deep into the Soviet Union in the opening months. Then the Russian winter set in, stalling the German offensive just 20 miles from Moscow. German soldiers, unequipped and unprepared for these subzero conditions, suffered horribly while their equipment broke down. Meanwhile, the Russians launched offensives of their own that nearly destroyed much of the German forces.

The German offensive revived with the spring thaw in 1942. The Germans advanced against Leningrad in the north and Stalingrad in the south. The siege of Leningrad was a long drawn-out affair that lasted 900 days. Starvation, more than bullets exacted its toll, especially on civilians. Although as many as 1.5 million Russians died in the siege of Leningrad, the city stood held out.

If any battle was the turning point of the war, it was Stalingrad, an industrial city that Hitler saw as the key to Russia's oil fields in the south. After initial German successes that took 90% of the city, the fighting bogged down into desperate house-to-house and even room-to-room fighting. As the Russians bled the German army white in the rubble of Stalingrad, they were also building massive forces to the north and south. On November 19, 1942, they slammed into the flanks of the German army guarded by its Italian and Romanian allies, broke through, and met in a giant pincer movement behind the German army. The German army of some 250,000 men besieging Stalingrad was now itself surrounded and besieged.

Hitler refused to let the Germans break out and retreat, insisting that they continue the siege while he tried to airlift supplies to them. Therefore, while starvation, the Russian winter, and shelling took their toll, the fighting in the rubble continued. However, in February 1943, the Germans finally surrendered. Of the 90,000 Germans who survived to surrender at Stalingrad, only 5000 would make it home from Stalin's prison camps.

The Russian victory at Stalingrad provided the impetus to go on the offensive and drive the Germans out of Russia. Two things provided the Russians with the means to fight this war to the bitter end. First, and most important, was the revival of Russian industries, many of them moved beyond the Ural Mountains and out of reach of the *Luftwaffe*. Second, there was substantial material aid from the United States shipped north of Scandinavia, braving the hazards of both the Arctic Ocean and German U-boats. By war's end, these gave Stalin the means to build the most massive war machine in all history.

The Russian Front in World War II became renown for the intensity and the desperation of its fighting. This was especially true of the Battle of Kursk in

the summer of 1943, a German attempt to break through a strong salient in the Russian line and turn the tide back in Germany's favor. This battle involved over one million men, 5800 tanks and assault guns, 5000 planes, and 30,000 artillery pieces on both sides. After weeks of blasting away at each other, sometimes at pointblank range, the Russians had broken the German offensive.

If Stalingrad signaled the end of the German tide of conquests, Kursk signaled the beginning of the end of Hitler's Third Reich. Not that Germany was completely done for yet. The fighting on the Russian Front assumed epic proportions till the end of the war. Whereas Hitler committed 10 divisions to North Africa, he had 200 divisions on the Russian Front. Therefore, the fighting, destruction, and bloodshed escalated to horrific levels and continued unbroken until the bitter end.

The Western Front (1942-44). The tide was turning against Germany on other fronts as well, especially as American forces and material were being fed into the war. In North Africa, Allied forces under the British General, Montgomery decisively defeated German General Rommel and his Afrika Corps at El Alamein. Despite all of Rommel's efforts, the German war effort in North Africa faltered without adequate aid from home. By May 1943, the Germans had been cleared from North Africa.

The Allies then swept across Sicily and into Italy. German forces defending Italy used its rocky and mountainous terrain well and slowed down the Allies who referred to Italy as "tough old gut". The slowness of the Allied advance in Italy aggravated Stalin who pushed the British and Americans to open a new front to take the pressure off Russia. Much of the hostility between Russia and the West after the war came from Stalin's belief that his allies intentionally dragged their feet while Russia and Germany bled each other to death.

In fairness to the British and Americans, launching an amphibious assault on France's heavily defended coasts was a very dangerous and tricky operation. It required intense preparations and the build-up of massive forces that were not ready until 1944. Until that time, the British and American air forces were busy taking the war directly to the German heartland. As the war progressed, so did the intensity of aerial bombardments of German cities.

In some cases, as at Hamburg in 1943 and Dresden in 1945, the bombing was so intense that firestorms developed, whipping up 150 mile per hour winds and temperatures of 1800 degrees Fahrenheit. The destruction and death tolls from these raids were devastating to the German people. However, German war industries had largely been decentralized and spread out away from the heart of German cities. Therefore, they still managed to maintain production of weapons and war materials.

On D-Day, June 6, 1944, the British and Americans finally gave Stalin the second front he wanted by launching an amphibious assault on the beaches of Normandy, the largest such assault in history. It ran a tremendous risk, but was successful in establishing a foothold in France. In the following weeks, the Allies expanded that foothold and then broke out into the French countryside in July. In the following months, they triumphantly advanced through France, liberating Paris in August, and being poised for a final assault on Germany in 1945.

The end of the Third Reich (1944-45). By late 1944, the German position on both the Eastern and Western Fronts was steadily crumbling. On June 22, 1944, the Russians broke through the German line and surrounded 40 divisions known as Army Group Center. Eventually they destroyed or captured all but 12 of those divisions. In October, a similar offensive destroyed Germany's Army Group North. Germany's allies, Romania and Bulgaria, dropped out of the war and the Germans were forced to abandon the Balkans. By 1945 the Russians were driving through Poland against a German army that had only one tank for every three or four miles of front and was drafting old men and 14 year old boys to fill its ranks.

In one last desperate for a negotiated settlement from Britain and America and thus force Stalin to stop his advance, Hitler launched a surprise attack against American and British forces in the Ardennes in December 1944. The Germans were initially successful in this "Battle of the Bulge," but their offensive literally ran out of gas and men as the Allies regrouped and counterattacked. In early 1945, the Russians, Americans, and British invaded Germany from both east and west.

With invasions closing in from all sides and air raids tearing apart Germany's cities, only Hitler,

who was secluded in an underground bunker, failed to recognize the inevitable collapse of Germany and refused to surrender. In late April, Russian forces reached Berlin. What few German forces that remained put up a desperate resistance, and it took the Russians three days to take the city. Just as the Russians were closing in on his bunker, Hitler committed suicide. His body, probably cremated beyond recognition, was never found.

In his wake, Hitler left an unprecedented amount of death and destruction, including the brutal and bizarre murder of 6,000,000 Jews and millions of others in his death camps. He had intended his Third Reich to last 1000 years. It had lasted twelve.

Selling Blitzkrieg



In 1933, to convert the new chancellor, Adolf Hitler, to the doctrine of blitzkrieg, Guderian did a demonstration using cardboard mock-ups of tanks placed over cars (above) or pictures of tanks carried by soldiers to demonstrate how it worked. Hitler was delighted, and by 1939 Germany had six panzer divisions. Even then, the German army was no more mechanized than its enemies. It had fewer tanks than either France or Russia and still relied heavily on horses for transporting supplies. However, the revolutionary way Germany used its tanks and planes would give it amazingly quick victories in the war's early years over enemies who still spread their tanks out as infantry support.

One of Blitzkrieg's critical elements was communications. While German tanks had radio communications with one another, French tanks didn't. Even allied High Command still relied on motorcycle couriers (who were often killed by marauding German planes), for information from the front. By contrast Guderian's state-of-the-art mobile radio command center gave him much more precise information on the current situation.

Blitzkrieg Strikes: Poland (September 1939)



Stuka dive-bombers led the German air assault. From an infantryman's perspective, it looked like the Stuka was diving straight for him personally. To add to the terror they were equipped with sirens, an idea supposedly credited to Hitler.

The Pomorske brigade. According to one story, the Germans met the Pomorske brigade, cavalry wearing white gloves and lances with pennons flying proudly in the breeze. It was like a page out of a 19th century storybook. However, this was the 20th century and the German tanks didn't care about chivalry and glory. Within minutes they had reduced the Pomorske Brigade to a bloody heap of men and horses. As the Polish prisoners were being led into captivity, they rapped on the German tanks, having heard they were only made of cardboard and tin foil.

The Germans would use this incident as the basis for jokes about Polish stupidity. To be fair, many or most people have similar jokes about other ethnic groups. I won't go into detail, although one baffling example is that Mexicans apparently tell such jokes about Swedes. Suffice it to say that stupidity and cruelty seem to be qualities found in humans everywhere. Only the names are changed to oppress the innocent.

Chopin's music. Polish radio defiantly met Hitler's round-the-clock air raids by broadcasting the music of Chopin, people scavenged the carcasses of dead horses for meat. Finally, Chopin's music was silenced and the Poles surrendered.

Almost immediately, the Nazis started rounding up Polish Jews for abuse and, in some cases, methodical executions.

France Falls (1940)

Sitzkrieg. Although France and Britain had declared war two days after Hitler invaded Poland, they did little but wait for Hitler to attack. Each day they would fire a few shots

across the border, trade insults with the Germans, and see whose brass bands were louder. All the while, allied morale steadily dropped.

The Maginot Line. In fact, the allies expected a replay of the last war, where trenches and massed firepower would destroy any enemy offensives. The French even lined their eastern border with a giant concrete trench, the Maginot Line, complete with an underground railroad and sunlamps to give the French Poilus (soldiers) their vitamin D.

The German strategy: Schlieffen Plan or no Schlieffen Plan? Originally, the German strategy was a replay of the Schlieffen Plan, with the main attack coming through the Low Countries north of France. But a plane carrying the plans crashed in Belgium, leading to a guessing game of whether allies got the plans or not and if they had them, did they think the Germans knew they had them and would change the plans as one would expect. Or would they do a reverse psychology and carry them out. Or would they do a double reverse psychology... etc.?

In the end, Hitler satisfied allied expectations of a repeat of 1914 by attacking through Belgium and Holland on May 10, bombing their cities and using paratroops to secure strategic points. Rotterdam, Holland was especially hard hit, with 814 civilians killed in this new kind of war. However, this was merely a ruse to lure the British and French armies north to meet the invaders.



Having drawn the bulk of allied forces north, the Germans struck with their *real* offensive north of the unfinished Maginot Line through the Ardennes, a thickly forested area that French High Command had wrongly deemed

as impenetrable (although French war-games in 1937 had proven differently). Therefore it was only defended by poorly trained and equipped reservists who now had to face the full fury of the Wehrmacht's assault.

Having brought their panzers through the Ardennes, the Germans worked with mechanical precision. Infantry crossed the Meuse River under cover of German dive-bombers, which silenced any French guns defending the opposite shore. Having secured a foothold there, engineers built bridges over the river, allowing the German tanks to cross into France.

Race to the sea. Stukas strafed the roads to clear them for the quickly advancing Panzers. Germans shouted from their tanks to the French troops: "Drop your rifles and get the hell out of here-- we don't have time to take you prisoner." By May 16, the hole in the allied line was 60 miles wide.

"Civilians and French troops, their faces distorted with terror, lay huddled in the ditches, alongside hedges and in every hollow beside the road...Always the same picture, troops and civilians in wild flight down both sides of the road...a chaos of guns, tanks, and military vehicles of all kinds, inextricably entangled with horse drawn carts."-- Erwin Rommel, German tank commander

Getting the message. On the maps it looked like the Germans were over-extending their line. But the maps didn't show the total confusion in the French army or high command. For one thing, the French used motorcycle couriers, not radios or phones, leading to the nightmare scenario of couriers dodging marauding Stukas to report on positions, getting their orders, evading more Stukas to give the troops orders that were totally out of date by then. That's if the courier survived and got through.

Confusion, then panic and paralysis, seized allied command as its forces in the north rushed back to escape the trap. Generals

were sacked right and left. Even the top commander, age 67, was replaced by one who was 73.

Even the German high command couldn't believe their success was so swift and complete and was getting nervous about Guderian's tanks outrunning his infantry support, so they told him to stop. Guderian seeing the total chaos and lack of resistance among the French, got permission to "consolidate" his line, which he "consolidated" at the Atlantic coast, having reached the sea and cut off the main allied forces racing south from Belgium in only ten days.

Meanwhile in the south, French resistance collapsed as German tanks and planes seemed to be everywhere.

Surrender. Hitler insisted the French sign the surrender in the same railroad car where Germany had surrendered in 1918. He then had the car dynamited so the French could never use it against the Germans again. One last humiliation awaited the French: the German triumphal march through Paris, following the exact route of the French victory march in 1918, which had followed the route of the Prussian victory march in 1871.

Vichy France. However, the Germans only occupied northern France. The southern half, known as Vichy France, functioned as a satellite state expected to follow Nazi policies, including the arrest of Jews to be sent to the concentration camps. Anyone, Jew or Gentile, suspected of plotting against Hitler's regime faced immediate execution.

The French navy was a major concern Britain's prime minister, Winston Churchill. Although it was anchored in Vichy ports on the Mediterranean, the Germans clearly wanted it, since that, combined with their own fleet, would give them naval superiority over the British navy and the ability to force a crossing of the Channel to invade Britain. Despite French assurances that they would scuttle their fleet before the Germany got it,

Churchill became increasingly nervous as the Germans closed in. Finally, out of desperation, he ordered the British to destroy their French allies' fleet, in the process killing about 1500 French sailors. The French, claiming they would have scuttled their ships in time, were understandably bitter over this incident.



But Britain had survived to fight another day

Dunkirk



Not all the allied forces had been lost. Retreating British, French and Belgian forces had been trapped in a collapsing pocket along the Channel coast around Dunkirk. Although Hitler wouldn't risk his precious tanks in a final assault, his air force mercilessly pounded the allied troops cornered on the beaches.

The British launched one of the most unlikely rescue flotillas in history to save their imperiled troops. Pleasure craft, barges, paddle wheelers, almost anything that could float were gathered to run the gauntlet of German Stukas and save the allied troops. British ships were guided to Dunkirk at night by its burning fires and during the day by smoke from its burning oil tanks.

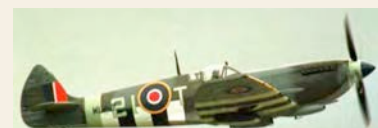
Many ships were lost, including an offshore hospital ship, which managed to escape damage until a Stuka dropped a bomb down the smokestack. For days, bodies from the hospital ship washed ashore. Initially, the British hoped to rescue 45,000 men. However, from May 26th to June 4th, they evacuated 338,226 men as German planes bombed British rescue ships and strafed the helpless troops on the beach. Still, not everyone made it. Besides thousands of their comrades, the British also left behind in France all their ground equipment and half their air force.

Britain Alone (August 1940-May 1941)



One tool, just invented in 1937, was radar that would give early warning of German air raids. Many of the women who ran these radar stations would die in German air raids. Behind the line of radar defenses another 30,000 volunteers served as aircraft spotters. At Fighter Command Headquarters reports of incoming raiders would be plotted on a map of Britain to give an overview of the strategic situation at that time. The British even prepared oil slicks to incinerate invading Germans which, when ignited with flares.

The workhorse of the German fighter force was the Messerschmitt 109. An excellent fighter plane, but with only 80 minutes worth of fuel, leaving it only 20 minutes of combat time over Britain. Many German planes, even after surviving combat over Britain, ran out of fuel on the return trip and went down in the Channel. Opposing the German planes were very fast British Hurricanes and Spitfires (pictured below). When asked if his air force needed anything, Hermann Goring, head of the German Luftwaffe replied "a squadron of Spitfires"



Enigma is the term for a number of machines for encrypting and decoding secret messages. The

most famous of these was the German military version. Between the wars, the Poles had made significant progress in deciphering its messages, and just before the German invasion of Poland, they passed these secrets to the French and British. This enabled the allies to decipher encoded German messages, giving them an edge that some historians think shortened the war by two years.

However, the allies had to be careful as to how much they exploited this advantage, since using it too much might tip off the Germans, causing them to create a new code. One of the most gut wrenching decisions of the war for Churchill was to refrain from warning Coventry about it being targeted for a major air raid November 14, 1940. As a result, it took a serious beating, including its Cathedral (below). Still, by sacrificing Coventry in order to win the war, Churchill might have saved a dozen Coventry's down the road.



Shelter from the storm. At first, the British government banned using subway stations as bomb shelters. However, mobs of people desperate for a place of refuge clamored at the gates until they were finally let in. An estimated 40% of London's population spent their nights in "the tubes" during the Blitz, as the period of German bombing raids was called. Others slept in department store basements or stayed at home, sealing their curtains to keep any light from leaking out and giving German bombers a target. Some even walked the streets during the raids for kicks.

During the Blitz, thousands of children were evacuated from Britain's cities and lodged in the country, often with complete strangers. Special weekend rates allowed many parents to visit their children briefly on Sundays.

UXBs. Another type of hazard was the large number of unexploded bombs (UXBs) that had to be carefully extricated and detonated. Especially difficult were parachute mines that got hung up in trees, making them hard to get to. Complicating matters further was the fact that some bombs were booby trapped with trigger fuses. By December 1941, there were 3000 UXBs waiting to be defused.

Finding London. Since Bombing by night doubled the margin of error for hitting a target to ten miles, The Germans used two radio beams to guide pilots to London, knowing they were over their target when the beams intersected. To combat this, the British set up counter-beams to confuse German pilots and throw them off target.

Finding the tee. For those who think today's golfers are obsessive about playing the game in any sorts of conditions, consider the temporary golf rules passed by the Richmond Golf Club of London in 1941 during the Blitz. These are real.

1. Players are asked to collect the bomb and shrapnel splinters to save these causing damage to the mowing machines.
2. In competitions, during gunfire or while bombs are falling, players may take shelter without penalty or ceasing play.
3. The positions of known delayed-action bombs are marked by red flags at a reasonable, but not guaranteed, safe distance therefrom.
4. Shrapnel and/or bomb splinters on the fairways, or in bunkers, within a club's length of a ball, may be moved without penalty, and no penalty shall be incurred if a ball is thereby caused to move accidentally.
5. A ball moved by enemy action may be replaced, or if lost or destroyed, a ball may be dropped not nearer the hole without penalty.
6. A ball lying in a crater may be lifted and dropped not nearer the hole, preserving the line to the hole, without penalty.
7. A player whose stroke is affected by the simultaneous explosion of a bomb may play another ball. Penalty: one stroke.

Britain also faced another problem: starvation, since it had to import half its food and many of its other vital resources, largely from the US. “Wolf packs” of German U-boats preyed upon Britain’s shipping, threatening to cut its vital lifeline. In October 1940, two eastbound convoys lost 33 of 79 ships to German U-boats. As late as March 1943 a wolf pack of 40 U-boats sank 23 of 92 ships in two other convoys.

But by then the tide was turning. Better detection technology (sonar), depth charges, aircraft carriers enabling surveillance planes to cover the whole Atlantic, and more escort ships dramatically reduced shipping losses. The allies sank 33 U-boats in May 1943 and 22 more in July, making the erstwhile hunters now the hunted. With the Atlantic sea-lanes now secure, the allies could build up their forces for an eventual invasion of Hitler’s Europe.

The last major raid of the Blitz came on the night of May 10-11, 1941. It was a “dirty raid” as the British called it, one using incendiary bombs. Due to Britain’s mild winters, water lines were close to the surface and thus easily burst by bombs. This forced firemen to run canvas hoses to the Thames River, but the hoses kept catching fire. To complicate firemen’s efforts further, smoke got into a subway station, causing panic-stricken crowds to come pouring out into the streets where the fires were raging and bombs still falling. German air raids would assault Britain’s cities sporadically throughout the war, but this was the last night of the Blitz as Hitler turned east for new conquests.

Barbarossa: Germany vs. Russia (1941)



A fatal delay? When Mussolini bungled campaigns in both the Balkans and against the British in North Africa, Hitler intervened, sweeping through

the Balkans, driving British forces from Greece, and seizing Crete with a daring paratroop drop. In North Africa, the Afrika Korps, under Erwin Rommel, known as the Desert Fox, drove the British back towards Egypt.

Hitler’s Southern flank was momentarily secure, but he claimed the delay, which he estimated at four or five weeks, was fatal to German plans. In fact, even without Mussolini’s “help”, the German invasion probably would have had to wait until June to start because of an unusually rainy spring.

Russia had around 20,000 tanks at the time of the German invasion. Guderian thought this was an overwhelming advantage for Stalin, but if he gave this figure to Hitler and asked him not to attack, Hitler would say he was exaggerating Russian strength. So, to make his argument seem more believable to Hitler, Guderian cut the estimate of Russian tanks in half to 10,000, which would still be triple the number of tanks the Germans had. Hitler still thought he was exaggerating and insisted the plan continue.

Hitler’s success in Russia depended on the speed and surprise of blitzkrieg, for which Russia’s flat open terrain was perfect. Stalin gave Hitler the element of surprise by not heeding numerous warnings of the impending attack. And when it came, he was so shaken he couldn’t function for several days, giving Hitler an even bigger jump on the Russians. Therefore, when the attack was launched on June 22, 1941, it hit with hurricane force. Guderian’s two panzer divisions in the center destroyed 30 Russian divisions & then moved on to destroy 12 more. In the south, one panzer division pinned down and destroyed 20 Russian divisions.



The German offensive was rapid too. Guderian’s divisions advanced 175 miles in only four days, while German motorized divisions at one point

covered 413 miles in three weeks. The efficiency of the German army's engineers was one reason for the rapid advance through Russia, even bridging rivers in the face of enemy fire. Still, since Hitler concentrated mechanization in a few elite panzer divisions, the rest of the Wehrmacht had to rely on horses for transporting equipment and supplies.

Especially hurting the Russians was Stalin's insistence on controlling every move his armies made. Fighter planes were strafed on the ground because he refused to let them be launched. Tanks sank in a swamp he ordered them to advance through. Millions of Russian soldiers were wounded, killed, or captured because Stalin refused to let them retreat to new positions. Germany's overwhelming offensive led to a million Russian casualties and 3.5 million prisoners in 1941, growing to 5.7 million by 1945. Most would not survive captivity, 2.8 million alone dying by 1942

Non-Russians, such as Ukrainians, at first welcomed the Germans as liberators from Stalin. A million of them enlisted to fight for Hitler before they found that, against all odds, he was even worse than Stalin. Five days after letting the Ukraine declare itself an independent state, Hitler broke it up into five territories under Germany or its allies. Then, declaring there was no Ukraine, he began a purge of the local population, starting with the Jews. Local militia raised by the Germans helped in executing local Jews. First, the Nazis would force their victims to dig mass graves in the frozen ground. Then a kicker would kick bodies into the ditch to make way for the next round of executions. The Nazis would soon expand these operations to include Soviet citizens in general since they too were non-Aryans.

Not surprisingly, Nazi rule led to a widespread resistance movement. Russian partisan bands, containing both men and women, sabotaged railroad tracks and bridges, waylaid supply convoys, and ambushed isolated German units. Any partisans caught were automatically executed, just stirring up more Russian anger.

As long as conditions were good, the Germans advanced rapidly. However, Russia's lack of good roads led to traffic jams in good weather and made

travel nearly impossible when the weather turned foul. It started with the autumn rains which left the Wehrmacht (German Army) literally stuck in the mud. But the Russian winter wasn't far behind, and the German army was woefully unprepared for it. Guns jammed, engines froze, and steam engines couldn't get up a head of steam. Worst of all, Hitler had neglected to supply his men with winter clothing.

Meanwhile, the Russians prepared to defend the gates of Moscow. Women built defensive works while men cleared German barbed wire and land mines to pave the way for the counter-attack to come. It came on December 6, 1941, the Russians throwing everything they had against the freezing Germans. Stalin even used "trampers" to run ahead to detonate land mines so his tanks would be safe.



Now it was the Germans' turn to surrender or retreat and freeze. Some German units were trapped in isolated pockets and survived on airdrops by the Luftwaffe until they could resume their offensive in the spring. This success would prove fatal a year later when Hitler thought he could repeat this type of operation on a much larger scale at Stalingrad.

A Tale of Two Cities: Leningrad and Stalingrad

Much of the war on the Russian Front hinged on two very different sieges, one at Leningrad and the other at Stalingrad. In the North, German forces settled down to besiege Leningrad (once again, present day St. Petersburg). The 900-day siege of Leningrad was not so much a battle as a prolonged agony for its inhabitants.

An estimated one million Russians died there, an average of 1100 every day for 900 days, mostly from starvation or disease brought on by malnutrition. That's nearly three times more than all the Americans who died in the entire war.

People ate stewed twigs and peat moss shavings, household pets, and shoe leather, along with fir bark, insects, wallpaper paste, and lab rats. Pine sawdust, moldy grain dredged from sunken barges, bone meal, and cottonseed processed to remove the poisons were added to the bread. There were 226 people arrested for cannibalism, while human flesh was sold in the markets.

People were so hungry they would keep relatives' deaths secret so they could still use their ration cards. Because they were so weak from hunger, it took up to an hour to walk up three flights of steps.

During the shelling, people learned to walk on the side of the street closest to the Germans, using the buildings on that side as shelter from the shelling. Boys would be sent to the rooftops to shovel unexploded bombs down into the street.

In the winter, when its ice could support the weight of supply trucks Lake Ladoga became "the road of life". Despite the cold, drivers kept their doors open in case their trucks broke through the ice. In the summer, food was grown anywhere to feed the starving city, including a cabbage patch planted in the plaza of St. Isaac's Cathedral.



As supplies were brought in to the city, children were evacuated. Thousands of them lost touch with their families. After the war, the most popular radio show in Russia was "I am looking for someone". Its sole purpose was to reunite families separated by the war.

The Russian Composer, Dmitry Shostakovich, conducted his Seventh Symphony in the summer of 1942. It was a major event in the siege of Leningrad, signifying Russian defiance of the Nazis still besieging the city. Russian artillery drew German fire to one part of the city so the symphony could be performed peacefully in

another part of town. Finally, in 1944, the Red Army broke the siege. Leningrad had survived.

Stalingrad (September 1942-January 1943)

If any battle was the turning point of the war, it was Stalingrad, an industrial city that Hitler saw as the key to Russia's oil fields in the south. After initial German successes that took 90% of the city, the fighting bogged down into desperate house-to-house and even room-to-room fighting. As the Russians bled the German army white in the rubble of Stalingrad, they were also building massive forces to the north and south. On November 19, 1942, they slammed into the flanks of the German army guarded by its Italian and Romanian allies, broke through, and met in a giant pincer movement behind the German army. The German army of some 250,000 men besieging Stalingrad was now itself surrounded and besieged.



Before trying to take Stalingrad, the Germans virtually destroyed it in a massive air attack, creating such intense fires that people 30 miles away could supposedly read a newspaper by them at night. Then the German army moved in, only to find that tanks were ill suited to the desperate house-to-house fighting of urban warfare. Stalingrad quickly degenerated into the most vicious and desperate urban fighting in history.

For the Germans it meant their tanks were nearly useless in the crowded rubble strewn city. It also meant fighting toe to toe with an enemy fanatically devoted to defending its homeland & knowing it had the Germans on even terms for once. For the Russians it meant having to get to and supply the city by crossing the Volga River in the face of enemy dive-bombers. Casualties were horrendous for both sides. One of four Russian soldiers sent across the Volga didn't even survive the crossing to make it to the fight.

Many of Stalingrad's defenders were untrained citizens who were sent into battle after being given a rifle and basic instructions within sound of the fighting. Factories even continued working during the fighting, one producing a submachine gun especially designed for the city's urban warfare. Still, even when reduced to a narrow 1500-meter perimeter backed up to the Volga River, the Russians grimly hung on. There were no battle lines here, only bombed out buildings that held a hundred bombed out rooms, each of them its own battlefield, sniper's post, or grave. No quarter was asked or given in this city.

As one German officer put it: *"Stalingrad is no longer a town. By day it is an enormous cloud of burning, blinding smoke; it is a vast furnace lit by the reflection of the flames. And when night arrives, one of those scorching, howling, bleeding nights, the dogs plunge into the Volga & swim desperately to gain the other bank. The nights of Stalingrad are a terror for them. Animals flee this hell; the hardest stones cannot bear it for long; only man endures..."*

By November 1942, the Germans controlled all but 10% of Stalingrad. Still the fighting went on. The Germans were losing the equivalent of an entire division every five days. For the Russians, it was even worse, losing 25% of its entire force in two days fighting. As if things weren't bad enough for the Germans, Hell was about to freeze over again as another Russian winter approached. Once the Volga was frozen solid, it provided a more convenient avenue for supplying the Russian soldiers desperately holding out in Stalingrad.

But for Russian Marshal Zhukov, Stalingrad was now the bait to trap the Germans. The real Russian offensive would drive through Germany's poorly armed and trained allies north and south of town and meet behind German lines, trapping the entire German 6th army. The Russians struck on November 19, 1942, catching Germany's Romanian and Italian allies completely unprepared. Four days later the two forces met, closing the trap on the Germans. It happened so fast the Russian

soldiers had to reenact the two forces meeting and celebrating for the cameras.

Trapped inside this pocket, known as the Cauldron, was the entire German 6th army, some 250,000 men. Hitler refused to let them break out, insisting they go on fighting for Stalingrad, now nothing more than a useless pile of rubble saying German reinforcements would rescue them and the Luftwaffe would airlift supplies to the beleaguered army. Therefore, while starvation, the Russian winter, and shelling took their toll, the fighting in the rubble continued. However, in February 1943, the Germans finally surrendered.



Katyushas (Little Kates) were Russian rocket launchers that would send a devastating amount of firepower raining down on German soldiers at one time. They were also known as Stalin's Organs for the unnerving high pitched humming sound they made when being fired.

Despite Goring's assurances to Hitler, airlifting supplies to an entire army was beyond the Luftwaffe's capabilities even under normal conditions. However, with Russian anti-aircraft fire & the Russian winter factored in, only 80 tons of supplies, one-tenth of what was needed, could get through each day. In addition, due to some bad planning or a twisted sense of humor, some of the supplies that did get through were shipments of pepper and condoms.

Gradually, the Red Army tightened the noose around the Cauldron, pounding the Germans with artillery fire from all directions, and taking one airfield after another. Meanwhile, at Hitler's insistence the fighting for Stalingrad went on. Finally, on January 31, 1943, despite his promotion to field marshal and Hitler's orders to keep fighting, General von Paulus surrendered the remnants of the 6th army, the same army that had marched in triumph through Paris only two and a half years before. Of the 91,000

Germans who surrendered, only 6,000 would make it home from Stalin's prison camps.

“What is life? Life is the nation. The individual must die anyway. Beyond the life of the individual is the nation.”—Hitler speech soon after the disaster at Stalingrad



The Aftermath of Stalingrad

Kursk & The End of Blitzkrieg



In July 1943, the Germans, desperate to regain the initiative, launched a huge offensive against the Russians who were waiting in heavily fortified positions at Kursk. The ensuing battle was probably the largest battle ever fought in history. When it was over, the Germans had lost 70,000 dead and 2950 tanks, almost their total tank force at the start of the battle. The Russians had suffered heavy losses as well, but Kursk was the last major German offensive against Russia.

Kursk was a hellish battle of attrition with no clear-cut winner or loser. With the addition of artillery and mobile assault guns to armored divisions, tanks no longer ruled warfare absolutely. The days of blitzkrieg were over, and with that, the days of the Third Reich were numbered. From now on, the Red Army would be on the offensive, slowly and tortuously driving the Germans back across Eastern and

Central Europe. The war was far from over, but the tide was turning, not just in Russia, but on other fronts was well.

Whirlwind: the air war (1942-45)



An American B-24 is hit by German ground fire Whirlwind: the air war (1942-45). Until they had built up the forces for invading Hitler's Europe, the only way the British and Americans could do any harm to the Germans was from the air. Therefore, they developed the tactics and planes for large-scale aerial bombardments of enemy positions. Strategic long-range bombing required large planes, not only capable of carrying large numbers of bombs long distances, but also defensive armament since they were slow and fighter escorts didn't have the range to protect them for the entire mission.

Because of their limited range, fighter squadrons had to stagger the way they provided fighter escorts for the heavier and slower bombers on their way to and back from Germany. The large numbers of bombers used for a mission made organizing the planes into formation a major task. To that end, an older, combat worn plane with bright markings would serve as a rallying point for each bomber squadron.



Two B-17's collide in bad weather. The large number of planes involved made this a frequent sort of accident.

The bombers' slowness made them highly vulnerable to fighter attacks and anti-aircraft fire. A loss of anything less than 10% of the planes involved in such a raid was considered a success. Aircrews suffered the highest casualty rate for any branch of service in the American

and British armed forces. The incredible stress of such missions made it necessary to relieve any crewmen of combat duty after 25 missions, although the average life expectancy of a crewman was 14 missions.



Flak from anti-aircraft guns, such as German 88's, could hit planes at an altitude of six miles, spotting them with radar.

“Foiling” the enemy.” On one air raid, the allies dropped 92,000,000 aluminum foil strips to “white out” German radar, since each foil strip showed up as a blip on the radar screen.

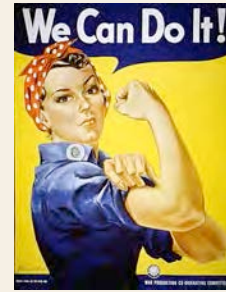
However, it was the cities and people in them that really suffered. Many raids would first use high explosive bombs to blow out windows and rooftops to create more airflow through buildings for the firebombs that would follow. If conditions were right, such as at Hamburg, Dresden, and Tokyo, a firestorm, usually associated with a nuclear blast, occurred. Such fires triggered tremendous winds that sucked in surrounding oxygen and burned until there was nothing flammable left.

In Dresden, many people believed a rumor of a secret deal between Hitler and Churchill where Germany wouldn't bomb Oxford and Britain wouldn't bomb Dresden. Although it was a beautiful old city with no real military value, the allies may have bombed it to give morale support to Stalin, since it was in eastern Germany.



Dresden after allied incendiary raids and the resulting firestorm

The Sinews of War: the War of Production



World War II was as much a war of production quotas as it was of inflicting damage and casualties on the enemy. To a large extent, victory went to whoever could produce the most tanks and planes.

Russia was heavily crippled by the opening months of fighting with Germany, losing much of its industrial and agricultural heartland. However, the Russians managed somehow to move some 1523 factories eastward beyond the Urals and get them running in a remarkably short time. Soviet wartime production constituted a virtual 2nd industrial revolution in Russia.



An ice-covered Soviet sub, used to protect allied convoys in the Arctic Sea, the only route open for supplying Russia.

In addition, the U.S. & Britain helped keep Russia afloat via the Arctic Sea with massive aid consisting of planes, 665,000 motor vehicles (mostly Dodge trucks), boots, 8 ounces of rations for every Russian soldier for the duration of the war, 3/4 of its copper consumption and most of its high grade oil for planes. The allies also gave Russia 2000 locomotives, 11,000 freight cars, and 540,000 tons rails, equal to more railroad track than Russia built between 1928-1939. British wartime aid to Russia nearly equaled its entire 1989 defense budget.

Germany's concept of Blitzkrieg was as much an economic as military strategy, being geared to the economic necessity for a short decisive war that would net Germany large supplies of coal, iron, oil, and food. Largely because of promises he had made to German industrialists, Hitler waited until 1943 to put Germany on a total war footing. In 1944, despite Germany's increasingly desperate situation, Hitler devoted only 40% of Germany's economy to the war, as opposed to Britain, which had dedicated 50% of its economy to the war for several years. However, added to that were the imports and forced labor of millions taken from occupied areas.

Therefore, German plane production went from 10,392 in 1940 to 40,953 in 1944. Germany never tried to match its enemies in quantity, but quality, especially putting out excellent tanks, machine guns, and submarines as well as pioneering the development of Jets, and the V1 and V2 missiles. Given a bit more time, these weapons might have turned the tide back in Germany's favor. However, allied bombing of German ammunition, explosives, & especially oil facilities kept Germany from using these new high-tech weapons to full effect.



The Me 262, the first jet fighter with a top speed of 559 miles per hour, was virtually untouchable by Allied planes. Given a bit more time, these weapons might have turned the tide back in Germany's favor.

Britain at this time only produced half its food & none of its oil or rubber, so that, by 1944, the US had to supply it with 28.7% of its military equipment & 29.1% of its food. Not that Britain wasn't doing its part. British war socialism" & Keynesian economics led to a 50% increase in industrial production in 1942 alone. Tank production rose from 969 tanks in 1939 to 8611 in 1942. During that same time, production of bombers, such as the Avro Lancasters (below) jumped from 758 to 7903.

While Britain's GDP rose 60%, consumer production dropped 56%. The war ate up 50% of Britain's GDP, one third of that just for its strategic bomber force. To pay for this, Britain sold most of its overseas holdings, which had deep repercussions for it after the war.

However, America was the huge success story in the war of production quotas. During the war the US budget jumped from \$13 billion to \$71 billion by 1944. America's Industrial production doubled during the war, giving it 65% of world industrial production by 1945. Average plant utilization went from 40 to 90 hours per week. Industrial output went from 29% of GDP in 1939 to 38% in 1944. Productivity per man (or, more properly, human) hour in the US was double that of Germany's and five times that of Japan.



The stereotype of the American housewife took a heavy blow during World War II as millions of women stepped up to fill the gaps in the labor force left by men going to war. The iconic image of Rosie the Riveter still frames our perceptions of American women during this era.

In 1942, American industrial production was greater than that of all three Axis powers combined. By 1944, it had doubled again. American "know how" reduced the 12-week repair of the carrier Yorktown to 2 days. It cut the time needed to build a "Liberty" cargo ship from 196 days to 10.3 hrs. WWII also raised Americans' standard of living so that Steinbeck's Okies of the 1930's had become middle class factory workers of the 1940's. In short, the war lifted the US out of the Depression.

"The war was a hell of a good time. Farmers in S. Dakota that I administered relief to, & gave them \$4/wk & bully beef to feed their families, when I came home they were worth a quarter of a million dollars...What was true there was true all over the United States...And the rest of the world was bleeding & in pain. But it's forgotten now. WWII? It's a war I would still go to." --Paul Edwards, New Deal Worker

The Beginning of the End: France (1944)

For some time, Stalin had pressured his Western allies to open a second front in order to relieve the pressure on Russia. He felt Russia was bearing the brunt of the fighting. Indeed, while Germany had 10 divisions committed to the North African front, it had 200 divisions in Russia. In fairness to the Western allies, an amphibious invasion of France was a daunting task that required tremendous amount of logistical planning as well as men and supplies. Between the only two suitable invasion spots, Calais or Normandy, the allies settled on Normandy, selecting five beaches for the assault.

Two-thirds of the bombing raids before D-Day were around Calais to make the Germans think that was where the invasion was coming. The allies fabricated and broadcast "news" about a fictional First US Army Group (FUSAG) to make the Germans think the Allied invasion would take place north of Calais, even lining the British coast opposite Calais with inflatable fake tanks (below). Helping the allies was the capture of Enigma, the German decoding machine, which allowed them to intercept German communiqués. When they intercepted messages referring to FUSAG, they knew the Germans had gone for the bait.



By D-Day the allies had an overwhelming advantage of 12,000 planes against 169 for the Germans. Before, crossing Germany would

normally take three days. After D-Day, because of the threat of allied attacks during the day, that same trip took eleven days.

Before D-Day, there was a raging argument between German generals Rommel and Runstedt over placement of their tanks in readiness for the allied invasion. Rommel wanted forward positions for the tanks in France so they could react quickly and drive the allies back into the sea before they could build a substantial force. Runstedt wanted them kept back in reserve. Hitler resolved it by dividing them between forward positions and reserve.

Bad weather delayed the invasion for a day, but when a slight break in the weather appeared, commanding general of the Allied forces, Dwight D. Eisenhower, took the risk of launching the invasion. Paratroops first landed behind German lines to begin the invasion. Their role was to seize key points and create confusion behind German lines as to where the invasion was coming. Except for Omaha Beach, (which is effectively portrayed with nightmarish detail in the opening scenes of the film *Saving Private Ryan*) the allied forces met much less resistance than they were prepared for and established footholds on all five beaches.



Now, having established a thin beachhead, they had to race to build up their forces before the Germans could amass enough forces in the area to drive them out. The Allies' overwhelming air superiority especially disrupted German efforts. So did artificial harbors called Mulberries that allowed the allies to bring in large volumes of heavy equipment (below) needed to break through the surrounding German lines.



Having secured a beachhead, the allies had to expand it and then break through the German lines. To do this, they had to fight through the Bocage, the region of Normandy with thick hedgerows that made each field a virtual German fortress that must be assaulted and cleared out individually. The fighting that followed D-Day was intense, especially for elite paratrooper units that were constantly called upon to lead the fighting in the Bocage (below).



Especially wearing on German soldiers was the continued bombardment they were subjected to by the Allies who had massive superiority in air and artillery power. Unfortunately, 60,000 French civilians, including children, were killed just for being in the wrong place at the wrong time during the liberation of Normandy.

In retaliation, Hitler launched V-1 and V-2 Rockets against Britain. The V-2s, fired from bases along the Belgian coast and carrying a ton of TNT at speeds of up to 1000 MPH, were virtually impossible to stop and killed more British than the Blitz did. At the end of the war, German scientists were working on a V-3 rocket able to reach the America, making it essentially the first intercontinental ballistic missile. Captured German scientists would play essential roles in the rocket and missile programs for both the U.S. and Russia during the Cold War.



A V-1 rocket goes down over London

An attempted assassination of Hitler in July 1944 sent the fuhrer even farther over the deep end of delusion and paranoia. As a result, he had many of his best generals, including Rommel, arrested and given the choice of execution or suicide. Many killed themselves.

The Fall of the Third Reich (December 1944-May 1945).



A Russian soldier raises the Soviet flag over the Reichstag. Stalin wanted this picture banned because close-ups of it showed two watches on the soldier's arm, indicating the Red Army had been looting.

In December 1944, with Germany on the verge of collapse, Hitler launched one last desperate attack through the Ardennes (where the Germans had broken through in the Battle of France in 1940), hoping it would convince the Allies to negotiate a peace with Germany. Although initially successful, it was too little too late as the Allies regrouped and eventually won the battle. This was the last offensive launched by the Third Reich. In March 1945, the Western allies crossed the Rhine. Now it was just a matter of time.

In the west, German soldiers were surrendering by the thousands. Some German officers, figuring the war was over anyway, would give soldiers their discharge papers as they passed through or near their hometowns. Thousands of German soldiers and civilians fled westward to escape Stalin's rule.

On March 19, 1945, Hitler ordered the total destruction of what was left of Germany to punish defeatists. Luckily, Albert Speer, who was charged with this mission, failed to carry it out. When he confessed this to Hitler a month later, the fuhrer was too preoccupied with his own impending death to show much interest.

On the Eastern front, events were considerably more brutal and destructive. In Warsaw the Poles were hoping to liberate themselves from Hitler before the Russians got there. However,

Stalin halted the Red Army to “regroup”, giving the SS time to brutally suppress the Poles. He then moved to take the city, but not before the SS had carried out Hitler’s orders to level it to the ground.

Some of the more desperate German resistance came from the Hitler Youth, the most fanatical and vicious of Germany’s defenders. Pilots shot down over Germany prayed they were found by the regular army instead of the Hitler Youth who would torture and execute them.



On April 25, 1945, American and Soviet troops met on a footbridge over the Elbe River, signifying the end was near. All that remained was the final assault on Berlin by eight Russian armies. Against this the Germans only had 75,000 defenders many of them old men and boys. During the last few months of his life, Hitler rarely showed his face above ground, staying isolated in his underground bunker and becoming increasingly deranged and delusional while the Third Reich came crashing down in ruins. German boys (below) were given *panzerfausts*, one-shot anti-tank weapons, with which to face Soviet tank columns. Soldiers with rifles were issued an average of 5 bullets each.



Berlin by this time was a city without power, public transportation, sanitation facilities, fuel for cooking, or anesthetics for the wounded. Corpses from the bombing were left unburied. For food, people would come out to carve up

horses killed by the bombing. Despite the hopelessness of their cause, the Germans, especially SS units with nothing left to lose, defended Berlin ferociously. They even blew out the water pipes in the subway tunnels to stop the Russians from using them, in the process drowning thousands of helpless civilians hiding there.



While the German army defended Berlin, SS squads would randomly seize civilians, charge them with defeatism or collaborating with the Bolsheviks, and execute them on the spot. In some cases, German soldiers would intervene by shooting the SS officers. In the final assault on the Reichstag (below) the Soviets fought their way up its steps, blasted open the doors with two mortars and plunged inside. Then followed savage room-to-room fighting with fanatical SS units who, knowing they could expect no mercy, held out to the last. The earsplitting crash of grenades & gunfire reverberated through the halls as rooms were won & lost over & over again in the desperate hand to hand fighting.

On April 30, 1945, the Red flag was raised over the Reichstag. Stalin’s insistence that his army took the Reichstag in time for the May Day celebration cost the Red Army dearly. Overall, the Russians lost 300,000 men in the Battle of Berlin, 10% of their numbers and the heaviest losses of any battle of that duration during the war. Meanwhile, Hitler married his longtime mistress, Eva Braun, and then they committed suicide in their bunker. The Germans officially surrendered to Russia and the Western allies on May 8, 1945. Although they had already surrendered to the Americans and British on May 7, the Russians, based on prior agreement with their allies, insisted it be redone to include them, an ominous sign of the Cold War already emerging between the erstwhile allies.

137. WORLD WAR II IN THE PACIFIC (1941-45)

"I am become Death, the destroyer of Worlds."—
Robert Oppenheimer, quoting the Hindu scripture,
The Bhagavadgita, upon witnessing the first atomic
bomb test in July 1945

We have already seen how the stalemate between Japan and China, Hitler's failure to keep Japan informed about his plans against Russia, and France and Britain being distracted by the outbreak of war in Europe caused Japan to turn south and threaten the European colonies in South-east Asia. The Japanese planned to consolidate their gains there by forming the Greater East Asia Co-prosperity Sphere, an organization of states that would provide Japan with raw materials as well as markets for its manufactured goods. All this seriously damaged the reputation of the West and set the stage for colonial revolts and independence after the war.

Up to this point, Japan was careful not to antagonize the United States, which then held the Philippines. However, in 1941 the United States, nearly as concerned about aggression in Asia as in Europe, cut off its oil shipments to Japan to persuade it to back off from invading Indonesia. The Japanese, desperate for oil, took the fatal step of attacking the United States' naval base at Pearl Harbor in the Hawaiian Islands (12/7/41). This did cripple American naval power in the Pacific for the time being, but it also brought into action an industrial giant that Japan would have a hard time matching blow for blow. Still, the opening months of 1942 saw a virtually unbroken string of Japanese successes, including the conquest of the Philippines.

However, in the long run, these victories would cause some serious problems for Japan. For one thing, the Japanese generals became overconfident of victory, which in June, 1942 helped set up a serious defeat at the hands of the American navy at Midway, a battle which proved to be the turning point of the war. Secondly, the Japanese advance caused American industrial production to intensify and create overwhelming numbers of ships and planes for the war in the Pacific. In fact, by 1944 American production was twice that of Japan, Germany, and Italy combined. Another major problem Japan had was that, although its empire covered nearly 1/10 of the globe, most of that was

water. This spread the Japanese army very thinly over a large number of islands. That in turn stretched the Japanese navy's resources to its limits as it tried to supply the army on the various islands.

As a result, everything started going wrong for Japan. First of all, the widespread nature of the Japanese Empire meant that American warships, especially submarines, could destroy most of the Japanese navy and shipping, thus isolating forces on the islands from each other and Japan. This in turn allowed the allies to concentrate their forces on each island separately and destroy the forces there in detail. Finally, the stepped up industrial production of the United States wore the Japanese down with its superior numbers and firepower. The Japanese fought ferociously, often to the last man, despite being supplied with no food or ammunition and sometimes having to fight with bamboo spears.

By 1944, the Allies had taken islands within bomber range of Japan and were launching devastating raids on Japanese cities. One raid over Tokyo in 1945 triggered a firestorm, much like the ones that hit Hamburg and Dresden, killing 200,000 Japanese civilians in its flames. Japanese houses, made of wood and paper, were much more susceptible to Allied incendiary bombs than European cities of brick and stone.

By the time the war in Europe was over, the Allies were preparing to invade a Japanese homeland whose 60 largest cities were 60% destroyed, whose fuel supplies were depleted, and whose railroads and industries were near collapse. However, an invasion of Japan was not a thought the Allies treasured, since some estimated Allied casualties would reach one million while Japanese casualties might reach 10-20 million.

Complicating this situation was the fact that Stalin had promised to enter the war against the Japanese 90 days after the conclusion of the war in Europe. That would put his entry into the war in early August. The United States, not wanting to give Stalin a chance to expand in Asia, needed to win the war quickly with as few casualties as possible. They found that way with a new weapon: the atomic bomb, which they had been developing through the Manhattan Project since 1942.

On August 6 and 9, 1945, the United States Air Force launched nuclear attacks on the Japanese cities of Hiroshima and Nagasaki respectively. The level of destruction and suffering was unprecedented and signaled a dangerous new era in history. Debates continue about whether the U.S. should have dropped these bombs. Some see it as a needless act of mass destruction launched against a country on the verge of collapse. However, to Americans still caught up in the fury of a world war, it was seen as a way to shorten the war and save American (and Japanese) lives. Whatever one's opinion, Hiroshima and Nagasaki provided a grim and frightening vision of what the future could hold for us. The direct result of the atomic attacks on Hiroshima and Nagasaki was that Japan soon surrendered on September 2, 1945. However, Asia was anything but calm as civil war in China would put the Communists in power there in 1949 and the Cold War between the United States and Russia was starting.

“A Day of Infamy”: Pearl Harbor



The USS Arizona goes down during the Japanese attack on Pearl Harbor

Aircraft carriers. The key to waging and winning a war in the Pacific was the aircraft carrier, a mobile air base that allowed its owners to extend their air power far beyond the range of aircraft alone. In 1922, a naval arms limitation treaty put caps on the relative sizes of navies of different powers, including those of the US and Japan. However, the aircraft carrier, barely more than a concept at this time, was omitted from the treaty. Japan exploited this loophole and, by the start of World War II, had the world's largest aircraft carrier fleet.

The Japanese made thorough preparations for the attack on Pearl Harbor.

Spy photos enabled them to construct a mock-up of Pearl Harbor with each

American ship in place so they could practice dry runs of the attack.

They developed special torpedoes for the shallow waters of the harbor.

To avoid detection, they practiced strict radio silence and took an indirect route across the north Pacific that had virtually no other ship traffic.

As a result, when they struck they had the complete element of surprise.

Helping the Japanese was the fact that Pearl Harbor had been on high alert for an attack for six months. Thus, by the time the Japanese attacked, American vigilance had slackened. In fact, American radar picked up the Japanese planes approaching Pearl Harbor, but thought they were American planes flying in from San Diego.

The Americans had even cracked the Japanese diplomatic code and intercepted the message to their ambassador instructing him to deliver the declaration of war as the attack was starting. Unfortunately, by the time the message was deciphered and a warning delivered to Pearl Harbor, the attack was already underway.

The *USS Oklahoma* keeled over, the sailors inside drowning before rescuers could get to them.



The USS Shaw explodes in dry-dock during the attack on Pearl Harbor

The attack on Pearl Harbor sank four American battleships and seriously damaged four more. In addition, 347 American planes were destroyed or damaged on the ground. Adding to the damage was the fact that the planes were bunched closely together to make them easier to guard on the

ground, but also making it easier to attack them from the air.



The aftermath of the attack on Pearl Harbor

One factor that would prove crucial to America's comeback was the fact that at the time the attack on Pearl Harbor came, the US carrier fleet was away on maneuvers and thus was unharmed. This has led to speculation that President Roosevelt intentionally allowed the attack on Pearl Harbor to take place so that the U.S. would enter the war. However, that begs the question of why not just be ready for the attack when it came. We would still be at war, but with more of our fleet intact.

"I shall run wild considerably for the first six months or a year but I have utterly no confidence for the second and third years."-- Japanese admiral Yamamoto

Dark Days (December 1941-June 1942).



The attack on Pearl Harbor did cripple American naval power in the Pacific for the time being, but it also brought into action an industrial giant that Japan would have a hard time matching blow for blow. Still, as the Japanese admiral Yamamoto predicted, the opening months of 1942 saw a virtually unbroken string of Japanese successes, including the conquest of the Philippines.

The Bataan Death March. In April 1942, the Japanese subjected 76,000 POWs, including 12,000 Americans, to a grueling 60-mile forced march known as the Bataan Death March (shown above). During this ordeal, the POWs were driven relentlessly in the blazing sun without food or water. Even prisoners stopping to go to the bathroom were immediately shot or bayoneted. Those still able to walk carried comrades too weak or sick to continue on their own. About 5,000 of the 12,000 Americans subjected to this atrocity died before reaching their destination. Overall, 40% of American POWs in Japanese camps died, compared to 1.2% in German camps.

The Japanese expected their own soldiers to fight to the death and had complete contempt for any soldiers, including their own, who surrendered. For example, my father, who served as a paratrooper in the Pacific, told me of three Japanese prisoners, an officer and two enlisted men, the latter having surrendered. The officer, having the same contempt for the Japanese soldiers who surrendered as for Americans who did likewise, brutalized the enlisted men to the point that they had to be separated.

Thirty seconds over Tokyo: the Doolittle Raid. On April 18, 1942, Jimmy Doolittle led a squadron of B-25 bombers to raid Tokyo and three other cities. Because the Americans had no bases close to Japan, the bombers had to launch from aircraft carriers. However, normally being too large to launch from carrier decks, they had to be stripped of any excess weight. Also, since they didn't have enough fuel to return to their ships and were too big to land on a carrier anyway, the pilots continued to China where they ditched the planes behind Chinese lines in the hope of being rescued by Nationalist forces. While the raid barely hurt Japan, it was a morale booster for the Americans, while it shocked the Japanese and helped prompt the offensive on Midway that would prove to be the war's turning point.

Turning of the Tide at Midway (6/ 4/1942)



AF. Crucial to the American victory at Midway was cracking the Japanese naval code. They knew the code name for the Japanese target was “AF” which they suspected was the American base on Midway Island, one of the few islands in the Central Pacific. Therefore, the Americans at Midway sent an un-coded message saying they were short of water. When the Japanese signaled that AF was short of water, the Americans knew Midway was the target and would be waiting in force. Thus, instead of attacking with an overwhelming advantage, the Japanese would be meeting a force of carriers and airplanes comparable to their own.

Americans working round the clock at the Pearl Harbor shipyard, cut the repair time for the *Yorktown* from 12 weeks to 48 hours to get it ready for the upcoming battle. Unfortunately, the *Yorktown* was sunk at Midway.

Life turns on a dime. On June 3, 1942, American planes spotted the Japanese fleet. The next day a fleet of American Flying Fortresses tried to bomb the Japanese fleet but failed. The Japanese then launched an attack on Midway beating intercepting fighters and seriously damaging the American base there.

The Japanese planes returned to their carriers to load torpedoes to attack the American fleet. However, since it still hadn’t been sighted, they started to exchange torpedoes for bombs to make another attack on Midway. Then a Japanese plane reported finding the U.S. fleet, so they started to switch back to torpedoes.

Meanwhile, Midway launched its planes against the Japanese fleet. Japanese Zeros (fighter planes), which were faster than the American planes at that time, destroyed one squadron of

American planes after another while their dive bombers were refueling and switching to torpedoes on the carrier decks below.

Then a minor miracle occurred.

One lone squadron of American bombers that had overshot the Japanese fleet came back and found it, hitting the carrier decks cluttered with bombs, torpedoes and high-octane fuel hoses.

The effects were devastating.

The torpedo stores of one Japanese carrier, *Akagi*, caught fire, forcing the crew to abandon ship.

Another carrier, the *Soryu*, was disabled by dive-bombers and sunk by a submarine the next day.

Similarly, the carrier *Kaga’s* aviation fuel caught fire and its crew also abandoned ship.

American dive-bombers later sank a fourth carrier, the *Hiryu*.

Meanwhile the pilot of a Japanese scout plane sighted the American carriers, *Hornet* and *Enterprise*. However, being tired and confused, he saw them again and mistook them for two new ships. The Japanese were alarmed because they thought U.S. had only three carriers in the Pacific (which they did) instead of four. Therefore, they withdrew, despite still having superiority in surface ships.



The USS Yorktown being torpedoed at Midway

The final tally: four Japanese carriers and one US carrier & destroyer sunk.

In 5 minutes, 10:25-10:30 AM, June 4, 1942, the war in the Pacific was reversed nearly one hundred eighty degrees.... almost six months to the day after Pearl Harbor and Yamamoto’s prediction.

Production Quotas and Internment Camps



B-17 bombers under construction at a Boeing plant in Seattle, Washington

The War of Production. As in the European theater of the war, the Pacific front was as much about production quotas as casualty counts. The common belief has been that the day after Pearl Harbor, American industries immediately kicked into high gear, producing tanks, planes, and bombs “like sausages” (a phrase used by the Russian leader Khrushchev during the Cold War). In fact, industrialists had urged, and gotten the green light from, President Roosevelt to start preparing the buildup for war eighteen months earlier as they watched Hitler’s Blitzkrieg storm across Europe. Therefore, when the Japanese attacked Pearl Harbor, America was already transforming its industries for making war materiel. Once again, the production figures are astounding.

In 1941, the United States and Japan each had six heavy aircraft carriers.

Between 1942 and 1944, Japan launched six more carriers.

Meanwhile, the U.S. launched 14 heavy carriers, 9 light carriers, and 66 escort carriers.

By 1945 the US had nearly 100 carriers.

During the war, Japan produced 62,795 planes, peaking at 2857 in June 1944.

From 1943 on, the US was producing 100,000 planes *each year*.

Internment camps for our own citizens. Fearing they might be spies for Japan, the U.S. government rounded up between 110,000 to 120,000 Japanese and American citizens of Japanese descent, keeping them in internment camps for the duration of the war. An estimated 62% of those interned were American citizens,

including people who were as little as one-eighth Japanese. Since Japan then occupied Korea, Korean-Americans were also interned. These actions were probably motivated more by racial prejudice against Japan than any real threat they posed, especially in California where 90% of Japanese immigrants to the U.S. had settled.

The main goal, to remove them one hundred miles from the West Coast, involved moving them first to temporary Civilian Assembly Centers, typically in horse tracks, and from there to internment camps with cheaply built barracks, no plumbing, and a surrounding barrier of barbed wire and armed guards. They were located in remote, desolate areas, such as Wyoming, where they were unprepared for winter, especially for those uprooted without a chance to pack, taking only the clothes on their backs. The government budgeted \$.45 per person daily for food. Many were Of course, being so far removed from home, they had no independent means for making a living.

Many of these people lost valuable property, either due to restrictions on what they could take with them, or from theft or vandalism while absent. Some farmers’ lands were tended by neighbors, but others had to sell their farms on short notice at huge losses. A few internees were even killed by sentries for wandering too close to the barbed wire perimeter.

On January 2, 1945 the exclusion order keeping the Japanese Americans interned, was rescinded. Freed internees received \$25 and a train ticket home to rebuild their lives. Some of them returned to Japan at a time when it was clearly losing the war. The last internment camp was closed in 1946. In 1988, the U.S. government apologized for its actions during the war.

To prove their loyalty, a number of Nisei (second generation Japanese Americans) from Hawaii enlisted, but were sent to the European theater instead of the Pacific theater where their linguistic skills would have been of great use. However, in Europe they proved their loyalty by becoming one of the most decorated units in the war, known as the “Purple Heart Battalion” for all the casualties they sustained.

Playing the Race Card: the Propaganda War



The Pacific War was also a propaganda war, with both sides playing the race card and exaggerating stereotypes of the other side. The Japanese saw Americans as lazy drunks and their own soldiers as heroically reclaiming Asia for the Asians while chopping off the tentacles of the American and British octopi portrayed as FDR and Churchill.



However, Japanese propaganda tended to be aimed against the allies more than to its own people, the intention being to demoralize them and sow dissension within their ranks. The poster on the left tries to exploit Indian dissatisfaction with British rule by showing a blinded Indian soldier fighting for his British overlord. The right-hand poster, aimed at the Australian public, plays on fears of American soldiers stealing Aussie women at home while the men fight and die in New Guinea.

An especially provocative poster aimed at the American public shows African-American men abusing white women while their men are away at war. Similarly, the Japanese would try to demoralize American soldiers with a radio show hosted by a woman (actually several women) known as Tokyo Rose, who would play the latest hits interspersed with suggestions of how the women back home were cheating on them with men who stayed home from the war. One of these women, Iva Toguri D'Aquino was an American citizen with the bad luck of visiting her aunt in Japan when Pearl Harbor was bombed. Stuck in Japan, she was one of the women known collectively as Tokyo Rose, he

real signon being Orphan Ann. After the war, she was tried and sentenced to ten years in prison for helping the Japanese. She was later offered a pardon.

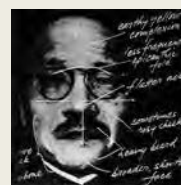
American propaganda was no subtler in its racial stereotypes, portraying the Japanese as near-sighted, buck-toothed, and as stupid as Elmer Fudd, as in the 1944 cartoon, “Bugs Bunny Nips the Nips.” More often, they were shown as an evil threat, murdering helpless American prisoners or molesting American women.



More amazing still is the misinformation spread about the Japanese, especially compared to the Chinese as seen in this Life Magazine article and a popular cartoon of the time, Terry and the Pirates, which had a feature “How to Spot a Jap.” Among the more interesting “facts” were:

- The Japanese are shorter and hairier than the Chinese and typically have buck teeth. (The hairier aspect may be due to the fact that soldiers in combat often cannot shave regularly.)
- The Japanese cannot walk straight because their legs are joined directly to their chests, making them shuffle along. However, the clever ones can mimic normal walking to infiltrate civilian society.

It's amazing the allies won the war after being fed so much misinformation. One particularly fatal misconception was that the slanted eyes of the Japanese prevented them from being able to fly long distances, leading to the conclusion they couldn't even reach Pearl Harbor.



Island Hopping



Two Marines are hit by sniper fire while landing on Saipan

Never got word. Every so often after the war, Japanese soldiers abandoned and forgotten on various Pacific islands would wander out of the jungle, some still thinking the war was going on. The Japanese government would have to send officials to explain the war was over and convince these men to come home. As recently as 2009, two such veterans wandered out of the jungle in the Philippines, thinking the war was still going on.

Lopsided casualties. Thinking any substantial casualties inflicted on the Americans would cause them to give up on the war, the Japanese showed callous regard for their own soldiers lives, sometimes in suicidal “Banzai” charges that, along with massive air and sea bombardments, led to nearly colonial era casualty ratios:

- Guadalcanal (1942): 25,000 Japanese vs. 1592 Americans killed
- Tarawa (1943): 5,000 Japanese vs. 1,000 Americans; only 17 Japanese survived.
- Leyte (1944): 65,000 out of 70,000 Japanese killed vs. 3500 Americans
- Iwo Jima (1945): 18,000 Japanese killed vs. 4917 Americans, the closest casualty ratio of the war
- Okinawa (1945): 185,000 Japanese vs. 12,520 Americans



Left: Marines killed on Buna Beach in the South Pacific. This was one of the first such photos released showing the stark realities of war.
Right: Japanese soldiers killed rushing a machine gun on Guadalcanal (November 1942)

At the battle of Kwajalein in 1944, the American air and sea bombardment was so destructive that someone said the island looked as if it had been picked up to 20,000 feet and then dropped. As a result, all 8500 Japanese were killed as opposed to only 373 Americans.

The Seabees were the naval engineering corps. On each island that took the allies closer to Japan, the Seabees would prepare a new airstrip for launching air raids against the Japanese.

Flamethrowers, although outlawed by the Geneva Convention, were used by the Americans, especially against Japanese soldiers holding out in caves. Sometimes they would fire the flames across the entrance of the cave to suck out the oxygen and suffocate the inhabitants.



Paratroops were one of any number of innovations in World War II. The idea was to drop them behind enemy lines to confuse the enemy and disrupt their communications and supply lines. The basic procedure was to drop them from a low altitude (c.500 feet), which would give them enough time for their chutes to open and stabilize before hitting the ground.

Unfortunately, in one drop of the 503rd Airborne on the Pacific island of Noemfoor, Army Air Corps forgot to factor in that the landing site was 200 feet above sea level. Thus many paratroopers’ chutes didn’t have time to open or stabilize before hitting the ground.

One of those paratroopers was my father, who may be in this picture. His chute hadn’t stabilized and he swung into a Japanese tank upon landing, permanently messing up his back.



The fact that I found this on an Australian war memorial site shows the close cooperation of American and Australian soldiers during the war, even fighting shoulder to shoulder in such places as New Guinea and Noemfoor. My father always spoke highly of the Australians who, he said, were grateful to the United States for coming to their aid as the Japanese closed in. Apparently, he knew what he was talking about, because Australia has been among America's staunchest allies ever since, even during the controversial Iraq War in the 2000s.

Kamikazes



Toward the end of the war, as its situation became increasingly desperate, Japan launched a series of planes as suicide bombers. They were called "kamikaze", meaning "divine wind" referring to a typhoon that wrecked a Mongol invasion fleet in 1282, thus saving Japan. However, for Americans, kamikaze became synonymous with suicide bomber. The American admiral Halsey said it was the only weapon he feared.

American aircraft carriers, with wooden flight decks suffered considerably more damage and casualties than did their British counterparts with steel decks. For example, 389 men were killed in the kamikaze attack on the *USS Bunker Hill* (below left), more than all the fatal casualties suffered on all six British carriers during the entire war. American ships also took much longer to repair, up to six months back at Pearl Harbor. By contrast, British ships were usually back in service within hours.



The *USS Bunker Hill* & *USS Formidable* are hit by kamikazes. Although the U.S. admits to 34 of its ships being sunk, none were aircraft carriers.

Estimates vary about how many ships the Kamikazes sank and damaged. The U.S. Air Force admits 34 ships were sunk and 368 others were damaged, along with 4,900 sailors killed and 4,800 wounded. It goes on to say that 14% of the Kamikazes reached their targets and that 8.5% of all ships hit by kamikazes sank. Japanese propaganda claimed they sank 81 ships and were responsible for 80% of American losses in the final phases of the war. Another independent source says that kamikazes sank 47 ships. Japan sacrificed 3,912 pilots in this effort, most of them young men, some only 17 years of age.



The very nature of kamikaze missions has led to conflicting views on how recruits were obtained. Patriotism and devotion to the emperor were certainly factors, but so were peer pressure and even coercion. One witness compared the pilots setting out to sheep in a slaughterhouse, trembling as they approached their planes. Some even had to be carried and pushed into their planes by ground crew.

Pilots could return from a mission if they experienced mechanical problems or couldn't find their targets. However, there was a stigma lasting for decades for kamikaze pilots who survived their missions, one pilot who returned nine times with his plane intact being executed.

The last kamikaze attack took place on August 15, 1945, six days after the nuclear attack on Nagasaki.

The Bomb



The Trinity Test (7/16/1945)

The bomb. On August 30, 1939, only two days before Hitler invaded Poland, an article explaining nuclear fission was published. As a result, Albert Einstein wrote a letter to President Roosevelt, urging him to develop an A-bomb before Hitler did. Thus, in a negative sense, Hitler was the father of the atomic bomb.

Luckily, Britain snatched the entire world supply, 185 kilograms, of heavy water, a key ingredient in developing the bomb, from Norway before Hitler conquered it in 1940. However, the Germans still held the Rjukan hydrogen plant near Telemark, Norway, which produced heavy water.

In 1943, after two planes carrying American paratroops assigned to destroy the plant crashed, a commando team of 12 Norwegians took on the job. They succeeded in destroying it and a large supply of heavy water. The Germans rebuilt the facility, so six months later, a raid by 140 bombers finished it off.

How close Hitler could have come to developing an atomic bomb if the plant hadn't been destroyed is anyone's guess.

At this point, Britain had the theoretical knowledge, while the U.S. had the industrial capacity to develop an A-bomb. Thus the Manhattan Project, as the program for developing the bomb was called, fused Britain's theoretical knowledge with American industrial capacity. It would cost an unprecedented \$2 billion to complete.



Los Alamos, New Mexico the main site for the development of the Manhattan Project

The Manhattan Project spawned all sorts of new technologies at various sites throughout the United States: the first fully automated factory, the first factory operated by remote control, and the first wholly sterile industrial process, to name a few. In essence, it compressed thirty years of scientific engineering into four. Los Alamos, the main site for its development was called "a Nobel Prize winners' concentration camp".

When the bomb was successfully tested at Alamogordo, New Mexico on July 16, 1945, Robert Oppenheimer was reminded of a passage from the Hindu epic, *The Bhagavad Gita*: " *I am become Death, the destroyer of Worlds.*"

Miles away, a blind girl saw the light of the bomb's heat flash.

At least one physicist had the theory that detonating a nuclear device would ignite the atmosphere and incinerate the earth. Luckily, he was wrong.

Why wasn't Germany first? Although Hitler saw nuclear physics as "Jewish physics", Germany had retained enough physicists to build a bomb. In fact, the Germans were ahead on the A-bomb until a crucial reactor exploded. Also, they didn't realize graphite could be used in the process, because a German scientist in love with a woman in Chicago intentionally misled Hitler on the subject. Another scientist, in order to keep Hitler from setting set an unrealistic deadline for the bomb's completion, waited to tell the *fuehrer* the possibility of a bomb until he got a sustained chain reaction. Thus he got no government support to speed up the process.

The decision to drop the bomb is still a matter of controversy. However, to Americans still caught up in the fury of a world war, it was seen as a way to shorten the war and save an estimated one million American lives. For Truman, who had just come to office upon Roosevelt's death in April and had virtually no prior knowledge of the Manhattan Project, there was no way he could justify the deaths of more Americans to their families if they knew he had a weapon that could quickly end the war. Besides, most people still thought of it as just a big bomb, not knowing of the more insidious effects of radiation and fallout. Also, as many Japanese that the bomb might kill, many argued that it saved millions more from a prolonged conventional invasion. Finally, there was one other factor to consider: Joseph Stalin.

If Hitler spurred development of the A-bomb, Stalin helped prompt its use. As the war in Europe was winding down, he had told President Roosevelt he would bring Russia into the war against Japan ninety days after the fall of Hitler. Germany surrendered on May 8, which would put Stalin's entrance into the war somewhere around August 8. Once the bomb had been successfully tested on July 16, there was incentive to get Japan to surrender before Stalin declared war so he could claim some of the spoils in East Asia.

Complicating matter was the fact that Japan had approached Stalin (who was still neutral) to see what terms the U.S. would offer. Stalin delayed sending this message, although the Americans had intercepted and deciphered it. In the end, it was decided there was too little time to demonstrate the bomb in a remote area of Japan,

Therefore, Truman decided to drop the bomb.

The decision of what cities to target depended on finding a place not already extensively damaged by previous bombing raids, thus allowing the bomb to demonstrate its full destructive power and scientists to accurately assess its real impact. Only a few Japanese cities, including Hiroshima and Nagasaki, met that criterion.

On August 6th 1945, the B-29 bomber, *Enola Gay* (named after pilot Paul Tibbets' mother) and two other B-29s equipped with recording instruments approached Hiroshima. Because radar only picked up three planes and Japanese defenses and fuel were depleted, no planes were sent to intercept the Americans and a raid alert was called off, leaving Hiroshima's people exposed to the bomb's full effects.

It took the bomb 43 seconds to drop to its pre-determined detonation altitude of 580 meters, by which time the American planes were eleven miles from the blast. Its effects were unprecedented, leaving total destruction over a one-mile radius and destroying 69% of the city's buildings.

For example the photo on top shows damage to the barracks 4200 feet from the center of the blast, while the one below shows what was left of the theater only 2500 feet away.

In addition to the blast, all the fires set off by the bomb's blast and intense heat combined to create a firestorm, a pillar of fire and terrific winds that sucked in surrounding debris and people, further stoking the fire and increasing its heat and the winds. The winds even ripped children from their mothers' arms into the flames.

An estimated 70,000-80,000 people (30% of the city's population) died immediately from the blast with an equal number being injured. That only tells part of the story. Personal accounts by survivors revealed a whole new level of human suffering from war. Heat from the initial blast caused people's skin to just peel off. All that remained of some people at ground zero were black shadows burned into the concrete.



Everywhere there were charred corpses and people horribly burned crying out for water. Some burn victims made it to water, only to die, being too weak to take a drink. The cisterns and river were choked with their bodies.

Since medical facilities were so close to the center of the blast area, 93% of the city's doctors and nurses had been killed. Thus medical care was minimal, with the wounded covered with maggots.

It took some time for Japanese authorities to restore contact with Hiroshima and absorb the magnitude of damage inflicted. Never before had they, or anyone seen a city so thoroughly demolished. Even more shocking was the fact that it only took one bomb to do it.

While the Japanese were still assessing what had just happened, Stalin entered the war, so a second atomic bomb was dropped on August 9. The initial target was Kokura, but cloud cover diverted the mission to Nagasaki. A minor raid on the city on August 1st had prompted an evacuation effort, mostly of children, that reduced casualties when the atomic bomb was dropped.



By the same token, a number of survivors from the Hiroshima blast had fled to Nagasaki and therefore suffered through a second nuclear attack. In addition, 11 allied POWs who happened to be in the cities were also killed in each blast.

The bomb that hit Nagasaki, nicknamed Fat Man, was a more efficient plutonium device that triggered a blast equal to 21 kilotons of TNT (compared to 12.5kt for the Hiroshima uranium bomb). It generated temperatures at ground zero of 7000°F and a blast wind of 624mph. Because of intervening hills, there was less damage to buildings, no firestorm, and fewer

deaths (an estimated 40,000 the first day. As with Hiroshima, thousands more died from wounds and burns in the following days.

Meanwhile, a new and unforeseen hazard descended on the two cities: radioactive fallout. The Japanese called it “Black rain” because its effects seemed to coincide with the charred ashes from the burning city falling back to the ground. Indeed it was caused by dust and ash being sucked into the mushroom cloud and irradiated before falling back to earth.

One couldn't see or taste or feel fallout, but once it got inside the body it basically burned it out from the inside. Many people got sick. A few died, and most recovered... for the short term. However, cancer rates over the years for Hiroshima and Nagasaki survivors were unusually high.

Luckily, at least by later thermonuclear standards, the Hiroshima and Nagasaki bombs were tiny with relatively small yields of fallout. But radioactive fallout may have been the most frightening aspect of this new weapon. The idea of demolishing entire cities, and even civilization in a matter of hours or days was bad enough. But the specter of a planet so poisoned in the aftermath that people couldn't survive and rebuild civilization made the idea of a third world war seem unthinkable.

As Albert Einstein put it, he didn't know how the next big war would be fought, but the one after that would be fought with sticks and stones.

Whatever one's opinion, Hiroshima and Nagasaki provided a grim and frightening vision of what the future could hold for us.

137B THE EVOLUTION OF THE STATE IN THE EARLY 20TH CENTURY (1900-45)

Easily lost in the dramatic events of the early twentieth century is another equally important story: the growth of the modern industrial state. Once again, the roots of this story lie in two events or processes starting in the 1700s and continuing through the 1800s: the French Revolution, which gave birth to modern nationalism, and the industrial revolution. One process quietly taking place in the 1800s was the development of increasingly sophisticated weapons that only the state could afford and could use to enforce its will if the need should arise. Also, in the course of the nineteenth century, nation states took over and funded public education, which as part of its mission promoted nationalism among its young. Unfortunately, the resulting nationalist rivalries spilled over into economic, diplomatic, and military tensions that led to World War I.

As the prolonged stalemate continued on the Western Front, the various combatant nations assumed increasing control over virtually all aspects of their respective societies: raw materials, scientific research, industrial production, manpower (with the draft) and womanpower (as women moved into the factories to carry out government contracts), and the media. World War I had two other far-reaching effects by 1930: the destabilization of Russia, which led to the Russian Revolution, and an unstable global economy that triggered the Great Depression.

In Russia, the ultimate victor was Joseph Stalin, who launched a ruthless campaign to make the Soviet Union a major industrial power by controlling all production on a national scale. While micro-management on this scale proved somewhat counter-productive, it did result in a highly centralized industrial state (probably in spite of Stalin) that many other nations at the time saw as a model for their own development.

The Great Depression also contributed to greater state control. As the world economy continued to plummet, there was a growing belief, articulated by John Maynard Keynes in particular, that only the nation state could solve something as big as the Depression. This played out in two different ways in the 1930s. Liberal democracies, especially

Britain and the United States, provided massive funding of public programs to get people back to work. After World War II, Western European countries would carry this idea further with the somewhat socialist notion that it was the state's responsibility to ensure the welfare of society as a whole. The United States, while also adopting more social programs, would more fiercely resist adopting the benign socialism of its European allies.

Fascist dictatorships, such as Germany, Italy, and Japan would apply Keynesian ideas in a very different and less benign way: namely the buildup of military forces that produced jobs, but only in the short run because tanks and other military hardware produce little of nothing of economic use. Therefore, military buildups in the long run produced aggression, which led to the Second World War.

In the 1930s, Stalin's purges and Hitler's persecution of the Jews gave the world a frightening look at how dangerous and malign the modern state could be to its own people in terms of surveillance, terror tactics, propaganda, and the use of brute force with its monopoly on new, even more powerful weapons. The result was World War II, which was fought by the Western democracies to stop the aggression of the totalitarian fascist regimes.

However, there were two potential problems. One was that the democracies had to ally with Stalin in order to beat Hitler, a situation that would carry over during the Cold War. The other problem was they had to mobilize all their resources and exert much the same control over societies as their fascist opponents were doing and to an even greater extent than they had in World War I. This created the danger (and possible temptation) that they could become as dictatorial and repressive as the regimes they were fighting. Since World War II, weapons and surveillance technologies have continued to grow at frantic rates, making the liberty versus security debate more relevant than ever.

A NEW BALANCE OF POWER AND COLD WAR (1945-1948)

"The Soviet Union never deserts its friends."- Soviet ambassador threatening intervention in Hungary

The aftermath of World War II. The human capacity for self-destruction had reached new heights in World War II, killing an estimated 60,000,000 people, 27,000,000 in the Soviet Union alone. Many, if not most, of those were civilians who just happened to be in the wrong place at the wrong time. Added to that were another 50,000,000 refugees (AKA Displaced Persons or DPs), people uprooted by the war and trying to find their ways home: Jews still being persecuted in the aftermath of the war, Germans driven from their homes as Germany's borders shrank to make room for Stalin's own expansion, and Soviets released from German prison camps only to be forced to return home as "traitors" to face Stalin's wrath. Refugees flocked to cities desperate for jobs, food, and shelter, only to find mountains of rubble. Hardly a city had escaped the roar of the bombs, with some, such as Stalingrad and Berlin, being 95% destroyed. No wonder one observer referred to Europe as "half graveyard and half junkyard."

Even two years after the war, Western Europe had made little apparent progress recovering from the war. Roads and bridges were still in disrepair; cities were still largely piles of rubble, and consumer production was only half of pre-war levels. Britain and France, the two main European powers who in the past might have led the way in reconstruction, were themselves severely weakened by the war's staggering cost and growing unrest in their colonies.

This produced a good deal of bitterness against the conservative governments that had blundered into the Depression and World War II and done little to restore things to normal after the war. Benefiting from these problems were the communists, who had led much of the partisan resistance to the Nazis and now were gaining popularity and votes.

The end of the war also led to two counterbalancing factors in the struggle ahead. One was that until 1949 the United States was the sole possessor of nuclear weapons. Partly by default due to the war's damage elsewhere and partly by right of its vast

resources and industrial strength, the United States in 1945 was by far the number one economic power in the world, controlling an estimated 60% of the world's industrial production.

While the U.S. was the only nation capable of stopping Stalin, the perceived protection of two oceans made America isolationist at heart. However, having been dragged into two world wars in quick succession, many Americans reluctantly recognized that they were an integral part of a larger world. The fact that a new, hopefully more effective international body, the United Nations, was headquartered in the United States also symbolized America's new role in world affairs.

The other counterbalancing factor was that, although severely damaged by the war, Russia also had the world's biggest army, and Stalin was determined to use it to guard against a repeat of the last four years. In the post-war years, Stalin rebuilt much of Soviet industry while ignoring the needs of his people. For example, by 1948, Stalingrad, which had lost 95% of its industries and population, had restored 60% of its population and 70% of its factories, but had rebuilt only 20% of its housing. As a result, many people resorted to living in makeshift dugouts along the Volga River, their only modern convenience being an electric line for a light bulb.

Two historical factors further added to post-war tensions. One was the ideological hostility between capitalism and communism, further fueled by Western attempts to overthrow the Bolsheviks during Russia's civil war. The other was the alarming growth of Stalin's power since the 1930s.

A new balance of power emerges (1945-48). When the allied armies met in triumph at the Elbe River in May 1945, all seemed to be smiles and comradeship. But with the common Nazi enemy gone, old animosities quickly resurfaced, causing the Western allies and Soviet Union to establish spheres of influence from which they would eye each other suspiciously during the next half-century. This led to a vicious cycle where Stalin's suspicions of the U.S. and his subsequent reactions would lead to American suspicions of Stalin and corresponding reactions, which would confirm Stalin's suspicions, and so on.

Given this vicious cycle, with roots going all the way back to 1917, and Stalin's paranoid personality, it didn't take much to intensify his suspicions. One early issue was the long time it took for the Western Allies to open a second front in Normandy, making Stalin suspect Britain and the U.S. were hoping his war against Germany would exhaust Russia so they could take over Europe.

An early indication of Stalin's intentions was how he handled the Potsdam conference in July 1945. This was the first conference between the Big Three (The U.S., Britain, and Russia) since Yalta and the end of the war in Europe. However, both the U.S. and Britain had seen changes of leadership: Harry Truman taking over in the U.S. after FDR's death in April and Clement Atlee replacing Winston Churchill as Britain's Prime Minister. Thus Stalin, seeing himself faced with two men inexperienced in foreign policy, decided to stall the proceedings until they had to go home. While accomplishing his goal of getting nothing decided and leaving him with a free hand in Eastern Europe, Potsdam started to turn American public opinion against Stalin.

This came into clearer focus in March 1946 when Churchill gave a speech at Fulton, Missouri describing how Stalin's actions, had brought an "Iron Curtain" down across Eastern Europe. Although Soviet control of this area was hardly complete yet, Churchill's speech further alerted the West to what was happening in Europe.

In reaction to Churchill's rhetoric, Stalin was even more determined to establish a buffer zone in Eastern Europe to forestall any future aggression from the West. His domination of Eastern Europe generally followed a fairly insidious but effective pattern. First the Red Army would liberate the country from the Germans. Then the Communists would form a coalition government with other parties while holding key government posts, in particular the ministry of the interior that controlled the police. Using propaganda, gangs of thugs much like the Fascists had used, and the threat of military force from the police and (if necessary) the Red Army, the Communists would gradually force their opponents from the government until only they remained.

As a result, by 1948 Poland, Czechoslovakia, Hungary, Bulgaria, and Romania, fell under Soviet

domination with Soviet troops occupying their territories. Only Yugoslavia, by quickly going Communist and making an outward show of obedience to Stalin, escaped Soviet occupation and kept some measure of independence.

Americans increasingly were feeling betrayed by their former ally: his stall tactics at Potsdam, his takeover of Eastern Europe, and his support of the Chinese communists in their civil war. In addition, Britain, exhausted by two world wars and seeing its empire rapidly come unraveled, announced it could no longer play the role of global policeman that it had largely fulfilled in the glory days of the British Empire. Thus a growing sense of global responsibility and fear of the spread of communism led the United States to step up and get actively involved in Western Europe.

Militarily, President Truman, in what was known as the Truman Doctrine, committed the United States to stop Communist aggression in Greece and Turkey. In Greece a bitter civil war had been raging since the end of World War II between communist guerrillas operating from mountain bases and government forces in the valleys. American military aid and advisors, along with remaining British involvement, managed to help the government forces stop the Communists and drive them out of Greece by 1949. However, Greece had suffered horribly in this civil war following right on the heels of World War II.

Meanwhile, for Turkey it was much the same story as before: Russia pressuring it to open the straits at Istanbul. However, some gunboat diplomacy (i.e., sending America's largest battleship, the USS Missouri, "just to pick up a dead diplomat's body") gave Stalin the message and he backed down. As a result, Turkey would remain strongly allied with the U.S. against the Soviet Union throughout the Cold War and even a member of NATO (North Atlantic Treaty Organization), although it has hardly any coastline on the Atlantic. Complicating this was America's alliance also with Greece, who had conflicting claims with Turkey on the island of Cyprus. Several crises over this island during the Cold War would put the U.S. in an awkward position.

America's economic response was known as the Marshall Plan, announced in 1948. Its basic premise was that communism thrived in economically backward or disrupted areas. Therefore, large amounts of foreign aid to revive Europe's economies would deprive the communists of the conditions on which they thrived, save Western Europe from communism, and provide the United States with stable trade partners and markets. Marshall Plan aid was offered to any country desiring it, including the Soviet Union. However, Stalin, not wanting to be dependant on the West, refused the aid, as did his obedient satellites in Eastern Europe, as much as they may have needed and wanted it.

However, Marshall Plan aid made a huge difference in Western Europe, especially France and Italy, which were in danger of Communist takeover by means of elections in 1948. When American aid was announced, French and Italian Communists made a final bid for power by disrupting their nations through strikes, riots, and even sabotage of public works such as railroads. In each case, the communists largely discredited themselves, while the more moderate democrats had the Marshall Plan aid to back them up and win over voters. As a result, Western Europe experienced a remarkable economic recovery after this.

The success of the Truman Doctrine and Marshall Plan encouraged the U.S. to pursue an expanded two-pronged strategy in its efforts to stop Soviet expansion across the globe. Militarily, the Eisenhower Doctrine, issued in the 1950's by President Eisenhower, announced the U.S. would follow a policy, known as *containment*, to stop communist aggression wherever it occurred. Early successes in this policy, namely the overthrow of Mohammed Mossadegh in Iran and Jacobo Arbenz in Guatemala in 1953, would encourage more intervention that would lead to the Cuban Crisis in and American involvement in Vietnam in the 1960s.

Economic aid would bear fruit with Japan in the 1950s much as it had with the Marshall Plan. However, the U.S. would give aid almost indiscriminately to any regime that would back it against Russia. Unfortunately, all too often these were corrupt, brutal, and unstable dictatorships, thinly masked as democracies just to get American aid. Once again, support for the shah in Iran and a

series of similar regimes in South Vietnam would serve as examples of the severe limits of this policy.

The Cold War begins (1948-55). By 1948, the United States and Soviet Union had established their spheres of influence in Western and Eastern Europe respectively. Unlike World War I when a definitive treaty emerged to determine a new balance of power, no such treaty emerged after World War II. This was because there was such a quick falling out between Stalin and the Western allies after the war. The fates of Western Europe and Eastern Europe had been determined without direct confrontation between the two superpowers. But, by 1948, when the two superpowers had established their spheres of influence, they started confronting each other in what is known as the Cold War.

In essence, the Cold War was a period of hostility and competition between the U.S. and Russia that always stopped short of direct war, mainly because their growing arsenals of nuclear weapons made such a war seem suicidal to both sides. Therefore, the Cold War played out as a series of crises resolved along two lines of development: either by non military means or by fighting by proxy (substitute) where one or both powers fought each other by supporting smaller allied states in regional wars. The Korean (1950-53), Vietnam (1954-75), Arab-Israeli (1973 and 1982), and Afghan (1979-89) wars were all examples of the superpowers exploiting regional conflicts to promote their own ends.

Crises resolved through non-military means actually ran a higher risk of erupting into all out war, since American and Soviet forces directly opposed one another. In such cases, each side would play a dangerous game, known as *brinkmanship*, trying to push the other side into a position that would make any further escalation of the crisis run the risk of full-scale nuclear war, thus forcing it to back down.

The initial stages of the Cold War would be played out in two widely separated theaters corresponding to the two main theaters of World War II: Europe and Asia.

The Yalta Conference (February, 1945)



The Big Three (l. to r., Churchill, Roosevelt, and Stalin).

Yalta was a meeting in February 1945 between the Big Three (Churchill of Britain, FDR of the United States, and Stalin of the Soviet Union) to discuss the postwar arrangements of Europe as the war was near its end. (At the time, Soviet forces were only 60 kilometers from Berlin.) Much like Woodrow Wilson at Versailles in 1919, illness impaired FDR's ability to negotiate effectively with Stalin. Two months later he would die. Ironically, the meeting was held in the Soviet Crimea because Stalin said his doctors insisted he wasn't healthy enough to travel to the proposed site in the Mediterranean. Also, Stalin had Churchill's and FDR's quarters bugged so he could listen in on their private discussions.

Churchill, who didn't trust Stalin, wanted to create a tightly worded document to which he could hold the Soviet leader and minimize aggression in Eastern Europe. By the same token, Stalin wanted a loosely worded agreement that he could interpret as he chose. FDR thought Stalin, who could pour on the charm when he needed to, could be reasoned with and resisted Churchill's pressure for a firmer agreement. That, plus FDR's illness and the preponderance of Soviet forces in Europe (outnumbering the Western allies three to one) gave Stalin the leverage he needed to get things his way.

They did eventually agree on three matters:

- Germany would be divided into four occupation zones: Soviet, American, British, and a French zone carved out of the American and British zones. Later, a "Committee on Dismemberment of Germany" would be set up to decide if Germany would ultimately be partitioned into several nations.

- Democratic elections were to be held in all liberated and former Axis countries, a provision Stalin followed only in name.
- Stalin would bring Russia into the war against Japan 90 days after the fall of Germany. FDR has been criticized for this since the atomic bomb would make unnecessary such a deal that later would give Stalin a foothold in East Asia. However, at this time, it wasn't clear when the bomb would be ready or if it would even work.

Germany Surrenders (May 8, 1945). Symbolic of growing tensions between the victorious allies was disagreement over the date of VE (victory in Europe) day. The Western allies had forgotten a pre-arranged copy of the surrender terms they had agreed on with Stalin. Therefore, a makeshift version was signed on May 7th. This led to a Soviet protest and a re-signing of the surrender the next day, thus creating two VE (Victory in Europe) days: May 7th and 8th, 1945.

Treaty ending the war in Europe. Also reflecting rising tensions between the victors was the fact that there was no treaty to end World War II in Europe as there had been with World War I. Besides the unconditional surrender and dissolution of the Third Reich Germany and the division of Germany into four separate occupation zones meant there was no recognized German government with whom to make such a treaty.

“Half graveyard and half junkyard”



Dresden after the war

In the cities of the victorious allies, thousands flooded the streets to celebrate victory and the end of the war. However, not everyone on the winning side felt like a winner:

"Above the muzzle of our window and from all the other cells of the Lubyanka [Prison] we too, former prisoners of war and former front line soldiers, watched the Moscow Heavens, patterned with fireworks and crisscrossed by the beams of search lights. That victory was not for us." -- Alex Solzhenitsyn on victory celebrations seen from his prison cell

The Western allies' losses were relatively small compared to those in Eastern Europe. Less than 1% of the populations of France, Britain, the U.S., and Canada died in the war, a total for them all of approximately 1.5 million. Around 400,000 Americans died in World War II. To put that into perspective, for every American that died, around 70 Soviets died, a total of between 27 million and 29 million people. Still, each of those soldiers died his own individual death, and each of their families was distraught by the loss of a loved one.

Yet, by another comparison, 4,221 Americans had died in Iraq by the end of 2008, just over 1% of the American death toll in World War II and 1/7000th the Soviet losses.

Germany lost 4.5 million soldiers and 2 million civilians, some 9% of its population.

- Some towns were left totally devoid of adult men.
- Treptow, a Berlin suburb had 1105 women age 19-21, but only 181 men that age.
- Two-thirds of all German men born in 1918 at the end of the First World War didn't survive the second one.
- While Britain devoted over half its GDP to the war effort, Germany had ransacked other countries' economies and workforces. By September, 1944, there were 7,487,000 foreigners in Germany, the vast majority of them there against their will. They made up 21% Germany's population.

Greece lost 7% of its population during the war, followed by a bloody and destructive civil war lasting to 1949.

Ten per cent of Yugoslavia's population died in the war, many of them from the German policy

of retaliating against partisan activities in a village by executing all of its males over age 15.

An estimated 27,000,000 Soviets died in the war, roughly 14% of its population.

- Of 800,000 Soviet citizens who joined the German army, 215,000 (26.8%) died.
- Out of 5.5 million Russian POWs, 60% died in German camps.
- Of 750,000 Soviets captured at Kiev in 1941, only 22,000 survived the war.
- After the war, there were 20 million more women than men in the Soviet Union.

Poland lost around 5.5 million, including 3 million Jews from the Holocaust, totaling over 16% of its population.

The Holocaust killed six million Jews, 60% of Europe's total Jewish population.

- Forty per cent of those released from concentration camps didn't survive their first weeks of freedom.

In Asia, China had lost 20 million people, and Japan 3.78 million.

Berlin, like Warsaw and Stalingrad, was virtually destroyed, and was a prime example of the war's destruction in Central and Eastern Europe.

- In the last 14 days of the war, it was hit by 40,000 tons of shells.
- Up to 95% of its center and 75% of its houses were destroyed.
- Wheeled transportation, including ambulance service no longer existed.
- It had almost no fuel, electricity, or communications, and no working industries.
- There were 3000 breaks in its water mains, leaving virtually no clean water or sanitary facilities. As a result, rats proliferated.
- There was hardly any police or fire protection.
- The dead lay unburied for months, creating a horrible stench
- People lived in basements and dugouts of rubble in a Stone Age-like existence. They were the lucky ones. Some had no shelter at all.
- Some people estimated it would take fifteen years to clear its rubble.

As one witness described Berlin:

"Wherever we looked we saw desolation.

The streets were piled high with debris which left in many places only a narrow one way passage between high mounds of rubble, and frequent detours had to be made where bridges and viaducts had been destroyed. The Germans seemed weak, cowed, and furtive and not yet recovered from the shock of the battle of Berlin. It was like a city of the dead."

Other cities hardly did any better.

- In Hamburg, devastated by a firestorm resulting from a massive raid in 1943, pre-fabricated huts built for GI's were the only decent shelters.
- Wiener Neustadt, near Vienna had only 18 houses and 860 of its previous population of 45,000 left.
- Sixty per cent of Japan's sixty largest cities were in ruins, being especially vulnerable to American air raids since so many of their buildings were made of wood. Americans had a hard time finding suitable targets for the atomic bomb, because so few cities were relatively intact by August 1945.

Famine and pestilence also loomed over "the lunar landscape of craters and rubble" that was Europe in 1945. For one thing, much farmland was ruined by flooding and scorched earth policies, while damage to roads and bridges left each area isolated, so even unscathed farmland was useless. In addition, lack of equipment and fertilizer led to lower crop yields and widespread hunger. To make matters worse, farmers wouldn't trade food they had for worthless cash. Finally, a drought in 1945 reduced Europe's agricultural production to 50% below normal. This led to strict rationing, many people receiving less than 900 calories a day.

In Holland, people were allotted fewer calories in a week than they should have had in a day.

There were 700,000 needy children in Czechoslovakia; half of them infected with Tuberculosis.

Cultural damage. Much of Europe's art and architecture were also ruined. In addition, high-ranking Nazis, such as Herman Goring, had plundered massive amounts of art, often stored in mine shafts that needed to be returned to their rightful owners. By the same token, the Soviets plundered much of Berlin's art treasures, such as the Trojan gold excavated by Heinrich Schliemann in the 1800s. Not until after the fall of communism in 1991 did Russia admit to having these priceless artifacts.

DPs (Displaced Persons)



Two Germans return from a Russian POW camp on one pair of legs.

Uprooted from their homes, an estimated 50 million displaced persons (aka, DPs) wandered across Europe, either dying from starvation, exposure, or attacks by hostile soldiers and civilians. Not wanted by the locals, the unfortunate émigrés were driven further on, attacked by bandits, robbed, raped, and murdered. In one case, several hundred Jewish children were loaded on a train to remove them from anti-Semitic attacks by people who, of all things, blamed the Jews for the war.

All too often, DPs and Jewish concentration camp inmates found themselves kept in old concentration camps, since there was nowhere else to put them. In some of these camps people continued dying at the rate of 1000 to 1500 a day, their bodies stacked like cordwood as in the days of the Third Reich.

German DPs. During the war, Hitler had expelled 750,000 Poles from Eastern Europe and replaced them with 500,000 Germans, a process that was reversed after the war when 8 million Germans were driven West to a Germany

seriously reduced in size by Stalin. Hitler's goal to include all Germans in one border had come true, but not as he had planned.

Of the 8 million Germans forcibly uprooted from Eastern Europe and driven to Germany, some 2 million died on the journey.



A German mother hurries ahead of the lone survivors of a group of some 150 refugees of a death march from Lodz looking for help for her sick baby. Unfortunately, the baby had died.

Rape. In addition, thousands of German women were raped, mainly by Russian soldiers in retribution for atrocities committed by the Nazis. There were 87,000 women in Vienna hospitals, and even more in Berlin, who reported being raped by Russian soldiers. However, since it was so humiliating to report such a crime, the real number of rape victims is estimated at several times that.

As a result, there were 150-200,000 "Russian babies" born in East Germany (1945-6). The number of illegal abortions performed and how many women died from them is unknown.



A German girl is led from a Berlin train station after being gang-raped by Polish youths who would regularly board trains to rob or rape German refugees fleeing Poland

Retribution. There were also angry recriminations against those who had

collaborated with the Germans, especially in France. French women, who had fraternized with German officers, had their heads publicly shaved and were driven through the streets of their towns to the taunts of their neighbors. Other collaborators were beaten by angry mobs or, in some cases, shot.

Soviet DPs. Even more tragic, Stalin wanted East Europeans, especially Russians, in Western Europe returned to him. Many of them had served in the German army, making up an estimated 10% of the Wehrmacht.

Thousands more were prisoners of the Germans, many of them wounded, but Stalin viewed them as traitors too. Nevertheless, the allies gave in to Stalin's demands and agreed to return any people from areas that had been part of USSR before 1939.

In one case, thousands of Cossacks who had served in the German army at Stalingrad had made their way with their families to Austria, an ideal area with its pastures and relatively plentiful supplies. Then came the shattering news they were to be handed over to Stalin. In desperation, some killed themselves and their families.

Overall some 5.5 million Soviet citizens were repatriated. According to one estimate:

- 20% were sentenced to death or 25 years hard labor (death).
- 15-20% were given shorter labor sentences from which one might survive.
- 10% were exiled to Siberia.
- 15% were sent to rebuild cities.
- 15-20% were allowed to return home.
- The remaining 15-25% escaped or died in transit.

Some accounts of DP's disembarking in USSR relate they were taken behind buildings, after which came the sound of machine gun fire.

Getting by in Postwar Germany



A train overloaded with Germans to make the trip to a Black Market.

Before the 1945 harvest, the average German's diet was 950 calories per day, less than half of what the average worker needed and one-third of the American diet. In Berlin it was 850 calories, leading to 4000 deaths each day. Broken water mains and sewers in Berlin led to outbreaks of cholera, killing two-thirds of all newborns.

In response, the allies. The U.S. and Britain in particular, had to import food to prevent mass starvation in Germany. West Germany was especially hurt since Stalin had the best German lands and 4,000,000 refugees had fled to the West.

Britain imported 1,000,000 tons of food and the U.S. brought in another 500,000 million tons. As a result, Britain had to ration food for its own people, something it hadn't had to do during the war.

Unfortunately, a grain shortage in America the next spring led to shipments being stopped, reducing the average single daily meal of watery soup to 400 calories, less than half of what some concentration camps had fed their inmates. People started collapsing on the job, while others dug through the garbage of GI's who were receiving 4200 calories a day.

The "\$65 question". In the early months of the occupation, things got steadily worse for the German people. Typhus spread among those too tired to clean lice. Tuberculosis in Hamburg increased five times. Children often went without breakfast or lunch, shoes or winter coats.

In contrast, occupation troops were very well off, which led to growing fraternization between

allied troops and the local population. All this in spite of the fact that fraternization was strictly forbidden, bringing a fine of \$65 (one month's pay) for offending GIs. This gave rise to the expression, "the \$65 question".

U.S. propaganda, such as this passage from the GI paper, *Stars and Stripes*, tried to scare GIs from fraternizing with the Germans: *"Don't get chummy with Jerry. In heart, body and spirit, every German is a Hitler...If in a German town you bow to a pretty girl or pet a blonde child, you bow to Hitler and his reign of blood."*

In time so much fraternization took place that the Allied authorities could do nothing about it. According to one German at the time, *"It is impossible to distinguish between good girls and bad girls in Germany. Even nice girls of good family, good education and family background have discovered their bodies afford the only real living."*

Moral standards have crashed to a new low level. At the present rate, in two months, I wonder if there will be a decent moral woman left."

Germany's "cigarette economy". Since the value of the old Deutsch Mark collapsed with the Third Reich, cigarettes served as the primary, though unofficial currency in post-war Germany. This was because there was a controlled supply through GI PXs, constant demand, convenient size, and an innate value since it could temporarily calm nerves and hunger.

The pay for two days' labor clearing rubble (the one job Germans could get then) was equal to the value of one cigarette. Many Germans hung around movie lobbies waiting for Allies to toss cigarette butts, 7 butts equaling one cigarette.

Few cigarettes were consumed by the original buyer. Even kids had their own stash for trading in the thriving black markets outside German cities. This was the only way many German citizens could survive, illegally trading family treasures to GI's for food and other necessities.

When trains started running, many people traveled to areas with food to trade.

Trains got such names as the Potato train, Calorie express, Vitamin train, Nicotine line, Fish Express (going out), and Silk Stocking Express (coming back). These trains were typically overloaded, with Germans even riding on the roof to make the trip to a Black Market.



Black market trading near Berlin

Black market prices were remarkably stable, even between different cities, given the lack of centralized regulation. Such regulation came largely from big time black market traders called *scheiber*. Below are some typical prices one would pay for various goods. Average monthly pay for a worker was about 150 marks.

5 marks = a little less than one cigarette = two day's labor clearing rubble
1 pound of meat = 3 bottles of wine OR 15 cigarettes OR 80 marks
1 pound of coffee = 500 marks
1 pound of butter = 250 marks
1 pound of bacon = 200 marks
1 pound sugar = 90 marks
1 pound flour = 30 marks
A 3 pound loaf of bread = 25 marks
A man's suit = 1,000 marks
A ladies' dress = 800 mark
1 bottle of schnapps = 200 marks
1 pair of nylons = 200 marks

A day at the market. Note that nearly all of these cost well over one month's wages. Therefore, survival in this economy required some shrewd trading, such as these deals carried on in one day by a somewhat astute German.

First he traded 320 marks for a pound of butter. He traded half of that for 50 cigarettes.

He then traded 40 cigarettes for a bottle of wine and a bottle of Schnapps.

Next he traded the Schnapps to a farmer for two pounds of butter.

He took one pound and traded it back to the original dealer for 320 marks.

Thus he got 1.5 pounds of butter, a bottle of wine, and 10 cigarettes for nothing except for some shrewd trading.

GI wheeler-dealers. Although, illegal, many American GIs took an active part in the black market trade as well. For example, a GI could buy 25 cartons of cigarettes for \$20 in the PX (store reserved for American GIs only). He could trade those for a Leica Camera, which sold in U.S. for \$600.

With that \$600 he could buy 750 cartons of cigarettes and trade them for 30 Leica cameras, which he could then sell in U.S. for \$18,000. With that money, he could move up to dealing in art and diamonds, buying one diamond for 2 kilos coffee and 50 cigarettes.

Stalin's occupation currency scam. Originally, the allies planned to pay all occupation armies in one occupation currency. However, the Russians balked at this until some U.S. official gave them a set of engraving plates and said just keep track of how much they print. Since Russian troops were as much as three years behind in pay, Stalin printed vast amounts of this money and used it to pay off his troops.

However, he refused to let his soldiers spend it in the Russian sector, so they went to the American sector, there they bought all sorts of souvenirs at outrageous prices, paying 3-4000 occupation marks for a fountain pen, 1000 marks for a Mickey Mouse watch, and much more for better watches. In July 1945, American troops were paid \$1 million in occupation marks, but sent back \$3 million. Overall Stalin's little scam cost the U.S. treasury \$250 million.

Belgium. Since its conquest and liberation had been quick, thus minimizing damage, and its government had spirited away its gold reserves to Britain, Belgium was the one country in Europe whose economy rapidly revived after the war. This drew foreigners across its borders to get food and supplies that were lacking in their own countries.

Seeking Justice at Nuremberg



Major surviving members of Hitler's regime stand trial at Nuremberg

On November 20, 1945 trials at Nuremberg opened to show the world the extent of Nazi crimes against Jews, Gypsies, Slavs, and prisoners of war. The trials lasted 216 days.

Key to the prosecution's case were photos taken by Nazi officials themselves and found by allies in their homes after the war. However, Stalin was nervous about the trials, fearing they might expose some of his war crimes in the process of investigating those of the Nazis (e.g., his massacre of an estimated 22,000 Poles in the Katyn Forest in 1940).

A total of 11 Nazis at Nuremberg were condemned and hanged for mass atrocities. Among those condemned were Joachim von Ribbentrop, Hitler's foreign minister, and Herman Goering, head of the Luftwaffe. Later trials of those involved in certain indictable occupations (business, security, officers, diplomats) would lead to some 20,000 Nazis being convicted over the next 20 years.

Strict measures were taken to prevent Nazi prisoners from committing suicide before facing justice. For example, prison stairways were ringed with steel mesh to prevent defendants from jumping to their deaths. Despite these precautions, several Nazis, such as Herman Goering, were able to smuggle in cyanide capsules, which killed them almost instantly and painlessly.

Complaints abounded that the most guilty and powerful had escaped to Italy and then used Papal relief funds, supposedly set aside for refugees fleeing from the Nazis, to escape to Syria, Egypt and South America.

While many big time Nazis escaped, others, such as teachers and civil servants who had been in the Nazi party, were denied jobs or forced to join rubble clearing crews and the like.



Simon Wiesenthal, the "Nazi Hunter." A survivor of 13 concentration camps and witness to countless atrocities, Wiesenthal tracked down hundreds of Nazi war criminals after the war and brought them to justice. He also ran a clearinghouse of information to help people find loved ones separated by the war. All this while holding down menial jobs to support his mission.

Japan's leaders faced war crimes trials of their own. Their leader, premier Hideki Tojo, attempted suicide in 1945 to avoid such trials. The attempt was a failure, and he was convicted and executed in 1947. Three other leaders were convicted and condemned the next year. Amazingly, they tried to appeal the verdict.

However, the emperor, Hirohito, was not tried or even ousted, the Americans realizing that his importance to Japanese culture as a figurehead was too valuable to waste. The Japanese revered authority so much that in places without a strong Western presence, such as French Indochina and Korea, Japanese soldiers were kept on by the war's victors, obeying orders from the victorious allies by way of the government back home.

When the Korean War broke out in 1950, the U.S. needed a strong stable base of operations in East Asia that Japan could provide. Much like the Marshall Plan in Europe, American money rebuilt the Japanese economy, making it a firm ally and trading partner. So invested was America in supporting Japan, it was even complicit in covering up the atrocities that took place at Nanjing in 1937. By the same token, the Japanese were relieved and grateful that we did not carry out similar atrocities on them.

Signing the U.N. Charter (June 26, 1945)



The failure of the League of Nations to secure international peace led to the creation of a new organization toward the end of World War II in the hopes of doing a better job. The charter for this new body, the United Nations, was signed in San Francisco, which was indicative of the leading role the United States was playing in the world. The original membership consisted of 51 nations, a number which has grown to 192.

The primary problem for the old League of Nations had been its lack of an executive body with powers of enforcing the general will. The U.N. attempted to rectify this with the Security Council of 15 members, five of them being permanent: the United States, Britain, France, the Soviet Union (replaced by the Russian Federation after the end of the Cold War) and Nationalist China (later replaced by Communist China). The five permanent members each can veto any action of the Security Council, unless they are directly involved in the dispute under discussion.

Probably the most decisive action taken by the U.N. was its restoration of Korea's borders in the Korean War (1950-3). While mainly a U.S. action, fourteen other nations also took part, all serving under the U.N. flag being presented to General MacArthur in the photo below.

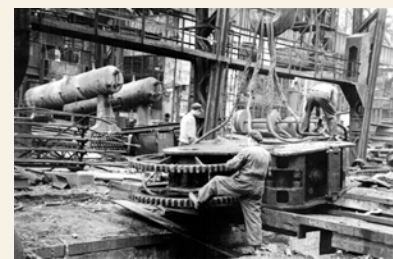
Since then the United Nations has provided peace-keeping forces to separate combatants in wars and civil wars, its forces being supplied by neutral nations and distinguished by their baby blue helmets. Such forces are typically considered neutral non-combatants, so firing on them is considered a serious breach of international law.

While not that successful in stopping wars, the U.N. has served as a medium for negotiating ceasefires for existing ones and discussing crises before they erupt into war, such as the Cuban Missile Crisis in 1962. It has also provided economic assistance, famine relief, and medical aid to undeveloped parts of the world.

Reparations and "Ethnic Cleansing"



German reparations. Stalin wanted reparations (both material and forced labor) from Germany, much like what the Western allies had gotten from Germany after World War I. However, the loosely worded Yalta agreement only provided for a reparations council to be located in Russia. Stalin took this as a green light to dismantle entire German factories (above) and transport them and captured Germans (including civilians) back to Russia. Unfortunately, the factories mostly remained dismantled and rusting in Russian railroad yards.



Stalin wasn't the only one involved in dismantling German factories after the War. British workers here dismantle machinery from a Krupp factory to be shipped back home. However, Britain put an end to this practice, seeing the moral implications of profiting from German war industries and the economic cost of having to carry a German economy crippled by such reparations.

Stalin already had an estimated 2.3 million German prisoners of war he could use for forced labor, but that wasn't enough. So he forcibly transferred nearly 300,000 ethnic German

civilians to the Soviet Union as well. These included 100,000 deported from Romania, around 30,000 from Yugoslavia, and 165,000 from previously German territories now annexed by Poland.

There were two categories of these civilians: those taken from Eastern Europe (“mobilized internees”) and those taken from Germany (“arrested internees”), the latter category getting much worse treatment. An estimated 19% of the “mobilized internees” died in captivity compared to 39% of the “arrested internees”. Since their forced labor was deemed inefficient, proceedings for repatriation back to Germany began in 1946.

Other examples of “ethnic cleansing” in post-war Europe included:

- When 100,000 Croats fleeing Tito’s Yugoslavia were forcibly returned by Britain, Tito had at least 40,000 of them executed.
- Pogroms against the Jews in Poland caused 63,387 to migrate to Germany.
- Bulgaria forcibly moved 160,000 ethnic Turks to Turkey.
- Hungary traded 120,000 Slovaks to Czechoslovakia for an equal number of Hungarians.
- Similar exchanges took place between Poland and Lithuania and between the Soviet Union and Czechoslovakia.
- Some 400,000 Yugoslavs moved north to replace 600,000 Germans and Italians
- In June 1945 Czechs started to move 3 million Germans from Sudetenland. An estimated 267,000 died on way to Germany.
- The German proportion of the population in Bohemia and Moravia dropped from 29% (1930) down to 1.8% (1950)
- Poland, which was 68% Polish in 1938, was overwhelmingly Polish by 1946
- Before 1938 Czechoslovakia was 68% Czech and Slovak. By 1950 it was almost exclusively Czech and Slovak.
- After the war, 623,000 Germans were expelled from Hungary, 786,000 from Romania, 500,000 from Yugoslavia, and 1.3 million from Poland.
- Overall 13 million Germans fled to W. Germany where they were eventually resettled and integrated into society and the economy.

The Potsdam Conference officially allowed these forcible movements of Germans, but after it was mostly done.

Besides Poland and a few other minor exceptions, borders remained pretty much unchanged from before the war. Therefore, the aftermath of World War II left most states, except for the Soviet Union and Yugoslavia, ethnically homogeneous.

The Potsdam Conference (July 1945)



The new Western leaders, Clement Atlee of Britain and Harry Truman of the United States, meet Stalin at the Potsdam Conference in July, 1945. Behind the smiles, all was not well, though.

The Potsdam Conference was the first conference of the Big Three since the fall of Germany. A lot had changed, including the players. Churchill had been replaced in post-war elections as prime minister of Britain by the Labor leader, Clement Atlee. Meanwhile, FDR had died in April and been succeeded by his vice-president, Harry Truman, who had not been kept up to date on affairs (including the Manhattan Project). Thus Stalin faced two men largely inexperienced in foreign policy that he planned to take advantage of.

His main strategy was to stall for time, knowing Atlee and Truman would have to return home fairly soon. To that end the Russians insisted that all speeches be translated into English, Russian, and French in order to drag out the proceedings. They also kept strange hours, rising late in the morning for a long and leisurely breakfast. By the time the meetings started, it was almost time for everyone else to have lunch, which created further delays. The Soviet stall tactics worked, keeping anything substantial

from getting resolved, and sending the Western allies home with a sourer attitude toward Stalin.

During the conference, the Trinity Test successfully tested the first atomic bomb. When Truman informed Stalin that the U.S. had a new weapon of unprecedented destructive power, Stalin barely reacted, saying he hoped the U.S. would use it (i.e., against Japan who was still fighting). Stalin's nonchalant reaction was probably because, thanks to espionage, he probably knew as much or more about the bomb than Truman did.

“Red is the new brown”: Stalin’s Takeover of Eastern Europe



The single most divisive issue leading to the Cold War was Stalin's takeover of Central and Eastern Europe in the years after World War II. From the Western point of view, this was a betrayal by an erstwhile ally. For Stalin, it was a necessary measure in light of the West's previous hostility to communist Russia. Underscoring this fear was Hitler's surprise attack in 1941 that had cost the Soviet Union untold physical damage and 27 million lives.

For all intents and purposes, Red tactics (street violence, intimidation, murder, etc.) were identical to those of the Brownshirts in the 1930s. The only real difference was that in Nazi Germany, the hot button name to label an enemy with was “communist.” In post-war Europe it was “fascist”. Thus the expression: *“Red is the new brown.”*

The fate of Poland was an especially bitter case for Britain, since it was for Poland's sake that it had declared war on Germany in 1939. Some 200,000 Polish expatriates served under British command, mainly in North Africa, and

Churchill felt especially committed to a free and independent Poland.

Stalin had other ideas. His first move was a significant readjustment of borders, moving the Soviet border some 200 miles west and compensating Poland by expanding its western border by a similar amount at Germany's expense. This involved the mass deportation of thousands of Poles from lands now annexed by the Soviet Union to the newly constituted Poland. That, in turn, created a chain reaction driving several million Germans westward from newly Polish territory to a diminished Germany.

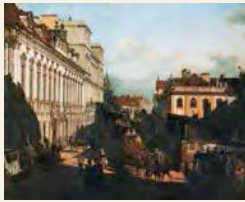
Churchill had actually agreed to Stalin's annexation of Polish territory (based on, of all things, the Nazi-Soviet Pact of 1939) and even the forcible transfer of ethnic Poles. When informed that they could not return to their homes (which were now part of the Soviet Union), thirty men of the independent Polish army committed suicide.

With the border adjusted to his satisfaction, Stalin turned to Poland's internal politics. During the war Stalin had supported the communist Lublin Committee as Poland's legitimate government, while Britain supported a more democratic Polish government in exile. The communists became increasingly abusive toward any non-communists and delayed the first postwar elections while they intimidated, jailed and even murdered members of the opposition. They also disqualified non-communist candidates in 10 out of 52 districts (affecting about a quarter of the population) and on Election Day marched office and factory workers to the polls.

When somehow the Communists won a landslide victory, the opposition leader, Stanislaw Mikolajczyk, resigned his post in protest. This cost him his parliamentary immunity and he had to flee the country for his life in a high-speed car chase. Strong protests from the U.S. and Britain came to nothing and Poland would endure over forty years of communist rule and Soviet dominance.

The Communist Party slogan was:
"Independence - Peace – Welfare"

The Poles found ways to express their national pride even under Stalinist rule. One involved the 18th century, the Italian artist, Canaletto, who did a series of urban landscapes of Warsaw. After the war and the methodical destruction of Warsaw, the Poles used these paintings as blueprints for rebuilding their city to assert their nationalist spirit. Similarly, Polish membership in the Catholic Church was a means of showing some defiance of Communist rule.



Canaletto's painting of Miodowa Street in Warsaw.

Czechoslovakia and the "Third Defenestration of Prague". Czechoslovakia's demise was also quite upsetting to the West since, before the war it had been a model Central European democracy with a successful industrialization policy and a large efficient army. Its betrayal by the West to Hitler at Munich in 1938 had done nothing to increase the Czechs' trust of the West, but they still aspired to build a successful capitalist democracy in 1945.

After Soviet and American troops withdrew in 1946, the Czechs held elections in which the communists were just one of several parties in the government, although holding nearly half the cabinet posts and the all-important ministry of the interior which controlled the police, there being no other Czech military organization after the Nazi occupation. Still, Czechoslovakia seemed to be settling into a stable non-Soviet pattern by following Stalin in foreign policy while exercising more independence in domestic affairs...until the Marshall Plan was announced.

Czech attendance of European talks about Marshall plan aid without first asking Moscow infuriated Stalin and aroused his suspicions about Czech loyalty, never a good thing. Stalin

first "convinced" the communist Czech premier Gottwald to have Czechoslovakia withdraw from taking part in the plan, which it did.

But once aroused, Stalin's suspicions were not so easily calmed, especially when an opinion poll showed a projected loss of 25% of the Communist vote in upcoming elections due to economic problems and food shortages arising from a famine in 1947. So, along with giving the Czechs 600,000 tons of Soviet grain (which his own people could not afford to lose), Stalin directed the Czech interior minister to replace non-Communist police chiefs with Communists.

When protests broke out, armed communist bands rioted and raised the threat of a coup, while a former Soviet ambassador showed up and warned the Czechs that the Soviet Union might have to "safeguard Czechoslovakia's Independence", adding: "*The Soviet Union never deserts her friends.*"

With Czech participation in the Marshall Plan effectively vetoed, most of the non-communist cabinet members of the Czech government resigned, hoping to force a new election. When the non-communist minister resigned, hoping the crisis would force new elections before the communists got too powerful, the communists responded by stirring up strikes and riots, which forced the ailing president Benes to ask them to form a government, thus inaugurating forty years of Soviet rule.

In defiance of the communist regime, the foreign minister, Jan Masuryk, a popular Czech patriot, refused to resign his post. A month later (March 10, 1948), he was found dead several stories beneath his bathroom window. While communists claimed he committed suicide, several subsequent investigations concluded Soviet agents most likely pushed him.

This has been called the "Third Defenestration of Prague". (The first was in 1419 when radical Hussites threw fifteen town councilors to their deaths out of a town hall window, triggering the religious struggle known as the Hussite Wars. The second, and most famous, occurred in 1618 when angry Protestants threw two imperial

ministers out a castle window in Prague, thus starting the Thirty Years War.) The result of this “Third Defenestration” was the tightening of communist rule in Czechoslovakia.



Mourners line the street for the funeral of Jan Masaryk.

Back in the U.S. this sequence of events shocked Congress so much that it voted an initial \$5.3 billion for the Marshall Plan.

Hungary. During the 1930s, Hungary had increasingly close trade, and then diplomatic, relations with Fascist Germany and Italy. It also benefited territorially from Hitler’s land grabs in 1938-9. Therefore it was pretty much forced to join Axis forces in the war, helping with the invasions of Yugoslavia and Russia. As the war turned against Germany, Hungary first tried secretly negotiating with Britain and the U.S., but Hitler discovered this plot and German forces occupied the country in 1944. Again, as Soviet forces were approaching, the Hungarians tried negotiating, this time with Stalin, but Hitler forced the regent to negate the truce by kidnapping his son. He then deposed the regent and established a fascist government that lasted until the Soviets drove the Germans out in 1945.

Elections in 1945 delivered 57% of the vote to the Smallholders Party and only 17% to the Communists. However, pressure by the communists backed by the threat of Soviet intervention kept the Smallholders from forming a government. Instead a temporary coalition government was formed with the Communists just one of four parties, but the one controlling the ministry of the interior and thus the security police.

Soon, the Communists were setting up “People's Courts” across Hungary to eliminate influential people likely to oppose them. They commonly accused them of *fascism*, a highly charged word in light of recent history, but used indiscriminately by the communists to label anyone who wasn’t one of them.

They also accused the premier of espionage and kidnapped his 5-year old son to force him out of office and the country. Meanwhile, gangs of communist thugs attacked members of the Hungarian Freedom party in the streets until it disbanded. Bit by bit, through a series of purges, government reorganizations, and rigged elections, the Communists solidified their control, denying the vote to anyone condemned for “crimes against democracy”.

By 1948 all but the Communist Party had been disbanded. In 1949, the People’s Republic of Hungary was declared as a “country of the workers and peasants” where “every authority is held by the working people”. The hated communist regime would rule Hungary until its overthrow in 1989.

Bulgaria. During the war, Bulgaria had joined Germany against Britain and the U.S., but maintained neutrality with the Soviet Union. In 1944, as the war was turning against Germany, the Bulgarians formed a new government hostile to Germany, and put out peace feelers to Britain and the U.S., with whom it was still at war, hoping this would prevent intervention by Stalin and the Red Army.

It didn’t work. Even though Bulgaria had been careful to keep the peace with Stalin, he declared war nonetheless. This prompted the formation of a new government with Communists as a major part of the coalition. From there it followed the familiar pattern of purges, trials, street violence, etc.

As elections approached, the Communists demanded that all parties join their Fatherland Front. As a result, they won 60% of the legislative seats, allowing them to gradually pressure any non-Communists out of the government or just arrest and eliminate them.

In 1948, they declared the Peoples Republic of Bulgaria, which would last, like most other East Bloc communist regimes, until the sudden collapse of communism in 1989.

Rumania. Like many of its neighbors during the war, Romania was coerced into joining Hitler and took part in the invasion of Russia in 1941. However, in 1943, Romania unsuccessfully tried secret negotiations with the U.S. and Britain. The next year, King Michael, with support from the communists, replaced the pro-fascist government with the monarchy, withdrew from the Axis alliance, and declared a ceasefire with Russian forces.

When the Red Army entered Rumania, Stalin ordered the king to put the communists in power or be overthrown. Over American and British protests, the communists tightened the noose, promising free elections, but only letting Communist Party members vote. Thus they got 80% of the vote, the king abdicated, and in 1948, the People's Republic of Rumania was declared. Under Nicolae Ceausescu, (ruled 1965-89), Rumania was one of the more hardcore communists states along the lines of Stalinism. Ceausescu promoted his own cult of personality, and even had one for his wife.

Unlike the fall of most other communist regimes in 1989, Ceausescu's fall was a violent revolution that ended with his trial and execution.



Marshall Tito and Yugoslavia. Marshal Josip Broz Tito (above) was the tough communist leader of the Yugoslav resistance that liberated Yugoslavia before the Red army could get there. Without the Red Army's presence, Stalin had to allow Tito more freedom than he did other East Bloc leaders. However, because Tito followed a different, less strict model of socialism, even

taking aid from America, Stalin kicked him out of Cominform, the Communist international organization. That didn't seem to bother Tito in the least, who ruled Yugoslavia with an iron fist until his death in 1980. After that and the demise of the Soviet Union in 1991, the Balkans would descend into chaos for the better part of a decade.

The Buck Stops with Truman



Harry Truman holds up the copy of the Chicago Tribune that jumped the gun in wrongly predicting the outcome of the 1948 presidential election.

"He doesn't have enough sense to pour sand in a rat hole."

—Harry Truman

Harry Truman was the last president to serve without a college degree (although he attended law college for two years after being rejected from West Point for poor eyesight, and was an avid reader of history). His father was a farmer, which accounted for both his strong work ethic and unassuming manner, something critics compared unfavorably to his more sophisticated predecessor, FDR. Another formative experience was his service in World War I, which brought out his leadership qualities. (Initially rejected by the army for his poor eyesight, he reportedly memorized the eye chart to gain admission.)

Truman was also a man of his convictions. When a friend and political ally tinged with scandal died, he was the only politician to show up at the funeral, simply saying he had always been his friend.

After a moderately successful career in the Senate, including an incredible comeback in the 1940 election, Truman was chosen as FDR's running mate in 1944. He served as vice

president for only 82 days before FDR died and he became president.

Truman had virtually no contact with FDR during his brief vice-presidency, and was kept uninformed on major initiatives, including the existence of the Manhattan Project to develop the atomic bomb. His inexperience combined with his simple homespun manner and lack of college degree led to low expectations of him as president.

"The buck stops here."—Harry Truman.

In fact, Truman developed into one of America's most capable presidents. Central to this was his willingness to make tough decisions, no matter how unpopular they may be. He alienated labor by cracking down on a national railway strike after the war, made the decision to drop the atomic bomb (a popular move at the time), but withstood pressure to use it during the Korean War, seeing that nuclear weapons had made the Cold War a very different game from previous diplomacy. He recognized Israel as a nation, desegregated the military, and fired the popular General MacArthur, all very controversial moves from which he would not back down.

Thus at times, he suffered from the lowest popularity ratings in American history. By the same token, the success and wisdom of his decisions at other times gave him some of the highest presidential ratings in our history.

"If you can't stand the heat, you better get out of the kitchen."—Harry Truman.

Truman quickly came to the decision to resist Stalinist aggression after the war. In a meeting with Molotov, the formidable Soviet foreign minister, Truman basically read him the riot act, telling him the Soviets had better behave better from now on. When Molotov replied he had never been spoken to like that before, Truman shot back, "Carry out your agreements and you won't get talked to like that." While it didn't solve U.S.-Soviet relations, it let Stalin know that Truman wouldn't be intimidated.

I wonder what Harry Truman would do if he were a live today.—Popular joke about Truman's low chances of reelection in 1948.

In 1948, after sixteen years of Democratic presidents, the Republicans seemed poised to reclaim the White House. No one gave Harry Truman much of a chance at reelection, especially with the looming threat of communism abroad and a still faltering economy at home. No one much but Harry Truman, that is.

He did it in typical Truman style: with hard work and grit. He launched a massive train tour, called the "Whistle Stop Tour", across the nation and took his case directly to the American people, while his opponent, Tom Dewey, remained somewhat complacent about and aloof from campaigning. The result was the most stunning upset in American political history that is still held as the gold standard of political comebacks.

The Greek Civil War (1946-49)



Almost immediately after liberation by the British from a brutal Nazi occupation, in 1944, Greece became embroiled in a civil war between the communists, who had led much of the resistance, and the unpopular monarchy restored by the British.

Until American advisors took over, Greek government troops only maintained a static defense that let the enemy strike where and when they wanted. As a result, the Communists overran most of the countryside, establishing their own government, courts, and even phone system.

Starting in 1947, with the Truman Doctrine, American advisors took over training and directing government forces. Switching from the government's passive defensive strategy, they took the offensive, dividing Greece into nine sectors and sweeping through them one at a time. Yugoslavia had provided the most support to the communists, while Stalin, who had promised to stay out of Greece, kept his word,

leaving the communists to their fate. Thus, by 1949, they had cleared out communist forces.



Both communist guerillas and government troops would kill peasants just for talking to the other side, leaving them caught in the middle with nowhere to turn. In addition, they stole 1.3 million sheep and goats and 100,000 cattle and horses. This drove 700,000 peasants to flee to the bigger towns, leaving much of the countryside empty.



Women mourn men and boys killed by Communist guerillas just for talking to American military advisors. In addition to murder, the rebels stole 1.3 million sheep & goats and 100,000 cattle and horses. They even kidnapped an estimated 30,000 children to raise as Communists.

As usual, children were often the victims worst hit by the war. Although the Red Cross was able to evacuate a number of orphans to Rhodes, most others weren't so lucky. During the war, communist forces also kidnapped an estimated 30,000 children to Bulgaria to raise as communists.

The Marshall Plan (1948-52)



Don't fight the problem, gentlemen. Solve it." --George C. Marshall, or "General Marshall" as he insisted even the president call him. Truman's secretary of state, called the "organizer of victory" for his staff work during WWII, pushed the Marshall Plan to revive Western Europe's economies and save it from going communist

America's economic response was known as the Marshall Plan (1948). Its basic premise was that Communism thrived in economically backward or disrupted areas. Therefore, large amounts of foreign aid to revive Europe's economies would deprive the Communists of the conditions on which they thrived, save Western Europe from Communism, and provide the United States with stable trade partners and markets. Marshall Plan aid was offered to any country desiring it, including the Soviet Union. Stalin, not wanting to be dependent on the West, refused the aid, as did his satellites in Eastern Europe (after some of Stalin's "gentle" persuasion).

It was a trip to Moscow that convinced Marshall that Stalin was waiting for European economies to collapse so communism could take over. Reinforcing this belief was a gaffe made by ailing President Roosevelt in 1945, promising to have all U.S. troops out of Europe in three years. After a stop in Germany, where he saw how postwar chaos still persisted, he was convinced aid must be given to Europe to revive its economies and save it from going communist.

With Europe still in such bad shape Marshall outlined a proposed plan for aid to Europe in a speech at Harvard (6/4/1947). Emphasizing the urgency of the situation, he said, "The patient is sinking whilst the doctors deliberate." His plan was a hard sell for the still largely isolationist American public and Congress, but it passed,

eventually supplying \$13.1 billion worth of aid to Europe.

Marshall Plan Aid was open to all European countries, which raised the question of whether Stalin would accept it or let his satellites do so. After all, he had accepted massive Lend-Lease aid during the war. However, he saw too many strings attached, namely letting Americans travel freely in the Soviet Union distributing aid but also seeing how badly the Soviet Union had been damaged during the war.

For forty years, Western experts estimated Soviet losses in the war at around 20 million lives, a staggering figure in itself and one that Soviet officials didn't deny. Not until 1985 did Mikhail Gorbachev announce the figure as 27 million. Some scholars since then have pushed it further up to 29 million.

Overall, sixteen nations participated in the Marshall Plan and received U.S. aid: Austria, Belgium, Denmark, France, Great Britain, Greece, Iceland, Ireland, Italy, Luxembourg, Holland, Norway, Portugal, Sweden, Switzerland, and Turkey, plus the three allied occupation zones of West Germany. On Stalin's orders, no communist bloc countries participated, reinforcing the perception that the Marshall Plan was political in nature and aimed against the Soviet Union.

Between 1948 and 1952, the U.S. spent \$13.7 billion on Marshall Plan Aid (roughly equal to \$130 billion in 2000). Only 20% of that came as loans, the rest being in grants of food, industrial machinery, etc. The Marshall Plan encouraged Europeans to buy American goods and was criticized as merely a ploy to expand American markets. Indeed it did solve the dilemma of reviving markets for American goods, but one might say the U.S. did well by doing good, since it saved Western Europe's economies as well as its own.



A street in Hamburg, Germany before and after reconstruction using US aid

Among supplies sent to Britain was sugar, which was one of the items rationed after the war, making those restrictions especially unpopular. The prime minister even carried his own bowl of sugar to meetings as a show of solidarity with the rest of the public and the sacrifices they were making.



Left to right: eggs sent to Europe, a hydroelectric dam in Austria built with Marshall Plan aid, and Italian motorcycles, a sign of Europe's recovery.

Among the more interesting aspects of Marshall Plan aid were the 7,500 Missouri mules (below) the US sent to help revive Greece's livestock after its costly civil war. These mules, twice the size of Greek mules, were also stubborn and cantankerous, but proved very useful once the Greek farmers learned how to handle them.



Marshall Plan aid made a huge difference in Western Europe, especially France and Italy which were in danger of Communist takeover. When American aid was announced, French and Italian Communists made a final bid for power by disrupting their nations through strikes, riots, and even sabotage of public works such as railroads. In each case, the Communists largely discredited themselves, while the more moderate democrats had the Marshall Plan aid to back them up and win over voters. As a result, Western Europe experienced a remarkable economic recovery after this.

Postwar Politics in France and Italy



In response, the Church issued this poster with a picture of Garibaldi and the questions of whether the communists were truly democratic. When the poster was flipped over, it transformed the picture of Garibaldi into the dictator Stalin.

Having “saved” Eastern bloc from the Marshall Plan and American influence, Stalin still hoped to bring parts of Western Europe, especially France and Italy, under his influence, since there was still widespread discontent with the capitalist leaders who so far had failed to revive Western Europe from the war. The key to Stalin’s success or failure lay with the general elections in France and Italy. If communists could win those elections, American and British influence in Europe overall would likely collapse.

Having little to offer those countries in a positive way, Stalin had the communists do whatever they could to disrupt public order with strikes and riots and to discredit the ruling government, much like Hitler and the Nazis had done in the 1930s. Postwar politics were particularly wild and chaotic in France and Italy. Communists in both countries had led much of the resistance against the Germans, making them a popular and powerful political force after the war.

In addition, both countries’ economies were in shambles. In France, prices were inflated fourteen times of what they had been in 1938, electrical production was only half of what it had been, and coal production was only one-fifth. Hunger stalked the land, especially in the cities where 75% of the population was malnourished.

After the war, the provisional government declared by the Free French in Algiers continued as France’s government. The conservative war hero, Charles De Gaulle, served as head of state until resigning when the Communists gained

nearly a third of the seats in the legislature in the 1945 elections. However, the Socialists kept the Communists, from gaining full control of the government. At first, the Communists worked within the system and cooperated with the Socialists to push through more socialist oriented reforms, but finally split with them.

In 1947, with the announcement of the Marshall Plan, Stalin urged French communists to disrupt the economy with strikes and riots. A massive general strike that fall succeeded in disrupting food and coal supplies and transportation, while Communists physically seized control of the legislative Assembly, held it overnight, and had to be forcibly evicted.

Strikers derailed up to five trains a day through sabotage, sixteen people being killed in one such incident. Meanwhile, all across France, pitched battles raged between strikers and police, making some wonder if France was slipping into civil war.

In response, the government got emergency powers, called up 80,000 troops to replace striking workers, and, most effectively, threatened to cut social security benefits to strikers. Gradually, strikers returned to work and the strikes collapsed.

One factor undermining the French communists was a changing public perception of them and Maurice Thorez, their leader. In 1939, as World War II was starting, Thorez had deserted the French army and spent the war in exile with Stalin rather than fight Germany, which at first had been an ally of communist Russia. Thorez’ actions became more acceptable after 1941 when Russia became an ally against Germany. In 1945 he returned to France, regained popularity, and even held the post of vice premier before the Communists split with the Socialists. However, Stalin’s increasingly hostile actions against the West after the war damaged the reputation of the French communists in general and Thorez in particular.

Thorez didn’t help matters with his remark that the French communists would do nothing to stop Soviet troops if they came into France to save communism there. This cost the Communists a

good deal of support, since most of the French were French nationalists first and loyal to a particular party second. If Thorez had read his history more carefully, he would have recalled the French had pretty much invented nationalism back in 1789 and weren't about to give it up to a dictator like Stalin.

In the end, a growing perception of the French communists as being too tightly associated with Stalin, their split with the Socialists, and the lure of American Marshall Plan aid helped defeat the French communists' violent bid for power. While still a factor in French politics, they would never again have the support they commanded right after the war.



Some of the rioting, largely stirred up by French Communists to disrupt the 1948 elections. When strikers derailed a train, killing 20 people, public opinion turned sharply against the Communists.

Eventually, Charles De Gaulle would return to power and oversee the birth of a new constitution, the Fifth Republic, with a stronger executive. In the 1960s, he would steer France on a course that was more independent from the U.S., even developing France's own nuclear bomb. Some people saw De Gaulle as an anachronism, confusing himself with Joan of Arc in his belief in France as a world power.

Postwar Italy, heavily damaged by the war, was another battleground between capitalism and communism. Agricultural production was half of its pre-war level, while 80% of its industrial production had been destroyed, along with most of its inland transportation, and much of its merchant marine. Three million people were homeless; 2 million unemployed, and uncounted millions underfed, in particular lots of war orphans. Both inflation and banditry were rampant, and separatist groups in Sicily and

Calabria were trying to break away as independent states.

Italy, like France, saw turmoil throughout the country in 1947. Communist workers occupied factories, wrecked offices, and openly battled the police and Fascist action squads in the streets, using caches of weapons hidden since the war. In the countryside, thousands of peasants seized the lands of the rich. Meanwhile, even in the National Assembly, 200 delegates battled on the floor.

As in France, Italian communists commanded a lot of support that threatened to give them control of the government. Thus the 1948 elections in Italy were a bitterly contested campaign between the conservative (and U.S. backed) Christian Democrats led by Alcide de Gasperi and the Communists led by Palmiro Togliatti.

The Catholic Church was particularly scared of communism, since it was an atheistic creed. The pope excommunicated Communist Party members, while priests denounced the "cosmic sin" of communism from the pulpits.

One group this had an effect on was women, who were voting for the first time and were especially influenced by their priests. Communists' girlfriends were even more affected, since excommunication meant they couldn't get married in the eyes of the church or have a church wedding with a white gown and all the other trappings.

In the U.S., celebrities such as Frank Sinatra, urged Italian-Americans to write their relatives back home encouraging them to vote against the communists. However, even more important than popular singers in exerting American influence was the newly formed CIA.

The vexing question was whether the U.S. had the right to interfere in other countries' affairs. The answer seemed to lie in the National Security Act (1947), giving the government the right to act against any threat to national security. By the Truman administration's reckoning, a communist victory in Italy's elections would constitute such a threat. While

CIA involvement in the Italian election was less than subtle, agents going around handing out cash from suitcases to Christian Democrat politicians, it was the basis for all subsequent covert operations by the CIA in other countries.

Another widespread tactic was using posters to frighten voters away from supporting the communists. Rome and other cities seemed to be papered over with such posters, which were generally anything but subtle. The Church was heavily involved in this propaganda campaign, funding the issue of over 300 different posters to scare people away from the communists. Italian communists liked to use images of the popular national hero, Giuseppe Garibaldi, to imply he would have supported their party. In response, the Church issued a poster (top) with a picture of Garibaldi and the question of whether the communists were truly democratic. When the poster was flipped over, it transformed the picture of Garibaldi into the dictator Stalin.



Political posters from the 1948 elections in Italy. The caption for the one on the right reads: *“Attention! Communism needs a boot.”*

Meanwhile, strikes and violence continued across Italy. A right wing politician was shot in his own home, and two bombs were thrown into a crowd at a communist rally.

Probably the most influential factor was the promise of Marshall Plan Aid, but only if the communists were defeated. Along those lines, Christian Democrats spread the rumor that Stalin was sending lots of grain to relieve starvation in Italy. In fact, he wasn't sending grain, so that when it never showed up, people called him and the communists a bunch of liars.

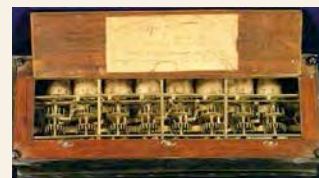
In the end, these various tactics and American money and aid worked, giving the Christian Democrats and their leader, Alcide de Gasperi, a landslide victory, thus keeping Italy in the Western camp during the emerging Cold War.

The Long Road to the Computer (1642-1947)



The IBM Automatic Sequence Controlled Calculator after installation at Harvard University in 1944. It was 51 feet long, weighed 5 tons, and had 750,000 parts. On the right side were card readers, a cardpunch, paper tape readers, and typewriters. It took 1/3 second for an addition problem and 1 second for a multiplication problem.

The history of mechanical calculators, forefathers of the computer, goes back to 1642 when Blaise Pascal created an adding machine, the Pascaline (below) that automatically carried digits from one position to the next. It had several dials that could be turned with a stylus. Underlying gears turned as each digit was dialed in, the cumulative total displayed in a window above the "keyboard". However, Pascalenes remained little more than curiosity pieces in private parlors until the debut of Thomas De Colmar's Arithmometer in 1820. Able to add, subtract, multiply, and divide, it was the first commercially successful calculator, being the model for calculators into the 1900s.



Babbage's Difference Machine. The Englishman Charles Babbage (26 December 1791 – 18 October 1871) was obsessed with using the steam engine to power a device that would calculate navigational, celestial, and mathematical tables. From 1822 to 1849 he worked on the design for

his *Difference Machine*, which could do four functions (add, subtract, multiply, and divide). He even got a grant from the British government, probably the first government grant for researching computers. Although he never built one, he is often considered the father of the computer. In 1991, to mark the bicentennial of Babbage's birth, a working Difference Machine was built. To prove that it was feasible to build such a machine in the 19th century, the project used only the technology available then.

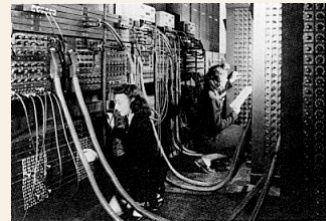
The Jacquard Loom (1825). In 1728, a new weaving device, the Falcon's loom used the Frenchman Basile Bouchon's invention of perforated paper rolls, the holes operating as binary on/off switches to determine if a particular color thread was used in that row of fabric. A century later Joseph-Marie Jacquard invented an automatic loom (above right) using punched cards to control the patterns in the fabrics in a similar way. Despite worker riots against the replacement of people by these machines, virtually all industrial looms were using this system by 1900. Not only that, it was being applied to other industrial uses, such as riveting patterns on the large steel ships bringing millions of immigrants to America. Just in time, someone found another use for this concept.

The Hollerith machine (1890). The 1890 US census provided the impetus for another step toward inventing the computer. Because of the huge influx of immigrants, people figured the 1890 census wouldn't be finished before the 1900 census came around. To the rescue came the Hollerith machine. Using punch cards like those designed for Jacquard Looms, census takers would punch out chads on the appropriate places for numbers of family members, males, females, etc. Back at the census bureau, secretaries placed the card in an electronic machine with contact points for each space on the card. When the lever was lowered, only tabs for places with missing chads would complete the electronic circuit by touching the electrified plate underneath the card. This would automatically register the appropriate number on a counter. Like the Jacquard loom, this was using a basic

binary, on-off, concept that is still central to computer design.

In 1930, Vannevar Bush at MIT built a large-scale differential analyzer with the additional capabilities of integration and differentiation (left and below). Funded by the Rockefeller Foundation, it was perhaps the largest computational device in the world at that time

The Z-1 machine (1938). Another pioneer in the field was Konrad Zuse who, working in his parents' living room between 1935 and 1938, built the Z-1 machine, a relay computer, using binary arithmetic. During World War II he applied to the German government for funding, but the Nazis thought its development would last longer than the war. After the war he constructed the Z-4 machine at the University of Zurich and founded a computer company that was later absorbed by Siemens Corporation. As pioneering as Zuse's work was, it was little known outside of a few people and had no real impact on the development of computers.



The Electronic Numerical Integrator And Computer (ENIAC) (above) was the first general-purpose electronic digital computer and the forefather of today's all-electronic digital computers. It was 150 feet wide with 20 banks of flashing lights and about 300 times faster at addition than the IBM Automatic Sequence Controlled Calculator. Built between 1943 and 1945 by two University of Pennsylvania professors, John Mauchly and J. Presper Eckert for the war department, its purpose was to create a machine to replace all the women (known as "computers") employed by the army to calculate the complex firing artillery tables.

To program a modern computer, you type out a program with statements like:
Circumference = 3.14 * diameter.

To reprogram the ENIAC you had to rearrange the patch cords settings on some of its 3000 switches.

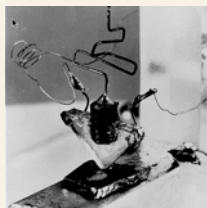
Vacuum Tubes. Relaying the signals in ENIAC was a vast array of 19,000 vacuum tubes. In the mid 1800s a German, Heinrich Geissler (1814-79) carried out experiments with vacuum tubes and found that a current passed through an enclosed gas tube, which contained a partial vacuum and one of a series of gases, would produce a brightly colored glow. He found that different gases, such as hydrogen, oxygen, and nitrogen, produced different colors. His devices were known as Geissler Tubes.



In 1878, the Englishman, Sir William Crookes (1832-1919), expanded on Geissler's research and found that an electrically charged cathode in a tube (left) would produce streams of what he called "cathode rays." This would also help lead to the invention of television in 1927.

But that's another story.

Unfortunately, vacuum tubes used a lot of energy, and produced a lot of heat, causing them to burn out quickly. If one vacuum tube on the ENIAC went bad, technicians had to search through its 19,000 vacuum tubes until finding the problem. This didn't make computer design and usage very efficient.



The Transistor (1947). In 1947, William Shockley, John Bardeen, and Walter Brattain invented the "transfer resistance" device (above), AKA the transistor, which would revolutionize the computer and give it the reliability that could not be achieved with vacuum tubes. The key innovation was a valve

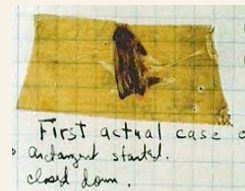
that let a weak signal control a much larger flow much as a faucet controls the flow of water.

This was a much more elegant solution to the needs of electronics, being small and using much less power than the vacuum tube. Since it used so little power, it also produced hardly any heat, thus giving it a longer life than a vacuum tube. The transistor dramatically expanded the possibilities for further computer development.

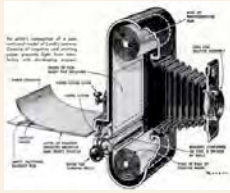
Since ENIAC and other early computers, such as ILLIAC, JOHNNIAC, and MANIAC (*Mathematical Analyzer, Numerical Integrator, and Computer* or *Mathematical Analyzer, Numerator, Integrator, and Computer*), were so huge, future computers were envisioned to grow in size with their capabilities. A prime example was the villainous computer HAL (the letters IBM moved back one position each in the alphabet) from the 1968 movie "2001: A Space Odyssey" (below). To turn it off, one would have to go inside of it. Of course, the real trend for computers, as in other areas of technology, has been progressive miniaturization.



The First Computer Bug. In 1945 the first computer bug was discovered: a moth that was beaten to death in the jaws of a computer relay. Technicians reported they "debugged" the computer, giving rise to today's common terminology. The moth now resides in the Smithsonian.



The Frontiers of Postwar Consumer Technology



Balancing the fears caused by the emerging Cold War was the anticipation of a new age of technological wonders that would revolutionize our lives. Consumers didn't have to wait long, as almost immediately, an abundance of new consumer products appeared to make life easier and more fun.

(Nearly) instant photography: the Polaroid camera (1947). In 1947 Polaroid announced the invention of the one-step camera (above) and started marketing it the next year. Early models could develop a picture in one minute, with instant development finally available in 1979. Such a camera ideally suited a society on the move that increasingly demanded instant results. Although the pictures were not professional quality, they suited the average American family wanting to capture a moment and not wanting to wait a week or two to review it.



Prelude to MacDonal'd's: the Automat. Introduced in Philadelphia in 1902, the automat became a quick and popular form of urban dining during the first half of the twentieth century.

Diners would insert a number of coins into a slot next to a window showing the desired item. They could then lift the window, which operated on a hinge, and remove their food, which was a cold dish such as a sandwich or pie. In many automats, customers could also buy hot food

served cafeteria style from steam tables in the back.

Despite what the name suggests, automats required a large staff for preparing the food in the kitchen and replacing sold items. They reached the peak of their popularity in the 1940s and 50s, but faded from the scene with the advent of the suburbs, increased reliance on the automobile, and drive-in fast food restaurants, such as MacDonal'd's.

The automatic washing machine. During the twentieth century, the days of pounding laundry on rocks by the local stream or river finally ended for most housewives in the Western world.

Although the electric washing machine had been around since 1904 and was fairly common by 1930, it had to go through several developmental changes before becoming the automatic washer we are familiar with.

One major feature was the spin washer, first introduced in the 1930s. Previously, water had to be wrung out with a separate manual (and later power) wringer. By 1940, there were washing machines in 60% of America's 25 million households. In 1947 General Electric introduced what we would recognize as the first modern automatic top-loading washer. By 1953 sales of automatic washing machines had surpassed those of wringer washers.

There's no way to quantify the impact of the washing machine on personal hygiene and health. Similarly, the reduction in the drudgery of washing clothes by hand and the resulting freedom it provided women has even been compared to modern birth control in its impact on the Women's Liberation movement in the 1970s.



The LP or long-playing record (1948). One of the prime features in the history of technology is miniaturization: packing new technology into smaller and more portable forms. Such was the case with the replacement of the 78-rpm with the 33 $\frac{1}{3}$ -rpm record, also known as the LP or Long Playing record.

Although first introduced by RCA in 1931, production halted after two years, largely because of the Great Depression. Columbia resumed development of the LP in 1941, but World War II delayed its introduction to the market until 1948. While the older 78 rpm format could only hold four minutes of material, the 33 $\frac{1}{3}$ rpm record typically held 30 to 45 minutes over two sides of a disc. This proved especially appealing to classical music fans who didn't have to switch records several times in the course of a symphony. In the picture above, a man stands holding a stack of LPs that hold as much music as the stack of 78s next to him.

Some record turntables came equipped with record-changers (introduced in the 1920s), which could automatically play an entire stack of records, double albums often had sides 1 and 2 backed with sides 4 and 3 respectively, so listeners could listen to two sides of the album without having to turn over the record.

Forty years later, another revolution would take place: the CD, which could hold 78 minutes of music on its one side compared to the 30-45 minutes of the LP. And it did this on a disc less than half the size of the LP.

It would take half as long, twenty years, for the next dramatic advance, the digital music revolution, to take place where a pocket-sized device could hold an entire music collection and made it completely portable—all without consuming any plastic discs.

Fun and Fashion in the Forties



Swing dancing was especially popular in the 1920s, 30s, and 40s and was associated with jazz music of the times. Just as jazz had African and African-American roots, so did much of Swing dancing, although some dances, notably the Balboa, originated in the Anglo-American community.

One of the most popular dances to come out of the African-American community in Harlem, the Lindy, served as the basis for numerous variations that evolved into other swing dances.

The term jitterbug, which is popularly associated with a particular dance, actually referred to swing dancers themselves. It was supposedly coined by bandleader, Cab Calloway, who said the dancers on the floor looked like a bunch of jitterbugs.

Postwar fashions. The austerity of wartime carried over into the late 1940s as it took time for most economies to recover and make clothes and fabrics available and affordable. Thus skirts and dresses tended to be shorter and tighter to conserve on cloth.

Adding to this trend was the influx of women into the workforce during the war. Skirts and dresses had to be more comfortable and practical for women in office jobs, while Rosie the Riveter wore totally functional dungarees in the factory.



Although not a fashion statement at first, teenage girls (AKA Bobbysoxers, above) continued this trend into the 1950s, making jeans and slacks only become more prominent as part of a woman's wardrobe over the decades as society has become less formal.

Postwar austerity applied to food as well, which was rationed even more strictly in Britain, as it exported grain to keep Germany from starving. As a result, people were generally fitter and trimmer, which clothing styles also reflected.

Not surprisingly, when economies recovered and fabrics became more readily available in the late 1940s, dresses became longer and fuller, a trend that continued into the 1950s.

One fashion accessory that has disappeared as a must for both ladies and gentlemen is the hat. There was a time in Western culture where a woman's hair was kept from public view much as it still is in traditional Muslim society. Even as women's hair became more visible in high society, modesty still demanded ladies wear a hat. As a result, hat styles changed as regularly as dress styles, the fashion capital for both being Paris. Below are the *spring* hats for 1944.

Growing informality in society saw the demise of hats, both men's and women's, in the 1960s. Apparently, after that, no one seems to have cared how they appeared to the rest of society.

139. THE EVOLUTION OF MODERN WAR & ANATOMY OF COLD WAR CRISES

Introduction. By 1948, the United States and Soviet Union had established their respective spheres of influence in Western and Eastern Europe. However, unlike World War I when a definitive treaty emerged to determine a new balance of power, no such treaty emerged after World War II because of the quick falling out between Stalin and the Western allies. So far, the post-war settlement had been determined without direct conflict between the two superpowers. But, by 1948, when the two superpowers had established their spheres of influence, they started confronting each other in what is known as the Cold War.

The Cold War crises always stopped short of direct war between the two sides because their growing nuclear arsenals made such a war potentially suicidal to both sides. Already by 1945 two world wars in quick succession had shown the spiraling destructive potential of modern technology. At first, it took a while for both sides to realize nuclear weapons were much more than just big conventional bombs.

Even when that lesson sank in with the realization that nuclear war was played by a different set of rules, it still was not clear just what those rules were; but it was clear we could not risk such a conflict. Before the twentieth century, diplomats could use the threat of war as one tool in their efforts to resolve a crisis. However, with the nature of war so radically different, the rules of diplomacy also had to change drastically. The question was how. To the diplomats and leaders who had gone through two previous world wars, the answer largely lay in analyzing what had gone wrong in 1914 and 1939.

The road to total war (1789-1945). Many times throughout history people during wars had exercised little or no restraint in killing each other. Therefore, war, as horrible as it was, had never seriously threatened the very existence of our species. In the twentieth century it did.

The root of the problem lay in two things: the spirit of nationalism born during the French Revolution and the mismatch between the slow rate of change in cultural attitudes toward war compared to the

accelerating pace of technological change triggered by the industrial revolution. The first of these, nationalism, made universal conscription possible, drawing upon the whole population of France and producing huge armies of loyal, at times enthusiastic, and relatively cheap recruits. Universal conscription dramatically changed the scale of warfare, but that, combined with the industrial revolution, would change everything about war.

By 1914, industrialization had spawned revolutions in communications, transportation, and warfare. In communications, the telegraph and telephone drastically cut the time of communications between governments. That alone might have been manageable, except that, with the telegraph used in conjunction with railroads, armies could mobilize much more quickly, giving diplomats hardly any time to reflect on their situations and negotiate a settlement. As a result, the various powers' provocative behavior in 1914, especially Russia's mobilization (an act once accepted as a legitimate diplomatic strategy) spun out of control into war.

Industrialization also triggered dramatic population growth while mechanized production freed a much larger percentage of that population from farming and factory work for the armies. By 1914, combining those huge armies with the mechanized firepower of weapons such as the machine gun, poison gas, and more powerful artillery gave industrial nations the recipe for a level of carnage and destruction hitherto undreamt of. Not only that, but after the initial battles ending with the First Battle of the Marne, the two sides' armies spread out in an attempt to outflank one another. However, since both sides had millions of men, each with many times the firepower of their ancestors, they were able to fill in a solid line of trenches from the mountains to the Sea. The continuous front had been born, but because the technology of defense was more effective than that of offense, neither army could go around or through the other. Not that they didn't try. They did and with tragic results. Thus the continuous front was also a static front with material damage mainly limited to a narrow strip of land. That would change in the next war.

Between the wars, diplomats, in their efforts to prevent another such disaster, focused on, and tried

to avoid the provocative diplomacy of 1914. Unfortunately, they went too far in their efforts to keep the peace in the 1930s, constantly meeting Hitler's aggression with appeasement. This only encouraged more aggression while Hitler built up his power. Therefore, the Second World War broke out only twenty years after the end of the First.

By 1939, industrialization had further expanded populations and the armies they could fill, while it also supplied those armies with even more destructive weapons. Two of these in particular, the tank and airplane, which had just made their debut in the previous war, now came into their own. Tanks, rather than eliminating the continuous front, just made it mobile, thus spreading the swathe of destruction from a limited static front to one that engulfed all off Europe. Airplanes exacerbated this effect, especially with long-range strategic bombing that now made cities and their civilian populations behind the battle lines primary targets.

Unfortunately, if the Second World War seemed to spawn another quantum leap in the destructive capability of modern technology, the entry of a weapon of even more devastating power heralded the end of that era and the start of a whole new era in the history of human warfare: the atomic bomb. Even more ominous was the development of thermonuclear, or hydrogen, bombs just seven years later using a fusion reaction to generate an explosion that dwarfed that of the of the Hiroshima bomb's fission reaction in much the same way that it had dwarfed conventional bombs. Whereas a simple chemical reaction was the basis of warfare in the age of gunpowder (c.1500-1945), the key to the Atomic Age was a much more complicated chain reaction taking place inside the nucleus of the atom, something so small we still didn't have microscopes powerful enough to see it. But we could unleash, if not control, its destructive force. Now the very survival of civilization was on the line, and a way had to be found to avert a clash between the two nuclear superpowers, the United States and Soviet Union.

New rules for a new game. Therefore, the Cold War assumed the form of a series of crises that were resolved along two lines of development: either by non military means or by fighting by proxy (substitute) where one or both powers fought each other indirectly by supporting smaller allied states

in regional wars. The Korean (1950-53), Vietnam (1954-75), Arab-Israeli (1948, 1956, 1967, 1973, and 1982), and Afghan (1979-89) wars were all examples of the superpowers exploiting regional conflicts to promote their own ends.

Crises involving the Americans and Russians in a direct confrontation ran a higher risk of erupting into all out war. Therefore, each side would carefully assess the seriousness and strategic value of the crisis to its own and the other side to calculate how far it could go without starting World War III. This assessment would be based largely on three factors. First was the strategic value (in terms of location and/or resources) of the target country at the center of the crisis. For example, any crisis over the oil-rich Middle East would have serious implications. So would a crisis over any strategic choke points such as the Suez and Panama Canals or Turkey's control of the Hellespont threatening Russia's access from the Black Sea to the Mediterranean.

The second and third factors were which superpower's sphere of influence the target country occupied and the diplomatic ties it had with each side. These would usually, but not always, belong to the same power, giving that power a decisive "home field" advantage in the crisis. However, crises where diplomatic ties did not correspond to the sphere of influence tended to run the highest risk of escalating into war because it wasn't clear who held the all-important home field advantage.

Two examples of such a situation were the Berlin Blockade in 1948-9 and the Cuban Missile Crisis in 1962. In the former crisis, West Berlin had strong diplomatic ties with the West but was located in the middle of Soviet controlled East Germany. The Cuban Missile Crisis saw just the opposite situation, with Cuba in the United States' traditional sphere of influence, but having strong diplomatic ties with the Soviets. In each case it was unclear who had more at stake and was willing to go farther in defense of what it believed to be its "home turf". This was where the chances of miscalculation and the risk of war ran the highest.

Having assessed the risks in a crisis, each side needed to pursue a strategy between being too aggressive and too weak, such as those which led to World Wars I and II respectively. This needed to

meet three criteria. First, it must show strength and resolve without being too provocative. Second, playing a dangerous game known as *brinkmanship*, it should push the other side into a position that would make any further escalation of the crisis run the risk of war, thus forcing it to back down. For example, during the Berlin Blockade, the United States and Britain airlifted supplies into West Berlin rather than crashing the land blockade Stalin had set up. This avoided committing an act of aggression that might lead to war and it forced Stalin into the position of either letting the planes through or actively shooting them down, which would also lead to war.

Finally, the strategy in a crisis should provide the opposition a face-saving way to back down without feeling publicly humiliated. The United Nations could play a valuable role here as mediator to defuse the crisis. So could secret diplomatic deals between the two powers, such as the secret agreement by the U. S. to remove its missiles from Turkey if Russia would publicly agree to take its missiles out of Cuba in return for a public commitment that the U.S. would not invade Cuba. Recognizing the value of such secret “back channels”, the two powers installed a “hot line” after the Cuban Missile Crisis, thus providing direct communications with one another during any future crises.

It is important to note that these were not hard and fast rules that were ever written down in a handbook so both sides knew exactly how to deal with one another. Rather they were vague principles that evolved through trial and error as the two sides struggled to find a way to deal with the new sort of world nuclear weapons had created. However poorly articulated these principle were, during the most dangerous half-century of human history to that point they helped the United States and Soviet Union break the pattern of resolving differences through total war. In the process, they avoided nuclear Armageddon and provided some glimmer of hope that the human species might survive its technological adolescence.

THE EARLY COLD WAR (1948-53)

The Cold War in Europe (1948-55). The first Cold War crisis was over Germany, which was divided between Soviet and Western spheres of influence in 1945. France, Britain, and the United States held the Western two-thirds of Germany, while Russia held the eastern third. At first this division was meant to be temporary with a permanent settlement to be hammered out in the future. But Stalin and the Western allies were soon at odds over the fate of Germany. Stalin wanted it to be Communist and the Western allies wanted it to be Capitalist and democratic.

In 1948, the United States and its allies made several moves that led to a crisis: the formation of a military and economic alliance that was aimed against a resurgent Germany but which Stalin thought was against him, the Marshall Plan to stop the spread of Communism, the unification of the three western sectors into what would become West Germany, and the introduction of a new currency to stabilize the German economy. Stalin kept this new currency out of his sector and tried to introduce his own currency into the West. The allies responded by keeping his currency out of the West. Stalin, sensing a resurgent West German economy and fearing that this might threaten his dominance in East Germany and Eastern Europe, raised the stakes in what is known as the Berlin Crisis.

Berlin, which itself lay deep inside East Germany, was divided between the allies in much the same way as the rest of Germany. The Western allies had access to West Berlin through three land corridors and three air corridors. Therefore, West Berlin was quite vulnerable to Soviet pressure, and that is where Stalin struck.

On June 24, Stalin started cutting off utilities and the flow of traffic and supplies along the three land corridors leading into West Berlin. This presented the Western Allies with a difficult choice. If they abandoned West Berlin to its fate and let Stalin have his way, it would encourage more aggression that might lead to war just as a similar sort of appeasement had done in 1939. By the same token, crashing the Soviet blockade could lead to war just as similar acts of aggression had done in 1914.

The Allied solution was tedious but ingenious: an airlift of supplies into West Berlin. This would supply West Berlin while using three-dimensional air space that could not be blockaded. It was a classic case of brinkmanship, since stopping the airlift would require shooting down American and British planes, which might provoke a war. Since the United States had the Atomic bomb and he did not (at least until the following year), Stalin did not want to risk a war with the United States. Therefore, he let the planes go, hoping the British and Americans would get tired of this costly operation. They did not. For nearly eleven months, they kept up the round-the-clock flights that were only 30 seconds apart, taking in supplies and taking out some 50,000 sick, elderly, and very young people. Besides food and medical supplies, they also took in cars, heavy machinery, and even Clarence the Camel, a defiant symbol to Stalin that the Western Allies could bring anything they wanted into West Berlin.

Each succeeding day of the airlift embarrassed Stalin with proof of the West's technical ability to pull off such a feat. After eleven months, he lifted the blockade. The Berlin airlift had saved West Berlin. It had involved 276,926 flights that brought in 1,592,287 tons of supplies at the cost of 24 air crashes and 79 lives. The importance of the Berlin Crisis was that it stopped further Stalinist aggression in Europe. The same month that the blockade was lifted (May, 1949), West Germany was formed as a parliamentary democracy.

The Berlin crisis prompted two rival alliances led respectively by the United States and Soviet Union. In 1949 the North Atlantic Treaty Organization (NATO) was formed between the United States, Britain, France, Belgium, the Netherlands, Luxembourg, Greece (1952), and Turkey (1952). It was mainly a defensive alliance to stop Soviet aggression by hemming it in to the west and south. In 1954, the NATO allies, in need of manpower and firepower to combat the Soviets, allowed West Germany to rearm itself and admitted it to NATO. Outside of the United States, the West German army became the biggest and best-trained army in NATO.

A similar alliance, the South East Asia Treaty Organization (SEATO) was formed in 1954 between the United States, Britain, France,

Pakistan, Australia, New Zealand, Thailand, and the Philippines to contain the Soviets and Communists to the south and east. A third alliance, the Mideast Treaty Organization (1955) completed the ring of hostile powers on Russia's borders to the south. These alliances proved to be less stable and reliable than NATO, but they did ring the Soviet Union with unfriendly alliances, which alarmed its leaders.

In response to this threat, Russia formed the Warsaw Pact in 1955 with its satellite states in Eastern Europe: East Germany, Czechoslovakia, Romania, Hungary, Bulgaria, and Albania. Making this threat much more potent was the fact that the Soviets now had nuclear weapons of their own. In the following years, Britain, France, China, and India would join the "nuclear club" and all but India would develop their own nuclear arsenals.

Therefore, by the mid 1950's, distinct battle lines had been drawn in Central Europe. Armies which people expected to be demobilized and sent home in 1945 remained in place for nearly a half century, draining their countries' economies, turning Central Europe into an armed camp, and presenting the constant threat of war, which this time would probably be accompanied by a devastating nuclear exchange. Whole generations grew up under the ominous cloud of this atomic umbrella, acutely aware that the next war might well be the last for the human race.

The struggle widens: East Asia (1945-53). World War II had been a truly global war, especially involving Europe's colonial empires in Asia. By the mid twentieth century, the areas outside of Europe loomed much larger in importance as they shook off Europe's grip and started developing on their own economically and politically. Japan had led the way since the late 1800's, and its early success against the European colonial powers inspired others in Asia to challenge European supremacy as well.

One such country was China, whose civil war between the Communists led by Mao Zedong and the Nationalists led by Chiang Kai-shek had been interrupted by World War II. That civil war resumed right after Japan's defeat. Although the Nationalists started out with more men and resources, the Communists had Soviet help, both in the form of weapons and high ranking Nationalist officers who were actually Stalin's moles and

repeatedly betrayed Chiang Kai-shek's. By 1949, the Communists emerged victorious, and the West found itself confronted by another Communist power that was heavily backed by the Soviet Union. The ensuing clash between Communist East and Capitalist West came in a third country: Korea.

The victorious Americans and Soviets partitioned Korea, which had been occupied by Japan since the early part of the century, after the war at the thirty-eighth parallel. Soviet dominated North Korea became Communist, while American backed South Korea was capitalist and democratic, at least in form. In 1950, North Korean forces invaded South Korea and overran most of it.

This crisis brought to the forefront the fledgling United Nations, founded in 1945 in the recurring hope that such an international organization could help defuse conflicts and safeguard the peace. The members of its main executive body, the Security Council, each had the power to veto any proposed actions. As luck would have it, when the Security Council met to discuss the Korean crisis, the Soviets boycotted its meeting. This allowed the United States to pass a resolution calling for an international force to stop the North Koreans.

The bulk of this force consisted of American troops led by General Douglas MacArthur. With the United Nations forces barely hanging on to a toehold in the south, MacArthur landed an amphibious invasion behind North Korean lines and drove them back north. When the U.N. forces advanced dangerously close to the Chinese border in the North, Chinese forces entered North Korea and drove them back south. What ensued was a long bloody stalemate that ended with a ceasefire at the original border, the thirty-eighth parallel. The Korean War had two major results. For one thing, it contained the spread of Communism, but at the cost of a divided Korea and the loss of millions of lives and untold material damage.

It also affected Japan where the United States was worried about the further spread of Communism and Soviet power into East Asia. Feeling that poor and unstable conditions created the ideal conditions for the spread of communism, the United States decided to provide Japan with economic aid to help it revive. As a result, Japan's prosperity and stability rapidly recovered, making it a strong ally

and trading partner for the United States. However, by the 1980's, Japan' was seriously challenging American dominance of world trade.

A growing climate of fear. In the 1950s, Soviet possession of the atomic bomb, the emergence of an aggressive and hostile Communist China, American support for South Korea and Japan, and the development of thermonuclear weapons by the United States in 1952 and the Soviet Union only a year later all served to create a climate of growing fear and paranoia on both sides. Stalin's behavior inside the Soviet Union did nothing to allay those fears. During World War II, he had to lighten up a bit on his repression and terror in order to encourage his people to fight the Fascists. After the war, however, he re-established his terrorist regime, instituting a new round of purges against talented subordinates who had emerged during the war and he saw as threats to his regime. This, in turn triggered a wave of paranoia and recriminations in the United States about the ubiquitous communist threat, feeding into the dark days of Joe McCarthy's hearings and J. Edgar Hoover's use of the FBI in his secretive campaign against suspected Communist traitors.

Even after Stalin's death and the discrediting of McCarthy, the new Soviet leadership found it difficult to dismantle the whole Stalinist system without risking the entire fabric of Soviet power coming unraveled. Therefore, the legacy of paranoia persisted on both sides for decades, fed by and feeding into growing stockpiles of nuclear weapons, not just in the United States and Soviet Union, but also in Britain, France, and China as they all joined the "nuclear club" and developed their own nuclear arsenals. The world was still a very dangerous place, and seemingly more dangerous with each passing day.

The Berlin Airlift (1948-49)



West Berliners watch an American C-54 coming in for a landing during the Airlift

The Yalta agreement provided the U.S., Britain, and France each with its own sector of Berlin, dividing it up much as Germany overall had been divided. The problem was that Berlin was deep inside the Soviet controlled sector of Germany, with the Western allies having three narrow land and air corridors through which to supply their part of the city.



Map showing the division of Germany into different sectors and the three air corridors accessible to West Berlin across East German air space

In 1947, when Britain and the U.S. made moves to combine their sectors into one sector known as Bizonia, Stalin started shutting off one road or another for a time, or discontinuing water service due to "technical difficulties". The next year, the allies convinced France to join in combining their sectors into one West German territory and started to replace the old German Reichsmark currency with a new Western German Deutschemark, allowing West Berliners to exchange 60 old marks for 40 new ones. At the same time they imported 20 million cigarettes to stabilize the economy, which started to revive.

Alarmed by these moves, Stalin introduced his own East German mark. East Germans quickly realized the superior strength of the West German economy, trading seven or eight of their own marks for one West German mark.

In June 1948, when the Western allies refused to allow the East German currency into their sector, Stalin blockaded the land corridors they needed to supply West Berlin. He figured the West's only options were either to crash the blockade, which would likely lead to war, or give up West Berlin, which, being so deep inside East Germany, was nearly impossible to defend.

However, the British and Americans saw another option: to airlift supplies into the besieged city. Since Stalin couldn't build a wall 30,000 feet high to blockade the air corridors to stop this, he could only stop the planes by shooting them down, which would lead to war, an unacceptable option since the U.S. was the sole nuclear power at the time.

"Why shouldn't it [airlift] work, they dropped so many bombs on Berlin, they should be able to drop potatoes." --Berlin woman talking about the plan to airlift supplies into West Berlin during the Soviet blockade.

However, safely landing potatoes was a much more daunting task than dropping bombs, because Berlin's population of 2,000,000 needed 12,000 tons of supplies each day and only had 36 days of food and 45 days of coal stockpiled. Many Berliners were still collecting scrap wood for fuel from bombed out buildings. Therefore, Stalin figured the West had neither the capability nor will to carry out such a task.

He was wrong on both counts.

This was especially true after President Truman's astounding reelection in November 1948 freed him from some of the political pressures by various groups trying to influence his handling of the Berlin Crisis. Still, it was a daunting task.

The allies worked around the clock, 24/7, even by the light of jeep headlights if necessary. Transport flights on the 275-mile route between Berlin and Frankfurt Planes landed at 30-45 second intervals, so if a pilot missed his approach to Berlin, he had to return to West Germany.

The U.S. Air Force was training 100 crews a month in Montana to fly within the three 20-mile wide corridors between Berlin and the West. The air control rooms at West Berlin airports were also frantically busy, as they had to coordinate flights to accommodate one landing every 30-45 seconds.

Transporting coal (left) was a particular problem because coal dust would get in the engine. To combat this, pilots flew with the cargo doors open so the coal dust would get sucked out the back.

At the other end, West Berliners transferred cargo from supply planes. Turnaround time from landing through unloading to taking off again for West Germany was 30 minutes. German Workers could eventually empty a plane in 7 minutes.

Over time the allies got increasingly better at supplying the city. While the Americans added more and bigger planes to their fleet, Berliners helped the French build a third airfield in their sector at Tegel. Since the Soviets refused to remove a control tower obstructing the runway's approach, the French blew it up. When an angry Soviet general demanded to know how they could do such a thing., the French General Jean Ganeval answered, "With dynamite, my dear colleague."

On September 18th, the allies delivered 7000 tons of supplies. By spring, 1949 they had increased that to 8000 tons a day. On Sunday April 15, 1949, during what they called the Easter Parade, they delivered 13,000 tons, finally passing the 12,000-ton threshold.

Aiding the allies' were an especially mild winter and West Berliners' efforts to use every available bit of space to grow food, although they also grew tobacco as remnants of the cigarette economy carried on. To reduce food needs, some 50,000 people were also evacuated from West Berlin.

While life was hard in West Berlin during the blockade, one factor making it a bit more livable was that passage between the two sectors was open. An estimated 10% of West Berliners survived by buying supplies in the eastern sector. Soviet propaganda and photos played this up, trying to convince people the airlift was a failure by showing hungry children and little girls from West Berlin having to shop in East Berlin.

Electricity was another matter, because Stalin had stripped power plants in the western sector of their generators before the allies had moved in. This forced Western authorities to ration power to West Berlin in four-hour intervals on a rotating basis. Thus, a family might get power from midnight to 4AM one day, from 4-8AM the next day, and so on. As a result, movies were played in the middle of the night and concerts by candlelight. Loudspeakers mounted on trucks would broadcast the news. Dentists' wives even generated power with bicycle generators.

Also complicating matters were unusual amounts of fog in November and December and Soviet efforts to sabotage the operation by *buzzing* (flying dangerously close to) their planes and trying to blind pilots with search-lights.

All things considered, there were remarkably few accidents. Thirty-one Americans lost their lives in 17 crashes, while 40 British crewmen died in 8 crashes. Berliners mourned the deaths of those airmen as their own, even though they had been dropping a very different sort of load on the city just a few years before. Allied pilots became new heroes to the West Berliners and even inspired Berlin children to play like they were airlift pilots.

One American pilot, Gail Halverson, gained fame and the nickname the “Candy bomber” by dropping pieces of candy attached to little parachutes to Berlin children. This even had an impact on the hobby industry back in the States, marketing modeling kits of the C-54 “Candy Bomber” flown by Gail Halverson. During the 50th anniversary celebration of the Berlin Airlift

in 2009, Halverson returned to reenact the candy drops he made so famous.



Just to show Stalin they could airlift anything they wanted, the allies brought a baby camel named Clarence into Berlin. Other things flown in included cars, giant replacement wheels for C47s, and heavy construction equipment. When vital construction equipment proved too big and heavy to bring in one piece, a Brazilian engineer came up with a technique for dismantling the machinery, bringing the individual parts to Berlin, and reassembling them there.

Whether because of Clarence the Camel, the airlift, or the West’s counter-blockade cutting coal and steel to East Germany, Stalin finally gave up on the blockade in May 1949 and let supplies into Berlin. As the sign on the first truck into the city announced, West Berlin was still alive. However, the issue of West Berlin existing as a haven of freedom in the midst of the Soviet bloc would remain an issue throughout the Cold War.

The Forgotten War: Korea (1950-53)

In September 1945 American occupation troops landed under General John Hodge. He ignored local Korean parties and instead relied, incredibly, on over 500,000 Japanese troops and tens of thousands of Japanese bureaucrats to run the country, which deeply offended the South Koreans. The Japanese were eventually replaced, so the US needed Koreans to help, but were unwilling to include communists, who were numerous. Instead, they relied on professionals, especially ones educated in the U.S. or by American missionaries, while ignoring how unpopular or corrupt they might be.

The American-supported leader of South Korea was the contentious Syngman Rhee. Rhee was American-educated (the first Korean to get a degree at an American university) and had spent most of the period of Japan's occupation of Korea (1910-45) in the U.S. While he had connections in America, he had no real support base in Korea. However, until the North Korean invasion, American officials didn't really care, not seeing any value in Korea and ignoring Korean feelings to the point of even using Japanese troops to keep control in 1945. Rhee's stubbornness would prove a major stumbling block in future negotiations at Panmunjon.

Kim Il Sung, the popular communist leader of North Korea, had opposed the Japanese during the war and worked with the Soviets, who put him in charge of North Korea after the war. Following the pattern of Lenin and Stalin, he broke up great estates and gave them to peasants, initially without collectivization. He also ruthlessly suppressed any opposition, causing many non-communists to flee to the South. His regime and that of his son, Kim Jung Il, would prove to be among the most brutal and repressive dictatorships during the Cold War.

Kim Il Sung constantly sought Stalin's permission and support to invade the South. When Mao and the communists finally seized control of China in October 1949, Stalin gave the green light as part of a three-way deal. Stalin would supply China and North Korea with arms, while China and North Korea supplied the bodies and blood to tie down and wear out U.S. forces and resources.

By spring, 1950, large numbers of Soviet tanks, planes, artillery, and machine guns had been delivered to North Korea and were amassing on the border. Despite reports of a buildup, MacArthur and his

staff in Tokyo ignored the signs, and then panicked when the invasion started.

On June 25, seven divisions led by big T-34 tanks, arguably the best tanks to fight in World War II, struck across the border, completely surprising the South Korean army and quickly driving it into full retreat. Three days later, they took the South Korean capital, Seoul. In order to slow the communist advance the South Koreans blew up bridges in the invaders' path, in one case killing thousands of refugees as well.

This crisis brought to the forefront the fledgling United Nations, founded in 1945 in the recurring hope that such an international organization could help defuse conflicts and safeguard the peace. The permanent members of its main executive body, the Security Council, each had the power to veto any proposed actions. As luck would have it, when the Security Council met to discuss the Korean crisis, the Soviets were boycotting the meeting in protest over Taiwan, instead of Mainland China, getting the Chinese seat on the Security Council. Russia's absence allowed the United States to pass a resolution calling for an international force to stop the North Koreans.

The first forces sent to help South Korea were Americans from the occupation force in Japan. Unfortunately, by 1950, thanks to the soft life in Japan, they had lost all combat readiness, in terms of both training and equipment. They also had no respect for the North Koreans they were about to face, thinking they would just run away as soon as the Americans landed.

They were wrong.

Instead, the Americans, who fought as well as could be expected, were outgunned and outclassed by the North Koreans every step of the way. Among other things, they had no weapons that could stop the enemy's T-34 tanks. By

September, American and South Korean forces, along with hundreds of thousands of refugees, were barely hanging on to a toehold around the port city of Pusan in the extreme south of the peninsula. Only American bombing of North Korean supply lines had any effect in slowing down their advance.

On September 15, UN forces led by MacArthur struck back. Instead of hitting the North Koreans head-on, MacArthur, despite tricky tides and beaches, sparse information on enemy defenses, and contrary advice by subordinates, engineered a risky amphibious landing 150 miles behind North Korean lines at Inchon. Luckily, it was a success, which forced the North Koreans into a headlong retreat northward to avoid getting trapped between the armies of UN forces. After heavy resistance in which 50,000 civilians were killed, Seoul was recaptured (9/25). Two weeks later, MacArthur crossed the 38th parallel into North Korean territory, taking its capital, Pyongyang (10/19), the only communist capital to fall during the Cold War.

Stalin, not wanting to get directly involved against the United States, pushed China to support North Korea. Therefore, China, by way of the Indian ambassador in Beijing, started warning the U.S. to stop its advance, which was rapidly approaching the Chinese border at the Yalu River. MacArthur wouldn't listen.

Meanwhile, Truman, worried about China intervening, met with MacArthur at Wake Island (below). The general assured Truman that his continuing advance through N. Korea carried no risk of Chinese intervention. MacArthur even snubbed the president's invitation to lunch. But with mid-term elections coming up, Truman had to be nice to the highly popular general, even describing their meeting as the most satisfying of his career.



Six weeks after this meeting, despite MacArthur's confident assertions, massive Chinese intervention was driving UN forces in headlong retreat. It started as a warning shot. On October 25, as UN forces were driving toward the Yalu River, Chinese forces suddenly struck in two ferocious and devastating attacks on forward units of the UN army. UN forces didn't even realize they were Chinese until they found that some prisoners they took were unable to understand Korean. Then, as suddenly as they had attacked, they were gone, with no trace of the Chinese army to be found.

Rather than take this warning seriously, MacArthur continued his advance northward toward China, sure that he could easily sweep aside any Chinese forces that dared challenge him. So overconfident was he that he split his forces going north and sent what he considered spare ammunition back to Japan. As far as he was concerned, he had won the war and the troops would be home by Christmas.

On November 26, right after Thanksgiving, 300,000 Chinese troops drastically changed MacArthur's Christmas plans. The Chinese general, Peng Dehuai, compensated for his army's lack of modern equipment with effective infiltration tactics away from the roads and enemy detection. As a result, MacArthur and UN forces, who were tied down to wheeled vehicles and the roads that could carry them, were caught completely off-guard. (Peng would later be rewarded for his service to China by being executed as a traitor to Communism during Mao's Cultural Revolution.)

Being assaulted from the surrounding hills, UN forces soon found themselves engulfed in successive human waves. Typically, they would mow down wave after wave until they were out

of ammunition and were either overrun or had to retreat, leaving their wounded behind.



A napalm bomb hits Chinese positions blocking the breakout from Chosin Reservoir as marines prepare to move on. Despite their hardships and desperate position, the marines fought their way out, making this one of the most celebrated exploits in the history of the Corps.

*“It was enough to make your hair stand on end...When the bugles died away we heard a voice through a megaphone and then the blast of a police whistle. I was plenty scared, but who wasn't? I couldn't believe my eyes when I saw them in the moonlight. It was like the snow coming to life, and they were shouting and shaking their fists--just raising hell...The Chinese didn't come at us by fire and maneuver...they came in a rush like a pack of wild dogs. Even though I was ready it was a terrible shock.”-- Martin Russ, *Breakout**



Making this especially bad was the fact that it was happening in the midst of the Korean winter, so that frostbite claimed more victims than combat did. An army that just days before thought it had won the war was now in full retreat, trying to use a scorched earth policy to slow down the enemy. Caught in the middle were thousands of Korean civilians, many of whom were killed in the crossfire or even blatantly massacred.

On December 6, the communists retook Pyongyang.

On January 4, 1951, Seoul fell for the third time in six months.

Despite their hardships and desperate position, the marines fought their way out, destroying several Chinese divisions in some of the most celebrated engagements in the Corps' history. Making this even more remarkable was the Marines' custom of not leaving any of their own behind.

Meanwhile, MacArthur openly advocated invading China and using the Atomic bomb. Truman, seeing this would be a whole new kind of war if nuclear weapons were added to the equation, realized the foolhardiness of such an action. Finally, on April 10, 1951 he relieved MacArthur of his command. It was one of the most controversial and divisive acts of Truman's presidency, but he refused to back down, asserting the principle of civilian control of policy.

In January, Truman had put General Matthew Ridgeway in charge of the fighting in Korea, an inspired choice, who instilled the UN forces with new fighting spirit. By January, 1951, they had stopped the Chinese offensive and were counterattacking in February. By late March they had recaptured Seoul and reestablished their line at the 38th parallel, the original border before the war started. In late April, they met and repulsed another Chinese offensive.

Stalemate (1951-53). By now the front was stabilizing along the 38th Parallel where a prolonged war of stalemate would develop, with neither side able to dislodge the other with conventional weapons or willing to use nuclear weapons and risk a Third World War. Instead, the fighting reverted to a style of trench warfare more reminiscent of World War I. On the one side the huge numbers of Chinese soldiers entrenched in the hillsides held up any UN advances, while overstretched supply lines going back to China and American artillery and air superiority hampered any Chinese offensives.



By July, 1951 the Korean War had turned into a stalemate characterized by trench-lines much as in World War I.

Instead, fighting took the form of small night patrols where casualties were counted in single digits instead of the thousands. However, over time all those single digits add up.

The Air War. Air combat largely centered over an area known as Mig Alley. Russian-made Mig-15 jets, flown by Chinese, North Korean, and Russian pilots, briefly gave Communists the edge in the air war, because of their swept-back wing design, which made them more maneuverable. The Korean War was the only time during the Cold War that Americans and Russians directly fought each other. Although the Americans knew they were facing Russian pilots, they chose not to publicize it, since that might increase tensions with Russia.

Flying a jet in combat created a whole new set of problems as well as possibilities for pilots in the Korean War, since the higher speeds demanded a much higher turning radius and quicker reflexes than with slower propeller driven planes. By 2000 computers and more sophisticated weapons systems would take over much of the task of flying in combat, to the extent that totally unmanned drones would perform some missions.



Napalm hits a N. Korean railroad yard during Operation Strangle. Such direct hits were rare for high-speed jets dropping

“dumb bombs” while flying through smoke and flak.

Operation Strangle was an effort to destroy communist supply lines. However, the campaign ultimately failed because the static battle-lines and lower intensity fighting reduced the Communists’ supply needs, while hitting specific targets with “dumb” bombs at such high speeds was extremely difficult. Also, roads and bridges were easier to repair than expensive jets lost in such raids. UN forces lost 330 planes during this operation.

Therefore, UN forces turned their attention against North Korea’s industrial base, infrastructure, and cities. American bombing raids against the four largest hydroelectric power plants in North Korea reportedly cut power throughout country. By the end of the war, saturation bombing by American B-29 bombers, besides destroying North Korea’s cities, may have killed over one million North Korean civilians. With most of its industries and cities in ruins, the survivors fled to the countryside.



North Korean civilians huddle in a shelter that also serves as their makeshift home, since, their real home was destroyed by aerial bombing.

The strategy worked in that Kim Il Sung did ask Stalin to agree to a ceasefire. However, the war was costing Stalin virtually nothing compared to what America was spending, and he was impervious to the suffering of the Korean people. So the war dragged on.

Peace talks started in 1951 at Panmunjon, but dragged on for two years, since Stalin was only interested in looking like he was interested in peace. Besides being confrontational and provocative, the Communist negotiators also arranged for their UN counterparts to be seated

in lower chairs so they would feel more intimidated.

One issue was treatment of prisoners. Initially, the North Koreans had been in charge of prisoners, but because of their brutal treatment one-third of all UN prisoners died the first winter from starvation, dysentery, and mistreatment. Therefore, the Chinese took over, providing more humane treatment, but also subjecting their prisoners to lengthy propaganda lectures and brainwashing sessions. Another sticking point was that North Korea claimed it held only 3,000 prisoners, while the UN claimed it was 11,000.

On the other hand, the UN claimed that up to half of the North Koreans taken prisoner wanted to stay in the democratic South rather than go home. Communists claimed the UN was making that figure up and wanted all the prisoners back.

End of the war. In 1952, Dwight D. Eisenhower, America's top commander in World War II, was elected president, largely on the pledge that he would end the war in Korea. Even more decisive was the death of Stalin in March 1953, removing the major stumbling block to peace. In May, Eisenhower threatened to bomb Beijing with nuclear weapons, while bombing North Korean dams led to disastrous flooding. After heavy fighting and losses in June, the new Soviet leadership, wanting to focus on matters at home, agreed to a ceasefire in July, 1953.

In the prisoner exchange, 12,000 UN troops were traded for 50,000 communists, although two-thirds of the Chinese prisoners supposedly wanted to defect to Taiwan. Some hardcore Communist prisoners tore off their UN-issued clothes and crossed the border naked.

Losses in the war were heavy:

- The U.S. lost 54,000 killed and 100,000 wounded.
- Other UN forces lost 3,000 killed and 12,000 wounded.
- South Korea lost 415,00 killed and had 5 million refugees.
- North Korea lost an estimated 1 million killed

- China lost an estimated 250-500,000 killed.

The Korean War is often called the Forgotten War, because it didn't get the heavy coverage of previous wars or the media coverage of the Vietnam War a decade later. This was largely because it was so soon after World War II and Americans weren't ready for the emotional involvement required by such a war. Besides, the Korean War was not a declared war, but rather a "police action", making it even harder for the American public to get involved. Therefore, it had very little newspaper coverage. The best one could get was a daily column on page 2 of the *New York Times*.

Highlighting the forgotten aspect of this war is the fact that it wasn't until 1995, forty-two years after the ceasefire ending the war, that a national memorial was finally dedicated to its veterans in Washington D.C.



McCarthyism (1950-54)



"This is the most unheard of thing I've ever heard of."--Joe McCarthy.

No episode in American political history better teaches us how fear and paranoia can take over a society than the episode of Senator Joe McCarthy from Wisconsin. He enlisted in the marines as an intelligence officer during World War II, thinking that being a marine would help his career. He called himself "Tail-gunner Joe" claiming to fly 32 missions (when it was actually just one) to qualify for a Distinguished Flying Cross. In his capacity as an intelligence officer,

he forged a letter of commendation from his commanding officer and countersigned by Admiral Nimitz, and claimed that an injury was a combat wound when it actually occurred during an initiation ceremony while crossing the equator for the first time.

He resigned his commission in April 1945, five months before the end of the war, and ran for the Senate the next year. He attacked his opponent for war profiteering (although he made nearly as much in investments during the War as did his opponent) and for not enlisting for the War, although his opponent was 46 when Pearl Harbor was bombed.

His first three years as a senator were unremarkable, until he lobbied to commute the death sentences of a group of SS officers convicted of massacring American prisoners, claiming, without substantiation, the Army had tortured them to get confessions. Soon after that, the Senate press corps voted him "the worst U.S. senator" currently in office.

At this point, growing fear about communism generated by recent events (the fall of China to the communists, Stalin's takeover of Eastern Europe and getting the atomic bomb, the Alger Hiss case, and Klaus Fuchs' confession to espionage for the Soviets), gave McCarthy the cause he could latch onto for popularity.

His meteoric rise to prominence started February 9, 1950 with a speech to the Ohio County Women's Club lunch in Wheeling West Virginia, where he announced, almost casually as a throwaway line, that he had list of 205 Communists in the state department controlling foreign policy. Later in Denver, when asked to produce the list, he claimed he left it in his other suit, which he left on the plane. The next day the Denver Post ran a photo of McCarthy with the caption "Left Commie List in Other Bag". However, what seemed to start as a joke, turned very bad very quickly.

Much of McCarthy's problem was an obsession to please others and be the center of attention. While merciless in persecuting innocent people,

he loved to socialize and drink with reporters after hours, treating them like old buddies that he was letting in on his secrets. He was also an extremely heavy drinker, which added to the disreputable nature of his exploits, but no one seems to have called him on that. (His secret for keeping liquor down was to eat a stick of butter.)

The Washington press corps, ever eager for a story, played into McCarthy's hands, and he exploited this ruthlessly to keep himself in the limelight. Realizing when reporters' had to meet deadlines, he would announce bombshells right before those deadlines so the press didn't have time to check his facts. And fact checking was a major loophole hardly anyone bothered to address for nearly four years. For example, one person on McCarthy's lists was Howard Shipley, a Harvard "astrologer". A reporter followed up on this and did find Harlow Shapley, a Harvard astronomer. Although Shapley had no overt political activities, he remained one of the primary targets of McCarthy's early investigations. He especially liked to make charges in smaller towns where AP reporters would pick it up and use it without checking their facts.

More often, it was nearly impossible to pin him down to any sort of specifics.

- The number on his list of communists in the state department went quickly from 205 (or 57 depending on which part of the Wheeling Speech one heard) to 57 again during a speech in Salt Lake City to 81 during a five-hour speech in the Senate.
- When reporters in a bar (after a lot of drinks) asked McCarthy to clarify whether the people on his list were communists, communist sympathizers, or what, McCarthy conveniently couldn't find the list again and then accused the reporters of stealing it.
- Once in Madison, when McCarthy claimed there were commies on the newspaper staff, a reporter challenged him to name one. McCarthy went silent, so the reporter persisted until McCarthy said "I'm not going to answer that question if we sit here all day." The reporters sat through fifteen minutes of silence until McCarthy got up and left the room.

McCarthy, who claimed to be Catholic, had strong support from American Catholics (representing about 20% of the U.S. population), who normally voted Democratic but saw him as one of their own and also opposed communism. Among his supporters was Joseph Kennedy Sr., an avid anti-communist. McCarthy was a frequent guest of the Kennedys, dated two of Joseph's daughters, was godfather to Robert Kennedy's first child, and had Robert on his staff for six months before they had a falling out. John F. Kennedy, although a Democrat, never publicly criticized McCarthy, who reciprocated by refusing to campaign for Kennedy's Republican opponent. It is widely believed Joseph Kennedy's support for McCarthy was meant to pave the way for the Catholic presidency of his son, John.

After the Wheeling speech, McCarthy moved aggressively in the Senate to attack people in the State Department he claimed were communists. The numbers on his list moved from the original 205 to 57 (during a speech in Salt Lake City) to 81 during a five-hour speech in the Senate. In response to his charges, hearings by a subcommittee of the U.S. Senate Committee on foreign Relations, known as the Tydings Committee, were called. Being mostly Democrats, its final report called McCarthy's charges a "fraud and a hoax," saying the result of his actions was to "*confuse and divide the American people [...] to a degree far beyond the hopes of the Communists themselves.*" The Republican response by William E. Jenner called the Tydings report "*the most brazen whitewash of treasonable conspiracy in our history.*" American politics was definitely becoming meaner and more partisan, as seen by the fact that three separate votes in the Senate on whether to accept the Tydings Report broke down along strict party lines. Meanwhile, press coverage of McCarthy was gaining him popularity and a national following.

Although not taken too seriously or given much respect at first, McCarthy campaigned ruthlessly for other Republicans in the mid-term congressional elections in 1950. He especially

helped smear Millard Tydings, the Democratic chair of the Tydings Committee, even going so far as to doctor a composite photo to make it look like Tydings was in intimate conversation with a Communist Party leader. A later investigation of this election by a Senate subcommittee recommended that such tactics be grounds for expulsion from the Senate. However, in every case, the candidates McCarthy campaigned for won their elections, thus vaulting him to a position of very high status in the Senate.

Redbaiting Republican style in the 1950 elections. With McCarthyism, the Republicans, long out of office since 1932, had found their issue. In addition to Nixon's classic red-baiting of his opponent in California, there was:

- George Smathers in Florida: "Joe [Stalin] likes him and he likes Joe"
- John Foster Dulles in NY: "I know he is no Communist, but I also know that the Communists are in his corner and that he and not I will get the 500,000 Communist votes that last year went to Henry Wallace in this state."
- When Truman fired McArthur, Bill Jenner of Indiana charged: "this country is in the hands of a secret inner coterie which is directed by Agents of the Soviet Union."
- Senator Wherey of Nebraska referred to Vietnam as "Indigo China"



Richard Nixon viewing microfilm found in a pumpkin patch that helped him secure the conviction of Alger Hiss and launch his political career as a hardline anti-communist.

Not surprisingly, McCarthy didn't get along with President Truman, whom he accused of being soft on communism. He was especially rough on John C. Marshall (the author of the

Marshall Plan which earned him the Nobel Peace Prize in 1953), charging in a book he published in 1951, *America's Retreat From Victory: The Story Of George Catlett Marshall*, that Marshall was directly responsible for losing China to the communists. He even went so far as to accuse Marshall of being part of "*a conspiracy so immense and an infamy so black as to dwarf any previous venture in the history of man.*"

When Truman fired General MacArthur, McCarthy accused the president's advisors of getting their boss drunk to make that decision, adding that he should be impeached. Truman returned the love, calling McCarthy "*the best asset the Kremlin has*" and comparing the senator's actions to shooting American soldiers in the back during a hot war.

McCarthy's relations with President Eisenhower were better, only because Ike chose not to directly confront him, although he privately detested the senator. Ike was especially criticized for not coming to the defense of his friend and mentor, John C. Marshall. When McCarthy started attacking Eisenhower for being soft on communism during the first year of his presidency, the president's advisors urged him to confront the senator, but he refused, saying he would not "*get down in the gutter with that guy.*" As a result, McCarthy continued and intensified his witch-hunts.

Not only did the 1952 election get McCarthy re-elected, it also gave the Republicans control of the presidency and both houses of Congress. However, leading Republicans, such as Robert Taft were concerned about putting McCarthy where he could do little harm to the country and the party's reputation. So they made him chairman of the Senate Committee on Government Operations, what was supposed to be a somewhat innocuous position, the real power till then being with the Internal Security Subcommittee. However, the mandate of this committee was flexible enough to allow McCarthy to extend its operations to pursue alleged communists in the government. This was where he carried on some of his most notorious work, helped as chief counsel by the almost equally infamous Roy Cohn.



McCarthy (left) with Roy Cohn

His first targets were personnel in the Voice of America, which broadcast news from the American point of view to the Iron Curtain. Using questions laced with his typical innuendoes and false accusations of communist slanted broadcasts, McCarthy wrecked morale in the VOA and may have contributed to one of its engineers' suicide. Next the subcommittee went after the overseas library program of the International Information Agency, forcing it to delete any books McCarthy deemed tinged with any communist influence. Some libraries even burned the newly censored books.

The beginning of the end. The first sign of things coming unraveled for McCarthy was the controversy over his appointment of J. B. Matthews as staff director of the subcommittee. When it was learned that Matthews, an ardent anti-communist, had claimed that Protestant clergy comprised the largest single group supporting communists in America, there was a huge outcry of protest along with demands that McCarthy dismiss Matthews. McCarthy caved in and accepted Matthews' resignation.

In autumn 1953, McCarthy went after the U.S. Army. After failing to come up with any dirt on the Army Signal Corps, he focused on an army dentist with left-wing tendencies, Irving Peress, and why he had been rapidly promoted to Major, although it was according to the provisions of the Doctor Draft Law for which McCarthy himself had voted. When Peress refused to answer McCarthy's questions, citing the Fifth Amendment, the senator told the Army to court-martial him. However, Peress had applied for and immediately gotten an honorable discharge, thus saving him from court-martial. McCarthy then summoned the general who had

granted the discharge, Brigadier General Ralph W. Zwicker, who, under advice from counsel, refused to answer the subcommittee's questions or kept changing his story. McCarthy's response was that Zwicker was "not fit to wear that uniform." Unfortunately for the senator, his comment about Zwicker, a World War II hero, backfired, as he was flooded with outrage from veterans, the press, and even President Eisenhower. Under pressure from leading Republicans, the Secretary of the Army, Robert Stevens, gave in to McCarthy's demands for cooperation. McCarthy, not able to leave well enough alone, gloated that Stevens "could not have given in more abjectly if he had got down on his knees." Not only did this sit badly with the public, it also caused the Army, with support from Eisenhower, to retaliate.

The Army-McCarthy hearings lasted 36 days in 1954 and were broadcast live on television to an estimated 20 million viewers. Instead of attacking the senator directly for his political activities, they investigated the alleged pressure by McCarthy and Cohn for favorable treatment of one of the senator's aides, G. David Schine. Although Cohn was found guilty of the charges, McCarthy was not. However, where the Army had failed, television had done the job, because extensive exposure of the senator on TV and in the press convinced many that he was nothing more than a reckless and dishonest bully.

Central to this was the exchange on June 9 between McCarthy and Joseph Welch, the Army's chief legal representative, when Welch challenged Cohn to provide the list of 130 alleged communists and subversives in defense plants. Instead, McCarthy started attacking one of Welch's employees. Welch shot back the famous words: "*Let us not assassinate this lad further, Senator. You've done enough. Have you no sense of decency, sir, at long last? Have you left no sense of decency?*" When McCarthy resumed his attack, Welch cut him off and demanded the chairman call the next witness, the gallery erupted into applause and recess was called.

Three months before this, Edward R. Murrow (below), host of CBS News' *See It Now*, took on

the senator in one of the great moments in journalistic history. After showing clips of the senator in his own words, Murrow concluded: "*This is no time for men who oppose Senator McCarthy's methods to keep silent, or for those who approve. We can deny our heritage and our history, but we cannot escape responsibility for the result. There is no way for a citizen of a republic to abdicate his responsibilities. As a nation we have come into our full inheritance at a tender age. We proclaim ourselves, as indeed we are, the defenders of freedom, wherever it continues to exist in the world, but we cannot defend freedom abroad by deserting it at home. The actions of the junior Senator from Wisconsin have caused alarm and dismay amongst our allies abroad, and given considerable comfort to our enemies. And whose fault is that? Not really his. He didn't create this situation of fear; he merely exploited it -- and rather successfully. Cassius was right. 'The fault, dear Brutus, is not in our stars, but in ourselves.'*"



After this, it was all downhill for McCarthy, as public support for him melted away. On December 2, 1954 the Senate voted 67 to 22 to condemn the senator for his contempt of Senate rules, turning his subcommittee into a "lynch party", that it had tended to bring dishonor and disrepute to the Senate, and to "*obstruct the constitutional processes of the Senate, and to impair its dignity.*" McCarthy kept his senate seat for two and half more years, but his political career was over, as Senate colleagues avoided him and were noticeably absent during his speeches. His drinking got progressively heavier until he died May 2nd, 1957 at the age of 48, from hepatitis most likely aggravated by alcoholism.

The effects of McCarthyism on America were wide and deep. In addition to people whose careers were directly ruined and their families and friends who were stigmatized by association, the majority of Americans were left with an abiding fear that continued to permeate

American culture until the 1960s and, to an extent, to the end of the Cold War. People with left-wing views went underground or were marginalized, while others who might have a view on politics that deviated even slightly from the mainstream felt it best to keep their opinions to themselves.

Below: Several examples of how the fear of communism permeated popular culture during the early Cold War.



FC.140A DECOLONIZATION IN SE ASIA AFTER WORLD WAR II

Introduction. World War II marked the beginning of the end of the West's colonial empires. While the colonies in Africa would not generally gain their independence until after 1960, those in South and Southeast Asia started gaining their freedom in the aftermath of the war. This was largely because Japan had stripped away those colonies in the opening phases of the war, thus discrediting the West and destroying the myth of its invincibility. Even though the European powers restored their rule in 1945, they were too exhausted from the recent war effort to effectively resist the growing agitation for independence.

The colonies also benefited from both widespread indifference to and support for their movements for several reasons. For one thing, the Soviet Union supported independence movements even when led by nationalist and capitalist elements, seeing them as a step toward socialism, which they could then work for after independence. Secondly, the U.S., with its dominant economic position in the world, supported decolonization in order to gain free access to markets previously run by colonial powers. However, it opposed radical nationalists who wanted to control their own economies. Finally, Europeans, disillusioned and worn out by war, only wanted recovery at home and cared little about their colonies. There were four major independence movements after the war: Malaysia, Indochina, Indonesia, and the Philippines. In the first two of these, the newly established communist regime in China would play an active role.

Malaysia. In June 1948 a communist-led uprising by guerrillas who had fought the Japanese broke out. About forty per cent of Malaysia's population was made up of middle and working class ethnic Chinese. Therefore, Britain resettled many of them in an effort to isolate them from communist influence and pressure. Thus, while Malaysia did win its independence in 1957, rich businessmen who supported and protected British economic interests led the new nation.

Indochina had been a French colony since 1867. Soon after the French re-established their rule, they

faced an insurgency led by the Vietminh. This was a communist group who had fought the Japanese during the past war, thus giving them credibility with and support from the populace at large. After 1949 they also had help from communist China. On the other side, France drew economic support from the U.S., especially after the Korean War broke out in 1950. After a long drawn-out struggle (1946-54) and a major defeat at Dien Bien Phu, France granted Indochina its independence. Three new nations emerged from this: Vietnam, Laos, and Cambodia. Since Vietnam was especially divided between communist and anti-communist elements, it was divided between North and South at the 17th parallel until internationally monitored elections could take place in 1956. However, fear of a communist victory led the U.S. to block these elections and back a repressive, but anti-communist, regime in the South. As a result war broke out between the two parts of Vietnam, each supported by outside powers, thus prolonging the agony and destruction of the country for another thirty years.

Indonesia. The aftermath of World War II saw a three-way struggle emerge between the communists, the Dutch and Nationalists led by Kusno Sosrodihardjo (AKA Sukarno). The U.S., worried about a communist takeover, threatened to cut off Marshall Plan aid to the Dutch unless they gave up Indonesia. The Dutch succumbed to this pressure, and in 1949 Sukarno took power backed by pro-US factory & plantation owners. He would rule with mixed success until being ousted in 1967 by General Suharto.

The Philippines had been an American colony since the Spanish-American War in 1898. Much like in other Southeast Asian colonies, Japanese victories against colonial powers, this time the Americans, inspired an insurgency in the Philippines led by the communist Hukbalahap, a group who had fought Japanese occupation during the war. On July 4, 1946, the United States granted independence to the Philippines, favoring a liberal party run by landlords and the urban rich who favored American economic interests. The Hukbalahaps continued their revolt until they were crushed in 1952 by the new Philippine with the help of US military advisors.

Postcolonial American policy in Southeast Asia.

While the U.S. typically favored independence for the European colonies, it was particularly concerned about communist influence in these new nations. In 1955, it formed the Southeast Asian Treaty Organization (SEATO) with Thailand, Pakistan, the Philippines, Australia, New Zealand, Britain and France. From its headquarters were located in Bangkok, Thailand, it was modeled after NATO as a military alliance designed to stop the spread of communism through a policy of containment. SEATO was dissolved on June 30, 1977 in the aftermath of communist victories in Vietnam and other parts of Southeast Asia.

FC.140B INDIA SINCE WORLD WAR II

Introduction: The foundations of modern India during British rule (1858-1947). While most Indians viewed British rule (AKA Raj) as a negative experience, it did prepare India for the modern world in a couple ways. For one thing, the British did build industries and the most extensive railroad system in Asia by 1900. For example, the Tata Iron Works was the largest iron foundry in the world and that firm continues to be a major factor in India's economy today. One other thing the British did was establish a nationwide school system and bureaucracy, both operating in English. This had two benefits. First of all, it unified India by using one common administrative language for a country split up by some 700 languages and dialects. A more long-range benefit has been that thousands of jobs, many requiring some education (i.e., on line tech support), have been outsourced to India since English is the predominant second language across the globe. (For the American market, Indians have to learn the American dialect of English.

Independence, partitioning, and Kashmir. In order to prevent civil strife between Muslims and Hindus, Britain's grant of independence to India in 1947 involved its partition into the Hindu nation of India and the Muslim nation of Pakistan. It could be that this prevented more violence between the two groups, but it wasn't without its problems, the most outstanding of which was control of Kashmir, an area stuck between India, Pakistan, and China. Which in 1947 was 77% Muslim. Hari Singh, Kashmir's reigning monarch under British auspices during the Raj, could choose to join India, Pakistan, or remain independent. Pakistan expected him to join Pakistan. However, when he remained uncommitted, Pakistan sent irregular forces into Kashmir to bully Singh into submission. Instead, he joined India, which sent in troops to clear out the Pakistani guerillas. The UN was called into mediate the dispute, and it decreed a plebiscite (popular vote) would decide the issue. However, the plebiscite was never held, leaving India in control of half the region and most of its population. Pakistan had a sparsely populated third, while, to confuse matters more, China controlled the rest and claimed more.

Two conflicts broke out over Kashmir between India and Pakistan in 1965 and 1999, neither becoming an all-out war nor deciding anything. When India discovered that China had built a military road from Tibet to Kashmir, hostilities briefly broke out between those two countries. More important to China than the disputed border was the fact that, after China crushed the Tibetan revolt in 1959, India had given refuge the Dalai Lama, Tibet's spiritual leader. The Sino-Indian conflict, fought in October 1962 at the same time as the Cuban Missile crisis, ended with China overrunning Indian positions, then declaring a cease-fire and pulling back to the original border, apparently feeling it had made its point to India about interfering in Tibetan affairs.

India and the Cold War. Since its independence in 1947, India has functioned as the world's largest democracy (in terms of population). Therefore, one might expect it to align with the United States during the Cold War. However, things were not quite so simple. Since America's primary concern was containing Soviet expansion, it focused more on supporting India's neighbor and nemesis, Pakistan, even though it has generally been ruled by military dictators. Therefore, the Soviets, who typically supported any former colonies to weaken the West, courted an alliance with India. This put India in the awkward role of playing both ends against the middle, where it would accept aid from Russia, which the U.S., alarmed India might go communist, would give aid to India, which led to more aid from Russia and so on. The end result was that India stayed non-aligned while receiving aid from both super-powers.

The Nuclear issue. In the 1960s, India developed and tested a nuclear bomb. However, it chose not to develop a nuclear arsenal, probably realizing how that could destabilize the region. However, in 1998 Pakistan became the first Muslim nation to develop its own nuclear bomb and, when it did start building up an arsenal, India followed suit. As both sides' arsenals increased, so did the danger of a nuclear holocaust if the two sides went to war. Luckily, both sides recognized threat of MAD (Mutually Assured Destruction) and start negotiating. While tensions persist, especially after the terrorist bombing of a hotel in Mumbai in 2009, the fact that

the two nations are still talking offers hope of a peaceful resolution of their problems.

Globalization and India since the 1990s.

Throughout the Cold War, India remained in the ranks of what were referred to as under-developed countries, being poverty stricken and having a spiraling population from its high birth rate. Since the 1990s that has been changing rapidly, with India becoming one of the high tech centers of the world. As stated previously, much of the foundations for this were its infrastructure of factories, railroads, and English speaking schools. Another important factor has been the ongoing cycle of the spread of industrialization through outsourcing of jobs to places with cheaper labor.

Unfortunately, like China, India has seen uneven development with islands of high tech prosperity awash in a sea of poverty, leading to two problems that exacerbate each other. First of all, India's rapidly skyrocketing population (estimated at nearly 1.2 billion in 2009) makes it much harder to supply its people with the bare minimum of a standard of living. Secondly, the rapidly expanding middle class is consuming resources at a much higher rate than the rest of the country. As such consumption in India and China expands and competes with other developed nations for resources, the human race and planet face a rapidly looming crisis as those resources become scarcer.

141. MISSED OPPORTUNITIES: THE AFTERMATH OF STALIN (1953-56)

Introduction. The death of Joseph Stalin in 1953 marked the end of an era for both the Soviet Union and the world, although no one was sure just what it meant for the future. For many Soviets, the end of Stalin's brutal dictatorship also meant the end of stability. They wondered who would watch over and defend the Soviet Union now that his strong hand had been removed. To others, it meant an opportunity to dismantle at least some, if not all, the repressive aspects of Stalinist rule. People in Eastern Europe watched anxiously for signs they could gain more liberties, if not outright freedom, from Soviet rule. For the West, it was also an anxious time. Would the new regime in Moscow continue Stalin's hostility to the West or would it open a new regime of peace and cooperation? Unfortunately, when the dust finally settled by the end of 1956, little would seem to have changed within the Soviet empire or in its relations with the West. Not that people, especially Nikita Khrushchev, wouldn't try to change things. However, the Stalinist legacy of three decades of repression and paranoia would prove to be too strong to be dismantled within such a short time. To a large extent, it was a period of missed opportunities that faced heavy odds of those opportunities blossoming into a new era of peace and stability.

Mixed signals. Since Stalin had not designated a successor, no single figure emerged in the immediate aftermath of his death. Instead a moderate coalition, led by Georgi Malenkov, took over in the Kremlin that did not even institute a major purge of its enemies. Other hopeful signs followed. Peace talks in Korea resumed only two weeks after Stalin's death and produced a ceasefire by July. Leaders in the Kremlin were even considering the idea of a reunified, but neutral Germany. Along these lines, they summoned to Moscow the East German leader, Ulbricht, a dictator cut in the Stalinist mode, to encourage him to relax his harsh rule. However, this ultimately triggered a more ominous chain reaction of events.

In June 1953, East German workers, sensing more relaxed control from Moscow, demonstrated against Ulbricht, whose response to the message from the Kremlin had been to impose even harsher work

quotas on his people. When the East German government did nothing to respond to these demonstrations, the protests turned political, threatening to overthrow Ulbricht and communist rule in East Germany. Eventually, Beria, the former head of Stalin's secret police, ordered in Soviet forces and crushed the protests.

However, the Kremlin's initial indecision during this crisis encouraged similar riots and strikes in Czechoslovakia, Hungary, Romania, and even Siberia. Many Soviet leaders saw these as attempts by the United States to upset communist rule in Eastern Europe. This generated a backlash against the government's recent moderate policies as well as a fiercer power struggle within the Kremlin. Beria, saw this as his opportunity to seize power, but was defeated and executed. This was the only notable execution to take place in the aftermath of Stalin's death. The fact that its victim, Beria, represented more than anyone the old Stalinist legacy was a sign that times had indeed changed.

Unfortunately, two things would prevent the United States from picking up on these cues. One was the recent Red Scare of the McCarthy era that still heavily affected American politics. The administration of the new president, Dwight D. Eisenhower, who had courted McCarthy's support during the 1952 election campaign, was split over how to treat these new developments. Even more worrying to the Soviets was West Germany's admission into NATO in 1954 and the decision to let it rearm the next year. This was done largely to relieve the strain the Korean War had put on American Military resources. Seeing West Germany as a reliable democracy and ally now, the U.S. decided to use that country's resources to bolster the Western alliance. However, a rearmed and hostile German state was the last thing Russians wanted to see so soon after World War II. Therefore, they responded by forming their own military alliance, the Warsaw Pact in 1955. Thus the future of U.S.-Soviet relations seemed cloudier than ever.

Nikita Khrushchev. By 1955, a new leader, Nikita Khrushchev, had emerged from the power struggle inside the Kremlin. Khrushchev himself seemed to epitomize the mixed signals being sent to the West in the 1950s. He came from a poor working class background and had joined the Bolshevik

Revolution in 1917. As political commissar at Stalingrad, he had seen firsthand the destruction World War II had wreaked upon the Russian people and understood as well as anyone the even greater destructive power of nuclear weapons. He firmly believed communism was the best way to create better lives for the people. Unlike Stalin and Malenkov, he had a very personable style, going out to meet the people and generating genuine popular support. He prompted more consumer industries, freedom of the arts, better pensions, and freed thousands of political prisoners from Stalin's gulags. Trying to project "Socialism with a human face," he even opened the Kremlin to visitors and children's parties.

However, Khrushchev had also been a loyal follower of Stalin, helping carry out many of his harsh policies. Therefore, to many people, especially in the West, he only represented a continuation of Stalinist rule. In addition, Khrushchev had a somewhat volatile and unpredictable personality, seeming to be waving the olive branch of peace one minute and his saber the next. This made it difficult for the West to know which Khrushchev it was dealing with at any given time. Contributing to Khrushchev's unpredictability was the conflict between his own genuine desire to improve the lives of the Soviet people and the need to look tough in his dealings with the West in order to satisfy the hard-liners within the Kremlin. In the end, his attempts to follow both of these seemingly irreconcilable policies would lead to his overthrow from power in 1964.

Initially Khrushchev did two things to show a more moderate and reasonable regime was in charge. In 1955, he withdrew Soviet troops from Austria (which had been occupied like Germany since 1945) on the stipulation that it maintain a neutral position between East and West. The next year, in a six-hour speech to a closed session of a Congress of the Communist party, he took an even bolder step by exposing Stalin's purges as frauds and denouncing Stalin himself as a pathological criminal. When news of this speech leaked out, the common people welcomed it as a sign of more relaxed times to come. However, many communist leaders in the Kremlin and Eastern Europe worried about where this would lead. Those worries soon proved to be justified.

Unrest and crisis in Eastern Europe. Khrushchev's speech excited new hopes in the West, which continuously broadcast the text of his speech over Radio Free Europe, its main medium of propaganda to Soviet satellite countries. Naturally, this stirred up hopes of freedom from Soviet rule across Eastern Europe. Poland was the first country to react, as its workers' demands for economic reforms grew into demands for political reforms. At first, Khrushchev moved Soviet forces toward Warsaw, threatening to crush the movement. Then, he seemed to do an about face (especially when compared to how Stalin would have acted) and agreed to give the Poles more freedom as long as they stayed loyal to the Warsaw Pact. This was hardly the end of it, though.

Later that month (October, 1956), student demonstrations erupted across Hungary in support of the Poles. When the Hungarian secret police shot several demonstrators, workers joined the students. Soviet troops sealed off Budapest and fierce fighting ensued. A popular leader, Imre Nagy, was restored to power. His government called for amnesty for the demonstrators along with more liberal political and economic reforms while still assuring the Soviet Union of Hungary's loyalty. Khrushchev withdrew his troops (many of whom were fraternizing with the Hungarians) from Budapest, but moved more forces close to Hungary's borders. This only caused demonstrations to spread to the countryside while more and more Hungarian troops joined the demonstrators, taking their weapons with them. Then on November 1st, Nagy repudiated the Warsaw Pact and declared Hungary's neutrality. Meanwhile, Radio Free Europe kept hopes and tensions at fever pitch by promising support to the rebels.

However, as luck would have it, another crisis, this time over the Suez Canal, had erupted with fighting between Israel and Egypt. With the United States thus distracted, the Kremlin seized the opportunity to move fifteen divisions, including 4000 tanks (which are hard to fraternize with) against Budapest. Even without help from the United States, which probably would not have risked war with Russia over Hungary anyway, the rebels held on for three weeks, even fighting Soviet tanks with homemade bombs called Molotov cocktails. Some 700 Soviet soldiers and 3-4000 Hungarians died in

the fighting before Budapest was brought back under control. Nagy was ousted from power and executed along with 300 other rebel leaders. Another 35,000 Hungarians were arrested, while 200,000 more fled to the West.

The Hungarian uprising of 1956 showed how far Khrushchev and the Kremlin would let reforms progress within the Soviet Empire before cracking down. Unfortunately, the West took this as a sign that nothing had changed since Stalin's death and maintained a hostile posture against Khrushchev, and he responded accordingly. Therefore, an opportunity to ease tensions between the superpowers backfired, causing the Cold War to heat up even more in the years to come.

Was Stalin murdered?



One theory, based on the testimony of one of Stalin's guards, Pyotr Lozgachev, suggests that Stalin may have been the victim of foul play. According to Lozgachev, on the night of February 28th/March 1st the guards in charge of Stalin's security were told to go to bed, an unusual order for a man as paranoid as the Soviet leader. However, the order didn't come directly from Stalin, but his main guard, Khrustalev.

When they got up the next morning, there was no sign of Stalin, nor was there for the whole day. However, no one had the nerve to disturb him. Then a light went on about 6:30PM, but still no sign of Stalin. Finally about 10 o'clock they got the nerve to go in to check on him and found him mumbling something like "Dz dz".

It took Beria and the other Politburo members several hours to show up, and they didn't summon a doctor until the next day (March 2nd). Stalin managed to hang on and finally died 9:30PM on March 5th. He was quickly embalmed and laid in state, where thousands came to view

him. According to some versions, hundreds of people were killed in the crush to see him.

The tardiness of the politburo members in showing up when notified aroused the suspicion of historian, Edvard Radzinski, leading to the theory that Khrustalev, working with one of the politburo members, most likely Lavrenty Beria, injected Stalin with poison. Molotov, in his memoirs, claims that Beria told him "I took him out," while Khrushchev wrote that after the stroke, Beria went about "spewing hatred against [Stalin] and mocking him" until the stricken leader showed signs of consciousness. Then Beria fell to his knees and kissed Stalin's hand until he lost consciousness again, at which Beria stood up and spat.

In 2003 a joint group of Russian and American historians announced that Stalin had ingested warafin, a powerful but tasteless rat poison that predisposes the victim to cerebral hemorrhage (stroke).

Khrushchev Zingers



The essence of Khrushchev's personality, a down-to-earth peasant common sense, shows as much through his sayings as his political actions:

"Support by United States rulers is rather in the nature of the support that the rope gives to a hanged man."

"When you are skinning your customers, you should leave some skin on to heal, so that you can skin them again."

"Whether you like it or not, history is on our side. We will bury you!"

“I once said, "We will bury you," and I got into trouble with it. Of course we will not bury you with a shovel. Your own working class will bury you.”

“If you cannot catch a bird of paradise, better take a wet hen. “

“If you start throwing hedgehogs under me, I shall throw a couple of porcupines under you.”

“Don't you have a machine that puts food into the mouth and pushes it down?” (said sarcastically about all the automated kitchen gadgets Americans had.)

“Economics is a subject that does not greatly respect one's wishes.”

“Bombs do not choose. They will hit everything.”

“Do you think when two representatives holding diametrically opposing views get together and shake hands, the contradictions between our systems will simply melt away? What kind of a daydream is that?”

“Call it what you will, incentives are what get people to work harder.”

“Politicians are the same all over. They promise to build bridges even when there are no rivers.”

POSTWAR CONFORMITY AND THE SEEDS OF DISSENT IN THE 1950s

Pressures to conform. World War II gave Americans an unprecedented era of affluence, technological growth, leisure, and opportunities for education and research. Out of this came four new factors pressuring people to conform, and especially to spend more to keep the consumer economy growing: modern advertising, television, credit cards, and babies.

Advertising had grown in tandem with the industrial consumer economies that emerged in the nineteenth century. As production of goods grew, so did the need to find consumers to buy those goods. After World War II, this need grew dramatically in the United States which, having suffered little material damage from the war, had 60% of the world's industrial capacity and needed to convince people to buy those goods. Complicating this was the traditional thrift-oriented mentality of most people, especially reinforced by the hard times of the recent Depression. In addition, there was little to qualitatively distinguish one brand of product from another.

Therefore advertising agencies hired psychologists who used modern psychological techniques to influence people to subconsciously prefer their products over the virtually identical products of their competition. One of the big pioneers in this field was Rosser Reeves, best known for his Anacin commercials that, in order to get people to buy his headache medicine, showed annoying animated images of a throbbing brain full of lightning bolts and pounding hammers. People hated these commercials, but they also bought lots of Anacin. Other commercials attacked people's subconscious fears and insecurities to make them believe their products, such as a brand new car, would solve their problems. Vance Packard exposed these tricks in his book, *The Hidden Persuaders*, but people still kept buying.

Adding a whole new dimension to these advertising techniques was television, which mesmerized people with dynamic moving images designed to sell them the sponsors' products. Television was the perfect advertising tool for reaching a visually oriented species such as humans whose eyes take in 90% of the information they get from the world

around them. Reinforcing these messages were shows that typically showed affluent families with the very sorts of products the sponsors wanted viewers to buy.

Unfortunately, buying all this cost more money than people had saved in cash. So along came the credit card, making it easier for people to get that new car or washing machine now and worry later about paying for it (along with added interest charges). Credit cards did indeed encourage consumer spending. Unfortunately, millions of families also found out how easy it was to lose track of their spending and fall heavily into debt.

Finally, there was the post-war baby boom and their parents' desire to provide their children with a better life than they had during the Depression. In the consumer society of the 1950s, people equated this with buying lots of toys and other things for their children. And that could only be good for business. These new opportunities and pressures affected people's attitudes toward two things: conformity and sex.

Conformity and deformity. Both men and women experienced growing frustration with pressures to conform. However, they experienced them in different ways. After the war, millions of men seemed to move seamlessly from the regimentation and conformity of the armed forces to that of the factories and corporations that were rapidly growing with the American economy. However, although corporate regimentation seemed familiar enough to these men, the lack of excitement and sense of purpose they had known during the war was gone. Replacing it was a dull routine of either assembly line work or paperwork, meetings, and kow-towing to the boss. Reflecting this lack of purpose was a profusion of adventure magazines that tried to recapture the excitement of the war years. Also reflecting it was Sloan Wilson's *The Man in the Grey Flannel Suit* (1955), a book detailing the frustrations of being trapped in the corporate rat race by day, only to return every evening to a house in the suburbs that was increasingly less a home and more a burdensome means of keeping up with the Joneses. Its characters, Tom and Betsy Rath were fictional, but the lives they portrayed were all too real to growing numbers of Americans in the 1950s.

For women much of the problem started with an acute post-war housing shortage that developed when millions of veterans came home, got married, and started families. The solution to this problem was a brand new phenomenon: the suburbs. The suburbs were largely the invention of William J. Levitt who applied Henry Ford's mass production techniques for cars to building homes. He broke home construction into 27 separate steps, each one being handled by a separate team specializing in that step. By 1948, Levitt's crews were completing 36 houses a day. Each house sat on a lot of 60 by 100 feet and had two bedrooms a bathroom, a 12 by 16 foot living room, and a kitchen. They had no basements, because concrete slabs were much easier and faster to lay down. The first Levittown, as this Long Island community was called, had 17,000 such houses with 82,000 residents.

Mass-produced Levittowns solved the acute post-war housing shortage, but they also created a whole new problem for women: a growing sense of isolation. Since the men generally took the family car on their long daily commutes between home and work (another source of stress), their wives were stranded miles away from the families and friends they had grown up with in the city. Instead of apartment buildings shared by a number of families, there were now separate family homes, oftentimes separated from one another by hedges or fences. The meaningful relationships and mutual support women had previously relied on were now replaced by a growing sense of desperate isolation from the rest of the world. This malaise was given a name, Housewife Syndrome, and a cure, large doses of anti-depressants to medicate women into passive acceptance of their fates. For both men and women, alcohol consumption also increased dramatically in order to dull the pain.

One woman who had bought into the suburban dream and seen it go sour was Betty Friedan. Coming to a gradual realization that millions of other women shared her malaise, she wrote a book that took her five years to research and write. That book, *The Feminine Mystique* (1963), would become the handbook for the feminist movement that would emerge in the late 1960s.

Things we don't talk about was the general attitude of society toward sex before the 1950s. Underwear was referred to as unmentionables and

talk about sex reverted to discussing birds and bees. Enter Alfred Kinsey, a mild straight-laced professor at Indiana University with a passion for collecting things, especially information. In the 1940s Kinsey launched a monumental study that culminated in 1947 with the publication of *Sexual Behavior in the Human Male*, an 804 page, three-pound book that quickly became a bestseller. Kinsey's book showed that pre-marital sex, extra-marital sex, homosexuality, and other practices typically labeled deviant behavior were more prevalent and normal for men than previously assumed. Naturally, such findings triggered heavy criticism and moral outrage from parts of a society still deeply rooted in its Protestant heritage. Not surprisingly, Kinsey's next book, *Sexuality in the Human Female* (1953), sparked an even more violent backlash, since it was about our mothers, sisters, daughters, and wives who were supposed to be pure and basically asexual. More devastating to Kinsey was The Rockefeller Foundation's decision to cut funding for his research. Kinsey's reaction was to overwork himself in further pursuit of his research until he died of heart failure in 1956. But the cat was out of the bag.

Kinsey's work encouraged more open attitudes toward sex. Much of this was healthy, but there were some results of questionable value. Most notable among these was Hugh Hefner's *Playboy* magazine, which showcased glossy airbrushed photos of beautiful women who evoked images of the wholesome girl next door except that they happened to be missing their clothes. Hefner, himself from a strict Methodist background, espoused a philosophy of promiscuous sex divorced from any emotional commitments. All this was slickly wrapped in a package laced with product placement type articles/ads for the latest accessories for the successful playboy: cars, stereos, clothes, etc. There were also serious articles and interviews that Hefner's customers could conveniently claim they bought the magazine for. The cumulative effect of this approach was to give pornography a pseudo respectability that made it and sex part of the mainstream culture.

Meanwhile a very different sort of quest was being realized: the birth control pill. The driving force behind the pill was Margaret Sanger. For decades she had been crusading to get access to birth control for women suffering in poverty from the burden of

too many children. Sanger, an incredibly persistent woman, had been jailed several times just for providing information about birth control. In the 1950s, she joined forces with John “Goody” Pincus, whose career had suffered for his dedication to research on hormones and fertilization. Their efforts bore fruit and the birth control pill came on the market in 1960. However, the Pill, as it was called, had far-reaching and unforeseen effects. While it did relieve many women of the burden of unwanted children, it also made sex seem safer for women by removing the fear of pregnancy. Just as *Playboy* led a movement to bring sex out in the open for men, the Pill made sex less scary and more desirable for women. Together, Kinsey’s and Sanger’s work, Hefner’s magazine, and Pincus’ pill would help lead to the sexual revolution of the 1960s.

Conclusion: toward a decade of dissent. The 1950s are typically viewed as a placid and comfortable decade. More properly it was a transitional era seeing revolutionary changes in the home, the workplace and attitudes toward sex. Add to this the start of the Civil Rights Movement and an emerging counter-culture centered on the Beats and Rock and Roll, and one can see the seeds of dissent in the years to come.

The Transistor Radio Revolution



The first commercially available transistor radio, Texas Instruments' Regency TR-1, marketed in 1954. However, since American industries were focused on the development of color TV, the Japanese were able to take over the market for transistor radios and, from there come to dominate the electronics industry overall.

In addition to the computer, the transistor created a revolution in miniaturizing consumer electronics, notably the transistor radio. Although invented in 1947, it took some time for the electronics industry to embrace it for a number of reasons.

One was the bottom line. As with any new technology, production is expensive until further research and development have created a cheap way to mass-produce it. At this point companies weren't ready to make that commitment, especially as they were pouring their resources into developing what they saw as the next big technology: color TV, which made its debut in 1954. The transistor's durability also threatened the profit margin of companies in a completely different, but significant way: revenues from repairing and replacing vacuum tubes that constantly burned out.

Secondly, since until now the radio had been a large heavy device, the average family could only afford one. One advantage of this was that it did encourage more togetherness, as the whole family would listen to it together. Postwar sociologists were constantly warning about how personal devices were further fragmenting the nuclear family. The transistor radio was the poster child for such a message, being small, portable, and eventually cheap (its initial price a relatively pricey \$49.95).

In addition, the “common wisdom” was that no one would want to listen to the tinny quality of sound coming from such a pocket-sized device. However, the common wisdom didn't account for the tastes of teenagers, who preferred the tinny sound of their own rock n' roll music to the fuller sound of whatever their parents listened to.

Thus the transistor radio spearheaded two revolutions at once. There was the consumer revolution that allowed everyone to listen privately to his or her chosen program, even in the midst of a crowd, much like people do with cell phones today. And there was the youth counter-culture ushered in with rock n' roll. In 1955, the year after the introduction of the transistor radio, Bill Haley's “Rock Around the Clock” became rock n' roll's first number one hit, followed next year by rock's first superstar: Elvis Presley.



No, those aren't cell phones that are pressed against their ears, but transistor radios, the mobile device of the 1950s

Turning Japanese. Ironically, the real beneficiaries of the transistor revolution were the Japanese, in particular a company called TOTSUKO, bought the rights to manufacture transistor radios, which cheap Japanese labor allowed them to do much more cheaply than American companies. As with anything, timing was crucial. Since the war, anything bearing a label saying "Made in Japan" was considered second rate. Reinforcing this was anti-Japanese sentiment left over from the war. However, by the late 1950s, a new generation of consumers, not so affected by such sentiments, was coming of age with money in their pockets. In addition, American companies, with one exception, Regency, had still not caught on to the potential of transistor radios.

In 1956, TOTSUKO (renamed Sony so Americans could pronounce it) introduced its first transistor radios. By 1965 the Japanese had captured 94% of the American market, making the transistor radio the first electronics product to be overwhelmed by foreign competition. More would follow as Sony's dependable little transistor radios would make "Made in Japan" a byword for first rate quality. In the years to follow, Japanese stereos, cameras, TVs, and eventually cars would also flood American markets, much to the chagrin of their American counterparts.

A Decade of Technological Revolutions



In addition to TV and the transistor radio, the 1950s witnessed technological revolutions on a number of fronts. Here are some of the highlights. Because there were so many, they have been broken down year by year.

1950

- Zenith offers the "lazy bones" remote control that plugs into the TV.
- Antihistamines are first widely used.
- Bell Labs & Western Electric invent the telephone answering machine.

1951

- Univac 1 the first commercial computer is produced.
- The Atomic Energy Commission produces its first electricity from atomic energy.
- Super glue is invented.
- Videotape recorder (VTR) invented by Charles Ginsburg
- J. Andre-Thomas invents first heart-lung machine, making possible advanced life support during open heart surgery
- The first built-in flashbulbs for still cameras are introduced.

1952

- First "Hydraglide" (AKA power steering) introduced by Chrysler
- Mr Potato Head patented; later the first toy advertised on network TV
- First patent for the bar code issued to Joseph Woodland and Bernard Silver
- Sony introduces the first pocket-sized transistor radio

1953

- Radial tires are invented.
- Invention of first musical synthesizer.
- DNA's Double Helix of is discovered by Francis

Crick and James Watson.

- Jonas Salk announces vaccine for polio.
- First color TV broadcasting.
- Saran Wrap created by Dow Chemical.

1954

- The first color TV broadcast was the Tournament of Roses Parade on January 1, 1954 to 21 stations.
- The first nonstick pan is produced.
- Chaplin, Fuller and Pearson invent the solar cell.
- Harvard physicians perform the first successful kidney transplant, the patient surviving for seven more years.

1955

- Optic fiber is invented.
- The first wireless remote, Zenith's "Flashmatic" is invented.
- Gregory Pincus develops the first oral contraceptive.
- Microwave ovens are first marketed by Tappan, costing \$1300. The original version invented in 1947 (below), was 5.5 feet tall and weighed 750 pounds. One blogger reminisced about how he and his brother used to aim the opened microwave at an egg and explode it. That may explain why they have a safety device that only allows operating a microwave when closed.



1956

- Scotchgard™ Protector is first marketed.
- "Mistake Out" (AKA Liquid Paper) is invented. Basically it was a white enamel applied with a tiny brush to cover typographical errors. Until the 1980s when computer word processing would start to replace typewriters, this was the primary way one would correct minor typing errors. Major ones would require starting that page all over.
- The first computer hard disk is invented.

- Christopher Cockerell invents the hovercraft.
- The Neutrino, an atomic particle without an electrical charge is discovered at Los Alamos Laboratories.
- Anti-protons are detected in the atmosphere.
- The first commercial videotape recorder is introduced for industrial applications, revolutionizing how TV programming is produced and stored. It would be nearly 30 years before affordable home VCRs would be widely available.

1957

- The computer language Fortran is invented.
- George de Mestral of Switzerland patents Velcro.
- "AA" size batteries are introduced by Eveready.

1958

- The modem is invented.
- The laser is invented by Gordon Gould.
- Jack Kilby and Robert Noyce invent the integrated circuit
- First commercial use of stereophonic recordings with two channels of sound. Future attempts to improve on this, notably Quadrophonic sound, would meet with little or no success until the 1980s with CDs and digital recording.
- Rich Knerr and Arthur "Spud" Melin, founders of Wham-O market the Hula Hoop, based on bamboo hoops reportedly twirled around the waist in Australian PE classes.
- A Boeing 707 jet makes the first non-stop trans-Atlantic passenger flight.

1959

- Wilson Greatbatch invents the internal pacemaker.
- The snowmobile is patented as the "Ski Dog", a typographical error of Ski Doo that its inventor, Joseph-Armand Bombardier, decided to keep.
- Jan 2- The Soviets launch Lunik I which reaches escape velocity from the earth's gravity and a speed of 25,000 miles per hour. It flies past the moon, making it the first manmade satellite of the sun.

Electron Frontiers: The Birth of TV



Howdy Doody watches himself
and Buffalo Bob on TV

If one thing came to define American culture in the 1950s, it was television. In 1941, there were 8,000 TVs in the U.S., half of them in New York City. In 1949, there were still only 3,602,872 sets in the U.S., but a year later that number had nearly tripled to 9,734,872. By 1959, it had reached 67,145,000.

As TV set sales skyrocketed, people seemed mesmerized and willing to watch anything: Roller Derby, wrestling, harness racing, amateur shows, really bad B movies, anything. One TV executive suggested that people would even watch a show with nothing more than a hand constantly rolling dice. In fact, the obsession with watching anything through a screen-like window affected other consumer products by adding windows: ovens, clothes driers, electric skillets, and even houses with picture windows.

Children's programming. One early captive audience was young Baby-boomers, the original TV generation. The first major show in this genre was *Howdy Doody*, a circus/western themed show, which ran from 1947 to 1960. Its title character was a marionette with 48 freckles (one for each state in the union until 1959). It had a live audience of children known as the Peanut Gallery.

In 1949, NBC decided the original Doody (below) looked too immature and needed a makeover. The result was the more familiar Doody (top). Unfortunately, the original creator of Doody stormed out of the studio in protest right before going live, so NBC explained the puppet's absence as the result of getting plastic surgery.



When its host/puppet master, Buffalo Bob Smith, had to take a break due to a heart attack, the show promoters told its young viewers he was just taking a vacation at Pioneer Village. A parody of Howdy Doody in the 1980s was a character on *Pee Wee's Playhouse* named Randy. Despite their physical similarities, Randy was as evil and mischievous as Howdy was nice.

Another bit of trivia: Ron Howard (aka Opie on *The Andy Griffith Show*) got his start in show business by winning a Howdy Doody look-alike contest in Milwaukee.

Possibly the best-known and best-loved children's show of early TV was *Captain Kangaroo*, which ran from 1955-84. Bob Keeshan (who got his start as Clarabell the Clown on *Howdy Doody*) played the title role as the grandfatherly Captain who interacted with other people and puppets, such as Mr. Moose and the mischievous Bunny Rabbit, the original low talker, whose main goal in life was to trick the Captain out of his carrots.

The classic after-school show was the *Mickey Mouse Club*, also premiering in 1955. In addition to cartoons, song-and-dance numbers by the kids in the cast (AKA the Mouseketeers), and serials that starred the kids and dealt with everyday challenges, the adult host Jimmy Dodds provided moral leadership with homilies that became known as Doddisms.

For local after-school programming, one mainstay was 1930s vintage episodes of the *Three Stooges*, which glorified physical violence for comic effect. After each 20-minute episode of such unrelenting violence, some adult would come out and warn kids not to try the brutal stunts that Moe pulled on Curly and Larry each episode. Then, he'd show us another one to drive home the point.

Local stations also made extensive use of puppets, since they are cheap and rarely forget their lines. In Chicago, that puppet was Garfield Goose, some stupid goose puppet who thought he was king of the United States. Key to the program was Frazier Thomas, who thought he was the goose's prime minister and had the uncanny ability to interpret the senseless clacking of Garfield in order to carry on meaningful conversations with the goose. Another character was Romberg Rabbit, who was also a low talker. Frazier could talk with him too.



Even children get bored with a grown man talking for an entire hour to a puppet, so much of the time was filled in with such things as old cartoons and 1940s vintage grade-B serial westerns, with a “new” episode running each day. How many kids could follow their convoluted plot lines from day to day, or even cared, isn't clear. But we'd watch anything if it was on the tube back then.



Violence against cats. Saturday mornings were particularly special for children's programming, because that's when cartoons ruled the airwaves and first provided parents with an electronic baby-sitter so they could sleep in. Premier among these shows was Mighty Mouse, a super-mouse that beat up countless cats, Tom and Jerry, a more down-to-earth version of Mighty Mouse where the mouse still always beat the cat, and Sylvester and Tweety Bird, where it was a tiny baby bird that beat the cat. The main rule of thumb was that small herbivores always beat large carnivores, whether it was a roadrunner

against a coyote (a wily one at that) or a rabbit against a bald-headed human with a speech impediment. A great parody of this genre of cartoons was Itchy and Scratchy on *The Simpsons*.

TV situation comedies (AKA sit-coms), still a mainstay of TV programming, go back to the early 1950s. As with other new technologies, people tended to think first of applying older uses and forms to them before seeing their wider possibilities. Among the pioneers of the TV sit-com was the *Burns and Allen Show*, starring the older vaudeville act of George Burns and Gracie Allen.

Their earliest shows combined elements of sit-com with vaudeville. George would come out and do an onstage monologue. Then there would be the bare elements of a comedy play with onstage props that George might use for sight gags such as walking around the prop for a wall instead of using its door. Then another monologue followed by a singing act, and then the rest of the play.

Commercials took the form of product placements that worked their way into the dialogue. (“Would you like some Carnation Evaporated Milk with your coffee? It's the milk made from contented cows.”)



The number one sit-com of the 1950s was *I Love Lucy* starring Lucille Ball (above) who, as the stage-struck housewife of a popular nightclub entertainer, was always coming up with zany schemes either to get on stage or carry off some other ridiculous scam. My theory is that Juliet's crazy faked suicide caper in *Romeo and Juliet* was the inspiration for *I Love Lucy*, except that Lucy was funnier...and smart enough to survive her own stupid capers.



Game shows were a relatively cheap type of show to produce that also proved extremely popular in the 1950s. Some of the more popular shows then were:

- *What's My Line* where celebrity panelists tried to guess contestants' occupations.

Salvador Dali was a contestant once. No one guessed his occupation.

- *You Bet Your Life* with Groucho Marx

- *Who Do You Trust?* Where celebrity panelists tried to figure out which of three

contestants was the real person described at the beginning of that round.

- *The Price is Right*, still a mainstay of daytime game shows, premiered in 1956

- *Twenty-one* a high stakes quiz show that was the center of a major scandal for

feeding a contestant answers over several weeks to build viewer interest.

- *Queen For a Day* where the woman with the most pathetic sob story, as judged by

the audience applause-o-meter, got her wish, a crown, and a dozen roses.



Westerns were probably the most popular type of TV drama in the 1950s. Like World War II, it was easy to tell the good guys from the bad guys by the colors of their hats (black or white).

There were around 120 TV Westerns, some of the most popular being Roy Rogers, The Lone Ranger, Hopalong Cassidy, Gunsmoke, Wagon Train, and Have Gun Will Travel.

Roy Rogers, largely appealed to kids, since it had several non-human characters: Trigger and Buttermilk (horses), Bullet the Wonder Dog, and

Nellie Belle the Jeep. Similar to this was *Fury* and *My Friend Flicka* (shows starring horses) and *Rin Tin Tin* and *Lassie* (with dogs in the leading roles).

As TV producers caught on that women liked westerns too, they started casting hot looking leading men who might occasionally go bare-chested to thrill the ladies. Westerns thrived into the 1960s, but faded in popularity, a combination of wearing out their welcome and not adapting to the moral confusion and controversy of the times.



The Twilight Zone was a science fiction/fantasy anthology series that aired from 1959-64. It was a hard sell for its creator and narrator, Rod Serling, a highly respected writer of TV drama at the time, because science fiction wasn't considered serious material.

In fact Serling's vision was very serious. In the still repressive political climate of the 1950s, anything of a political nature was kept out of TV drama. Using the science fiction's otherworldly and seemingly innocuous settings, Serling crafted highly pointed political and social allegories and parables without directly stepping on anyone's toes. Thus in episodes such as "The Monsters Are Due on Maple Street" and "The Shelter" he was able to tackle such issues as mass hysteria, the dehumanizing aspects of modern society, McCarthyism, and nuclear war and just claim they were stories about human nature (which they were) and not about any one person or group in particular (which was sometimes more debatable).

The Twilight Zone was a valuable cultural landmark and means to get Americans, in particular impressionable Baby-boomers on the verge of adolescence, to think seriously and freely about contemporary issues.

A typical episode was “The Obsolete Man”, which takes place in a future totalitarian state where a man, named Wordsworth, is condemned for being obsolete on two counts: being a librarian (and literate) and believing in God. For his method of execution, he asks to choose a personal assassin, the head of state known only as the Chancellor, to whom he may disclose his preferred method of death. He also requests that his execution be televised for the whole nation to see.

When the Chancellor arrives, Wordsworth reveals he has locked the door, and chosen to die by means of a bomb hidden in the room and set to go off in 45 minutes. He also explains the regime will lose face if it tries to rescue the Chancellor with the nation watching on TV. As time winds down, Wordsworth calmly awaits death by reading Psalm 23 from the Bible while the Chancellor grows increasingly panicky, begging Wordsworth to let him go “in the name of God.” Repeating that phrase, Wordsworth releases him just before the bomb explodes, while he dies calmly.

In the final scene, the Chancellor, who has lost face and his position, is declared obsolete and condemned to death.

Color TV. The first color TV broadcast was the Tournament of Roses Parade carried to 21 stations on January 1, 1954. At the time, there were only 200 experimental color sets able to view it. By March there were 370 stations broadcasting in color, with 202 more ready to start. In April, RCA started selling color sets at \$1,000 each (half the price of a car). One year later, it had sold only 5,000 sets. But color was clearly the wave of the future

Crabgrass Frontiers: the Birth of the Suburbs



"We are not builders. We are manufacturers." --Bill Levitt

Before the suburbs there were the “urbs”. By 1920, America had become an urban nation where more than half its people lived in communities of 2500 or more. Many of them lived in urban tenements nostalgically recalled in many of Norman Rockwell’s paintings. Photos of ethnic festivals also suggest a greater sense of community still existed in urban neighborhoods that the following half-century would largely dissolve. This was also before any urbanites had anywhere else they could live that was easily accessible to work. And it was before there were enough cars to take them between the two relatively distant places.

With the Depression still fresh in many people’s minds and postwar prosperity just starting, middle class America was poor by today’s standards. However, there was much less perception of a social distinction about being poor, since almost everyone was in the same predicament. This was largely reflected in the popular TV sitcom from the mid 1950s, *The Honeymooners*, about two families living in a sparsely furnished tenement apartment. While struggling financially, they had aspirations of upward mobility that their audience could relate to.

But there were problems, in particular with housing. As early as 1944, people foresaw the coming housing shortage when millions of veterans would return home to start families delayed by the war. Many of these new couples lived with their parents. Others found themselves crowded into substandard housing,

even old army barracks, often having to share housing with several other couples. Things only got more crowded and tense when millions of noisy babies with irregular sleep patterns started showing up in what was referred to as the baby boom.

Into the breach stepped Bill Levitt. A housing contractor before the war, he served in the Pacific with the Naval engineering corps popularly known as the Seabees. With each island American forces would take bringing them closer to Japan, the Seabees would build air bases from which to launch raids against Japanese cities. The Seabees were very efficient in doing their job, including quickly constructing pre-fabricated housing known as Quonset huts.

Inspired by the Seabees and Henry Ford's assembly line process, Levitt decided to apply the same techniques to building houses. His first project, Levittown, was on a Long Island potato farm he bought, cleared and subdivided into individual lots.

Rather than hiring expensive skilled workers who built one house at a time, he broke down the process of building a house into 27 stages, each done by a separate crew that focused on that one aspect of the project and then moving on to the next house. That way Levitt could create a virtual assembly line of house-building modeled after Henry Ford's assembly line. He could also use cheap unskilled workers who only had to learn one narrow aspect of house building.

Best of all, it kept prices down.

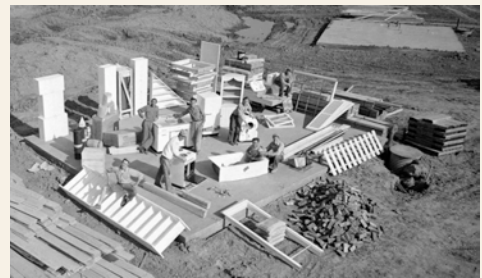
First, one crew would lay the slab on a lot, then move to the next lot to lay that slab, then the next one and the next one, etc.



Levitt-slabs just waiting for someone make them a home

Levitt was the first large-scale builder to construct houses on radiantly heated cement slabs. By foregoing a dugout basement, Levitt estimated he saved consumers \$1,000 per dwelling. The practice caught on. By 1952, 25% of all new houses were constructed on slab. Another money-saving omission was the front porch, where neighbors traditionally socialize with one another.

Building materials, from siding to nails, were delivered in perfectly calibrated house-sized amounts to each house site. Workers needed to do no measuring or cutting. Interchangeable, standardized parts also cut costs.



A building crews tanding on a slab with all the materials need for building a Levitt house

Once the first concrete slab was set, the next crew would frame the house, and then the next house, and the next, and the next, etc.

Then a third crew would work its way down lot-by-lot attaching the outer walls.

After that came the siding crew, and then the roofing crew.

Inside another crew installed the plumbing while an electrical crew did the wiring.

After that came crews that put in the insulation, the drywall, and the mudding.

Then came the painting crew, the flooring crew, and the crew that installed the appliances. All Levitt houses featured modern kitchens complete with electric range, refrigerator and other built-in accessories designed to take the labor out of housekeeping.

To reduce his dependence on middlemen, Levitt bought his own lumber stands in California and Oregon, invested in a lumber mill, and established a centrally located warehouse in Levittown. To increase efficiency, pre-cut lumber was bundled "combat loaded," with pieces arranged from top to bottom according to the sequence of when they would be needed.

While many supplies were shipped in, some materials were made on site. A cement hopper and gravel pit set up in one subdivision produced concrete for house slabs. After construction was completed, Levitt flooded the pit to create a community lake.

Originally, Levitt only built two variations of Cape Cod houses. This made it easier and cheaper for his crews to work quickly. Once the project was in full production, Levitt was finishing 36 houses a day.

Before the war, it would take him a year to complete that many homes.

Levitt sacrificed individuality and custom design for low-cost efficiency. Still, his later Pennsylvania development, also known as Levittown, featured six house models, each in several different styles and model years. The ranch house model, called the Levittowner, cost \$10,900, payments being \$67 a month. To create a sense of variety, Levitt would put houses at different angles on their lots, put different models of houses on adjacent lots, and paint them different colors. He boasted he had created "the least monotonous mass housing group in the country."

As prosperity increased in the 1950s and families grew, Levitt and other developers started offering ranch-style houses that included an attic, which could be finished into an extra bedroom. Later models would include such refinements as enclosed garages instead of open carports.

As with everything else, landscaping was standardized so that each lot received the same allotment of shade trees, fruit trees, evergreens

and perennials and flowering shrubs. The final plan called for more than 400,000 plantings at a cost of \$8,000,000.

Levitt supplied homeowners with detailed instructions on the care of lawn, plants and shrubbery. The assumption was that most new homeowners—as lifelong city dwellers—would have been unfamiliar with even the most basic aspects of horticulture. While small by rural standards, Levittown's 7000 square foot lots seemed spacious to city dwellers. Levitt figured most homeowners would be unwilling to maintain lots any larger than that.

Lawns offered homeowners an opportunity to individualize their homes. In some cases this led to "grass widows syndrome", the feeling by housewives of being ignored by husbands who spent all their spare time tending their lawns and gardens. At least grass widows' husbands were at home, as opposed to a later more severe condition called "golf widows".

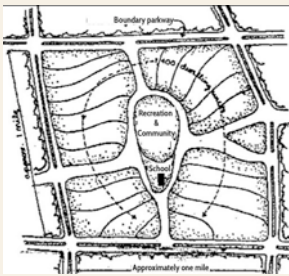
Consistent with mid-century architectural design, Levitt incorporated windows and natural light wherever possible. Later models featured full-length or floor-to-ceiling picture windows, in front and back, segmented into standard multiples. This also fit in with the growing popularity of TV, where people loved looking through anything that resembled a TV screen, including ovens, clothes driers, and electric skillets. Most models featured large, sliding glass doors that opened on to an outdoor terrace that could be finished into a livable, even enclosed, patio space.

To cut costs and add flexibility, Levitt replaced conventional, solid-wood closet doors with Japanese manufactured bamboo screens. Like all of his materials, Levitt ordered the bamboo screens in bulk—1,750,000 square feet of them in his initial order. "The Japanese will learn what it means to be touched by Levitt," *Fortune Magazine* quipped.

While most of Levitt's cost cutting measures held up, some did not. His tarpaper composition sewer pipe saved money in the short run but

proved unstable. Homeowners often were forced to pay thousands of dollars to install new, copper lines—generally after Levitt's five-year warranty had expired.

Levittown as a Community. The basic planning unit for Levittown was the master block (below), a roughly mile-square area that encompassed three to five variously sized neighborhoods, also known as "sections." Each section contained on average between 300 and 500 houses. Although the goal of Levittown was to house people, and lots of them, by arranging his houses around neighborhoods drawn to human scale, Levitt hoped to create a small-town feel.



In addition to houses, Levittown's master plan called for swimming pools, baseball fields, churches, schools, and shopping centers. Levitt believed new homeowners preferred a full-service community with "built-in" features—just like its houses.

Elementary schools were to be nestled inside each master block so that, in Levitt's words, "no child will have to walk more than one half mile to school or cross any major road." He donated the land for both schools and churches.

Levitt's plan also included Olympic-sized swimming pools, Little League baseball fields, neighborhood parks, and a multi-purpose community building. An avid baseball fan, Levitt even built a regulation, major-league field in the hopes of luring a minor league team to Levittown.

By building a few large, centralized shopping centers, Levitt hoped to avoid the problems associated with haphazardly placed and often unsightly commercial strips. Levittown's main shopping center was not only large—at the time,

the biggest shopping center east of the Mississippi—but also meticulously landscaped.

During Levittown, Pa.'s first year, the company sold an average of 1600 houses a month. During a typical closing, it was not uncommon to see 40 to 50 buyers settling simultaneously on their new homes. This was indicative of a corresponding real estate boom across America.

Levitt took a lot of criticism for the three Levittowns he built and the multitude of imitations they inspired in cities across the nation: "*Suburbia is becoming the most important single market in the country. It is the suburbanite who starts the mass fashions—for children, ... dungarees, vodka martinis, outdoor barbecues, functional furniture, [and] picture windows ... All suburbs are not alike, but they are more alike than they are different.*" --William H. Whyte, author of the 1956 best seller, *The Organization Man*

"It is a one-class community on a great scale, too congested for effective variety and too spread out for social relationships...Mechanically, it is admirably done. Socially, the design is backward." --Lewis Mumford, 1952

"What would you call the places our homeowners left to move out here? We give them something better and something they can pay for." —Bill Levitt's response

In fairness to Levitt, he did try to create self-contained communities each with its own recreation facilities, shopping, schools, and churches within a square mile block. Unfortunately, other developers were not quite so conscientious, packing as many houses as possible into a small space to maximize profits. Unfortunately, this was at the expense of all the amenities that Bill Levitt had built into Levittown to make it a community rather than just a cluster of houses.

From 1950 to 1960, 20 million people moved from the cities to the suburbs. In terms of sheer numbers, this outstripped the fabled Westward migration of the 1800s many times over.

Except this was neither an *urban* migration, where living space was very limited and had to be maximized by building upward, nor a *rural* migration, where people had to occupy more space in order to farm. Rather, it was a *suburban* migration, where people took as much land as they could afford, not as much as they needed. As prosperity expanded in the coming decades, so did the size of houses, even as the size of families shrank. Suburban sprawl took over more and more farmland. In terms of space it also separated families further from one another, creating a greater psychological divide between them as well.

That and various other factors (the demise of the front porch, air conditioning which isolated people in their homes, fences and hedges that marked distinct boundaries between different families' property, and the increased mobility of society which cut into family meals and allowed families to move more often to follow corporate jobs) would all have unfortunate effects on the fabric of modern society.

On the Road: The Interstate Highway System (b.1956)



A stretch of interstate around Los Angeles

The affluence of the 1950s made it so the average American family could buy at least one car, making the US a nation on the move. However, all those extra cars needed more roads on which to drive, as the old two-lane highway system was quickly proving inadequate to handle all the new traffic.

In the early 1900s few roads were paved outside of the cities. Oftentimes, unpaved shoulders bordered ditches with steep drop-offs that could prove fatal. Road atlases consisted of written

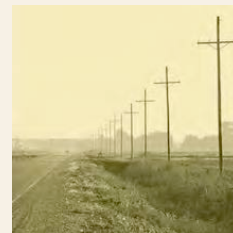
directions, sometimes with a picture of a fork in the road.

In 1919, Lt. Dwight D. Eisenhower took part in the US army's first transcontinental motor convoy from Washington DC to San Francisco. Largely because of inadequate roads, it took 62 days, as vehicles got stuck in mud and sand and equipment crashed through wooden bridges. It was an experience that stuck in Ike's mind.

In 1939, the US bureau of Public Roads, probably influenced by the success of Hitler's Autobahn, recommended a transcontinental highway system of 26,700 miles. At the end of World War II, Eisenhower saw the Autobahn first hand, which just reinforced his ideas about the benefits of an interstate system to both commerce and defense.

A major hazard of two lane highways was passing slower vehicles, especially semis, on hilly or curved stretches of road where one could not see oncoming traffic. As cars backed up behind the slower semis, frustration would build and drivers would often take unnecessary risks in passing them, sometimes with fatal results.

In 1939, the US bureau of Public Roads, probably influenced by the success of Hitler's Autobahn, recommended a transcontinental highway system of 26,700 miles. By 1935, the government had built an early prototype of the interstate system with limited access in Massachusetts. During World War II, Eisenhower also saw the benefits of the Autobahn to both commerce and defense.



A typical stretch of highway before the interstates. Unpaved shoulders often bordered ditches with steep drop-offs that could prove fatal.

While Congress passed several bills to establish an interstate system, it never funded such a project. Finally, in 1956, with Eisenhower's prompting, Congress passed the Interstate Highways Act to remedy this situation. Also known as the Dwight D. Eisenhower System of Interstate and Defense Highways, it was possibly the most ambitious public works project since the Roman Empire.

The defense aspect of the interstates was to move tanks and other military vehicles rapidly across the nation. The new superhighways were also supposed to serve as emergency landing strips for air force planes.

Illinois was the site of the first comprehensive research project to build test pavements that could withstand the rigorous conditions interstates would have to endure. The site, which met requirements for temperature, frost penetration and soil conditions that were typical of most of the country, was built between 1956 and 1958 and consisted of six test loops west of Ottawa on the site of the current I-80.



Bulldozers lined up to build an interstate in 1960

Since 1956, it is estimated that interstates, which represent 3% of the nation's highways but carry 24% of its traffic, have saved 234,000 lives by providing:

- At least 2 lanes going in each direction to eliminate dangerous passing of other vehicles on dangerous curves and hills in the face of oncoming traffic along two-lane highways.
- Gentler curves and paved shoulders
- Median barriers & rumble strips to warn drivers they are leaving the road.

Each year the nation's interstates save an estimated \$30 billion in safety, time, fuel and consumer costs along with 9.7 billions of gasoline. They also save the average American 70 hours travel time per year, 20 billion hours for the nation as a whole.

On the down side, a certain romance and nostalgia about America's two-lane highways was lost with the interstates and their sanitized views of America. It's hard to imagine Jack Kerouac's *On the Road* as *On the Interstate*.

Also, from 1956 to 2006, the number of vehicles on national roads has grown from 65 million to 237 million, an increase of 263%, while our population has grown 75%. Miles traveled per year has increased 373% to three trillion. Traffic is increasing eight times faster than the miles of new road being built.

As of 2011, major repairs and maintenance were needed on existing roads.

- Five percent of interstate bridges were rated structurally deficient and another 16% as functionally obsolete.
- Likewise, 17% of the roads were in poor or mediocre condition and another 16% in only fair condition.

Unfortunately, only 49% of the funds needed for these repairs were being allocated. The collapse of the I-35 bridge near Minneapolis in 2007 (below) was a grim reminder of this need.



Birth of a (fast food) nation



As America became a nation on the move, it was only natural it would want and develop a diet as quick as its lifestyle. And nothing has fulfilled that need and defined that lifestyle since 1945 more than McDonalds.

In the 1930s, with the Northeastern shoe and textile industries closing down, two brothers, Dick and Maurice MacDonald, pulled up stakes and moved to the “promised land”, California. First, they opened a movie theater, which failed. Then they started a hot dog stand near a racetrack in 1937, which did all right during the racing season.

In 1940, they got a \$5000 loan from the Bank of America and opened a new stand in San Bernardino, a blue-collar town of about 100,000 people. This did reasonably well, bringing in \$40,000 a year.

However, it was nothing special, having 25 menu items (including Barbeque ribs and beef and pork sandwiches) that slowed service to an average wait of twenty minutes. Having 20 carhops didn't help, since their high school friends and boyfriends tended to hang around, filling the parking lot and probably reducing business.

Therefore, in October 1948 they closed down for several months and totally retooled their operation with a number of time and money-saving innovations.

- Seeing 80% of their business was burgers, they fired the carhops & cut the menu to 9 items.
- They replaced their three-foot long cast iron grill with two six-foot long stainless steel grills that held heat better than cast iron and were easier to clean.
- Plates and silverware, which tended to disappear anyway, were replaced by paper

bags, wrappers and cups, which also allowed them to get rid of the dishwasher.

- The size of the burgers was reduced from 1/8 to 1/10 pound.
- They got rid of messy condiment stations & added two pickles, ketchup, mustard, & onion to each burger.
- They adapted a machine that made peppermint patties to mechanically making burger patties.
- They also discouraged custom made orders since they led to big delays.

On December 12 they reopened, their restaurant sporting a sign with a chef called Speedy and the motto: “MCDONALD'S FAMOUS HAMBURGERS BUY E'M BY THE BAG”. And next to that in even larger letters: “15 CENTS”.



At first, business fell off as teens (who had just used their restaurant as a hangout) and the fired carhops heckled them. But in time working class people found that, for the first time, they could take their whole families out for a reasonably cheap meal. Adding to the family appeal were glass windows so kids could watch the cooks working. In a sense, McDonalds was mass-producing food like Detroit mass-produced cars and Bill Levitt mass-produced houses, handling a customer every fifteen seconds, with crowds lined up halfway to the curb.

Gross annual receipts in 1951 were \$277,000, and by the mid 1950s the restaurant was earning a profit of \$100,000. The McDonald brothers were deluged with requests about how they did it, and were generous in sharing their secrets. As business grew, so did pressure to open franchises. They sold their first franchise for \$1,000 to a gas retailer in Phoenix who surprised them by wanting to use the McDonalds name. The Carnation Company even wanted to turn them into a national franchise. However, the

McDonald brothers, having made more money than they'd ever dreamed of, were content with what they had and didn't want to get tied down to the endless headaches going national would bring them.

By 1954, the McDonald brothers had issued nine franchises. To handle their growing business, they kept buying more multi-mixers for making milk shakes from Ray Kroc, a man who was as driven to succeed as they were content with what they had. Soon Kroc was managing the franchise end of McDonalds, whose customer base he saw as families. When scouting out new locations, he would count schools and church steeples rather than measure traffic patterns, seeing those as the best predictors of success. And where he saw more and more steeples and schools was in the emerging phenomenon of the suburbs. Along those lines, he wouldn't hire women, thinking they were only there to flirt, and that would drive off the family business.

Besides being a workaholic, Ray Kroc was a control freak, obsessed with control of every aspect of McDonalds franchises. He demanded absolute cleanliness in his restaurants and employees (including no facial hair) and absolute standardization in his product. He would even pick up garbage and hose down his own parking lot.

Kroc's goal was for any customer at any McDonalds anywhere to be able to expect the same standardized quality of hamburger: 1.6 ounces of commercial grade beef with no more than 20% fat (when the industry standard was 33%), one-quarter ounce of chopped onion, one tablespoon of ketchup, one teaspoon of mustard, and a single pickle one inch in diameter.

Such rigid standardization demanded complete (nearly 24/7) dedication and conformity by his franchisees. The irony was that he wanted franchisees who were individualistic enough to put their life savings on the line, yet willing to conform to his rules. He felt he could more readily find people with such values in the Midwest, and, since he lived in suburban Chicago, he opened his first stand in Des Plaines,

Illinois in 1955. One problem he discovered was the McDonald brothers had licensed McDonald's rights to that part of Illinois to someone else. So to open his store, he first had to buy out the other contract for \$25,000, putting him even deeper into debt.

Once it was open, Kroc was a totally hands-on manager, in both running his stand and overseeing those of his franchisees. Therefore, the company grew slowly, with Kroc granting only one franchise besides his own in 1955. In 1956 he sold twelve. In 1957 there were forty McDonalds. From there it grew to 79 (1958), then 145 (1959), and then 228 (1960).

By 1961, people were identifying McDonalds more with Ray Kroc than the McDonalds brothers who still owned the name and were running their original store in San Bernardino. Kroc, who thought they were lazy and ambitious, wanted to buy them out, which he did, agreeing to their price of \$2.7 million. That was a hefty sum at the time, but Kroc thought it was a bargain with the chain growing by 100 stores a year.

Still bitter against the McDonalds brothers, he forced them to take their name of their restaurant (which they renamed Big M) and opened a competing McDonalds only a block away. Once when asked what he thought about competition, Ray Kroc answered: "If they were drowning to death I'd put the hose in their mouth."

Ray Kroc's intense competitive spirit would pay off. By 1989, McDonalds, for better or worse, had revolutionized how America and the world eat, owning over 20,000 restaurants worldwide.

In 1963, McDonalds replaced its icon, Speedy, with a clown. The original Ronald McDonald was portrayed by famous weatherman & TV personality, Willard Scott.



"...the reason Japanese people are so short and have yellow skins is because they have eaten nothing but fish and rice for two thousand years...if we eat McDonald's hamburgers and potatoes for a thousand years we will become taller, our skin become white and our hair blonde"-- Japanese President, Den Fujita, upon opening of the first Japanese McDonalds in 1971.

Kids Stay Free at Holiday Inn



In 1951, Kemmons Wilson, a very successful contractor from Memphis Tennessee, took his family on vacation to Washington DC. This was back in the days before super-highways when long lines of cars could be backed up for miles trying to pass slow moving semis on hilly and winding roads. Therefore, a family usually could travel only about 300 miles a day, and then had to look for lodging.

Unfortunately, there were no industry standards of cleanliness, and motels could be located far from any decent place to eat. Sometimes you might stumble onto something charming. Other times you might find a rattrap with no better prospects in sight. The motel below would be considered nice back then.



While the basic rate of \$8-10 a room was decent, families were charged an extra \$2 for each child. Thus the rate for a family with 5 children (not a lot back then) would be around \$20 (which was a lot back then).

Wilson decided he would open his own motels with consistent standards of cleanliness and a policy of not charging extra for children. In 1952, he opened his first Holiday Inn in Memphis.

Four years later, as if to help Wilson, Congress would pass a \$76 billion federal highway plan, putting millions of Americans on the road and in need of lodging every night.

Wilson's chain would grow to 1500 motels across the nation. Besides assuring consistent quality of accommodations to travelers across the nation, Holiday Inn was the first to offer the public a "Kids Stay Free" policy, in-room phone and TV, and free ice. These are amenities that we may take for granted today, but we owe them to the vision of Kemmons Wilson.

A Decade of Fads



One sign of an affluent (and some might say decadent) society is fads temporary movements typically having little of substantive value but being popular just because they entertain. While previous decades, in particular the 1920s, had fads, the 1950s, being the most affluent decade in history to that time, were especially loaded with corresponding fads.

Davy Crockett: the first merchandising spinoff empire. "Davy. Davy Crockett. King of the wild

frontier.” At least that’s what the song told us and we bought it, along with 100 million dollars worth of raccoon caps, cap-guns, wrist watches, books, moccasins, lunch boxes and all manner of merchandise.

Interestingly, there were only five episodes about Davy Crockett which aired as part of The Wonderful World of Disney in 1954 and 1955, but it was enough to trigger TV’s first merchandising mania, something that’s taken for granted with any blockbuster action movie or TV show. In fact, now they create a product and then movies and TV shows to advertise them.

Fess Parker portrayed both Davy Crockett and later Daniel Boone in an actual TV series, something which may have caused a permanent blurring of the two real life men into one entity (Davy Boone, Daniel Crockett?) and forever making their individual accomplishments less distinct to history students.

Like most fads, Davy Crockett and the coonskin cap faded from the scene more quickly than they had appeared, leaving a lot of people stuck with worthless coonskin hats...unless they saved them and tried to sell them as collectibles fifty years later.

In 1960, Davy would have a brief revival and go out a second time (or third if you count the real battle in 1836) in one final blaze of glory, this time portrayed by John Wayne in the movie, *The Alamo*.

Hula hoops were one of the biggest fads of all time. Its promoters, if not actual inventors, were Richard Knerr and Arthur "Spud" Melin, founders of Wham-O. In 1957, they heard a visiting Australian casually mention that PE classes in his home country had children twirl bamboo hoops around their waists for exercise.

Inspired by this factoid and the recent invention by Phillips Petroleum of a lightweight and durable plastic, Knerr and Melin created and marketed a device they called the “Hula hoop” because its users seemed to be doing the Hawaiian Hula. In two months, Wham-O sold 25

million hula hoops and another 100 million internationally in the following months. At its peak of popularity, they were manufacturing 20,000 hoops a day.

Not that all nations thought this fad was a good idea. The Japanese banned Hula Hoops thinking they might lead to inappropriate behavior. The Soviet condemned them (with some justification, as an example of the "emptiness of American culture". By 1960, Hula Hoops were lying next to coonskin hats in millions of attics, although Hawaii did attain statehood in 1959. Whether this was because of or in spite of the Hula Hoop is a matter of debate. Meanwhile, Knerr and Melin were marketing another hot idea: the frisbee.

The saucers have landed and they're ours. In 1957, a plastic flying saucer toy was first marketed by Rich Knerr and Arthur "Spud" Melin, founders of Wham-O and later creators of the Hula Hoop. The Frisbee’s history goes back to the popularity of tossing tin pie tins manufactured by The Frisbee Baking Co. of Bridgeport, Connecticut. Yale students would warn innocent bystanders of errant incoming pie tins by shouting “Frisbie”. In 1948, two World War II veterans improved on this by making them out of plastic. Their efforts to market the toy as the “Flyin’ Saucer” and “Pluto Platter” met with little success until Knerr and Melin noticed it, bought the rights to it, and marketed it as the Frisbee.

Poodle Mania! Each decade seems to favor certain colors, fashions, and even dogs. And in the Fifties the dog of choice was the poodle, which brought with it a lot of cultural baggage, such as poodle skirts, ceramic poodles, plastic poodles, pink poodles, decorative poodles, storage poodles, and even wastecan poodles. As if that wasn't enough, you could even look like a poodle with the poodle haircut especially popularized by Lucille Ball.

Much of this we could blame on World War II and Japan. After the war, we were touchy about the Japanese manufacturing anything that could possibly be used for making war. So they made

lots of poodles, all of them bearing the label "Made in Occupied Japan." To some Americans it seemed that the war had never ended, but just entered a new phase. To a large degree, they were right.

Chlorophyll. Green vegetables are good for you, so that means the green chlorophyll in them must be good for you and eliminate bad smells to boot. At least that was the common belief in the 1950s, so they added chlorophyll to every kind of product imaginable: toothpaste, shoe inserts, deodorants, and even chewing gum.

Whatever its merits, chlorophyll products sold well until "The Journal of the American Medical Association" had to ruin everything by pointing out one brutal fact: goats, who graze and live on chlorophyll, still have bad breath. After that, chlorophyll sales plummeted.

Cramming (AKA Telephone Cramming or Telephone Box Squash). Along with those crazy horns that make other soccer fans go deaf, we can thank South Africa for the sport of trying to cram as many people as possible into a phone booth (maybe to escape the sound of those horns). As a competition sport, cramming soon spread England and in 1959 to California. It became especially popular across college campuses as each one tried to set a new record. Since phone booths were so small, there wasn't room to fit very many rules:

- 1) The booth must still contain a phone (presumably working).
- 2) The door could be left open and only half of a person must be inside the booth to be counted.
- 3) The booth must be upright.
- 4) British rules required a team member to be able to either receive or place a call. I assume that placing a call earned you more points than receiving one, and that making a long distance call directly added even more. International calls would be the best. I don't know if reaching a wrong number counted. Luckily, this rule did not apply anywhere else.

The world record appropriately was claimed by the South Africans who fit 25 people inside one booth. The English, who had wider booths only

made it to 19, but they had to actually use the phone. A Canadian group made it to 40 but their booth was on its side and so they were disqualified (see rule 3). The American record went to a group at St. Mary's College in Moraga, California, who managed to cram 22 people into a booth.

As far as I can tell, this was a men-only sport, since this was before Title IX. Besides, this was the Fifties, and cramming would have been very unladylike back then. Not to mention the complications created by those huge flouncy skirts, heavily reinforced brassieres, and all the red lipstick in use back then.

Having destroyed an unknown number of phone booths, people tried Cramming into other helpless objects. VW Beetle cramming in particular enjoyed a brief heyday. (I don't know if British rules required someone to drive the car.) However, like all good fads, this one ended rather quickly and with mercifully few deaths.

**For those not in the know or under age 30, telephone booths were places where one could pay a dime to use a phone to call someone who hopefully was in the same place as their phone, since all phones were connected to walls. This made talking on the phone while driving extremely difficult. And don't even think about texting.*

"Housewife Syndrome"



An ad for the anti-depressant, Milton, which was prescribed for millions of women suffering from "Housewife Syndrome".

A major factor driving women's behavior in the Fifties was the misperception that the war had created a significant imbalance of eligible women compared to men. (In some countries, notably Russia, this was the case.) Women's magazines

added to these fears (and their profits) by playing up this belief, pressuring women to conform to a more feminine and ladylike styles and behaviors in order to catch and keep a husband.

This meant discouraging women from pursuing higher education or independent careers out of fear that would scare off a man. Thus the ideal woman in many people's minds should act, if not stupid, at least a bit clueless about anything besides babies and housework, and should never ever show herself smarter or more athletic than a man. This must have made for some very boring marriages.

For example, consider the following article, *The Good Wife's Guide*," from *Housekeeping Monthly* (May 13,1955).

"Have dinner ready. Plan ahead, even the night before, to have a delicious meal ready on time for his return. This is a way of letting him know that you have been thinking about him and are concerned about his needs. Most men are hungry when they come home and the prospect of a good meal (especially his favorite dish) is part of the warm welcome needed.

"Prepare yourself. Take 15 minutes to rest so you'll be refreshed when he arrives. Touch up your make-up, put a ribbon in your hair and be fresh-looking. He has just been with a lot of work-weary people.

"Be a little gay and a little more interesting for him. His boring day may need a lift and one of your duties is to provide it.

"Clear away the clutter. Make one last trip through the main part of the house just before your husband arrives. Run a dustcloth over the tables.

"Over the cooler months of the year you should prepare and light a fire for him to unwind by. Your husband will feel he has reached a haven of rest and order, and it will give you a lift too. After all, catering

for his comfort will provide you with immense personal satisfaction.

"Minimize all noise. At the time of his arrival, eliminate all noise of the washer, dryer or vacuum. Encourage the children to be quiet.

"Be happy to see him. Greet him with a warm smile and show sincerity in your desire to please him.

Listen to him. You may have a dozen important things to tell him, but the moment of his arrival is not the time. Let him talk first - remember, his topics of conversation are more important than yours.

"Make the evening his. Never complain if he comes home late or goes out to dinner or other places of entertainment without you. Instead, try to understand his world of strain and pressure and his very real need to be at home and relax.

"Your goal: To try and make sure your home is a place of peace, order, and tranquility where your husband can renew himself in body and spirit.

"Don't greet him with complaints and problems.

"Make him comfortable. Have him lean back in a comfortable chair or have him lie down in the bedroom. Have a cool or warm drink ready for him.

"Arrange his pillow and offer to take off his shoes. Speak in a low, soothing and pleasant voice.

"Don't ask him questions about his actions or question his judgment or integrity. Remember, he is the master of the house and as such will always exercise his will with fairness and truthfulness. You have no right to question him.

"A good wife always knows her place."

Of course, the role of a housewife, as described above, typically meant being stuck at home with the kids and isolated out in the suburbs away from old friends and family with whom to socialize and on whom they could rely for support. Adding to their isolation was the fact that most families had only one car, and the husband took that to work. Therefore, many women, feeling trapped and unfulfilled in their lives, became depressed. Although not a specific disease, this was diagnosed as a malady known as “Housewife Syndrome”.

One woman who recognized this, although she didn’t have that name for it, was Betty Friedan, whose book, *The Feminine Mystique* (1963), would help launch the Women’s Liberation Movement.

Fifties Fashions



As prosperity and the supply of fabric expanded after the war, so did women’s dresses, with hemlines usually stopping at or just below the knee. For women and girls, the most popular style was the full dress or skirt known as the swing style. Other typical features to accentuate a feminine look were bows and wide (AKA “Peter Pan”) collars to soften the neckline. To create that full Fifties look, women and girls wore petticoats, which were often starched with a mixture of sugar and water to keep the full look.

Another popular style for women was the tighter pencil style designed to show off a woman’s “figure eight” or “hourglass” shape. This was considered too provocative for teenagers. Gloves and high heels were also a must for any lady going out in public.

Except on TV shows, housewives didn’t wear high heels and pearls while cleaning the house. However, they did typically wear simple dresses for cooking and household chores. Women’s magazines also encouraged them to dress up for when their husbands returned from a hard day at the office, so maybe a lot of men and TV producers did believe that housewives actually wore pearls and high heels while doing laundry and changing diapers. And women were supposed to be the dumb ones.

To maintain that perfect figure, the corset made a comeback in the form of the girdle. The good news was that steel and whalebone were mercifully replaced by modern artificial fabrics such as spandex. The bad news was that women still had to wear their girdles, oftentimes all day, no matter how hot it might be in an era when air conditioning was relatively rare. Similarly, bras were heavily reinforced to provide extra support (and heat). However, they probably provided good protection in a knife fight.



Casual pants and shorts, as the term implies, were generally worn for casual occasions, such as picnics and barbecues, but were considered inappropriate for most other social occasions. Shorts went to just above the knees and were also high-waisted to cover the belly button in case a lady wore a halter top. Even the bikini (named after the atoll of South Pacific islands that were the sites of several A-bomb tests by the U.S.) was extremely modest by today’s standards, again covering the belly button with a high waist. Young women wore jeans (still called dungarees), but mainly in the home. The sloppy look of the 1940s bobbysoxers was a thing of the past in the 1950s. Girls, in particular, were kept on a tight leash in terms of what they wore outside the home.



The Men in the Gray Flannel Suits. For men, the military conformity of the war largely carried over into the quasi-military corporate conformity of the 1950s...except the uniform now was the dark (blue, brown, or charcoal) suit and tie with a white button down shirt. Even teenagers might wear ties to school, but with a cardigan sweater instead of a suit coat. The “officers” (i.e., athletes) would wear their letter sweaters to denote their rank in the hierarchy.

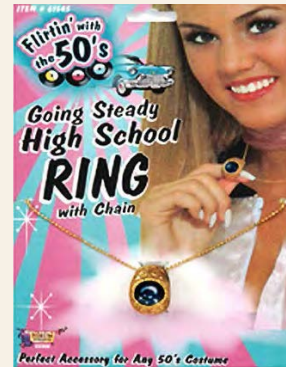
Military conformity in the workplace without the excitement of war was reflected in Sloan Wilson’s *The Man in the Grey Flannel Suit* (1955), a book detailing the frustrations of being trapped in the corporate rat race by day, only to return every evening to a house in the suburbs that was increasingly less a home and more a burdensome means of keeping up with the Joneses. Its characters, Tom and Betsy Rath were fictional, but the lives they portrayed were all too real to growing numbers of Americans in the 1950s.

Hats were a must for men in the 1950s, and no man was considered properly dressed if he went out without his hat. Hats, like suits, were conservative: black, gray, or brown with a medium brim and a dark colored hatband.

At home men could be a bit more casual, even wearing pink shirts and ties, the unofficial color of the 1950s. There was even a semi-sloppy look of leaving the shirt tail out. TV westerns also had their impact on men’s shirts, although they generally did not wear coonskin hats even around the home with their sons.

Point of etiquette. It was considered impolite for a man not to remove his hat when indoors.

Social Security in the 1950s and 1960s: Going Steady



*Wouldn't it be nice if we were older
Then we wouldn't have to wait so long
And wouldn't it be nice to live together
In the kind of world where we belong
You know its gonna make it that much better
When we can say goodnight and stay
together*

*Wouldn't it be nice if we could wake up
In the morning when the day is new
And after having spent the day together
Hold each other close the whole night
through
Happy times together we've been spending
I wish that every kiss was never ending
Wouldn't it be nice
Wouldn't it be nice by the Beach Boys
(1966)*

Going steady was serious business in the 1950s and 60s, being sort of a “term limit” marriage, where neither could date some one else and each had to know where the other one was at all times. (Keep in mind, this was before cell phones.) While going steady, a boy had to call his girl a certain number of times a week and take her out a certain number of times, based on local (high school) custom, but usually ranging from two to seven. Each had a standing date for special events, and the girl would even save up and help budget “their” money for those occasions.

To advertise their quasi-married status, a couple might exchange friendship rings worn on the third finger of the left hand. Other signs of “steadiness” would be for the boy to give the girl

his class ring or letter sweater. Couples in rural Iowa wore matching corduroy “steady jackets”. Teen girls in the 50s were advised to wear “puppy love” anklets to advertise their current status: on the left leg if they were going steady, on the right if they were available. (Or was it the other way around.) In fact, since status changed so quickly and boys might forget the code, there were anklets that actually said, “Going steady” on one side and “Ready, willing, and waiting” on the other.

Saving Lives with Shaving Cream: Burma Shave Signs (1925-63)



Without DVD players, satellite radio, iPods, or cell phones to distract and entertain them while driving on winding and hilly two-lane highways, one of the most creative ways to keep drivers alert and safe were Burma Shave (shaving cream) signs, a campaign that graced America’s highways from 1925 to 1963, by which time the interstates and television had made it obsolete.

Each set consisted of six signs posted 100 feet apart that gradually unveiled a clever four or five-line poem and then the Burma Shave logo. Some poems extolled the virtues of their shaving cream, while others extolled the even more important virtues of safe driving on highways that were much more treacherous than today’s four-lane straightaway interstates. There are no reliable figures on how many cans of shaving cream the Burma Shave campaign sold, or how many lives it saved by making drivers think twice about doing something foolish.

THE BEATS, ROCK & ROLL AND THE COUNTER-CULTURE CYCLE (c.1950-)

*“I saw the best minds of my generation destroyed
by madness, starving hysterical naked,
dragging themselves through the negro streets at
dawn looking for an angry fix;
Angel-headed hipsters burning for the ancient
heavenly connection
to the starry dynamo in the machinery of night.”* —
From “Howl” by Allen Ginsberg

Introduction: the age of pop culture. Different eras typically see one art form dominating the expression of that time’s culture, such as painting during the Renaissance and late 1800s or classical music during the 1700s. During the 1950s and 1960s it was music. One of the defining aspects of twentieth century civilization overall was popular culture which through the mass media of movies, radio, recorded music and television involved a much larger section of the general population as participants, both active and passive. Starting with silent movies around 1900, pop culture grew in popularity as it branched out into radio in the 1920s and talking movies in the 1930s. The dramatic growth of prosperity and new media after World War II saw an equally dramatic growth in popular culture, in particular with the birth of the musical phenomenon known as rock ‘n roll.

In fact there has always been pop culture, commonly referred to before the twentieth century as folk culture, the difference being that pop culture has access to and makes use of mass media. Mass media has also homogenized pop culture where a much larger part of the population is singing the same songs and seeing the same movies. Previously, popular folk songs, such as “Ring around the Rosie”, would have nearly as many local variations as there were local populations singing them. There was just no way to reach everyone with the same version of a song at the same time.

African-American roots. One distinction between high culture and pop culture is that the latter more readily includes the culture of the poor and downtrodden. In post-war America much of that culture was African-American. The roots of African-American music lie back in their African

heritage, which merged with Christianity and evolved into gospel music during the period of slavery and continued after the Civil War. While the gospel music tradition has continued to the present day (e.g., Whitney Houston’s background), it also morphed into two other forms: jazz in urban areas and blues in the countryside.

Jazz and the Beats. A major factor influencing jazz in the postwar era was the rapid pace of urban life. Jazz greats like Charlie Parker would take traditionally slow tunes and speed them up with extra notes in between to create whole new pieces of music that reflected urban culture’s fast pace. Since cities have traditionally been more open to new ideas and art forms, these jazz musicians attracted a largely white audience. A group of these people came to be known as the Beats, referring to that feeling people get, especially late at night, when they are beat, tired, and open to new experiences. One of the Beats, Jack Kerouac, wrote a stream-of-consciousness novel on one long roll of paper, using the written word in an effort to simulate the musical pace and rhythm of jazz. That novel, *On the Road*, captured the spirit of the younger postwar generation that was vaguely dissatisfied with mainstream culture and was looking for something new and more meaningful. Its title and basic plot line also reflected the increasing mobility of American society in its search for meaning in life.

Allen Ginsberg’s poem, “Howl”, written in 1955, made heavy use of *parataxis*, a technique, which juxtaposes two starkly dissimilar images or fragments without any clear connection, forcing readers to make their own personal connections. In fact, much of what seems to be purely random names in “Howl” were very personal specific references to people and events in his own life. For example, his repeated use of Moloch, the Canaanite fire god, to symbolize American culture is a reference to the factory in Fritz Lang’s film, *Metropolis* as well as to the impersonal materialism of American culture. “Howl” and its use of parataxis has had a profound impact on both poetry and music lyrics ever since.

The blues, Elvis, and the birth of rock ‘n roll. Meanwhile, another, more rural, genre of African-

American music was taking form and gaining wider acceptance: the blues. In the early twentieth century, artists from the rural Mississippi Delta, such as Robert Johnson, drew upon African-American field work songs and spirituals to popularize a new kind of guitar-based music among Black listeners. As the century progressed, the blues gained growing attention among white listeners, in particular Alan Lomax, whose recordings of a number of blues artists in the 1930s are our primary record of much of history of this music.

After World War II, African-American music, known then as race music, as becoming increasingly visible, largely thanks to a highly popular white disc jockey in Memphis, Dewey Phillips, who played a free-form mixture of country, blues, and rhythm and blues on his show, thus exposing a growing white audience to a variety of black artists. Therefore, Memphis was ready for a crossover artist when in 1954 Phillips first played “That’s all right” by Elvis Presley. The song gained enormous popularity among white audiences even before they found out he was white. Elvis, who grew up in Tupelo, Mississippi, was himself influenced by a mixture of white country and black blues music, successfully blending them in a style that came to be called rock ‘n roll.

Thanks to Dewey Phillips and Sun Records owner, Sam Phillips, the popularity of Elvis and rock ‘n roll skyrocketed across the South and then the entire nation. Wherever Elvis performed, hordes of hysterical fans, mostly girls, nearly drowned out his music with their screaming. This opened the door for other black artists, such as Chuck Berry and Little Richard, as well as white performers who imitated this style, to rise to stardom and further popularize this new kind of music. As one song put it, “I don’t care what people say, rock ‘n roll is here to stay.”

Evolution of the Youth Culture. Throughout the vast majority of our species’ existence, all ages of society have been mixed together day to day, although work and most social activities were typically divided along gender lines. All that changed with the industrial revolution in two ways. For one thing, the increasingly technical nature of

society led to greater affluence and the growth of public education. Whereas before, children and adolescents would work with the adults in the fields or factories, public education was now separating them from the rest of society by putting them together in classrooms. Although adults were still in charge, young people were increasingly influencing each other in their shared cultural values. And just as the younger generation was being separated from adults, women’s suffrage was bringing the genders closer together, mixing them more and more in the workplace and the classroom. Thus a virtual youth subculture was starting to form.

The role of postwar prosperity. The popularity of rock & roll was also the result of other historical forces converging on America in the 1950s. At the root of this was America’s position after the war as a global economic and political superpower. By the 1950s this had translated into unprecedented prosperity and new technologies, especially mass media, in particular television that millions of Americans were able to buy. As usual such developments had unforeseen results, in particular with teenagers.

By the 1950s, American teenagers working part-time jobs after school were making more money than the average family during the Depression twenty years earlier. Since their parents generally paid the bills, this meant teens had unprecedented amounts of money, which they could spend just on themselves. One cheap and seemingly innocuous new product they bought was the portable record player. Whereas, before a family might have one large record player that sat in the living room and was controlled by the parents, now teens could play their own records in the privacy of their bedrooms, free from their parents’ censorship. At the same time, record companies along with radio and TV stations, recognizing teenagers as a huge affluent new market, catered to their tastes, even if they were somewhat rebellious and their parents disapproved. The result was global awareness and popularity of both the Beat culture and rock ‘n roll.

The pop culture cycle. Of course, there was backlash from adults and mainstream America against these strange new cultural forms. As a result, the media typically would incorporate the more “acceptable” aspects of this new “youth

culture” while rejecting and/or parodying its more radical aspects. Thus when Elvis Presley appeared on Ed Sullivan’s popular variety program, the cameras showed him only from the waist up because of his gyrations when he performed. Similarly, there were endless parodies of Elvis, including those of small children imitating his style. Treatment of the Beat culture was more hostile, portraying them as violent rebels who were undermining the morals of our youth. The media even coined a new word for them, beatniks, combining beat with the Russian satellite Sputnik, because they were “way out there.” One popular TV sitcom, *Dobie Gillis*, had a totally clueless (but harmless) stereotype of a beatnik named Maynard G. Krebs. At first, this diluted portrayal of the youth culture would increase its popularity as it exposed more people to it. That in turn would invite more homogenized stereotyping of the youth culture, and so on.

However, this process had its limits. Eventually, the youth culture would become so diluted and mainstream, it would lose its appeal to teenagers, thus reducing media profits. However, a new, revitalized, and more radical, expression of the youth culture would emerge. Once again, the media would stereotype and parody this new movement and also incorporate its safer elements, making it more popular with mainstream culture until it also lost its appeal. This would happen with the “hippies” in the 1960s, Punk and New Wave in the late 1970s, and Hip Hop in the 2000s.

Creating the Youth Culture



The “bobby soxers” of the late 1940s who cultivated a sloppy image of rolled up jeans and loose-fitting clothes were a precursor to the screaming hordes of fans chasing after Elvis in the 1950s and the Beatles in the

1960s. In the 1940s the object of their adulation was Frank Sinatra.

With rock n’ roll came the beginnings of the generation gap, its first battlefield being the family radio or hi-fi and the first battle being whose music got played on it. The result was often an uneasy truce, with either parents or their teenagers buying them transistor radios and portable record players (another invention of the 1950s), which their owners took to the “forbidden cities” of their bedrooms where they could listen to their subversive music and plot the next stage of the “revolution.”

And to many adults rock & roll was a revolutionary threat to the status quo. Senator Estes Kefauver headed the Subcommittee on Juvenile Delinquency where witnesses testified to the direct links between rock & roll and juvenile crime, while one psychiatrist referred to it as a “communicable disease.” Much of the fear about this music was based in racial prejudice, since its roots were African American blues, jazz, and gospel. Critics called it the “Negro’s Revenge” and went on how its voodoo dancing and tom toms had white girls “squealing and drooling over negroidal crooners.”

Nor were critics completely off the mark about the social effects of rock & roll. Between 1955 and 1963, which were also key years in the Civil Rights movement, the number of top ten hits by black artists increased by fifty per cent. All that extra exposure to African American music must have had its effects on teenagers’ views on race. After all, it’s a lot harder to hate people when you’re dancing to their music.

“*Fifties speak*”. Even more than the Flappers of the 1920s, the youth culture of the 1950s generated what seemed to adults to be a whole new alien language occasionally laced with some English to provide a minimum level of communication between generations. While the phenomenon itself was nothing new, the numbers of young people using it was unprecedented. In the 1960s, as the Baby-boomers reached adolescence, the numbers

would mushroom and help create what would be termed the Generation Gap.

Below are some select terms and phrases in case you ever get caught in a time warp and find yourself in the 1950s. Some have remained part of daily speech to the present day. Most haven't.

<i>Actor</i>	<i>Show-off</i>
<i>Agitate the Gravel</i>	To leave (hot-rodders)
<i>Ankle-biter</i>	A child
<i>Ape (used with go) really mad</i>	to explode or be
<i>Are you writing a book?</i>	You're asking too many questions
<i>Back seat bingo</i>	Necking in a car
<i>Bad news</i>	Depressing person
<i>Bash</i>	Great party
<i>Big Daddy</i>	An older person
<i>Big tickle</i>	Really funny
<i>Blast</i>	A good time
<i>Blow off</i>	To defeat in a race
<i>Boss</i>	Great
<i>Bread</i>	Money
<i>Burn rubber</i>	Accelerate hard & fast (hot-rodders)
<i>Cast an eyeball</i>	To look
<i>Cat</i>	A hip person (Beats)
<i>Chariot</i>	Car (Beats)
<i>Chrome-plated</i>	Dressed up
<i>Circled</i>	Married
<i>Clutched</i>	Rejected
<i>Cranked</i>	Excited (Beats)
<i>Cream</i>	To badly damage)
<i>Cube</i>	A normal person
<i>Cut the gas</i>	Be quiet!
<i>Cut out</i>	Leave
<i>Daddy-O</i>	Term of address (Beats)
<i>D.D.T.</i>	Drop Dead Twice → Respond: What, and look like you?
<i>Deuce</i>	A 1932 Ford (hot-rodders)
<i>Dibs</i>	A claim
<i>Dolly</i>	Cute girl
<i>Don't have a cow</i>	Don't get so excited (hot-rodders) A
<i>Drag</i>	short car race; (Beats) A bore

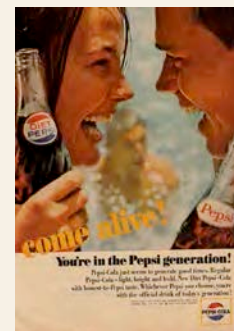
Earthbound
Epistle
Eyeball
Fake Out
Fast
Fracture
Frosted

Reliable
Letter
Look around
A bad date
Sexually active
To amuse
Angry

“Spendagers” was what one critic dubbed the teenagers of the 1950s, and for good reason. In 1956, *Scholastic* magazine disclosed that 13 million American teens were earning \$7 billion a year, averaging \$10.35 per teen each week, more money from part-time after-school jobs than the average family had made during the Great Depression twenty years earlier. And most of that was discretionary income, making teens a major factor in the consumer market. As the bulk of Baby boomers became consumers in the 1960s, these numbers would rise dramatically, giving rise to a consumer-oriented youth culture that refused to die even as Baby Boomers grew older (although many would refuse to grow up).

It was the combination of lots of teens with money to spend and mass market advertising that created a new phenomenon: the youth culture. Rarely, if ever, has the elusive promise of eternal youth and immediate gratification so dominated cultural values at the expense of age and experience.

You're in the Pepsi Generation (gap)



Various companies, such as Pepsi, cashed in on the emerging youth culture and market by packaging their products in ways that were both appealing to teen-agers and squeaky clean enough so as not to offend parents and make them worry that drinking Pepsi would turn their children into beatniks.

Looking at Pepsi ads from the 1950s to the 1960s, one sees an emerging re-definition of young, which happened to coincide with an increasingly younger consumer market. The people portraying a youthful image in the 1950s are definitely adults, youthful and active, but some with what might be hints of grey in their hair. These are also people who are successful, being able to afford ski trips and fancy clothes. So Pepsi should fit in with their affluent lifestyles. As late as 1962, the models, while youthful, have crows' feet around their eyes along with the motto: "for those who think young."



By 1965, millions of Baby-boomers have reached or are approaching their teen years and collectively have enough money to buy a lot of Pepsis. As a result, the new slogan (seen at top) is "Come alive! You're in the Pepsi generation!" The models are teenagers, not with expensive clothes or ski equipment, but having the freedom to go to the beach and enough change to buy a Pepsi. Besides their numbers, they're also too young to (legally) buy alcohol, which is a major competitor for the adult market. Making Pepsi more appealing, both beer and Pepsi came in bottles.

America's beat is the world's beat

World beat is a term that could first be ascribed to rock & roll, because American teens weren't the only ones affected by its infectious "voodoo" rhythms. Teens in Europe were also caught up with this new music that they could identify as belonging to their generation. However, in Europe there was the added barrier of state-controlled radio which severely limited or

banned rock & roll from the airwaves. If rock's association with African Americans made it something of an outlaw music in the U.S., being totally banned made it more so, and therefore even more enticing as forbidden fruit.



Along came Allen Crawford, a London record producer who in 1964 started illegally broadcasting rock music from an off-shore ship, the *Caroline*, to British teens hungry for the latest hits, all this at a time when the Beatles and British Invasion bands were at the height of their frenzied popularity. Crawford's broadcasts didn't stop at British shores either. Dutch teens picked it up, inspiring their own pirate radio broadcast from the North Sea. So dominant were British and American rock becoming by then that Dutch DJs broadcast only songs sung in English and mixed their own banter with English phrases.

World culture was being born with the first generation totally plugged into the mass media. French authorities trying to stop it passed a law requiring at least 40% of the music broadcast on the radio must be of French origin. Even in Russia, teens hungry for American and British rock would pick it up on Radio Free America (which Soviet authorities tried to jam), record it, and somehow burn illegal copies using X-ray plates (below).



142B. THE EVOLUTION OF THE SUPERMARKET (c.1900-1960)

"When I saw those shelves crammed with hundreds, thousands of cans, cartons and goods of every possible sort, I felt quite frankly sick with despair for the Soviet people." --Russian president, Boris Yeltsin describing his first visit to a Houston supermarket

From credit to cash-and-carry. It's easy to take for granted supermarkets as the way we shop for food. However, the supermarket is both a product of the industrial revolution and a vehicle for change in our daily lives. Out of industrialization came four effects that started us down the long road to the supermarkets: vastly improved agriculture, a higher standard of living and the urbanization that came with it, the transportation revolution (both railroads and automobiles), and mass media.

Previously, shoppers had to go on a nearly daily basis to a variety of specialty stores (butcher shops, produce markets, dairies, and bakeries) for their groceries. Besides being time consuming, such a system was also expensive.

By the early twentieth century, railroads were bringing vastly increased crop yields to distant urban markets so that by 1920 over half of America's population was living in towns with populations of 2500 or more. This profoundly affected the consumer market. Previously, when the economy was primarily agricultural and a farmer got only one harvest and payoff per year, he would have to pay for any supplies he needed with credit. The local storekeeper would keep a running tab and the farmer would pay it off when the next harvest came in. However, by the 1920s when most of the population was living in towns and cities, people earned weekly paychecks and could pay for whatever they bought with cash.

In 1917, a man named Clarence Saunders opened Piggly Wiggly, the first cash-and-carry grocery store. In addition to paying with cash instead of credit, it was set up in a revolutionary new way. Previously, much of the store's inventory was on shelves behind a main counter along with a person who would fetch whatever items the shopper

needed. The merchandise in Piggly Wiggly, however, was on shelves in aisles winding through the store. Customers would get the items themselves and pay for them at the counter. This had several advantages. First it was faster for the customers who no longer had to wait in line for someone else to get their groceries for them. This, in turn, made it possible to handle a larger number of customers in a given amount of time, thus increasing the volume of sales. In addition, it reduced labor costs since customers were doing most of the work. The combination of higher volume and lower labor costs meant Piggly Wiggly could charge cheaper prices, thus making it popular with customers. Eventually, there were some 3000 Piggly Wiggly's across the nation, not to mention thousands of other cash-and-carry stores.

The birth of the supermarket. In 1930 the success of the cash-and-carry stores inspired a branch manager for Kroger Grocery & Bakery Co., Michael Cullen, to open King Kullen, the first large scale supermarket in Queens, N.Y. With the slogans "the world's greatest price wrecker," and "Pile it high; sell it cheap," King Kullen provided all a shopper's grocery needs under one roof, thus saving consumers time while featuring lower prices because of its high volume. It took advantage of two other products of the industrial revolution: the automobile, which created a much more mobile and geographically widespread population of consumers, and mass media advertising in newspapers which could reach that far-flung population of shoppers. Keeping prices even lower was King Kullen's remote location from the center of town, which required lower rents while providing shoppers with parking spaces for their cars. By his death in 1936, Cullen had seventeen such markets across the Northeast. Meanwhile, another former Kroger employee, William Albers, had opened Albers Super Market in Cincinnati, the first store to use the word "supermarket." By 1939, there were 4,982 supermarkets operating across the nation. As early as 1932, the food industry accounted for the second largest advertising budget in magazines.

Other innovations led to greater profits for the supermarkets and savings for consumers. Refrigeration and frozen foods allowed longer shelf life for products, thus reducing waste and expense.

They also meant shoppers could buy larger amounts of food at one time and store it, thus saving time and money on extra trips to the store. Another invention was the shopping cart, basically a basket with a handle and four wheels, which allowed shoppers to carry (and buy) larger volumes of food at one time. The one limiting feature of the shopping cart, the amount of space it took up in storage, was solved by the invention of the nesting shopping cart where unused carts fit inside one another.

Supermarkets created a whole new dynamic in food marketing. Instead of going through a wholesaler to get their products on the shelves, food manufacturers went directly to the supermarkets. Competition for shelf space further reduced prices. More sophisticated ways of selling foods also evolved. One was pre-packaging by the manufacturers who used more colorful eye-catching labels and wrappers to attract the buyer. Stores used bright lights and soothing music to make shopping an exciting and enjoyable experience. Strategies of product placement, such as putting boxes of sugary cereals advertised by cartoon characters on lower shelves where children could reach them, replaced random arrangement of products. The advent of television in the 1950s merely added to an impressive arsenal of marketing techniques.

By 1960, supermarkets were selling 70% of the nation's groceries. In 1930 the average share a family's budget for food was 21%. By 2009 it was down to 6%, creating more discretionary income for consumer luxuries, family homes, and education, the hallmarks of the middle class.

Today, the supermarket has given us year round produce and bar codes, but also gets blamed for obesity in America and global warming. In short, it has transformed and become an integral part of our lives.

A SHORT HISTORY OF MODERN ADVERTISING SINCE 1945

“I like Ike.”—1952 political slogan
“Winston tastes good like cigarette should.”
—Cigarette ad

Introduction: from producers to consumers. One of the most significant turning points in human history came in the 19th century when industrialization started turning Western Civilization from a producer to a consumer oriented society. In other words, whereas before the main concern was to produce enough to satisfy everyone’s needs, now the concern was getting people to buy and consume everything being made through mass production. Advertising, mainly print media until the 1900s, had been evolving more or less in step with ever-increasing production rates.

However, both production and advertising took a dramatic turn as a result of World War II, which created two very different situations in the U.S. and the rest of the world. For Americans, the recent conflict had brought them out of the Depression, as millions of workers had found jobs thanks to government contracts for producing tanks, planes, and other munitions for the war effort. Conversely, the war had impoverished the rest of the world, including our primary trading partners in Western Europe, and left them in no position to buy the consumer goods our factories were retooling to produce now that government contracts for military goods were drying up. In addition, Americans still clung to a traditional Puritan thrift ethic that discouraged unnecessary consumption. American businessmen feared a return of the Depression if they couldn’t sell their products. Adding to individual companies’ fears was the fact that there was no real difference between their products and those of their competitors.

For Western Europe, the solution was the Marshall Plan in 1947 to pump money into foreign economies. In addition to creating markets for American goods, it would also stabilize our allies politically against communism as the Cold War was developing. Similarly, the U.S. helped rebuild Japan’s economy to create a stable trading partner,

ally, and base in East Asia for stopping Soviet and Chinese expansion.

Madison Avenue takes off. In the U.S., companies and Madison Avenue (where ad agencies were clustered in New York City) were enlisting the help of psychologists to find out what makes people buy what they do. The results were surprising, if not a bit disturbing. In one study, hidden cameras measured the rate of eye blinks by shoppers, the theory being the rate would increase from excitement over all the products on the shelves. In fact, their eye blink rates dropped to an almost catatonic state, as if they were in a trance. Not until they were at the cash register watching the bill climb did their eye blink rates dramatically increase.

Another thing surveys showed was that consumers, who swore by a particular brand of product, often could not distinguish their “favorite” brands from those of competitors when all external packaging and other identifying marks had been removed. Furthermore, they found that people were buying on the basis of subconscious fears, prejudices, and even unconscious feelings. Delving deeper into this, psychologists hired by ad agencies identified three basic needs in consumers’ psyches that they could exploit: conformity, oral gratification, and security.

Armed with this information, advertisers started employing non-rational techniques, such as using bright colors and logos to sell the illusion of satisfying these hidden needs. They settled on several areas of approach by which to win consumers, six of which are discussed below with select examples. Of course, some of the examples could fall into two or more categories.

1) *Sex appeal* is probably the most widely used approach to selling products, even when those products have no rational connection to sex. But, a whole new industry was emerging, or reinventing itself on the basis of non-rational strategies. Therefore, cigarettes and fountain pens, with their long sleek phallic imagery, were ideal products for boosting a man’s self-image of attractiveness. Similarly, men’s adventure magazines and beer all were presented as reinforcing men’s feelings of masculinity. One of the biggest mistakes Coors

Beer ever made was trying to market beer to women. Although they quickly withdrew the campaign, their image as a manly beer probably still hasn't recovered.

Cars as symbols of power and sexuality in the 1950s were a classic example of form leading function. Previously, cars had been seen mainly as practical and functional, although a few cars, such as Dusenbergs in the 1930s, had been exceptions to this rule. Then along came Harley Earl, who started designing cars for General Motors with size and style being the main selling points instead of reliability and economy. The iconic hallmark of American cars in the 1950s was the tailfin, which seemed to get larger (and more threatening) every year. (There were even rumors of people being impaled on them.) Big American cars became one of the ultimate status symbols, and remain so in some countries, notably China where Buicks are still popular. Madison Avenue also pushed the idea that a man should buy a new car every two years to renew his sense of manhood.

Advertisers also used sex appeal to target women, but the more conservative nature of advertising in the 1950s limited what Madison Avenue could show mainly to makeup and hair-care products. One campaign that did push the limits was the Maidenform Bra ads, which showed women dreaming they were in various locales that were either exotic (e.g., ancient Egypt) or unlikely (e.g., construction sites) wearing nothing above their waists except their Maidenform Bras. Over the years, as standards for what was deemed appropriate for public advertising loosened, women were increasingly used to sell sexy clothes to other women and hamburgers to men.

2) *Reassurance of worth.* This was an area where women were especially targeted, since after the War they had typically become stay-at-home housewives, many of them in new suburban homes. Therefore, advertisers pitched the line that a woman's value was measured by the quality of her housework, especially cleaning. Daytime TV was bombarded with ads for dish detergents, laundry detergents, and various other cleaning chemicals. Daytime dramas came to be called soap operas since companies selling such products sponsored

them. A typical commercial would be a mini-drama with two women: one whose house or laundry was spotlessly clean and another who was depressed because her work didn't measure up until the first woman would enlighten her about the brand of cleaning chemical she was using. The last scene would show the second woman, having used the superior product, euphorically showing off her clean laundry or house. And they lived happily ever after.

3) *Creative outlets.* One phenomenon of the 1950s, popularly known as Housewife Syndrome, referred to the depression of housewives feeling bored and unfulfilled with the day-to-day drudgery of housework. Manufacturers and Madison Avenue came up with lines of pre-packaged food products that were simple and easy, but also designed to appeal to women as a creative outlet, just like the great chefs of Europe. When a line of instant cake mixes where the cook only added water failed, researchers figured out that adding just water wasn't creative enough and modified their product so women could add an egg and a cup of milk. Now housewives could feel just like the great chefs of Europe.

4) *Emotional security.* One of the more outrageous advertising campaigns took place in 1921 when the advertisers for Listerine Mouthwash (which had previously been sold as a floor cleaner and cure for gonorrhoea) invented a condition dubbed halitosis (bad breath), making millions of consumers insecure about something nearly everyone had up to that point in history and few people worried about. Since then, advertisers have constantly played upon, built up, and even created insecurities in consumers about something they have but no one else does (such as body odor, dandruff, and even "housitosis") or about something everyone else has but they don't (e.g., the latest fashions, toys, or electronic device). Emotional security especially relies on social acceptance, so ads show the consumer enjoying their product is with a group of people also enjoying it. Beer ads especially do this, typically showing a bunch of men together after a day at work or winning a big game (reassurance of worth) and enjoying a beer together as their reward.

5) *That warm and fuzzy feeling.* This includes all the commercials that use darling little children and puppies to sell us such things as cars and furniture. It's also used to induce nostalgic feelings of the good old days (e.g., lemonade) and family reunions (e.g., wine and biscuits).

6) *Immortality.* This especially includes commercials for financial and insurance companies that make us feel we can take care of our families even after we die.

Pushing ethical standards. While such tactics sparked discussions about ethical standards, their apparent success led to even more questionable practices, largely driven by the fear that once everyone had bought a certain product there would be no reason to buy any more. Out of this came something called planned obsolescence, where products either became outdated or broke down after a relatively short time, thus inducing the consumer to buy a "new and improved" version of the product. Possibly the most dangerous examples of this practice came from the American auto industry in the late 1960s when it started producing cars that proved increasingly unreliable. Behind this was a certain complacency about the dominance of American cars in the marketplace. However, in the 1970s cheaper, more reliable, and fuel-efficient foreign cars, especially from Japan, started taking larger and larger shares of world automobile markets. By the time American companies started improving the quality of their cars again, they had lost their dominant position in the world.

Another controversial practice was subliminal advertising. These were ads hidden from consumers' conscious awareness so they could only notice them subconsciously or unconsciously. One popular charge concerned movies, which run at twenty-four frames per second, too fast for the human brain to consciously notice individual frames. Periodically hidden inside one of these frames was an ad for popcorn, soda, or candy, the theory being that, after viewing several of these frames over several minutes would feel hungry or thirsty and go to the concession stand for food or drink. Later research indicated subliminal advertising had little or no effect.

The television age. Modern advertising really came into its own in the 1950s with television, which proved itself an especially powerful medium for several reasons. Central to its influence is the fact that we are a visually oriented species that gets 90% of its information through the eyes. As a result, it is much harder for us to ignore a TV than a radio. Of course, we can turn it off, but we're not programmed to shut out visual stimuli, so, all too often, the TV stays on. Once it has our attention it can incessantly repeat a message until it sinks in. Compounding this is the fact that it comes into people's homes where they can't escape its message, unless they turn it off--which they generally don't do.

Possibly most unsettling is how TV captures the imagination and attention of children, who are especially impressionable and easy to influence, thus making them lifelong customers. McDonalds has been particularly successful in this regard. After catering to a whole generation of baby-boomers from childhood through adolescence, it realized that America's increased affluence might make more upscale restaurants appealing to those same customers as adults. Thus, in the late 1960s, it created a clown (Ronald McDonald) and Happy meals with toys included. Consequently, the children of baby-boomers would pester their parents (who tended to indulge their kids) to go to McDonalds and other fast food restaurants with similar sales pitches to kids. Since the 1950s, advertising has become both more sophisticated as technology has advanced and more explicit, as standards of what is appropriate for TV have loosened.

The Evolution of TV Advertising



At first, ad agencies saw TV as just an extension of radio and treated TV ads as radio ads, just with pictures. Therefore, on July 1, 1941, when the first TV commercial aired on WNBT (NBC)

in NYC for Bulova, the camera focused on a watch and said “It’s three o’clock, Bulova Watch time.” This was already a standard ad on radio, just without the picture.

The ad agency, Biow Company, charged Bulova \$9 for the ad: \$5 for TV time & \$4 for “station charges.”

Just like the Internet in the 1990s, no one knew how much of a future TV would have. Who would buy TVs with nothing to watch and who would broadcast shows without anyone owning TVs? The first big market for TVs was taverns because sports events would pack in customers. Therefore, beer, cigarettes, cars & Gillette razors were the main sponsors.

Because of limited resources and no prior experience in the medium to draw upon, early TV advertising was largely done as cheap cartoons or live demos. In June 1946, Gillette & NBC televised the Joe Louis-Billy Conn fight. Louis won. So did Gillette with an audience of 150,000. In 1947, Ford & Gillette sponsored the first game of the World Series, making Gillette’s Sharpie, (an animated parrot) and jingle (“Look sharp, be sharp”) fixtures on TV for years.

Live demos were another early mainstay of TV commercials: band aids staying stuck to boiling eggs; a Remington razor shaving a peach; the Timex torture tests (“It takes a licking and keeps on ticking”), and dropping an RCA radio from a 12’ ladder.

Of course, live demos had their pitfalls. For example, June Graham demoing a frost-free freezer couldn’t get the easy open button to work. So she shifted emphasis to another feature with the camera zooming in on her face while a stagehand off camera opened the freezer. Then the camera zoomed out to show a smiling woman next to an open freezer door. Another product that didn’t work right was the early pop-top for beer cans, requiring some deft camera work to cut away until the problem was fixed.



In another commercial in 1959, the woman demonstrating a Frigidaire delivered her lines flawlessly until the end of the ad when she yelled “Help! I can’t move!” because the microphone wired to her bra had short-circuited when she touched the Frigidaire.

Until the 1950s “respectable” advertising was still a print medium that still put a premium on the written word. Therefore, it was difficult to sell the scions of an older generation of print-driven advertising executives on the possibilities of TV advertising with its dynamic moving images that captured potential customers’ attention whether they liked it or not. However, in 1957 Chevrolet gave a man named Kensinger Jones a shot at using this new approach, setting him up with a huge budget of \$1 million that would soon grow to \$90 million.

At the time, Chevrolet and its parent corporation, General Motors, were on top of the world, producing nearly half the cars sold globally at the time. GM even willingly allowed the then nearly bankrupt Ford Motor Corporation to steal some of their top executives, fearing that if it controlled any more of the automobile market they would be subject to government anti-monopoly actions. Therefore, Chevy felt safe in trying a new approach to advertising, an attitude that was quickly dying in its approach to producing cars.

For his TV ads, Jones brought in an experimental filmmaker, Gerry Schnitzer, whose approach was to let the camera tell the story with minimal narrative. For example, one short film had a postman approaching a hopscotch board on a sidewalk and, when no one was looking, playing a secret game of hopscotch.

Schnitzer's first commercial for GM showed a wholesome clean-cut teenager rushing out the door to the prom as his family watches. The boy approaches his jalopy, the older icon of the youth car culture, patched together with various parts and made functional by hours and hours of tinkering. As he's about to get in, he notices a new Chevy convertible (with the top down).

For the first time words are spoken, not dialogue however, but a soothing male voiceover announcing: *"If it's happened once, it's happened a thousand times."*

The boy looks back and forth between the Chevy and his family, who are clearly in on the surprise. Then Dad reaches in his pocket, pulls out a set of keys and hands them to the boy, who runs to the new car, then back to the jalopy to retrieve his nearly forgotten corsage and almost as a farewell to a by-gone age.

Only after he picks up his equally wholesome date, does the voiceover return to deliver the message as if we haven't gotten it: *"What a gal! What a night! What a car! The new Chevrolet!"*

That ad, along with other Schnitzer ad/films with little or no dialogue and minimal narration (such as a driverless Chevy astounding style-conscious Parisians as it moves effortlessly through the streets of Paris and a Chevy sitting on top of a mountain as an airline pilot exclaims: "My God, there's a car on that rock"), signaled as much as anything, the birth of modern advertising in television. Ads with extensive dialogues or voiceover narratives would still comprise much, if not the bulk of TV advertising, but the cutting edge of TV ads would hearken back to Gerry Schnitzer's work.



In 1971, TV commercials went from 60 to 30 seconds due to higher costs. One casualty was live demos because 30-second demos are nearly impossible to do.

Rosser Reeves Sells Pain Relief and a President



The 1952 presidential election pitted the seasoned Democratic politician, Adlai Stevenson, against General Dwight D. Eisenhower, a man with virtually no experience in politics (unless one counts how he handled the egos of other generals like Montgomery and Patton in World War II). Ike was no public speaker like Stevenson was, so the Republicans brought Rosser Reeves of the Ted Bates ad agency, to handle his campaign.

More than anyone, Reeves understood the power of the new medium of television. He called his approach Unique Selling Proposition (USP). It had three basic rules:

1. An ad must make a single and simple pitch to the consumer.
2. This pitch should be one the competition can't make, or at least hasn't made yet
3. The pitch has to be so overwhelmingly powerful and convincing that potential consumers can't help but think that it is absolutely true.

In that vein, Reeves was responsible for numerous memorable slogans:

Wonder Bread helps build strong bodies in eight ways.

M&M's melt in your mouth, not in your hands.

Colgate cleans your breath while it cleans your teeth.

How do you spell relief? R-O-L-A-I-D-S.

Only Viceroy gives you 20,000 filter traps in every filter.

Certs breath mints with a magic drop of retsyn.

Reeves would be responsible for some of the most successful, and irritating, ads in TV history, most notably the "Hammer in the Head" commercial for Anacin (1952) that showed a

head wracked with three different types of animated pain (top). Then an authoritative sounding announcer would inform us that Anacin delivers relief from pain “*fast, Fast, FAST.*” It also would provide “*Fast relief from headaches, neuritis, and neuralgia,*” not that anyone in the audience had heard of neuritis and neuralgia. But they sounded bad, so you sure didn’t want to get it.

Another claim was that “*Three out of four doctors recommend the ingredients in Anacin,*” although it says three out of doctors recommended Anacin itself. In fact, it turned out he most prominent ingredient in Anacin after aspirin was a large dose of caffeine.

In fact, a consumer poll found that viewers hated the Anacin ad. But it seemed to sell a lot of Anacin and the campaign ran for over a decade.

Eisenhower answers America. This was the approach the Eisenhower camp got when it hired Rosser Reeves to run its campaign. In a series called “Eisenhower answers America” Reeves created 29 TV spots based around three themes: the cost of living, corruption in government, and the war in Korea. In each spot an average citizen would ask a question and Ike would answer it. Such as:

Man: “*General, the Democrats tell me I never had it so good.*”

Eisenhower: “*Can that be true when America is billions in debt, when prices have doubled, when taxes break our backs, and we are still fighting in Korea. It’s tragic...and it’s time for a change.*”

That’s what the viewer saw, something seemingly straightforward. However, it was large smoke and mirrors in how it was constructed. First, Reeves would have Ike read a series of answers, looking down to his right as if directly addressing a citizen until the last several seconds when he would turn to directly address the camera (i.e., the viewer). Then Reeves would find some average-looking citizens who would ask a question while looking up to their right.



After that, Reeves would match different questions with answers and splice the clips together to make it look like Ike was having a personal dialogue with each person.

Ike hated the phony nature of the ads and the fact that he wasn’t even allowed to wear his glasses to read the cue cards. (Supposedly they made him look too old.) However, the ads seemed to work, being run in a media blitz in certain battleground states in the last three weeks of the campaign. Naturally, Democrats called foul at this new technique, but to no avail. A new age in politics had been born. No longer was it public speaking to a crowd that mattered most. Now it was the apparent one-on-one eye contact between the politician and each individual viewer via the TV screen that could reach literally millions of individuals simultaneously.

FC.142D A SHORT HISTORY OF THE AMERICAN AUTO INDUSTRY TO c.2010

The Oil Century. Just as one could call the twentieth century (especially after 1945) the American Century, one could also call it the Oil Century. In 1949, coal accounted for two-thirds of the world's energy. By 1972 two-thirds of global energy came from oil, and most of that was burned in cars, and most of those cars were made in America.

Until the early 1900s, automobiles were individually made and limited to a small market able to afford such luxuries. Then, along came Henry Ford with the revolutionary new concept, the assembly line, which mass produced cars cheaply so that a lot more people could afford to buy them. The boxy Model T had no frills and, as Henry Ford would quip, came in any color a customer liked, as long as it was black.

What made cars so dynamic a part of the economy was the fact that workers' wages were high enough and cars were cheap enough that a much larger part of the population could afford the cars and other products they were making. The true consumer society had been born, and inhabiting it was a new type of person that one historian dubbed "Hydrocarbon Man."

Form over function. For the first half of the century, the basic formula for success had been to make good affordable cars with no frills and people would buy them. Even during the dark days of the Depression, that formula held true for maintaining what few auto sales took place. After the war and fifteen years of deprivation, however, people had more money to spend and were ready for something new and exciting.

Making this possible was Charles Kettering's invention of the high-compression engine using high-octane fuel in 1947. This could have led Detroit in two directions as far as producing cars was concerned: smaller fuel efficient cars, or much bigger cars that could carry extra features, weight, and status. Detroit went for Big. The ultimate winner would be a small foreign car derisively called the Bug.

However, just as the auto industry was moving forward in its advertising, it was moving backward in the quality of its product. This was largely the work of two men, General Motors' CEO Alfred P. Sloan, and his chief designer, Harley Earl. As Sloan saw it, smaller cars meant smaller profits, since it cost nearly as much in parts and labor to build a small car as a big one.

In this new age of affluence and abundance, Sloan saw the automobile less as a functional device and more as a status symbol representing one's current place as he moved up in the social hierarchy. For GM the hierarchy went from the basic Chevy for working class people and young couples just starting out up through the Buicks and the Oldsmobile and finally to the Cadillac as the ultimate sign that one had arrived at the top of society.

However, Sloan wanted customers to change cars on an even more regular basis than they changed status. To accomplish this, he had to make customers dissatisfied with the cars they currently owned. And to accomplish that, GM had to change each model of car every year in enough ways to distinguish it from last year's older "out of date" model. The term for this approach was "planned obsolescence."

Heralding these changes would be a massive advertising campaign to get the public excited for next year's new models coming out in the fall. As a result, the unveiling of next year's models became a major media event, at first with traveling auto shows, and later with TV advertising.

However, it was impractical and expensive to significantly improve a car in terms of engineering each year. Besides, such changes would usually be hidden under the hood, thus making them much less exciting and harder to sell. It was much cheaper to make cosmetic changes in the car, changing the shape or size of the body each year and adding more shiny chrome and larger tail fins to give the misleading impression of being more streamlined and futuristic.

The problem was that function was increasingly taking a back seat to form. In some cases, the changes in such things as body design actually compromised performance and safety. Among

other things, as American cars became progressively gaudier and heavier, fuel efficiency dropped. However, at a time when America was virtually self-sufficient in oil and gas was cheap, that didn't seem to matter. Twenty years later it would.

The Bug. By the late 1950s, the American auto industry was so far on top of the rest of the world that it lost sight of what had made it great. Sales were still skyrocketing, and so were stocks on Wall Street. Unfortunately, auto executives became obsessed with how the stock market was doing and ignored the quality of the cars they were producing. And, at first, there was no necessary correlation between the two. More specifically, there was a lag rate between when the quality of the autos started falling and the time it took for the consumers to catch on. Masking, and partly adding to, this decline in quality were the flashy, but unnecessary, new features (e.g., chrome and tailfins) that were being added each year to make last year's model seem obsolete.

In the meantime, both Western Europe and the U.S. were seeing a new emerging market of consumers wanting or only able to afford basic no-frills automobiles. In Western Europe, this was the result of the economic recovery starting with the Marshall Plan. In the U.S., it was the emergence of a relatively affluent blue collar middle class making decent wages in American factories and able to buy their own homes and cars.

There were increasing calls for Detroit to meet this new demand, but the thinking among the executives was that big expensive cars made bigger profits than small cars and that producing small cars would cut into big-car sales and profits. Therefore, American auto makers dragged their feet in producing a car for this market and left the door open for small efficient foreign cars to sneak in and steal American and global markets. It started with a small inconspicuous German car: the Volkswagen Beetle.

The idea of the Beetle went all the way back to the 1930s, when the German auto maker, Ferdinand Porsche, had a dream of making a cheap efficient version of Henry Ford's Model T for the German public. Hitler initially bought into this idea, but diverted money set aside from workers' paychecks toward buying such a car to building his navy.

Thus the Beetle never got off the ground until after the War, when a visionary German businessman, Heinz Nordhoff, bought the then derelict auto plant and started bringing Porsche's dream to life.

It was a success in Europe, but in order to modernize production to make his cars more competitive in the marketplace, Nordhoff needed hard cash, and that meant he needed to crack the U.S. market. Complicating that was the fact that the Beetle was made in Germany, which still didn't sit so well in many Americans' minds just a decade after the war. His initial effort in 1949 to market the Beetle through a Dutch salesman, Ben Pon, met with failure. What did work, starting next year, was a gradual word-of-mouth campaign about the reliability and low cost of the car. It began with a handful of GIs coming back from service in Germany with Beetles they had bought there. By 1956, the Beetle had won so many customers that it merited a review in *Popular Mechanics*:

"The Volkswagen sells because it is, more than anything else, an honest car. It doesn't pretend to be anything it is not. Being an honest piece of machinery, it is one the owner can be proud of. Wherever he looks, he sees honest design and workmanship. There are no places where parts don't fit, where paint is thin, where the trim is shoddy. There are no body rattles, no water leaks. Neither, of course is there overstuff, false luxury either. There is nothing about the car that is not sincere. One cannot imagine for instance, a Volkswagen with a fake air scoop or tail fins to make it look like an airplane in flight."

Of course, *Popular Mechanics'* audience consisted largely of "techno-geeks", many of them auto engineers, who were interested in function over form and weren't impressed with the status that supposedly came with the needless gimmicks weighing down American cars and driving up their prices. Unlike most of the public, they saw the flaws and dangers in what Detroit was putting out.

One other thing setting the Beetle apart from other cars was customer service. Volkswagen sent its top mechanics to the U.S. to teach American mechanics how to service their cars. Maybe of even greater importance was the fact that there was just one standard model of the Beetle that hardly changed from year to year. As a result, it was much easier

for Volkswagen dealers to keep parts in stock than it was for dealers of other brands with multiple models that changed each year.

GM did make a half-hearted effort at creating an efficient compact car: the Chevy Corvair, whose name was meant to evoke images of its much sexier sports care, the Corvette. Unfortunately, over the protests of the engineers, GM cut corners on the cost and safety of the Corvair, in particular, using small tires and not putting in a stabilization bar that cost only \$14-15 per car. As a result, it had a tendency to flip when taking sharp corners at high speeds. (The car itself may have been as safe as the Beetle, but the image its commercials and name evoked probably encouraged faster driving and more fatal wrecks.) Not until 1963, after numerous lawsuits, did GM add the stabilization bar. This also brought to the forefront a young crusading consumer advocate, Ralph Nader.

But GM and the American auto industry had learned their lesson. Unfortunately, it was the wrong lesson. Instead of manufacturing smaller cost effective cars that were also safer, it largely gave up on the small-car market and kept making behemoths that remained an icon of American industry, although in an increasingly negative way. This would really catch up with Detroit in the 1970s when cheap plentiful oil started to become less cheap and plentiful.

In fact, Detroit would start making smaller and more fuel-efficient cars in the 1970s. However, in the 1980s, oil prices came back down and American cars got bigger again, the new poster children for the industry being SUVs (sports utility vehicles), updated station wagons, some of which were so big they were mounted on truck chassis. Until the first decade of the new millennium, oil availability and prices remained fairly stable, and so did the size of American cars, although their quality and reliability did improve during this time.

Another growing problem for American auto-makers and other industries since the 1970s has been the emergence of industrial economies in East Asia with much cheaper labor that has allowed them to undersell their American competition. In response, companies in the U.S. started outsourcing production to other countries to take advantage of their cheap labor. While this would keep these

companies more competitive, it also drained jobs from the U.S., making more of its people unable to afford cars.

As other countries' middle class grew after 2000, so did competition for oil, thus driving its price up again and spurring the American auto industry to develop more fuel-efficient cars, including ones that use alternate fuels, to keep it competitive in the twenty-first century. The days of the oil century were clearly numbered.

THE HEIGHT OF THE COLD WAR (1957-72)

“Why not throw a hedgehog at Uncle Sam’s pants?”—Khrushchev on his decision to put missiles in Cuba

Rising tensions. As we have seen, Khrushchev’s efforts to ease East-West tensions couldn’t overcome the inertia of Stalin’s legacy. Adding to the tensions, the Soviets developed the Bison Bomber and intercontinental ballistic missiles (ICBMs) in the 1950s, both of which could deliver nuclear weapons to the United States. The American public became increasingly concerned about the so-called “bomber gap.” Therefore, the U.S. increased its spy flights over the Soviet Union to determine how large the “bomber gap” was. It turned out that such a gap did indeed exist, but it was in America’s favor. However, the top-secret nature of this information and how it was obtained kept President Eisenhower from using it to silence Democrats who were constantly criticizing him for being soft on defense.

Meanwhile, Khrushchev had one more ace up his sleeve.

Sputnik. On October 4, 1957, the Russians launched Sputnik, the world’s first space satellite, into orbit around earth. Although it was only a small metal ball emitting a weak radio signal, it shocked Americans who saw this as a threat to their security. Once again, the response was two-fold. In 1958 Congress passed the National Defense Education Act. From this point on, American schools would stress math and science in their curriculum in order to compete with Soviet science and technology.

The second American response was to launch its own space program. After an embarrassing initial failure, the Americans launched their own space satellite in 1958. The Space Race was on. Over the next decade, the two powers competed to achieve the first manned space flight, the longest space flights, the first walk in space, the first manned orbiting of the moon, and ultimately the first lunar landing. On July 16, 1969, millions of Americans watched a live broadcast of the first human to walk on the moon. Although the space race itself accomplished little of value, it spawned a technology revolution, especially in

communications as television broadcasts and telephone calls could now span the globe.

“Long live Soviet-American friendship”: *Khrushchev in America (1959).* Khrushchev (and the Soviets in general) had a bit of an inferiority complex about the rest of the world, and the United States in particular, taking Russia seriously as a major power. Therefore, it would mean a lot to his and Russia’s prestige if Eisenhower would invite him to America for a visit. So, in 1959 Khrushchev got his invitation for a two-day visit, accepted for a 10-day visit, and arrived in Washington D.C. (with his wife and grown sons, another innovation for the Soviet era) for what turned into a 13-day media circus.

At first, Americans were somewhat cool to the leader of the communist world (a busload of kids even calling him a “meatball”). Khrushchev explained the cool silent reception from crowds along a parade route as being like people who hadn’t seen a camel before. If you displayed a camel they would come out to see it out of curiosity and maybe pull its tail. Pure Khrushchev.

Nikita’s boisterous style was also a bit much for the more reserved Ike, but they got along well enough. However, tight security kept the Soviet premier from getting out to meet people, which was what he liked to do. When he wasn’t allowed into Disneyland for security reasons, he remarked somewhat angrily, “Is there an epidemic of cholera or something? Or have gangsters taken hold of the place?” then, during his tour of Twentieth Century-Fox Studios, he got into an argument with the studio president Spyros Skouras about the merits of capitalism versus communism.

But he did get to schmooze with stars like Shirley Maclaine and Frank Sinatra, and then the trip turned upbeat. On the train from Los Angeles to San Francisco, Khrushchev’s traveling host, Henry Cabot Lodge, decided to loosen up and let his Russian guest go out and meet people. This was just what Nikita wanted, going out to meet real live Americans and turn on the charm. Later, to reporters he beamed, “I have seen some real live Americans. It seems they are just as real and as good as our kind Soviet people.”

After visiting an Iowa farm where he got excited about growing corn in Russia, Khrushchev moved on to two days of talks with Eisenhower. Although no substantive agreement about Berlin was reached, Nikita confessed he had acted brashly by laying down an ultimatum about the city, while Ike admitted that a Western city stuck in the middle of communist territory was a bit “abnormal.” The tour ended with Eisenhower agreeing to reciprocate by visiting Russia the next year, although events would prevent that from happening. By the end of the tour Khrushchev had largely won over the American public, one woman in Des Moines referring to him as a cute little man. Upon his return to Moscow, he proclaimed, “*Long live Soviet-American friendship!*”

Unfortunately, the honeymoon wouldn’t last.

Gary Powers and the U2 incident. Around the time of his visit Khrushchev had proposed a massive disarmament deal involving a unilateral withdrawal of one-third of the Soviet forces in Eastern Europe and offering mutual disarmament of both sides’ missiles along with verification by on-site inspections. The CIA saw this as a serious proposal, but the Democrats and generals kept pounding the drums about the “bomber gap” (which they didn’t realize actually favored the U.S.). Therefore, CIA director, Allen Dulles, proposed one more U-2 spy flight to confirm whom the “bomber gap” favored, if it existed at all. This is where everything went wrong.

The Soviets knew about our spy flights and denounced them as violations of their borders, but couldn’t prove to the world they were taking place by shooting them down...until now. When this U-2 was shot down, the pilot, Gary Powers, was supposed to take a cyanide pill so that there would be no living proof of such a mission. Instead, Powers parachuted to the ground and was captured alive.

At first the Soviets just revealed they had shot down the plane, so Ike went into standard denial mode. Only then did they parade out Powers who had confessed to the mission, forcing Eisenhower to admit he had lied. Khrushchev was furious. Trusting Ike’s good intentions from their previous meeting, he felt personally betrayed. Not only that, but he had taken tremendous political risks by

proposing massive disarmament. Now, not only the generals in the Kremlin, but also Mao, condemned him as a traitor to communism.

It was in the context of this betrayal and humiliation that Khrushchev became much more belligerent: storming out of peace talks in Paris, angrily pounding his shoe on his desk in the UN, openly embracing Castro as a new communist ally in America’s backyard, renewing threats about Berlin to the new president, Kennedy, and finally shipping nuclear missiles to Cuba.

More atomic tests. Because of the spy flights, Khrushchev had to worry about how much the U.S. knew about how vulnerable the Soviet Union really was. Therefore, to deflect public attention, he increased Soviet nuclear testing, even detonating a 57-megaton H-bomb (1961), the largest man-made explosion in history. Increased nuclear testing by both sides accomplished nothing except for raising tensions further and increasing worldwide concern about the higher levels of radiation being released into the atmosphere.

The Berlin Wall. Ever since 1945, the West’s control of West Berlin had presented major problems, since it was situated in the middle of East Germany with several very vulnerable routes there from West Germany. In 1948, Stalin had tried to gain control of West Berlin by cutting off its land corridors to the West, but the Americans and British had successfully air-lifted supplies into the beleaguered city until Stalin gave in. However, West Berlin continued to present a growing problem for the Soviets, since it was a constant reminder to East Germans all around of the much better standard of living in the West. Complicating this was the fact that there was free access between East and West Berlin. This and the lure of a better lifestyle caused growing numbers of East Germans to defect to the West, which only hurt the East German economy more and made the West that much more enticing. This led to Soviet demands for the West to abandon West Berlin, but this only increased tensions that drove even more East Germans to flee to the West and so on.

People worried that Berlin would be the spark to ignite World War III. Then, on August 13, 1961, Berlin awoke to find the East Germans building a wall to cut off all access between the two parts of

the city. Despite public indignation, Western leaders breathed a sigh of relief, because the Berlin Wall solved the problem of mass defections to the West without damaging their prestige. However, the Berlin Wall would separate families for nearly thirty years and stand as the most visible symbol of the Cold War until its fall on November 9, 1989.

The Cuban Missile Crisis. For years, Cuba had suffered under the corrupt dictatorship of Juan Batista while serving as a playground for rich Americans. In the 1950s Fidel Castro started a small insurgency that gradually grew into a full-fledged revolution and overthrew Batista in 1959. Although Castro had socialist leanings, he was not a declared communist. However, the United States, in the midst of the Cold War, tended to see red when any leader with the slightest socialist leanings appeared in the Western Hemisphere. When it refused to recognize Castro's regime, he formed closer ties with Russia. The U.S. responded by refusing to refine imported Soviet oil in its Cuban refineries, spurring Castro to nationalize those refineries. When the U.S. put an embargo on all Cuban goods, Castro retaliated by nationalizing all American owned businesses in Cuba. Then it turned nasty, with the CIA launching air raids on Cuban sugar fields and plotting against Castro by putting chemicals in Castro's cigars to make his beard fall out and spraying LSD into a studio he was visiting to make him act crazy. Finally, Castro declared his movement a communist revolution.

Under Eisenhower, the CIA had organized an invasion of Cuban émigrés to overthrow Castro. However, in 1961, a new president, John F. Kennedy, took office. When presented with the CIA's plan for an invasion, he agreed to go ahead with it, but cut critical American air support, fearing to expose American involvement in this plan. Consequently, the ensuing Bay of Pigs invasion was an unmitigated disaster that embarrassed Kennedy and infuriated Castro. Khrushchev convinced Castro to let him put medium and intermediate range missiles armed with nuclear warheads in Cuba. For the first time in the Cold War, most American cities were within range of Russian missiles. Therefore, when American U-2 spy planes spotted these missiles in October 1962, Kennedy treated this as a major threat.

The question was how to get rid of the missiles. Just as appeasement had led to World War II in 1939, a mere diplomatic response seemed too mild and ineffective for this situation. By the same token, while the generals pressured Kennedy to invade Cuba or launch an air strike against the Soviet missiles, he remained acutely aware that such aggressive actions could trigger a third world war and nuclear holocaust. (At the time, Kennedy was reading Barbara Tuchman's *The Guns of August* that told how aggressive diplomatic actions had led to World War I.) Along those lines, he saw that it was unclear as to who was the "home team" defending its turf, because, while Cuba was geographically closer to the U.S., it was firmly allied with the Soviet Union.

He finally decided on the strong but less provocative course of a naval blockade to stop more Soviet missiles from reaching Cuba. While the United States and Britain had been able to airlift supplies into West Berlin over Stalin's blockade in 1948-9, airlifting heavy missiles into Cuba over such a long distance was not an option for Khrushchev. A few days later, the policy bore fruit when an approaching Soviet convoy turned back rather than trying to crash the American blockade. However there was still the much stickier issue of how to remove the missiles already in Cuba.

By late October tensions were near breaking point as the American military moved to Def-Con 2, signaling that war seemed imminent. Civilians made plans to evacuate major cities that might be targeted for a nuclear strike. The military was pressuring Kennedy to invade Cuba, unaware that the Soviets had tactical nuclear weapons on Cuba that would have immediately destroyed any invading force. Just to add to the tension, on several occasions false alarms nearly launched our bombers.

Then Kennedy received two messages from Moscow, one fairly conciliatory, the other more provocative. Such mixed signals further confused him about the proper response, there even being speculation that a military coup had seized power in the Kremlin in the interim between the two messages. Kennedy decided to respond to the more conciliatory message and ignore the other one, thus establishing a calmer basis for negotiation. On this basis he struck a deal with Khrushchev. Russia

would publicly remove the missiles in return for an American promise not to invade Cuba. Privately, Kennedy agreed to remove American missiles from Turkey that posed a similar threat to Russia. Therefore, publicly it seemed the U.S. had won, while behind the scenes the net result was that fewer missiles threatened Russia than before 1961 and no more missiles threatened the U.S.

The Cuban Missile Crisis was a major turning point in the Cold War. It was the closest we ever came to unleashing a nuclear holocaust that would have devastated civilization. Both sides clearly saw this and worked harder to avoid such a scenario. They installed the “Hot Line” to ensure better communications between the two sides and avoid unnecessary speculation, such as whether the other side had had a military coup. In 1963, the two sides agreed to a ban on atmospheric testing of nuclear weapons, thus putting an end to such ridiculous saber rattling. The Cold War would continue for almost another thirty years, but the two sides had planted the seeds of at least some level of mutual trust that would form the basis of more substantial progress in the years to come.

Vietnam (1954-75). American involvement in Vietnam was its most disastrous move of the Cold War. Driving it was a fear and hostility toward communist Russia and China that blinded American leaders to any other possible causes of an uprising with the slightest socialist elements as examples of Soviet and Chinese aggression. Out of this came the unfortunate policy of backing any anti-communist regime, no matter how corrupt and repressive. Therefore, The US missed two important facts about Vietnam. One was that the government it supported in Saigon (the South Vietnamese capital) was a brutal dictatorship and anything but democratic. Secondly, ignoring the centuries-long animosity between the Chinese and Vietnamese, it saw North Vietnam as a pawn in a Chinese plot to conquer all of Asia.

After Vietnam won its independence in 1954, it had been divided between North and South at the 17th parallel, with planned elections to reunite the country in 1956. However, The United States, fearing a communist victory, prevented the elections from taking place, thus keeping Vietnam divided between the communist North and a “democratic” South that actually functioned under a

series of American-backed dictators. Civil War soon erupted with North Vietnam supporting a communist insurgency known as the Viet Cong in the South.

Acting on these assumptions, the U.S. felt it imperative to support the government in Saigon against the Viet Cong and North Vietnam. At first, Eisenhower sent only a few hundred military advisors and Kennedy slightly increased this commitment. However, it was President Johnson who heavily committed American forces and aid to South Vietnam in the 1960s.

Unfortunately for American forces, this was very different from any war they had ever fought in before. Instead of the traditional head-on clashes between clearly identifiable armies, this was a guerilla war where insurgents would attack American soldiers and then melt back into the civilian population, often making it impossible to identify and catch them. Out of frustration, American troops would retaliate against any civilians in the area of the attack, inevitably killing innocent people in their efforts to find the Viet Cong. This would increase public support for the Viet Cong and feed more guerilla attacks which, in turn, would trigger both increased American involvement in Vietnam and more retaliation against innocent civilians, and so on. Vietnam’s jungles also made it virtually impossible for American forces to sweep through the countryside or even effectively disrupt enemy supply lines, known as the Ho Chi Minh Trail. This trail ran largely through neighboring Cambodia and Laos to avoid American attacks, unless the U.S. wanted to complicate its situation further by sending forces into those countries.

This was a different kind of war where traditional benchmarks of progress didn’t apply for several reasons. First of all, the jungle made it impossible to advance along a visible front with visible battle lines in contact with one another. Also, there were also diplomatic factors that shackled the war effort. For one thing, US forces couldn’t unleash their total firepower, fearing that they might cross a threshold that would bring in China or Russia and trigger World War III. Likewise, North Vietnamese forces were supplied along the “Ho Chi Minh Trail”, an ever-shifting supply line that ran through neutral Laos and Cambodia. Launching an offensive

against this would violate the neutrality of Laos or Cambodia, with all sorts of complications. In fact, when Richard Nixon did send troops in to Cambodia, it triggered massive demonstrations across the US. In one of those, four students were shot and killed, which escalated protests to a new level still.

Another factor hampering the war effort was television coverage. This was the first television war, where Americans would watch updated accounts and images of the war every night on the evening news. This can make progress in any war seem unbearably slow, but especially so in Vietnam where the nature of the fighting eliminated the traditional measure of success: geographic advance along a front towards a stated goal, typically the enemy capital. However, there were no geographically defined fronts in this war, only isolated raids where American troops would be airlifted by helicopters into remote villages, try to identify and catch the enemy, and then get airlifted out, abandoning control of the villages to the enemy once again. This daily repetition of seemingly identical raids with no apparent progress or purpose increasingly frustrated the American public.

Added to this frustration was the media's portrayal of the war as a losing cause, especially after the Tet Offensive in 1968. This was a surprise attack that did catch U.S. and South Vietnamese forces off guard, but turned into a major defeat for the communists. However, the media's portrayal of this battle as a defeat (because of its initial surprise) turned much of the American public against the war. This generated another vicious cycle where media portrayal of the war as a losing cause would trigger student protests that also got heavy TV coverage. These would reinforce the media's negative portrayal of the war, causing more protests and so on.

The war's unpopularity forced President Johnson out of the presidential race in 1968. The winner was Richard Nixon who told the public he had a secret plan for ending the war while he was secretly telling the North Vietnamese to keep fighting while Johnson was still in office, saying they could get a better deal with him if he were elected. When Nixon took office, he pushed for "Vietnamization" of the war, replacing American troops with South Vietnamese conscripts, many of who proved

unreliable in the fight to defend a corrupt and failing dictatorship. However, this gave Nixon the chance to negotiate a "peace with honor" (1973), which left communist forces still operating in South Vietnam intact, but gave American forces enough time to exit Vietnam before the Saigon government fell. In 1975, North Vietnamese forces entered Saigon, thus reuniting Vietnam. Three years later, as if to underscore the nationalist nature of this prolonged struggle and debunk the idea that the war was a Chinese plot, Chinese and Vietnamese forces were firing at each other as they had for centuries.

"Long live Soviet-American friendship": Khrushchev in America (1959)



Khrushchev (and Russians in general) had a bit of an inferiority complex about the rest of the world, especially the United States, taking them seriously as a major power. Therefore, it would mean a lot to his and Russia's prestige if Ike would invite him to America for a visit. So, in 1959 Khrushchev got his invitation for a two-day visit, accepted for a 10-day visit, and arrived in Washington D.C. (with his wife and grown sons, another innovation for the Soviet era) for what turned into a 13-day media circus.

The many contradictions in Khrushchev's personality often made him difficult to deal with, thus making the period of the Cold War when he ruled Russia an exceptionally dangerous time as well. While from a humble background, working as a shepherd and coal miner as he grew up, his personality was anything but simple.

By nature, Khrushchev was bubbly and enthusiastic about life, enjoying it to the fullest when given a chance. However, all those years as one of Stalin's top advisors had also taught him to be somewhat circumspect when he needed to be, making him seem devious and duplicitous when he was probably just trying to be careful.

Like Stalin, he was a natural born actor, able to do his boss' bidding, no matter how horrible or humiliating that might be, and act like he enjoyed it. Unlike Stalin, he was a ham who loved the spotlight and meeting people. Thus as an actor, he could be either extremely charming, an intimidating bully, or both all at the same time as required.

Although able to keep a low profile to avoid undue attention from Stalin, Khrushchev could be bold, as seen in his daring speech in 1956 denouncing Stalinist rule to a closed meeting of the party faithful, most of whom, like it or not, owed their careers to Stalin. But he could be a bit too bold and impetuous and do things like putting nuclear missiles in Cuba.

Khrushchev was also very emotional and wore his heart on his sleeve. While this meant that people knew where he stood on an issue...at that particular time, he also had a tendency to experience rapid mood swings that could create uncertainty and confusion, which isn't always the best thing to do when engaged in high-stakes international diplomacy involving nuclear weapons. For his trip to America in 1959, advisors thought the presence of Khrushchev's wife, Nina, might act as a calming influence on the Soviet leader's volatile temper.

Khrushchev had both a huge ego and inferiority complex, the latter not being helped by all those years under Stalin. He was virtually obsessed with the Soviet Union and himself getting respect as world leaders. To him, the ultimate sign of such respect was getting an invitation to visit the United States, so he was overjoyed when he got that invitation in 1959, feeling the Soviet Union had finally gained the respect it deserved.



The Kitchen Debates. This came in the wake of the nearly disastrous visit of Vice President

Nixon to Russia. Nixon, hoping to run for president as Ike's successor the next year, wanted to score points with his constituents back home by confronting Nikita over Cold War Issues. With the Soviet leader as eager to steal the show and make his points, the result was a series of contentious arguments between the two men known as the Kitchen Debates, since two of them took place in model kitchens that were part of an American exhibition in Moscow. When the two men met again in Washington, they resumed their argument, Khrushchev even inviting Ike to decide who was right.

During his visit, Nixon had tried to impress Khrushchev with his own working class background working in his father's grocery as he grew up. Nikita merely replied that all merchants are thieves.

Ike's invitation to Khrushchev was supposed to be contingent on progress in peace talks that spring, but the aide delivering the message forgot that part of it, and Nikita jumped immediately to accept what he saw as an unqualified invitation.

A place where stray dogs are sent to die. One aspect of Ike's invitation that worried the Soviet premier was this mysterious place called Camp David where they would meet. Nikita remembered that in the early days when relations with the West were first being established that a Soviet delegation was being invited to the Prince's Islands, which they learned was supposedly a place where stray dogs were sent to die. Similarly, he worried that Camp David might be some similar place where mistrusted foreigners were kept under quarantine.

None of the Soviet officials seemed to know what this Camp David was either. Even more worrisome was the fact that Russian spies couldn't figure it out for some time. Finally they learned it was the presidential retreat, meaning Khrushchev was being invited to Ike's country "dacha".

This delighted Nikita, who had only one other complication to deal with, a previously planned

trip to Norway, Sweden, and Denmark. In order to break that date without insulting the Scandinavians, he used a Swedish article criticizing his visit as an excuse to feel insulted and cancel the Scandinavian trip. He kept his date with Sweden in 1964 and had lots of fun.

Twenty-one guns and not one gun less. One issue dogging the visit was the State Department's refusal to give Khrushchev the full diplomatic honors given to a head of state, since technically he was only head of the Soviet government, not head of the Soviet State, an honor due to the titular president, Kliment Voroshilov. This meant he would be greeted by only a 19-gun salute and Vice President Nixon (whom he hated from the previous Kitchen Debate) rather than a 21-gun salute and President Eisenhower. Nikita finally got his way by threatening to visit the same indignities on Ike when he visited Russia.

The twenty-one-gun salute apparently had its origins in the 1600s. When a warship wanted to signal its peaceful intentions as it approached a foreign port or ship, it would fire all its guns to empty them of all live ammunition, thus leaving it helpless in the face of retaliation.

Communists not welcome. Not all Americans were happy to see Khrushchev come for a visit. The FBI knew of at least 25,000 people that supposedly wanted to kill him. While the National Review sold stickers saying "Khrushchev Not Welcome Here," at least one cemetery had a sign saying Khrushchev *was* welcome there. A Hungarian refugee put a blindfold on the Statue of Liberty so she wouldn't have to see "this murderer, Khrushchev." And an Iowa college student charged with murdering a young mother and her baby even claimed that he got the urge to kill from watching Khrushchev's arrival on TV.

Congress felt somewhat obligated to invite the Soviet leader to speak to a joint session of the two houses, but many legislators personally hated the idea or feared popular backlash back home for welcoming a communist. Faced with this dilemma, they came up with the brilliant

solution of adjourning Congress and leaving town before Khrushchev arrived.

On the other hand, many Americans welcomed the opportunity to show off their version of the American way of life to Khrushchev. A Philadelphia restaurant had fifty pounds of borscht flavored ice cream delivered to the Russian leader, while the National Institute of Dry Cleaning announced it would give Khrushchev and his entire party free dry cleaning for the duration of the trip. The American Trampoline Company in Jefferson, Iowa offered him a free trampoline if he'd just visit for ten minutes. Different communities tried to lure Nikita to visit them with gifts of such things as shoes, gunstocks, and, in one case, use of a luxury apartment with a Japanese houseboy.

The tallest airplane in the world. Even Khrushchev's method of arrival in America was loaded with theater. Back in 1956, when Eisenhower had arrived for a conference in Geneva in a plane twice the size of Khrushchev's, the Soviet leader was irate that it made his plane look "like an insect" and ordered a giant plane of his own. The result was a giant 50-foot tall, 4-engine turbo-prop monster known as the TU114, which was ready by 1959 for his U.S. visit. On a preliminary visit, the TU114 proved so tall that when it landed at Andrews Air Force Base, there weren't any stairways that could reach the main door and the occupants had to crawl down a ladder.



Despite microscopic cracks in the engine, Khrushchev insisted on flying it to the U.S. Technicians on the flight monitored the cracked engines with tubes resembling stethoscopes, while the Soviet merchant fleet was on alert along its flight path to fish out Khrushchev's body if it crashed. Luckily it didn't, and by the time the Russians landed, the Americans had built a mobile stairway tall enough to reach the door of the plane.

According to Soviet propaganda, the TU114 was also “carried across the ocean not only by its mighty engines...but by the solicitous and considerate strength of millions of Soviet toilers, of all progressive people on earth, by their indomitable and passionate desire for peace.”

Shooting the moon. Forty-one hours before Khrushchev’s scheduled arrival, the Soviets landed an unmanned satellite, Lunik II, on the moon, announcing: “For the first time in history, a space flight has been achieved from the earth to another celestial body.” The pinpoint accuracy with which the Soviets had achieved this feat suggested that they could also deliver nuclear-armed ICBMs anywhere in America. Although the Soviets claimed the event was purely a “happy coincidence” with Khrushchev’s visit, no one believed them.

Of course, after the usual diplomatic niceties, Nikita couldn’t resist mentioning this in his speech upon landing in America: “*On the eve of our meeting with you, Mr. President, Soviet scientists, engineers, technicians and workers gladdened us by launching a rocket to the moon. We do not doubt that the United States will likewise deliver their emblem to the moon. The Soviet emblem, an old resident of the moon, will welcome your emblem and they will live in peace and friendship.*” Later, whether out of a spirit of genuine friendship or a desire to rub it in further, Khrushchev presented Ike with a scale model of the Lunik II.

Nikita’s boisterous style was a bit much for the more reserved Ike, but they got along well enough. At the state dinner, Nikita and the entire Soviet delegation wore dark suits and ties instead of white ties and formal tuxes, which he claimed were signs of decadent capitalism.

Khrushchev was hesitant to take a helicopter tour over Washington D.C. until he was assured Ike would be on the chopper with him, concerned that it might be “accidentally” rigged to crash. Of course, who could blame Nikita after all the years he had served Stalin? As it turned out, the Soviet leader loved the tour, and in

particular the helicopter ride. When he returned to Russia, he ordered three for himself, just like the ones Ike had.

One of Khrushchev’s scheduled stops was an experimental government farm in Maryland, which was known for such things as trying to develop sunburn resistant hogs. After listening to boring speeches about such things as pre-emergent pesticides, Nikita entertained reporters by insulting American hogs as being too fat and questioning why America would specially breed turkeys to be smaller just to be more suitable in size for smaller families.

At first, Americans were somewhat cool to the leader of the communist world (a busload of kids even calling him a “meatball”). Khrushchev explained the cool silent reception from crowds along a parade route as being like people who hadn’t seen a camel before. If you displayed a camel they would come out to see it out of curiosity and maybe pull its tail. Pure Khrushchev.

Throughout the tour, Nikita, never willing to be one-upped, constantly bragged about the superior quality and numbers of Soviet missiles, which he liked to brag were being manufactured like sausages.. From the Soviet leader’s point of view, this was probably to cover up Russia’s overall nuclear inferiority. However, to Americans, this seemed like provocative rhetoric designed to scare them about war with Russia. Aggravating these fears were Khrushchev’s occasional outbursts of temper, especially when hit with hard and embarrassing questions about repression in the Soviet Union and Hungary (whose uprising had been brutally suppressed just three years earlier).

While in New York City, Khrushchev’s hotel elevator got stuck just short of one of the floors. As a result, the whole party had to climb out and up to the next floor and then walk up the remaining five flights of stairs to their destination. Later, as he was riding in a limousine through the slums of Harlem, Khrushchev remarked to his guide, Henry

Cabot Lodge: "This isn't bad. We have a lot of areas just like this in the Soviet Union."

The day after Frank Pace, the CEO of General Dynamics, a major defense contractor, told Khrushchev "it was absurd to think that American capitalists supported the cold war in order to make money in the arms business," Khrushchev gave a speech for disarmament. That day the stock market lost \$1.7 billion.

On his flight to Los Angeles in a Boeing 707 jet, Khrushchev was so impressed with the plane that he offered to trade his TU114 for it. His hosts explained that they didn't have the power to authorize such a trade.

Nikita's boisterous style was also a bit much for the more reserved Ike, but they got along well enough. However, tight security kept the Soviet premier from getting out to meet people, which was what he liked to do. When he wasn't allowed into Disneyland for security reasons, he remarked somewhat angrily, "Is there an epidemic of cholera or something? Or have gangsters taken hold of the place?"

But Nikita did get to schmooze with Hollywood stars like Shirley MacLaine (below) and Frank Sinatra. He was also treated to a special performance from the somewhat risqué *Can Can*. Although he later blasted it as immoral, he didn't seem to object to it close up. His wife's reaction wasn't so clear.



Khrushchev also got to meet Marilyn Monroe, who was instructed:

- a) to wear a low-cut dress
- b) to leave her husband, playwright Arthur Miller, at home; and
- c) to know who Khrushchev was and the importance of his visit.

Ms. Monroe thought Khrushchev was nice, but said she'd never want to have a president who was so short, bald, and ugly.

But the Hollywood visit turned sour again when Nikita got into an argument with Twentieth Century-Fox Studios president, Spyros Skouras, about the merits of capitalism versus communism. Adding to his anger and another temper tantrum were the rudeness of L.A.'s mayor and replacing his desired tour of Disneyland with a long boring tour of a suburban development project.

One incident hints that at least part of this was theater on Khrushchev's part. After his outburst in LA, the Russians returned to their hotel room, which Nikita assumed was bugged. While silently indicating to his colleagues that he thought they were being listened to, he launched into a half-hour tirade about his treatment by the Americans, just to throw them off balance.

Then the trip turned upbeat. On the train from Los Angeles to San Francisco, Khrushchev's traveling host, Henry Cabot Lodge, decided to loosen up and let his Russian guest go out and meet people. This was just what Nikita wanted, going out to meet real live Americans and turn on the charm. Later, to reporters he beamed, "I have seen some real live Americans. It seems they are just as real and as good as our kind Soviet people."

Mr K visits Big Blue. One of the icons of American business in 1959 was IBM, already becoming the giant in the computer industry. (In the 1960s, the computer industry would be described as IBM and the seven dwarfs.)

Like Khrushchev who had succeeded the egomaniacal Stalin, IBM's president, Thomas J. Watson Jr., had followed an almost equally egomaniacal father, Thomas J. Watson Sr., who had built IBM around his own bizarre personality cult. Besides a strict dress and conduct code (dark suits, white shirts, no facial hair, no drinking or smoking at company events), he also had pictures of himself in every

office, along with the IBM Band, IBM Orchestra, IBM Men's Glee Club, and IBM Mixed Chorus. There was also an IBM songbook with songs like "March on with IBM", "Hail to the IBM" and even "To Thomas J. Watson", with the lyrics:
*"Pack up your troubles—T.J. Watson's here!
And smile, smile, smile.
He's the genius in our IBM
He's the man worthwhile.
He's inspiring all the time
And very versatile."*

Luckily Watson Jr. had dismantled this ridiculous Stalinist type personality cult before Khrushchev's visit. While anxious to show off his star computer, RAMAC, he was worried about Khrushchev's pending visit to his factory, given the contentious arguments that had accompanied so many of his other visits. Luckily, the IBM cafeteria took care of the problem.

Watson made the fortuitous decision to take Khrushchev to lunch first. Food always made Mr. K, a heavy eater, in a better mood. What really impressed him was the concept of self-service, which had the double advantage of saving worker time and giving him unlimited access to food. For Khrushchev this particular lunch included fried chicken, potatoes, fruit salad, onion soup, orange juice, and iced tea. Khrushchev wasn't impressed with the computers, but he loved IBM's food.

For his afternoon snack to hold him till dinner, Khrushchev ordered clam chowder, abalone steaks, filet of sole, roast pheasants, roast beef, baked potatoes, vegetables, fruit tarts with whipped cream, coffee, tea, and milk.

A visit to the cathedral of consumption. American capitalists were anxious to show Khrushchev an American supermarket. When they finally did get him into a Quality Foods store in San Francisco, it triggered a virtual riot as the crowd, wishing to see the Soviet premier, surged forward, with children shrieking and teenage girls squealing as if they had seen Elvis.

Khrushchev's guards, alarmed by this scene, formed a protective wall around the Soviet

premier. In response, the photographers climbed all over the products to get their pictures, squishing sticks of butter, shattering displays of instant coffee, stomping across salami and cheese in the deli, and trampling over the chickens in the meat department. Teenage boys stood in shopping carts to get a better view, only to tumble out when they started rolling. Another teenager made five dollars carrying a photographer on his shoulders to give him a better view. As AP reporter, Seth Pett described the scene: *"It was like happy hour in a manic depressive ward."*

Nikita was especially impressed with hot dogs and corn grown on Roswell Garst's farm near Coon Rapids, Iowa. Garst had been corresponding with the Russian leader for several years about corn and even traveled to the Iron Curtain in 1955 to promote corn agriculture there.

While the leader of the communist world was welcome on Garst's farm, the huge cadre of reporters and photographers wasn't, especially when they started trampling his corn to get better views of Nikita. Garst even resorted to pelting the press corps with wet silage (which really stinks).

Khrushchev thought that was outrageously funny.

Unfortunately, this would inspire him to try growing corn in Siberia, an experiment that unfortunately would help cost him his job five years later.

After visiting an Iowa farm where he got excited about growing corn in Russia, Khrushchev moved on to two days of talks with Eisenhower. Although no substantive agreement about Berlin was reached, Nikita confessed he had acted brashly by laying down an ultimatum about the city, while Ike admitted that a Western city stuck in the middle of communist territory was a bit "abnormal." The tour ended with Eisenhower agreeing to reciprocate by visiting Russia the next year, although events would prevent that from happening. By the end of the tour

Khrushchev had largely won over the American public, one woman in Des Moines referring to him as a cute little man. Upon his return to Moscow, he proclaimed, “Long live Soviet-American friendship!”

Not only that, he went out on a limb by offering a sweeping arms reduction deal. Unfortunately, the honeymoon wouldn’t last, because, before accepting this remarkable deal, hardliners pressured Ike to send one more spy flight over Russia, and that would ruin everything.

The U-2 Incident (1960)



The U-2 spy plane

One of the asymmetries of the early Cold War was the openness of American society, which gave relatively easy access to Soviet Spies, compared to the closed society of the Soviet Union. To even the playing field, the United States developed increasingly long-range photography and the U-2, a spy plane that could fly at altitudes beyond the reach of Soviet air defenses. As a result, it could send flights over Russia with impunity.

The Soviets knew about our spy flights and denounced them as violations of their borders, but couldn’t prove to the world they were taking place by shooting them down...until 1960 when they shot down a U-2. Rather than be captured, the pilot, Gary Powers, was supposed to take a cyanide pill so that there would be no living proof of such a mission. Instead, he parachuted to the ground and was captured alive.

Years later, different versions emerged of how the U2 plane was brought down. In one, a pilot, Igor Mentyukov, claimed he caught the U2 in the slipstream of his unarmed Su-9, causing Powers’ plane to flip over and break its wings. According to Mentyukov, if a Russian SAM (Surface to Air Missile) had hit the U2, Powers

would never have survived. Metyukov’s Su-9 had been disarmed so it could reach the 65,000-foot altitude at which the U2 was flying. Being without weapons, he was ordered to ram the American plane.

It does seem a SAM inadvertently hit and brought down a pursuing MIG-19, killing the pilot. According to Khrushchev’s son, Sergei, only one of a battery of three SAM’s even ignited when fired against the U2 and it exploded behind the plane, breaking off its wings, but allowing Powers to eject. Since the Soviets didn’t know for some time if they had downed the American plane, they fired thirteen more missiles, and it was one of these missiles that accidentally shot down the MIG-19.

Part of Powers’ survival kit when he ejected consisted of 7500 rubles and jewelry for any women he encountered.

Powers was sentenced to three years in prison and seven years of hard labor. However, he was exchanged for a Russian prisoner in 1962 after only 21 months in a Russian prison.

Among other things, the Gary Powers incident served as a boost to America’s space program. Since Soviet defenses apparently could reach the U2, the US accelerated development of the Corona spy satellite program run by the CIA until 1972. Flying in a low earth orbit (LEO), it provided the US with photographic surveillance of Russia, China, and other areas.

The political ramifications were a bit more severe. Khrushchev had had to use a lot of intense persuasion to get hardliners in the Kremlin to agree to his massive disarmament proposal after his visit to America. Therefore, not only did he feel betrayed by Eisenhower’s sending another U2 flight, he also faced serious backlash in the Kremlin for going so far out on a limb to make the offer.

Therefore, when he returned to the U.S. in 1960 to speak to the U.N. in New York, Americans saw a much different and angrier Khrushchev from the one they had seen in 1959.



His most notorious outburst during this trip came when, to protest another delegate's speech, he took off his shoe and pounded it on his lectern. The other members of his delegation followed suit and pounded in rhythm with him. To further annoy the U.S., he stayed in New York for two weeks, making a series of long provocative speeches against the West, generally behaving badly, and making few new friends, most notably the communist leader of Cuba, Fidel Castro.

This also sent U.S.-Soviet relations into a tailspin.

The Great Nuclear Bomb Firing Contest of 1961-62



The Tsar Bomb test, the largest manmade explosion in history (October 30, 1961)

Nuclear bomb tests. In the early 1950s, when we only had “small” fission devices such as those dropped on Japan in 1945, we could carry out tests in the desert and even send out troops into the Ground Zero after the blast. Twenty years later, many of these soldiers developed radiation related maladies such as leukemia, and some even sued the government.

Some civilians even got to view early nuclear tests, as long as they wore their protective goggles. Others took the nuclear threat more seriously, building and stocking fallout shelters in preparation for the Apocalypse. However, as thermonuclear devices multiplied and grew in destructiveness, such precautions seemed increasingly pointless to many.

In the 1960s, the period of greatest tensions between the two powers, the number of American and Soviet nuclear tests peaked at ridiculous levels, mainly to show each other our respective destructive potentials, while also poisoning the planet with radioactive fallout. The record year was 1962, with nearly 140 nuclear tests by the nuclear powers, almost all of them by the Soviet Union and United States.

The Tsar Bomb (October 30, 1961). The record for the biggest bomb test was reached on October 30, 1961 when the Soviet Union detonated the largest man-made explosion in history: the Tsar Bomb. Luckily, it was just a nuclear test blowing up some of their own territory north of the Arctic Circle.

Originally, the Tsar Bomb was designed as a 100-megaton device, but scientists cut its yield to only 50 megatons so the plane dropping it could escape the blast. Considering it would take 80 Hiroshima size bombs to equal one megaton, it would take 4000 such bombs to equal the yield of the Tsar Bomb.

Even with its “reduced” yield, the Tsar Bomb created total devastation over a 15-mile radius (225 square miles) and could inflict third degree burns out to 10 kilometers from ground zero. Or to put it another way, it could completely flatten a city like New York, Chicago or Los Angeles while also inflicting widespread death and devastation in their suburbs.

The largest device developed by the U.S. had a possible yield of 25 megatons, but was never tested. The largest actual U.S. test, Bravo, was designed to give a 5-megaton yield, but due to miscalculations, created a 15-megaton blast.

More “Fun Facts” about the Tsar Bomb:

- The mushroom cloud was 25 miles (40 km) wide and 40 miles (64 km) high, nearly seven times the height of Mt. Everest.
- Its seismic shock was equal to 7.1 on the Richter scale. But being an airburst, it only measured up to 5.25
- Its blast was seen and felt up to 1,000

kilometers away, breaking windows in Finland and Sweden.

- Its shockwave was measurable even after travelling around the globe three times.
- Its yield was equal to 1.4% of the output of the sun.

*The "Anti-Fascist Protection Rampart"
(AKA The Berlin Wall)
(1961)*



Ever since 1945, the West's control of West Berlin had presented major problems, since it was situated in the middle of East Germany with several highly vulnerable routes there from West Germany. In 1948, Stalin had tried to gain control of West Berlin by cutting off its land corridors to the West, but the Americans and British had successfully air-lifted supplies into the beleaguered city until Stalin gave in.

In 1952, Stalin ordered the border between East and West Germany sealed by a barbed wire fence, although passage between East and West Berlin remained free.

Fleeing the East. Between 1949 and 1961, some 3.5 million people, roughly 20% of East Germany's population, fled to the West by way of Berlin. This was easy to do, since Berlin was an open city. One could just hop on the metro in East Berlin and five minutes later be in the West where they would be welcomed and assimilated into the economy.

In 1957, East Germany's ruler, Walter Ulbricht, made fleeing to the West a criminal offense, which was fairly pointless. After all, it was impossible to prosecute offenders once they were in the West, and the authorities couldn't prove

they were fleeing (as opposed to just visiting, going to work, or shopping) until they hadn't returned.

This situation was both costly and embarrassing for the communist East, especially since it was young skilled workers who were most likely to flee. For example, seventeen key engineers from one factory all fled to the West (with the factory's blueprints). In one day, the entire faculty of the University of Leipzig's law department defected. Industrial production slowed down and, in some cases, factories shut down altogether. The East German leader, Ulbricht even demanded \$17 billion in reparations from the West for all the lost labor. Maybe he could have sued the West if so many of his lawyers hadn't already fled.

However, West Berlin was also an extremely vulnerable part of the West. As Khrushchev put it in his own incomparable way: "*Berlin is the testicles of the West...Every time I want to make the West scream I squeeze on Berlin.*"

Realizing this weakness and concerned about both the surging West German economy and the absence of any formal treaty ending World War II, the Soviet leader issued an ultimatum in 1958, demanding that the Western powers sign a treaty recognizing East Germany and end their military presence in West Berlin or lose all rights of access to the city.

However, West Berlin continued to present a growing problem for the Soviets, since it was a constant reminder to East Germans all around of the much better standard of living in the West. Complicating this was the fact that there was free access between East and West Berlin. This and the lure of a better lifestyle caused growing numbers of East Germans to defect to the West, which only hurt the East German economy more and made the West that much more enticing. This led to Soviet demands for the West to abandon West Berlin, but this only increased tensions that drove even more East Germans to flee to the West and so on.

In 1959, Khrushchev visited the U.S. and relations eased a bit. Unfortunately, in May 1960 when the Soviets downed an American U2 spy plane and captured its pilot, Gary Powers, tensions shot back up again. And, as tensions rose, more East Germans fled. By 1961, there were 1000 people defecting to the West every day.

People worried that Berlin would be the spark to ignite World War III. Then, on August 13, 1961, Berlin awoke to find the East Germans building a wall to cut off all access between the two parts of the city. Despite public indignation, Western leaders breathed a sigh of relief, because the Berlin Wall solved the problem of mass defections to the West without damaging the communists' prestige and thus reduced the chances of war. However, the Berlin Wall would separate families for nearly thirty years and stand as the most visible symbol of the Cold War until its fall on November 9, 1989.

Because West Berlin was surrounded by East Germany, the Wall had to encircle the entire city. When complete, it had 96 miles of barbed wire to seal off any access to the western part of the city. Since the construction of the Berlin Wall was such a surprise, there were a number of West Germans visiting relatives and friends in the East who woke up to find themselves trapped in the communist bloc.

On the other side, the West could do about the Wall short of starting a war, so it remained undisturbed. However, something had to be done to bolster the morale of the West Berliners. Therefore, the U.S. sent 1500 troops to reinforce the city's garrison. Their commander was General Clay, the man who had led the allied efforts in Berlin during the Airlift twelve years earlier.

Clay felt the only thing the Soviets understood was strength, so he did everything he could to bully and worry them. He would send squads of armed soldiers on pointless or nearly pointless missions into East Berlin, such as to accompany any diplomat going there. He even built a

concrete wall in sight of the real wall and had his men practice knocking it down.

His most provocative act was to bring ten tanks up to the border at Checkpoint Charlie, as if he was threatening to break into East Berlin. In response the Soviets brought up ten tanks. For the first time in the Cold War American and Soviet tanks were nose to nose. The Russians were authorized to respond to force, while NATO and American forces went on full alert worldwide.

Worried that a nervous soldier might fire his rifle and trigger World War III, Kennedy offered to withdraw the American tanks if the Soviets withdrew theirs. One Soviet tank backed up five meters, and one American tank followed suit. Eventually the crisis was defused after sixteen hours.

In the months and years that followed, East Germans tried to escape in various ways. The first was an East German guard, Conrad Schumann (below), who jumped the barbed wire to safety, followed by someone else who drove his Volkswagen through the barbed wire. Since windows along the border weren't bricked up at first, East Germans would signal they were going to jump on a particular day so the West Berlin Fire Department would show up with a net to catch them. The first person to die trying to escape, Ida Siekmann, was killed jumping from a third floor window.



After the windows were sealed shut and the barbed wire was replaced by a concrete wall, people tried a multitude of other ways to escape: hanging underneath trucks passing through the checkpoints, swimming the canal, climbing through the city's old sewers, or tunneling under the wall.

At first, breaking or cutting through the wire barrier was the simplest and easiest manner of escape. One East Berliner hijacked a Soviet vehicle and ran it into the barbed wire, where it got entangled. He was seriously wounded, but a West German policeman, firing at the East Germans, saved him. When the East Germans put a metal bar across the barbed wire to stop any other cars, four men (real low riders) rigged a detachable top that was torn off as they drove under the bar. When a concrete wall replaced the barbed wire, people would scale it, so the East German government outlawed the sale of rope and twine

There was a large network of escape tunnels built by East Berliners, mostly college students, although used by a large number of people. The first known successful such tunnel was dug in a graveyard. People would come to lay a wreath of flowers then suddenly drop out of sight, never to be seen in the East again. It was discovered when a woman accidentally dropped in, leaving her baby carriage behind. The most successful tunnel led to the escape of 29 people.

Hot air balloons, of course, were not offered on the market in East Germany. Therefore, two families wanting to fly to freedom, the Wetzels and Strlzycks, had to construct them, buying small amounts of nylon at a time to keep from arousing suspicion. They had just enough fuel to get them over the wall, which took several hours. After their escape, sales of lightweight cloth were strictly controlled.

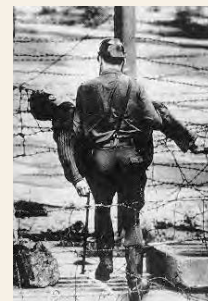
Buildings along the wall were destroyed to provide a clear field of view and fire from a chain of 116 watchtowers interspersed along the way. To better spot potential escapees, bright searchlights lit up the area at night and the Wall was painted white. (The western side of the Wall was decorated with all sorts of graffiti, including one that said it was the training ground for the East German high jump team.)

Before even reaching the Wall, one had to get through coils of barbed wire and then cross a field of sand or gravel, known as the “Death

Strip”, that would show footprints of any escapees. This would also reveal which guards had been derelict in their duty, thus giving them extra incentive to shoot anyone trying to escape. Anyone violating the strip would be shot, and anyone trying to give them medical aid risked being shot as well.

To further impede and discourage escape attempts, there were land mines planted in parts of the Death Strip and guard dogs chained to pulleys (to keep them from accidentally detonating the mines). There were also trip wires that could activate automatic machine gun fire aimed at that section.

However, the Wall, or as the communist leaders called it, the "Anti-Fascist Protection Rampart" to protect the East from an invasion by the West, effectively stemmed the tidal wave of defections. Between 1961 and 1989, around 5,000 people would successfully escape and at least 100 people died in the attempt. (Estimates range between 86 and 239.) Even pregnant women were shot to death attempting to escape. The most notorious incident was the shooting of 18-year old Peter Fechter in 1962, who was left to die a slow agonizing death in full view of crowds while East German guards just looked on. The last person shot trying to cross the Wall was Chris Gueffroy on February 6, 1989.



“I am a jelly donut.” When President Kennedy visited the Wall in 1963 to show solidarity with the people of Berlin, he uttered the famous phrase “Ich bin ein Berliner”, meaning “I am a Berliner.” JFK’s intentions were clear, and contrary to popular belief, he didn’t mispeak, saying he was a jelly donut. The term “Berliner” can mean either jelly donut (like a Danish) or

inhabitant of Berlin. It all depends on context, which the crowd understood perfectly well.

However, many Berliners, still mad that Kennedy had not reacted more strongly to the building of the Wall two years earlier, chose to spread the version that made him sound like a fool or very hungry tourist.

The Cuban Missile Crisis (1962)



A map showing the range of various Soviet missiles stationed in Cuba and the American cities they could hit

The Cuban Revolution. For years, Cuba had suffered under the corrupt dictatorship of Juan Batista while serving as a playground for rich Americans. In the 1950s Fidel Castro started a small insurgency that gradually grew into a full-fledged revolution and overthrew Batista in 1959.

Although Castro had socialist leanings, he was not a declared communist. However, the United States, in the midst of the Cold War, tended to see red when any leader with the slightest socialist leanings appeared in the Western Hemisphere. When it refused to recognize Castro's regime, he formed closer ties with Russia. The U.S. responded by refusing to refine imported Soviet oil in its Cuban refineries, spurring Castro to nationalize those refineries. When the U.S. put an embargo on all Cuban goods, Castro retaliated by nationalizing all American owned businesses in Cuba.

Then it turned nasty, with the CIA launching air raids on Cuban sugar fields and plotting against Castro by putting chemicals in his cigars to make his beard fall out and spraying LSD into a studio he was visiting to make him act crazy. Finally, Castro declared his movement a communist revolution.

The Bay of Pigs Invasion (1961). Under Eisenhower, the CIA had organized an invasion of Cuban émigrés to overthrow Castro. However, in 1961, a new president, John F. Kennedy, took office. When presented with the CIA's plan for an invasion, he agreed to go ahead with it, but cut critical American air support, fearing to expose American involvement in this plan. Consequently, the ensuing Bay of Pigs invasion was an unmitigated disaster that embarrassed Kennedy and infuriated Castro. In the aftermath, Khrushchev convinced Castro to let him put medium and intermediate range missiles armed with nuclear warheads in Cuba. For the first time in the Cold War, most American cities were within range of Russian missiles. Therefore, when American U-2 spy planes spotted these missiles in October 1962, Kennedy treated this as a major threat.

The Bay of Pigs invasion by the numbers:

- 1,400 Cuban expatriates took part
- 4 American pilots and over 100 Cubans were killed
- 1,197 invaders were captured
 - 200 of them had been soldiers in Batista's army
 - 14 of those were wanted for murder in Cuba

In June 1962 Khrushchev sent ships carrying 80 missiles, each with a one-megaton warhead, 42 Mig-21 fighter jets, 24 surface-to-air missiles (SAM's), two tank battalions, four elite combat regiments, and a total of 40,000 troops and personnel overall. He was so obsessed with secrecy he didn't even tell his ambassadors to the U.S. and U.N.

Nuclear proliferation (1954-62). Documents declassified and released in 1999 give an idea of how much the Soviet Union was surrounded and outgunned by the U.S. in 1962 when the Cuban Missile Crisis erupted.

1954- The U.S. starts stockpiling nuclear weapons on various Japanese islands without informing the Japanese or American public. The purpose of these stockpiles is to reload nuclear submarines and bombers for further attacks on

Russia, just 600 km (400 miles) from Japan, in case of nuclear war.

1956- The U.S. deploys “tactical” nuclear warheads mounted on Corporal and Honest John intermediate range missiles (IRBMs) in Italy. Contrary to the Atomic Energy Act, they can be launched at the discretion of local officers. Nuclear bombs are also deployed to Puerto Rico.

1957- the Soviet Union successfully tests the first long-range intercontinental ballistic missile (ICBM) and uses it in October to launch Sputnik. The U.S. counters by putting IRBMs capable of hitting Russia in the Philippines. By the end of the year, the U.S. has stockpiled 5,828 nuclear missiles, while Russia only has 650.

1958- The U.S. deploys nuclear bombs in Greenland, Spain, France, South Korea, and Taiwan.

1960- The U.S. deploys 15 Jupiter missiles in Turkey, each with a 1.45-megaton warhead (nearly 100 times the destructive power of the bombs used against Hiroshima and Nagasaki). The Soviet Union deploys its first four SS-6 ICBMs in Russian territory. Because they are stationed in the far north so they can hit the U.S., one of the engines explodes from the extreme cold, killing the chief of the Strategic Rocket Forces. No more of the SS-6 missiles are deployed as weapons, only being used after this for space exploration.

The Bomber Gap” The U.S. also had decisive supremacy in strategic bombers, in particular, its fleet of B-52 jet bombers that far outnumbered and outclassed Russia’s bison bombers, although there had been a perceived bomber gap due to an incident at the Soviet Aviation Day demonstration in 1955 when the Soviets flew 10 of their new Myasishchev M-4 Bison bombers over the airfield. Then, when out of sight, they turned around and flew back over the field, doing this five times, giving the impression they had brought 60 bombers, not just 10. Based on that misperception. American analysts calculated the Soviets could quickly produce 600 such planes.

Adding to the paranoia next July was Martin Knutson’s U-2 flight over Engels airfield near Saratov that photographed 20 Bison Bombers. Assuming the Soviets had such a squadron at every base, the U.S. believed the Soviets had, or were close to deploying hundreds of these bombers. This spurred the production of over 2,000 B-47s and nearly 750 B-52s to match this hypothetical fleet.

In reality, Knutson had inadvertently photographed the *entire* Soviet bomber fleet, which later U-2 flights clearly showed. However, the myth of the bomber gap persisted in the American public’s mind and couldn’t be disproven since the information proving otherwise was highly classified.

Besides all that, the Bison bomber was of little use to the Soviets, since its range (8,000 km.) wasn’t enough to bomb the U.S. *and* return to Russia. And since the Soviets had no friendly bases outside of Eastern Europe, it was virtually worthless to them. Thus, only 93 Bisons were produced and, of those, only 19 were used on nuclear alert.

The crisis mounts. The question was how to get the Soviet missiles out of Cuba. Just as appeasement had led to World War II in 1939, a mere diplomatic response seemed too mild and ineffective for this situation. By the same token, while the generals pressured Kennedy to invade Cuba or launch an air strike against the Soviet missiles, he remained acutely aware that such aggressive actions could trigger a third world war and nuclear holocaust. (At the time, Kennedy was reading Barbara Tuchman’s *The Guns of August* that told how aggressive diplomatic actions had led to World War I.) Along those lines, he saw that it was unclear as to who was the “home team” defending its turf, because, while Cuba was geographically closer to the U.S., it was firmly allied with the Soviet Union.



He finally decided on the strong but less provocative course of a naval blockade to stop more Soviet missiles from reaching Cuba. While the United States and Britain had been able to airlift supplies into West Berlin over Stalin's blockade in 1948-9, airlifting heavy missiles into Cuba over such a long distance was not an option for Khrushchev. A few days later, the policy bore fruit when an approaching Soviet convoy turned back rather than trying to crash the American blockade. However there was still the much stickier issue of how to remove the missiles already in Cuba.

By late October tensions were near breaking point as the American military moved to Def-Con 2, signaling that war seemed imminent. Civilians made plans to evacuate major cities that might be targeted for a nuclear strike. The military was pressuring Kennedy to invade Cuba, unaware that the Soviets had tactical nuclear weapons on Cuba that would have immediately destroyed any invading force. Just to add to the tension, on several occasions false alarms nearly launched our bombers.

Resolution. Then Kennedy received two messages from Moscow, one fairly conciliatory, the other more provocative. Such mixed signals further confused him about the proper response, there even being speculation that a coup had seized power in the Kremlin in the interim between the two messages.

Kennedy decided to respond to the more conciliatory message and ignore the other one, thus establishing a calmer basis for negotiation. On this basis he struck a deal with Khrushchev. Russia would publicly remove the missiles in return for an American promise not to invade Cuba. Privately, Kennedy agreed to remove American missiles from Turkey that posed a

similar threat to Russia. Therefore, publicly it seemed that the U.S. had won, while behind the scenes the net result was that fewer missiles threatened Russia than before 1961 and no more missiles threatened the U.S.

A timeline of the Cuban Missile Crisis:

October 14- Soviet missiles are first spotted in Cuba. Secretary of Defense, McNamara calculates they will be operational in two weeks.

October 21- After weighing different options, President Kennedy decides a "quarantine" (i.e., blockade) of Cuba would be the strongest action without being too provocative. Curtis Lemay, head of Strategic Bomber Command, wants an all out bombing attack, saying: "*The Russian bear has always been eager to stick his paw in Latin American waters. Now we've got him in a trap, let's take his leg off right up to his testicles. On second thought, let's take his testicles off too.*"

October 22- Kennedy informs the public and our allies of the crisis and the blockade.

- B52s are put on full alert, with at least one in eight always in the air. For the first time, all of them are armed with nuclear weapons, four hydrogen bombs apiece.

- Khrushchev authorizes his commander in Cuba to use tactical nuclear weapons against any invasion force. Throughout the crisis, the Americans were unaware of these tactical nukes, which, if used, would have automatically incinerated any invasion force before it reached the beach.

- U.S. Forces go to DEFCON-3. (On a scale of one to five, DEFCON 5 was normal alert and DEFCON 1 was war. The U.S. military probably reached DEFCON 3 one other time, in 1973 during the Yom Kippur War.

October 23- The Soviet ship *Alexandrovsk*, carrying 24 warheads, beats the blockade to Cuba. Five other ships with nuclear warheads turn back.

October 24- Khrushchev warns that his subs will sink any US ships trying to stop Soviet ships, saying he won't be the first to use nukes, but "*if the US insists on war, we'll all meet together in Hell.*"

- The U.S. goes to DEFCON-2, the only time it has gone that close to nuclear war.
- After approaching the blockade, Soviet ships turn around, leading to Secretary of State Dean Rusk's famous saying "We've gone eyeball to eyeball and the other fellow just blinked."

October 25- The CIA reports the Soviet medium range SS-4 missiles are operational.

October 26- Kennedy, conceding the blockade won't get the existing missiles out of Cuba, discusses launching an invasion of 125,000 men. He is shaken by an estimate of 18,500 casualties in 10 days of fighting, not even realizing the Russians also have tactical nuclear weapons to defend the beaches, which would have made casualties many times greater still.

- That evening, Khrushchev sends a message proposing to remove the missiles if the U.S. promises not to invade Cuba.
- In a meeting with Soviet ambassador Dobrynin, JFK says American missiles in Turkey might be brought into the equation.

October 27 (AKA "Black Saturday")- Reconnaissance flights showed six Soviet missile launchers in Cuba were now operational.

- A second letter from Khrushchev arrives demanding the U.S. take its missiles out of Turkey. Since no one on the National Security Council (NSC) had heard of this previous proposal by JFK, outraged hawks said it would be tantamount to surrender. Many NSC members feared Khrushchev had been overthrown by hardliners. Adding to this uncertainty was the absence of direct communications between the White House and Kremlin, so that it took 12 to 15 hours for messages to travel back and forth.
- A Soviet SAM shoots down an American U-2 plane over Cuba, triggering calls by the American military to bomb and/or invade Cuba.
- Someone, probably Bobby Kennedy, the president's younger brother and attorney general, suggests that they ignore Khrushchev's second letter and just respond to his first one, although the U.S. secretly agrees

to take its missiles out of Turkey in several months if the Soviets keep quiet about it.

October 28- Because of the slowness of communications with the White House and fear that a nuclear war might accidentally be triggered, Khrushchev announces the agreement over Radio Moscow. Curtis Lemay still wants to invade Cuba even after the Soviets have agreed to take out their missiles, calling the peaceful resolution of the crisis "the greatest defeat in our history."

Several near misses occurred during the Cuban Missile Crisis that might have accidentally launched World War III.

October 25- A guard at a base in Duluth Minnesota fired at an intruder climbing the fence, triggering alarms at bases across the region. Unfortunately, some wires got crossed and the klaxon to launch bombers sounded at Volk Air Base in Wisconsin. Crews scrambled to their planes while the base commander checked with Duluth for confirmation. Finding the real story, he sent an officer to drive in front of the taxiing B-52s to stop them. It turned out the original intruder was a bear.

October 26- Despite the mounting crisis, which had reached DEFCON-2, a scheduled test launch of an unarmed ICBM went ahead. If the Soviets had seen it, that might have triggered World War III.

October 27 (Black Saturday)- A routine computer simulation of a nuclear attack just happened to coincide with a satellite in position to hit Tampa, Florida at 9:02 AM. The confused program alerted SAC, NORAD, and the Pentagon that an attack was coming. Luckily, other tracking systems detected the error and the original base in New Jersey realized it was an error when Tampa didn't blow up.

October 27- A U-2 flight over the Arctic Circle accidentally drifted into Soviet air space when the Northern Lights blotted out the stars used for navigation. Luckily, after unsuccessful attempts by Russian MIGs to intercept it, the Soviets didn't escalate this incident into World War III.

Conclusion. Publicly the resolution of the Cuban Missile Crisis may have looked like an American victory. But privately, the Soviets could be seen as the winners, since before the crisis, only the U.S. had missiles threatening Russia from Turkey, and after the crisis those missiles were gone. On the other hand, the U.S. still had an estimated nine to one advantage in strategic nuclear weapons when it was all over, so removing the one viable Soviet threat to the U.S. while still keeping such an advantage might be seen as an American victory.

In the greater scheme of things, the Cuban Missile Crisis may have been the single most important event of the twentieth century, since an unsuccessful resolution could have crippled or even ended civilization as we know it. Instead, it set in motion efforts that gradually defused the Cold War and allowed it to come to a peaceful conclusion.

Bombs Away with Curtis Lemay



Curtis Lemay was one of the most controversial military leaders during World War II and the Cold War. During World War II he had initiated the firebombing campaign against Japan that may have killed 500,000 Japanese civilians and military personnel. He himself said that if we had lost the war he would have been tried as a war criminal. However, he was completely unrepentant about his role, saying it was worth it if it shortened the war by one day.

He was famous for his strict orders for crews not to return with a single bomb undropped. In accordance with these orders, when a bomb got stuck with the bomb bay doors open, one airman had to climb out to cut it loose, a scene

reminiscent of the end of the movie, *Dr. Strangelove*.

After the war, Lemay became the head of Strategic Bomber Command (SAC), building it into the most powerful nuclear strike force on the planet, with 244,000 airmen, a fleet of ICBM's that eventually would include 1054 missiles, and nearly 2,000 heavy bombers and 800 tanker aircraft for in-flight refueling. He also successfully pushed for expanding use of space satellites & electronic warfare.

Lemay advocated justified preemptive nuclear attacks on Russia if it was clear they were preparing to attack. However, he doesn't seem to have supported randomly initiating such an attack without justification.

He was also famous for his ever-present cigar. Supposedly, when asked by an airman to get rid of it to keep it from igniting an aircraft's fuel, he replied: "It wouldn't dare."

Some choice quotes by Curtis Lemay:

"I think there are many times when it would be most efficient to use nuclear weapons. However, the public opinion in this country and throughout the world is to throw up their hands in horror when you mention nuclear weapons, just because of the propaganda that's been fed to them."

"That was the era when we might have destroyed Russia completely and not even skinned our elbows doing it."

"We should bomb Vietnam back into the stone age."

"If you kill enough of them, they stop fighting."

Vietnam (1954-75).

American involvement in Vietnam was its most disastrous move of the Cold War. Driving it was a fear and hostility toward communist Russia and China that blinded American leaders to any other possible causes of an uprising with the slightest socialist elements as examples of Soviet and Chinese aggression. Out of this came the unfortunate policy of backing any anti-communist regime, no matter how corrupt and repressive. Therefore, The US missed two important facts about Vietnam. One was that the government it supported in Saigon (the South Vietnamese capital) was a brutal dictatorship and anything but democratic. Secondly, ignoring the centuries-long animosity between the Chinese and Vietnamese, it saw North Vietnam as a pawn in a Chinese plot to conquer all of Asia.

After Vietnam won its independence in 1954, it had been divided between North and South at the 17th parallel, with planned elections to reunite the country in 1956. However, The United States, fearing a communist victory, prevented the elections from taking place, thus keeping Vietnam divided between the communist North and a “democratic” South that actually functioned under a series of American-backed dictators. Civil War soon erupted with North Vietnam supporting a communist insurgency known as the Viet Cong in the South.

Acting on these assumptions, the U.S. felt it imperative to support the government in Saigon against the Viet Cong and North Vietnam. At first, Eisenhower sent only a few hundred military advisors and Kennedy slightly increased this commitment. However, it was President Johnson who heavily committed American forces and aid to South Vietnam in the 1960s.

Unfortunately for American forces, this was very different from any war they had ever fought in before. Instead of the traditional head-on clashes between clearly identifiable armies, this was a guerilla war where insurgents would attack American soldiers and then melt back into the civilian population, often making it impossible to identify and catch them. Out of frustration, American troops would retaliate against any civilians in the area of the attack, inevitably killing

innocent people in their efforts to find the Viet Cong. This would increase public support for the Viet Cong and feed more guerilla attacks which, in turn, would trigger both increased American involvement in Vietnam and more retaliation against innocent civilians, and so on. Vietnam’s jungles also made it virtually impossible for American forces to sweep through the countryside or even effectively disrupt enemy supply lines, known as the Ho Chi Minh Trail. This trail ran largely through neighboring Cambodia and Laos to avoid American attacks, unless the U.S. wanted to complicate its situation further by sending forces into those countries.

This was a different kind of war where traditional benchmarks of progress didn’t apply for several reasons. First of all, the jungle made it impossible to advance along a visible front with visible battle lines in contact with one another. Also, there were also diplomatic factors that shackled the war effort. For one thing, US forces couldn’t unleash their total firepower, fearing that they might cross a threshold that would bring in China or Russia and trigger World War III. Likewise, North Vietnamese forces were supplied along the “Ho Chi Minh Trail”, an ever-shifting supply line that ran through neutral Laos and Cambodia. Launching an offensive against this would violate the neutrality of Laos or Cambodia, with all sorts of complications. In fact, when Richard Nixon did send troops in to Cambodia, it triggered massive demonstrations across the US. In one of those, four students were shot and killed, which escalated protests to a new level still.

Another factor hampering the war effort was television coverage. This was the first television war, where Americans would watch updated accounts and images of the war every night on the evening news. This can make progress in any war seem unbearably slow, but especially so in Vietnam where the nature of the fighting eliminated the traditional measure of success: geographic advance along a front towards a stated goal, typically the enemy capital. However, there were no geographically defined fronts in this war, only isolated raids where American troops would be airlifted by helicopters into remote villages, try to identify and catch the enemy, and then get airlifted out, abandoning control of the villages to the enemy once again. This daily repetition of seemingly

identical raids with no apparent progress or purpose increasingly frustrated the American public.

Added to this frustration was the media's portrayal of the war as a losing cause, especially after the Tet Offensive in 1968. This was a surprise attack that did catch U.S. and South Vietnamese forces off guard, but turned into a major defeat for the communists. However, the media's portrayal of this battle as a defeat (because of its initial surprise) turned much of the American public against the war. This generated another vicious cycle where media portrayal of the war as a losing cause would trigger student protests that also got heavy TV coverage. These would reinforce the media's negative portrayal of the war, causing more protests and so on.

The war's unpopularity forced President Johnson out of the presidential race in 1968. The winner was Richard Nixon who told the public he had a secret plan for ending the war while he was secretly telling the North Vietnamese to keep fighting while Johnson was still in office, saying they could get a better deal with him if he were elected. When Nixon took office, he pushed for "Vietnamization" of the war, replacing American troops with South Vietnamese conscripts, many of who proved unreliable in the fight to defend a corrupt and failing dictatorship. However, this gave Nixon the chance to negotiate a "peace with honor" (1973), which left communist forces still operating in South Vietnam intact, but gave American forces enough time to exit Vietnam before the Saigon government fell. In 1975, North Vietnamese forces entered Saigon, thus reuniting Vietnam. Three years later, as if to underscore the nationalist nature of this prolonged struggle and debunk the idea that the war was a Chinese plot, Chinese and Vietnamese forces were firing at each other as they had for centuries.

The beginnings of American Involvement



"You can kill ten of my men for every one I kill of yours, but even at those odds, you will lose and I will win."--Ho Chi Minh to the French, late 1940s-- Ho Chi Minh (1890-1969

Involvement in Vietnam was America's most disastrous move of the Cold War. Driving it was a fear and hostility toward communist Russia and China. This blinded American leaders to any other possible causes of an uprising except as examples of Soviet and Chinese aggression if it had the slightest socialist elements. Out of this came the unfortunate policy of backing any anti-communist regime, no matter how corrupt and repressive, as long as it wasn't communist. Therefore, The US missed two important facts about Vietnam. One was that the government it supported in Saigon (the South Vietnamese capital) was a brutal dictatorship and anything but democratic. Secondly, ignoring the centuries-long animosity between the Chinese and Vietnamese, it saw North Vietnam as a pawn in a Chinese plot to conquer all of Asia.

The Domino Theory was the belief that, if we let one country go communist, it would lead to all its neighbors falling to communism like a row of dominoes. In the case of Southeast Asia, Vietnam was seen as the lead domino, with its neighbors (Laos, Cambodia, Thailand, Burma, and maybe even India) being the next to fall, thus allowing the Soviet Union and Red China to expand their power globally at our expense.

While this may seem naïve in retrospect, we have to view it from the point of view of President Johnson and the generation who had seen Central Europe fall like this to the Nazis in the 1930s and Eastern Europe fall to Stalin after 1945. Thus, in their historical experience, the Domino Theory was not just a theory, but

something they had seen happen and could not afford to recur.

By the same token, since it had been the policy of appeasement that had allowed Hitler to advance across Europe, many American leaders in the Cold War felt that showing and using military strength was the only appropriate response to any communist aggression. Even when that aggression took place in a region that was of little or no strategic value to the U.S., it still had to be stopped.

Ho Chi Minh was the communist leader of North Vietnam. After attending school in the Vietnamese city of Hue, he took a job as a cook on a French steamship, and lived for a while in London and Paris, where he helped found the French Communist Party. He was then summoned for further training in Moscow, whence he moved to China to help Vietnamese exiles. While there, he founded the Indochinese Communist Party (ICP), was expelled from the country, and returned in 1938. During World War II, Ho organized the Viet Minh independence movement against Japan.

After World War II, he led the Viet Minh in the war for independence from France. With help from China and the Soviet Union, the Viet Minh were able to surround the French at Dien Bien Phu in 1954 (below) and force their surrender. After the division of Vietnam at the 17th Parallel, Ho became the president of the communist North and worked tirelessly to bring the whole country under unified communist rule.



Ngo Dinh Diem has generally been seen as a brutal and corrupt dictator of South Vietnam whom the U.S. supported to stop a communist takeover from the North. In fact, he was the one leader in the South who realized that winning the hearts and minds of his people through

honest and responsible government was the best way to fight the communist insurgency.

Unfortunately, despite the advice of Edward Lansdale whose policies Diem had followed, the dominant voices in Washington saw Diem as a corrupt leader. Reinforcing this view was the corrupt behavior of his brother, Ngo Dinh Nhu, that especially discredited Diem. Therefore, Washington went along with the coup that killed Diem in 1963. In retrospect, failure to support Diem may have been the worst mistake the U.S. made in Vietnam.

In 1960, the National Liberation Front (NLF), a more broadly based movement opposed to Diem's regime, was formed in the South. However true US claims that North Vietnam controlled the communist dominated group may have been, it did signal increased turmoil in Vietnam, including growing North Vietnamese support for the NLF, which the US dubbed the Viet Cong.

Mounting troubles. In June 1963 during religious & political protests against the regime of Ngo Dinh Diem, a 73year- old Buddhist monk, doused with gasoline by fellow monks, set himself on fire in Saigon, followed by another one on October 5. On November 1st a military coup, with US knowledge, overthrew Diem, but the following regime was little better and turmoil continued.



On November 1, 1963, a military coup, with US knowledge, overthrew and killed Diem but the following regimes proved to be much worse and turmoil continued.

On November 22, less than a month after Diem's overthrow, President Kennedy was assassinated. It was with Kennedy's successor, Lyndon Baines Johnson, that America's involvement in Vietnam would get especially serious.

Selling the War: the Gulf of Tonkin Incident



Secretary of Defense, Robert McNamara, briefs the press on the Johnson administration's version of what happened in the Gulf of Tonkin.

Kennedy's successor, Lyndon Baines Johnson (LBJ) began his political career during the 1930s under FDR. This had two major effects on his policies. One was The Great Society, a continuation of the social programs begun with the New Deal. The other, influenced by Hitler's expansion in the face of appeasement, was a near obsession with showing America's strength to stop communist aggression. Therefore, LBJ became increasingly committed to saving South Vietnam from a communist takeover.

As LBJ himself put it: "I knew from the start...that I was bound to be crucified either way I moved. If I left the woman I really loved—the Great Society—in order to get involved with that bitch of a war on the other side of the world, then I would lose everything at home. All my programs. All my hopes to feed the hungry and shelter the homeless. All my dreams to provide education and medical care to the browns and the blacks and the lame and the poor. But if I left that war and let the Communists take over South Vietnam, then I would be seen as a coward and my nation would be seen as an appeaser, and we would both find it impossible to accomplish anything for anybody anywhere on the entire globe.

From the point of view of LBJ and his advisors, not taking a stand in a local war in Vietnam would lead inevitably to a catastrophic world war as had happened in 1939. Thus it would be totally irresponsible to turn our backs on South Vietnam.

On August 2, 1964, an attack in the Gulf of Tonkin by North Vietnamese patrol boats on the

USS Maddox, plus a second attack two days later (either by North Vietnamese torpedoes or dolphins) gave LBJ the convenient excuse to widen the conflict in Vietnam. Since the incidents took place offshore, reporters could neither confirm nor deny they had even happened, let alone question LBJ's version of what had happened and the threat he claimed it posed to American forces and its allies.

Despite the pending election, the American public bought LBJ's version of what happened, and he convinced Congress to pass (nearly unanimously) the Gulf of Tonkin Resolution, giving the president broad discretionary war powers to send American forces to Vietnam without requiring an official declaration of war. During the election campaign, LBJ constantly reassured the public that "the United States... seeks no wider war".

After his reelection in November, LBJ rapidly widened the war.

Waging war without declaring war. The Gulf of Tonkin Resolution effectively gave LBJ and his successor, Richard Nixon, the power to keep American troops in Vietnam indefinitely without officially declaring war. This made it easier to soft sell the war to the public by referring to it as a police action or some other innocuous-sounding name. Along those lines, there weren't the sorts of sacrifices associated with wartime: rationing, extra taxes, recycling, bond drives, etc. Thus, for many Americans, life seemed to go on completely unaffected by the war. However, for many others, especially the young and poor, there was the draft, so the war was very much a reality in their lives.

In 1973, when the war and Nixon had both become very unpopular, Congress would pass the War Powers Act, which limited to 60 days the president's power to use American military forces without Congressional consent or a formal declaration of war. Nixon vetoed this act, but Congress overrode his veto.

The War Powers Act tried to strike a fine balance between the need to react quickly to a

national emergency and Congress' need for time to deliberate on the need to go to war. However, it's much harder to get out of a war than it is to get into it, especially after a nation's forces have already been committed to combat or even just deployed for combat for 60 days. Thus, although, the U.S. has not officially declared war on anyone since World War II, the inertia of events have committed its forces to long-term combat in a number of situations: Korea, Vietnam, Iraq (twice), and Afghanistan. In addition, there have been a number of short-term actions as well, such as in Somalia, Grenada, and Lebanon.

The 1964 Presidential Campaign and the "Daisy Girl" Ad



A screen shot from the Daisy Girl Ad

The 1964 presidential campaign pitted the very conservative Barry Goldwater against LBJ. Goldwater is largely credited with sparking the revival of conservatism in America in the 1960s, being strongly opposed to what he saw as the socialistic aspects of FDR's New Deal and its successor, LBJ's Great Society.

Goldwater, who was cast as an extremist in his views, is probably best remembered for his saying: "Extremism in the defense of liberty is no vice; Moderation in the pursuit of justice is no virtue!" This did nothing to win him the votes of political moderates. Neither did his statement in 1961 that "sometimes I think this country would be better off if we could just saw off the Eastern Seaboard and let it float out to sea". Thanks largely to such comments, he lost the election by one of the biggest landslides in American history.

The 1964 campaign may be most famous for an anti-Goldwater ad showing a little girl picking petals off of a daisy. As she plucks the last petal,

an ominous voice starts counting down from ten. The camera freezes and zooms in on her eye until the screen is filled with darkness. When the countdown reaches zero, a nuclear explosion lights up the dark screen. Then comes a voiceover of an LBJ speech: "*These are the stakes! To make a world in which all of God's children can live, or to go into the dark. We must either love each other, or we must die.*" Then another voiceover: "*Vote for President Johnson on November 3. The stakes are too high for you to stay home.*"

The ad was exploiting a comment Goldwater had made about the possibility of using nuclear weapons in Vietnam. Although it was aired only once, being pulled as too provocative, it was replayed widely on local TV stations and talk shows, thus giving it wide airplay and publicity while making LBJ look ethical by immediately pulling it. It remains one of the most controversial political ads in history and marks a turning point in both commercial and political advertising.

Escalation and "Search and Destroy"

We should declare war on North Vietnam. . . . We could pave the whole country and put parking strips on it and still be home by Christmas. -- Ronald Reagan, 1965



Full American involvement didn't come all at once, but escalated somewhat gradually before really starting to accelerate after LBJ's election in 1965:

- 3,000 by the end of 1961.
- 11,500 by the end of 1962.
- 20,000 by the end of 1963.
- 23,000 by the end of 1964, by which time LBJ had secured reelection.
- 3500 marines, the first U.S. ground combat troops, land in Vietnam in 1965. The first

major battle in the Vietnam War involving American troops was at Ia Drang in 1965 where 2500 Vietnamese and 234 Americans were reported killed.

- 183,000 by the end of 1965, while a coup led by General Nguyen Van Thieu prompts the U.S. commander in Vietnam, General Westmoreland, to request 100,000 more troops for 1966.
- 485,000 by the end of 1967.

“Search and Destroy” or “Zippo” missions.

Because of Vietnam’s jungle terrain and the guerilla warfare the Viet Cong favored, conventional tactics of sweeping back enemy forces and taking their territory along a continuous front were impractical. Therefore, American forces used a strategy known as Search and Destroy.

During the daytime the Americans would seek out enemy forces in the countryside, try to destroy them, and then retire to a secure base camp for the night, conceding control of the countryside back to the Vietcong. Every day or so they would repeat the process, hoping to kill enough of the enemy to wear them down. Therefore, rather than territory held, which was irrelevant to this new kind of warfare, success was measured in body counts.

Thus the war assumed the nature of repetitive raids to seemingly identical villages with no apparent progress being made. GIs, angered and frustrated by the elusiveness of the Vietcong and the deaths of comrades to various booby traps and mines, would lash out against the peasants, brutally interrogating them, killing or raping some, and burning their thatched huts, often using Zippo lighters. Thus the term Zippo missions. As a result, American GIs became increasingly numbered by this process and correspondingly insensitive to the fates of the Vietnamese peasants who found themselves caught in the middle of a conflict of which they had little or no understanding. The dynamics of such a war created a vicious cycle of atrocities and counter-atrocities that continued to escalate with no apparent end in sight.

Another aspect that made Vietnam so difficult for Americans was its hot tropical climate. Besides the heat and humidity, this meant frequently having to ford rivers and cross rice paddies, so that clothes and equipment never seemed to dry out.



Adding to the Americans’ mobility was a new technology, the helicopter, which could quickly leapfrog across large areas of jungle, drop soldiers at their destination, and then take them back to base camp when finished. Helicopters were even used for lifting whole pieces of artillery into otherwise inaccessible areas. To the Vietnamese peasants isolated from the modern world, these strange machines suddenly descending from the sky along with the huge soldiers they disgorged to terrorize and brutalize them, and then just as suddenly disappear back into the sky, were especially puzzling and frightening.



Above. Not that Americans were always on the attack. GIs at Khe Sahn, one of our most important bases in Vietnam, head for cover during a mortar attack by the Viet Cong in 1968.

Bombs, Napalm, and Other Chemicals



The Air War. The U. S. had total command of the air during the Vietnam War, which provided it the opportunity to engage in large scale conventional bombing raids, even using B-52s, which were the workhorse of our nuclear bomber fleet. Bombing had two purposes. One was to destroy enemy targets, which was difficult because they were generally hidden by the jungle. Therefore, part of the air war consisted of spraying defoliates, notably Agent Orange, to kill that cover. The second purpose was to exert political pressure on North Vietnam to agree to a negotiated settlement. Neither strategy really worked toward winning the war, although they did inflict untold suffering on the Vietnamese people.



Napalm is a highly flammable petroleum-based jellied compound, similar to Greek Fire (AKA sticky fire) used by the Byzantines in the Middle Ages. Its use as an incendiary weapon during the Vietnam War was extremely controversial and triggered numerous protests on college campuses against recruiting by its producer, Dow Chemical (also known for Saran Wrap).

It was originally developed during World War II for use in flame-throwers and then for firebombing cities and hard to reach Japanese positions, such as caves and bunkers. Its effects were horrific, sticking to the skin and burning at temperatures of 1200° Celsius. Even Japanese soldiers, who were known for fighting to the death defending their positions, would surrender rather than face the fiery death napalm brought. It was probably the most ghastly and provocative symbol used by protestors to end the Vietnam War.

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Agent Orange was the most famous of the so-called “Rainbow Herbicides” used in a program called Operation Ranch Hand to defoliate rainforests and destroy crops in Vietnam. Its use against forests was to deprive enemy troops of cover, while destruction of crops was to force peasants to move into the cities where the Americans had greater control. Between 1958 and 1971 the urban population of South Vietnam more than tripled from 2.8 million to 8 million, largely because of this policy.

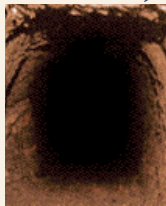
Spraying Agent Orange and other herbicides, such as Agent Blue, destroyed at least 10 million hectares (25 million acres) of farmland. Altogether, 12% of South Vietnam was sprayed, some areas with several hundred times the amount considered safe in the U.S. The resulting loss of ground cover led to widespread soil erosion and disruption of animal life.

The effects of Agent Orange on people, although less dramatic than those of napalm, were still awful, since it contained a carcinogenic dioxin that one researcher described as “*perhaps the most toxic molecule ever synthesized by man.*” Several million Vietnamese were affected by Agent Orange, with between 150,000 and 500,000 children born with birth defects such as cleft palates, mental disabilities, and extra fingers and toes

In areas most heavily affected, people still suffer from skin diseases and cancer of the lungs, larynx, and prostate. Similarly, a high ratio of returning American soldiers exposed to Agent Orange developed various forms of cancers, while higher rates of miscarriages and birth defects affected their wives and children respectively.

Tragically, the effects of Agent Orange seem to keep wearing on, as a third generation of Vietnamese is experiencing abnormally high levels of birth defects.

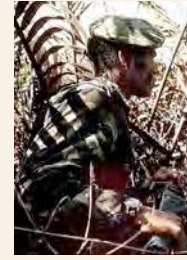
Tunnel Rats, Mercenaries, & Fake Villages



Entrance to a Viet Cong Tunnel

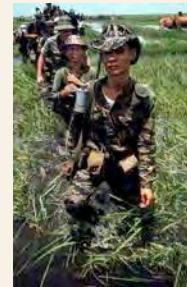
The Vietnamese had been using tunnel systems for many years against Chinese, Japanese and French invaders. There were numerous underground guerilla bases in South Vietnam that had been built and supplied by forced labor from the surrounding villages. The largest systems could be over 200 kilometers (130 miles) long. They would be constructed with water traps to keep out poisonous gases, were strong enough to withstand explosions and could house barracks, armories, supply depots, air raid shelters, classrooms, hospitals and factories.

The US employed specially trained volunteers, known as "Tunnel Rats", to go into these systems in search of the enemy and information. They were hand picked men with nerves of steel, able to stay calm in highly tense situations. They could not suffer from claustrophobia and had to be of a strong but small stature. They would enter tunnels armed with only hand grenades, a pistol and a flashlight. They frequently engaged in hand-to-hand combat and were subjected to snipers, booby traps, rats, snakes and scorpions. Tunnel Rats received "hazardous pay" as extra compensation and would generally not serve for more than an average of four months.



A Navy Seal waiting in ambush. Special forces troops such as the Navy Seals and Green Berets were especially valuable in the irregular type of warfare fought in Vietnam.

The Montagnards were highlanders in Vietnam and Laos who opposed the Communists and fought loyally beside American forces, being especially valuable as guides and interpreters. In addition, the U.S. also used Cambodian mercenaries (below) working for them inside Vietnam close to the Cambodian border in order to help cut off the Ho Chi Minh Trail, the primary supply line for the Viet Cong.



Taking a lesson from Potemkin. As part of a propaganda campaign, the U.S. built a fake North Vietnamese fishing village where they took some 1000 kidnapped Vietnamese civilians (1964-8) to convince them that this was a base for an anti-Communist resistance group, the Secret Sword of the Patriots' League, operating in N. Vietnam. All this in the hope of recruiting insurgents to operate in the communist North. In the 18th century, Catherine the Great's minister, Potemkin, had reportedly built similar fake villages stocked with healthy happy peasants to convince the tsarina that she was ruling a prosperous realm.



South Vietnam Transformed



Nearly as much as the war itself, the mere presence of so many Americans in South Vietnam transformed the country. The U.S. built a huge infrastructure of roads, bridges, harbors, airfields, and communications networks in the country. By 1967, an estimated 1 million tons of goods were entering South Vietnam every month. Much of these vast stores leaked out to create a huge black market of stolen guns, ammunition, office furniture, etc. Unfortunately, the massive sums spent in South Vietnam also led to rampant inflation and a growing gap in the country between rich and poor.

At the same time, fighting, shelling, bombing (including the controversial use of the incendiary napalm) and defoliation with carcinogenic herbicides such as Agent Orange drove tens of thousands of refugees from the countryside to the cities, where they settled in makeshift shanty towns. Thousands more were forcibly resettled in new, supposedly secured villages that functioned largely as concentration camps, despite the American government's intentions. All these factors in turn combined to shatter Vietnam's traditional social and family structures.



Americans Transformed



A marine's face reflects the stress of having just been on a 6-day patrol in the jungle.

The growing futility of the war in Vietnam and its unpopularity back home had unfortunate effects on American soldiers too. Adding to these effects were two other factors. First of all the average American soldier serving in Vietnam was only 19 years old, a young age to be exposing someone to the psychologically upsetting experiences of such a war. Secondly, a soldier's tour of duty was usually done in thirteen months. While this did give him a concrete date to look forward to going home, the rapid turnover in personnel also created instability in units, along with barely giving raw recruits enough time to learn the ropes before they left.

The demoralizing effects of all this caused many GIs to try to kill the pain with drugs that were often supplied by South Vietnamese officers. Both marijuana and highly potent heroin were cheap and plentiful, neither of which added to soldiers' combat readiness. By 1971 an estimated 30% of American troops had tried opium or heroin, and many of them returned to the states as addicts.

At the time, the prevailing belief was that one couldn't break heroin addiction by just going "cold turkey" without the help of an established drug treatment program. Amazingly, a number of former GIs disproved this by checking into hotels with some friends who kept them there for several days as they went through the extremely painful process of withdrawal until they were clean.

My Lai (March 16, 1968)



Probably the most transformative experience in war is how it brutalizes normally decent men and turns them into vicious killers. Nothing symbolized this more than the massacre of the innocent civilians in a South Vietnamese village in 1968.

My Lai was in the middle of an area where the Vietcong were heavily entrenched. In previous weeks American GIs had suffered numerous casualties from ambushes and mines set by an elusive enemy they could never bring to grips. The frustration spilled over when the men of Charlie Company, 11th Brigade, American Division entered the village in a search and destroy mission.

As typically happened, they found no Vietcong upon whom to wreak vengeance. What was different was that something snapped and they took out their frustrations on the helpless civilians left behind. According to eyewitness reports, women and children were shot in the backs of their heads while praying, old men were bayoneted, and at least one girl was raped before being killed.

When news of this atrocity leaked out, the American public was shocked that its young men could act in such a way. What they didn't understand was that this wasn't so much about the character of these young Americans as it was about war and what it can turn the best of us into. The commanding officer, Lieutenant William Calley, was later convicted of murder (despite appeals he was acting on orders from above), sentenced to life in prison, and released in 1974. He was discharged dishonorably from the army and got a job selling insurance

Dissension in the Ranks



As morale declined and resistance to the war rose, growing numbers of soldiers protested the war in various ways. Some grew their hair longer than regulation, listened to rock music, took drugs, wore peace signs and black arm bands, and some, like the 1st Air Cavalry (below), outright refused to go on missions they saw as suicidal and fight in a war they saw as senseless. As one soldier put it: *"I always did believe in protecting my own country, if it came down to that. But I'm over here fighting a war for a cause that means nothing to me."*

Soldiers engaged in "search and avoid" missions, deliberately avoiding clashes with the enemy. They would sometimes carry enemy weapons on patrol and return with them as "evidence" of engaging the enemy. Some units made their own private ceasefires with the enemy. North Vietnamese soldiers were told not to fire on Americans carrying their weapons pointed down or wearing anti-war symbols such as red bandanas and peace signs.

Eventually, the army made accommodations for the growing numbers of soldiers who joined what was known as the "grunts' peace." As one veteran testified in a *New York Times* article *"They have set up separate companies for men who refuse to go out into the field. It is no big thing to refuse to go. If a man is ordered to go to such and such a place, he no longer goes through the hassle of refusing; he just packs his shirt and goes to visit some buddies at another base camp."*

Fragging. One of the most disturbing aspects of the breakdown of discipline in Vietnam was fragging: the act of trying to maim or kill a superior officer, usually because he was incompetent or too enthusiastic about going after the enemy, even when it put his men's safety at risk. Incidents of fragging (called that since it was typically done with a fragmentation

grenade) increased as the war seemed to become more fruitless and unpopular. Most soldiers, typically young draftees who didn't want to be there, had little motivation to take extra risks in order to win the war since they knew they would be going home after 13 months...if they survived.

Also, because of heavy attrition or rotation back home most of the good experienced officers were replaced by young and inexperienced junior officers fresh out of Officers Candidate School (OCS), which did little to prepare them for jungle war and tactics. One common and unpopular mistake they made was to order their men to travel along jungle trails where they could easily be ambushed, rather than take the slower, harder, but safer routes off the trails.

Sometimes, soldiers would leave a grenade pin on an officer's bed to warn him he would be fragged if he didn't change his ways. There were 230 confirmed cases of officers killed by fragging and 1400 other suspicious deaths that went unexplained. Among those officers that GIs secretly considered fragging for careless leadership was Lieutenant William Calley who led the My Lai massacre.

The Anti-War Movement



A variety of factors converged to make opposition to involvement in Vietnam the largest anti-war movement in American history. Much of it had to do with demographics: millions of baby-boomers who were in their teens or early twenties, an especially energetic and potentially volatile age. A mixture of their youthful idealism, hormones, and the fact they were the group being drafted for service in Vietnam made them especially vociferous and active in their resistance to the war. They were also inspired by the spirit of activism that had fueled the Civil Rights and Free Speech movements. Also, as the

war took more lives and drained American resources at home, Martin Luther King denounced American involvement in Viet Nam.

The stresses of the war also helped split the Civil Rights Movement, as frustrated Blacks advocated a more violent strategy to achieve their aims. This helped spark destructive riots in many American Cities in the mid and late 1960s. Those riots, in turn, may have inspired violence in antiwar demonstrations.

There was also the issue of whether the U.S. should be involved in a far off land that didn't seem crucial to national interests or security. Popular perception is that disagreement about the war followed a fracture line corresponding to age: younger people being opposed to the war while the older generation, which had gone through World War II, was more willing to support the government unquestioningly and even brand opponents to the war as traitors. Although this was true later in the war, at first there was more opposition to the war from those over 50 and support for LBJ's policies by younger adults. For example, a Gallup poll in 1966 showed that 71% of those age 21-29 thought sending troops to Vietnam was not a mistake, while only 48% of those over age 50 thought that way.

Similarly, there were protests involving thousands of people from the very start of serious American involvement. In April 1965 an estimated 25,000 people demonstrated against the war in Washington D.C., while 30,000 attended a teach-in about the war in Berkeley. A demonstration at the Washington Monument in November drew 40,000 protesters. That same month, a 31-year-old pacifist named Norman Morrison, burned himself alive outside the Pentagon. The following year saw similar, if somewhat smaller protests. Meanwhile, Muhammed Ali's public opposition to the war helped catalyzed the opinions of African-Americans who bore a disproportionate burden of the fighting.

The movement really started to swell in 1967. On April 15, an estimated 400,000 protesters

marched in New York City and another 100,000 in San Francisco. In October, 100,000 people demonstrated against the war in Washington D.C.

Many people consider the turning point of the war as the Tet Offensive in February 1968. Despite an understood truce to observe the New Year festival, communist forces made surprise attacks on several South Vietnamese cities, apparently catching the Americans off guard and even penetrating into the U.S. embassy. Although the communists were heavily defeated, the Tet offensive was perceived in the U.S. as a defeat for the Americans and opposition to the war grew rapidly from that point.



A picture of Saigon police chief Nguyen Ngoc Loan about to execute a Viet Cong insurgent. What the public generally didn't know when viewing this what that it took place after Nguyen had learned his wife had just been killed by the Viet Cong.

Another turning point was an editorial (2/27/1968) by CBS anchorman, Walter Cronkite, the "most trusted man in America". Having returned from Vietnam to see the situation for himself, he concluded the U.S. could not win the war. As he put it: *"To say that we are closer to victory today is to believe, in the face of the evidence, the optimists who have been wrong in the past. To suggest we are on the edge of defeat is to yield to unreasonable pessimism. To say that we are mired in stalemate seems the only realistic, yet unsatisfactory, conclusion. On the off chance that military and political analysts are right, in the next few months we must test the enemy's intentions, in case this is indeed his last big gasp before negotiations. But it is increasingly clear to this reporter that the only rational way out then will be to negotiate, not as victors, but as an*

honorable people who lived up to their pledge to defend democracy, and did the best they could."



After Cronkite's editorial, LBJ reportedly remarked, "If I've lost Cronkite, I've lost Middle America." LBJ was pretty much right.

Ironically, the growth of the anti-war movement led to a lot more violence in 1968, not just in the U.S., but also in France and West Germany. Not only was there violence at Berkeley, Columbia University, and in particular the Democratic National Convention, it got widespread media coverage that helped widen the generation gap in America. Older people saw the demonstrations as shameful hooliganism and even treason, while younger people saw them as evidence of police brutality and a repressive government.



Same images, but widely different interpretations. That was America in 1968.

1969 saw a new president, Richard Nixon, and a certain wait-and-see attitude about how he would handle the war, which continued to become more unpopular. However, by that fall, many people saw Nixon as no different from LBJ, and organized the Moratorium to End the War in Vietnam. On October 15, millions of Americans took off from work and school to participate in local protests. A month later up to half a million people marched against the war in Washington, with a parallel march taking place

in San Francisco. Thus 1969 was relatively peaceful. It wouldn't last.

In April 1970 Nixon sent troops into Cambodia to disrupt the Ho Chi Minh trail and other North Vietnamese operations based in that neutral country. This triggered a storm of protests across the nation, but nothing compared to the uproar when four students were shot dead by the National Guard at Kent State University in Ohio on May 4 (below). College campuses erupted in the most widespread protests yet, many of them violent. A subsequent National Student Strike shut down over 450 university, college, and high school campuses, while seriously impairing normal operations at many more.



What happened at Kent State is still open to dispute, although one likely scenario was that a nervous guardsman (probably only 19 or 20 himself) panicked at the sound of something in the chaos going on all around him and inadvertently fired his gun, triggering his comrades to do the same. Although probably not a premeditated act, thousands of college students across the nation felt differently and took to the streets. A similar incident that killed several Black students at Jackson State that week created much less of a stir on predominantly white campuses.

As the war's popularity continued to plummet, the anti-war movement attracted a wider cross-section of people to its ranks: blue collar workers, clergy, and Vietnam veterans. Such people, especially veterans, gave the movement more credibility with mainstream society who had largely perceived it as consisting mainly of unkempt spoiled middle class brats. As the

movement became more widely accepted, it also tended to become less violent.

However, there were violent splinter groups, such as the Weathermen, who went underground to carry out violent revolutionary activities. The most notable such action was the bombing of Sterling Hall in Madison Wisconsin, because it housed government-funded research. One physics researcher, who was not involved in government research, was killed. The bomb wrecked the university's physics department, but barely touched the part of the building housing government research.

One interesting aspect of the anti-war movement concerned the elements of humor, satire and irony demonstrators often injected into events. For example, after the march in Washington, 30,000 of the demonstrators went to surround the Pentagon, some of them trying to "exorcise" and "levitate" the building into space. By most accounts, they failed. When the CIA also foiled an attempt to "bomb" the Pentagon with 10,000 flowers, demonstrators put the flowers in the barrels of the rifles of the troops opposing them.

During the protests at the Democratic Convention in Chicago in August 1968, demonstrators nominated their own candidate, a pig named Pigasus, for president, a slam at the establishment, and especially police, who were typically called pigs by protestors. The police got their revenge by "kidnapping" the protestors' presidential candidate.



The Bitter End (1973-5)



South Vietnamese civilians try to escape Saigon as communist forces approach in the final days of the war.



With their ships so overloaded with refugees, Americans have to make room by shoving helicopters into the South China Sea.

The war's unpopularity forced LBJ out of the presidential race in 1968. The winner and his successor was Richard Nixon who claimed he had a secret plan to end the war. Meanwhile he was secretly telling North Vietnam to keep fighting while Johnson was still in office, saying they could get a better deal with him if he were elected. When Nixon took office, he pushed for "Vietnamization" of the war, replacing U.S. troops with South Vietnamese conscripts, many of whom proved unreliable in the fight to defend a corrupt and failing dictatorship.

However, this gave Nixon the chance to negotiate a "peace with honor" (1973), which left communist forces still operating in South Vietnam intact, but gave American forces enough time to exit Vietnam before the Saigon government fell.

While this did allow American forces to withdraw peacefully, North Vietnam stepped up its war with the South. For the regime there, it was only a matter of time. In April 1975 North Vietnamese forces closed in on Saigon as resistance crumbled.

The scene in Saigon as communist forces closed in was both chaotic and pathetic. While Americans in the embassy scrambled to evacuate, thousands of South Vietnamese afraid of communist reprisals, tried desperately to escape with them.

THE U.S AND LATIN AMERICA

“America’s back yard”. The relationship between the U.S. and its Latin American neighbors has always been fraught with problems, especially since the Spanish-American War in 1898. Much of this is the result of the United States’ condescending, often times arrogant, and even exploitative attitudes and treatment of Latin America as its “backyard.” Three things especially fed into a pattern of intervention after 1898. The first was a document known as the Monroe Doctrine (1823), which warned European powers against trying to retake the newly independent republics then forming in South America. Part of this was an aspect of the “Era of Good Feeling” in the U. S. at the time, a sense of being a unique experiment in democracy that we wanted to encourage and maybe even nurture in our image without foreign interference. It was also a result of fear about the big European powers coming back to conquer, not just South America, but also the U.S., coming less than a decade after the British had taken and burned Washington D.C. in the war of 1812. Ironically, it was Britain, the power that had burned our capital, that enforced the Monroe Doctrine, but for reasons of its own, namely to open South American markets to British goods.

This brings us to the second factor influencing our policies in Latin America: the cycle of instability (discussed in FC.108A) where encouragement of one product economies by European powers (Britain in particular) created economic instability, which led to political instability and military dictators, which further encouraged economic instability, and so on. Added to this type of economic imperialism was industrial expansion in the U.S., especially after 1900, where American corporations had vested interests in Latin American economies much as the British had before.

Unfortunately, ongoing political instability in many of these nations made corporations nervous about their investments, thus leading to a long history of intervention in Latin America. Among the countries affected were Haiti (1915-34), Mexico (1846-48, 1914, 1916), Puerto Rico (1898-present), Panama (1903-18 to build the canal), Cuba (1898-1902, 1917, 1921-23, 1933), Nicaragua (1912-33), and the Dominican Republic (1916-24). Of course, most Americans didn’t think of this as intervention

or imperialism, but rather as helping our little brothers south of the border keep their lives in order, because they couldn’t do it for themselves. This situation became more serious in the 1950s.

Before the Cold War, there had been no viable threat to our security. However, after 1945 the Soviet Union was increasingly perceived as such a threat. By extension, anything that even suggested socialist tendencies was seen as the work of the Soviets and must be crushed. At first, the Soviet Union was too weak to extend its influence directly into Latin America by military means. However, if it were to ally with an already established communist state in the region, we feared it could use that as the gateway for the Red Army to threaten us. Therefore, the prevailing feeling in the U.S. was that any perceived communist threats in Latin America must be eliminated before they could blossom into a Soviet satellite.

The first major Cold War intervention in Latin America was in Guatemala, where a progressive reformer, Jacobo Arbenz, was working for land reform. Unfortunately, the United Fruit Company, which owned much of the country, convinced members of the Eisenhower administration, some of who owned stock in the company, that Arbenz was a communist. Therefore, the CIA, in conjunction with a slick media smokescreen showing supposed communist incursions from Honduras, overthrew Arbenz and replaced him with a brutal dictatorship in 1954.

A more serious threat emerged less than a decade later in Cuba. Fulgencio Batista was the U.S.-backed dictator of Cuba, served as a resort and playground for the rich as well as a source of bananas and sugar. In 1959 after years of trying, a young revolutionary, Fidel Castro overthrew Batista’s corrupt regime. At the time, Castro had some socialist leanings, but wasn’t looking to the Soviet Union for support. However, for many in the U.S., some having corporate interests in Cuba, even a hint of socialism was enough for them to see Soviet communism. Therefore, as the U.S. tried to destabilize Castro’s regime with such things as an economic embargo, he struck back by progressively nationalizing more American owned companies. Finally, faced with economic ruin, he declared his regime was socialist and allied with the Soviet

Union, which bought Cuban sugar in return for letting the Soviets put military installations on the island, including medium range nuclear missiles. The result was the Cuban Missile Crisis, which nearly triggered a thermo-nuclear war. Luckily for all, the crisis was defused peacefully, but now Russia had a communist ally only ninety miles from our shores.

For many in Latin America, the presence of a communist bloc nation in the Western Hemisphere created a viable alternative to the military dictators in power in many countries, which encouraged other reformers to come forth. The problem was that Washington equated anything socialist with the Stalinist model, which it usually wasn't, thus driving the U.S. to make an unlikely alliance with those dictators, who were also supported by the middle class that feared a socialist takeover. Supposedly these efforts were to save democracy, which the dictators feared nearly as much as socialism. For the U.S., it was a choice between what it thought the lesser of two evils. Unfortunately, many people living under those dictators did not agree. Therefore, the more the U.S. supported dictatorial regimes in Latin America, the more popular socialism became, causing the U.S. to push harder in support of the dictators, and so on.

Three examples especially stand out in that respect. The first was Chile in 1973, when the CIA helped a General Pinochet overthrow a popular, but socialist leaning, reformer, Salvador Allende. The second example was Nicaragua, where a socialist movement known as the Sandinistas overthrew a U.S.-backed dictator, Anastasio Somoza in 1979. In reaction, the CIA backed another group, the Contras, in its efforts to overthrow the Sandinistas. The result was nearly a decade of civil war that wrecked the economy until U.S. money got the Sandinistas voted out of office. Finally, a U.S. backed dictator in Panama, Manuel Noriega, became so hated that even the middle class wanted him out, which finally encouraged the U.S. to remove him in 1989, showing that business even trumped dictators when push came to shove.

THE NUCLEAR ARMS RACE (1945-2001)

Introduction. We have already seen how Stalin's domination of Eastern Europe after World War II and the West's reaction to his aggression led to a vicious Cold War cycle of one side, fearful of the other, developing new weapons, which caused the other side to do the same and so on. Of course, the single factor making the Cold War so unique and dangerous was nuclear weapons. And just as the Cold War's roots lay back in World War II, so did the roots of the nuclear arms race.

Starting in 1942, almost immediately after its entry into World War II, the United States had worked intensively to develop an atomic bomb before Nazi Germany could do the same. On July 15, 1945 the American program, known as the Manhattan Project, successfully tested the first nuclear bomb at Alamogordo, New Mexico. The United States expected to keep its monopoly on the atomic bomb well into the 1950s, by which time its nuclear arsenal would be virtually impossible for anyone else to match or threaten. However, Stalin's scientists, thanks partly to espionage reaching into the ranks of the Manhattan Project, successfully developed and tested their own atomic bomb in 1949. The Americans, desperate to regain their technological edge to counterbalance Stalin's huge conventional forces, decided to work on what was referred to as the Super bomb. This device, also known as a hydrogen bomb, would create a fusion reaction and thermonuclear explosion as much more powerful than the fission bomb that destroyed Hiroshima and Nagasaki as those bombs were compared to the conventional bombs used in World War II. In 1952, the United States successfully developed and tested such a fearsome weapon. However, the Russians, following the same line of research, produced their own super bomb in 1953, only a year after the Americans had done the same.

In 1957 Soviet military technology seemed to surpass that of the Americans when the Russians developed the first Intercontinental ballistic missiles (ICBMs) capable of delivering nuclear warheads to targets in the United States when fired from Soviet territory. That same year, the Soviets launched the first space satellite, Sputnik, raising American fears of Russia launching nuclear attacks from outer space. Also, the Russians started developing their first long-range bomber force, another area where

the United States previously had a monopoly. Although the perceived missile and bomber gaps were myths, or more accurately, were real in favor of the West, both the threat and fear of nuclear war grew throughout the 1950s. Therefore, as nuclear arsenals grew and with them the threat of nuclear Armageddon, an anti-nuclear movement emerged in the West.

However, in the late 1950s Cold War rhetoric made the American public even more afraid of growing Soviet military power than nuclear holocaust, so that President Eisenhower, under increasing criticism for being soft on communism, increased military spending, which only brought a similar reaction from the Soviet Union and a spiraling arms race. Ironically, Ike did this knowing (through top secret information that he could not make public) that the feared "bomber gap" actually heavily favored the United States. Along these lines the United States embarked on an expensive space program to close the "space gap" and reoriented its school curricula to emphasize math and science to close the perceived "education gap".

Meanwhile, the U.S. tried to close the "espionage gap" by increasing spy flights over Russia to compensate for the fact that it was easier for the Soviets to infiltrate America's open society with spies than it was for the U.S. to do the same into the much more tightly closed Soviet society. Unfortunately, in 1960 an American U-2 spy plane was shot down over Russia and its pilot, Gary Powers, was captured. In addition to the diplomatic furor this raised, it also alarmed Khrushchev about how much the Americans knew concerning Russia's relative nuclear weakness. In order to cover this up, he ordered a series of massive atmospheric tests of Hydrogen bombs as a warning to the West. The U.S. responded in kind and nuclear tensions (and fallout) continued to increase into the 1960s.

MAD. Out of this situation evolved the dominant nuclear strategy of the Cold War: mutually assured destruction (MAD). The basic idea was that each side built up such an overwhelming amount of nuclear firepower (known as overkill) that no one would dare launch a war out of fear of massive retaliation. The basic psychological assumption of MAD was sound, because it did scare each side away from intentional aggression that might lead to an all-out thermonuclear exchange. However, there

was the danger that human or mechanical (especially computer) error could accidentally trigger World War III. Growing fears of such a scenario were reflected in several books and movies of the era, notably *Fail Safe* and *Doctor Strangelove*. In fact, there were several incidents where some sort of mechanical error did nearly launch a nuclear war. Fortunately, in each case disaster was averted, typically by an individual who refused to believe the launch orders were real.

MAD produced several results that together seemed to be both hurtling the human race toward certain destruction and bringing it to its senses. For one thing, MAD demanded that each side keep a large retaliatory (second strike) force that could survive a surprise attack by the enemy and act as a deterrent to such an attack. Therefore, both sides continued to build huge nuclear stockpiles and progressively more accurate delivery systems that gave them the combined capability of destroying the human race many times over.

However, despite the perception that nuclear weapons were more cost effective than conventional weapons, providing more “bang for the buck”, so to speak, they were also prohibitively expensive. This was especially true for the research and development of new weapons systems, since the arms race catalyzed increasingly high-tech research that became more costly as the technology involved became more sophisticated. Eventually, the huge price tag of the arms race would drive the Soviet Union into financial oblivion and help end the Cold War. However, that would not happen until the 1980s. In the 1960s, it was a more immediate crisis that would help cool down the arms race: the Cuban Missile Crisis.

Gradually defusing the nuclear time-bomb (1962-2001). The realization of how close we had come to World War III over Cuba woke many people to the dangers of thermonuclear war. As a result, both sides were much more careful to take precautions to avoid such a disaster. The major obstacle to overcome was the deep distrust between the Soviets and Americans. Therefore, bringing the nuclear genie under control involved starting with relatively small measures to gradually build mutual trust as a foundation for more substantial measures. The first such step was installing the Hot Line, a direct line of communications between Washington

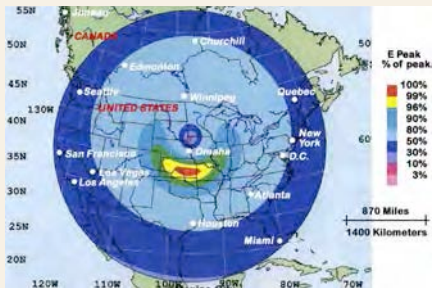
and Moscow that would speed up communications and reduce the chances of a garbled misunderstood message triggering an unintended war. Along these lines, both sides were constantly upgrading their control systems to minimize the chances of some officer or mechanical error launching World War III without authorization from above. In 1963 came an atmospheric test ban treaty to protect the atmosphere from fallout. In 1968 the nuclear non-proliferation treaty committed a large number of nations to not developing nuclear weapons.

In the 1970s, the United States and Soviet Union took a giant step forward with the Strategic Arms Limitations Treaties, SALT I (1972) and SALT II (1979), which put caps on the number of new weapons being produced. Although this did not stop the spiraling arms race, at least it put some limits on it and kept both sides talking. Unfortunately, during the 1980s, the Cold War heated up again, and with it the arms race. However, by this time, high tech, especially computer technology, was making possible a whole new generation of sophisticated weapons systems, including the possibility of mounting a guided missile defense system against an incoming nuclear attack. President Reagan’s proposed Strategic Defense Initiative (AKA “Star Wars” or SDI), although technologically unfeasible at the time, still upped the stakes (and price tag) of the arms race. By this time, the Soviet Union’s economy was already sinking under the burden of trying to keep up with the United States’ buildup. Therefore, its new leader, Mikhail Gorbachev, announced a unilateral withdrawal of some Soviet forces from Eastern Europe as a gesture to the West for more substantial talks. These renewed disarmament negotiations produced a series of new treaties that significantly reduced nuclear stockpiles and ended the Cold War on a much happier note than it might have:

- Intermediate Nuclear Forces (INF) Treaty eliminates many missiles, especially in Europe (1987)
- Strategic Arms Reduction Treaty (START I) cut number of Nuclear warheads from 23,500 → 15,400 (1991)
- START II Eliminated land based MIRV’s (Multiple Independent Re-entry Vehicles) (1993)
- Agreement to cut American & Russian nuclear forces below 2000 warheads each (2001)

The arms race between the Cold War superpowers ended much better than it might have. That's the good news, that human beings are capable of resolving their differences peacefully. However, we're not out of the woods yet as other people try to get and intend to use "weapons of mass destruction". Still, the final lesson of the Cold War is that there is still hope, and that, as always, is a priceless commodity.

The Effects of a Nuclear Detonation



The EMP range of damage caused by a high yield burst detonated at 400 km over the United States.

Following is a brief description of what happens during a nuclear blast.

1. *An immediate or Prompt Radiation burst of primarily gamma rays and neutrons.* Gamma-rays, which are generated by radioactive atoms and in nuclear explosions, have the smallest wavelengths and the most energy of any other wave in the electromagnetic spectrum. Gamma-rays are produced by such violent events as supernova explosions or the destruction of atoms. They can kill living cells, and are used discretely to kill cancerous cells. When unleashed in the massive burst of a hydrogen bomb, they are indiscriminately deadly to any cells in their path.

The best shield from gamma radiation is a dense mass of material, such as lead, although a thick mass of lighter materials such as aluminum, concrete, or soil can be as effective as a thin shield of lead.

A burst of gamma rays from an exploding supernova may have been responsible for the extinction of 70 percent of the marine creatures that thrived during the Ordovician period (488

to 443 million years ago) by destroying the ozone layer and cooling the planet.

2. *EMP (electromagnetic pulse), also caused by lightning and solar flares, is an intense pulse of electromagnetic energy lasting some 200 nanoseconds with a peak power on the order of 500 billion megawatts.* EMP will fry the circuits of any unshielded electronics within its range. On July 8, 1962, in the "Starfish Prime" test, the EMP from a 1.4 Mt burst 250 miles above Johnston Island in the Pacific turned off 300 streetlights in Oahu, Hawaii (740 miles away). Today's integrated circuits are one million times more vulnerable to EMP than older vacuum tube electronics in use in 1962. We still face the threat of a thermonuclear blast 300 miles above the center of the United States that could critically damage our nation's infrastructure.



This and the following pictures are screen shots from Peter Watkins' film *The War Game*, which was commissioned by the BBC. Despite winning an Oscar, the BBC declined to air it since it was deemed too realistic for public viewing.

3. *Thermal radiation.* Directly viewing a nuclear explosion can burn the retinas, although the eyes will often recover if bandaged for a couple weeks. More serious are the heat effects. Direct exposure of flesh to a 1-megaton blast from seven miles away will cause first-degree burns, comparable to a bad sunburn. A person will suffer second-degree burns at a distance of six miles, and third degree burns five miles out. At a closer range, the heat can sear the flesh and even melt one's eyeballs. It can also ignite flammable materials such as wood, clothes, and draperies, causing widespread fires.



4. *The blast and shock wave* can travel several hundred kilometers per hour, atomizing just about anything close to ground zero and doing progressively less damage outward. It can also start fires by rupturing natural gas lines and fuel tanks. The blast wave is measured in pounds per square inch (psi) "overpressure" beyond normal psi. Even a moderate overpressure of 5 psi can rupture internal organs and do substantial damage to normal buildings. The overpressure created by the shock wave's outward motion leaves a low-pressure area at ground zero, causing a subsequent strong backwash of winds to fill in that low-pressure area. The fires ignited by the blast wave may join with those triggered by thermal radiation to generate what is known as a firestorm.



5. *Firestorms*. In some cases, the fires created by the heat flash and shock waves combine to create intense fires. These lead to low pressure in the middle as the heat rises, sucking in surrounding air to stoke the fire, generating hotter fires, etc. This rush of air into the center of the fire causes gale force winds that suck people into the firestorm. The firestorm also replaces surrounding oxygen with carbon monoxide and carbon dioxide, leading to asphyxiation of people even in the supposed safety of shelters. Firestorms were generated by the conventional fire bombings of Hamburg, Dresden, and Tokyo as well as the atomic attack on Hiroshima. However, hilly terrain at Nagasaki blocked winds and the formation of a firestorm.

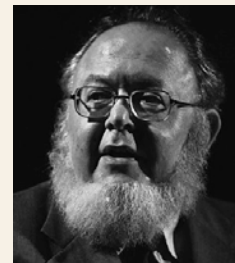
A firestorm continues until there is nothing left to burn.

6. *Radioactive Fallout* starts within hours of detonation as ionized radioactive particles lifted into the mushroom cloud fall back to earth. A ground burst ionizes more dust particles than an air burst does, thus leading to more fallout. It takes 2-3 weeks for the fallout to settle back to earth. Where fallout comes down and in what concentrations depends on wind patterns. People in fallout areas should remain in airtight shelters with supplies of uncontaminated food and water stored beforehand, until the fallout has settled out of the atmosphere.

Since it takes thousands of years for radioactive isotopes like strontium-90 and cesium-136 to deteriorate, everything must be thoroughly cleaned and several inches of the topsoil buried before "normal" life resumes.

Exposure to large doses of fallout can lead to radiation sickness. The heavier the dose, the more quickly symptoms show up, with severe doses leading to symptoms occurring within 30 minutes. Radiation especially attacks reproductive, intestinal, and hair cells. Early symptoms are nausea, vomiting, and bloody diarrhea (from the breakdown of intestinal cells) while hair loss, the inability of wounds to heal, dizziness, fatigue, and headaches also typically occur. Roughly 50% of those exposed to heavy doses of radiation die from radiation sickness. Even after recovering from radiation sickness, other long-term effects may show up, such as cancer, tumors, and birth defects.

MAD and the Real Dr. Strangelove



Herman Kahn, the inspiration for *Doctor Strangelove*

The man considered the creator of the concept of Mutually Assured Destruction (MAD) was Herman Kahn, a 5'8" 350 pound man who

worked for the RAND think-tank of intellectuals (philosophers, mathematicians, physicists, economists, etc.) in the 1950s thinking up ways to justify big Air Force budgets.

RAND began as a small group of scientists in World War II in response to the more highly technical aspects of warfare emerging in the 1940s. Besides the atomic bomb, it dealt with such things as radar, depth charges, long-range rockets, and infrared sensors, along with how to use them most efficiently (e.g., the maximum destructive radius of a particular charge of explosives, the best formation for flying bombers, etc.). Out of this came the field of systems analysis. After the war, the air force was concerned about reduced military budgets and being able to retain skilled scientists, so it retained four of the scientists as the air force RAND group to deal with questions of the increasingly complex technologies of war: long-range missiles, atomic weapons, robots, etc.

1959 was the year of the “missile gap” when many policy makers tried to convince people scared of nuclear attack that we should just make more missiles. Civil defense authorities testified that a “moderate sized” nuclear attack of 263 H-bombs against 70 American cities and 151 air bases would instantly kill 23-million Americans and ultimately 26-million more, while irradiating half of the homes in the U.S. In addition, atmospheric tests were creating dangerously high levels of radioactive strontium-90 in America’s milk.

During the 1950s the war strategy for Strategic Air Command (SAC) was simply to unleash a total nuclear attack on the Russians and Chinese as soon as war should begin. Such an attack would involve 3,423 nuclear bombs, unleashing the equivalent of nearly 8 billion tons of explosive power. It was estimated that would kill 285,000,000 Russians and Chinese with unknown collateral effects (such as radioactive fallout) in other areas such as Europe.

According to Kahn, this wasn’t a war strategy but a “war orgasm”. To make his point, Kahn proposed with mock sincerity a “doomsday

machine”, a massive stockpile of hydrogen bombs set to go off in case of Soviet aggression and unleashing massive amounts of fallout that would kill hundreds of millions of people globally, if not exterminate the entire human race. He even drew up plans for such a device to prove it could be done. When, as expected, every SAC officer rejected the idea, Kahn told them their own plans were little short of such a doomsday device.

Kahn’s deeper point was that no one realistically expected such a war to take place. Therefore, if we didn’t take our own plans seriously, why should the Soviets, who might call our bluff by facing us with the choice of surrender or mass suicide/murder? Instead, Kahn advocated a “counterforce” strategy that would meet a Soviet conventional attack with a limited nuclear attack on several select strategic targets along with the threat to escalate unless the Soviets backed off. Of course, the Soviets might call our bluff and respond in kind, thus raising the odds of a thermonuclear Armageddon taking place. Thus the “counterforce” strategy drew little support with SAC generals, who saw the risk it ran as making it hardly a credible strategy either.

But Kahn, who didn’t do things in half measures, saw differently, and proposed large-scale civil defense measures to make a counterforce strategy credible and nuclear war seem winnable. Therefore, he became obsessed with surviving nuclear war by means of massive fallout shelter building programs and evacuations of cities. Nelson Rockefeller, governor of New York, even introduced a bill that every homeowner in his state be required to build a fallout shelter. Other governors supported this idea, which went nowhere.

Another problem with Kahn’s ideas about fallout shelters and evacuation of cities was that they would bring in no funding for new air force weapons, so he quit RAND in 1959, wrote a 652 page book called *On Thermonuclear War*, and went on a lecture tour explaining how to survive nuclear war.

According to Kahn, if 53 of America's major cities were wiped out in a thermonuclear attack, that would *only* kill 40% of the population, leaving 60% alive. Asking his audiences if they could live with that, he would answer for them in the affirmative, saying the destruction of the cities would be so remote from survivors who wouldn't be faced with seeing the actual carnage.

Of course, he admitted things would be different. People's diets would change. And sure, some people would get apathetic and others would get nauseous. That's why people needed radiation meters so they could tell their vomiting neighbors, "The meter says you only got ten roentgens. What are you throwing up for? Shut up!"

When asked if such a world would make normal happy lives impossible for most survivors, Kahn replied, "Who's happy and normal now?"

Kahn proposed an ascending scale of nuclear strategies for deterring or, if necessary, winning a nuclear war with the Soviets:

- Type I was the simple threat, with the apparent intention, to annihilate Russia if it attacked.
- Type II was the counterforce strategy backed up by and made credible by extensive civil defense measures.
- Type III was a "prolonged" war (i.e., lasting between two and twenty days) in a "tit-for-tat" exchange of nuclear attacks until the enemy gave up.

There was one other catch. In order to keep this strategy credible, we had to sustain a high level of tension with the Soviets so that our government and people would be willing to maintain a correspondingly high level of arms production and readiness to fight a nuclear war. Of course the Soviets would respond in kind, thus perpetuating a spiraling arms race that would create the paradox that the strategy, also known later as Mutually Assured Destruction (MAD), both kept the peace while putting the survival of the human race at increasingly higher levels of peril.

Even Kahn would concede to audience members that a thermonuclear exchange would destroy the communications infrastructure necessary for the president to know the real situation beyond his bunker and be able to order either more attacks or a ceasefire. In fact, this uncertainty was built into the system whereby nuclear submarine commanders who lost contact with strategic command and the president had the discretionary power to order a nuclear attack if they thought the United States had been attacked.

In the meantime, crowds flocked to see Kahn and buy his book, *On Thermonuclear War*. He would later become the intellectual model for film director, Stanley Kubrick's dark nuclear war comedy *Dr. Strangelove*, with whole lines of dialogue in the movie taken from Kahn's book.

Nuclear strategies. While MAD was a general philosophy or strategy on how to wage nuclear war, there were two basic types of strategies for nuclear war: counter-value and counterforce.

Counter-value. In the early days of nuclear weapons, guidance systems were so inaccurate that neither side could count on hitting anything smaller than a city. Therefore, each side targeted the other's cities, the understanding being that you destroy one of my cities, I destroy at least one of yours. This was the approach especially associated with MAD.

Counterforce. As guidance systems got more accurate in the 1960s and 1970s, each side was able to accurately target the other's missile silos, thus avoiding the massive loss of life caused by hitting the enemy's cities. Unfortunately, this also made it seem that nuclear war could be limited and won. Of course, the question was, would both sides be able to keep such a war limited to enemy silos when no other known war had been voluntarily limited?

Weapons blurring the Distinction between Conventional & Nuclear War



A Cruise Missile, capable of carrying a conventional or nuclear warhead

Tactical nuclear weapons were “smaller yield” weapons with a yield of 10-15Kt (kilotons), comparable to the bombs dropped on Hiroshima and Nagasaki. They were specially deployed by NATO against the Warsaw Pact’s larger conventional forces. Of course, if we initiate the use of nuclear weapons, where would it stop?

Enhanced Radiation Warheads (Neutron Bombs) yield up to 80% of their energy in the form of high-energy neutrons. This is six times the yield of ordinary nuclear weapons, which produce most of their energy as blast and heat. In the mid 1970s neutron bombs were proposed for development and deployment against Soviet tank columns to fry the tank crews inside their tanks with a burst of radiation while doing minimal damage to civilian property and creating little fallout.

A one kiloton enhanced radiation warhead can deliver an instantaneous lethal dose of 8000 rads over a radius of 690m (2260 ft) while the blast radius would be limited to approximately 550m (1800 ft). In contrast a regular 10 kiloton nuclear device would have the same lethal radiation radius but a blast radius of 1220m (4000 ft).

Degraded uranium is extremely dense, and thus very effective when used for the tips of anti-tank shells. Unfortunately, the shell’s explosion spreads radioactive uranium all over. D-tipped shells were used extensively in the Gulf War and Kosovo, and have been blamed for the mysterious malady, Gulf War Syndrome, found in many soldiers who were sent, without chemical protection suits, to clean up after the shells. The symptoms for Gulf War Syndrome are consistent with radiation sickness.

Soviet and American Nuclear Delivery Systems



The B-52, workhorse of our strategic nuclear bomber fleet since 1960, is still used as a static bomber for launching cruise missiles and is expected to stay in service until 2030.

The nature of the respective nuclear delivery systems for the Soviets and Americans during the Cold War was largely determined by the fighting in the Second World War. Until June 6, 1944 the Americans (and British) were confined to Britain, making large-scale bombing of German cities by long-range strategic bomber fleets the only way they could hurt Germany. By 1945, they were launching raids of up to 1000 “flying fortresses” at a time to devastate Germany’s cities.

For the Russians, it was a very different story, being nose to nose with the Germans from day one of the fighting. Therefore, nearly all of their resources for an air force had to be put into fighters and ground support planes to combat their German counterparts, leaving very little for development of long-range bombers. One thing they did develop were rockets. The infamous Katyushas, although, only short-range weapons, served as the basis for Russia’s long-range missile forces after the war, also being helped by captured German scientists who had worked on the long-range V-1 and V-2 rockets for Hitler. However, half of Germany’s scientists had been captured by the Americans and put to work in their programs.

As a result, during the Cold War, the U.S. continued development of both strategic bombers and missiles, while the Russians, without a strategic bomber fleet to build upon, focused almost totally on missiles. The Russians came up with the first long-range

Intercontinental Ballistic Missiles (ICBMs) in 1957, followed closely by the U.S. (The Soviets used one of their ICBMs to launch Sputnik that October to start the space race.)

ICBMs could fly on a suborbital path across the North Pole at a speed of four miles *per second* and were capable of hitting within a few yards of their designated targets on the other side of the globe. Civilians targeted for such an attack would only have a few minutes warning time to find shelter before detonation.

Complicating matters further in the late 1960s was the development of Multiple Independent Reentry Vehicles (MIRVs), making it possible to carry up to ten warheads on one missile and deliver them to ten different targets along the missile's path.

The Cold War also saw both sides develop another type of delivery system, submarines armed with Submarine Launched Ballistic Missiles (SLBMs). Leading the American fleet were the Ohio class Trident submarines, which were the backbone of the submarine leg of America's nuclear triad. They had 24 Submarine Launched Ballistic Missiles (SLBMs), which individually could carry up to eight 100Kt warheads (each one roughly equivalent to 8 Hiroshima bombs). Thus each submarine could deliver 192 nuclear bombs

against an enemy. Some people described a Trident submarine as the third largest nuclear power on the planet.

These submarines, which are still in service as of 2013, are extremely quiet and virtually invulnerable to enemy attack. To maintain communications with the mainland, they use ultra-low frequency radio waves that are as secure as the communications for land-based ICBMs. The Navy, which once worried about being made obsolete by nuclear weapons in the 1950s, now contends land-based ICBMs and the manned bomber forces of SAC (Strategic Air Command) are what are obsolete.



The B-2 Stealth bomber, able to avoid detection by enemy radar, largely replaced the B-52 as America's main strategic bomber.

U.S. Nuclear Free-Fall Bombs

Bomb	Yield	= to how many Hiroshima blasts	Type
B28	70kt to 1.45 MT	4.6 - 95	Fusion
B43	1MT	66.6	Fusion
B53	9MT	600	Fusion
B57	5kT to 10kT	0.3 - 0.6	Fission
B61	10kT to 500kT	0.6 - 33.3	Boosted Fission
B83	1-2 MT	66.6-133.3	Fission

THE LIKELY EFFECTS OF A LIMITED NUCLEAR ATTACK

While most people tend to think of an all-out exchange of nuclear weapons when they think of nuclear war, both sides planned for many different scenarios and how they would respond. An example of one scenario is what would happen in case of a limited strike on just a few cities that have most of our oil refining capacity. Besides the psychological shock of such a catastrophe on the nation, such an attack would trigger a whole chain reaction of problems.

One problem would be agriculture. For one thing, farmers would probably be allocated some fuel for their tractors and other machinery, but not as much as before. Therefore, fewer acres of crops would be planted. Also, there would probably be no chemical fertilizers, herbicides, or pesticides, thus drastically reducing crop yields per acre that was planted. As a result, food supplies would be severely reduced, especially meat, and what food there was would be hard to get to markets, not to mention the greater difficulties for people to get to market to buy it.

This brings us to the next problem: no fuel for a society almost completely dependent on the family car. One immediate victim would be the auto industry and other industries feeding into it, such as glass, steel, and upholstery, not to mention all the auto mechanics and other auto service people. For people spread out into the suburbs, this would create particular problems for getting to work, school, the market, etc. Outlying malls, another common feature of America, would become inaccessible and almost certainly go out of business. All of these would create massive unemployment on a scale dwarfing the Great Depression. And all those unemployed people would create a huge strain on an economy already severely reduced.

The effects wouldn't stop there. For one thing, the severe psychological shock of the attack and its aftermath would seriously discourage any potential consumers (what few are left) from buying all but the bare necessities, if they could even get those. This would trigger more business failures, further discouraging spending, and so on.

The effects would also be global, discouraging Americans from buying foreign goods (if they could get them to market). It would also discourage other people from buying American goods. Thus more businesses would collapse, further discouraging domestic buying, which would further discourage foreign trade, etc.

Thus, even if only the U.S. were bombed, the effects of a limited nuclear attack would trigger a worldwide depression and the collapse of the global economy for an indefinite period.

Charlottesville: A Fictional Account Of Post-Nuclear Survival By Nan Randall



Screenshot from the 1983 film *The Day After* that describes the effects on Lawrence, Kansas of a fictional nuclear attack that hits nearby Kansas City. It closely follows the scenario described in the following study done for the Office of Technology Assessment of how a similar attack would affect Charlottesville, Virginia.

At first, it seemed like a miracle. No fireball had seared the city, no blast wave had crumbled buildings and buried the inhabitants, no dark mushroom cloud had spread over the sky. Much of the country had been devastated by massive nuclear attack, but the small, gracious city of Charlottesville, Virginia had escaped unharmed.

The nuclear attack on the Nation did not come as a complete surprise. For some weeks, there had been a mounting anxiety as the media reported deteriorating relations between the superpowers. The threat of possible nuclear war hung heavy

in the world's consciousness. As evidence reached the U.S. President's desk that a sizable number of Americans were deserting the major cities for what they perceived to be safety in the rural areas, he considered ordering a general evacuation. But, with the concurrence of his advisors, he decided that an evacuation call from the Federal Government would be premature, and possibly provocative. There was no hard evidence that the Soviets were evacuating and there was a good chance that the crisis would pass.

Spontaneous evacuation, without official sanction or direction, grew and spread. A week before the attack, Charlottesville had no free hotel or motel rooms. A few evacuees found lodgings with private families, at great expense, but most were forced to camp by their cars in their trailers next to the fast-food chains on Route 29. The governing bodies of Charlottesville and surrounding Albemarle County were rumored to be concerned about the drain on the area resources, without really having any way of turning back newcomers. "If this keeps up," remarked a member of the Albemarle Board of Supervisors, "we're going to be overrun without any war."

A few of the students at the University of Virginia left Charlottesville to join their families. But the majority of the students stayed, believing that they could go home easily if it were necessary.

Refugees came from Washington, 130 miles to the north, and they came from Richmond, 70 miles to the east. A few of the hardier types continued on into the mountains and caverns near Skyline Drive; the majority sought the reassurances of civilization that the small city could provide.

The population of Charlottesville normally stood a little above 40,000, while Albemarle County which surrounds the city like a

donut boasted an additional 40,000 to 50,000. With the arrival of the city evacuees, the combined population was well over 120,000.

In the week before the nuclear attack, much of the population familiarized itself with the location of fallout shelters. Little hoarding took place as retailers limited sales of food and other necessities. Transistor radios accompanied both adults and children when they were away from home. However, most of the residents of Charlottesville continued to live as they always had, although they were particularly alert for sirens or bulletin broadcasts on the radio. Many children stayed out of school.

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At the sound of the sirens and the emergency radio alerts, most of Charlottesville and Albemarle County hurried to shelter. Fortunately, Charlottesville had a surplus of shelter space for its own population, though the refugees easily took up the slack. Many headed for the University grounds and the basements of the old neoclassical buildings designed by Thomas Jefferson; others headed downtown for the office building parking garages. Carrying a few personal effects, blankets, cans and bottles of food, and transistor radios, they converged in a quiet if unorderly mass. For most people, the obvious emotional crises—grief at leaving behind a pet, anxiety at being unable to locate a family member or relative—were suppressed by the overwhelming fear of the impending attack.

Some residents chose not to join the group shelters. Many suburbanites had ample, sturdy basements and food stocks. They preferred not to crowd themselves. In the event, those who had taken the precaution of piling dirt against the windows and doors of their basements found that they provided adequate shelter. Among the rural poor, there was a reluctance to desert

the small farms that represented the sum of their Life's work. They wondered whether, if they left, they would return to find their means of livelihood gone. Further, many lived far from an adequate public shelter. So they stayed.

* * *

Most did not see the attacks on Richmond and on Washington as they huddled in their shelters. But the sky to the east and north of Charlottesville glowed brilliant in the noonday sun. At first no one knew how extensive the damage was.

Communication nationwide was interrupted as the Earth's atmosphere shivered with the assault of the explosions. Each town, city, village, or farm was an island, forced to suffer its selected fate of death or salvation alone. (Some time later it was learned that more than 4,000 megatons (Mt) had destroyed military and industrial targets, killing close to 100 million people in the United States. The U.S. counterattack on the Soviet Union had had a similar, devastating effect. Destruction ranged from the large industrial centers on the coasts and Great Lakes to small farming communities that had the misfortune to be close to the great missile silos and military bases.)

Areas of the country such as the northeast corridor were reduced to a swath of burning rubble from north of Boston to south of Norfolk. Still, there were some sections of the Nation that were spared the direct effects of blast and fire. Inland in Virginia, only the town of Radford, west of Roanoke, received a direct hit. The farming and orchard land of the rural counties were not targets.

Charlottesville, the small but elegant center of learning, culture, and trade in central Virginia, was not hit either. This monument to the mind and manner of Jefferson retained its status as a kind of genteel sanctuary, momentarily immune to

the disaster that had leveled the cities of the Nation.

An hour after nothing fell on Charlottesville, rescue squads and police were dispatched to scour the countryside for stragglers to get them to shelters. Because, even if the population was safe from the direct effects of the nuclear warheads, another danger was imminent. Fallout, the deadly cloud of radioactive particles sucked up by the nuclear fireballs, could easily blanket the town of Charlottesville in a matter of hours. And no one could predict how much, and where it would go. Fallout could poison many of those idyllic rural towns and villages that seemed light-years away from the problems of international power and politics. While a few places, such as Roseberg, Oregon, would receive no fallout at all, the rest of the Nation would have to constantly monitor to know the level of radiation and where it was located. Fortunately for Charlottesville, the University and the hospitals had sophisticated radiological monitoring equipment, and the training to use it. Many other towns were not so lucky.

Two and one-half hours after the warnings had sounded, the nuclear engineering staff from the University picked up the first fallout. Starting at a moderate level of about 40 rems an hour — a cumulative dose of 450 rems received in a 1-week period would be fatal to one-half of those exposed — the intensity rose to 50 rems before starting the decline to a level of about four-tenths of a rem an hour after 2 weeks. (The total dose in the first 4 days was 2,000 rems, which killed those who refused to believe shelter was necessary, and increased the risk of eventually dying of cancer for those who were properly sheltered.) For the immediate period, it was essential to stay as protected as possible.

For several days, Charlottesville remained immobile, suspended in time. It was unclear just what had happened or would happen. The President had been able to deliver a message of encouragement, which was carried by those emergency radio stations that could broadcast. As the atmosphere had cleared, radio station WCHV was able to transmit sporadically on its backup transmitter and emergency generator in the basement. However, the message from the President posed more questions than it answered — the damage assessment was incomplete. Nevertheless, he said that there was a tentative cease-fire.

In the first days of sheltering, only those with some particular expertise had much to do. Nuclear engineers and technicians from the University were able to monitor radiation in the shelters they occupied, and CB radios broadcast results to other shelters. The doctors were busy attempting to treat physical and psychological ailments — the symptoms of radiation sickness, flu, and acute anxiety being unnervingly similar — while the police and government officials attempted to keep order. The rest waited.

For the time being, the food stocks brought to the shelter were adequate if not appetizing. The only problem was the water supply, which, though it kept running because of its gravity system, was contaminated with iodine 131. Potassium iodide pills, which were available in some shelters, provided protection; elsewhere people drank bottled water, or as little water as possible.

Not all of the shelters had enough food and other necessities. Most shelters had no toilets. The use of trashcans for human waste was an imperfect system, and several days into the shelter period, the atmosphere was often oppressive. As many suffered from diarrhea —the result either of anxiety, flu, or radiation

sickness— the lack of toilet facilities was especially difficult.

Shelter life was bearable in the beginning. Communications by CB radio allowed some shelters to communicate with one another, to locate missing family members and friends. A genuine altruism or community spirit of cooperation was present in almost all the shelters — though some of them were fairly primitive. Even those refugees who were crowded into halls and basements with the local residents were welcomed. Parents watched out for one another's children or shared scarce baby food. Most people willingly accepted direction from whomever took charge. Among the majority of the shelter residents, the out-of-town refugees being an exception, there was a sense of relief, a sense that they had been among the lucky ones of this world. They had survived.

Within a few days, the emergency radio was able to broadcast quite regularly. (As the ionosphere does not clear all at once, occasional interruptions were expected.) The station had had no protection from the electro-magnetic pulse that can travel down the antenna and shatter the inner workings of electronic equipment during a nuclear explosion. However, by detaching the back-up transmitter at the sound of the warning, the station engineer had protected equipment. Intermittent communications from Emergency Operations Centers got through to Charlottesville officials, though the main communications center at Olney, Md., was silent. Telephone switching facilities were almost entirely out, although the small, independent phone company could expect to be operational fairly quickly. The complex, coast-to-coast trunk lines of Ma Bell might take a year or more to reconnect.

Lifeline of the sheltered community was the CB radio. Rural Virginians had been CB fans long before it became a national craze,

and they put their equipment to imaginative use. Prodded by anxious refugees, as well as by local residents who had relatives and friends in other parts of the world, CBers tried to set up a relay system on the lines of an electronic pony express. Though less than perfect, the CB relay was able to bring limited news from outside, most of that news being acutely distressing. From the limited reports, it was clear that there was little left in the coastal cities; those who had abandoned family or friends to come to Charlottesville understood that probably they would never see them again.

The first surge of grief swept over the refugees and those Charlottesville residents who were affected. In time, the sorrow of loss would affect almost everyone. Although they had survived themselves, still they had lost.

Three days after the attacks, the next large influx of refugees poured into Charlottesville, many of them suffering with the early symptoms of radiation sickness. They had been caught poorly sheltered or too close to the nuclear targets them. A few showed the effects of blast and fire, bringing home to Charlottesville the tangible evidence of the war's destruction. Some refugees had driven, while others had hitchhiked or even walked to reach what they hoped was safety and medical help. On the way, many were forced to abandon those who were too weak to continue.

The hospitals were completely overwhelmed. Up to now, the hospitals had managed to treat the ill with some modicum of order. The hospitals themselves were fallout shelters of a kind; patients' beds had been moved to interior corridors for fallout protection; emergency surgery was feasible with the emergency generators, hospital staff slept in the most protected areas. Some borderline cases in

intensive care were released to nature's devices while any elective medical procedures were eliminated. Still, hospitals were able to cope, even with the increasing number of common ailments caused by the shelter crowding.

Suddenly, this changed. Fallout levels were too high for anyone to be out in the open for any length of time, but the people came anyway. The carefully laid plans of the University of Virginia Emergency Room, devised for the possibility of peacetime accidents, were hurriedly modified. No longer was the careful showering and decontaminating of victims possible with the single shower and uncertain water pressure. Instead, patients were stripped of their clothes and issued hospital gowns. With no time for studied decision, doctors segregated the very sick from the moderately sick — the latter to be treated, the former given medication and allowed to die.

Nevertheless, the day came when the hospitals were full. The University Hospital, Martha Jefferson Hospital, the Blue Ridge Sanatorium, and the others were forced to lock their doors to protect those patients they had already accepted.

After being turned away, the sick had no specific destination. Many still clustered around the middle of town near the two major hospitals taking up residence in the houses abandoned by local residents several days before. With minimal protection from fallout and no medical treatment for other trauma, many died, their bodies left unburied for several weeks.

The combined populations of Charlottesville and Albemarle County rose to 150,000 in the 7 days after the nuclear attack. Slowly, hostility and resentment wedged a gap between residents and refugees who attempted to join the group

shelters, The refugees, still in a daze from their experience, believed that they had priority rights after all they had suffered. The local residents viewed the outsiders as a threat to their own survival, particularly as the extent of the war damage was becoming evident.

In fact, the supply of food was not a problem in the short run. Like most other towns and cities, Charlottesville and Albemarle had some 3 weeks worth of food on hand, on home shelves, in supermarkets and wholesale outlets. The Morton Frozen Food plant could be expected to supply a rich diet of convenience foods for a short time, even after the refrigeration was off. The problem was, after the local supplies were exhausted, where could they get more?

Nerves, already frayed by the stresses of the past days, threatened to snap. Older people were irritated by the noise and commotion of children; children resented the lack of freedom. The friction between differing groups became increasingly evident, and vocal. An experiment in communal living was clearly not to the taste of many, and the discomforts, both physical and psychological, had the effect of pushing local residents out of the shelters. (There was some effort to stop them as the radiation levels still posed some hazards; they were urged at least to stay inside most of the time.) Left in the shelters, now, were mostly those out-of-town refugees who had no homes to go to.

Not all the residents of Charlottesville and Albemarle found their homes intact. In some cases they returned to find the house looted or occupied by refugees who were unwilling to give up squatters' rights. Sometimes claims were backed with guns; in a few cases, squatter and owner worked out a modus vivendi of sharing the property.

Some animals had survived, in varying states of health. Unprotected farm animals were dead, while those that had been confined to fairly solid barns with uncontaminated feed had a fair chance of surviving. Many of these farm animals, however, were missing, apparently eaten by hungry refugees and residents. Some pets had remained indoors in good de facto shelters so that, if they had found water, they needed only to be fed to regain health. Worried about the amount of food pets could consume, many families simply put them out to fend for themselves.

For the first week or so after the nuclear attacks, authorities had few options. Simple survival was the priority, the elements of which included food and water distribution, fallout protection, and retention of some civil order. Government was ad hoc, with the leadership of the city and county naturally cooperating, along with the different police forces. As the population left the shelters, however, officials felt that some more formalized system was desirable. After several long meetings — in the basement of the courthouse where the government officials had stayed to avoid fallout — an emergency government, led by the city manager of Charlottesville, was agreed on. The combined city council and the Albemarle County Board of Supervisors also elected the chairman of the board of supervisors as deputy, and the sheriff of the county as chief of public safety to oversee the combined police forces and provide liaison with those military units, which were still in the area.

The powers given to the city manager were sweeping in scope, certainly far beyond any powers he had held before, and ran “for the duration of the emergency.” While some considered the new form of local government close to martial law, great care was exercised to be sure that the offensive

term was not used. In effect, however, Charlottesville and Albemarle were under a highly centralized, almost totalitarian rule.

Whatever it might be called, under the new system, the city manager was able to take over all resources and their allocation. Following to some extent the paper plan that the area had developed, the new government attempted to set out priorities. It was greatly aided by the experts from the University, who volunteered time and expertise to analyzing the needs of the area. (In this respect, Charlottesville was particularly fortunate in having an extensive pool of talent on which to draw.)

However, if Charlottesville was lucky to have reasonably functioning government and a number of experienced planners and managers, and to have suffered comparatively modest disruption from refugees and fallout, the city and county authorities were becoming painfully aware that they were not set up to 'go it alone' without any outside help. Even were the weather suitable for planting, Charlottesville was no longer an agricultural center. There wasn't enough energy to process any food that might be grown. Where would people get clothes and building materials and medicines and spare parts for the cars and buses? The very complexity of American society — its technological marvels and high standard of living — could well prove to be a barrier to the reconstruction of any one part.

During the third week after the attacks, the new rationing system came into force. Individual identification cards were issued to every man, woman and child. Food was distributed at centralized points. Those without I.D. cards were unable to get their ration of flour, powdered milk, and lard — and the processing of cards could take 3 or more days. Some desperate refugees resorted to stealing I.D. cards in order to

get food, while an enterprising printer started turning out forgeries within 2 days after the government had first issued cards. Rumors of hoarding and black marketeering abounded. Some of the missing supermarket food turned up in black market centers, accompanied by exorbitant prices.

Fuel supplies were dropping more rapidly than the government had hoped. Most families were heating their homes with wood, either in fireplaces or in recycled oil drums for stoves. As the winter was waning, the most desperate need was for fuel for driving motors and generators. Even the drinking water was dependent on the emergency generator that ran a single purifying system for the Rivanna Water and Sewer Authority. (Water for other uses could simply be drawn from the gravity-powered reservoir system, bypassing the filtration system entirely.) The hospital and radio stations all ran on small generators. The University could luxuriate in its coal-powered steam heat, but there was no way, save generators or candles and lanterns, to get lights.

No one was exactly certain how much fuel there was in the area. Both jurisdictions had once surveyed, for emergency planning purposes, the fuel storage capacity, and they hoped they could count on having about half of that on hand. Armed guards were assigned to those larger facilities that had not already been raided by the desperate. All private use of cars or tractors was outlawed, and the government threatened to confiscate any moving vehicles.

Electricity was restored, partially, some two weeks after the attack. Workers from the small Bremo Bluff generating plant, about 15 miles away from Charlottesville, succeeded in starting the plant with the coal reserves that were on hand. From then on, limited electricity use was

permitted for a few hours a day. This was particularly pleasant for those families whose water came from electrically powered well pumps. Well water was issued to children for drinking, as it had escaped the Iodine 131 contamination, which was still elevated in the reservoirs.

The radioactivity level continued to drop (after two weeks it was 0.4 rem per hour) and it was “safe” to go outdoors. However, the resulting doses, though too low to cause immediate illness or deaths, posed a long-term health hazard. The authorities, while recognizing that everybody would receive many times the pre-war “safe dose,” tried to reduce the hazards by urging people to stay inside as much as possible when not picking up food rations at the distribution centers. Life for the residents of Charlottesville revolved around those trips and figuring out ways to make do without the normal supplies and services. Some chanced outings to forage for a greater variety of food, but most were resigned to waiting. There wasn’t much else they could do.

Three weeks after the nuclear attack, almost all the Charlottesville and Albemarle County residents had returned to their homes. Those few whose homes had either been occupied by squatters, or been destroyed by fire, easily found some alternate housing with the government’s help.

This left the refugees. Though the drop in fallout intensity allowed the refugees to move out of basements and interior halls, they still were forced to live a version of camp life. They spent their endless, empty hours waiting in lines for food, for a chance to use the bath-rooms — which at least functioned now — for a chance to talk to authorities. Information from the outside was still sketchy, and for the refugees, this uncertainty added to their already high level of anxiety.

The city manager and the emergency government attempted to solve the refugee-housing problem by billeting refugees in private homes. At first they asked for volunteers, but got few, the authorities then announced that any house with fewer than two people per room would be assigned a refugee family. Resistance to this order was strong, and, particularly in the outlying areas where it was hard to check, outright defiance was common. Families would pretend to comply and then simply force the refugees out as soon as the authorities had left. The refugees would struggle back to town, or take up residence in barns or garages.

And still the refugees came to Charlottesville, bringing with them stories of the horrors they had experienced. They camped in schools, in banks, in warehouses. By night the neoclassical architecture of the University was packed with the residents of Arlington and Alexandria. By day, the new downtown mall was awash with a floating mass of men, women, and children, who, with nothing to do, milled around the unopened stores. A retired ambassador was overheard comparing the scene to that of downtown Calcutta.

By now, the emergency government recognized that the need for food was going to be acute. Without power for refrigeration, much food had spoiled; stocks of nonperishable foods were mostly exhausted. As the shortages became clear, the price of food skyrocketed. Many people refused money for food, preferring to barter. Food and fuel were the most valuable commodities, with shoes and coats high on the list as well.

Since shortly after the attack, the city manager had been in contact both with the Federal Government and with the relocated State government in Roanoke.

He had repeatedly asked for emergency rations, only to be met with vague promises and explanations about the problems of transportation. He was generally urged to cut rations further and hang on. Help would arrive when it could.

For some time, the relatively few surviving farm animals had been gradually and mysteriously disappearing. The farmers concluded that “those damned city folks” were stealing them for food, although some of the local residents were also making midnight forays on the livestock. Farmers themselves slaughtered animals they had planned to fatten-up for the future. They couldn’t spare the feed grain, and they needed food now.

Finally the emergency authorities announced that they would take a percentage of every farmer’s livestock to help feed residents and refugees. Farmers were outraged, considering the action simple theft. There were rumors that angry farmers had shot several agents who had tried to confiscate the animals. Though they were offered promissory notes from the city authorities, the farmers thought such payment worthless.

(The radiological experts at the University had been questioned on the advisability of eating the meat of animals with radiation sickness. Many of those beasts which had remained outside during the high fallout period were showing clear signs of illness. The experts decided that the meat would be edible if cooked sufficiently to kill any bacterial invasion— the result of the deterioration of the animal’s digestive tract. Strontium 90 would be concentrated in the bones or the milk, not the muscle tissue.

Although the city government had relatively frequent contact, mostly by radio, with the Federal and State

governments, the citizens had to rely on the occasional Presidential message that was broadcast on WCHV. Three weeks after the attacks, the President made a major address to reassure the people. He announced that the cease-fire was still holding and he saw no reason why that would change. He described the damage that the U.S. Retaliatory strike had done to the Soviet Union. He also noted that the United States still retained enough nuclear weapons, most of them at sea on submarines, to inflict considerable damage on any nation that attempted to take advantage of the recent past. He did not mention that he suspected that the Soviets also held reserve weapons.

Describing the damage that the country had suffered, the President noted that, even with the loss of over 100 million lives, “We still have reserves, both material and spiritual, unlike any nation on earth. ” He asked for patience and for prayers.

There had been broadcasts earlier by the Lieutenant Governor of Virginia —the Governor was killed in Richmond — from his shelter in Roanoke. However, as fallout in the Roanoke area was quite high (Radford just to the west had been struck), he was effectively immobilized for some time. The State government appeared less organized than the Federal.

Charlottesville was still on its own. Residents hunted game as the last of the food stocks disappeared, but the fallout had killed most animals that were in the open. Refugees were reduced to stealing. A number of people managed to fill their gas tanks with contraband gasoline and set out to forage in the mountains to the west.

Three and one-half weeks after the attack, an old propeller-driven cargo plane landed at the Charlottesville Airport with a supply of flour, powdered milk, and vegetable oil.

The pilot assured the few policemen who guarded the airstrip that more would be on the way by truck as soon as temporary bridges could be built over the major rivers.

The emergency airlift was supposed to supply Charlottesville with food for a week or two. However, the officials who had calculated the allotment had overlooked the refugees. Charlottesville's population was some three times the normal. (No one was absolutely sure because the refugees moved around a good deal, from camp to camp.

The first of the deaths from radiation had occurred 10 days after the attacks, and the number grew steadily. By now, it was not uncommon to see mass funerals several times a day. The terminally ill were not cared for by the hospitals — there were too many, and there was nothing that could be done for them anyway — so it was up to their families to do what they could. Fortunately there were still ample supplies of morphine, and it was rumored that college students had donated marijuana. The city set aside several locations on the outskirts of town for mass graves.

In addition to those with terminal radiation sickness, there were those with nonfatal cases and those who showed some symptoms. Often it was impossible for doctors to quickly identify those with flu or psychosomatic radiation symptoms. The number of patients crowding the emergency rooms did not slacken off. The refugees, crowded together, passed a variety of common disorders, from colds to diarrhea, back and forth, several public health experts worried that an outbreak of measles or even polio could come in the late spring. "So far, we have been lucky not to have a major epidemic of typhus or cholera," a doctor observed to his colleagues.

The supply of drugs on hand at the hospitals was dwindling fast. Although penicillin could be manufactured fairly easily in the laboratories at the university, many other drugs were not so simple, even with talent and ingenuity. (The penicillin had to be administered with large veterinary hypodermics, as the homemade mix was too coarse for the small disposable hypes that most doctors stocked. There was a considerable shortage of needles.) Other medications were in such short supply that many patients with chronic illnesses such as heart disease, kidney failure, respiratory problems, hypertension, and diabetes died within a few weeks.

Food riots broke out 4½ weeks after the attacks — precipitated by the first large shipment of grain. Three large tractor-trailers had pulled into the parking lot of the Citizens Commonwealth Building quite unexpectedly, the word of their arrival somehow misplaced between the Agriculture Department dispatchers and the local authorities. The trucks were greeted with cheers until the residents of Charlottesville discovered that they had been shipped raw grain rather than flour. The drivers were taken unawares when empty cans and bottles showered them and one driver jumped in his cab and departed. (The official explanation, delivered some time later, was that processed food was going to those areas where the bulk of the population was sick or injured. It was also assumed that Charlottesville had some livestock reserves.)

With only a fraction of the population knowing what to do with raw grain, a number of angry citizens broke open the sacks and scattered wheat through the parking lot. They in turn were set upon by those who wanted to conserve as much as possible. The local public safety forces waded into the melee with nightsticks and tear gas.

Everyone blamed everyone else for the incident, but the fragile glue that had held public order together began to unstick.

From this time on, it was almost impossible for the local authorities, not to mention the State and Federal governments, to convince everyone they were getting a fair share. People in one section of town would watch suspiciously as delivery trucks passed them by and headed somewhere else. Blacks distrusted whites, the poor distrusted the rich and everyone distrusted the refugees as “outsiders.”

The refugees were convinced that the local authorities were favoring the residents and tried repeatedly to get State intervention, with little success. Still billeted in dormitories, schools, and motels, the refugee camps were a breeding ground for discontent and even rebellion.

The presence of the Federal Government was not entirely confined to the occasional delivery of food or radio broadcast. Some time before, the National Guard and the Reserve Unit were moved to North Carolina, partly to give the impression of military readiness, and perhaps to be assigned to dig out cities and start reconstruction. The Government had put out calls for volunteers to help in the reconstruction, but found that most workers, young and old, wanted to stay with their families. A system of national conscription for young men and women with no children was in the planning stage.

The Federal Government attempted to urge refugees back to where they had come from, first to assist in the rebuilding of the damaged cities which were rich in resources, and ultimately to redistribute the population to a more normal pattern. Some refugees were happy to attempt to return, particularly those whose houses were more or less intact. However, those

who found their homes destroyed preferred to return to the refugee camps inland. There was nothing to hold them to their former lives. Fearful memories of the past made any time spent in the cities painful.

One day, quite without warning, the city manager was informed that one-half of his fuel stores were to be confiscated by the Federal Government, for the military and for the re- construction effort. (Earth-moving equipment was gathering on the outskirts of the devastated cities and needed fuel.) After it was clear that there was no way to stop the Government from taking the fuel, the city manager suggested that unmarked tank trucks, well-guarded, pick up the stocks at night. He was aware of the effect this action would have on the morale of the population.

Already transportation was difficult for the elderly and those who lived in the rural areas. A sporadic bus service ran from one end of town to the other once a day and an occasional school bus made a sortie out into the suburbs. Bicycles were prized, and sometimes fought over. Those gentlemen farmers whose thoroughbred horses had been protected from fallout could use these animals for transportation, but it was risky to let the animals stand unprotected. Horse thievery had made an anachronistic reappearance.

With even less fuel, the bus service would be cut in half.

By now, barter was clearly established as the preferred means of trade. For a time, the government had paid for commandeered foodstuff and resources with checks and promissory notes, but no one wanted them any more. The local banks had opened for a few days, only to find all their savers lined up to withdraw everything. They closed down. Stores either never opened, or shut down quickly when

they were overrun. (Many stores had been looted in the second week after the attack, when the fallout intensity had dropped.) A few people hoarded money, but most thought money worthless.

Workers in the small industries in the Charlottesville area saw no point in turning up for work if all they could get was paper money. They preferred to spend the time hunting for food and fuel. If barter was a highly inefficient way to do business — it's hard to make change for a side of beef—still, it was preferable to using worthless currency.

Psychologically, the population seemed to be in a quiet holding pattern. The refugees, many of them, had survived experiences that would mark them for years. The memories of fire, collapsing buildings, and screaming, trapped people were still vivid, and some would tremble at loud noises. However, the profound grief over what they had lost—family members, possessions, or friends — underlay emotions and made many apathetic and passive victims of the nuclear attacks, they appeared willing to be victims afterwards too. Still shunned as outsiders by the resident population, most refugees appeared to accept the exclusion just as the surviving population of Hiroshima and Nagasaki had 30 odd years before.

The effect on the Charlottesville and Albemarle residents was less pronounced. They were disoriented. For each lucky one who had a specific job to do, there were many more who were in effect unemployed. They turned inward to their families or else friends and relatives. Their worries about the future—would there be another attack, would they go back to their old jobs, etc.? — Made most days rather anxious, unproductive ones. Children particularly reflected a continuous nervousness, picked up from their elders, and had difficulty sleeping at night. Though many parents

hoped for a return to normalcy once the school re-opened, others quietly decided not to send their children for fear of a second outbreak of war.

Spring changed a lot of things. A new optimism surfaced as everyone looked forward to planting, to good weather and warmth. The residents of Charlottesville had survived the first hurdle; they felt confident they could survive the next.

At the University, agronomists studied the best crops to plant in the Charlottesville area. No one was certain what effect the nuclear explosions had had on the ozone layer. If indeed the ozone was severely damaged, more ultra-violet rays could reach the crops and perhaps burn them. This effect would be more pronounced on delicate crops such as peas and beans. Instead it was suggested that potatoes and soybeans be encouraged and whatever limited fertilizer became available go to farmers who followed the government guidelines.

The emergency government announced that two-thirds of the former pasture land was to be cultivated. Feed grains were to be used for humans, not livestock. Dairy cattle and chickens were the only exceptions.

The next few months in Charlottesville and Albemarle County had a slow, almost dream-like quality. Fears of new attacks had abated. It was a time of settling into a new lifestyle, a severely simplified way of being, of making do. Children ate meat, cheese, or eggs rarely, adults practically never. A good pair of shoes was guarded — and worn only on special occasions. (With warmer weather, most children and adults went barefoot, bringing concern to doctors that there would be an increase in parasitic diseases such as hookworm.)

Many people were unable to return to their former jobs. In some cases, their employers never reopened for business, their goods and services being irrelevant in the post attack society. College teachers, for example, had no students to teach; computer programmers had no computers to program.

For some, it was relatively easy to adapt. Electronics experts set up CB and short wave radio repair shops. Cottage industries — sandal and clothing manufacturing from recycled materials, soap and candle making — sprang up in many homes. Some workers were able to acquire new, relevant skills quickly.

Others had to make do with menial jobs—burying the dead, cleaning the streets, assisting carpenters and bricklayers— that took little skill.

And then there were those who could not fit in anywhere. Many found it difficult to adapt to the idleness. Disruption of the 9 to 5 work ethic was a disruption of basic psychological props, of a sense of identity. In the immediate period after the attacks, parents concentrated on protection of their families. Once their families were no longer directly affected, adults were robbed of their traditional roles.

By now, a few of the refugees had melted into the general population. But the vast majority was no further along than in the late winter. The drag on the area resources was significant, and many in the leadership wanted to force them out.

Charlottesville was fortunate in many respects, however. Being located on two easily repairable rail lines — with a major storage yard for cars only two counties away—there was some access to the outside world. Travel was only

permitted with a special pass, naturally, and so the younger members of the community resorted to the hallowed art of riding the rods.

Government officials, many of whom had visited Charlottesville and the University frequently in the past, kept in closer contact with the city than with many other locales. Doubtless the area residents benefited with more Federal assistance, As a result, Charlottesville became the unofficial “capital” of the area, economically and politically.

But as autumn approached, a universal depression settled on the residents and refugees. Starvation had been held at bay by the planting — but crop yields were smaller than expected. No one was cold, but the weather was still fine. There seemed to be no appreciable progress towards pre-attack conditions. Those young men and women who had been conscripted to build housing for the Nation’s refugees returned with gloomy reports of the devastation to the Nation’s commerce. The east coast was effectively leveled. Where factories were rebuildable, the shortage of materials precluded their operation.

Recognizing that many families would have to make do without heating oil or gas, the Agriculture Extension Service issued pamphlets on how to make your own wood-burning stove. Fortunately for Charlottesville and the surrounding area, trees were plentiful. However, the momentum that had started with the spring planting slowed,

Winter was harder than anyone had expected. There were few additional deaths that could be directly attributed to the nuclear blast effects or the radiation; however, a large percentage of the surviving population was weakened. Lack of medicines, lack of adequate food

and reasonable shelter, plus the lingering physical and psychological effects, meant that many were unable to work effectively, even if there were work available. An epidemic of flu raged through the cities of the east where refugees were huddled in camps. Many died, especially children and old people. Although vaccine for this particular common strain of flu had been developed, the stocks had been destroyed in the attacks.

In the northern sections of the country, food supplies were inadequate and poorly distributed. The average diet — day in, day out — consisted of unleavened bread and potatoes, where there were enough of those. As animal herds, both domestic and wild, had been decimated by fallout and indiscriminate hunting, the only available meat came from dogs, cats, and rats — those animals whose living habits protected them from fallout. Dietary deficiency diseases appeared.

Growing children were the first to notice the lack of replacement clothes— particularly leather shoes. Coats and blankets were highly prized in the cold climates.

Next to food, the most severe shortage was housing. Even with the temporary barracks that had been erected in a cluster around the damaged cities, refugees were crowded two or three to a room. Kitchens were shared by four and five families; bathrooms by as many as 12 people.

Although there was relatively little work to occupy time, and schooling was strictly curtailed, if indeed it existed, there was also very little available recreation. The entertainment industry located in California and New York had been particularly hard hit. Local TV stations could broadcast and rebroadcast those old films and cartoons they had in stock, but

little was fed nationwide, in the small towns, public libraries were overwhelmed. In the large cities, the libraries had been destroyed. There were no movie houses to speak of; there were no professional sports. The lack of recreation, perhaps a minor problem, still served to underscore the bleakness of the winter.

In Charlottesville alone, several thousand people died in the first winter after the nuclear attack.

A year almost to the day after the nuclear war between the United States and the Soviet Union, Charlottesville was host to a blue ribbon panel of experts on reconstruction planning. The University had not returned to normal — there were no undergraduate classes as the students had been conscripted for reconstruction work in the cities — but it was a natural meeting place since so many centers of learning had been destroyed.

The questions before the group centered on setting priorities: what were the goals and how could the country reach them?

The U.S. Government still existed, if in a slightly reordered form. The President, now permanently located in the Midwest along with the surviving Members of Congress and the Cabinet, retained the emergency powers he had taken just after the attacks. (Congress had had no choice but to ratify his assumption of these extraordinary powers at the time. However, there was growing resentment that he showed few signs of relinquishing them. Congress was reduced to a kind of advisory body, its members spending most of their time on helping constituents relocate or obtain an ID.)

The State governments had, by and large, reestablished themselves, often in new locations. Virginia's government was

located in Roanoke, for example, under the Lieutenant Governor. State governments were not as well respected as before; citizens tended to blame them for the mix-ups in aid distribution. Only the refugees looked to the States for assistance against the local governments, which they distrusted. The residents of an area such as Charlottesville were most loyal to their local government, particularly when that government had a reputation of basic evenhandedness.

Everyone, however, was growing hostile to the imposition of strict governmental controls over their lives — what they could or could not buy, or eat, where they could travel, etc. In certain rural sections, such as Nelson County, south of Charlottesville, farmers had barricaded themselves off, ignored government orders, and occasionally, it was rumored, took potshots at the government agents.

Attempts to conscript the able-bodied to rebuild the damaged areas often failed miserably. Many simply walked off the job and returned to their families. Since there were no adequate records remaining of the prewar population, and no records at all of war deaths, the Government found it an impossible task to track down offenders. (Criminals in medium- and light-security detention facilities had simply evaporated into the population.)

Charlottesville, like the rest of the undamaged parts of the country, still had a huge refugee population that was unwilling or unable to return to former homes. The majority was in camps such as the large facility in the old Lane School, and children were in day care or orphanages, depending on the status of their surviving families. If anything, the refugees were both more apathetic and more rebellious when faced with simple assignments. Lawless bands of teenaged refugees roamed the countryside, hijacking

supply trucks and raiding farms and villages. Partly it was simple bravado, partly a way to feed them. Most refugees simply sat and waited for the next meal.

Yet even now, the flow of refugees continued. The winter had driven out those who could not find enough to eat or enough shelter. Stories of Vermont families subsisting on maple syrup and wild rabbits might have proven entertaining in the retelling, but those who had survived did not want to repeat the performance.

The medical problems were still acute. Drug supplies were almost exhausted, but the weakened population remained more susceptible to disease. The birth rate had fallen drastically 9 months after the attacks, partly because of the radiation, which produced temporary sterilization — but there had also been a rise in miscarriages, stillbirths, and abnormalities. Infant mortality soared. Experts worried that an unprecedented increase in cancer, particularly in children, could be expected in several years. And there was still the possibility of some devastating epidemic as cholera running unchecked through the population. The Blue Ridge Sanatorium in Charlottesville, which had seen few tuberculosis patients in the last years before the attacks, was making plans to convert back to specializing in the disease. TB was making a comeback.

The Nation's economy was in shambles. The bulk of the oil refining capacity had been knocked out, and only a few facilities were functioning again. The small oil wells around the country that were situated away from target areas produced more oil than the refineries could handle— and it was only a fraction of the need. Coal mining, mostly by the time-honored pick and shovel method as strip mining took heavy equipment, was the only industry that could be called booming. (There was a major migration to the mining areas by the

unemployed.) Agriculture, of course, was a major undertaking for much of the population. However, yields from the farms were considerably below what had been hoped for. The lack of pesticides and fertilizer cut heavily into the crops and there was concern about a major insect invasion next summer. Food processing — wheat and corn milling particularly— showed encouraging signs of recovery.

Most major industries, however, were in disarray as a result of lack of energy, lack of raw materials, and lack of managerial expertise. The world economy was staggering from the effect of losing both the United States and the Soviet Union as suppliers and markets. (If the Latin Americans were able to make small fortunes on selling the U.S. refined petroleum, political pressures were building in those countries to raise the prices to double the current rates.)

An efficient system of money still had not been reestablished. The Federal Government paid the military and other Federal employees with dollars and tried to preserve purchasing power through a series of price controls. However, most people were reluctant to accept dollars in exchange for essentials such as food or clothing. As a result, a barter system continued to flourish and the black market, with its highly inflated prices, continued to encourage defiance of the law.

Most experts believed that the experience of post-World War II in Europe and Japan could provide the model for currency reform, including replacement of the dollar, that was necessary to restore an economy based on the division of labor. However, the resolution of two policy issues stood in the way. First, should the market, on one hand, or Government control, on the other, determine the distribution of scarce resources? Second, should the new money go to those with legitimate claims,

pensions, promissory notes for goods confiscated during the post attack period etc., or to those who held productive jobs, or even to the entire population even if many were more drag than help to the recovery? Politically, the Government was unable to deny any one of the groups; practically, it was obvious the Government could not satisfy all three.

It was clear that if the economy did not get moving again soon, it might never. Already there were indications that manufacturing was not reestablishing itself with anywhere near the speed the planners had hoped. The amount of shipping, by rail and by truck, was actually down from the mid-summer high.

“We are in the classic race,” remarked one of the participants who had written a major study of post attack recovery some years before. “We have to be able to produce new goods and materials before we exhaust our stored supplies. We can continue to eat the wheat that is in the grain elevators of the Midwest for another year, perhaps. But after that, we have to have the capacity to grow new wheat. When our winter coats wear through, we have to have the capacity to weave the cloth for new ones. When our railroad cars break down, we have to be able to make new ones, or replacement parts. Right now we are a long way from that capacity.” Privately, he and a group of conferees agreed that heavy controls on the economy, and ultimately on the population, would be the only way to get things going. Resources, both material and human, were severely limited,

One of the major problems, it was obvious to everyone, was the drag the huge refugee population had on the recovery effort. While numbers of workers were actively engaged in the rebuilding of the cities as well as the factories and services that powered the economy, there were as many

more who were unemployed and unemployable for the time being. Their skills were not suited to the priority tasks. Several participants had prepared a statement on what should be done with these nonproductive members of society. “We cannot let this mass of people drain our resources while they do nothing to contribute,” it was rumored to say. “If we cannot let them starve outright, we suggest that they be issued only that amount of food which is minimally necessary to sustain life. They should be moved to camps away from the center of activity for reason of public morale.” The report was suppressed but several copies were leaked to the press anyway.

The most basic disagreement among the participants in the conference was over the level of reconstruction that might actually be feasible. Optimists cited the phenomenal recovery of Japan and West Germany after World War II and insisted that these be the models for the United States in the next 5 to 10 years.

Pessimists, noting the major differences between the post-World War II era and the situation of Japan and Germany, felt these examples were irrelevant, or worse, misleading. “Everyone forgets the amount of aid that came in from outside in the late ‘40’s and early ‘50’s. We don’t have the United States’ wealth to turn to. Such a goal is unrealistic and unreachable, even with absolute controls on the economy.”

The pessimists were divided. Some saw the nation building itself along the line of some of the Asian nations, which boasted a small technologically advanced segment in the midst of a large agrarian or unskilled worker population, on the model of India or Indonesia. Some thought technology itself would eventually disappear from American society. “If you don’t have computers to run, you don’t train computer programmers,” one expert was

overheard to say. “After a while, in a few generations, no one remembers how the machines worked at all. They remember the important things: how to plant crops, how to train draft horses and oxen, how to make a simple pump. We will have survived biologically, but our way of life is going to be unrecognizable. In several generations, the United States is going to resemble a late medieval society.”

Because the conferees could not agree on what was a reasonable goal, much less how to get there, the conference report straddled all fences and concluded nothing. Follow-up task forces were appointed and the conferees agreed to meet again in the summer. Perhaps by then they would have a better idea of whether or not they were winning the race.

FRAGMENTATION & COUNTERCULTURE IN THE 1960'S

"The past isn't what it used to be"—Yogi Berra
"If you remember the 60s, then you weren't there?"—common joke

Prelude to the 60s. While the 1960s are remembered as one of the most turbulent, creative, and controversial decades in our history, all that disruptive energy had roots going back through the 1950s to World War II. In a broad sense, the 1950s provided Americans new technologies and unprecedented prosperity. At the same time these seemed to impose an almost military conformity on men at work and housewives left behind in the cookie-cutter style suburbs that were springing up outside of the cities. Together, these triggered some unforeseen side effects. For one thing, the new electronic medium, television, provided viewers with increasingly graphic coverage of the news, making it harder to hide or sugarcoat what was really going on in the world. At the same time, a small, but visible, group of people, generically labeled beatniks, was starting to challenge the old values at the very core of American culture and society. By the 1960s there was growing dissatisfaction in the mainstream culture with traditional values that seemed to many to be increasingly repressive. These factors, along with World War II, would help trigger two major movements in the 1960s: The Civil Rights movement and the youth counter-culture.

The Civil Rights movement. In 1943, towards the end of the Second World War, another new technology made its debut on a plantation near Clarksdale, Mississippi: the mechanical cotton picker. Its inventors meant to ease farm workers from the backbreaking labor of picking cotton by hand. Instead, it put thousands of African-Americans in the South out of work. This triggered the next, and biggest, wave of the Great Migration to cities in the North. However, the influx of so many poor people just led to more crowded cities with fewer jobs. At the same time, thousands of African Americans who had served their country during World War II were returning home, feeling entitled to more rights than the various forms of racism had allowed them up to that point. Out of these frustrations and rising expectations arose the Civil Rights movement.

The central figure in the Civil Rights movement was a young preacher from Atlanta, Martin Luther King Jr. King had studied the nonviolent tactics used by Gandhi to win India's independence from Britain in 1947. He saw that the new medium of television would make such tactics even more effective since they would expose many more people across the country and world to the brutality of racism in the South, thus winning wide public support for his movement and putting pressure on the federal government to intervene. This had become apparent in the 1950s with the heavy media coverage of the Montgomery Bus Boycott and the murder of Emmett Till. The key to King's strategy was to keep his marches peaceful in the face of brutal police reprisals, all of which played out dramatically on TV screens across America. The images of peaceful demonstrators being beaten and attacked with high-pressure hoses and police dogs graphically imbedded the plight of African Americans into millions of viewers' consciousness and generated the sort of public sympathy and federal support that King needed. Bit by bit, federal backing, peaking with the Civil Rights Act in 1964, officially desegregated schools, restaurants, and other public facilities across the country.

However, King's opponents in the South caught on to his tactics and worked to thwart them in various ways. For one thing, they learned to exercise more restraint in dealing with demonstrations, thus making them less interesting to watch on TV and therefore reducing media coverage. Another tactic was to open private facilities, such as schools and swimming pools, where only White children could go, thus leaving the public schools and pools inadequately funded by White-controlled state and local governments. Therefore, the struggle was just beginning.

Vietnam and the invasion of the Baby Boomers. World War II had two other effects. One was the Cold War, which thrust the United States into the role of a global superpower determined to stop communism wherever it appeared. In the 1960s Vietnam was the primary battlefield of that struggle. However, this was a guerrilla war with no set battle lines or clear markers to indicate victory. As it dragged on, the media turned the American public increasingly against involvement there.

The end of World War II also saw the couples that had to delay having children during the war joined by those who were coming of age to start families. The result was a massive “baby boom” after 1945. The baby boomers, besides being numerous, were also the best-educated and most affluent generation in history. By the 1960s, many of them were becoming teenagers who, besides being idealistic, were also impatient for change. No issue galvanized them more than the Vietnam War. Every night on the evening news they saw graphic news reports of this war, which took the lives of friends and family and threatened many of them with the draft. Bit by bit, student radicalism grew as the media exposed more unpleasant facts about the war. In the late 1960s, growing frustration and anger with the seemingly slow progress of change would erupt into some of the most turbulent years in American history.

Coming apart (1965-70). For several years, the United States, seemed to be a society at war with itself, caught up in a vicious cycle of challenges to traditional middle class values that triggered backlashes along generational and class lines, causing more challenges, and so on. This conflict played out in both the Civil rights Movement and in protests against the Vietnam War.

In the Civil Rights Movement, the unprecedented gains made by African Americans by 1965 raised hopes of even more spectacular gains. However, racism, in both the North and South, began to take on less blatant forms that were harder to combat. For example, homeowners in white neighborhoods faced heavy pressure from neighbors not to sell their houses to African Americans on the pretext that property values would fall. Similarly, real estate agencies practiced “redlining” where they would only show African American families houses in African American neighborhoods, making it hard to prove discrimination.

Public school funding was (and is) another major issue, being mainly dependant on local property taxes, so that children from rich White neighborhoods attended the best schools while African American children had to attend poorly funded schools. When the courts ordered integration of schools by busing Black and White students to each others’ neighborhood schools, parents strongly protested.

Martin Luther King especially encountered these problems when he moved the Civil Rights Movement to the North, which on the surface was much less blatantly racist. However, when northern Whites faced integration as real issues in their own neighborhoods and schools rather than just as abstract Southern issues viewed on TV, they often proved as intransigent as Whites in the South.

As the movement got bigger, it became harder for King to control it, especially keeping it non-violent. Starting in 1965, Black frustration spilled over into violent rioting in various American cities. Americans watched as the evening news showed riots burning down large sections of Los Angeles (Watts) in 1965, Chicago in 1966, and Detroit and Newark, New Jersey in 1967. As a result, the Civil Rights movement lost support among many Whites who had previously sympathized with its peaceful tactics. By the same token, the rioters had mainly burned down large parts of their own neighborhoods and driven businesses and jobs away, making economic progress even harder. Therefore, the movement’s momentum was already starting to dissipate when King was assassinated on April 4, 1968. While it is anyone’s guess what the great civil rights leader could have accomplished if he had lived, it seems likely that things would have worked out better.

King’s death led to disillusionment among many Blacks, a feeling that was reinforced two months later with the assassination of Bobby Kennedy, a presidential candidate who held out hope for better times to the nation’s poor. No leader of King’s caliber stepped up to carry the civil rights banner, and the movement further lost steam as it fractured into different sub-groups that stood for various goals and tactics, both violent and non-violent.

Meanwhile, America’s youth were also getting caught up in the vicious cycle of rebellion and backlash, with Vietnam being the main catalyst for trouble. The anti-war movement grew steadily on college campuses in 1967 and 1968, with student protests and riots sharing the headlines with racial strife. While the Vietnam War was the main driving issue, a whole range of other social and cultural issues were caught up in the turmoil of the times. For example, the Women’s Liberation movement, which would blossom in the 1970s, had its

beginnings here. Many of these issues largely centered around replacing the older generation's Puritan values of hard work and self-denial with a preoccupation with individual experiences. Many young people, growing up in the midst of affluence, thought life, including its more sensual pleasures, should be enjoyed more. Some adopted a totally hedonistic lifestyle of experimenting with free love and drugs.

Out of this emerged the so-called Counter-culture, a primarily white middle class phenomenon, but one, which did attract a number of African Americans as well. Three things largely characterized the Counter-culture. One was experimentation with drugs, especially the hallucinogenic LSD, in attempts to expand one's experiences and awareness of the universe. Another feature, largely made possible by the birth control pill, was a much freer attitude toward sex, not just within marriage, but also before it and outside of it. The last feature was very experimental rock music that went far beyond the limits of what top 40 radio would play.

Towards the 70s. While relatively few people engaged in the more extreme cases of experimenting with sex and drugs, the Counter-culture did enter the mainstream culture in more diluted forms and with lasting effects on attitudes toward these issues that continue today. Some of these new attitudes involved things as basic as the food we eat and clothes we wear. The traditional American meat and potatoes diet became less dominant fare at people's dinner tables as awareness of the dangers of various chemicals in our food and the advantages of a more vegetarian and less fat laden diet entered the mainstream consciousness. Women no longer mindlessly accepted the dictates of fashion designers who decreed what new styles to switch to each year. While styles continue to change, they seem to do so over longer cycles of time so that women don't feel pressured to buy a whole new wardrobe every spring and fall.

Starting in the late 1960s and continuing into the following decades, attitudes toward sexual preferences and gender roles would experience especially radical changes. The big story of the 70s would be the Women's Liberation movement as women questioned their traditionally subordinate roles at home and at work. Whole new careers were

opened to women who also fought for equal pay for equal work. At the same time, gay rights groups worked for acceptance in mainstream society. Both of these movements continue working for equality and acceptance.

Closely related to these issues were changing standards of sexual behavior and attitudes toward marriage. The birth control pill, which freed women from the fear of unwanted pregnancies,, enabled men and women in mainstream society to engage in pre-marital and extra-marital sex. The latter, combined with the greater career opportunities for women, helped trigger rising divorce rates, with a corresponding rise in one-parent families. Within marriage, the Women's Liberation movement made housekeeping and child raising duties a major issue. On the one hand, wives and mothers were working full-time and expecting help at home from their husbands. On the other hand, most men were still stuck in the older more traditional patterns of behavior in which they had been raised and taught to be the correct way to live.

Finally, in April 1970, a new issue made its official debut with the first observance of Earth Day. The 1970s would see growing amounts of public concern and legislation to curb air and water pollution. To this day, these issues and concerns, especially global warming, loom ever larger in our consciousness.

The Beatles



For many Baby-boomers, the 1960s started in 1963 with the Beatles. Not only did they provide the soundtrack for a generation, that soundtrack became the main attraction.

However, in the early 60s, rock and roll had hit a low point. The fresh energy of Elvis, Chuck Berry, and Buddy Holly had faded away, succeeded by a much blander music. The idea that rock and roll would never die sounded a bit hollow at the time.

John Lennon, Paul McCartney, and George Harrison had been playing together at church socials, local dances, and birthday parties since 1957, originally as the Quarrymen when Harrison was 14, Lennon was 16, and McCartney was 15. However, with 400 other competing bands in Liverpool at that time, one thing that distinguished this group was they played their own songs. At first that wasn't even enough as they struggled through years of "paying their dues", even in Hamburg, Germany for a time.

Then, in 1961, Brian Epstein became their manager and polished up their image. For one thing, he dressed them in the fashionable Mod style with skinny black ties and even skinnier pants, something that seemed quite alien to four working class lads from Liverpool. Still, they were rejected by various record companies until they met record producer, George Martin. If Epstein cleaned up their image, Martin cleaned up and refined their sound to make it more marketable. On Martin's advice, they also dumped their drummer Pete Best, replacing him with Richard Starkey (AKA Ringo Starr).

On October 5, 1962 the Beatles released their first single, "Love Me Do," which rose to a respectable number 17 on the charts. Their next single, "Please Please Me," hit number one in Britain on March 2, 1963 and the Fab Four took off like a rocket.

Much of their success was due to timing. British papers at the time were full of stories about political scandal, so a group of (apparently) clean-cut young men with happy bouncy music was just what the nation was looking for. And the Beatles delivered with a virtual non-stop barrage of hits, including "I Want to Hold your Hand," the biggest selling single in British pop history.



Beatlemania. While Elvis had also inspired hordes of screaming teenage girls in the 1950s, when the seats and floor were found soaked with urine after a Beatles concert in Cambridge in November 1963, serious questions started being asked...and some strange answers were forthcoming.

- Some people thought that this mass loss of bladder control was because girls didn't have the same outlets for their pent up energies as boys did with football and rugby.
- One doctor thought this was an important preparation for standing the pains of pregnancy when the girls got older.
- The Daily Telegraph just saw disturbing similarities with Hitler's Nuremberg rallies.

Beatle mania even captured the imaginations of staid music critics, such as William Mann for the Times: *"But harmonic interest is typical of their quicker songs too,...so firmly are the major tonic sevenths and ninths built into their tunes, and the flat sub-mediant key switches, so natural is the Aeolian cadence at the end of 'Not a Second Time.'"*

In 1964 the Beatles hit America. Music executives were skeptical about the British being able to show America something about rock and roll. They were rapidly convinced when hordes of American teenage girls mobbed the Fab Four wherever they went and an all time high 78 million people tuned in to watch them on the Ed Sullivan Show. By April they had the top five selling records on the American charts with seven more in the top 100, either on their way to the top or gradually fading from that pinnacle.

Merchandising of Beatles paraphernalia (dolls, wigs, trading cards, haircuts, lunch boxes, action figures, puppets, etc.) just added to the growing hysteria that became known as Beatle mania.

As a band, the Beatles dominated pop music for seven years, an amazingly long time by modern music standards. Much of the key to their success was they didn't let themselves go stale by writing and playing the same songs over and over. And much of that was due to their decision to stop touring and playing live to crowds that screamed so loud that they could barely hear themselves play. (You Tube has several videos from their performance at Shea Stadium in New York if all you want to see and hear is screaming teenage girls with a faint backdrop of music.) As George Harrison put it after their last concert: "I don't have to pretend being a Beatle anymore."

The Beatles' discography in essence chronicles a band and a whole generation growing up in the 1960s. Their early songs were simple, happy, and innocent, perfectly suited for a young adolescent audience. (College students at this time typically dismissed them as kids' stuff.) By 1966, their music was a bit more sophisticated and their behavior more rowdy. The original cover for their album "Yesterday and Today" (sometimes called the Butcher Block cover) had a picture of them in butchers' coats holding chopped up baby dolls and raw meat, supposedly as a protest of the Vietnam War. It was withdrawn from sale after one day and all copies were either destroyed or pasted over with a much tamer cover. Around the same time, John Lennon outraged much of the public by saying the Beatles were more popular than Jesus.

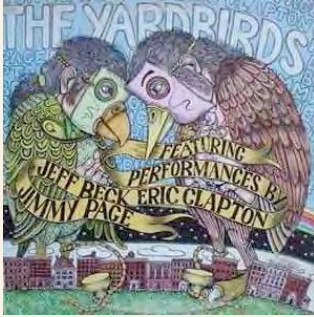


The Beatles' retirement from the exhausting tedium touring in 1966 freed them to experiment with their music in ways never before tried, especially in the studio. The result, released in 1967, was "Sgt. Pepper's Lonely Hearts Club Band", widely considered the greatest rock album of all time. Combining the most sophisticated studio recording techniques of the time with elements of jazz, rock, classical, dance hall, and Indian music, it marked rock music's coming of age.

The next two years saw the Beatles gradually coming apart as a group as its individual members grew apart as individuals. Recording sessions for their 1968 release, "The Beatles" (AKA White Album) became increasingly fractious, as Ringo briefly quit the group and at times John and Paul were recording separately in different studios. The next album to be recorded, "Let it Be", was equally acrimonious, with George Harrison briefly walking out this time. It was also the subject of a documentary by the same name, which chronicled the Beatles' breakup as much as their music.

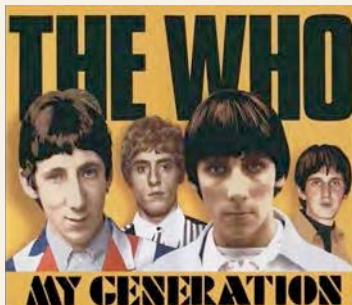
The final Beatles' album recorded was "Abbey Road". Although still largely reflecting four different personalities at work, it did show the Beatles going out on a high note, especially with a brilliant suite of songs on side two that were a collection of short and/or unfinished Beatles songs not previously recorded. Although "Abbey Road" was the last album recorded by the Beatles, "Let it Be" was the last one released (May, 1970). Shortly afterwards, Paul announced he was leaving the group, which is generally seen as the final breakup of the Fab Four.

The British Invasions



However, the Beatles weren't the only British band to take America by storm. Liverpool in the early 1960s had up to 400 bands competing with them for gigs. So, when the Beatles hit it big, they brought in their wake a virtual tidal wave of other British bands that adapted their sound and look to that of the Fab Four: The Dave Clark Five, Peter and Gordon, Gerry and the Pacemakers, Freddy and the Dreamers, and Herman's Hermits. Most were short-lived, although there were serious discussions in 1964 about who would emerge as the most popular band, the Beatles or Dave Clark Five.

Nor were all the British invasion bands mere flashes in the pan. A number survived and evolved into some of rock music's most legendary groups: the Rolling Stones, The Who, the Kinks, the Animals, Fleetwood Mac, and the Yardbirds, the last of which would help give rise to other legends such as Eric Clapton (who became part of Cream, Blind Faith, and Derek and the Dominoes before going solo) and Jimmy Page who would go on to form Led Zeppelin. Many of these bands had strong blues roots, since Britain's history without slavery made African Americans and their music more acceptable, especially to younger musicians.



The Times They Are a-Changin': Bob Dylan



For those trying to find the true meaning of the 1960s, Bob Dylan's music is both the first and the last place to go: the first because his music, nearly as much as that of the Beatles, epitomizes the spirit of the decade; the last because his lyrics are not so topical as universal. Therefore, one can read nearly anything he or she wants into them. For example, many interpreted the song "A Hard Rains A-Gonna Fall" as being about nuclear fallout. According to Dylan, it wasn't about that or anything else in particular.

Or so Dylan said. Imagine how difficult it is interpreting Dylan's lyrics when it used to be hard even getting a straight story from him about something as simple as where he was from. While we know and he now says that he's from Hibbing, Minnesota, he used to tell people he grew up all over from New Mexico to the Dakotas, even joining the carnival at age 14. Early in his career, he did side work on various albums under such pseudonyms as Blind Boy Grunt, Bob Landy, and Tedham Porterhouse. Dylan wasn't even his given name. It was Zimmerman, which he changed after going to New York. Learning anything more substantive about Dylan and his music gets progressively harder, mainly because he was a somewhat reluctant standard bearer for the causes of the 60s and was frustrated by how the public projected its own ideas into his lyrics.

Robert Zimmerman was born in 1941 in Duluth, Minnesota and grew up mainly in the small town of Hibbing from age six after his father was stricken with polio. There seems to have been nothing that remarkable about him as he grew

up, although he got interested in a variety of musical styles (blues, folk, country and western, gospel, rock 'n roll) from listening to late night radio broadcasts when far off stations could reach Minnesota.

After a brief stint at the University of Minnesota, he settled on folk music, which was quite popular at the time, seeing it as more serious than rock 'n roll. He was especially influenced by the music of Woody Guthrie and in 1961 moved to New York City, hoping to sing there and also visit Guthrie, who was in a hospital suffering from Huntington's disease.

In September 1961, music critic Robert Shelton wrote a positive review of a Dylan performance, which got him enough notice to land a recording contract with Columbia Records. His first record, which was mostly covers of other songs along with a couple original compositions, didn't do very well, and Columbia thought of dropping him from the label.

In 1962 he legally changed his last name to Dylan for as many reasons as there are people to speculate on it. He also signed on an aggressive and protective manager, Albert Grossman, who oversaw his career until 1970. After a tour of Britain, he released his second album, *The Freewheelin' Bob Dylan*, in May 1963. This was when he especially started earning a reputation as a protest singer, with such songs as "Oxford Town" (about James Meredith's attempt to become the first African American student at the University of Mississippi), "Talkin' World War III Blues", "Masters of War", and "A Hard Rain's A-Gonna Fall," which came out right before the Cuban Missile Crisis, but with predictable results as to how people would interpret it.

Dylan's third album, *The Times They Are a-Changin'*, released in 1963, was even more political than *Freewheelin'*, with two songs in particular about the Civil Rights Movement: "Only A Pawn In Their Game" and the

"Lonesome Death of Hattie Carroll" about the murders of Medgar Evers and a black hotel barmaid respectively. He also played for the civil rights March on Washington on August 28, 1963, further evidence of his prominence in the movement.

Besides his unique voice and style of singing, what made Dylan so dynamic was how he was transforming folk lyrics from being mostly straightforward ballads or protests into a much more literary and obscure art form that remained open to various interpretations. This inspired a multitude of rock bands in the mid-60s to do covers of his songs: most notably the Byrds, but also Sonny and Cher, the Turtles, the Hollies, Manfred Mann, and the Association.

Also among his fans were the Beatles, who were impressed and influenced by his attitude as well as the themes and lyrics of his songs. By the same token, when the Beatles hit America in 1964, they would have a profound effect on the direction his music would soon take.

Dylan never liked to be stereotyped and included songs on his albums tinged with romance, and tongue-in-cheek humor. During the *Freewheelin'* sessions, he even recorded a rockabilly song with a backup band. Although released as a single, it was quickly withdrawn out of concern for how folk purists would react to it. For those paying attention, the storm was already looming on the horizon.

Hard Rain at Newport. In July 1965 Dylan went electric, releasing the single, "Like a Rolling Stone". Clocking in at over six minutes, it transformed pop music with both its length and serious, if obscure, lyrics. In 2004 *Rolling Stone Magazine* listed it as number one in its list of the 500 greatest songs of all time. He didn't get quite so friendly a reception at the Newport Folk Festival when he debuted an electric band and material to the folk purists. Similarly, on tours in Britain and Australia, he met with the same hostility from large sections of the crowds, while

younger fans embraced his new style, dubbed by some as folk-rock.



Dylan persevered with his new direction, releasing three primarily electric albums in 1965 and 1966: *Bringing it all Back Home*, *Highway 61 Revisited*, and *Blonde on Blonde*, the last a double album. Then, in July 1966 he crashed his motorcycle near his home in Woodstock, New York. How bad a wreck it was is a matter of question. Dylan said he broke four vertebrae in his neck, but no ambulance was called and he didn't go to a hospital. However bad it may have been, it gave him a chance to retreat from the musical controversy and rat race of an intense work schedule. He wouldn't tour for another eight years.

In the meantime, he stayed busy with various projects. In 1967, he changed styles again, recording *John Wesley Harding* in Nashville, a much quieter album that ran against the grain of the louder psychedelic sound then emerging. Returning again to Nashville, he recorded and released *Nashville Skyline* in 1969 (pictured below), which was essentially a straight country album, probably best remembered for the song "Lay Lady Lay."



As the 1960s segued into the 1970s, the rest of the rock world starting catching up to Dylan. The Byrds, the band probably most directly influenced by Dylan, released *Sweetheart of the Rodeo*, a straight country album for which they were practically booed off the stage when they premiered its material in Chicago. Other bands, such as the Flying Burrito Brothers and the Grateful Dead followed suit, so that in the early 1970s country rock had become mainstream, much like Dylan had help popularize folk and folk rock in the early and mid 60s.

Since the mid 70s, Dylan has toured practically non-stop and continued releasing albums. Recently, two of his albums, *Modern Times* (2006) and *Together Through Life* (2009), rose to the top of the American charts.

Mod: A fashion revolution for a new generation



Along with Vidal Sassoon, Mary Quant (above) also influenced hairstyles with the geometric cut in 1963, a low maintenance variation of the bob cut from the 1920s.

The music scene started by the Beatles had its fashion counterpart, making London the fashion capital of the world in the 1960s, mainly because of a young art student named Mary Quant.

During the 1930s and 40s British fashion went into a long hibernation, first because of the Depression, then wartime rationing, and then postwar rationing. During the War, in addition to requisitioning fabrics and dyes for the army, leaving only grey woollens for the public, the government dictated the length of skirts and the number of pleats they had. Even when Christian Dior revived the fashion world with the New

Look in 1947, his styles were too elegant and expensive for most British.

By the 1960s more money was coming into circulation and a new generation was growing up that had not known the deprivations of war and depression and wanted more from life.

Therefore, when Mary Quant opened Bazaar, a clothing shop on King's Road in London, that carried a fresh young style, she tapped into a latent need among London's younger generation and triggered a fashion movement that was as revolutionary as the music permeating the airwaves.

One of Mary Quant's innovations was the mini-skirt, named after her favorite brand of car. She had been experimenting with progressively shorter dresses since the 1950s until she introduced the mini-skirt with the hemline nearly four inches above the knee. When Jean Shrimpton, in essence the world's first supermodel, showed up for an event in Australia in a minidress, it created a sensation. Soon other major designers had caught on and were introducing their own miniskirts.



Naturally, the miniskirt created a scandal, especially among parents of teenage girls who *just had* to wear them in order to stay in fashion. As a result, school administrators on both sides of the Atlantic would soon be racing around with rulers to measure girls' skirt and dress lengths to make sure they conformed with their dress code standards.

Besides saving on fabric, the miniskirt had another money saving feature in Britain, because anything less than 24 inches from waist to hemline was considered children's clothing and was not taxed.

Among Quant's other fashion innovations were plastic raincoats, knee-high, white, patent plastic, lace-up boots, tight skinny rib sweaters, paint box make-up, and hot pants. Just as revolutionary were her bright color schemes, often in bold stripes & checks.

Shopping is fun. Previously, shopping for clothes was a mundane experience. Shop assistants were older and often less than friendly, seeming to have the attitude they were doing customers a favor just by letting them in the store.

Mary Quant changed all that by making shopping a fun experience. Her boutiques were decorated brightly, contemporary music was constantly playing, and the sales girls were the same age as the customers, dressed the same way, and apparently having fun. Everything about the boutique was designed to make it inviting so customers would stay: to listen to the music, visit with friends, and let the overall atmosphere seep in until they wanted to take part of it home with them...all for a price, of course.

Naturally, Mary Quant's success inspired lots of imitators. One of the most famous was Biba (below), which started as a boutique and expanded into a full-scale department store. Art Deco influence, low lighting, and pop music gave it more the feel of a discotheque than a store.



For the first time, young people had a style of their own, rather than just a lame variation on their parents' fashions. The clothes were colorful and relatively cheap, thanks largely to the invention of synthetic fabrics. Since fashions changed so quickly and weren't meant to last long, some dresses were even made of paper.



The new youthful look called for a new body type. A full-bodied, large-breasted look implied motherhood, and that wasn't cool anymore. Rather, a waifish flat-chested, long-legged image was in. The poster girl for that look was Twiggy (below), a hyper-thin, doe-eyed supermodel who epitomized the youthful look of the 60s. At first her boyish figure was the source of endless jokes. But even as the jokes faded away, this new body type didn't. Not only were the young dictating fashion, they were dictating the culture's beauty standards. And despite fashion's vagaries, those standards have largely held up, much to the chagrin of millions of women whose bodies are less (or more) than Twiggy.



This brings up the larger issue of whether these fashions, the miniskirt in particular, were a sign of women being more liberated or reduced to sex objects. Opinions were sharply divided among women. Some women liked the freedom of movement and expression the new fashions offered. They saw it as only natural that the sexual freedom offered by the Pill should have a corresponding liberation in fashion. However, a growing number of feminists, like Germaine Greer, author of *The Female Eunuch*, saw such things as the miniskirt as catering to men's

sexual fantasies and further stereotyping women as sex objects.

Both views were at least partly right, depending on whom women were dressing for: men or each other. In the cases of those who were dressing to please and entice men, the feminists (as they would later be called) were to a large degree right. However, women often dressed for each other as a sort of social bonding rather than as a means of attracting a mate.

Coming from a cultural heritage where sex was often a taboo subject for everyone, most men and women were probably clueless as to each others' intentions and impressions. Men typically didn't realize there were other reasons for women to wear the more revealing clothes than just to be sexually attractive. On the other hand women often failed to understand the provocative effect the way they dressed had on men, even if they were just out for a night with the girls.

Anti-fashion & non-conformity. If Mod was a rebellion against the dictates of adult fashion in the mid-60s, the end of the decade would see a rebellion against fashion itself. In a sense, the Mod look carried the seeds of its own demise, since it thrived on constant innovation and change in the search for the next look. Its very spirit was one of non-conformity against older styles, so once that spirit of non-conformity was set loose, there was no telling where it would go.

After 1966, fashion morphed from the clean geometric lines and bright crisp colors of Mary Quant's designs to flowing luxuriant fabrics and deeper off-tone colors. Similarly, replacing the influence of Art Deco with its clean crisp lines was the flowing style of Art Nouveau from the early 20th century. Paisley was an especially popular design.



The rebellious spirit of the 60s even created a backlash against the fashion industry. The hippies, in particular, consciously rejected most aspects of mainstream culture, and that included the dictates of the fashion world, which used to parade out its new fall and spring fashions each year, expecting women to slavishly pitch last year's wardrobe and buy a whole new one. Hippie fashions, if one wants to use that somewhat oxymoronic term, were nearly the antithesis of mainstream fashion, a virtual anti-fashion if you will.

Some women started making their own clothes or finding them in thrift shops, which rarely carried cute little mini-skirts and dresses. Almost as if in reaction to the shorter fashions, they started wearing full-length peasant skirts and dresses.

Central to hippie fashion were blue jeans, basic durable long-lasting clothes that never went out of style and had to be replaced a lot less often than paper dresses. Jeans also functioned as a quasi-socialist "uniform" for the younger generation, not just leveling the differences between classes, but also genders. The combination of practicality and "cool" look also made jeans appealing to a broader cross-section of the younger generation well beyond the fringe elements called hippies.

Another common article of clothing for both males and females was the t-shirt, very often decorated at home through tie-dying. Others might have peace signs or some other political or social message on them.

Of course, the fashion world wasn't about to roll over and die in the face of these changes. As with the music industry, it would co-opt hippie styles, "clean" them up, and mass-market them in trendy boutiques in shopping malls. Partially replacing basic Levis jeans would be expensive designer jeans. (In the 1990s, when tattered jeans again became the fashion, clothing companies would hang pairs of jeans on fences, shoot them full of holes with buckshot, and jack up their prices.) Going along with the designer jeans would be expensive designer t-shirts that typically advertised the company their wearers had paid through the nose for the privilege of advertising. Go figure.

The Counterculture



*"Give me a head with hair, long beautiful hair
Shining, gleaming, streaming, flaxen, waxen
Give me down to there, hair, shoulder length or
longer
Here baby, there, mamma, everywhere, daddy,
daddy"*

-- from "Hair" by James Rado and Gerome Ragni

Hair club for men. More than nearly any other era in history, men's hair became a political issue in the 1960s. The Beatles are generally seen as starting the trend for longer hair on men, although their image in 1964 seems remarkably tame in retrospect. So why did men's hair get so long and become such an issue?

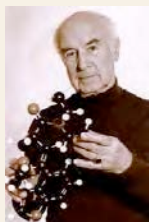
Once again, it largely had to do with timing: there were a lot of Baby-boomers in their teens itching to rebel and find their own identity. It also had to do with the older generation's association of long hair on men with being

effeminate or even homosexual, nearly every father's worst nightmare back then, especially for a generation of veterans who had defended and preserved freedom in The War.

Finally, long hair was increasingly seen and/or used as a protest against the Vietnam War and what many young men saw as senseless militarism. All of these factors combined created an extremely volatile mix in millions of American homes (including that of this author) in the late 1960s and early 1970s.

“Lucy in the Sky with Diamonds”: *The Drug Culture*. For many people mentioning the 1960s immediately conjures up images of drug use, in particular lysergic acid diethylamide (Aka, LSD or “acid”). Although by no means taken by the population in general, LSD profoundly affected the counter-culture and, through that, the mainstream culture to a lesser extent.

LSD basically switches off the filters in the brain that govern conscious thought. As a result, things we see and intellectualize as objects in order to get by on a day-to-day basis become indiscriminate sensory impulses. To a large extent, the user is experiencing the sensory world much as a newborn infant does, but with his brain still functioning (more or less) as that of an adult. While users typically enjoy this experience, they still are carrying their various personal hang-ups, which, if dwelled upon, can create a “bad trip.”



Albert Hoffman, who discovered LSD in 1938, holding a model of the LSD molecule. For his first experimental trip with the drug in 1943, he took 250 micrograms, thinking that was the minimum threshold dose. He should have taken only 20 micrograms.

The foremost advocate of LSD was Timothy Leary, who saw the drug as the means to achieving personal and collective enlightenment. Another advocate, the Beat poet, Allen Ginsberg, urged people to use LSD as a vehicle to greater spirituality.

Unfortunately, many people missed the part of the message that urged them to be actively and intellectually engaged while on acid. Instead, they just put their brains on autopilot and expected the drug to effortlessly take them to spiritual bliss.

As a result, for many people, drugs like LSD became nothing more than sensory carnival rides that they could come down from and sleep off before going to work the next day. And like a carnival ride, they may have had fun, but probably learned nothing.

To many in the establishment, drugs like LSD, and even marijuana, were a major threat to society, having the potential to rob society of productive minds and bodies needed to work in labs, teach in schools, drive buses, and go to war. One type of response was a media scare campaign with fabricated stories of people on LSD jumping off cliffs, going blind from staring at the sun, murdering their mothers, and breeding mutant children with exposed spines or two heads.

So what were the effects of the drug culture? Questionable stories of birth defects, self-induced blindness, and matricides aside, it did have its negative impact. Some people were outright casualties and even fatalities of the drug culture, especially as they went on to experiment with harder drugs, such as heroin, crack, and meth.

But the drug culture also created the subtler and wide ranging of an unbounded faith in science that could do everything for us effortlessly just by taking a drug, whether it was LSD, a diet pill, or methamphetamine. That mindset is still very much with us today.

The Hippies were the poster children for the counterculture of the 1960s, but who were they? Good question, but one without any clear answer, much like who were the beatniks in the 1950s. And much like the beatniks, hippies were largely a media creation built up around a central core of people with some common values, and then blown way out of proportion.

The stereotype of the hippie was someone who was dirty, sexually promiscuous, wore tattered clothes and long hair, didn't work, and did drugs all the time. While there were those sorts of people, many were latecomers to the scene who used the "hippie culture" as an excuse for their behavior. Much like the saying that if you think you understand Zen, then you probably don't, those who were first branded as hippies would say if you called yourself a hippie, you probably weren't one.

The beginnings of the "hippie" movement can be traced to the Bay area around San Francisco in the early 1960s. Part of it was musical, centered around various folk, blues, and jazz musicians playing together in different combinations in small clubs and eventually evolving into rock bands such as the Grateful Dead, Big Brother and the Holding Company, Jefferson Airplane, and Quicksilver Messenger Service.

Part of it was chemically influenced, in particular by marijuana and LSD. The best known proponents of this were Ken Kesey and the Merry Pranksters who held crazy free-form events known as Acid Tests where participants, having access to open microphones, musical instruments, paint, etc., indulged in LSD and did pretty much whatever they felt like. The Acid Tests were a sort of

participatory theater much like the art happenings taking place on the East Coast.

However, with nearly everyone (in one case 6000 people) high on acid, these were incredibly chaotic events with experimental films, flashing strobe lights, and a psychedelic light show engulfing the hall, the Grateful Dead playing at one end of the auditorium, Kesey and the Psychedelic Symphonette experimenting with random sequences of notes at the other end, and open microphones all over the place. When the police showed up after curfew to shut down one Acid Test, the Pranksters followed them around turning everything back on as they turned them off. Meanwhile, people in the audience were trying to scale the balcony with ladders to reach the police, chanting "Hug the Heat. Hug the Heat."

Kesey and the Pranksters even held an Acid Test in Watts just months after the race riots there. Despite the racial tension, the locals thought the Pranksters in their Day-Glo superhero outfits were hilarious. A good time was held by all.

Ironically, Kesey was introduced to LSD by the U.S. Army, which in the late 1950s and early 1960s conducted tests with the drug. The thinking was that LSD's psychoactive properties might have some military application, such as disorienting and freaking out prisoners to more easily get information out of them. Contrary to the Army's expectations, Kesey enjoyed taking the drug (and getting paid for it) and started introducing his friends to it, since it was legal until 1966.



In 1964 Kesey and the Pranksters took a legendary bus/acid trip across America in a 1939 International Harvester school bus named Further and painted with psychedelic colors and designs. A sign on the back of the bus warned “Caution: Weird Load.” The bus driver on that trip, described in Tom Wolfe’s *Electric Kool Aid Acid Test*, was Neal Cassidy (Aka Dean Moriarty), Jack Kerouac’s traveling partner in *On the Road*. Cassidy was symbolic of the link between the Beats and the Hippies, although many of the former viewed the latter as a bunch of stupid kids.

By the mid 1960s an amorphous sort of community was coming together in the Bay area, consisting of people who enjoyed the experimental music that was evolving, may or may not have been doing drugs, but generally enjoyed and cherished the artistic and lifestyle freedom of San Francisco. From their point of view, they weren’t a self-conscious movement with a label or name, like *hippies*.

Then the media caught on.



The Grateful Dead perform a free concert in San Francisco

Maybe it was Jefferson Airplane’s “fault”, because they were the first local band to have a hit record, “Somebody to Love”, which brought in a flood of record executives hoping to cash in

on the “San Francisco Sound” in 1967. Time Magazine didn’t help matters with its cover story of its July 7, 1967 issue entitled “The Hippies: Philosophy of a Subculture.”

It was downhill from that point on, as the Haight Ashbury district of San Francisco became a virtual Mecca for a generation of starry-eyed dreamers, teenage runaways, drug dealers, and tourists during what was ironically labeled the “Summer of Love”. There were even bus tours through the area advertised as the only tour of a foreign country inside the U.S.

Local “hippies”, overwhelmed and frustrated by this floodtide of outsiders, even tried to put an end to it by declaring the “Death of Hippie” on October 6, 1967 when they ritually buried the media creation called “Hippie”. Not surprisingly, it didn’t work. “Hippies” kept multiplying and spreading to other cities across the nation, which attracted drugs, crime, teenage runaways with no idea of how to get on in the real world, and sleazy opportunists wearing long hair and bellbottoms to exploit those kids.

Meanwhile, many of the “real” hippies, meaning those who really did want some peace, quiet, and freedom from a materialistic society, moved to communes in the countryside to raise their families in as honest and sane fashion as they could.



Although most of those communes eventually failed and their somewhat disillusioned inhabitants moved back into town, they still had an impact on two levels. On one level, there remained a small core of genuine people, what we might call hippies for lack of a better name who truly epitomized the “hippie values” of

peace and love. They persisted in living uncluttered lives, forsaking the glittering materialist trappings of modern society for a simpler and ecologically sustainable way of living.

On another level there was the hippie “trademark” that continues to be marketed as a stereotyped commodity. (Just Google “hippie images” and see how many ads for clothes and costumes and how few authentic pictures of “hippies” you get.) In the 1970s, men generally wore their hair longer than in 1960, but it was styled at salons (not barbershops) in order to make it more acceptable for graduation pictures and office jobs. Likewise, clothing mimicked hippie styles, but was standardized and made respectable for mainstream society.



The ultimate sign that the hippie movement had been commercialized into a parody of itself: when Barbie and Ken showed up on store shelves as hippies.

Still, in the midst of all this cultural static, it became clear that a major cultural shift had taken place, and continues to take place. Many people have learned to question on some level the unrestricted material consumption at the center of modern society and the mass media that promotes it. Decades later, that lesson has become even more profound and is largely the legacy of relatively small fringe groups sometimes referred to as “hippies.”

A Tale of Two Festivals: Woodstock & Altamont (1969). If any type of event typified the counterculture, it was the rock festival, a multi-day event filled bringing tens (sometimes hundreds) of thousands of young people together to party, listen to their favorite bands, and, in many cases, to get high. Two such festivals in 1969, Woodstock (above) and Altamont, came to

represent the best and the worst of the counterculture. However, the truth in each case didn’t live up to the legends they spawned.



In August 1969, the most famous rock festival of the era took place in upstate New York at Woodstock. Estimates varied to the size of the crowd, but it was probably 250,000-300,000 people. Despite traffic jams, rain and mud, Woodstock attained mythic status as proof that the younger generation could create a world of peace and love. The Promoters bragged how much money they lost by making this a “free” festival (after gatecrashers had made it free, anyway). What they didn’t talk about was all the money they made from the movie and albums.

Just a few months later, the myth of the Woodstock Generation was shattered at Altamont. Held near Oakland, California in December 1969 to cap off the Rolling Stones US tour, it was a free concert that drew 300,000 people. Unfortunately, for security, the Stones hired the Hell’s Angels who beat a spectator to death for knocking over their bikes near the stage. And that is how it was portrayed in the movie, *Gimme Shelter*, and has been perceived ever since. However, most people were too far from the stage to be aware of the violence, one spectator noting on a snapshot of the concert that he had a great time.

Instead of ending on a high note hopeful of a world filled with peace and love, such as portrayed at Woodstock, the 60s bowed out with the debacle at Altamont. It was an unsettling end to a decade marred by the Vietnam War, racial violence, and a huge cultural divide between Baby Boomers and their elders.

Maybe the best epitaph for the decade was that if you remember the Sixties, you weren’t there.

The “Sexual Revolution”



So where to start with the so-called Sexual Revolution? Some might start with the Suffrage Movement that gave women the vote and, by extension, various other rights and prerogatives, including greater choice of mates. Others might start with the “flappers” in the 1920s whose clothes, slang (e.g., “handcuff” for engagement ring), and behavior showed freer attitudes about sex. There was also Coco Chanel, who revolutionized fashions in the 1920s, further freeing women with comfortable clothing that felt as good as it looked. Then again, a case could be made to start with Margaret Sanger who crusaded tirelessly from the early twentieth century to gain women access to birth control.

A nerdy looking college professor named Alfred Kinsey also deserves mention, since he exposed just how much sex was really going on despite what society and its guardians of morality said. However, up to now, the twentieth century had seen rapid change or evolution in patterns of sexual behavior, but not a revolution.

Then in 1960 came The Pill. Now women could have sex without worrying about getting pregnant (unless their teenage daughters switched mom’s pills for aspirins). The Pill was certainly the biggest game changer yet.

Another big factor was the Baby Boomer generation that inherited the pill. Besides being numerous and having unprecedented affluence and freedom, they also had youthfully high levels of impatience and hormones. Affluence gave them such things as cars and the freedom to go off and get what they wanted. Impatience and hormones made them want sex.

Finally, since the decade was so much about change and challenging old values (e.g., civil rights and the Vietnam War) it was natural that people would include personal sexual freedom as part of the overall agenda of change. It was in the 1960s that all these forces converged to create the perfect storm, often referred to as the sexual revolution.

Free Love was the term most often associated with the sexual revolution although love didn’t seem to have much to do with it. Free love was largely interpreted as promiscuous sex with multiple partners, supposedly as an emotional bonding experience that transcended “selfish” romantic love between just two people. It was partly rooted in Marxist philosophy, which was trendy among many young people, as an act of political defiance against the bourgeois capitalist order that used the family as a mechanism of control. A widely read book at the time that further publicized the idea of free love was Aldous Huxley’s *Brave New World*, although many people missed Huxley’s real point about free love.

It didn’t take long for free love to devolve into a vulgar, aggressive, and unfeeling act devoid of any transcendent emotions beyond base sensual pleasure. And for many, particularly women who were pressured into these situations, the pleasure itself was dulled or missing.

The problem was that we are products of millennia of cultural conditioning, and very likely instinct, so that emotions such as love and jealousy cannot be automatically turned off like a light switch. There was a pill to prevent pregnancies. There wasn’t one to prevent or cure broken hearts.

Women especially suffered in this respect. While a lot of men (and some women) used free love as an excuse to sleep with multiple partners without any emotional attachments or responsibility, many women (and some men) did fall in love, but were pressured to stifle such feelings, since

they impinging on their partners' freedom. In addition, many women became pregnant, which often scared off their partners, leaving them as single mothers with no financial or emotional support for raising their children.

way for the Feminist Movement of the 1970s when women would work to end its abuses.

Therefore, the sexual revolution was a mixed bag, in particular for women. For the first time in history they did have the freedom to freely choose their own partners and enjoy sex. However, this often came with a heavy emotional price tag, as pre-marital sex became a sort of litmus test for how free women were, with men pressuring them into having sex to prove they were truly liberated. For many women, pre-marital sex became a virtual obligation for which it was often too much trouble just to say no.

Although the 60s are often remembered for free love and group sex (i.e., orgies), those represent merely the most extreme and relatively few examples of an overall shift in behavior. For example, in 1963 some 80% of American women thought premarital sex was wrong. By 1975 that number had dropped to 30%. However, instead of a long string of one-night stands, a more typical pattern was a series of monogamous relationships until the "right man" came along for marriage.

Not to say that this approach always worked, since from that time on, nearly half of all marriages have ended in divorce. Many of those marriages ended because of infidelity in a society with much looser moral expectations. But many ended because of domestic abuse, whereas those same marriages might have continued in an earlier era with the woman having no way out.

However, while the sexual revolution of the 1960s often cost women heavily in unforeseen ways, it also helped pave the

THE CIVIL RIGHTS MOVEMENT (1954-68)

“Darkness cannot drive out darkness; only light can do that. Hate cannot drive out hate; only love can do that.”

-Martin Luther King Jr.

Background to the movement. While the dates for this reading encompass only fourteen years of a battle for racial equality that goes back to the abolitionists and Civil War in the 1800s and continues today, the years from 1954 to 1968 represent the climax of that struggle when institutions, programs, and legislation were put in place that remain the foundation of the movement

Three main factors, going back to the 1930s and 1940s, set the stage for the Civil Rights Movement. One was World War II, which itself had several effects. First, there was exposure of the atrocities of the Holocaust at the end of the war. While this specifically concerned racism against the Jews, it carried over in many people’s consciousness to awareness of racism in America and where it could lead. Second, there were unprecedented job opportunities in Northern cities provided by government war contracts. This, plus the invention of the mechanical cotton picker in 1944, which put many African-American sharecroppers out of work, led to the Second Great Migration of African Americans to the North. In fact, plantation owners bought many of their train tickets in order to get rid of them.

Finally, African-American veterans of the war who had served their country and seen less racism abroad returned less willing to tolerate racism at home. Also helping were actions by Presidents Roosevelt and Truman that improved African Americans’ status, most notably President Truman’s executive order to integrate the ranks of the American military in 1948. All these helped pave the way for the landmark Supreme Court decision in 1954: *Brown vs. Board of Education*. Very simply, it said that the “separate but equal” principle of racist legislation in the South was not equal, and therefore was illegal. This opened the gates for the Civil Rights Movement that followed.

The cycle of progress (1955-65). The first major challenge to the separate but equal principle was the Montgomery Bus Boycott in 1955. When an African American woman, Rosa Parks, was arrested

for refusing to move to the back of a public bus for a white passenger, the African American community in Montgomery Alabama organized a boycott of the city bus system. Since Blacks were a major source the city’s revenues, this cost Montgomery a lot of money for months on end while the boycott lasted. Finally the city gave in and integrated its buses.

Over the next decade, the Civil Rights Movement succeeded in overturning a wide range of racist policies and laws across the South. While each episode had its own story of persistence and sacrifice, they tended to follow a basic pattern. First there would be non-violent demonstrations and acts of civil disobedience, often led by church ministers, most notably Martin Luther King Jr. who had studied Gandhi’s non-violent tactics in his fight for Indian independence a decade earlier. Since they had rarely, if ever, been challenged like this before, the authorities typically would react violently with clubs, tear gas, attack dogs, and high pressure hoses, figuring no one would notice, since no one had paid attention to the plight of Blacks in the South before. However, there was one new factor in the equation that made a huge difference from before: television.

King realized the power of this new medium, since it broadcast graphic images instead of just words into millions of homes across America. What people saw were peaceful protestors being brutally attacked and yet taking it with incredible courage. These images broadcast by the liberal media especially resonated with white families in the North for whom race was a distant issue, so it was safe to sympathize with the marchers. Each round of such images led to more popular support for the Civil Rights Movement in the North, which encouraged more protests, leading to more violent reprisals, more TV coverage, and so on. By the early 1960s, many young northern Whites went south to help the movement along. When some of them were killed in the reprisals, sympathy among northern Whites especially grew.

The Democratic President, Kennedy, was initially reluctant to get involved, since the Democrats drew much of their support from southern whites, who mostly opposed the Civil Rights Movement. However, he, President Johnson, Congress and the courts, eventually got on board, striking down racist

laws and passing legislation that culminated with the Civil Rights Act in 1965

One of the more interesting angles in this regard was role of a short passage in the Constitution, known as the Interstate Commerce Clause. Very simply, it gave Congress the right to regulate commerce between the states. Originally, this was to keep states, which exercised much more autonomy in the 1780s, from levying unreasonable tolls or shutting off waterways to other states. However, the Interstate Commerce Clause was also useful in the 1960s, since any business doing any commerce with people from another state came under its jurisdiction. Thus Congress could order any restaurant that served just one bit of food, drink, or spices originating in another state to open its doors to all people, regardless of race, color or creed. Similarly, it could order hotels, which were on carrying any interstate commerce to do the same.

The cycle of frustration (1965-68). In the mid 1960s, opponents of the Civil Rights Movement started using more subtle arguments and tactics. Most notably, they stopped committing blatant acts of violence in front of the TV cameras. As a result, the movement started getting less media coverage, causing interest and support among Whites to wane. Another problem was that, as King and his supporters started expanding their activities into the North to combat such things as housing discrimination, many northern Whites started feeling threatened now that the movement was affecting their own lives.

As the pace of change and progress slowed in the face of more subtle institutionalized racism, such as redlining neighborhoods and opening private schools to exclude African Americans, infighting began within the movement about the effectiveness of non-violent tactics. As the Civil Rights Movement started to sputter, frustrated militants, who were becoming a larger part of the movement as it grew, turned to more militant tactics. In the mid and late 1960s African American's frustration boiled over into a series of urban race riots. However, these were not organized protests, but rather spontaneous reactions to local incidents and conditions. Consequently, there was little or nothing King and other leaders could do to stop or control these events. Unfortunately, these riots received widespread TV coverage, which alienated

many Whites who had previously been sympathetic to the movement. This just encouraged racists to continue using more subtle tactics, which got little media coverage, leading to more frustration, infighting about tactics, and urban riots out of frustration at the slowing rate of progress.

On April 4, 1968 Martin Luther King was assassinated, depriving the Civil Rights Movement of a great leader. After this the Civil Rights Movement stalled as the Vietnam War took over the headlines, thus fragmenting activism even more over tactics and what issues to pursue. However, despite the lack of dramatic progress, laws and institutions had been put in place that in the following decades would lead to slow but steady progress for African Americans, symbolized especially by the election of an African American, Barak Obama, as president in 2008.

Legalized Racism: Jim Crow



Southern Whites may have lost the Civil War, but in a very real sense they won the peace, as institutionalized racism in new forms (aka Jim Crow) resurfaced in the South almost immediately after the abolition of slavery and end of Reconstruction. The legal phrase describing this was “separate but equal” and was based largely on the Second Morrill Act of 1890 which stated that states establishing federally funded land grant colleges should not use race as the basis of admission or should establish separate but equal institutions for people of color. Southern legislatures seized upon this principle to expand segregation to a wide array of institutions such as public transportation, restrooms, drinking fountains, and restaurants.

At the same time, Southern states, starting with Mississippi in 1890, adopted new constitutions that effectively disenfranchised any Blacks who had gained full citizenship rights during Reconstruction. Poll taxes, literacy and comprehension tests, and strictly documented

residency requirements were the means by which Blacks, and many poor whites, were kept from voting, holding office, and serving on juries, the last being especially crucial to keeping the legal system rigged.

Violence on an organized or quasi-legal level was another a means of repression. The most infamous organization was the Ku Klux Klan, in particular its second incarnation (1915-44). Known for their white robes and conical hoods, the Klan terrorized Blacks through burning crosses (as warnings) or outright violence. KKK propaganda and extreme acts of racism done openly in public especially peaked early in the 20th century.



Lynchings in the South by state & race, 1882-1968

State	White	Black	Total
Alabama	48	299	347
Arkansas	58	226	284
Florida	25	257	282
Georgia	3	492	531
Kentucky	63	142	205
Louisiana	56	335	391
Maryland	2	27	29
Mississippi	42	539	581
North Carolina	15	86	101
South Carolina	4	156	160
Tennessee	47	204	251
Texas	141	352	493
Virginia	17	83	100

Lynching was a term derived from the infamous Willie Lynch, meaning to murder an accused person by mob action without lawful trial, as by hanging. Because African-Americans were prohibited by U.S. law to "testify against a white

man," they could be easily framed for the unscrupulous deeds of others. Without "due process," vengeful Lynch Mobs would exact their own brand of "swift justice.

In the 1920s there was even a series of postcards published with pictures of Blacks being lynched, as if it were a thing to be proud of.

However, racial violence didn't require organized backing, as long as the legal system of all-white juries was in place to acquit even the most obviously guilty defendants. Nothing bore this out more than the murder of Emmett Till and the acquittal of his murderers, J. W. Milam and Roy Bryant by an all white jury after less than an hour of deliberation. Later, Milam and Bryant sold the true story to *Look Magazine*, knowing they couldn't be tried a second time for the same crime.

The murder of Emmett Till was the first example of TV bringing the brutality of Jim Crow racism into the national spotlight. Mamie Till-Mobley, Emmett's mother especially stirred a reaction by insisting on an open casket to show her son's mangled face to the world. When a Black congressman from the North showed up for the trial, locals were dumbfounded who couldn't conceive of an African American being elected to office. Similarly, Northern reporters at the trial faced open hostility from Southerners as if they were from a foreign country.

However, it was the presence of those reporters and the mass media they represented that was about to turn the tide.

Beginnings (1943-57)



Rosa Parks

In 1943, towards the end of the Second World War, another new technology made its debut on a plantation near Clarksdale, Mississippi: the

mechanical cotton picker. Its inventors meant to ease farm workers from the backbreaking labor of picking cotton by hand. Instead, it put thousands of African-Americans in the South out of work. This triggered the next, and biggest, wave of the Great Migration to cities in the North. However, the influx of so many poor people just led to more crowded cities with fewer jobs. Old Red now resides in the Agricultural wing of the Smithsonian.

At the same time, thousands of African Americans who had served their country during World War II were returning home, feeling entitled to more rights than the various forms of racism had allowed them up to that point. Also, exposure to the atrocities of the Holocaust at the end of the war, while specifically concerning racism against the Jews, carried over in many people's consciousness to awareness of racism in America and where that could lead. Out of these frustrations and rising expectations arose the Civil Rights movement.

The Montgomery Bus Boycott in 1955 was the first major challenge to the separate but equal principle. When an African American woman, Rosa Parks, was arrested for refusing to move to the back of a public bus for a white passenger, the African American community in Montgomery Alabama organized a boycott of the city bus system. Since Blacks were a major source of the city's revenues, this cost Montgomery a lot of money for months on end while the boycott lasted. Finally the city gave in and integrated its buses.

In 1954 in one of the landmark rulings in American legal history, *Brown vs. Board of Education*, the Supreme Court overturned the principle of "separate but equal", thus opening the way for the integration of American schools. Three years later, this ruling was put to the test as nine African American students (top left) tried to enroll in the all-white public high school in Little Rock Arkansas.

Because of the violent reactions against integration this triggered, President Eisenhower sent the elite 101st Airborne to calm the turmoil

at Little Rock. Although the nine students had to be constantly escorted and guarded, they made it through the year, one of them graduating in June.

The long process of integrating America's schools had begun.

A New Kind of Leader



The central figure in the Civil Rights movement who emerged from the Montgomery Bus Boycott was a young preacher from Atlanta, Martin Luther King Jr. King had studied the nonviolent tactics used by Gandhi to win India's independence from Britain in 1947. He saw that the new medium of television would make such tactics even more effective since they would expose many more people across the country and world to the brutality of racism in the South, thus winning wide public support for his movement and putting pressure on the federal government to intervene. This had become apparent in the 1950s with the heavy media coverage of the Montgomery Bus Boycott and the murder of Emmett Till.

The key to King's strategy was to keep his marches peaceful in the face of brutal police reprisals. Since they had rarely, if ever, been challenged like this before, the authorities typically would react violently with clubs, tear gas, attack dogs, and high pressure hoses, figuring no one would notice, since no one had paid attention to the plight of Blacks in the South before. However, there was one new factor in the equation that made a huge difference from before: television.

King realized the power of this new medium, since it broadcast graphic images instead of just words into millions of homes across America. The images of peaceful demonstrators being

beaten and attacked with high-pressure hoses and police dogs graphically imbedded the plight of African Americans into millions of viewers' consciousness and generated the sort of public sympathy and federal support that King needed. These images broadcast by the liberal media especially resonated with white families in the North for whom race was a distant issue, so it was safe to sympathize with the marchers.



The power of these images especially hit home with Peter Rodino, member of the House judiciary sub-committee hearing on the Kennedy civil rights bill, 1963: *"I was attending a conference at Geneva... and the incident of the police dog attacking the Negro in Birmingham was printed all over the world. One of the delegates from one of the nations represented at the conference there showed me the front page of the European edition of the Times and he was a little more frank than some of the others, and he asked me, 'Is this the way you practice democracy?' And I had no answer."*

Each round of such images led to more popular support for the Civil Rights Movement in the North, which encouraged more protests, leading to more violent reprisals, more TV coverage, and so on. One famous incident was the bombing of the 16th Street Baptist Church on September 15th, 1963 when four little African American girls were killed.

In the early 1960s, many young northern Whites went south to help the movement along. When some of them were killed in the reprisals, sympathy among northern Whites especially grew even more. Among the most dramatic events was the freedom ride in 1961 by a racially mixed group of people through the South to challenge segregation on public transportation. Things turned especially bad at the Greyhound bus station in Anniston, Alabama when a mob

slashed the tires of the freedom riders' bus. The bus raced out of town then broke down. The mob caught up, firebombed the bus and badly beat the passengers.



The Democratic President, Kennedy, was initially reluctant to get involved, since the Democrats drew much of their support from southern whites, who mostly opposed the Civil Rights Movement. However, he, President Johnson, Congress and the courts, eventually got on board, striking down racist laws and passing legislation that culminated with the Civil Rights Act in 1964. Bit by bit, schools, restaurants, and other public facilities across the country were officially desegregated, although there was still a long way to go as far as ending racism was concerned.



In 1963, Martin Luther King Jr. organized a massive civil rights march in Washington D.C. It was here that he gave his famous "I have a Dream" speech. The next year, Congress passed the Civil Rights Act.

"Freedom Summer." In the summer of 1964, a number of young idealistic Northerners went to Mississippi to help register Black voters. On June 21st, police arrested three young men, a 21-year-old black Mississippian, James Chaney, and two white New Yorkers, Andrew Goodman, 20, and Michael Schwerner, 24, near Philadelphia, Mississippi on trumped up charges. That night they released them into the charge of Ku Klux Klansmen who beat and murdered them.

The FBI arrested 18 men, but state prosecutors refused to try them, saying there wasn't enough evidence. So the FBI brought federal charges of conspiracy (but not murder) in 1967 and got seven of the men convicted, for which none of them served more than six years. Eight others were acquitted by all-white juries, and three others went free because of mistrials. One mistrial, that of Edgar Ray "Preacher" Killen, occurred because of a deadlocked jury where one woman couldn't bear to convict a preacher. If the murder of Blacks aroused sympathy in the North, the murder of Whites produced outrage.

In 2005, four decades later, Edgar Ray Killen, then 80, was charged with three counts of murder. He was finally convicted on the lower charge of manslaughter and sentenced to a maximum sentence of 60 years. The grand jury declined to indict the seven other surviving conspirators indicted back in 1967.

The Interstate Commerce Clause. Federal involvement in the Civil Rights movement was often based on the Commerce Clause, sometimes called the Interstate Commerce Clause, in the U.S. Constitution (Article I, Section 8, Clause 3). This gave Congress the power "to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes". Its primary domestic purpose originally was to keep interior waterways open and free for trade and not subject to local or state tolls.

However, its use was expanded to protect civil rights in anything that vaguely involved interstate commerce. Thus in *Heart of Atlanta Motel v. United States*, 379 U.S. 241 (1964), the Supreme Court ruled that since most of a motel's customers were from out of state, that constituted interstate commerce and gave the federal government the right to dictate that all potential customers be treated equally, regardless of race. Similarly, in *Daniel v. Paul*, 395 U.S. 298 (1969) the court ruled that the federal government could regulate a recreational facility because three-fourths of the items its snack bar sold came from out of state.

Eventually, King's opponents in the South caught on to his tactics and worked to thwart them in various ways. For one thing, they learned to exercise more restraint in dealing with demonstrations, thus making them less interesting to watch on TV and therefore reducing media coverage. Another tactic was to open private facilities, such as schools and swimming pools, where only White children could go, thus leaving the public schools and pools inadequately funded by White-controlled state and local governments. Therefore, the struggle was just beginning.

King especially encountered these problems when he moved the Civil Rights Movement to the North, which on the surface was much less blatantly racist. However, when northern Whites faced integration as real issues in their own neighborhoods and schools rather than just as abstract Southern issues viewed on TV, they often proved as intransigent as Whites in the South. During a march for equal housing opportunities in Cicero, Illinois, King was hit in the head with a rock by an angry spectator. This was a sign of tougher times to come.

The Movement Starts to Fragment: Black Power and Malcolm X



A man who stands for nothing will fall for anything.—Malcolm X

Elijah Muhammad, Malcolm X, and the Nation of Islam. Not all African Americans followed King's path to peaceful integration, or integration at all. Especially notable in this respect was Elijah Muhammad, leader of the Nation of Islam. He saw Whites as "blue-eyed devils" who could never be trusted, and Christianity as a religion of subservience used by Whites to keep Blacks down.

While King worked for racial harmony, Elijah Muhammad preached his own brand of separate but equal, urging Blacks to be self-sufficient and independent of White society, opening their own businesses and building their own homes.

Although he didn't preach aggressive violence, he didn't condone pacifism either: *"There is nothing in our book, the Koran that teaches us to suffer peacefully. Our religion teaches us to be intelligent. Be peaceful, be courteous, obey the law, respect everyone; but if someone puts his hand on you, send him to the cemetery. That's a good religion."* Ultimately, Elijah Muhammad did envisage a Black Nation born out of revolution and overthrowing the White Man.



As this poster indicates, Elijah Muhammad had a somewhat exalted view of himself as the sole messenger of God.

Malcolm X. Elijah Muhammad's religion had limited appeal among Blacks, but it did attract enough followers to open seventy congregations in thirty cities across America by 1960. Among his converts was a bright ex-con, Malcolm Little, who did away with his "white" surname, just changing it to X.

At first, Malcolm X was a devoted follower of Elijah Muhammad, but over time, he started to carve his own spiritual path. Key to this was his pilgrimage to Mecca where he saw all different races, including Whites, as devoted Muslims, which contradicted Elijah Muhammad's own narrowly racial view of Islam. As Malcolm formed his own views, this angered, and maybe even worse, aroused the jealousy of, Elijah with whom he eventually broke.

Malcolm was a brilliant, powerful and funny speaker who, above all else, made African Americans, both men and women, proud of themselves. He was particularly respectful to

Black women, making them feel beautiful in a culture that especially derided them. He didn't mince words, saying the assassination of JFK, whom he said had been involved in violence and repression in Asia, Latin America, and Africa, was "chickens coming home to roost." By the same token, he founded the Organization of Afro-American Unity and was increasingly open to reconciliation with all races, including Whites who would treat all other races with respect.

Unfortunately, on February 21st, 1965, Malcolm X was gunned down. Many have suspected Elijah Muhammad of being behind the murder. Where Malcolm would have gone from there if he had lived is anyone's guess.

From Cassius Clay to Muhammad Ali



Cassius Clay was a brash young black man who emerged from Louisville, Kentucky to become the world heavyweight champion boxer, possibly the greatest boxer in the history of the sport. He was called the Louisville Lip and The Mouth for his brazen ego and predictions (which usually came true) of how quickly he would defeat an upcoming opponent. Concerning the current champion, Sonny Liston, he said, "The man can't talk. The man can't fight. The man needs talking lessons. The man needs boxing lessons. And since he's gonna fight me, he needs falling lessons. I'm gonna give him to the local zoo after I whup him....He's too ugly to be the world champ. The world champ should be pretty, like me."

"Float like a butterfly, sting like a bee" is how Ali described his style of fighting. Instead of the old-fashioned lumbering, slug-it-out style of boxing, he based his success on his mobility and ability to wear out his opponent's legs as well as arms.

On February 26, 1964, the day after he pummeled Liston and took the crown (just as he had predicted), Clay announced he had converted to Islam and was a follower of Elijah Muhammad. A week later, Elijah honored him with the name Muhammad Ali, an honorific title that people usually had to wait ten years to receive. However, Elijah had recently broken with Malcolm X and probably was trying to use Clay against him. Although he was also a close friend of Malcolm, he followed Elijah's direction to break with him.

Clay's acceptance of Islam and change of name came as a shock to White America. Starting with Jackie Robinson sixteen years earlier, African Americans in professional sports had been very careful to act respectfully and respectably in order to gain their acceptance by White sports fans. By and large, it worked, especially with younger fans, including this author whose childhood hero was the Chicago Cubs' star shortstop, Ernie Banks. Muhammad Ali's change of religion and name was the first example of an African American athlete "betraying" those expectations.

Ali was in no way apologetic about it either: "I ain't no Christian. I can't be when I see all the colored people fighting for forced integration get blowed up. They get hit by stones and chewed by dogs and they blow up a Negro church and don't find the killer...I'm the heavyweight champion, but right now there are some neighborhoods I can't move into...I'm no troublemaker. I'm a good boy. I never have done anything wrong. I have never been to jail. I have never been to court. I don't join any integration marches.... A rooster crows only when it sees the light. Put him in the dark and he'll never crow. I have seen the light and I'm crowing."

Ali again: "The government should ...get down on their hands and knees every morning and thank God that 22 million black people have not become anti-American. You've given us every right to. The whole world would side with us if we became anti-American."

Another issue between Ali and the U.S. government was the draft. Right before the Liston fight, and again right after, he took and failed the military qualification exam, scoring in the 16th percentile when the cutoff for passing was 30. However, as the Vietnam War called for more and more draftees, the passing score was lowered from 30 to 15, making Ali eligible.

Although Ali had previously taken no strong position on the war, now that he was eligible for the draft he claimed he was a conscientious objector on the basis of being Muslim. At first, the judge granted him CO status, but the government, concerned this ruling would allow anyone to become a Muslim to avoid the draft, ordered the Kentucky selective service appeal board to ignore the ruling and draft Ali. In April 1967 he refused to take part in the induction ceremony and was tried and convicted by an all-white jury of draft evasion.



Top African American athletes join Ali at a press conference in 1967 where he explains his reasons for rejecting the draft.

Not only did Ali spend three years in jail, he was also stripped of his boxing crown. Therefore, when he emerged from prison, despite the fact that he was aging by boxing standards and had been out of training for three years, he proceeded to fight his way back to the top and reclaim his crown. The "Rumble in the Jungle" in Kinshasha, Zaire (10/30/1974), as the fight between Muhammad Ali and George Foreman was called is still considered one of the greatest fights in boxing history. Ali won in the eighth round.

Naturally, Ali's remarks and actions alienated much of White America, and even some Blacks who saw him jeopardizing the gains they had recently made. Journalists and reporters called him a member of the Black Muslims, even

though there was no such group. Many African Americans took pride in his accomplishments and stance, which signaled a significant shift in race relations in America. For many Blacks, the time was past when they would feel grateful for any rights they received, since they should have had those rights all along. Replacing the old chant of “We shall overcome” was a new battle cry: “Black Power.”



Tommie Smith and John Carlos raise their fists in the Black Power salute during the medal ceremony at the Mexico City Olympics in 1968, an act that outraged many Americans who saw it as unpatriotic. Smith and Carlos weren't trying to be unpatriotic, but were pointing out racial injustice in America and how it could lead to divided loyalties.

Burn Baby Burn: Fire and Malaise in the Promised Land



National Guardsmen in Detroit, 1967

As the movement got bigger, it became harder for King to control & especially keep non-violent. Starting in 1965, Black frustration spilled over into violent rioting in various American cities. Americans watched as the evening news showed riots burning down large sections of Los Angeles (Watts) in 1965, Chicago in 1966, and Detroit and Newark, New Jersey in 1967.

As a result, the Civil Rights movement lost support among many Whites who had previously

sympathized with its peaceful tactics. By the same token, rioters had mainly burned down large parts of their own neighborhoods and driven businesses and jobs away, making economic progress even harder.

Therefore, the movement's momentum was already starting to dissipate when King was assassinated in Memphis on April 4, 1968. While it is anyone's guess what the great civil rights leader could have accomplished if he had lived, it seems likely that things would have worked out better.

Predictably King's assassination only made many African-Americans more frustrated and angry, encouraging many to take more aggressive actions against the system. Disillusionment among Blacks over King's death was reinforced two months later with the assassination of Bobby Kennedy, a presidential candidate who held out hope for better times to the nation's poor. No leader of King's caliber stepped up to carry the civil rights banner after that, and the movement further lost steam as it fractured into different sub-groups that stood for various goals and tactics, both violent and non-violent.

Over sixty percent of those arrested in the Watts' riot had been born in the South. For them, northern industrial cities like Los Angeles, Chicago, and Detroit had represented the Promised Land, a promise that was at least partially fulfilled when jobs were plentiful during the Second World War. However, that dream had turned sour since 1945 for several reasons.

One was living conditions. Most Black migrants had come from rural areas that at least offered fresh air and room to live. Even if they did enjoy indoor plumbing and electricity for the first time when they moved north, they also were crammed into tiny, dilapidated and rat-infested tenements.



A half-empty part of Chicago's Cabrini Green, one of the nation's most notorious housing projects, burns, probably set on fire by arsonists.

And, like rats crowded in a cage, they were more prone to turn on one another, especially in the breezeless summer heat, which is also when most urban riots took place. In addition to alcohol, there were also hard drugs to kill the pain and/or earn a living. Therefore gangs formed and gang wars erupted to claim markets (AKA turf) or just vent frustrations.

Another problem was opportunistic exploitation. The perpetrators were absentee landlords and grocers who sold substandard food for outrageous prices because they knew the locals had nowhere else to go. No surprise then that popular targets for rioters were white-owned businesses that had been exploiting them for years. A new word entered the American vocabulary: the ghetto. More than a slum, it was cage or a trap from which there seemed to be no escape.

Finally there was "White flight" from the cities. Part of it was racially motivated, to get away from the people moving in by the thousands from the South. But it was also motivated by the opportunity to own a tiny plot of land and house in that new phenomenon known as the suburbs. Whatever the reasons, millions left the cities taking their money with them. And with them vanished the hopes and opportunities for those moving in.

What was left was the hollow shell of inner cities, now inhabited by people who thought they had finally reached their goal, the Promised Land, but found instead they had reached a dead end. There was no Promised Land. Or if this was it,

it didn't matter if it burned on a hot summer night when nothing seemed to matter anyway.

Therefore, the urban riots of the 1960s were about more than traditional racism, although that entered into the equation. They were also about urban neglect and decay, and how that affected the people who had moved in right before the trap door closed behind them. There were studies on what had gone wrong, most notably that done by the Kerner Commission, which bluntly stated that the nation was "*moving toward two societies, one black, one white — separate and unequal.*"

ISRAEL AND THE ARABS (c.1880-1973)

Introduction. Possibly the most volatile area of the world today is the Mid-east, focusing especially on the Jewish state of Israel placed in the midst of various Arab Muslim states. It is here that religious, economic (i.e., oil), and historical issues have converged for centuries to create, what seems to many, a problem that will only be resolved through violence. However, given the crucial economic and religious importance of this region to the rest of the world, a violent solution to these issues is not a realistic one. Therefore, if we are to arrive at a reasonable settlement, it is important to understand the historical forces that have created this situation.

Historical roots. There are five historical threads that made Palestine so highly valued. One of these, going back 3,000 years, sees Palestine as the Jews' religious and historical homeland. Although the Jews were scattered from there after their unsuccessful revolts against Rome some 1900 years ago, they have always seen Palestine as their legitimate homeland to which they would return one day. Similarly, Muslims have viewed Jerusalem as one of their holy places for almost 1400 years, since it was supposedly where Mohammed started on his night journey to visit Paradise. In addition, primarily Muslim populations have inhabited Palestine for most of that time. Thus there is the age-old argument of which holds priority: being there first or being there now.

The third thread was the Zionist movement, starting in Europe in the late 1800s. The liberal and democratic movements of the 19th century had made Jews more acceptable to European societies, leading many of them to emerge from their ghettos and largely assimilate into the mainstream culture. However, as economic and political tensions increased later in the century, Jews were more visible targets that many people used as scapegoats for their mounting problems. Consequently, many Jews saw Palestine as a homeland safe from the growing anti-Semitism in Europe. Also, with the Ottoman Empire in severe decline and strong European influence in the region, the opportunity for settling in Palestine never seemed better. At first, small numbers of Jewish settlers moved in, thus creating few problems with the Palestinian Arabs already settled there. However, two events in

the twentieth century would radically alter that situation.

One was the stalemate in Europe during World War I and the search for victory on other fronts. Britain, desperate to defeat Germany's Ottoman allies, issued the Balfour Agreement (1917) promising the Jews a homeland in Palestine in return for their help against the Turks. Unfortunately, Britain had promised liberation to the Arabs under Ottoman rule in return for similar help. Therefore, there were two seemingly contradictory promises that would serve as a source of conflict and tension, not just turning Muslims against Jews, but also against Britain and the West, which supported the Jewish presence in Palestine.

Finally, there was the Holocaust during World War II, which slaughtered some 6,000,000 of Europe's 10,000,000 Jews. This, and continuing anti-Semitism after the war, convinced surviving Jews that they could not trust the good will of a non-Jewish state to protect them from the recurrence of such a disaster. Consequently, they felt they must establish their own state and homeland in Palestine where they already had a foothold and which Britain still ruled as a mandate since World War I.

The foundation of Israel (1948). Therefore, after 1945 the trickle of Jewish settlers from Europe to Palestine became a virtual floodtide, as thousands of Jewish refugees arrived packed into any ship they could hire for the journey. Soon, the mounting tensions between Palestinian Arabs and the growing number of Jewish refugees flared into open violence, often taking the form of terrorist acts by both sides. Caught in the middle of this was Britain, exhausted from World War II and incapable of handling the growing chaos in Palestine. At a loss for any other kind of solution, the British rounded up Jewish refugees and shipped them back to Europe. Unfortunately, the war's destruction and the problem of 50,000,000 other refugees in Europe at this time often left only one source of shelter for many of the returning Jews: the old concentration camps they had inhabited during the Holocaust. Not surprisingly, many Jews escaped and made their way back to Palestine, further aggravating the growing violence there and Britain's inability to handle it.

Finally, in 1948, the newly formed United Nations, hoping to resolve the crisis, partitioned Palestine between Jews and Arabs, thus creating the Jewish state of Israel. Unfortunately, the proposed Jewish and Arab states were each split into three parts separated from one another by the other state's territory. Reacting against what they saw as a high-handed act by a pro-Jewish West, five neighboring Arab states declared war on the fledgling state of Israel.

A continuing cycle of violence. Thanks to hard fighting, a defense network of existing Jewish communities, and some outside help, Israel managed to win this war and seize more land to create one unified bloc of territory. However, Israel's problems were hardly over, for a new cycle of violence took over which still dominates the politics of the region today. Israel's victory caused thousands of Palestinian Arabs to flee to neighboring Arab states, most notably Jordan, Lebanon and Syria. Unfortunately, these were poor countries unable or unwilling to absorb so many refugees into their societies. In order to deal with the resulting instability and tensions as well as other internal problems, Arab leaders would often turn the anger of their own people and the Palestinian refugees against a convenient common enemy: Israel. Throughout this period, charismatic leaders such as Gamal Abdul Nasser of Egypt, Bashar al-Assad of Syria, and Saddam Hussein of Iraq would exploit this anger against Israel for their own political purposes and expand what could have been a local problem into a regional and global one. Then another war would break out (1956, 1967) where Israel would expand or tighten its hold on previously Arab lands, thus creating more refugees, and continuing the cycle.

Further complications. Israel's victory in 1967 proved a major turning point, because it virtually tripled the size of Israel giving it control of two things: millions of new Palestinian subjects and most of the old biblical land of Israel. Both of these factors vastly complicated Israel's situation. Ruling over a large Palestinian population meant the Palestinians were no longer just refugees scattered among neighboring Muslim states and looking for a home. Many of them were now gathered together under one government (Israel's), which gave sharper focus for the foundation of a Palestinian state. The Palestinians' high birth rate also

presented Israelis with the specter of eventually becoming a minority within their own country. With each successive year, the enemy within Israel's borders seemed more of a threat than the enemy without.

Then there was the issue of ruling the biblical Promised Land. From the start, the Zionist movement had been largely secular in spirit. Not that there weren't religious Jews involved, but the goal was to gain a Jewish homeland. There had even been talk of creating such a homeland in the middle of Africa. The 1948 partition created such a homeland in the territory of ancient Israel, but it by no means contained all or most of it. Thus Israel was a secular Jewish state for its first twenty years. However, gaining control of the biblical homeland in 1967 changed all that, since it triggered an influx of religious Jews determined to settle in the Promised Land. Unfortunately, Palestinians who had been there for centuries occupied most of that land. Feeling this was their God-given Promised Land, newly arriving Jews started destroying and replacing Palestinian communities with their own settlements along the West Bank of the Jordan River.

Although this was actively carried out and supported by a relatively small number of Israelis who fervently believed it their God-given right to do so, they had a disproportionate amount of influence in Israeli politics. This was because the large number of parties in Israel's political system made it virtually impossible for one party to gain an outright majority in elections, forcing it to form a coalition government with other parties. Therefore, small hard-line parties could threaten the stability of such a coalition if the ruling party did not allow continued expansion along the West Bank. Also, Israel's dangerous position made it easy for the right wing to play upon the wider public's fear of surrounding Muslims and gain its tacit, if not active support for continued expansion in the West Bank. Of course, Palestinian Arabs and their Muslim supporters viewed such a policy as aggression by *all* Israelis, much as Israelis would come to view all Muslims as terrorists.

Thus Israel was faced with a complicated dilemma. If it kept all Palestine as its Biblical heritage, it would give up being a predominantly Jewish and democratic state. However, if Israel gave up these

lands to stay Jewish and democratic, it would lose credibility and valuable support from a large number of Jews who felt the Israeli government had betrayed their faith. As a result, the Israeli government remained indecisive about the West Bank settlements, which just led to more Jewish settlements whose growing power kept the government from interfering with them, leading to more settlements, and so on.

With each year the tensions only grew worse.

ISRAEL AND THE ARABS SINCE 1973

New weapons: terror and oil. In 1973 another, conflict, known as the Yom Kippur war, broke out in the Middle East. As before, Israeli firepower, especially thanks to timely aid from the United States, led to a decisive victory. As Israeli troops surrounded the Egyptian army and threatened to destroy it, Egypt's leader, Anwar Sadat, asked for both American and Soviet troops to enforce a ceasefire on the victorious Israeli army. This raised the prospect of the two superpowers' forces meeting face to face in the Mid-East and starting World War III. Luckily, Sadat withdrew his invitation to the Soviets, thus defusing the situation, which had gone to Def Con 3, the highest it had been except for the Cuban Missile Crisis in 1962, when it had reached Def Con 2. (Def Con 1 would be nuclear war.)

Having suffered a continuous string of defeats at the hands of Israel in 1948, 1956, 1967, and 1973, it was clear that Israel, with American backing, was the big military power in the Middle East. Therefore, surrounding Arab states were reluctant to commit themselves to any more wars with Israel for the sake of a bunch of Palestinian refugees. Along with this frustration from repeated military defeats at the hands of the outnumbered (though not outgunned) Israelis, two other factors fed the Arabs' and Palestinians' mounting anger and led them to change their strategies. One was the continued encroachment of Israeli settlements along the West Bank and the resulting displacement of Palestinians from their homes. The other was growing support for Israel by the U.S., which was also increasingly dependant on the Mid East for oil. Out of this came two new weapons.

One was irregular and seemingly random terrorist attacks on Israel and, to a lesser extent, its Western supporters in Europe. Under the leadership of Yassir Arafat, a new disruptive force, the Palestinian Liberation Organization (PLO), emerged. Through hijacking airliners, attacking remote Israeli settlements, planting bombs in public places, and even the murder of eleven Israeli athletes at the 1972 Olympic Games in Munich, Germany, they sought to even the score against Israel. Much of their strategy was aimed to provoke a harsh over-reaction by Israel that would harm its image in the world. This largely worked, helping

spark a growing number of UN resolutions against Israel.

The U.S. also had a growing public relations problem with the Muslim world, since it was Israel's main arms supplier. To a certain extent, Mid-East wars were becoming testing grounds for American and Soviet weapons (the USSR supplying the Arabs with their weapons). After another humiliating defeat in the Yom Kippur War (1973), the Arabs turned to their second new weapon designed especially to hurt the U.S.: an oil embargo. The oil-rich Muslim states formed the Organization of Petroleum Exporting Countries (OPEC), which dramatically raised oil prices while drastically reducing oil supplies to the West. This especially hurt the United States whose giant gas guzzling cars were making it increasingly dependent on Mid-East oil.

Besides prompting efforts to make more fuel-efficient cars, the oil embargo forced the U.S. to be more sensitive to Arab feelings. A more peaceful approach especially suited the new American president elected in 1976, Jimmy Carter. Thanks largely to Carter's influence, Anwar Sadat, the Egyptian leader who had started the disastrous Yom Kippur War against Israel, realized the futility of further fighting and made peace overtures to Israel. At Camp David in 1978, Carter helped hammer out a peace settlement between Sadat and the Israeli leader Menachem Begin (a hardliner who had taken part in the bombing of the King David Hotel in 1946). In return for land taken in 1967, Israel gained recognition as a state, making Egypt the first Arab state to grant such recognition.

It was the first major breakthrough in establishing peace in the Middle East. However, a new vicious cycle took hold that frustrated further progress toward peace. As new Jewish settlements continued to replace Palestinian ones along the West Bank, the PLO would launch new terrorist attacks while Israeli F-16 jets retaliated against Palestinian camps. After both sides had suffered and realized the futility of the situation, there would be renewed peace efforts. However, this would worry extremists on both sides that too much would be given up in a compromise, so they would renew the violence and the cycle would repeat itself.

In 1987, Palestinians rose up against the Israelis in what is known as the First Intifada (literally “shaking off”). What made this especially noteworthy was the fact that it was a more or less spontaneous uprising by the Palestinian people instead of just another terrorist act carried out by the PLO. In fact, Yasser Arafat had to hustle to make a somewhat disingenuous claim to leadership of the movement. Although the Intifada, which lasted until 1993, accomplished nothing concrete, it did show there was a rising consciousness of nationalism among the Palestinian people.

Two events in 1991 radically altered the political landscape of the Middle East: the collapse of the Soviet Union at the end of the Cold War and the First Gulf War. The collapse of the Soviet Union opened the way for some 600,000 Jews to emigrate from Russia to Israel. Israel’s standing policy was to welcome any Jewish immigrants, but such a huge influx all at once proved impossible to handle alone. So Israel turned to the United States for economic aid for handling all these new people. The collapse of the Soviet Union also hurt the PLO, which relied heavily on the Soviets for military aid and diplomatic support in the United Nations.

The First Gulf War arising out of the invasion of Kuwait by Iraq’s dictator, Saddam Hussein, also hurt the PLO, because it supported Iraq for its missile attacks on Israel. However, since the rest of the Arab world opposed Saddam Hussein, the PLO lost support from oil-rich Arab nations. Saddam Hussein’s missile attacks also showed Israel’s vulnerability. Further exposing this vulnerability was a series of attacks within Israel led by a new organization, Hamas, which Israel had initially supported as a counterweight to the PLO.

All these factors, the decline of the PLO, Israel’s vulnerability to attack, and its reliance on American money, led to Israel and the PLO sitting down to talk face to face for the first time in 1992. The resulting Oslo Accords the next year called for more self-rule for the Palestinians and withdrawal of Israeli forces from parts of the Gaza Strip and West Bank. Unfortunately, hard-liners in Israel, led by Yigal Amir, feared a peace plan would jeopardize Israel’s security and assassinated their prime minister, Yitzhak Rabin, who along with Yasser Arafat and Shimon Peres had won the Nobel Prize for their peace efforts.

Once again, the cycle of violence started up as more Israeli settlements on the West Bank displaced Palestinians, triggering the Second Intifada in 2000. Israel would consistently respond to any Palestinian attacks and suicide bombings with harsh reprisals that only encouraged Palestinian reprisals of their own, and so on. While the Israeli army was an excellent fighting force for conventional warfare against other armies, it was not suited for dealing with the random acts of violence coming from civilians within its own country. Any reprisals were likely to kill innocent people, which hurt Israel’s public image in the rest of the world. The seemingly endless vigilance required for guarding against such things as suicide bombers also proved exhausting and frustrating, and at times resulted in Israeli soldiers lashing out at Palestinians, which just fed back into the cycle of violence.

At the same time, America’s apparent indifference to Muslim feelings and working for a lasting Mid East peace further angered many Muslims against Israel, the U.S., and the West in general, providing valuable recruitment propaganda for such terrorist organizations as Al Qaeda. As a result, starting in the late 1990s there was a surge of attacks against the U.S.: two American embassies in Africa in 1998, the USS Cole in 2000, and the World Trade Center in New York City in 2001. This provoked American intervention in Afghanistan and Iraq that dragged on for years.

COMPETING CROSSCURRENTS IN THE MUSLIM WORLD SINCE 1945

Historical background. In order to understand the complex problems of the Middle East, one has to understand their deep historical roots. One major component of that history is the centuries-long antagonism between Shi'ite Iranians (AKA Persians) and Sunni Arabs. Three major factors feed into this. One is Persia's long and proud historical and cultural tradition going back to the Achaemenid Dynasty (550-330 B.C.E.). Second was the Arab Muslims' conquest of Persia in the seventh century whereby Persia passed on its heritage to the conquerors while adopting their religion, Islam. The Third factor was the Sunni-Shi'ite split, which helped the Persians maintain a somewhat separate identity from their Arab neighbors.

A more recent catalyst to turmoil in the Middle East has been the state of Israel, founded in 1948. The one ethnic group this has hurt the worst has been the Palestinians, who fled as refugees in periodic waves to Israel's neighbors. Using Islam's message of social justice, they would pressure their hosts and other richer Arab states to help them regain their Palestinian homeland. Such a cause typically fit into the agendas of national leaders who were also dealing with complex domestic issues as well as problems with local and tribal loyalties inside their borders. Therefore, attacking Israel could serve the dual purpose of diverting their people's attention from local issues and also enhance their own prestige by posing as champions of Islam. Unfortunately, Israel, with Western aid, always won these wars (1948, 1967, and 1973), so that after 1973 the leaders of the various Arab states largely gave up on fighting Israel. Therefore, the Palestinians turned to "terrorist" tactics and organizations, in particular the Palestine Liberation Organization led by Yassir Arafat.

One state in the region that had not given up on leading a pan-Islamic crusade against Israel was Iran after its revolution in 1979 had replaced the pro-American shah with a radical Shi'ite Muslim regime. Therefore, soon after other Arab states had given up on fighting Israel, Iran took up the banner of supporting holy war against it. In addition to weakening or destroying Israel, Iran also hoped to gain status as the leader of Islam, subvert and

weaken neighboring Sunni Arab states, undercut American power and influence in the Middle East, and become the main regional power. Toward these ends, it embarked on an ambitious nuclear program, most likely with the intention of developing nuclear weapons. However, a powerful Iran is about as scary to Arab states as are Israel and the United States. Therefore, when Saddam Hussein, ruler of Iraq, attacked Iran in 1980, he got support from neighboring Arabs as well as the US. Also, the Gulf War (1991) and invasion of Iraq (2003) saw the growing presence of American forces in the region, which Iran viewed as a threat to its own power and even independence.

These developments have left Arab states torn between various policies. One is their fear and dislike of Iran versus their fear and dislike of America. They are also torn between loyalty to Sunni Islam and therefore hostility toward Iran on the one hand, and their loyalty to Islam overall (including Iran) and antagonism toward Israel and the United States on the other.

IRAN (1872-2009)

Historical background. Since its religious revolution in 1979, Iran has been the most fervent opponent of American policy in the Middle East. This is rooted in three historical threads. One is Iran's long proud history going back to the Persian Empire of the Achaemenid Dynasty (550-330 B.C.E.), reviving with the Sassanid Dynasty (224-651 C.E.) and again with the Safavid Dynasty (1501-1722). However, under the corrupt Qajar Dynasty (1794-1925) Iran fell increasingly into debt. Another important strain in Iranian history and culture comes from the Zoroastrian belief that rulers must rule justly or be overthrown. This fit in with the Muslim belief in social justice and especially fit in well with the Shi'ite branch of Islam in expressing the Persians' ethnic and cultural pride and independence from the ruling Arabs.

Iran and the West. The third historical thread was Iran's increasing contact with the West. By the 1800s, while the Qajar Dynasty was running into growing financial problems, Great Britain was forging ahead with the industrial revolution, which gave it tremendous technological and economic power. Therefore, British banks took the opportunity to gain increasing control of Iran's economy through loans that the government could not repay. Meanwhile, Russian expansion southward led to both Britain and Russia taking over parts of Iran. The British policy of setting up a dependant Iran as a bulwark against Russian expansion would be taken up by the United States.

By the late 1800s Iran was caught in a vicious cycle of conceding whole sectors of its economy to the British in return for loans, leading to rising popular discontent and a growing inability to pay off its loans, forcing it to make more concessions for loans, etc. In the twentieth century, the Iranian commodity attracting particular interest was oil. In 1908 the Anglo-Persian Oil Company, now known as British Petroleum (BP), struck a deal whereby nearly 85% of Iran's oil revenues went to BP. Its refinery in Abadan was the largest in the world for a good part of the century, indicating the growing importance of Iranian oil to the world economy. After the fall of the Qajar Dynasty in 1925, the new Pahlavi Dynasty tried to renegotiate the terms with BP, but gained nothing substantial.

At the same time, Iranians were becoming increasingly influenced by liberal and nationalist ideas from the West, and the Russian Revolution to the north, and the government was beginning efforts to modernize. However, any major reforms were put off during World War II, when Britain and the Soviet Union jointly occupied Iran to keep its oil out of Nazi hands. While the British honored the agreement to leave Iran at war's end, Stalin kept his troops in Iran until pressure from the US through the United Nations finally convinced him to leave.

Nationalization and repression (1951-79). In 1951, a new prime minister, Mohammed Mossadegh, came to power and nationalized Iran's oil, planning to use oil revenues to modernize Iran. In retaliation, the British pulled their trained technicians out of Iran, thus cutting its oil production in half, and blockaded its remaining oil exports, while increasing production in Saudi Arabia, Iraq, and Kuwait. One group supporting Mossadegh's moves was that of the Iranian communists, a fact that the British would distort and use to alarm the United States.

In 1952, the British tried to convince President Truman to overthrow Mossadegh in order to protect their oil supply, but Truman refused, largely because the US was virtually self-sufficient in oil at the time and had little sympathy for European imperial aspirations. Therefore, the next year, the British changed their approach toward the new president, Dwight D. Eisenhower, by saying that Mossadegh was turning communist. This convinced Eisenhower to authorize Operation Ajax, a joint CIA and British operation to overthrow Mossadegh and restore full power to Shah Pahlavi. The shah dismissed his prime minister and then fled to Rome until the CIA had staged a coup and overthrown Mossadegh. Mossadegh was imprisoned for three years and then kept under house arrest until his death from cancer in 1967.

In the aftermath of the coup, an oil consortium was formed to handle Iran's oil production and export, the bulk of the profits going to Britain and the United States. In return, the U.S. supported the shah, especially his army and brutal secret police (SWAK), which kept the Iranian people under his thumb and the Soviet Union at bay for the next quarter century.

The Iranian Revolution (1979) and Iran-Iraq War (1980-88). Public resentment against the shah finally boiled over in the Iranian Revolution led by the religious leader Ayatollah Khomeini. Khomeini established a strict and radical Islamic republic, which was staunchly opposed to Western, especially American, influence. The Iranians even seized the American embassy in Tehran, holding fifty Americans hostage until January 1981.

In 1980 Iraq's leader, Saddam Hussein, taking advantage of the turmoil caused by its revolution, attacked Iran to quell unrest by Iraqi Shi'ites and gain full control of the Shat al Arab, a 200 kilometer waterway between Iran and Iraq, the latter's only outlet to the Persian Gulf. The Iran-Iraq War was a prolonged agony for both nations, with neither side able to win a decisive victory, despite Saddam Hussein's use of chemical weapons and some help from the CIA. The conflict finally fizzled out under a UN ceasefire in 1988.

Growing American intervention and Iran's reaction (1990-2009). The cost of the war had been heavy for both sides, prompting Saddam Hussein to launch an invasion of Iraq's tiny but oil-rich neighbor, Kuwait in 1990. Once again, the Iraqi dictator had miscalculated as the US led a large coalition of powers in driving Iraqi forces from Kuwait in 1991. However, despite some urging to go all the way to Baghdad, President H.W. Bush stopped at the Iraqi border in accordance with his UN Mandate. This left Saddam Hussein in power, although Iraq was put under a strict embargo that hurt its people rather than its dictator. Twelve years later, Bush's son, President George Bush, invaded Iraq and overthrew Saddam Hussein under the pretext he was developing weapons of mass destruction, although UN inspectors said there was no evidence of such weapons. Unfortunately, the occupation of Iraq was badly handled, triggering factional fighting across much of the country.

Naturally, a strong American presence in the region worried the religious mullahs ruling Iran who reacted in several ways. For one thing, they clandestinely encouraged and supported Shi'ite groups in the factional fighting raging in Iraq, hoping to weaken American strength and resolve there. Secondly they embarked on an ambitious program to develop nuclear weapons and the missiles to deliver them, presumably against Israel.

However, this program was ruinously costly at the expense of the Iranian people and economy overall. Thus the third thing the mullahs did was maintain tight repressive control of the country while pursuing their other goals.

In 2009, disputed election results triggered massive demonstrations by Iranians protesting government fraud and oppression. Although the demonstrations were put down, resentment against the ruling regime continued to grow.

The Iran-Iraq War (1980-88)



The war between Iran and Iraq can be seen as another chapter in the Arab-Persian conflict spanning the centuries since the time of Mohammed. Border disputes dating from European colonial partitions after World War I also played a part, as did Saddam Hussein's own ambitions and fears. His ambition was to unify the Arab world against Iran and replace it as the major power in the Persian Gulf. His fear was that the Iranian Revolution in 1979 would incite uprisings against his own brutal and secular regime by Iraqi Shi'ites, who comprise 60% of Iraq's population,. Exacerbating matters was the fact that he had expelled the Ayatollah Khomeini from Iraq in 1977 and Khomeini vowed revenge after he seized power in Iran.

Geopolitically, Iraq was also in a precarious position since Iran controlled most of the outlets to the Persian Gulf. The main issue was the Shat al Arab, the 200 km. waterway between Iran and Iraq that led to the Gulf. Saddam claimed Iraq's share extended to Iran's shore. Iran, following an agreement in 1975, said the border ran down the middle of the channel.

The time seemed right militarily for Saddam, since Iraqi intelligence reported that Khomeini's religious revolution had purged the Iranian army

of many of its best officers for ideological reasons, replacing them with religious mullahs who had little or no military experience. In addition, Iran's bad relations with the US meant that it could not get spare parts for the American made equipment the shah had built up in the 1970s. By contrast, Saddam had built up an army of 190,000 men supplied by its ally, the Soviet Union.

In 1979, relations between the two nations especially deteriorated after an assassination attempt on Iraqi foreign minister, Tariq Aziz, triggered the expulsion from Iraq of Iranian-born Shi'ites. Border incidents increased until September 22, 1980 when Saddam attacked.

Iraq on the Offensive (1980-82). The initial attack was an air strike, hoping to destroy Iran's US-supplied jets, much like the Israelis had done to their opponents in 1967. However, the strike failed in its mission, and Iranian jets struck back against Iraqi targets. Despite this failure, the Iraqi land assault quickly overran Iranian towns, especially in the South near Basra. This rapid advance continued until Iranian president, Bani Sadr, released from jail pilots thought to be loyal to the shah. With their planes adequately piloted, the Iranians blunted the Iraqi offensive. Early in the war, American planes flown by well-trained Iranians proved superior to their Iraqi counterparts flying Russian Mig 23s.

By November 10, 1980, Iraqi forces controlled the Shatt al Arab and an 80-mile wide swath of territory inside Iran. Iran called for 200,000 volunteers and recalled some men from the shah's old army. Iran's religiously devoted, but poorly armed and trained, soldiers stopped the main Iraqi advance in the south, but at a frightful cost. Many Iranian volunteers even carried burial shrouds, anticipating martyrdom. Iranian commandos and jets also attacked Iraqi oil installations and pipelines to destroy its economic ability to wage war. Saddam hoped the 3 million Arabs in southern Iran would join his cause, but they fought for the Iranian regime instead. Similarly, later Iranian attempts to rally Iraqi Shi'ites to their cause would fail. With their offensive stalled, Iraqi troops dug in to hold their gains.

Iran's first major offensive failed largely for political reasons. Iranian president, Bani Sadr, locked in a power struggle with the religious leaders, courted the old regular army's support and launched a disastrous offensive that failed largely because of his own military inexperience. Consequently, Khomeini ousted Bani Sadr from power, made peace with the army which now cooperated with his volunteer militia, known as the *Basji*. This cooperation led to two major Iranian victories in late 1981 and early 1982. However, religious ideology, superior manpower, and the steady depletion of its American-made equipment without access to spare parts, led to the Iranian tactic of human wave assaults that would cost hundreds of thousands of Iranians their lives. Luckily for Iran, Iraqi troops were much more reluctant to take casualties in such offensives since they were heavily outnumbered.

Iran resurgent (1982-84). In March, 1982, Iran's regular army and militia launched a major offensive that pushed the Iraqis out of Iran and onto the defensive. In June, Saddam withdrew all his forces into Iraq, hoping to end the war. However, Iran's religious leaders were back in control of the military operations, refused to make peace, and launched Operation Ramadan on Iraqi. However, instead of using artillery to clear the way, they sent in human waves of barely trained soldiers, some as young as age 9, to clear minefields for their tanks. Much like World War I, these efforts gained minimal territory at horrific cost.



In late 1982, the Soviet Union, fearing the spread of Iran's Islamic revolution to its Muslim republics, heavily reinforced Iraq with new weapons that it used to restore its defensive lines. Throughout 1983, Iran launched more human wave assaults that, once again, made minimal gains while taking staggering losses. By the end of the year, an estimated 120,000 Iranians and 60,000 Iraqis had been killed.

In 1984, Iraq bought more equipment from Russia and France. Although mostly on the defensive, Saddam launched air raids on Iranian cities and chemical attacks on Iranian forces. The US helped in the latter by providing Iraq detailed information on Iranian positions.

Stalemate (1984-7). By the end of 1984, Iran had lost an estimated 300,000 killed and wounded, while Iraq had lost 250,000. Western military analysts pointed out the inefficient use of modern weapons on both sides. Instead of using tanks to spearhead assaults, they dug them in and used them as stationary artillery. Modern sighting technology was rarely used, reducing tank and artillery accuracy to World War II levels. Both sides would also abandon disabled heavy equipment, because they lacked the training or skills to repair them. Neither army coordinated movements between different units, while officers lacked the training and initiative to take action before referring back to central command for orders. As a result, the war ground to a stalemate with neither side able to dislodge the other.

Desperate to gain an edge, both sides launched air, artillery and missile attacks on each other's cities, while Iraq continued use of mustard and nerve gas against Iranian positions. In 1986, the UN formally charged Iraq with violating the 1925 Geneva Protocol that banned using such weapons. Saddam tried denying their use, but chemical weapons victims flown to European hospitals thoroughly discredited him. Chemical warfare led to an estimated 10,000 casualties by 1986. In 1988, Saddam again used chemical weapons, this time against his own rebellious Kurdish subjects who had helped Iranian forces in the North.

By 1987, Iraq had constructed a sophisticated defensive network along its southern border with Iran. However, a successful Iranian offensive in the North forced Iraq to adopt a more offensive strategy. By now, Saddam had learned to entrust his officers with more initiative. The resulting improvement in Iraqi effectiveness and change to an offensive strategy now neutralized Iran's military advantages. Gradually, the Iraqi air

force, being constantly re-supplied by its allies, dominated the skies against the Iranian planes which suffered increasingly from the lack of spare parts. By late 1987, Iran had lost the ability to mount effective offensives against the massively re-supplied Iraqi forces.

The Tanker War. Meanwhile, both sides were waging war on each other's oil producing and selling capabilities. Iran, was helped by Syria which cut off Iraq's pipeline to the Mediterranean, Iraq's oil exports were reduced by 70%, while Iraqi air raids cut 50% of Iran's oil exports. Since Gulf oil supplied 70% of Japan's, 50% of Western Europe's, and 7% of America's oil needs, this aspect of the war had serious international implications. Complicating it further was the fact that most of the tankers attacked were neither from Iran or Iraq.

At first, only Iraq attacked neutral ships in its self-declared war zone. However, in 1984, Iran started retaliating. In 1984, the Saudis shot down an Iranian plane intruding on their air space, which prompted both sides to agree to a moratorium on attacking civilian targets.

However, Iraq soon resumed its attacks on tankers. When an Iraqi missile hit the USS Stark and killed 37 crewmen, the US used the incident to blame Iran and send naval ships to the Gulf. After an Iranian attack on a reflagged vessel, the US retaliated by destroying two Iranian oil platforms. By 1988, ships from at least 10 Western and 8 regional navies were in the Gulf to protect tankers.

The End of the War. Diplomatic pressure from both superpowers increased in 1987, although American aid to Iran supposedly in return for freeing hostages in Lebanon, discredited US efforts in the eyes of many Arabs. From April to August, 1988, Iraq launched three major offensives, using chemical weapons to pave the way. The success of these offensives convinced Iran to agree to a UN sponsored ceasefire on August 20. The war resolved none of the issues that started it. Iraq suffered an estimated 375,000 casualties, while some 300,000 Iranians were killed and another 500,000 were wounded.

AN OVERVIEW OF THE CHINESE REVOLUTION (1911-?)

Introduction. Although the Chinese Revolution is still a work in progress, one can see how it has followed the patterns of other revolutions (i.e., English, French, and Russian) and the direction it could very well be headed based on those revolutions. Of course, there are elements unique to Chinese history that could cause it to end very differently than is conjectured here, just as there are any number of unforeseen events (e.g., a comet hitting the earth) that could do the same. Still, based on the historical record to date the last part of this chapter still stands as a probable outcome and is worth considering.

The Revolution's initial moderate stage (1911-25). As with other revolutions, the Chinese Revolution started out with a moderate phase, more specifically the liberal republic under Sun Yat Sen. And, as with other revolutions, it had its good and bad points. On the plus side, it was moderate enough to be acceptable to a wider range of people. On the negative side, it couldn't afford to take the drastic steps necessary to solve the crisis situation that led to the revolution in the first place. Therefore, the initial transition to a new system of government, known as the Nationalist government, created more confusion and turmoil, in particular fighting with two main elements: the communists, who would eventually be led by Mao Zedong, and various independent warlords scattered across China. Therefore, one can say that Sun Yat Sen's death in 1925 serves as a watershed as the revolution moved into its crisis phase.

The Revolution's crisis stage (1925-1949). As with other revolutions, the Chinese Revolution became caught in a vicious cycle whereby civil war primarily between the Nationalists, now led by Chiang Kai Chek, and the communists (with the various warlords peripherally involved) created more chaos and turmoil in the 1920s and 1930s, which fanned the flames of civil war, and so on. And, as so often happens, neighboring powers got involved for their own purposes. First, Japan seized Manchuria in 1931. Then, six years later, moles working for the Soviet leader Stalin instigated an all-out war between Japan and China in order to keep Japan diverted from attacking the Soviet Union.

As the Pacific theater of World War II expanded, the Nationalists and communists put their own conflict on hold (for the most part) until the end of the war.

After Japan's defeat in 1945, the civil war between the Nationalists and communists resumed, and Stalin's intervention played a major role in two ways. One was supplying the communists with captured Japanese weapons and training officers. The other was, once again, Stalin's moles in high positions in Chiang Kai Chek's army that repeatedly betrayed the Nationalist cause. On October 1, 1949 the Mao and the communists proclaimed victory in Tiananmen Square in Beijing. The revolution now moved into its dictator phases.

China under Mao (1949-76). Much like Stalin, whom he consciously imitated, Mao's long reign would leave a long-lasting legacy that it would take China decades from which to recover. In fact, Mao gained the dubious distinction of being responsible for an estimated 70,000,000 deaths, more than any other man in history including Hitler and Stalin. Of all the dictators in history, none has done more damage to more people in the pursuit of his own narrow personal goals.

From the start, Mao followed aggressive and destructive foreign and domestic policies. Like Stalin, he arbitrarily chose some peasants for other peasants to purge as an imagined group of landlords. Likewise, he purged religious groups (especially Catholics), bureaucrats, and businessmen. He enforced his terror through the use of propaganda, torture, forced labor camps and mass rallies where communists would incite crowds to attack Mao's enemies. In order to get military aid from Stalin, he traded vital supplies of food, starving his own people in the process. He also aggressively pursued a program to get the atomic bomb. (He even test flew a notoriously unreliable missile with a nuclear warhead on a flight path over his own cities. Luckily, this time it worked right.) In foreign policy, he entered the Korean War (1950-3) as part of a military aid deal with Stalin, sacrificing several hundred thousand Chinese lives in the process, not to mention contributing to the total devastation of North Korea.

At one point, he seemed to lighten up by encouraging free speech in his "Let a Hundred

Flowers Bloom” campaign. However, when people started criticizing him, he had them arrested and “corrected”. After that he launched “The Great Leap Forward”, a crazy scheme to take peasants out of the fields and focus on China’s industrialization, largely by building backyard steel furnaces that produced worthless third-rate steel. Even worse, neglect of the agriculture led to a famine that cost anywhere between 30-45,000,000 lives.

In 1965, Mao launched the “Great Cultural Revolution” (1966-70), a campaign to purge anyone who opposed (or did not slavishly follow) his policies and personality cult. While the Great Leap Forward killed millions, the Great Cultural Revolution created a deeper and more widespread swathe of turmoil and disruption across China. For one thing, most teachers were purged, so the army ran the schools and converted them into brainwashing classes where students endlessly studied and memorized the writings of Chairman Mao. By the time Mao died in 1976, China was in much worse shape than it had been in centuries. Luckily, help was on the way.

Economic development toward democracy (?): Deng Xiao Ping and the Four Reforms. Even before Mao died, he was losing his grip on power and more moderate leaders were coming to the fore, most notably Deng Xiao Peng. China since Mao’s death has largely resembled France under Napoleon III (1851-70): combining strong autocratic rule with economic development. As a result, China has experienced remarkable economic growth since 1976, but growth that may contain the seeds of trouble for the ruling regime, because with economic growth comes an expanding and educated middle class who want more political freedom. As the gap between economic progress and lack of political progress widens, the stresses and strains within China are increasing, raising the possibility of democratic reforms or revolution in the near future.

MAO ZEDONG AND CHINA (1937-76)

"A revolution is not the same as inviting people to dinner... or doing fancy needlework-- Mao Zedong

World War II (1937-45). When war broke out with Japan in 1937, the Nationalist leader, Chiang Kai Chek, had to put the civil war on hold and allow Mao Zedong and the communists autonomy in exchange for help against Japan. Despite this truce, Mao continued to attack Nationalist forces instead of the Japanese and to follow in the wake of the Japanese advance to take over the countryside, since the Japanese only had enough forces to hold the cities. The Communist Party (CCP) would also exploit Nationalist defeats by rounding up recruits from their beaten army.

Although Stalin pushed the CCP to fight the Japanese, the only major battle against Japan for years was an ambush of a Japanese convoy at Pingxingguan in 1937 that killed some 200 Japanese soldiers. And this engagement was fought by Lin Biao, acting in *defiance* of Mao's orders. When Germany attacked Russia in 1941 and the Soviets were unable to provide Mao with as much aid, he promoted the opium trade to raise cash. Unfortunately, the huge influx of money into Yenan province, Mao's base of power, triggered rampant inflation that impoverished the area for decades.

Since the Chinese army was no match for the more mechanized Japanese forces, switched to a strategy of trading space for time by retreating into the vast interior of China. This drew the advancing Japanese forces further and further inland and stretched their lines to the limit. The war now settled down to a costly stalemate that burnt, bled, and bent China, but could not break it. Thus the Chinese grimly hung on until victories on other fronts would finally beat Japan. The war would cost 20,000,000 Chinese their lives and leave another 95,000,000 uprooted and homeless.

Resumption of Civil War (1945-49). Just as the war in Asia was almost over, Stalin declared war on Japan, seized Mongolia and occupied Manchuria which had China's best deposits of coal, iron, gold, timber and 70% of its industries, although Stalin

had whole factories carted off and others demolished. Not until May, 1946 did the Russians leave Manchuria, turning it over to the communists.

While his generals wanted to establish bases along the Soviet border where their troops could get training and then concentrate on taking the countryside, Mao insisted on the wholly unrealistic strategy of trying to take and hold cities. Only after his urban strategy proved a disaster, did Mao adopt his generals' strategy, which his propaganda would insist was his idea all along.

The U.S. also helped ensure a communist victory, since secretary of state, George Marshall, didn't like Chiang Kai Chek and believed the communists when they said they wanted to establish an American style democracy and even change their party name from communist. Meanwhile, Stalin disavowed support for the communists to make them look more moderate. As a result, Marshall forced Chiang to agree to a ceasefire just as he was about to destroy the communist forces.

This may have been the most decisive event in ensuring the communist victory, because by the time war did resume in October 1946, Stalin had built up the communist army with captured Japanese and even German weapons: some 700 tanks, over 3700 artillery, mortars and grenade launchers, and almost 12,000 machine guns. Japanese prisoners of war were used to train the Red army and show them how to use Japanese weapons; while Japanese pilots trained the Red air force, some even taking part in combat against the Nationalists.

Another factor giving Mao and the communists victory was the fact that a number of Chiang's top general were actually moles working for Stalin. Time and again they would follow ridiculous self-destructive strategies that delivered hundreds of thousands of Nationalist troops into communist hands. Yet amazingly, Chiang refused to replace them with loyal commanders.

As the communists advanced through China, Mao proved himself a ruthless victor. For example, when besieging the Manchurian city Chanchun, he told his commander, Lin Biao, "Turn Changchun

into a city of death.” As a result, the city was besieged mercilessly, with no civilians allowed out. In the end, 350,000 out of 500,000 innocent people died. That was more than died at Nanjing.

In 1949 Mao’s forces, supported by Stalin, finally prevailed against the American backed Nationalist forces. Chiang Kai Chek retreated to the island of Taiwan where his government continued to rule, claiming it was the only legitimate regime for all of China. The status of a prosperous democracy on Taiwan, backed by American military support and claiming independence from the mainland communist regime, remained a serious source of tension into the 21st century.

“Many places ...don’t dare to kill counter-revolutionaries on a grand scale with big publicity. This situation must be changed.”—Mao
“This is a war on food producers as well as on food consumers.”--Mao

War on the Peasants. In the immediate aftermath of his victory, Mao kept most pre-communist bureaucrats and the old machinery of government until he was more established. Likewise, much of the economy remained in the hands of private individuals who were told to keep the factories running and shops open. However there were major changes in censoring the media and replacing the law courts with Party committees, which stripped people of any legal protection. Supposedly people had the right of appeal, but exercising such a right was treated as a crime, with officials doubling the sentence. In addition, a registration system locked everyone in China into fixed, and usually immutable, jobs and places to live. It was enforced by a nation-wide system of Order-Keeping Committees, often composed of a village’s nosiest and most hyperactive people.

In the early 1950s, Mao started to suppress various secret societies and religious groups, branding them as reactionary enemies of the revolution. He especially targeted China’s 3,300,000 Catholics through smear campaigns, charging them with cannibalism and conducting bizarre medical experiments. Hundreds were executed, and by 1953, most foreign clergy and businessmen had been expelled from China

However, instead of easing up on his terrorist tactics, Mao merely made them more pervasive and systematic. One campaign of terror was euphemistically called the “Struggle against the landlords,” a misnomer, since there were few rich landlords left in China. Much like Stalin’s collectivization campaign against a non-existent class of kulaks, Mao settled on attacking anyone who was relatively better off than his neighbors or was just disliked for whatever reasons, having an illicit affair being an especially popular reason. Cadres (gangs of party officials, many of them former Japanese soldiers) were told to randomly pick whole families, including their children, as targets. Village children were even organized and encouraged to beat up the “little landlords” Mao constantly berated provincial cadres for being too soft and urged more “massive arrests, massive killings”. When he criticized one province’s cadres for “being much too lenient and not killing [enough], they raised the execution rate, causing Mao to applaud this “improvement” and feeling “very delighted”.

Torture was also rampant. One older man had a wire run through his nose and his son was forced to pull him through the village like an ox with blood streaming down his face. Babies still nursing were torn apart at the limbs and tossed into wells. One village had a rule that “anyone not active in denouncing landlords will be stoned to death.”

Mao liked to carry out these purges at mass rallies where the victims had to face large crowds who were whipped up into frenzies against them. Mao’s son, An-ying described how in one case 10,000 people were herded together for a week in extremely cold weather. “*After careful rehearsals, on the fifth day, denunciations began...all the masses were told to raise their weapons when the word was given and shout several times: ‘kill, kill, kill’ ...the rally site was in a chaotic storm and ended in eight people being beaten to death.*”

Beijing alone witnessed some 30,000 sentencing and execution rallies. In one rally, 200 people were paraded and shot in the head so their brains splattered onto onlookers. It was common to see trucks carrying corpses through streets, still

dripping blood. The main difference between Mao versus Stalin and Hitler was they kept their worst atrocities secret, while Mao publicized them.

In an anti-corruption campaign the Communists grilled and screened 3.83 million bureaucrats, torturing some by having their testicles crushed in bamboo pliers. In January 1952 Mao launched the “Five antis” campaign against corruption to purge private businessmen whose property still had not been confiscated. This program led to some 200-300,000 suicides. Typically, a victim would jump onto a sidewalk instead of into a river so the government had a body and couldn’t punish his family because he had fled. This, along with the “land reform” then running led to some 3,000,000 deaths from execution, mob violence, or suicide

Like Stalin, Mao also had a vast labor camp system in the north with an estimated 10,000,000 inmates sentenced to backbreaking labor, many of them in dangerous mines. All told, Mao’s camps, purges, rallies, etc. killed some 27,000,000 people, as many as all the Soviets who died in World War II

The Korean War (1950-53). One common myth about Mao is that he committed Chinese troops to the Korean War to aid an Asian ally. Rather, he joined the Korean War as part of a deal with Stalin: China would fight the Americans as Russia’s proxy in exchange for Soviet technology and equipment. By 1951, Mao had taken 100,000 casualties and was ready to expend another 300,000 lives through human wave assaults and exposing his troops to starvation and temperatures as cold as 30 degrees below zero.

Chinese intervention in the Korean War was especially disastrous for North Korea. Kim Il Sung constantly begged Mao and Stalin to agree to a truce, but they insisted on dragging out the fighting to weaken America. By war’s end in 1953, virtually all of North Korea had been destroyed.

Mao’s foreign policy or The Great Chinese Food Give Away. Mao’s driving ambition was to make China an industrial and military superpower. For this he needed Stalin’s help, and Stalin wasn’t about to give it away for free. Mao paid for Russian aid with Chinese food, despite the fact that China was a

food *importer*, having 22% of the world’s population and only 7% of its arable land.

After Stalin’s death in 1953 and the emergence of a new leader Nikita Khrushchev, relations between Russian and China soured, but this didn’t stop Mao from exporting more food. In order to undermine Khrushchev’s influence, Mao actually gave food to richer Eastern European nations such as Hungary after the 1956 uprising, Romania, and East Germany, which was even able to lift its own food rationing in 1958. Under Mao, China gave 6.92% of its GDP in foreign aid, often to countries richer than itself, while the richest countries were giving no more than 0.5%.

To do this, he drove China’s peasants to near starvation, and many of them past it. To gain greater control over the food supply, Mao kept peasants from moving to other village. Mao’s policy was to leave people just enough to subsist and take the rest to trade away. He determined 200 kilograms of grain a year per peasant was enough for basic subsistence, and then decided they only needed 140 kilograms and some (especially women) only 110 kilograms. In 1953, he declared to his politburo they were “at war with the whole population” and prepared for deaths and riots in 100,000 villages (10% China). Many Chinese saw suicide as the only way out of their misery, and as many as 250,000 people took their own lives in despair during this short period.

In 1955, Mao tightened the screws more tightly on the peasants, by ordering forced collectivization of the land. This made it harder for China’s 100 million peasant families to hide grain, Collectivization also made it easier to supervise the peasants’ work and double their hours, in particular those of women who before had not worked in the fields.

Mao also nationalized industries, but left businessmen alone since he needed their skills. That isn’t to say that life in China’s cities was any bargain. Under Mao, virtually no new housing was built in Chinese cities despite rapid population growth.

The Hundred Flowers Campaign. In 1956, with

the slogans “Let a hundred flowers bloom” and “Let a hundred schools of thought contend.” Mao encouraged China’s intellectuals, even those who felt estranged from his revolution, to freely speak their minds. After some initial hesitation, scholars did just that, even questioning the legitimacy of Mao’s rule. Unfortunately for those intellectuals and dissidents, it was a trap set to lure them out into the open. Quickly ending the Hundred Flowers campaign, Mao rounded up 5000 free-speaking “rightists” for “rehabilitation”. Eventually, Mao’s regime would identify and “rehabilitate” 450,000 more “rightists”.

The Great Leap Forward (1958-62). In May 1958, Mao launched The Great Leap Forward, probably the most disastrous domestic policy in all of history, at least in terms of lives lost. Its avowed purpose was to make China an industrial power that would overtake the West in 5 to 10 years. It was based on Mao’s almost total ignorance on agricultural and industrial matters and the mistaken belief, which no one dared contradict, that much greater crop yields could be produced in much less time and on a fraction of the previous land in cultivation. This would also free tens of millions of peasants for Mao’s industrial ambitions.

The main goal was to produce steel by setting up backyard furnaces across China. Anything made of iron was thrown in, including farm implements, and what came out was a lot of worthless third-rate steel. Peasants were also drafted to build roads, bridges, railroads, and dams with little more than their bare hands, making most of these projects structurally unsound and unusable.

With so many peasants taken from the fields, hunger and starvation soon followed. Adding to the misery were local officials who had promised Mao unrealistic amounts of grain and had to take everything from the peasants to meet their quotas. Severe penalties, such as being buried alive, having limbs amputated or noses cut off, were given to those suspected of stealing or hoarding food. In one case hungry children were hung from a wall by wires piercing their ears. While people were reduced to eating grass, leaves, and tree bark, the government suggested they eat chlorella, a type of algae growing in stagnant pools of urine. People

even resorted to cannibalism. Some dug up bodies from graveyards. Others ate dead relatives while concealing their deaths so they could use their ration cards. In the most horrific cases, neighbors traded each other their children so at least they didn’t have to eat their own offspring.

During the Great Leap Forward, Mao experimented with the idea of replacing everyone’s names with numbers. He also mobilized children in their own campaign to eliminate the Four Pests: flies, mosquitoes, rats, and sparrows. Unfortunately, killing so many sparrows upset the ecological balance, leading to bug infestations on crops. So bedbugs replaced sparrows as the fourth pest

If Mao or other officials toured the countryside, local officials would hide the horrible conditions prevailing by replanting crops along the side of the road and stocking selected peasants’ huts with ample amounts of food. They even painted trees to hide the fact that the people were eating tree bark. Meanwhile, as millions of his own people starved, Mao was still trading much of China’s food to Russia and Warsaw Pact nations in return for military aid.

As the scope of this disaster became apparent, a power struggle broke out between the realists and the extreme ideologues headed by Mao. However, instead of abandoning the Great Leap Forward, Mao turned it into an anti-rightist campaign to eliminate his enemies. Meanwhile unrealistic quotas were set for 1959. The Great Leap Forward continued until 1962. Estimates of deaths from this catastrophe range from 30 million to 45 million. World War II was the only man-made disaster that killed more people.

“The more books you read, the more stupid you become.”--Mao

“We need the policy of ‘keep people stupid.’--Mao
The Great Cultural Revolution (1966-70). Mao’s anger and insecurity about his position of power set up one of his best known and most disruptive programs: The Great Cultural Revolution. As the quotations above suggest, Mao’s intention was more to destroy culture than to revolutionize it. Essentially, he wanted a brain-dead society of people with no feelings at all and the willingness to

obey him mindlessly. Even Hitler allowed apolitical entertainment and Stalin kept the classics, for which Mao criticized him.

In May 1966, Mao created a new office, The Cultural Revolution Small Group that would form the new inner circle with Chou En-lai, Lin Biao, and Kang Sheng. The first stage of the Cultural Revolution was to terrorize China back into submission. For this Mao would use China's teenagers, who were naturally prone to activism and he figured could be easily manipulated for his own purposes. Unfortunately, he was right.

In June Mao urged students to condemn their teachers for poisoning their minds with "bourgeois ideas" and persecuting them with exams, which were now abolished. Furthermore, he told them to "safeguard Mao", although how teachers or any other group were a threat to the "Great Helmsman" was not specified.

On June 13, Mao ordered all schools closed, which freed the young to carry out his purge. Two days later, students dragged scores of teachers and party cadres at Beijing University in front of crowds who blackened their faces, put dunce hats on their heads and forced them to kneel. Many of the teachers were beaten up, while some of the women were sexually molested. These sorts of scenes were repeated across China and led to a wave of suicides. Mao's followers were called the Red Guards, after a name adopted by students at a particularly vicious girls' middle school.

On August 1, Mao circulated a letter announcing his fiery support for the Red Guards and told officials to promote more such groups. As a result, officials had their children form Red Guard units that would carry out terror, little suspecting how that terror would later be expanded to purge them. As a result, the leadership by the officials' children would end and the Red Guard units they led would fall apart.

August 5th saw the first known death by torture when the girls at a school with lots of officials' daughters in it kicked and trampled the school's 50-year-old headmistress. Then they poured boiling water on her and forced her to carry a heavy load of bricks while being beaten with brass belt buckles

and sticks studded with nails. Her death and the authorities' failure to say anything to discourage such behavior were interpreted as a sign to continue the violence.

On August 18, Mao, dressed in military uniform for the first time since 1949, addressed several hundred thousand Red Guards, encouraging more violence by telling them "Be violent!" Violence indeed multiplied in schools and universities as Red Guards spread across China to show others how to do such things as thrash victims and make them lick their own blood off the pavement.

Travel, food, and lodging for Red Guards was free, bringing some 11,000,000 of them to Beijing to attend huge frenzied but well drilled mass rallies in Tiananmen Square where Mao appeared seven times in August. These mass demonstrations contributed to the further worship and deification of Mao, and helped him to vanquish local political and Party resistance to the Cultural Revolution.

On August 18, Lin Biao called on the Red Guards to "smash...old culture", leading them to attack shop and street signs with hammers and rename them something more revolutionary. They also attacked anyone in the streets wearing long hair, skirts, shoes with high heels, giving them haircuts and ill-fitting uniforms, now the mandatory attire of the Cultural Revolution. Children of officials led these actions reciting this poem, not realizing they were setting up their own "hero fathers" for later purges.

On August 23, Mao declared "*Beijing is not chaotic enough...Beijing is too civilized.*" This inspired Red Guards to attack two dozen of China's best known writers, hanging big signs with thin wire around their necks while thrashing them with belt buckles in the hot sun. Then they were taken to an old Confucian temple where they had to kneel before a bonfire of opera costumes and props, while constantly being punched and kicked. One writer, Lao She, once lauded by the regime as "the people's artist", drowned himself the next day.

On August 21 and 22, Mao ordered the army and police not to interfere.

During the Cultural Revolution, discussions could

border on the absurd. There were serious discussions on whether to switch stoplight colors, so that red, the color of revolution and progress, would stand for go and green, the color of capitalist green money, would mean stop. Mao specifically chose targets for Red Guards to attack. All across China, gangs of Red Guards broke into homes, burned books, cut up paintings, trampled phonograph records and musical instruments and destroyed anything that had to do with “culture”. Many victims were tortured to death in their own homes; others were hauled off to makeshift prisons in former theaters and stadiums. In August and September, 33,695 homes in Beijing alone were raided, leading to 1772 people being tortured or beaten to death.

The Communist paper, *People’s Daily*, called these raids “simply splendid”.

Then on August 31, Mao did an apparent about face, proclaiming “*Denounce by words, and not by violence.*” This allowed some Red Guards to opt out of violence and helped save some victims who shouted this slogan to threatening Red Guards. House raids allowed Party officials to confiscate tons of gold, silver, platinum, jewelry, foreign cash, art objects, paintings, and books, much like Nazi leaders had done. These raids also emptied many homes, providing living space for others while the owners were moved into one room or deported to the countryside. Many people, fearing Red Guards would burst in and find “culture”, destroyed their own books and art objects, helping Mao in his campaign to eliminate culture.

In addition to book burnings and methodical destruction of works of art, Mao also destroyed historical monuments. Mao ordered the desecration of Confucius’ home in Shandong, a richly endowed site, proclaiming, “*Confucius is humanism...that is to say, People-centered-ism*”. Of 6,843 historical monuments still standing in 1958, 4,922 had been destroyed by 1966.

On September 15, 1966, Mao shifted the focus of the Cultural Revolution to his real goal: purging party officials he saw as a threat to his power. Addressing a mass rally in Tiananmen Square in Beijing, he told his followers to pursue these

people, calling them “capitalist-roaders” for supposedly pursuing a capitalist road. These purges were led by new groups, also calling themselves Red Guards, but consisting primarily of adults known for taking on bosses. The more unruly Red Guard units made up mostly of teenagers fell apart as their leaders, often themselves the children of officials being purged, were also eliminated.

People were told that since 1949 the Party had been in the hands of villains called “the black line” and that all except Mao and a few close associates must be purged. Of course, this might raise the obvious question of why should the Party rule at all if it was so corrupt, but no one ever dared to openly ask such a question. The standing order was to purge all party bosses, whether they had been loyal to Mao or not. Some rebels did it out of loyalty to Mao, others did it out of hate for their old bosses, ambition to seize power, or just a sadistic love of violence. Whereas Stalin had purged, tortured and killed victims behind closed doors, Mao did it publicly, making the people his accomplices in crime. He even had these tortures openly photographed and filmed tortures, so he could enjoy watching them at home.

Millions of officials were exiled to de facto labor camps called “May 7 Cadre Schools”. Some victims were tortured by having loudspeakers placed directly by their ears so they could be deafened and never hear reactionary ideas again.

Replacements now had to be found for the 50,000 purged officials. Most of them came from the army, along with a handful of old officials kept on for continuity. In March 1967, schools were reopened, but now also run by soldiers who had little or no knowledge of the academic subjects normally being taught. Therefore they replaced real education with readings from Mao’s *Little Red Book* and endless indoctrination in Maoist theory. The result was a lost decade of education for that generation of Chinese.

For the most part, the regular economy of shops, banks, factories, and farms kept running during all this with only minor disruptions from personnel changes at top. However, for life outside work, leisure disappeared as books, magazines, plays,

operas, films, and light music on the radio were replaced by endless mind-numbing and nerve-racking meetings full of public humiliations, readings from Mao's book, and Mao Thought Propaganda teams singing songs of Mao's sayings and dancing while militantly waving the Little Red Book to raucous music.

During the Cultural Revolution, days were structured around "*asking for instructions in the morning, thanking Mao for his kindness at noon, and reporting back at night*". In the mornings, everyone would announce what he or she planned to accomplish for the revolution that day. In the evenings they would report on their successes and failures for the revolution that day and make resolutions for the next day. They also engaged in ritualistic bowing three times, singing the national anthem, reading passages from Mao's Little Red Book in front of his picture or bust, and wishing him "10,000 years". They might also do the "loyalty dance" which mostly involved stretching one's hand from the heart to Mao's picture.

Meanwhile, Mao cavorted at his estate at Zhongnanhai with a continuous stream of girls brought in for his entertainment. One by one, old colleagues disappeared, either purged or disgusted by the whole thing. In February 1967, some Politburo members did speak out against all this, but being old-time devotees of Mao and conditioned to obey, they caved in when harassed and Mao let them continue in office.

Amazingly, some individuals defied this madness.

One such protester was Nien Chang, a woman with ties to the old regime who was targeted by the Red Guards during the Cultural Revolution. In this case, the Red Guards had tangled with more than they could handle, since she was a woman of iron will who never backed down to their terror tactics. When in jail, she picked arguments with her guards whose mindless quotes from Chairman Mao wilted against her powerful arguments. In response they tortured her and forced her to live in an unheated cell with her hands tied behind her back, even for her meals. She survived bouts of fever and the malpractice of peasants turned into doctors by the Maoist quote "We learn to swim by swimming."

When the Cultural Revolution calmed down and Nien Cheng was given her release from prison, she refused to leave until she was given a written apology by the authorities. She got her apology and soon afterwards emigrated to Canada. The Chinese authorities were probably glad to see her go.

***"I'm not going to reveal the bottom line to you in this campaign, we must put to death about one-third or a quarter of the class enemies by bludgeoning or stoning."* –Mao**

In 1967 Mao, wanting a paramilitary group like Hitler's storm troopers, decided to distribute guns to groups loyal to him. Unfortunately, it wasn't always easy to tell which groups truly supported Mao, since they all claimed to be loyal. Therefore, the Army had to decide which groups were truly "leftist" and should be given guns for pursuing Mao's enemies. Factions not so favored merely raided arsenals for their own munitions, often helped by sympathizers in the army. Consequently guns became widely available to groups that were nothing more than gangs of thugs with a thin veneer of political correctness. The result was violence across China, often escalating into mini civil wars, especially in the cities.

Finally realizing what a blunder he had made, Mao rescinded his decree to "arm the Left" and ordered all guns returned. However, many "bandit" groups refused to give them up and the fighting continued, disrupting the economy as many people, fearing for their lives, stopped going to work. A year later (1968) factional fighting had shown little sign of abating.

In order to get the troublesome teenage Red Guards out of the cities and restore stability to Chinese life, authorities organized "field trips" to the countryside. Dubbed "educated youth" or "May 7th soldiers", they were now the problem of the peasants, who considered them lazy and worthless.

Mao cultivated a culture of hate, telling people that to hate class enemies is as good as loving one's country. Until 1964 the main objects of his hate had been the Soviet Union and especially Khrushchev whom he condemned as revisionists.

The populace was constantly force-fed hatred for Khrushchev by the press and at weekly indoctrination meetings. This helped set up Mao's campaign against Liu Shao-chi as the Chinese Khrushchev, since he had led the attempt to force Mao to end the Great Leap Forward. At a mass rally Red Guards wielding copies of the Little Red Book, first struck, and then trampled Liu on the ground while forcing his wife to wear a necklace of ping pong balls symbolizing her bourgeois pearls. Liu was purged and tortured until he died in prison in 1969.

Luo Rui-qing was another victim of Mao's purge, not because he did anything to anger Mao, but because Lin Biao hated him. Needing Lin's help with the Cultural Revolution, Mao agreed to charge Luo with treason. Luo jumped off a roof in a suicide attempt, but only broke both ankles. Since suicide was one of the worst crimes against the Party, Luo was dragged to denunciation meetings in a basket with his broken ankles hanging out and oozing blood. Amazingly, he survived the Cultural Revolution and Mao.

In April, 1969, feeling his enemies were finally eliminated and his new power apparatus was secure, Mao convened a new Party Congress, the first since 1956, with new delegates chosen just for their slavish devotion to him. However, the delegates showed their fanatical loyalty by constantly interrupting his speech, jumping up and chanting slogans like "Long live Chairman Mao". These interruptions merely annoyed Mao who issued rules against unscheduled slogan shouting.

"Respectfully wish Chairman Mao eternal life."

—Chinese poster

Mao's personality cult. Largely in emulation of Stalin's personality cult in Russia, Mao heavily promoted himself as the focus of the Chinese Revolution. This campaign attained egomaniacal proportions with posters that, at least to outsiders, seemed ridiculous in their claims. Mao's personality cult was designed to replace normal culture. To this end some 1.2 billion portraits of Mao and 4.8 billion badges with his face on them were produced. Likewise, copies of Mao's Little Red Book were given to everyone, who had to carry and brandish them on all occasions and recite sayings daily.

Mao was represented as the Four Greats: the great teacher, the great leader, the great (or supreme) commander, and the great helmsman. And, just as there were the Four Greats, there were also the Three Loyalties: "*Boundlessly loyal to the great Chairman Mao, boundlessly loyal to Mao Zedong Thought and boundlessly loyal to Chairman Mao's revolutionary line.*"

"Mao Ze Dong is the red sun in the hearts of all people of the world"

"The sunlight of Mao Ze Dong thought illuminates the road of the Great Proletarian Revolution."
(1969)

Mao replaced traditional places of pilgrimage with those associated with his life: Mao's birthplace at Shaoshan; Yan'an in Shaanxi Province, Mao's main base after the end of the Long March; the Luding Bridge over the Dadu River, scene of the epic (and totally fictional) crossing during the Long March.

Mao's collected readings were the virtual Bible of the Chinese revolution. Of course, few people actually read all of these. More accessible was his book of select quotations, commonly referred to as the Little Red Book. Much like Hitler's *Mein Kampf* in Nazi Germany, Mao's Little Red Book could be found in nearly every home as a sign of loyalty, was typically used as a reward for good schoolwork or service to the revolution, and, despite the posters, was rarely read, except under duress.

That's not to say Mao's writings were not used. Selected articles were mandatory reading for all school children and were widely quoted during the Cultural Revolution. However, as a result of the rote learning of these simplified versions of Mao's writings, most political discussions degenerated into rampantly and excessively used clichés, fixed formulas and empty sloganeering.

"Everything that Mao Zedong says is the truth; every statement he utters is worth 10,000 sentences."—Lin Biao

The more widespread the study of the book became, the more devastating the effects that were ascribed

to it. In 1960, Mao Thought was described as an arrow aimed at the target of revolution. By 1965, it had become a mighty "ideological weapon" in the struggle against imperialism, revisionism and dogmatism. One year later, Mao Thought had grown into a "spiritual atom bomb" of infinite power.

Supposedly, a study session with the *Quotations* "... supplied the breath of life to soldiers gasping in the thin air of the Tibetan plateau; enabled workers to raise the sinking city of Shanghai three-quarters of an inch; inspired a million people to subdue a tidal wave in 1969, inaccurate meteorologists to forecast weather correctly, a group of housewives to re-invent shoe polish, surgeons to sew back severed fingers and remove a ninety-nine pound tumor as big as a football."

Mao had high hopes that his personality cult would catch on in other countries. Pushing it with a hard sell, Beijing proclaimed that "*the world has entered the new era of Mao*" calling this an "*an event of immense joy for the people of the world,*" who "*love Chairman Mao's books more than any other books*" and to whom his Little Red Book "*is like the sweet rain to crops withering in a long drought, and the shining beacon to ships sailing in the thick fog.*" Along these lines, he set up secret training camps in China to spread Maoism across the world. As an incentive for Burmese Communists he had trained in China, before sending them home, he let each of them pick a Chinese girl from streets to marry, whether the girls wanted to marry them or not.

Yet, for some reason and despite Mao's best efforts, Maoism failed to catch on to any great extent outside of China, For example, in Burma Mao launched a hard-sell campaign to promote Maoism, with his communist followers there distributing badges and copies of his book, singing songs in his praise, and saluting his portraits. When the Burmese government banned these activities, Mao goaded the large ethnic Chinese community to demonstrate, leading only to violence, bloodshed, many deaths, and retribution against ethnic Chinese in Burma. One major obstacle to the spread of the Maoist cult was Mao's insistence that other communist nations look exclusively to him for

leadership and cut their ties with Moscow. However, most communists outside China and Russia saw Communism as an all-inclusive ideology and refused to choose between Beijing and Moscow.

In 1967, apparently frustrated with the failure of Maoism in other countries, Mao authorized attacks on missions of some twenty other countries, including those of the Soviet Union, India, Indonesia, Burma, Mongolia, and Great Britain. The forms of these "Punishments" ranged from huge demonstrations with giant Mao posters and slogans broadcast through loud speakers to breaking into the missions where they would burn cars, manhandle diplomats and their wives, and terrorize their children while chanting "Beat to death, Beat to death." On August 22, 1967, a mob burned the British mission in Beijing, trapping its staff inside and almost burning them alive, while also subjecting women to gross sexual harassment. By September 1967, China was embroiled in disputes with most of the 48 countries with which they had any diplomatic or semi-diplomatic relations.

***"We may lose more than 300,000,000 people. So what? War is war. The years will pass and we'll get to work producing more babies than before"--
Mao, 1960s***

On the brink of war with Russia (1969-71). Since the Cultural Revolution was largely aimed against Soviet Style revisionism, Mao felt he needed a symbolic triumph against Russia. He pursued it with what was supposed to be a small controlled border clash along the Ussuri River in the Northeast where the Soviets had a dubious claim. On March 2, 1969, specially trained and equipped Chinese troops ambushed a Soviet force, killing 32 Russians.

Then it spun out of control.

Twelve days later, Russian heavy artillery and tanks, opened fired, sending shells 20 kilometers into China, killing at least 800 Chinese while losing 60 of their own men in the clash. A CIA photo expert said the Chinese side of the Ussuri was so pock marked by Russian artillery it looked like a moonscape.

Mao was shocked by the fierceness of the fight and feared the Russians might invade. Yet, when the Soviet leader, Kosygin, called him on the Hot Line, after virtually no diplomatic contact in three years, the Chinese operator refused four times to take a call from that “scoundrel revisionist”, Kosygin. Therefore the Soviets moved up more troops, which quickly convinced Mao to send a message he was ready to talk.

Then, on August 13, 1969, the Russians attacked 100s of miles to the west, driving deep into Chinese territory where they surrounded and destroyed a force of Chinese troops. Having no effective defense against Russian armor, Mao launched a huge and worthless project to build artificial mountains 20-40 meters high and 250-400 meters wide. He was especially worried about a nuclear strike on his atomic facilities, an operation Moscow had actually discussed with the US. The CIA estimated the chances of this escalating into an all-out war as one in three.

An article in a London newspaper saying the Soviet Union was planning to bomb China's nuclear test site and replace Mao worried him enough to set up talks in Beijing in October. However, Mao was so worried the plane carrying the Russian diplomats actually had a nuke that he left Beijing and hid until the Russian plane had peacefully landed without detonating a nuclear explosion.

In the end, Mao's miscalculation created an expensive war scare that led to drafting millions of Chinese to build underground tunnels and shelters, not to mention fake mountains, at huge cost. Even worse, Mao used the scare to accelerate his nuclear program, spending more from 1971 to 1975 than in the 15 previous years. Despite this, China's nuclear program was incredibly unreliable, especially its missiles. Amazingly, Mao ordered the test of a missile with a live nuclear warhead and a flight path over populated areas. Luckily, the missile hit its target and the Chinese people were spared the added pain of being nuked by their own government.

Meanwhile per capita income in China had fallen to less than that in Somalia and calorie intake for the Chinese people was lower than in it had been in 1930. Except for the Great Leap Forward, people

remembered this as the worst period of Mao's rule. Yet there was virtually no resistance to his military spending, since he had purged all possible opposition in his Great Cultural Revolution. Instead, one governor offered to provide the government with seven times as much grain than it had supplied before.

“Ping-pong” diplomacy and the Western card (1970-73). By 1970, international Maoism was a flop and China was nearly at war with the Soviets. Just then, a new hope for Mao arose from the least likely direction when America's new president, Richard Nixon, expressed interest in improving relations with China. Mao's relations with America had been particularly hostile ever since his victory in 1949. At first, he had provoked the US to get military aid from Stalin, whom he hoped would see China as a valuable ally against the American threat. Then after Stalin died, Mao tried to court the US, now portraying China as a potential ally against the Russian threat. However, Korea being too fresh a memory, Washington, snubbed Beijing's overtures and Mao had followed an aggressively anti-US posture ever since then.

Mao's chance to establish relations with the US came in March 1971 when a Ping-pong match in Japan led to inviting the US ping-pong team to China. The ping-pong visit created a sensation in the West, causing Nixon to see a visit to China as a valuable run-up to the '72 election. Therefore, in February 1972 he made his dramatic trip to China, thus establishing relations between the two nations for the first time in over twenty years.

Mao wanted two things: international status and American military technology, claiming he feared a Soviet attack, much as he used the same sort of threat from the US to get arms from Khrushchev in 1954 and 1958. To that end, he even hinted Hanoi was a mutual enemy of China and the US, thus raising Nixon's hopes for a long-sought way out of the war in Vietnam. In the rush to gain Mao's favor, Nixon betrayed America's long-time ally, Taiwan, by helped Mao take China's seat in the UN. US aid also revived China's decrepit aircraft industry, whose planes had a bad habit of crashing or exploding in midair. Nixon even considered

airlifting tactical nukes to China in the event of war with Russia.

Nixon's visit gave Mao the global popularity and nearly cult status he had wanted for so long. Nixon said, "*under Mao the lives of the Chinese masses have been greatly improved.*" Secretary of State, Henry Kissinger, suggested Mao's regime could "challenge us in a moral way" and Mao's goal was a "*quest for egalitarian virtue*". In the US there was even a somewhat tongue-in-cheek opera about Nixon in China

Other world leaders then scrambled to get audiences with Mao, putting up with slights considered intolerable coming from anyone else. Amazingly, Mao openly flaunted his dictatorial ruling philosophy, saying, "*Napoleon's methods were the best. He dissolved all the assemblies and simply appointed those who were to govern with him.*" Yet world leaders ate up his words like candy.

In the end, Mao's ping-pong diplomacy gained little for China, largely because it spurred Russia to pursue better relations with the US. The result was Détente, a period of relative calm between the US and Soviet Union. For Mao, that meant the massive military aid he hoped to receive from America never materialized. For the Chinese people, better relations with the West gained them nothing, as foreigners were carefully denied any access to see their true living conditions and do anything to help. In fact, to many these were the worst years since the Great Leap Forward as Mao gave huge amounts of foreign aid to countries far richer than China while his own people suffered.... as always.

The fall of Lin Biao (1971). After 1970, Mao found his position in China progressively weakening. When he wanted to abolish the office of president, Lin Biao pushed him to take the office himself so he (Lin) could be vice president and the official second in command. Surprisingly, four of the top five men on the Politburo voted with Lin and against Mao. Therefore, Mao decided he had to purge Lin.

But Mao now faced another obstacle: old age. The stress of purging so many people had sapped his energy, and, at age 77, he came down with

pneumonia. Controlling everyone's actions in his weakened condition would be increasingly more difficult from now on.

Purging Lin would be especially hard since he'd been entrusted with so much power to carry out the Cultural Revolution. In particular, he had packed the army with his own men who would likely be more loyal to him than Mao. Therefore, Mao tried to bring Lin into line by demanding a self-abasement, a public admission of all his faults and sins against the Revolution that was designed to humble and break the spirits of those performing it. Lin Biao was the only major party official Mao had never subjected to a self-abasement. And when finally ordered by Mao to perform one, Lin refused.

However, Lin realized he was in great danger. At first he considered fleeing to Hong Kong. But then his son came up with a plot to assassinate Mao. However, everything went wrong, the plot failed, and Lin had to flee. Unfortunately, he had to leave before his plane could be refueled and it crashed in the countryside, killing him.

Lin's death created a new problem for Mao: replacing Lin's men who filled many critical offices, especially in the military. But there weren't enough qualified and loyal candidates to fill these spots, so he had to call on others who had already been purged and were currently in labor camps. Given the questionable loyalty of these men, Mao felt he had to rule more moderately in order to keep from antagonizing them.

Prison abuses decreased greatly and violent denunciation meetings were called off, even for Lin Biao's men. Mao even allowed a few songbooks and entertainments for the Chinese people, many of who were exhibiting facial tics and other signs of extreme stress brought on by Mao's harsh rule. In February 1972, Mao fell very ill again, further hurting his ability to rule effectively.

Mao's final years (1972-6). Right from the start of Mao's rise to power, his foreign minister, Chou En-lai had been his very capable and loyal follower, putting up with constant humiliations at the hands of his boss. After Lin Biao's betrayal, Mao became suspicious of the ever-loyal Chou. Therefore, when

Chou was diagnosed with cancer, Mao told the doctors not to tell him, since he didn't want Chou to outlive him. Then, to weaken him further, Mao, ordered Chou to do a detailed self-denunciation before 3000 top officials about all his past errors. It was so long it took Chou three nights to deliver and was such a pathetic sight that many in the audience cringed during Chou's delivery.

By early 1973, Chou's cancer had worsened critically and he was finally told about his condition. Yet, when the doctors begged Mao to let them treat him, he replied that Chou was quite old enough to die. Finally, he agreed to treatment, but in two stages, the first being only an exam, and the second stage actually removing the tumor. The chief surgeon, realizing Mao wouldn't allow a second stage, "combined" the two stages and removed the tumor. Luckily, Mao, in a good mood about Chou's diplomatic success with the US, acquiesced. Then, in June 1973 the U.S. and Russia signed the first Strategic Arms Limitation Treaty (SALT I). Enraged over China's isolation and second-rate status, Mao blamed Chou, calling him a revisionist, and ordered another self-abasement.

Meanwhile, the Watergate scandal was weakening Nixon and his ability to provide Mao with military aid. Mao, not familiar with a democratic system, couldn't understand what all the "farting" was about. Then, on August 9, 1974 Nixon resigned, signaling the end of Mao's dreams of superpower status, since his high-tech weapons program was only producing defective equipment. Mao took his frustration out on Chou, forcing his own subordinates to attack him to his face for his failures with the US.

In May 1974, Mao, intending to let cancer eat Chou to death, refused another entreaty by doctors to perform proper surgery. A month later, two years after the initial diagnosis, Mao finally relented. The delay made sure Chou died 19 months before Mao.

Then, in July 1974, the tables turned when Chou found out Mao had Lou Gehrig's disease and had only two years to live. Chou hid this information from Mao and was much bolder after this as Mao was starting to lose control over his own bodily functions.

Taking advantage of Mao's weakening condition, Chou formed an alliance with Deng Xiao-ping and army chief Marshal Yeh, the first time two or more top colleagues had been able to form such an alliance. Deng Xiao-ping, purged in 1966 for opposing the Cultural Revolution, was recalled after Mao lost Lin Biao's services and Chou came down with cancer. Mao put Deng in charge of the army since only he could guarantee its stability after Lin Biao's fall. Deng never moved against Mao personally, but did put his own reforms into action, in particular rolling back the worst aspects of the Cultural Revolution, Mao's proudest achievement, thus rehabilitating many cadres who had been purged.

Deng also tried to raise China's living standards. Under Mao, China's urban population had grown to 100,000,000, but budgets for urban improvement from 1965 to 1975 equaled only 4% of corresponding military budgets. Sometimes three generations of a family were crowded into one room. Reportedly, in some places, women were so poor they had no clothes and had to go naked. Mao knew perfectly well of these conditions, but did nothing about them.

In reaction to the alliance of Chou, Deng, and General Yeh, Mao had his main allies in defending the Cultural Revolution, his wife and a group known as the Gang of Four, wage media a campaign against Chou and Deng. Surprisingly, Deng gave Mao, nearly blind from cataracts, a piece of his mind and forced him to call off the campaign and admit he had "made a mistake", his first such admission ever. Mao even begged his colleagues not to overthrow him, saying they could do that to his wife and the Gang of Four after he died.

Mao's fourth and last wife, Jiang Qing (AKA Madame Mao), was one of the most notorious figures of the Maoist era. She started out in Shanghai as an actress with a somewhat shady past. As Mao's wife she was a fearsome creature whom everyone avoided. The only person she feared was Mao, who also couldn't stand her and had her banned from his quarters. However, she was useful to Mao as his attack dog during his purges. With so much blood on her hands she was extremely

paranoid about assassins. She had an intense fear of any strangers and unexpected noises, and got especially agitated at anything that would make her sweat, such as talking too quickly, too slowly, too loudly, or not loudly enough. This was the woman Mao was willing to sacrifice for his own safety.

In June 1975 the death of a purged Marshal, Ho Lung, led to a spontaneous memorial service by the army, which was taken as a huge snub against Mao. On July 23, 1975 a cataract was removed from Mao's left eye. Having regained his confidence, he launched a new media campaign against Deng. Once again, Chou confronted Mao who backed down again.

On January 8, 1976 Chou En-lai died. Mao quickly fired Deng and put him under house arrest. However, thanks to reforms made by Deng in 1975, news of Chou's death, but not his role in such things as the Cultural Revolution, were publicized. Public opinion was outraged at news of Chou's death, triggering a spontaneous demonstration of 1,000,000 people, which took Mao's absence from the funeral as a snub. This triggered popular protests all over China, using Chou's death as excuse to protest Mao's policies. Crowds in Beijing burned police vehicles and the headquarters of the Gang of Four's militia.

The demonstrations were suppressed with characteristic bloodshed, but Mao's regime had lost its edge of terror. Crowds praised Deng by hanging little bottles from pine trees around Tiananmen Square, since the Chinese word for little bottle is pronounced the same as Deng's name. Mao hauled Deng from house arrest to another part of Beijing, but didn't hurt him, fearing the army's reaction.

On July 28, 1976 a devastating earthquake leveled the city of Tangshen, killing an estimated 240,000 people. Many Chinese thought this presaged Mao's death.

When news of Mao's failing health was leaked, Deng asked for and got permission to go home. For Mao, it was only a matter of time.

On September 9, 1976, Mao Zedong died.

During and because of his twenty-seven year reign, over 70,000,000 innocent people also died.

After a brief power struggle, Deng Xiaoping defeated Jiang Qing and the Gang of Four.

He then set China on a new course of reforms that it has followed to the present day.

CHINA SINCE THE CULTURAL REVOLUTION

China since the Cultural Revolution. Gradually, the forces of moderation, led by Zhou Enlai and Deng Xiaoping, resurfaced and prevailed, especially after Mao's death at the age of 82 in 1976. After a brief power struggle against extremist elements led by Mao's widow and a faction known as the Gang of Four, the moderate and more practical Deng Xiaoping emerged as China's new leader. Since then, China has progressed in both the fields of foreign policy and economy.

In foreign policy, China's more moderate image led to its acceptance as a member of the United Nations in 1971. This put increased pressure on the United States to recognize the communist government in China. The Chinese communists, in turn, wanted better relations with the West to act as a counterbalance against the Soviets. In 1972, President Nixon visited China and started the long road towards normalizing relations between the two nations. A major stumbling block was America's support of the Nationalist government of still ruling the island of Taiwan. The communist government on the mainland insisted that its relations with Taiwan were an internal Chinese affair and that the United States should cut relations with and support for the government there. In 1978 the United States agreed to most of China's demands, although it informally maintained economic and diplomatic relations with the government on Taiwan. Other erstwhile enemies, notably Japan, also normalized diplomatic and economic relations with mainland China during this period.

Economically, Deng Xiaoping, instituted significant economic reforms known as The Four Modernizations (agriculture, industry, science and technology, and military) which provided farmers and factory workers incentives to work harder. Farmers were allowed to keep small plots for growing surplus food which they could sell, while factory workers could also do business on the side as long as they did not hire (and thus exploit) employees in the capitalist manner. To many hardliners, these reforms seemed too capitalistic in spirit. However, they helped lift China's economy dramatically in the following decades. As Deng put

it, he did not care whether a cat was black or white as long as it caught mice.

China's growing prosperity brought demands for more political rights and power for the common people, which Deng was not willing to grant. Unfortunately, this contrast between economic progress and the lack of corresponding political progress created tensions in Chinese society, much like the tensions in Soviet society caused by more political rights but the lack of economic progress. In 1989, massive demonstrations demanding more political rights spread across many Chinese cities. After several weeks of indecision, the aging leaders brutally suppressed the movement at Tiananmen Square in Beijing and reestablished a harsh and repressive rule.

Since then, China has rapidly emerged as a major economic force facing both new opportunities in economic and diplomatic affairs and challenges in its political policies at home. Much of what will happen hinges on what sort of new leadership would take the helm when the last of China's first generation of Communist leaders finally passes on.

DETENTE, YUPPIES, AND THE “ME GENERATION”: THE 1970S

Introduction: A decade of malaise and a decade of “me”. The more fragmented American society became, the harder it was to categorize it. Therefore, in one way, the 1970s were a decade of malaise and self doubt over the failures of either the right or left to win decisive victories after the turbulence and culture wars of the 1960s. American military might suffered a serious blow to its prestige, both at home and abroad, after the fall of South Vietnam in 1975. The Civil Rights movement lost much of its momentum and split between the more aggressive and peaceful wings of the movement after Martin Luther King’s murder in 1968. The counter-culture also lost momentum as our withdrawal from Vietnam eliminated a common unifying cause around which to rally and Baby-boomers got married and had jobs, mortgages and children to worry about.

On the other hand, the 1970s saw prosperity continue to rise for much of society. Many Baby-boomers, and even so-called “hippies”, became young upwardly mobile workers, sometimes called “yuppies”, cutting their hair stylishly long as they bought into the same materialistic mainstream values many of them had rebelled against a few years previously. As a result, the 1970s have been called the Me Decade for the materialistic and behavioral self-indulgence of many young adults. It was a time largely remembered for fancy cars, polyester pantsuits, upscale drugs such as cocaine, and sexual experimentation such as “swinging” (mate swapping between married couples). The wild experimental music of the 1960s gave way to more mainstream “corporate rock” as the music scene became more of an industry and the free-form underground repertoire of FM radio stations was replaced by “progressive rock”.

However, it was also a time of positive change. The Vietnam War did end, thus finishing an agonizing chapter in the histories of Vietnam and the United States. Most notably women made dramatic progress toward equality. It was also a time of technological change. Microwave ovens changed the way Americans cooked and ate. The cell phone was invented in 1973, while the computer microchip made its debut at the end of the decade, setting the stage for a revolution in communications

and information technologies that still hurtles along at breakneck speed.

Political changes took place in both domestic and foreign policies. Driving this at the start of the decade was the Vietnam War, which became increasingly unpopular over time as the mainstream media turned against the war and the Nixon administration’s policies. Early in 1973, President Nixon announced “peace with honor”, which was mainly a way for us to get out of South Vietnam and leave it to its fate. Two years later, Saigon fell and Vietnam was united under a communist regime that inherited a massive amount of American military equipment, making it the fifth largest military power on the planet. As it turned out, the Vietnamese would use this military hardware in a brief flare-up in late 1978 with Red China, the very power we feared would use the communist regime in Vietnam as its puppet to take over all South-east Asia. Instead, the Vietnamese followed a much older historical pattern of resisting Chinese influence. Luckily for them, they had American military hardware with which to do it.

However, Nixon had two major foreign policy triumphs, namely normalized relations with Russian and China. Ever since the Cuban Missile Crisis, which had taken the world to the brink of nuclear war in 1962, tensions between the U.S. and Russia had gradually been easing. A series of actions taken by the two superpowers had gradually stabilized the world: a direct line of communications (AKA the Hotline) between the White House and Kremlin (1962), a ban on atmospheric nuclear testing (1963), and a nuclear non-proliferation treaty (1968). In 1972 Nixon took the process a step further with SALT I (Strategic Arms Limitation Treaty) which limited the number of new nuclear weapons each side could build. While this did not stop the growth of each nation’s nuclear arsenal, it did slow it a bit and laid the groundwork of trust necessary for gradually freezing and eventually reducing the number of nuclear weapons. This new atmosphere of trust between the two nations was known as detente and would last until the late 1970s when growing Soviet military power alarmed many Americans and set the stage for the final round of Cold War hostility in the 1980s.

Even more startling was normalization of relations with Red China. Despite his heavy anti-Western

rhetoric, Mao Zedong of China was a shameless opportunist who favored better relations with America in the hope of getting American military aid. This was to discourage aggression by Russia, whose relations with China had seriously deteriorated in the previous decade. In fact shots were exchanged between the two in 1969 as mutual animosity reached fever pitch. Therefore Mao conveniently overlooked he was dealing with “capitalist imperialists” so he could get their weapons. Likewise, Nixon conveniently forgot he had been a leading anti-communist since the early 1950s so he could get an ally against Russia and divert public opinion away from the quickly unfolding Watergate scandal to a foreign policy coup.

Animosity between Nixon and the media escalated further during the 1972 presidential election with the Watergate scandal. On the surface, it shouldn't have amounted to much, since it started with the petty theft of documents from the Democratic Party headquarters in the Watergate Hotel in Washington D.C. What made it so serious was the growing effort by the White House to cover up this caper, causing it to explode into one of the biggest political scandals in American history. In August 1974 as Watergate spiraled increasingly out of control and Congress was on the verge of impeaching Nixon, he resigned in disgrace, the only president to leave office early without dying.

Two years later, American voters, disillusioned by Watergate and the bitter memories of Vietnam (although it was a Democratic president, LBJ, who had gotten us stuck in the quagmire of the war), elected a Democrat and Washington D.C. outsider, former governor of Georgia, Jimmy Carter, as president. However, despite Carter's best intentions, events abroad, a stagnating economy, and his lack of Washington experience seriously undermined his presidency. America's economic problems were tied heavily to rising oil prices, which were largely the result of events in the Middle East.

In October 1973 Israel's Arab neighbors launched a surprise attack during the Jewish holiday of Yom Kippur. At first, Israeli forces reeled from this sudden assault. However, thanks partly to aid from the U.S., they regained the upper hand and won the war. In retaliation, Arab oil producers reduced

supplies to the U.S. and raised the prices on what they did send. As oil prices and the cost of transporting goods rose, so did the price of nearly everything else. For the first time, Americans, who were used to cheap oil to fuel their big gas-consuming cars, faced the reality of the finite nature of world oil reserves. More fuel-efficient foreign cars from countries, especially Japan, that had always had to import most of their oil started to grab a bigger chunk of the market.

This also heavily impacted the Cold War, since Russia, an oil exporter, gained money from rising prices, while the United States, increasingly an oil importer, lost money. Thus the Soviet Union, with more money coming in, was able to rapidly increase its conventional and nuclear forces in the 1970s. At the same time, inflation and disillusionment with the military after Vietnam led to heavy cuts for the American armed forces. By the late 1970s the Soviet nuclear arsenal threatened to overtake that of the United States.

America's image abroad, especially with the Muslim world, suffered even more from a hostage crisis in Iran. In 1953, the United States had helped overthrow the legitimate government of Iranian leader Mohammed Mossadagh, replacing him with the corrupt and cruel regime of Shah Reza Pahlavi. For a quarter century, the U.S. continued to support the Shah's rule as long as he remained loyal to it and blocked Soviet pressure southward.

In 1978, a revolution led by the Shiite mullah, Ayatollah Khomeini, overthrew the shah and set up a radical Muslim regime that naturally blamed the U.S. for supporting the Shah and his oppressive policies. Making matters worse, when the shah contracted cancer, Carter, out of humanitarian sympathies, allowed him into the U.S. for treatment, despite warnings from Iran not to do so. The reaction in Tehran, the Iranian capital, was to storm the American embassy and hold fifty Americans hostage. After a disastrous rescue attempt where an American helicopter crashed from sand getting into its engine, the hostage crisis dragged on for the rest of Carter's administration, seriously weakening him in the process. The hostages were finally released the same day Carter's successor, Ronald Reagan, took office in 1981.

Relations between the two superpowers also deteriorated during the Carter administration. Another treaty between them in 1975, the Helsinki Accord, had a clause guaranteeing human rights. While the Kremlin felt the Americans would not make anything of this clause, Carter thought differently. Looking increasingly weak due to setbacks abroad and inflation at home, he put pressure on Russia to honor the human rights clause. Public attention especially focused on the treatment of dissident Jews, called *refuseniks*, two of the more prominent being physicist Andrei Sakharov and Alexander Solzhenitsyn. This issue, plus Carter's pressuring the Soviets for greater verification controls on nuclear arms, led to rising tensions between the Americans and the Soviets, who reacted by deploying nuclear missiles able to hit Western Europe. Thus by 1980 rising Cold War tensions loomed on the horizon.

A changing society. While America's position in the world seemed to be crumbling steadily in the 1970s, its very social structure was undergoing radical changes. This was very much a continuation of the turmoil of the 1960's: much quieter without a major war to catalyze events, more fragmented than the turbulent youth movement of the previous decade, but reaching further in to the depths of American society as the Baby Boomers came of age and increasingly had more clout. One of these movements, discussed in the next reading and flowchart, would vitally concern an estimated 51% of the American population: women's liberation.

To many African-Americans, the decade after Martin Luther King's murder was a series of broken promises and shattered dreams, as the housing projects of LBJ's Great Society, built initially to help relieve poverty and horrible housing conditions, themselves became part of vast urban ghettos. Promises of better jobs and living standards rarely materialized, being replaced by a welfare system, intended to temporarily relieve suffering, but itself becoming a trap that seemed to encourage broken families and just working the system. The non-violent movement King had led fragmented into two parts.

One part, symbolized by the inner-city riots of the middle and late 1960s and seen on TV, was violent and angry. As Civil Rights opponents came to understand how dramatic media images of brutal

oppression in the South had only gained sympathy for the movement, they used more subtle tactics to block the movement, such as opening private schools and swimming pools to avoid public integration. The resulting slowness of change, especially compared to the relatively rapid progress of the early 1960s, naturally generated frustration. And the result of that frustration was the riots of the late '60s.

However, just as the police brutality seen on TV in the early '60s had gained the Civil Rights movement much sympathy with white middle class Americans, the inner-city riots of the late '60s, also televised, had alienated many of those same people. Not only that, but the riots had mostly burned down Black neighborhoods and driven out many of the businesses that had previously thrived there. Unfortunately, the violence didn't end in the 1970s, it merely fragmented and turned on itself in the form of gangs, crime, and drugs, causing the inner-city ghettos to deteriorate further, causing more violence, and so on.

Two TV sitcoms of the time illustrate much of the problem the African-American community faced: *Good Times* and *The Jeffersons*. *Good Times* was set in the housing projects of Chicago. While it did address many of the problems facing inner-city African-Americans, it was still a sit-com that made white people laugh and many of them think it must be fun to be a "negro" in the projects, so why worry about them?

The Jeffersons illustrated another side of African-American society: those who, through hard work and diligence, did make it out of the projects and became part of the American dream. By the 1980s the fastest segment of American society was the Black middle class, although it should be remembered it was starting from a tiny base. White viewers could ease their social guilt by watching a prosperous African-American family on TV headed by a man who was every bit as bigoted as opponents to the movement had been. However, many blacks, especially those still in the projects, got a far different view of America from *The Jeffersons*, namely that their best and brightest had sold out to white America and left them behind in the ghettos without leaders and without hope. The bitterness and, in many cases, sense of inadequacy this bred

only exacerbated the problems of inner city America.

However, beneath the surface and away from the TV cameras, there was second, more quiet movement, still largely led by ministers such as Jesse Jackson, that worked hard and peacefully for change on a broad range of fronts, both local and national. Programs such as Affirmative Action and Operation Head Start would open educational and job opportunities for millions of African Americans over the following decades. As stated above, there were more blacks raising themselves to middle class status. The election of an African-American, Barack Obama, as president by a still primarily white electorate in 2008 underscores the fact that progress has been made. However, there is still a long way to go, especially for those who still have to see that progress in their lives.

Toward the 1980s. One other TV sitcom of the 1970s illustrates the feelings and plight of many white Americans, *All in the Family*. Interestingly, when it started early in the decade, it took a very liberal view, portraying its main character, Archie Bunker, as a bigoted fool. To the show's credit, in its later years it portrayed Archie in a much more sympathetic way, bringing out the ways many Americans were bewildered by the rapid changes that, in their point of view, were running out of control and ruining America. Archie was part of the so-called "greatest generation", those who had survived the Great Depression, fought World War II, and worked hard to build America and give their children all the advantages they never had. After all that they felt they were being tossed aside and left behind by an ungrateful nation. In addition, many conservative, white, heterosexual male Baby-Boomers felt blacks, women, and gays were in conspiracy with white liberal yuppies and threatening their positions in society. The result was a cultural and political backlash that was determined to restore to America the values that had made their nation great in the first place. Part of this was a growing religious right that sanctified America and equated its own values (e.g., anti-abortion, anti-gay, and anti-women's lib) with divine will. They would find their leader in a grade B movie actor who exuded to them all the values and self-confidence that had once made America great and would do it again. His name was Ronald Reagan.

Meanwhile, a tiny invention was being developed that would change America and the world in even more astounding ways than ever seen before: the computer microchip.

That 70s Malaise



President Nixon gives the V-for-Victory sign as he leaves Washington D.C., having just resigned from office (8/9/1974). Nixon's mental state of health was a matter of some concern in the latter part of Watergate and its aftermath. About a week after his resignation and return to California, he called his staff together announcing: "I've called you here to discuss an important topic. And that is, what are we going to do about the economy in the coming year?"

America after Watergate. Time magazine called Watergate the most traumatic political experience of this century," and indeed, it did transform American politics and the public's attitudes toward their elected officials. For one thing, corruption and indictments for corruption didn't stop at the White House or Washington. Starting in April 1973 two Maryland state legislators, two Chicago Aldermen, a former governor of Illinois, the chairman of the Securities and Exchange Commission and the chief judge of the U.S. Customs Court, along with two attorneys general, the mayor of Camden New Jersey, and the lieutenant governor of California had all been indicted or sentenced for corruption.

Corruption and scandals themselves were nothing new, but the pervasive media coverage of Watergate and the status gained by Bob Woodward and Carl Bernstein, the investigative reporters who uncovered the scandal, inspired journalists everywhere to try to uncover their own blockbuster scandals. Along with this were ambitious public prosecutors also anxious to make names for themselves. The feedback between these two groups created a virtual

media feeding frenzy in efforts to find the next big scandal. The frenzy never stopped.

While this now may seem like a normal day at the office for politicians, in the 1970s it was at first somewhat shocking, and then mind-numbing. Previously, the press had stayed clear of politicians' private indiscretions, thus the infidelities of Eisenhower, FDR, and JFK remained virtually unknown to the public. Schoolchildren were taught their national leaders were upright moral heroes without any human foibles. Therefore, this perception of their leaders as squeaky-clean left Americans open for a big shock when the bad news started pouring out in the 1970s.

Unfortunately, an even darker reality started coming to the light as revelations about the CIA's covert activities were revealed. In addition to the usual wiretaps, opening of people's mail, and break-ins, the public learned of mind control experiments using drugs like LSD, the use of exploding seashells, a poison dart gun called the "Nondiscernible Microbioinoculator," and assassination plots against Fidel Castro (in conjunction with the Mafia, using JFK's mistress, Judith Campbell Exner, as a go-between), Patrice Lumumba, Rafael Trujillo, and Chilean general Rene Schneider.

One sign of the times was the spate of movies involving conspiracies and cover-ups on a wide range of subjects: politics (*Executive Action*, *The Parallax View*, *Three Days of the Condor*, and *Chinatown*), police corruption (*Serpico*, *The French Connection*, and *The Godfather Part II*), corporate neglect (*The Poseidon Adventure* and the *Towering Inferno*), and even a fake Mars landing (*Capricorn One*).

Out of all this came extreme disillusionment with the government. According to one survey in 1975, seven out of ten people felt the nation's leaders had consistently lied to them over the last decade, while another survey a year later showed that only twenty percent of the American public trusted the government. Some of that

disillusionment was briefly alleviated by the new President who took over from Nixon in August 1974, Gerald Ford. By all accounts he was a decent human being with no skeletons in the closet. He was the first president since Eisenhower to share the same bedroom with his wife, Betty. While Ford seemed to restore some degree of normalcy to government, that quickly proved inadequate in itself to get the country back on the right track.

One thing hampering him, another legacy of Watergate, was a shift in the balance of power from the presidency back to Congress. An example of this was the joint resolution in 1973 by both houses of Congress, the War Powers Resolution, which sought to limit the president's discretionary use of military power without Congressional consent. A year later, the Budget and Impoundment Control Act challenged his authority over the nation's finances.

However, not only was the balance of power shifting in favor of Congress, the very nature of Congress and party politics was also radically changing. Whereas before, it was a hierarchy of politicians that had loyally served their party that decided from behind closed doors who would be nominated for upcoming elections, now that power lay in the hands of the voters in primary elections. Similarly, the winners of those elections were no longer so beholden to their parties and instead wanted to get things done, even if that meant sweeping away the old way of doing business in Congress. Replacing a few powerful committees and committee chairmen were 150 different subcommittees, each with its own chairman, budget, staff, and agenda. Between 1972 and 1978 the House Committee staff had more than doubled. Unfortunately, this meant that congressional politics fragmented into a bewildering number of single issue fights with little common ground for discussion or action, making it much harder to get working majorities for passing bills. Gone were the days of broad based coalitions that could get things done.

Single-issue politics had another unfortunate side effect: the proliferation of lobbyists, a swarm of them for every issue with its own subcommittee: gun owners, feminists, environmentalists, gays, farmers, and just about every industry in the land. By 1980, over five hundred corporations had lobbying offices in Washington. So much for cleaner, more transparent and honest government inside the Beltway.

The Swinging 70s



A great parody of the “Swinging 70s” was done on Saturday Night Live by Dan Aykroyd and Steve Martin who played two Czech brothers who had come to the U.S. with all sorts of distorted ideas of what a swinging place America is (e.g., the belief that U.S. Park Service personnel freely dispense birth control devices).

A popular impression of the 70s is that they merely saw orgies move from the squalor of hippie pads to the luxury of the yuppie suburbs. A recent TV series, *Swingtown*, played off this by showing a suburban culture heavily tinged with this behavior. As with hippie orgies in the 60s, a lot more people seem to remember these events than were actually there.

Granted, premarital sex was more prevalent and accepted than before, but, as in the 60s, it took the form of a series of monogamous relationships leading up to marriage much more than that of serial sex at orgies, whether on the floor or in a heated swimming pool.

In fact, looking at mail order catalogs (below), which reflected more of mainstream America than did *Swingtown*, it seemed that a secret Amish plot had taken over the lingerie industry, threatening to send the birthrate plummeting. (The birthrate did fall in the 70s, but not because

of nightwear that doubled as birth control devices.)



Yet, overall sex was much more a part of the mainstream culture than ever before. Nothing better illustrated this than the growth of the pornography industry. While soft-core magazines, led by *Playboy*, had flourished in the 1950s and 60s, it was the legalization of hard-core pornography in Denmark in 1969 that led to legalization across the Western world followed by a boom in the industry. Compared to new magazines like *Penthouse* and *Hustler*, *Playboy* seemed mild and was progressively left behind by the competition.

While Women’s Liberation and the growth of the pornography industry both owed much of their success to the liberal climate created in the 1960s, many feminists actively opposed pornography, claiming it encouraged violence against women and children. Although there was no conclusive evidence either way on this issue, the battle lines were drawn, as women across the country demonstrated against pornography. This raised the difficult question of whether controlling or outlawing pornography would be a violation of First Amendment rights and set a precedent that would lead to stifling freedom of speech for themselves and other groups.

Oddly enough, pornography created an odd convergence of interests between feminists and a growing conservative movement in mainstream America. Pornography, the divorce rate, the embarrassing end to the Vietnam War, women’s liberation, drugs, uncontrollable teenagers, and a myriad of other changes rapidly transforming society caused growing alarm for millions of Americans.

The “Dark Ages” of fashion



Was it the Women’s Liberation Movement or just a really bad hangover from the drugs of the 60s that inspired the excess of bad taste and deranged judgment that passed for fashion in the 70s?

Probably both. Women entering the workplace in greater numbers were faced with the dilemma of how to be taken seriously as good workers instead of being treated as sex objects in cute little mini-skirts, which largely describes the attitude of male workers in many companies until that time.

The answer was the pantsuit (top center), the female counterpart to the business suit. It was about as sexy as the unisex uniforms worn by Mao’s Red Guards. But it did send a message that a woman was there to work hard and be taken seriously as a human being. After a decade or so when women had gained more respect in the workplace, they could feel comfortable enough in their femininity to go beyond the unisex look.

A more realistic explanation might be that, just as big record companies got control of rock music, squeezed out much of its creativity, and homogenized it into a more marketable product for mainstream consumers, they did the same for (or to) fashion. The basic approach seems to have been to take the psychedelic look and make it look respectable. Not a good idea, especially for someone who was still high from the 60s.

So were women’s fashions really that bad in the 70s? Well yes and no. While it may have

seemed the fashion industry was conspiring to put an end to sex forever, that was only true for the workplace, where sex isn’t usually a good idea anyway. So pantsuits and frumpy dresses and skirts probably did help protect women from sexual harassment and pave the way for more equality. And the comfort and utility of those clothes carried over to leisure activities away from the office.



However, sex was much more out in the open at this time, so women’s fashions for going out on the town were designed to be both attractive while also not advertising the woman as “easy.” The screenshot (above) from *Swingtown* pretty much illustrate this point.

So what excuse did men have for dressing the way they did? For one thing, the leisure suit, as it was called, found a comfortable middle ground between the grungy hippy look of the 60s and the more respectable cleaned-up look yuppies needed for work in the 70s. As awful as it may have looked, it paved the way for Casual Fridays.

Also, many men did sympathize with the Women’s Liberation Movement, and adopted a somewhat unisex look in sympathy with it. By the same token, it helped free men from the more rigid gender roles in which they also felt trapped.

Along these lines, there were even matching his and her outfits.... even for bedtime.



Maybe it was something in the beer, but men still felt they had to be men. A popular song of the time by the (openly gay) group, Village People, even expressed/parodied the idea that “I want to be a macho man.”



Out of this developed a weird combination of flamboyant clothes (partly inspired by African American fashions) and an ultra-manly look of moustaches and shirts unbuttoned halfway down to reveal macho chests.

In the 70s, platform shoes were the latest attempt to make women look taller than they really were. However, some of these shoes seemed to be pushing women up to dangerous altitudes. In fact, several models, including Naomi Campbell, Agyness Deynnfell, and two models in one runway show in China have fallen from their shoes. Campbell's shoes had five-inch platforms and nine-inch heels.



With women growing so much taller, men had to keep up, so they also wore platform shoes.

And, as if cruelty to one's feet wasn't enough, how about trapping a live goldfish in the heel? Despite some doubts that real goldfish were used, apparently they were, at least in some cases.

What can you say except that it was a really rough decade for both men and women who struggled to define their new roles and identities in this period of rapid transition. The struggle is still going on today. Maybe it always will.



Bully magnet. That's the only way to describe what this poor child has been forced to wear, inviting violence from even the girls in the class.

Other Cultural Disasters



Unfortunately, bad taste didn't stop at fashion. Homes were also infested with vomit-inducing artifacts (e.g., shag carpets, furry toilets, and plaid furniture) that could easily convince an alien civilization to put us out of our misery as quickly as possible. They even had inflatable furniture, its main saving grace being that once deflated, it took up less room in a landfill.



Living room curtains matched the plaid furniture in bad taste, coming in various pseudo-psychedelic patterns. The question was whether such drapes did more harm as part of America's living rooms or good by hiding its contents from the outside world.

As if toilets, by definition, aren't already the epitome of bad taste, the 70s covered these receptacles of waste in soft plastic, pink carpeting, and fake fur turning them and the temples they inhabited (i.e., bathrooms) into cultural icons worthy of the decade that begat them.



Pet Rocks. Possibly the most successful fad/scam of the 70s was, the brainchild of Californian, Gary Dahl, who realized, despite the recession, Americans had too much money and needed help in finding ways to waste it. Thus was born the Pet Rock. For only \$3.95 (not adjusted for inflation) one could get a pebble from Rosarito Beach in Baja, California, along with a pet carrier (cardboard box with a handle and air holes) and a training manual so one could teach the rock simple commands such as “sit” and “stay” along with more advanced ones like “roll over” and “come”. Curiously, there were no feeding instructions. In the last half of 1975, Dahl (and imitators marketing cheap knock offs) made millions selling these lovely creatures. Sadly, after Christmas, everyone apparently had a rock and sales died.



Streaking is the act of running naked through a public venue to amuse, rather than shock, spectators. Although the first recorded incident took place on a bet in London in 1799, it reached its peak of popularity during an unseasonably warm streak of weather in February 1974 when thousands, if not millions, of streaks took place across the globe, especially on college campuses.

The author, who was delivering pizzas on the University of Illinois campus in Champaign-

Urbana, was in a particularly favored position to witness the rise and fall of this phenomenon over the course of less than a week. At first, there were isolated cases (or rumors) of individuals streaking short distances, such as between dorms. Day by day, reported incidents steadily grew.

By Thursday, large groups of people were taking part in various activities, including naked couples on motorcycles, an entire fraternity doing calisthenics on their front lawn, and another group of fraternity brothers running with their house flag down the street (all witnessed by yours truly). On Friday, a mass streak, involving an estimated 10,000 people, took place on the campus quad, the highlight being a naked skydiver landing in the crowd.

By Saturday, everyone was dressed again.

Warning: Since the 1970s, anyone convicted of streaking in the U.S. is labeled a “Sex offender.”



America goes metric (and then goes back). A map of the globe shows the U.S., Liberia, and Myanmar (Burma) as the only nations still holding out in the battle against global metric tyranny. Not that there haven't been efforts. In 1866, Congress authorized the official use of Metric along side traditional English measures, and the U.S. was an original signer of the 1875 Treaty of the Meter.

More recently, Congress passed the Metric Conversion Act of 1975 "to coordinate and plan the increasing use of the metric system in the United States". Metrication was not mandated however, and the U.S. Metric Board (USMB) lacked the power to enforce metrication. Despite public service announcements and road signs listing both miles and kilometers, the USMB had no real backing from Congress and was disbanded in 1982.

The Omnibus Trade and Competitiveness Act of 1988 mandated use of the metric system by government agencies before mandating private use. Every year, each government agency must file a report on its annual progress toward metrication. The military generally uses the metric system since it often has to coordinate actions with other militaries.

In 1998, the Mars Climate Orbiter was lost because, despite requirements that all sub-contractors use the metric system, Lockheed Martin provided thruster performance data to the team in pound force seconds instead of newton seconds. As a result, instead of orbiting at a height of 150 kilometers, it descended to 57 kilometers and burned up in the Martian atmosphere.

Textbook Wars and the Resurging Conservatism in America



Besides pornography, many conservative parents were worried about the books their children were reading in schools. Going back to a Supreme Court ruling in 1963 that banned school sponsored prayers in public schools, many people, Christians in particular, felt their ideals and views were being squeezed out of public education by what they called secular humanists. On the other side were people who felt school curricula should reflect the cultural changes in American society and the world.

Things reached the boiling point in 1974 in Kanawha County, West Virginia, when the State Board of Education mandated that books used in public schools reflect more multiracial themes. Along with *The Autobiography of Malcolm X* and Arthur Miller's *The Crucible* (written as a protest against the Red Scare on the early 1950s) their list included works by Beat Generation poet Allen Ginsberg, black rights activist

Eldridge Cleaver, and Sigmund Freud, the father of modern psychiatry.

When the local school board adopted these books, angry protestors acted, blocking highways, and throwing stones and Molotov cocktails at school buses. Violence escalated when 3,500 coal miners, defying orders from the United Mine Workers, went on strike to join the protests. A UPS driver was shot crossing a picket line, while a demonstrator was shot in the heart by a terrified janitor. Protestors firebombed two schools, dynamited another, and blew off fifteen sticks of dynamite under the gas meter at the school district's office, luckily at times when no one was present.



Left: Damage caused by a presumed dynamite blast at Midway Elementary School in Kanawha County, W. VA.

Right: A textbook protestor's car burned out by supporters of the new book list [Photos courtesy of Charleston Newspapers]

Not surprisingly, this generated a lot of media interest, with all three major networks (CBS, NBC, and ABC) sending news teams to cover the action. It also attracted several leaders from the Ku Klux Klan, as it did the Reverend Charles Quigley who prayed that God would kill the three school board members who had approved the books.

Although the books remained on the school board's list of books, the most controversial books were confined to school libraries and could only be checked out with parental permission.

Controversies of this sort and conservatism in general would only continue to grow over the following decades.

Childish Games over China



Believe it or not, there was an opera in three acts about Nixon's trip to China. Its initial performance in 1987 met with mixed reviews. It has been performed several times since.

Paving the way for Nixon with an old boot. The Sino-Soviet split led to ideological arguments bordering on the absurd or childish, especially over who was the real leader of the communist world. The Russians would say they were Marxist, and the Chinese would reply they were more Marxist. Then the Russians would say they were red, so the Chinese would retort they were redder. At one point, Khrushchev called Mao a *galosh*, which is Russian for old boot. Unfortunately, in Chinese, old boot can also mean old whore, which is how it was translated to Mao, not making matters any better.

Such nonsense did make things easier for President Nixon, since it provided the opportunity for a diplomatic coup by normalizing relations with China and driving a further wedge between Mao and the Soviet leadership. Since 1972 was also an election year, such a trip could help in his bid for reelection. To pave the way, he first sent his secretary of state, Henry Kissinger.

Kissinger in China: the drama. On Kissinger's initial trip to China to lay the foundations for Nixon's official state visit, there was great excitement about being the first Americans to officially visit Red China. One member of the entourage even moved to the front of the plane so he could say he was the first American official to actually *cross into* Chinese air space. Kissinger wasn't pleased. So when the plane landed, he shoved his way to the front so he could be the first American to *step foot in* China.

Taking his Lumps



In 1972, President Nixon, as part of *Détente*, scheduled a summit with the Soviet leader, Leonid Brezhnev in Moscow. However, as his trip to Russia loomed, he was faced with the dilemma of whether to keep bombing North Vietnam and thus jeopardize his chance to normalize relations with the Soviets. After considerable discussion with his advisors, he concluded that the Soviets would not throw away this diplomatic chance by canceling the summit over American policy in Southeast Asia. So he kept up the bombing and went to Moscow.

Soon after arrival, the Russians took their American guests to Brezhnev's country dacha, sat down with them, and proceeded to regale them with criticism of America's Vietnam policy. This went on for over three hours, the Soviets taking turns as if in some tag team wrestling match. All the while they carefully transcribed every word they said so they could send the script to the North Vietnamese to show them how much they supported them (in spite of the fact that they were negotiating with the United States). The Americans, understanding what was going on, just politely listened. Later, they all went to dinner and had a good time as if nothing had happened.

Looking Ferocious after Vietnam: The fall of Saigon and the Mayaguez incident



South Vietnamese frantically rush to board one of the last U.S. helicopters leaving Saigon before its fall to the North Vietnamese on April 30, 1975.

On April 30, 1975 the Vietnam War finally ended. That was the day North Vietnamese forces took Saigon and put a final end to the regime in South Vietnam. For most Americans, the war had ended two years earlier with the Paris Accord that allowed the U.S. to pull out its troops “with honor” while leaving North Vietnamese and Viet Cong forces still active in the South.

But for the Vietnamese, the real end came on that day in April 1975, as thousands of them stormed the U.S. embassy in Saigon, desperately trying to get on the final helicopter airlifting the last eleven (out of 6,000) Americans and a few lucky Vietnamese out of harm’s way. Although over 50,000 Vietnamese had been evacuated over the past two weeks (below), for those Americans present that day, no words could express their shame as they saw their South Vietnamese allies left behind to whatever fate awaited them at the hands of the communists.

Back in the States, many also felt such shame for abandoning our allies like that. Many others felt relief that it was finally over. Nearly everyone felt embarrassment for what was supposed to be the greatest nation on earth.

Henry Kissinger spun the whole episode as a successful, albeit costly (\$140 billion, 58,000 American and at least 2,000,000 Vietnamese lives), effort to keep communism out of Indonesia and maintain the American presence in Asia! But even he felt the need to redeem American honor. It came on May 12, 1975

(twelve days after the fall of Saigon) when the Cambodians seized an American merchant vessel, the *Mayaguez*, which had strayed into disputed waters.

Two days later, despite the fact that it was still unknown whether the 39 crewmen were still on their boat, the small island of Koh Tang, or the Cambodian mainland, President Ford, at Kissinger’s urging, ordered in the marines. Unfortunately, 15 marines and eight helicopters were lost storming Koh Tang, and the crewmen were neither there nor on the boat. While the navy was bombing Cambodian gunboats, the Americans were spotted on a small fishing boat and rescued. Despite having accomplished their mission, Kissinger ordered our jets to bomb the mainland so we could “look ferocious.”



Overall, thirty-nine Americans had been saved at the cost of forty-one marines (including twenty-three who had been killed in a helicopter crash during preparations for the mission. All this despite reports that the Cambodians were preparing to release the Americans anyway. In addition, the American captives had enjoyed their impromptu Cambodian vacation, the Cambodians having been very nice to them and fed them very well.

But America’s honor had been redeemed, and Ford’s popularity had jumped eleven points.

The Boat People



The aftermath of the fall of Saigon saw a purge of thousands of South Vietnamese deemed politically unreliable. Around a million were sent re-education camps, of which an estimated 165,000 died from abuse, torture and execution. This, plus the famine and poverty resulting from the war's destruction, led to some two million Vietnamese trying to flee the country. The Sino-Vietnamese War in 1979 led to thousands of ethnic Chinese to flee Vietnam out of fear of being targeted for violence.

Those planning to escape would have to contact people who could get them out, which commonly depleted their savings in buying fake IDs, food, transportation to a port, and passage on a fishing junks or trawlers that weren't suitable for long open sea sailing. The most common strategy was to head for major shipping lanes in the hope of getting picked up by larger ships and taken to Hong Kong, with the Philippines, Malaysia and Thailand as other destinations.



Those not lucky enough to be picked up might be stuck at sea for six months, all the while being decimated by hunger, thirst, and disease. Another problem they faced was robbery, rape and murder by pirates who knew the refugees had typically sold all their worldly goods for gold. Of the two million Vietnamese who attempted this journey, roughly one in four died.

Those who survived the voyage were put in squalid refugee camps in Thailand, Malaysia, the Philippines, Indonesia, and Hong Kong. Money was given to alleviate this humanitarian crisis, but most of it was siphoned off through corruption. Therefore, conditions in the refugee camps were miserable, made worse by the raping and beating of women and children. Thailand was supposedly the worst, with 77% of refugee boats leaving there being attacked.

Once in the camps, refugees might have to wait years before finding permanent asylum in other countries. Typically, children of GIs and Vietnamese women were given priority with their mothers, largely because they were discriminated against in Vietnam for their mixed ethnicity. Wealthier Vietnamese women would often buy the rights of passage from these mothers.



The countries taking in the most refugees were the United States (823,000), Australia and Canada (137,000 each), France (96,000), Germany (40,000), United Kingdom (19,000), and Japan (11,000). Those going to the U.S. often met with hostility, partly from bitterness about the war, but also because a serious recession, made worse by OPEC's oil embargo, generated resentment against any Vietnamese immigrants who got jobs. Below: Vietnamese refugees at Camp Pendleton, California.

The Killing Fields: Cambodia under Pol Pot (1975-9)



They said the Holocaust couldn't happen again. On April 17, 1975, two weeks before the fall of Saigon, the communist Khmer Rouge under Pol Pot took the Cambodian capital, Phnom Penh (below right), and proved everyone wrong by instituting the worst genocide since World War II.

Pol Pot was heavily influenced by Maoism, believing the true communist revolution must be carried out by the peasants. Taking this idea to the extreme, he emptied Cambodia's cities and sent their inhabitants to join the peasants in the countryside in forced labor camps, working them 12 hours a day on starvation rations.



But that was only the start of the madness. The Khmer Rouge closed down the country's schools, factories, hospitals, and entire banking and finance system. They abolished money, religion, and private property. The goal was to turn all Cambodians into "Old People" (i.e., farmers). Therefore, "New People" (teachers, merchants, and intellectuals) were murdered to eradicate their influence.

Their attitude toward "New People" was summed up in the slogan "To keep you is no benefit. To destroy you is no loss." Even having glasses could mark one for death as an intellectual. Ironically most of the Khmer Rouge leaders were from the educated middle class, Pol Pot himself being fluent in French and a lover of French literature.

Other "New People" from the cities largely starved, since they had no experience with agriculture and the "Old People" were afraid to be seen helping them. Even picking berries was seen as capitalist free enterprise and rewarded with execution. Families were broken up and anyone trying to establish contact with relatives was killed.

In addition, Pol Pot's regime committed genocide against non-Cambodians: Vietnamese, Thais, Chinese, and different tribal minorities. They also murdered Christians, Muslims, and Buddhists, although they did give some Muslims a chance live by forcing them to eat pork. (Similarly, Mao forced Chinese Muslims to raise pigs.) City dwellers who couldn't farm well were branded as "economic saboteurs" and killed.

Executions were often carried out using poison, bamboo stakes, shovels and pickaxes to save bullets. Even children and babies were killed by smashing their heads into trees so they wouldn't grow up to avenge their parents. One place where thousands were taken for extermination was dubbed the Killing Fields. Left: Skulls of victims completely fill this commemorative *stupa*. Even today, visitors come across random bones because victims were often forced to dig their own graves before being killed, and they were too weak to dig very deep.

The genocide in Cambodia triggered mass emigrations to neighboring Vietnam and

Thailand. Deteriorating relations with Vietnam led to a Cambodian invasion of Vietnam in 1978, which was repulsed. Vietnamese forces retaliated and took Phnom Penh, driving the Khmer Rouge into the countryside to carry on guerilla war until their final defeat in 1998.

Amazingly, most countries supported the Khmer Rouge keeping their UN seat, apparently seeing no difference between one communist government and the next.

However, since the Khmer Rouge followed a Maoist line of communism, China attacked Vietnam in 1979, resulting in a short indecisive border war (below). Luckily the Vietnamese had plenty of American equipment left over from the previous war to fend off Chinese aggression.



Because few accurate records were kept, estimates vary widely as to how many people were murdered by the Khmer Rouge, although reliable estimates hover around two million, which accounted for about one-quarter of Cambodia's population. A disproportionate number of those were foreign minorities, with over fifty percent of the country's ethnic Chinese being wiped out. As a result, Pol Pot has been referred to as the "Hitler of Cambodia."

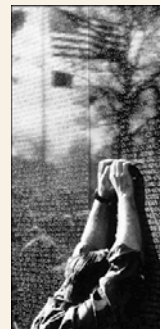
In 1997, the Cambodian government asked the UN to start war crimes proceedings. It was 2006 before a combination of Cambodian and international protocols was established and judges were being sworn in.

Coming Home



A returning veterans is greeted by a joyous reunion with his family. Sadly, not all homecomings turned out so well for veterans returning from Vietnam.

Among the more tragic aspects of the Vietnam War was the fate of returning veterans. Instead of returning as heroes, they were often condemned as murderers, not to mention the perceived stigma of having been part of the first war America had ever lost. In fairness to them, that defeat was mainly due to lack of vision by the leadership and the will of the public back home.



It wasn't until 1982 that the sacrifices of those veterans were acknowledged by a memorial in Washington D.C.

The women's liberation movement hit veterans especially hard in two ways. For one thing, it had been happening while they were gone, thus seeming to be a sudden and shocking change added to all the other shocking changes that had occurred. Secondly, soldiers' wives had been forced to be more independent in the absence of their husbands and continued becoming so after they returned, wanting their own careers and lives. All this flew in the faces of men who not only cherished "traditional values, but had made great sacrifices to defend those values.

Suddenly caught in this strange new world, many veterans turned to drugs and alcohol, had trouble holding jobs, lashed out violently against their wives, and in some cases, just ended their own lives. Suicide rates were 24% higher than the rest of the population, while 38% of veterans' marriages ended in divorce within six months of returning home.



One of the more provocative actions angering veterans was the actress Jane Fonda's trip during the war to North Vietnam to show sympathy for its people.

Even the toy industry seemed to have turned against them. Military toys were deemed no longer appropriate, and were completely deleted from the Sears Catalog. G.I. Joe even grew a liberal looking beard before disappearing from the shelves in 1976. He would be re-launched in 1982, but reduced in size from 12" to 3.75".

The Apollo-Soyuz Test Project



The Apollo-Soyuz Test Project was a joint Soviet and American program that culminated with a Soviet Soyuz space capsule and American Apollo space capsule linking up in orbit over the earth on July 17, 1975. For forty-four hours the two crews visited each others' capsules and shared meals in what may have been the ultimate symbolic gesture of U.S.-Soviet cooperation during Détente. As a parting gift after separating, the Americans interposed their craft between the Soyuz capsule and the sun, creating an artificial eclipse so the Soviet cosmonauts could photograph the sun's corona.

Carter's Killer Swamp Rabbit



Jimmy Carter just couldn't win, even against rabbits, especially of the giant marine variety that swim in Georgia swamps. In 1979, Carter related he was in a rowboat on his fishing pond, when he saw a rabbit swimming toward him. But this wasn't a cute little bunny, but a big splayfooted creature sometimes referred to as a swamp rabbit. The president admitted to having limited experience with enraged swamp rabbits that gnashed their teeth and let out strange hissing sounds. What was clear to him was that it was headed for his boat with hostile intentions.

As Carter described it: *"I had a paddle in the boat, so when the rabbit got closer to me to recognize it, and I saw that it was going to attempt to climb into the boat with me, I thought that would be an unpleasant situation for both me and the rabbit. I did not hit the rabbit, I just splashed water toward him and he finally veered his course."* A nearby photographer even got a picture (above) clearly showing the President splashing a big swimming rabbit with his oar.

Of course, the media, blew the story out of proportion. *The Washington Post* and all the networks featured it. For a week, the President couldn't get away from questions about his encounter with a swamp rabbit, the subtext being he was such a weak leader that even rabbits weren't afraid of him.

There was even talk of suing for release of the photo under the Freedom of Information Act. Even after leaving office, Carter wasn't free of the story. In 1981, members of the Reagan administration stumbled across the photo and released it, maybe as a diversion from more important matters.

Blaxploitation: African-Americans and the Media in the 1970s



While the 1950s and 1960s saw African-Americans advance in the realms of civil rights, sports, and music, opportunities for serious roles in film and TV opened more slowly for them, although there were some gains for them in the later 1960s. Probably the first primetime role for an African American (Bill Cosby) was *I Spy*, which debuted in 1965. On one level, it was just another spy drama, a popular genre for the time. However, it paired Cosby with a white partner (Robert Culp). However, even such a pairing on equal terms was too much for many stations in the South, which banned airing it.

Two years later, racial mixing was taken a step further with *Guess Who's Coming To Dinner*, which delved into the even more controversial issue of mixed marriages. In 1968, *Julia*, the first primetime TV drama starring an African American woman (Diahann Carroll) aired. The main character was a widowed nurse raising her son as a single mother after her husband had been killed in Vietnam, something that certainly made her character more acceptable to mainstream America.

Except for *Guess Who's Coming To Dinner*, there was very little that tackled the issue of race in America head on. But as the radical hippies of the 60s transitioned into the liberal yuppies of the 70s, producer Norman Lear decided it was finally time to address the social issues still dividing America, such as racism and feminism.

The result, debuting in 1971, was *All in the Family*, a sitcom centered around a bigoted, middle-aged, and conservative white man named

Archie Bunker. Surround him with his stereotypically good-natured wife, feminist daughter, and liberal /radical son-in-law (aka Meathead), and watch the sparks fly.

Although much of Middle America (including President Nixon) identified with Archie, the show's slant was very liberal. Archie's prejudices would consistently be shown up and ridiculed by all the liberals surrounding him, with an episode consistently ending with a lesson about tolerance and diversity.

The first primetime African-American centered sitcom, *The Jeffersons*, was a spinoff of the groundbreaking *All in the Family*. The question was how to structure a show about African-Americans in a way that mainstream White America would watch it? Simple. Create a Black counterpart to the cranky and racist, but deep-down-inside decent, Archie Bunker: George Jefferson. Then surround him with "good" liberal "negroes" and white neighbors to promote the lessons of tolerance and diversity.

In the early 1970s, as African Americans became more visible in American culture and also a larger part of the movie market, Hollywood exploited that market with films set in urban ghettos and having plots involving crime, drugs, and corruption. Since the main characters were Black, this genre of films came to be known as Blaxploitation.

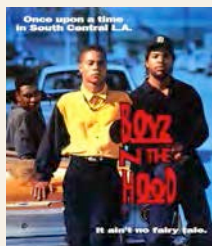
Catering to black audiences, such movies typically portrayed white people as drug dealers, pimps, prostitutes, and corrupt policemen and politicians. They were also referred to by such ethnic slurs as "Honkeys." Interestingly these films found a broader audience among white people too.

The first major Blaxploitation film was *Shaft*, starring Richard Roundtree as a stereotypically tough detective, except of course, he was black. Such groups as the NAACP, Southern Christian Leadership Conference, and National Urban League protested Blaxploitation films, saying they promoted negative stereotypes of African-

Americans. Subsequent support from various Black artists and publicity on this issue led to the eventual demise of the genre by 1980.

However, despite their somewhat lowbrow appeal and odd spinoffs, like *Blacula* (1972), Blaxploitation films had some long-term effects. For one thing they typically had soundtracks that featured and helped popularize funk music with its funky beats and heavy bass. The soundtrack for *Shaft* won a Grammy for Isaac Hayes in 1971.

They also gave black actors and film makers, such as Spike Lee and John Singleton, the exposure and opportunities to make more serious films, such as *Do the Right Thing* (1989) and *Boyz n the Hood* (1991), which also covered themes about conditions in the ghetto. Similarly, these movies' soundtracks helped popularize hip-hop music, taking African American culture further into the mainstream of American and global culture.



Another source of growing exposure and acceptance of Black culture into the mainstream was *Soul Train*, the "longest-running, first-run, nationally syndicated program in television history" (1971-2006). The creation of Don Cornelius, *Soul Train* featured R & B, soul, funk, and other genres of African American music along with the latest dances and fashions. Airing after school and following a format similar to that of *American Bandstand*, *Soul Train* provided both black and white kids access to African American culture.

THE WOMEN'S MOVEMENT II (1920- 92)

It was the summer of 1977. While my wife was at work, I stayed at home with the baby, changing his diapers, feeding him, playing with him, getting him to sleep, and straightening up the house. Of course, while I was at work, my wife filled in at home. Typically, whoever was at work, especially if it was an evening or night shift, got the car so we didn't have to get the baby out of bed, thus leaving the other parent stuck at home without a car. We had a small house with mortgage payments and the usual assortment of other bills. Nothing remarkable. We were the typical American family of the so-called Baby Boomer generation. However, this particular night it came home to me how different we were as a generation.

It was a particularly hot & sweltering night, and our house, which was tiny and had no air conditioning, was stifling. Therefore, in order to keep cool, I just wore a pair of shorts and the baby only had a diaper, which sometimes made things worse as I carried a hot sweaty baby up against my equally hot and sweaty body.

A friend of mine from work came by on his motorcycle. However, he didn't stay long, finding little of interest in hanging out and watching an eight-month old baby and his father sweat. I remember standing in the driveway, watching him leave on his motorcycle, that iconic symbol of freedom for the American male, and thinking, this isn't how my ancestors looking down from forty centuries of history lived, being tied down to a baby and housework. What would they say if they could see me now? How would I explain myself to them? But, deep down inside, I knew the answer, and it boiled down to one word: justice. How could I expect another human being to work and pay half the bills and also do all the housework and childcare, just because that other human being was female? Taken on that level, it was just that simple. But forty centuries of history made it far from easy. However, in spite of that, I knew what was the right thing to do, and I was determined to do it.

Meanwhile, my wife was at work, also haunted by forty centuries of ancestors telling her that her place was at home with the baby. For many of us, that was America in the 1970s.

Introduction: the "Second Wave" of the Women's Movement. People often think of the Women's Movement as coming in two distinct waves with little happening in between: the Suffrage Movement (1848-1920) and the Women's Liberation Movement starting in the late 1960s. While there is some truth in looking at the Women's Movement as coming in waves, it is inaccurate to see the period from 1920 to 1966 as an empty lull for women. To the contrary, the period 1920 to 1966 saw women, who now had the vote, taking their cause in new directions to gain equality at home and in the workplace. One of their more prolonged efforts, starting in 1923, was to push for an equal rights amendment that, among other things, would eliminate sexual discrimination in the workplace and in the application of various laws. Unfortunately, in 1982, after nearly sixty years of efforts, passage of this amendment fell three states short of ratification.

Margaret Sanger and the fight for birth control rights. While women had the vote by 1920, it was still illegal even to disseminate information on birth control. The woman who led the fight to change this was Margaret Sanger. One of the defining events in her life was watching her mother die in childbirth. Later, as a social worker, she was constantly coming across young women aged and worn out by all the children they had given birth to and the poverty resulting from all those births. As a result, Margaret made it her life's work to free women from such a fate, first by legalizing the spread of information on what birth control techniques were then available, and later working for the development of a safe and reliable birth control pill. In defiance of the law, she published numerous pamphlets on birth control (a term she coined), and opened the first birth control clinic in 1916. Five years later, she formed the American Birth Control League (ABCL) in an effort to gain support from the medical community and middle class so she could work through more mainstream channels. Finally, after years of hard work and multiple jail sentences for Margaret and other members, the ABCL got spreading birth control information through the mail legalized in 1936. Six years later, the American Birth Control League would become Planned Parenthood

World War II, “housewife syndrome”, and renewed activism (1941-66). The Second World War, even more than the first one, set momentous forces for change into motion. Its immediate impact was the need for women to fill the jobs left behind by the men gone to war. This brought millions of women into the workforce, giving them a sense of their own strength and worth, as depicted in the famous poster of Rosie the Riveter with the message “We can do it.” In 1943, women introduced the Equal Pay Act in the hopes of making the same wages as their male co-workers. It would take twenty years to get this bill passed.

As the war was winding down and the prospect loomed of millions of veterans coming back to their old jobs, government propaganda started preparing women to return to their pre-war roles as mothers and housewives. Although most women acquiesced in this expectation, a number found themselves attached to their increasingly independent status. Two decades later, they would be joined by millions of their daughters.

The post-war period saw Americans enjoying unprecedented prosperity as millions of couples got married, started families, and moved into their own houses in the suburbs. On the surface, it seemed middle class Americans were living in a dream come true. But for a growing number of these women in suburbia, that dream was becoming a nightmare. It even got a name: housewife syndrome. The basic problem was that they were not finding satisfaction and fulfillment with their supposedly idyllic suburban lives of doing housework, taking care of the kids, and making life as cozy as possible for their husbands. Adding to the problem was the fact that people didn't talk about such private matters with other people. Therefore, each woman thought she was the only one suffering such feelings, thus compounding her misery with guilt for even feeling such things. Some women saw psychiatrists or got prescriptions for anti-depressants, feeling that they were mentally ill, which only made them feel even more inadequate. Others turned to alcohol, which also made matters worse. Fortunately, one woman started writing.

Her name was Betty Friedan. She was a typical housewife and mother who also wrote articles on how nice it was to be housewife and mother for

women's magazines (which, by the way were all run by men). She also had a nagging feeling that not all was right with her life. However, being a writer, she had the opportunity to go out and talk to other women, unlike most housewives who were suffering at home alone in quiet desperation. During a class reunion at the women's college where she had graduated, she started getting the sense that other women were feeling frustrated and unfulfilled just as she was. Out of this and subsequent conversations and research came a book, *The Feminine Mystique*, published in 1963, that alerted women that their malaise was not abnormal and unique, but actually something being felt by millions of other housewives like themselves. *The Feminine Mystique* would come to be the virtual call to arms of the Women's Liberation movement, and Betty Friedan became one of the movement's godmothers.

Other forces were at work as well. For one thing, Margaret Sanger's crusade for developing and making available a safe, easy, and reliable form of birth control bore fruit when she and a researcher named Gregory “Goody” Pincus had developed the first oral contraceptive. In 1960 the FDA approved the use and distribution of the this oral contraceptive that, to a whole new generation of women whose lives it changed, would be known simply as The Pill. Secondly, the anti-war movement and counterculture created a reaction against the warrior ethic, opening the way to wider acceptance of gentler and more nurturing values associated with women. Also, there was the spirit of activism in the 1960s. Much like in the previous century, when women first got involved in various causes, such as abolition, to help other people, women in the 1960s took part in the Civil Rights and anti-war movements. And just like in the previous century, they came to realize that their own issues constituted just as worthy a cause. Catalyzing this was their treatment as inferior partners in these social movements. Things came to a head with the Civil Rights Act (1964), which, among other things, banned sexual discrimination in the workplace. However, frustration over the federal government's inadequate efforts to enforce this clause led in 1966 to the formation of a new organization: the National Organization of Women (NOW). The Women's Liberation Movement was born.

The Women's Liberation Movement (1966-92).

The first major public event of this new phase was a protest in 1968 against the Miss America Pageant for treating women as sexual objects. The protest took the form of an auction where women were sold as pieces of meat as in a cattle market. The legend is that women also burned their bras in protest. However, they couldn't get a fire permit, so no bras went up in flames. Much like the early suffrage marches, this protest met mostly derision, especially, but not exclusively, from men. However, NOW's street theater tactics got people's attention and started working their way into their consciousness.

While mythical bra burnings may remain as people's primary memories of the Women's Liberation Movement, progress was made through the more pedantic avenues of the courts and Congress. Out of these efforts came an onrush of laws and legal decisions that dramatically improved women's status and influence. In 1972, Title IX was passed, giving girls and women an equal number of opportunities to benefit from educational programs, including the right to play sports in schools. In 1973, in the *Roe vs. Wade* case the Supreme Court effectively made abortions safely and legally available to women, the main argument in favor of this being that women were getting illegal abortions outside the safe sanitary conditions of medical clinics, thus costing many of them their lives. Legalized abortion remains the single most controversial event coming out of the Women's Liberation Movement.

In 1977, the National Coalition against Domestic Violence was formed. Many of its early efforts were to call to people's attention the fact that domestic violence against women and children was much more widespread than most people realized, since previously such things were considered private matters, not to be discussed in public. Efforts to reduce domestic violence continue today.

Much of women's progress came in the workplace. In 1978 Congress passed the Pregnancy Discrimination Act, protecting women from losing their jobs because of pregnancy. Women were also breaking down barriers into various jobs previously considered men's exclusive domains. In 1981, Sandra Day O'Connor became the first woman to sit on the United States Supreme Court. Two years

later, Sally Ride became America's first woman astronaut. And the year 1992 would be called the "year of the woman" as a record number of women gained election to public office. However, in the midst of this there were setbacks, most notably the failure to get the Equal Rights Amendment ratified in 1982. And while women were making remarkable progress, there was a price to pay for these gains.

Trouble on the home front. Such rapid changes never come without putting stress on other parts of society and culture. In addition, altering traditional gender roles instilled by years of cultural conditioning inevitably would meet resistance from men. Not only did these changes threaten their privileged position in society, they also pressured men to act counter to what they had always been told was proper behavior. To most men and many women, such changes were unsettling, if not downright immoral. Therefore, the legal changes brought on by Women's Liberation to the workplace and public life created stresses and strains for both men and women in their private lives at home.

For men, there was additional pressure based on the theories of behavioral psychology in the 1970s that cultural conditioning, not biology, causes most difference between men and women. This led to the common assumption that traditional male behavior, especially aggression, could be tamed and that men could be conditioned to be gentler and more nurturing like women. This pressure to change led to problems for men from two directions. At home, criticism of and pressure to change traditional "male" values created frustration and anger. At the same time, men faced peer pressure to maintain traditional "male" values and patterns of behavior. Failure to do that, they were told and conditioned to believe, implied they were something less than real men. For men, who were conditioned to keep their feelings bottled up inside, their inability or unwillingness to verbally express their feelings often led to expressing it in the only way they knew how: violence.

While it is true that domestic violence has always existed, until now such matters were kept in the home and not reported. However, middle class women's greater sense of empowerment also allowed and encouraged them to talk about such

matters in ways that had been stifled since the isolation of the nuclear family and suburbia effectively cut their lines of communication. Now, not only were they talking about these things in support groups in the private sector, they also were gaining the political influence to make such discussions matters of public concern. Thus, while there was increased domestic violence, it was being reported like never before. How much more domestic violence there is now compared to before is impossible to determine, but the extra stresses caused by the radical changes taking place (including rejection of traditional rules of etiquette that previously had partially protected women from violence) certainly added to the problem.

Women faced their own set of new problems. One stemmed largely from the fact that status was still defined in “male” terms of successful careers instead of such things as parenting. Therefore, women often felt they had to downplay their traditional “female” qualities in order to be accepted and successfully compete in the business world. To an extent, this was reflected in women’s fashions with pantsuits as women tried to look the part of business executives. (By the same token, men wore something called leisure suits, a fashion I can find no excuse for whatsoever). Just as there was an underlying assumption that men could be conditioned to be gentler and more nurturing, there was a corresponding assumption that women could fulfill both the “male” role in pursuing careers as well as the “female” roles as mothers. For many career women, this was a necessity if their husbands refused to take on the less glamorous domestic chores of cleaning house and changing diapers. Out of this emerged the stereotype of the “supermom”, the woman who could take on both a career and raising a family.

However, this led to another problem. Not only did many women feel overwhelmed by taking on the daunting workload of both having careers and being mothers, they also felt guilty either for not being at home with their children or having forsaken having children altogether so they could pursue careers. Just as men felt centuries of ancestors were looking down upon them with disapproval for their taking on domestic and child-raising duties, women felt similar disapproval from centuries of their own ancestors for not being at home taking care of the children.

Another problem stemmed from the inauguration of the birth control pill and the resulting “sexual revolution” that began in the 1960s. Before this, sex was supposed to be something that only occurred within the context of marriage. While the Kinsey reports showed that people didn’t always conform to this standard of behavior, it was much more common for women to “save themselves for marriage”, if for no other reason than from the fear of getting pregnant and suffering the stigma of being single mothers. The Pill largely removed these fears, but the Sexual Revolution came with a price, especially for women. For one thing, the idea of sex without emotional commitment, while appealing at first to many women, wasn’t as easily attainable as it may have sounded. Many women engaging in what at first was casual sex often found themselves falling in love with their partners. While many men also fell in love, it was more common for men to take undue advantage of the freedom afforded by sex without commitment and move from partner to partner. They might even challenge women with the charge that, if they were truly liberated women, they should prove it by having sex with them. Many women fell for this faulty logic and were badly hurt as a result. This was especially true if they got pregnant, because the Pill didn’t always work, especially if a woman forgot to take it. Therefore, by the time the baby arrived, the father was often long gone, leaving many women left broken-hearted and with children to support.

There were other types of fallout from the women’s movement. One was in education. Previously, women wanting careers had very few choices, mainly as nurses, secretaries, or teachers. Since all these were seen as “women’s work”, they tended to be very low paying jobs. For public schools this meant that a disproportionate number of the best and brightest of half the population were being channeled into teaching at bargain prices. However, schools lost many of their best teachers when better and higher paying career opportunities opened up for women. To save public education, taxes would have to be raised to make schools more competitive in the market place.

Problems also emerged as more families had both parents working full-time. Finding good quality day-care for small children was one problem,

especially since this was, and largely remains, another area perceived as “women’s work resulting in low-paying wages. Older children would often come home from school to empty houses without any adult supervision. Such “latchkey” children, besides being at risk in terms of safety, were also more prone to get involved with drugs and crime.

Unfortunately, not all families stayed together. Along with more casual attitudes toward sex came more casual attitudes toward marriage and divorce. Therefore, either the fathers never married their children’s mothers or divorced them soon after getting married. Either way, millions of women were left to raise their kids as single parents. For them, working and raising a family single-handedly was not a choice. It was a reality they had to deal with by themselves. For those who got pregnant when they were young and inexperienced, this made it difficult, and in many cases impossible, to get an education to prepare them for a professional career. All that was left for them were low paying jobs that barely paid the bills, if that. The result was what became known as the “feminization of poverty”.

The “Third Wave” of the Women’s Movement (1992-). Having gained more legal equality in the home and workplace, feminists have turned their focus to such matters as violence against women, sexual harassment, and issues of race and class disparities among women in the West and across the globe. Some have even referred to this as the Third Wave of the Women’s Movement, since it reaches out to a broader range of women and deals with issues that are not as easily resolved through legislation. Rather, they deal with deeply ingrained cultural values that are just as difficult, if not more so, to tackle.

Housewife Myths



Part of an 8-page photo essay, entitled “Occupation: Housewife” from the September 22, 1941 issue of Life magazine. It was reprinted

in the New York Times in 2006 with one alteration: the picture of the woman’s grandfather was replaced with a picture of Betty Friedan, one of the founders of the Women’s Liberation movement.

World War II, even more than World War I, brought millions of women into the workforce, giving them a sense of their own strength and worth, as depicted in this government poster. However, as the war was winding down with the prospect of millions of veterans coming back to their old jobs, government propaganda started preparing women for a return to their pre-war roles as mothers and housewives. Although most women acquiesced to this expectation, a number found themselves attached to their greater independent status.

The pictures shown above were intended to show the life of a typical housewife in Kankakee, Illinois in 1941. When it was reprinted in 2006, the daughter of the woman in the picture sent the following letter to the Times:

To the Editor:

I agree that issuing marching orders to women today is “not helpful.” To try to label women is an act of futility, making them one-dimensional when in fact most women’s lives are complicated and change with time and circumstance.

But I was most taken with the photographs accompanying your article, because the woman portrayed cleaning her house was my mother, Jane LeValley Amberg.

As noted, the photo was taken by William C. Shroot for LIFE magazine and was originally published September 22, 1941, in a feature article titled “Occupation: Housewife.”

My mother was unhappy with the published article, because she was portrayed as a “typical” American housewife who cared only for home and family. Not mentioned was the fact that, with no college degree, she was also a voracious reader and a committed liberal

Democrat who cared deeply about national and international issues.

Our first TV was bought so that she could watch the Army-McCarthy hearings. Sixty-five years after the Life article, women still struggle with the rigid, one-dimensional labels of “stay-at-home moms” and “women who work.”

*Pamela Loewenstein
Lawrence, Kansas*

TV Moms. Unfortunately, this more nuanced view of women got lost in the greater shuffle of mass media in the 1950s and 1960s. In addition to articles in women’s magazines (that were owned and run by men) that scared women into domesticity with the threat of not being able to land a husband, there was the new medium of television, which especially emphasized the stereotype of the stay-at-home housewife.

Jane Wyatt was the first TV mom, although the show was entitled "Father Knows Best" (below). It was so popular in the 1950s that, when production ended, it continued to be shown in primetime for the next three years. Dad’s nicknames for the kids were Bud, Kitten, and Princess. Guess who was who.



Another popular TV mom in the early 1960s was Donna Reed (below). During the beginning credits she would hand out lunches to her kids and husband as they went out into the real world. One problem: Her husband forgot to kiss her goodbye. She’s so sad until, each week, he comes back just in time for the end of the credits and gives her a kiss to make her day.



Divorce Before 1970



While Protestant Christians had been able to get divorces since the 1500s, the stigma associated with it remained strong through most of the 1960s. In the eyes of the Catholic Church, divorce per se is still not recognized, though people can get an annulment based on the technicality that the marriage, for whatever reason, never took place.

White middle class society in America considered divorce a worse sin than infidelity. While infidelity was a matter between husband, wife, and God, divorce threatened the very fabric of society, especially in terms of its impact on the children and their upbringing.

Until the 1960s, divorce was only granted if one spouse was proven guilty of such things as adultery, abandonment, or being guilty of a felony. One spouse had to publicly testify and prove the guilt of the other in court before a judge, lawyer, and stenographer. If a judge found both parties guilty of one of these offenses, he would often deny them the divorce. Sometimes married couples were so desperate to split up that they would even stage a fake affair to get pictures as proof of infidelity.

Recognizing what shams many of these cases were, in 1970 California became the first state to legalize no-fault divorce. New York State was the last in 2010. Maybe it was only natural that California would lead the way in no-fault divorces. After all, Hollywood movie stars since World War II had been involved in growing numbers of high profile divorces. Although it’s impossible to quantify the impact of the constant press coverage of those cases, it certainly must have led to a skewed perception that divorce was more common in society overall, thus making it seem more acceptable as well.

Before Roe v. Wade



Abortions are not a new phenomenon. Safe and legal abortions are. Until the industrial revolution, high birth rates were essential to just keep a population's numbers stable for everything from getting the crops in to defending society against marauders. Therefore, abortions were seen as a crime against society as a whole. Further complicating the issue was the question of when life begins: at conception, at birth, or someplace in between. Most people believed it was conception, which made getting a safe and legal abortion was extremely difficult and dangerous.

For example, in New York State, a woman with some money could go before an obstetrics panel and apply for a "therapeutic abortion" on psychological grounds such as pregnancy being a threat to the baby or herself. However, it was difficult and expensive to get such a procedure. By the same token, reputable doctors and nurses were rarely willing to perform illegal abortions, since being caught would cost them their licenses and reputations.

Thus women desperate for abortions had to resort to unqualified and less than reputable people for illegal procedures, which could take two forms: surgery and abortifacient drugs that would induce abortion. Surgeries would involve sharp instruments, including according to some rumors, coat hangers. In addition to uncontrolled bleeding, the patient might also be treated with improperly sterilized instruments that could lead to infection. Another treatment was pushing a tube through the cervix and injecting Lysol into the uterus.

Ever since ancient times midwives and other abortionists have used abortifacient herbs, such as sylphium, rue, hellebore, and pennyroyal, to

induce abortions. Some of these, such as pennyroyal, can cause severe complications and even death. As recently as 1994 women have reportedly died from pennyroyal poisoning while trying to induce abortions.

Techniques to induce abortion without surgery or herbs were also prescribed since antiquity. They included strenuous exercise (in particular jumping up and down hitting the buttocks with the heels each time), pouring hot water on the abdomen, and lying on a heated coconut shell. Although generally safer than the surgical and herbal techniques, they were also less effective. Therefore women desperate for abortions were faced with some dangerous and scary options.

Women's Liberation 2.0 Takes Off



The Women's Liberation movement kicked off September 7, 1968 at the Miss America Pageant in Atlantic City. About 100 women, calling themselves the New York Radical Women, staged a protest outside the pageant center, running a mock cattle auction with themselves as the meat and throwing various "instruments of female torture," including make-up, high heels, Good Housekeeping magazine, girdles, garter belts and bras into a "Freedom Trash Can". The plan was to burn the contents, but they couldn't get a permit for public burning. However, the idea of women burning their bras (the female counterpart to men burning their draft cards?) stuck in people's heads, even though there were no documented cases of bra burnings, at least intentional ones.

You've Come a Long Way Baby



That night, the protestors succeeded in getting into the pageant gallery and hanging a protest banner. It was the first time the American public saw the slogan “Women’s Liberation”.



In the same year, 1968, the NAACP held a Miss Black America Pageant to celebrate the beauty of Black Women. The convergence of this event with the Women’s Liberation protest highlighted the dilemma Black women found themselves in during the 1970s: were they more committed to Black liberation or Women’s Liberation, which was largely a white middle class driven movement.



Unfortunately, it didn’t take long for corporate America, especially the tobacco industry to exploit the Women’s Movement for the sake of pure profit. In fact, Virginia Slims, the first cigarette specifically marketed to women, first came out in 1968. Using the slogan, “You’ve come a long way, Baby,” they helped make women more equal to men in rates of lung cancer and heart disease, a somewhat dubious distinction. According to a report by the Surgeon general of the United States, trying to link women’s empowerment with their cigarettes, Virginia Slims also contributed to higher rates of smoking in teenage girls.

Some other choice lines from Virginia Slim ads:

“If I ran the world, calories wouldn’t count.”

“Find your voice.”

“Pretty in pink doesn’t make you a pushover.”

“I’m a skyhigh pair of platforms in a closet full of flats.”

“I don’t necessarily want to run the world, but I wouldn’t mind taking it for a little ride.”



The caption says: “Why do we apply mascara at 55 mph? Because we can.”

THE DESOCIALIZATION OF AMERICA SINCE 1945

In a society, such as the United States, that values the individual so much, it is easy to lose sight of the fact that we are a social species that has survived down through the ages because we have worked together in groups. We have increasingly lost touch with this basic fact since World War II for a variety of reasons. Two in particular were results of the end of the war: the corporate workplace and the suburbs.

America in 1945 was the ideal breeding ground for corporate capitalism, since it controlled 60% of the world's industrial production. Corporate regimentation was also well positioned to ease the transition for millions of young men straight from the regimented structure of the military to that of the office place trading their green uniforms for gray flannel suits. While this entailed a group mentality to survive, one of the frequent demands of corporate life, helped by the Protestant work ethic, was either being on the road away from family or being transferred to a new office in another part of the country away from relatives and friends.

Suburbia. After the war, there was a severe housing shortage for all the new couples and families being formed. Into the breach stepped William Levitt, a housing contractor who applied mass production techniques to building homes, thus inventing the suburbs. The immediate effect was for millions of people to move from their family and neighborhood networks in the city, where everyone was crowded together and had to get along. Instead, each nuclear family was isolated in its own home. Of course, people made new friends, but there were several features about the suburbs that made them different.

First of all, to keep costs down, Levitt and other contractors who copied him did not put front porches on their new houses. For many people, the front porch had been a primary meeting place for neighbors to visit, especially on hot summer evenings. This fostered an atmosphere where everyone in the neighborhood knew each other and their kids, and were expected to let parents know if their children were acting up. The African expression "it takes a village to raise a child" had meaning in America as well as Africa.

However, without the front porch, people in neighborhoods started losing touch with one another.

This was especially true as new homeowners started putting up fences or hedges along their property lines to mark their land from that of their neighbors. While there was generally no hostile intent in such an action, it did tend to cut neighbors off from one another more and more as newly planted hedges filled out and grew up with each succeeding year.

Accelerating this process was the growing popularity and affordability of air conditioning. Now, even if people did have a front porch, they were more prone to stay inside where it was more comfortable, but also much harder to socialize with neighbors. Adding to this was another remarkable invention that came into its own in the 1950s: the television. At first, when TVs were an expensive novelty, the whole family gathered together to watch such programs as wrestling, a mainstay before more professional programming took over. Whatever was on TV, people loved to watch, and that moved them indoors away from socializing with neighbors. They also could serve as electronic baby-sitters, freeing their parents for other chores and activities. And when more than one TV was in the house, even the passive togetherness of a family watching its favorite programs gave way to TV watching as an isolated one-on-one experience between the picture tube and the passive viewer.

Among the first notable casualties of suburban life was the housewife. Separated from her husband by the corporate demands of his job, from her relatives by distance, and from her neighbors by fences and hedges, a new phenomenon appeared: housewife syndrome, a sense of loneliness and being trapped by the very circumstances that many women had fantasized as the American dream. Granted, not all women felt this way. Many housewives socialized with neighbors and made new friends in the suburbs, but oftentimes even those friendships were fleeting as their friends' husbands were transferred to a new city. For many families, the suburbs were not a home as much as a temporary stopping point on the way up the corporate ladder.

THE END OF THE COLD WAR (1981-1991)

Certainly, the most dramatic event in recent history has been the demise of communism in the Soviet Union and Eastern Europe, in the 1980s. For nearly half a century, communist Russia stood as an apparently immovable object in the seemingly endless Cold War. And then suddenly the Soviet Union and the Warsaw Pact collapsed like a house of cards. Conservative pundits attributed this to the Reagan administration's military buildup that forced the Soviets, with a much weaker economy, to spend themselves into oblivion in order to keep up in the arms race. While this was certainly a factor, it was a combination of factors as diverse as the computer chip, oil prices, nationalism, and ethnic diversity that drove the Soviet Union under.

Three factors emerged in the early 1980s that together put extra pressure on the Soviet leadership. One was the invention of the computer microchip in the 1970s that led to the development of personal computers in the 1980s. This triggered a dramatic expansion in both the sophistication and availability of computers that began transforming the world almost overnight. It also presented Soviet leaders with a serious dilemma. Widespread adoption of personal computers to keep up with the West would also expose Soviet citizens to outside ideas and influences that could undermine loyalty to their regime. By the same token, failure to adopt this new technology would doom the Soviet Union to fall further behind the West. Weighing its options, the aged and conservative Soviet leadership of the early 1980s saw exposure to Western ideas as the greater threat.

A second factor was oil prices. In the 1970s, members of OPEC (Organization of Petroleum Exporting Countries) cut production and raised the price of oil. This hurt the United States, a net importer of oil, while conversely helping the Soviet Union, a major exporter of oil. However, in the 1980s, several members of OPEC broke ranks and lowered the price of their oil, forcing other members to do likewise in order to remain competitive. Now the tables were turned, with lower oil prices hurting the Soviet economy and helping that of the United States.

Finally, post-Vietnam disillusionment with the military combined with the extra drain on the American economy from higher oil prices had allowed the Soviet military to pull even with that of the United States by the late 1970s. Ronald Reagan used this perceived "window of vulnerability" and promises to remedy it to win the 1980 presidential election. Immediately upon taking office in 1981, he launched an aggressive rearmament program that built up both conventional and nuclear forces increasingly using the emerging computer technology. Even more alarming to the Kremlin, he proposed the Space Defense Initiative (SDI), also known as "Star Wars" after the popular movie of the time, which would shoot down any incoming missiles. Such a system, if it worked, would radically alter the nuclear balance of power in America's favor. Even though such a system was not feasible at that time, it terrified the Soviets who thought we might be able to pull it off.

The combination of America's arms buildup with its economic strength and exaggerated fears of American technological abilities drove the Soviets to try to keep up in the arms race despite their own much weaker economy. This meant that while 6-7% of the United States' GDP was going to its military, the Kremlin had to spend 15-20% of its GDP just to keep up. This led to soaring military budgets that especially hurt the Soviet economy as new and more expensive weapons systems kept being developed that Moscow felt it had to match.

In 1985, as the older more conservative generation of communist leaders was dying off, Mikhail Gorbachev took over as the new Soviet leader. Recognizing that major reforms were long overdue, he initiated changes in both domestic and foreign policies. His domestic reforms were known by the Russian terms *glasnost* (openness) and *perestroika* (restructuring). *Glasnost* encouraged Soviet citizens to openly discuss the issues and problems facing them. Gorbachev's idea was to get new ideas on the table, make people feel more ownership in the communist system, and to provide popular support for his reforms. This worked at first, but revolutions, which start out with moderate agendas to prevent alarm over radical changes, just keep raising people's expectations for more changes, so what may have started as a feel-good exercise quickly turned into growing criticism of

the communist system Gorbachev was supposedly trying to save.

Perestroika, the transformation of the artificially controlled command economy into one determined by market forces, was upsetting in two ways. Not only did it alarm Soviet leaders who saw economic reforms as a threat to their political power as well, it also scared many Soviet citizens who were used to a state managed economy, that no matter how mediocre the standard of living, it was seen as at least being safe.

Finally, Gorbachev clearly saw that spiraling military budgets stemming from the renewed arms race were a major source of the Soviet Union's problems. He also realized that the arms race was the product of mutual fears on both sides and that the only way to end that cycle of fear was for one side to make a unilateral gesture that the other side could not ignore. Therefore, he announced a major reduction of Soviet forces in Eastern Europe followed by calls for talks on reducing nuclear stockpiles. Reagan took up Gorbachev's challenge and the two powers were well on their way to negotiating a series of arms reduction treaties that defused much of the threat and fear of nuclear holocaust that had haunted the world for over forty years.

However successful Gorbachev may have been on the diplomatic front, his troubles on the domestic front were just beginning. At the root of his problems was the fact that revolutionary economic changes were bound to make things worse before they got better. All he could do was carry on with more reforms even though in the short run they only caused further deterioration, more reforms, and so on. Unfortunately, this vicious cycle had two other effects that fed back into it. For one thing, *glasnost* had exposed people in the Soviet bloc to the greater freedom and affluence of the West, thus making them increasingly impatient for positive change. By the same token, continuing deterioration only made Soviet and East European citizens more frustrated and anxious for change. In the meantime all Gorbachev could do was hold on until his reforms took effect. However, the Soviet system was so rotten to the core that it would take time for things to turn around. And Gorbachev was running out of time.

When the end came, it came with almost apocalyptic speed. In 1989, within just a few months, the various communist dictatorships in Eastern Europe fell like a row of dominoes. In November, the Berlin Wall, the most visible symbol of the Cold War, came down and East and West Germany were reunited the next year. In 1991 the Soviet Union followed suit, breaking up into Russia and a number of other independent states. Since then, all these nations founded on the ruins of the Soviet empire have struggled to adapt to the high-tech capitalist world that has emerged in the aftermath of the Cold War and continues to change at an ever-accelerating pace.

The Birth of the Personal Computer



By the end of the 1950's computers were no longer one-of-a-kind hand built devices owned only by universities and government research labs. The first commercially mass-produced computer was the famous UNIVAC computer (a contraction of "Universal Automatic Computer"). In the 1950's, UNIVAC was the household word for "computer" just as "Kleenex" is for "tissue". The first UNIVAC was sold to the Census bureau. UNIVAC was also the first computer to employ magnetic tape for data storage, since computers didn't have hard drives yet.



An example of one of IBM's mainframe computers before the microchip drastically reduced computers' size and increased their computing power by several magnitudes.

In the 1960s IBM was seen as synonymous with computers. With only 7 other companies producing computers, the eight companies were known as IBM and the 7 dwarves.” What dethroned IBM was its decision to farm out its software writing to a then unknown company known as Microsoft. By 2000, Microsoft’s value would be twice that of IBM’s.

There were two ways to interact with a mainframe computer. One was the Teletype, which electronically transferred what you typed to the mainframe which would then print its response (at the lightning speed of 10 characters per second) on a roll of paper. You typed a single line of text, hit return, and waited for the Teletype to begin noisily printing the computer's response. Since it’s easier to produce an answer in something that only had two states, on or off, binary code became, and remains the standard of computer programs today. The advantage of this system was that maybe 100 teletypes could be feeding into the mainframe simultaneously.

The other way to interact with the computer was *batch mode processing*, where the computer handled one person’s program at a time. To do this without monopolizing computer's full attention at run-time, you had to prepare your program ahead of time by generating a stack of punch cards on a keypunch machine.

Each card could hold only 1 program statement. To submit your program to the mainframe, you placed your stack of cards with your program in the hopper of a card reader. Your program would be run whenever the computer made it that far. You often submitted your deck and then went to dinner or to bed and came back later hoping to see a successful printout showing your results. Obviously,

a program run in batch mode could not be interactive.

A common cliché then was “Do not bend, fold, spindle, or mutilate”. If you committed one of these atrocities on one of your cards, it wouldn’t run and would have to be retyped. Another common hassle was to drop your stack of cards all over the floor, forcing you to reassemble your program card by card.



An early tape drive necessary for storing information since computers didn’t have hard drives then.

The first commercially available integrated circuit came in 1961 and was first used in Air Force computers and Minuteman Missiles. It was the size of a pinky finger and had only one transistor, three resistors and one capacitor. Now an IC the size of a penny can hold 125,000,000 transistors. One of Intel's 4004 chips still functions aboard the Pioneer 10 spacecraft, which is now the man-made object farthest from the earth.

In 1971, Intel (an acronym for “integrated electronics”) introduced the single chip microprocessor. This did the IC one better by putting all the components of a computer (central processing unit, memory, input and output controls) on one chip. It was 1/8” X 1/6” and had 2,300 transistors, giving it as much power as the ENIAC, which had filled 3,000 cubic feet with 18,000 vacuum tubes. Another big feature of the microchip was its ability to be programmed and reprogrammed by writing software to tell it what to do.



Intel didn't invent the computer, but it was the first to cram an entire computer into one microchip.



Space Invaders, one of the first really popular video games that came out in the 1970s, linking the population at large with the revolution taking place in electronics.

Intel priced its next microprocessor, the 8080, at \$360 dollars as a dig at the IBM 360 mainframe, which cost millions of dollars. This microprocessor was used to market the world's first personal computer, the Altair 8800. The problem was you had to build it from a mail order kit.



At this time a Harvard freshman, Bill Gates, left school to devote his time to writing software for the Altair 8800. Luckily for him, IBM had decided to standardize its Intel microprocessors for its line of PCs for 1981. This meant that any software Gates wrote was compatible for any and all IBM or IBM compatible PCs, which still control the lion's share of the computer market.

Intel's Pentium 4 used in today's PCs is still compatible with the Intel 8088 used in IBM's first PC.

In September 1975, IBM introduced the 5100 Portable computer. Available in 12 models providing 16K, 32K, 48K or 64K positions of

main storage, the 5100 sold for between \$8,975 and \$19,975. It was available with either APL or BASIC — or both — programming languages. Weighing approximately 50 pounds and sized slightly larger than an IBM typewriter, The price made it unavailable to the average consumer and was made with professionals such as engineers, analysts, statisticians and other problem-solvers in mind. If the size and weight of the 5100 seems huge by today's standards, compare it to its late-1960's IBM counterpart, a machine nearly as large as two desks and weighing half a ton.

IBM offered three Problem-Solver Libraries, contained in magnetic tape cartridges that provided over 100 interactive routines applicable to mathematical problems, statistical techniques and financial analyses. The cartridge had a 204,000-character capacity on 300 feet of 1/4-inch tape.

In 1981, the personal computer (top) made by IBM, first became available to the average consumer for \$3000. It had a 10MB hard drive and two 5.25" floppy drives, so that data could be copied from one disc to the other.

The first PCs had no hard drives, so everything had to be stored on floppy discs. The discs in the 1980s were 8" in diameter (top left, below). By 1990, they had been reduced in size to 5.25" discs (middle right) that could only store 256k of data. A few years later, the 3.5" disc (bottom right) storing 1.5MB in a hardened case replaced the 5.25" floppy.



Grizzly Bear or Paper Tiger: the Soviet Army in the 1980s



Soviet soldiers in Afghanistan

During the Cold War, Soviet armed forces were portrayed as a monolithic threat ready to invade Western Europe at a moment's notice. By the 1980s, an alternate view of it as an alcoholic monster with feet of clay also emerged. As usual, the truth was somewhere in between, it being a force capable of maintaining internal order and defending its borders, but little else, especially in an offensive capacity. Of course, much of its decay came after 1985 when Mikhail Gorbachev started realigning Soviet priorities toward the civilian sector of the economy, thus drastically cutting funding to the military. However, much of the Soviet army's problems were systemic, starting with conscription and basic training.

Schoolboys were conditioned to the idea of two years mandatory service (three in the navy) at the age of eighteen. Paramilitary and ideological training along with trips to military installations and World War II battlefields and monuments were essential parts of this conditioning.

Conscripts were drafted in two large clumps each year, one in the spring and one in the fall, which itself made it hard to absorb and train them. Since pay was low (about \$30 a month), only one percent would reenlist, leaving the Soviet army critically short of non-commissioned officers (NCOs), sergeants and master sergeants who form the backbone of any army. As a result, for training and discipline the army largely relied on a four-tier pecking order of Youngsters, Fishes, Candidates, and Bosses that is based on seniority where soldiers move up every six months until discharged. Such a

system was barely standardized and encouraged a lot of bullying, which in turn results in low morale and poor unit cohesion. Further impairing such cohesion was the multi-ethnic makeup of the army, many Soviet peoples being resentful or even hostile to Russian rule. Making matters worse, an estimated fifteen percent of Soviet recruits could barely speak Russian.

Conscripts were stationed long distances from their homes. This discouraged desertion and reduced empathy with the local population, which might prove useful if called upon to suppress any popular disturbances that could require shooting some of the locals. To further reduce such empathy, troops were stationed away from towns where they might get to know the local population. In addition, they were denied maps, especially if stationed in Eastern Europe where they might try to desert and even defect if they only knew where they were. In 1968, some Soviet troops sent to repress the democratic movement in Czechoslovakia thought they were in West Germany or even Israel.

Isolation also reduced opportunities for recreation and entertainment. Therefore, Russian soldiers drank a lot and had a high level of alcohol dependency. Given their remote stationing and low pay, even alcohol might prove difficult to get hold of and pay for. But where there's a will there's a way. For extra money, they would strip parts from electronic equipment, such as radar, and sell them for the money to buy alcohol. Besides the soldiers, this also made military equipment less functional, disabling up to half the Soviet armed forces' radar, which potentially created huge gaps in Russia's radar defenses.

When regular alcohol was unavailable, soldiers reportedly would decant it from other sources. For example, pilots would siphon off de-icer, claiming their planes were icing up, and then drink that. As a result, a number of soldiers died or went blind.

However, various factors largely prevented the sort of rampant alcoholism that could seriously

impair combat readiness. Upon induction, recruits had to surrender their civilian clothes and internal passports, making it virtually impossible for deserters to get work, shelter, medical care, or even alcohol, since liquor stores were under strict orders not to sell to men in uniform.

Living in a society where government surveillance was ubiquitous and strict rules and punishments were regularly enforced also helped discourage conscripts from even trying to break the rules. Minor infractions, such as intoxication, rudeness to officers, and going absent without leave (AWOL) brought a sentence of fifteen days in an unheated guardhouse where prisoners had to remain standing eighteen hours a day while on reduced rations, which under normal conditions were unappetizing and vitamin deficient. More serious offenses led to sentencing in the much-feared penal battalions, which were notorious for their brutality, forced labor, and starvation rations.

Without an adequate number of NCOs, training was narrowed to a few specific tasks and endlessly repeated. As one former Soviet sailor put it: “We were drilled and drilled and drilled, relentlessly.... I could undoubtedly do my job, even now, five years later, in my sleep.” Another former conscript related that they were constantly being detailed to painting their tanks and how one time they resorted to spray-painting the surrounding woods as well.

Partially alleviating these problems was a virtual class system within the military. More elite branches, such as paratroops, strategic rocket forces, combat ready units in Eastern Europe, and the navy, got the best educated and most reliable recruits, who in turn were given better living conditions, food, officers, and training. Less combat ready units got poorer quality recruits, while non-combat branches, such as construction and railroad troops, got the “undesirables”: former criminals and men not fluent in Russian and/or from politically unreliable groups such as ethnic Germans or Crimean Tartars.

Poor production and design standards also hampered Soviet military effectiveness. On the most basic level, combat boots were so poorly made that they were falling apart after only ten days of active service in Afghanistan. Soviet tanks also had their problems. For one thing, they were extremely cramped, which made extended service exhausting for their crews. Since most maintenance was done by crews, often after a long day of service inside the tanks, the crews were often too tired to do full maintenance, leaving the machines prone to breaking down. Cramped conditions also forced fuel to be stored in extremely vulnerable external tanks.

Soviet tanks had a history of problems with their loading and shell ejection mechanisms. Earlier models, like the T-55, were manually loaded, which was very slow. Even worse, when empty shells were often ejected at high speeds so they ricocheted around the inside of the tank to the great peril of its crew. The T-62 had an autoloader, but lacked safety features, so that crewmen’s limbs might get caught and severely injured. If a crewman’s sleeve got caught in its moving parts, his whole body might get dragged into the mechanism upon firing. Finally, the more sophisticated nature of later models of tanks made them much more likely to break down.



Soviet soldiers in chemical suits take part in a decontamination exercise in 1987.

How did this play out in combat, especially in foreign territories, as seen in Czechoslovakia in 1968 and Afghanistan in the 1980s? In both cases, elite paratroop units led the way and effectively secured the main military and political targets. In Czechoslovakia this was enough to cow the population. In Afghanistan it

was a different story, as various Tribes rebelled and a larger, less elite force had to be brought in for the long term. Eyewitness accounts of their performance when their convoys were ambushed on mountain roads relate that, instead of spreading out and moving up to outflank and engulf the enemy, they stayed huddled in their vehicles, ineffectively returning fire. One explanation of this behavior is that command and control was so tightly centralized, and many Soviet troops were so unreliable that officers didn't want to risk letting their men spread out away from their control and then desert.

Once discharged, Soviet soldiers remained on active reserve, and could be called up for three months of retraining at any time and always at some remote location. In 1979 the pool of reservists with recent active duty service who could quickly be reintegrated into the military was estimated at over 9,000,000 men. Thus, however poorly prepared most Soviet soldiers may have been individually, their numbers, when fully mobilized, would have given them a huge numerical superiority in men who had at least been conditioned to military service.

Star Wars and a New Arms Race



Ronald Reagan had won election to the White House in 1980 largely on a platform of getting tough with Communism. In a sense he was the last great Cold Warrior, labeling the USSR the "Evil Empire". In 1983, maybe after watching *Star Wars* one too many times he announced a new defense initiative named the Space Defense Initiative, but popularly referred to as Star Wars after the popular science fiction movie. The basic concept was to create a space and land based defense system to protect us from Soviet attack. SDI was denounced by the scientific community as technologically unfeasible at that time, since a single mistake in the million lines of code needed to program one of these weapons would cause it to fail. One of the early

experiments in 1983-4 was the Homing Overlay Experiment (HOE), basically a giant pinwheel 13' in diameter that would physically knock out an incoming missile-- if it could find it.

Artists' concepts of what these high-tech systems in space would look like were effective in exciting and/or scaring the public, but gave no realistic idea of what it would cost to make something like this work. While we never put an operational space defense system in place during the Reagan years, the program has continued ever since and, with increasingly sophisticated technology may bear fruit. Currently the U.S. is testing a scaled down version of SDI that could intercept a few rogue missiles launched by a terrorist state such as North Korea or Iran. Such a scenario is very unlikely, since we could trace the origins of such a missile and respond with overwhelming force. A more likely nuclear threat is that of a suitcase bomb smuggled into a US city, which would be much harder to detect or trace.

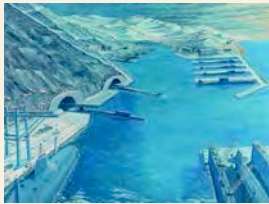
Of course, much of what prompted this surge in weapons development was the Soviet effort in the 1970s to close the huge nuclear gap with the United States. Unfortunately, that's not how politicians and the American public perceived it, seeing instead the specter of a huge Soviet advantage over the U.S. So after a brief period of Détente, the race was on again.

One weapon that scared us in the 1970s was the SS-24 Mod 1 ICBM, which could be launched from mobile railroad cars anywhere in the USSR, thus making it harder to target. The accuracy and survivability of these missiles deployed in the 1980's significantly increased the lethality of the USSR's intercontinental ballistic missile force. Our answer was the MX missile, which could also be launched from mobile railroad cars. What made such weapons feasible was much improved computer programming and GPS satellites.



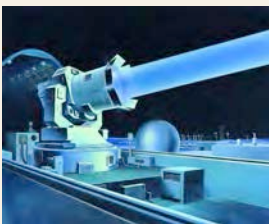
Ironically, better targeting technology made nuclear war seem more winnable, since one could now just target enemy missiles away from cities. Of course, this raised the question of whether such a nuclear exchange could be limited to non-civilian targets.

The USSR's strategic nuclear forces included a growing number of new TYPHOON-class and DELTA IV-class strategic ballistic missile submarines deployed in the 1980s. These advanced submarines, fitted with the latest generations of nuclear missiles, could operate from bases with tunnels for protection.

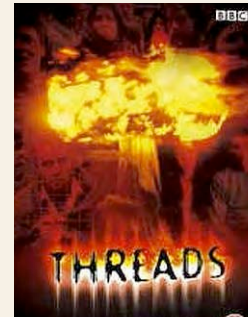


Another weapon developed by the Russians in the 1980s was the BLACKJACK bomber, which could carry air-launched nuclear-armed AS-15 cruise missiles. This significantly increased the Soviet bomber force's range, weapons delivery capability, and survivability. For the first time, the Russians had a viable manned bomber force that, along with land and submarine based ballistic missiles, gave it a full triad of nuclear delivery systems to match that of the U.S.

While publicly opposed to the US Strategic Defense Initiative, the Soviet Union forged ahead with research and development of land-, air-, and space-based ballistic missile defenses. The Soviets had already deployed and tested ground-based lasers, supposedly capable of interfering with some US satellites.



A New Round of Nuclear War Films



As the arms race resumed in the 1980s, so did Hollywood's efforts to cash in on it. As a result, the last decade of the Cold War saw a spate of new movies reviving public fears about nuclear holocaust.

One of the most disturbing of these films was *Threads*, an update of the 1965 film, *The War Game*, also produced by BBC. However, unlike *The War Game*, the BBC decided to air this shocker to the public. *Threads* was even more horrifying and realistic than its predecessor. After all, since 1965 nuclear stockpiles, and with them, public fears about Nuclear War had multiplied several times over.

So had the ability of special effects studios to portray such horrors realistically.

As with most nuclear war films, *Threads* is mostly about the aftermath and its effects on the survivors. At the end of the film, the main character gives birth in a rundown "hospital" that has no beds, only bed springs. In the last shot, she is shown her baby (which we never see) and screams in terror. Then the movie ends. In my experience this is the most depressing and frightening movie ever made.



Not that the Russians didn't understand what sort of threat nuclear war was. In 1986,

Konstantin Lopushansky released *Letters from a Dead Man*, a more surreal post-apocalyptic film. Among the chosen few who get to survive in an underground bunker is a Nobel prize winning scientist who writes letters to his son who had died in the blast. Blaming himself for the accident that triggered Armageddon, he takes care of a group of children who are mute, either from radiation or psychological trauma. When he dies they go up above into the raging blizzard of a continuous nuclear winter. If *Threads* is the most depressing and scary movie I've ever seen, *Letters from a Dead Man* runs a close second.



Compared to *Threads* and *Letters From A Dead Man*, the American made-for-TV film, *The Day After*, seemed like a sunny day. In fact, the weather during most of it was sunny, providing a faint glimmer of hope that the gloomy weather of the other films totally lacked. However, *The Day After* was scary enough that ABC warned against children under age 11 watching it.

Note: the study that served as the basic script for the film was based on a government study of what would happen in such a scenario and can be read in 17.7A.

Meltdown at Chernobyl (1986)



The Chernobyl nuclear meltdown in April 1986 was the worst such disaster in history. Although the Fukushima I nuclear incident following the earthquake and tsunami that hit Japan 2011 was also a level 7 event, Chernobyl proved much

more catastrophic, largely because there was no containment dome to keep the radiation from spreading.

A basic design flaw in the reactor was the backup system of diesel generators to maintain the flow of water to cool the core in case of the main reactor shutting down. The problem was that the generators needed more time (one minute) than was acceptable (fifteen seconds) for powering up to prevent a meltdown. Three tests of using residual power from the reactor to bridge the time gap had failed. On April 25, a fourth scheduled test shutdown to see if the diesel generators could power up in time was interrupted by a request from another power plant for electricity. Thus the day shift crews brought in for the experiment were gone when the test shutdown resumed that night. Unfortunately, that was when things started going wrong and the reactor was powered down to dangerous levels.

Then a huge power spike in the core of Reactor Four triggered several explosions that released radioactive materials into the atmosphere and ignited the graphite moderator, which released more radioactive particles. Making matters particularly bad was the lack of a containment dome, so radioactive gases kept spewing into the air, spreading across the western parts of the Soviet Union and into Europe.

A number of workers were quickly exposed to lethal doses of radiation and died. Several firemen who arrived on the scene in essence sacrificed their lives in efforts to put out the fires. Authorities tried to cover up the seriousness of the incident, not evacuating the nearby city of Prypiat until the following day. Even then, they told people to just bring enough supplies for three days. Since the area was soon closed off and remains so, the rest of their belongings still lie in their homes.



Workers removing radioactive materials from the site

Soviet authorities didn't announce the disaster until April 28 after radiation levels had triggered alarms at a Swedish power plant in Sweden 1000 kilometers away. Even then, they tried to minimize its seriousness.

Eventually, over 190 tons of highly radioactive materials were released into the atmosphere. The people around Chernobyl were exposed to radiation 90 times greater than that released by the Hiroshima bomb. According to the UN, 9 million people, including 4 million children, have been affected by the disaster. Radiation specialists expect nearly 1 million people to develop cancer as a direct result of the accident. In Belarus, next door to Ukraine, almost 400,000 people have been forced to leave their homes and become environmental refugees as a result of the contamination left by the explosion.

Around 2,000 towns and villages have been abandoned and become a radioactive desert, overgrown with poisoned vegetation and fenced off by barbed wire. Twenty years after the disaster 99% of the land in Belarus was still contaminated, while 25% of Belorussian farmland was a nuclear wasteland. Thyroid cancer had increased by 2,400; congenital birth defects by 250% and suicides in the contaminated areas by 1,000%.



A hydrocephalic child born in the area affected by the Chernobyl meltdown

The Berlin Wall Comes Down (1989)



“Mr. Gorbachev, tear down this wall!” is the line that resonates in the popular memory in America about the end of the Berlin Wall. In fact, Reagan's trip to Berlin in June 1987 was largely an afterthought, the main trip being to the G7 meeting in Venice. And the challenge to Gorbachev was nearly deleted from the speech as being too cowboyish and likely to raise false hopes. But Reagan kept the line...and the Wall didn't come down for nearly two and a half years. But the speech helped bring down the wall in a way other than people have imagined.

By 1987, Gorbachev and Reagan had made giant strides toward disarmament and the end of the Cold War. Three summits (in Geneva in 1985, Reykjavik, Iceland in 1986, and Washington in 1987) had produced the Intermediate Nuclear Forces (INF) Treaty, which removed Soviet SS-20 and American Pershing missiles from Europe. By this time Reagan had concluded, with British Prime Minister, Margaret Thatcher's encouragement, that Gorbachev was trustworthy. However, hawks, like defense secretary Casper Weinberger, thought the eminent Cold Warrior had gone soft on communism. Therefore, the “tear down this wall” line, (although tempered with less remembered lines conceding progress by Gorbachev) was largely thrown out to calm down hawks in America while Gorbachev and Reagan tried to bring the Cold War down with as soft a landing as possible.

Much as East Germans fleeing to the West had caused the Wall to be built in 1961, East Germans fleeing to the West in 1989 helped bring it down. More specifically, East Germans started escaping through other Warsaw Pact countries where communism was coming unraveled, namely Hungary and then Czechoslovakia. Meanwhile, protests in East Germany were growing in size intensity, which caused a change in leadership, which sparked in turn more demonstrations for reform and access to the West.



The first major breach in the Iron Curtain came when Hungary dismantled the barrier separating it from Austria

Down comes the Wall. The immediate cause of the Wall coming down was an inadvertent gaffe by an East German official, Gunter Schabowski at a routine news conference on November 9, 1989. Schabowski had been out of town for several days when he was handed an announcement, without explanation, that East Germans would be entitled to passports, which they could apply for in the standard bureaucratic way the next day. That in itself was progress, but Schabowski, making the announcement cold, didn't read the second part about going through the usual red tape. When someone asked when this went into effect, Schabowski fumbled around and then said right away.

Immediately, the news spread like wildfire across Berlin. Crowds started gathering at the various crossing points. As their numbers swelled into the thousands, the thin wall of East German police confronting them were at a complete loss as what to do, having been given no warning or instructions. By 11 PM the crowds were chanting "Open up!" from the east side of the wall while thousands of West Germans were calling to them to "Come over!" When the ranking officer at one gate couldn't get hold of any members of the Politburo for orders, he ordered the gate opened and thousands of East Germans flooded across the border. The Berlin Wall was down.

A year later, an even greater dream of the German people became reality as the East and West German states were reunited as one Germany.

RISING GLOBALIZATION IN 1990s

Two events in the 1980s led to changes on a global scale in the 1990s. The first was the collapse of communism in Eastern Europe in 1989, followed two years later in the Soviet Union, which also dissolved into a number of new nations, Russia still being overwhelmingly prominent. Thus ended the Cold War, and with it the need to fund corrupt (and financially wasteful) regimes to gain or maintain political influence. The other, less heralded but at least as significant, event was the introduction of the personal computer. While it could be said about any previous decade of the last two centuries, the 1990s saw by far the most dramatic leaps in technology in history. According to a principle referred to as Moore's Law, computing capacity doubles every two years. For example, portable storage capacity has gone from 5.25" floppy discs introduced in 1976 and storing 250 kilobytes of information, to 3.5" discs (1982) with 1.44 megabytes, to zip drives in the late 1990s storing 250 megabytes to portable hard drives a decade later storing 500 gigabytes of information. These represent a jump in storage capacity of 4 million times.

Connecting more and more of these computers across the planet was something known as the Internet, which made possible instantaneous information sharing and business deals on a global scale. Out of this arose any number of multinational corporations that were more active globally than most nation states. Joining these corporations were millions of investors from across the globe, a phenomenon Thomas Friedman dubbed the "electronic herd". Very rapidly, larger and larger segments of the human race were logging, investing, and buying on the Internet. Together, the end of the Cold War and the computer revolution pushed companies to invest in other countries to get profits rather than political influence. As a result, profits soared, leading to new technologies, more profits, and so on.

However, countries wanting foreign investors had to meet two rigorous criteria. First of all, they had to let the Internet spread in their countries so business could be done efficiently. The problem was that people in general would have access to much more information about the world than repressive dictatorships wanted to allow, since it

might give those people ideas about freedom. Secondly, potential investors demanded transparency, meaning governments had to open their books to scrutiny of their ruling policies, liberalize their economic practices, and cut corruption.

As a result, developing countries in the 1990s tended to break down into two categories: the countries that made the necessary reforms to attract foreign investors to develop their economies, and those countries that didn't make such reforms and therefore got no investors or economic growth. Of course this put growing pressure on developing countries (both from outside investors & their own people) to liberalize their political systems and keep peace with their neighbors so business could carry on peacefully. The result of all these forces and pressures, plus the ongoing cycle of foreign investment and spread of industrialization, was rapid globalization, not just of economies, but also of cultures in remote areas of the planet that were increasingly being tied to the mainstream.

However, this was not good news to everyone.

Globalization met growing resistance from people in both developed countries and those with more traditional cultures. For many people in developed countries, foreign investment meant losing their jobs to workers in poorer countries with cheaper labor. There were also groups that feared unrestricted corporate greed was destroying the environment in poorer countries that had little or no environmental. Especially worrisome to growing numbers of people was the issue of global warming. Therefore, meetings of economic leaders in the World Trade Organization were often met with massive, and sometimes violent, demonstrations.

In developing countries, there were two, somewhat different, fears that both saw globalization as a threat. One fear was that they were being left behind by rapidly modernizing neighbors. At the same time, many people felt their traditional cultures and values were being overwhelmed by globalization. In each case, these fears were often expressed in terms of religious backlash and acts of terrorism. Thus as the new millennium approached, what looked to many as a bright new world dawning concealed some very real fears, conflicts, and dangers.

COLONIAL AND POST COLONIAL AFRICA (c.1870-2000)

Colonial rule (c.1870-1920). While it is virtually impossible to generalize about African cultures, it is much easier to generalize about how the European powers treated their African colonies. After establishing their rule by breaking up old tribes and throwing previously hostile ones together, the European home governments ran the colonies more through private investors than by direct rule. In fact, those investors often ruled indirectly through local tribal chiefs whom they might favor over other local rulers, such as the Belgians did in Rwanda, favoring the taller and more “European looking” Tutsis over the Hutus. The long-term price of such a policy could be disastrous. Over thirty years after independence, the Hutus carried out a genocidal campaign against the Tutsis that ended up killing between 800,000 and 1,000,000 people. Overall, misrule plus exposure to new diseases from contact with the outside world, such as the global influenza pandemic in 1918, led to drastic population decline in Africa. Colonial rulers preferred to point out the schools they established to educate (and indoctrinate) Africans with Christian and European ideologies. Indeed, many missionaries did admirable work in their efforts to help and educate, but they hardly balanced out the harm done by other policies.

The era of World Wars (1914-45). As World War I ground down to a stalemate on the Western Front, consuming ever larger amounts of men and resources, European colonial powers drew upon thousands of Africans, both to fill in the trenches in Europe and fight against other Africans ruled by different European powers. Africans, for instance, were among the victims of the first poison gas attack in 1915. Their reward after the war was a decimated world economy that resulted in falling prices and demand for African goods, a situation that only got much worse during the Great Depression of the 1930s. As a result, colonial powers cut both their involvement and investment in African colonies, slashing administrative budgets, selling off colonial assets to pay war debts, and subsidizing white settlers who took prime land from their African owners. At the same time, many missionary societies were closing their schools, churches, and hospitals. Then came World War II, and the European powers once again used African

troops on various fronts. However, Africans were starting to get more vocal in their demands for modernization and independence. Instead, they got a resurgence of colonial rule.

The “Second Colonial Invasion” and independence (1945-60). After the Second World War, there was a growing trend in Europe toward socialistic managed economies that corresponded with an economic boom and rising demand for African products. Therefore, the colonial powers renewed their interest in Africa, exercising more overbearing state intervention in African economies, especially in the intensification of agricultural and irrigation projects, and allowing white settlers to seize more lands from native Africans. The worst-case scenario occurred in South Africa where the brutal system of segregation known as Apartheid was imposed in 1948.

Even the more supposedly benign policies introduced by Europe were over-managed and inappropriate for African conditions, especially in agricultural programs where Africa’s soils and climate differ markedly from those of Europe. At last, the home governments gave up these expensive and ruinous policies and decided to give the colonies their independence after 1960.

The problems of independence. Most African nations have struggled with a mountain of problems since independence. One major problem is that these newly independent African “nations” won their freedom at different times from different powers and according to the arbitrary boundaries those powers had imposed in the 1800s, dividing some tribes and throwing previously hostile ones together. Instead of any natural cohesion, these nations have experienced powerful centrifugal forces pulling them apart, typically leading to military dictators to hold them together. These dictators’ rule was, if anything, worse than that of the Europeans, because they didn’t have the resources needed for economic development. This was largely because European corporations still owned many of the resources in Africa, only having to buy from corrupt regimes the right to exploit them for their own profits. By the same token, corruption and political instability scare off new foreign investors and make it nearly impossible for African nations to get the capital needed for development.

An even more unfortunate legacy of colonialism has been the social instability caused by the rapidly expanding population, diseases, especially AIDS, which leave millions of orphans without adults to raise them, and the effects of modernization without anything stable to replace traditional tribal structures and values. Further aggravating these problems is a rapidly deteriorating environment, in particular desertification of large regions of Africa, which lead to famines and trigger wars and genocide as competition for dwindling resources grows more intense.

Biafra: a microcosm of post-colonial Africa



While it's dangerous to generalize about Africa based on one or two examples, what happened in Nigeria in the 1960s reflects to a large extent problems that affected the continent as a whole. Nigeria, like most sub-Saharan colonies that became "nations", was an artificial construct made up of a random collection of peoples who happened to live within the conveniently marked boundaries established by the colonial power, in this case Britain. Whatever ethnic divisions existed during the colonial period were overshadowed by the common desire for independence according to whatever boundaries that might mean.

The Nigeria that won its independence in 1960 was a very loosely federated collection of three main ethnic areas consisting of the Muslim Hausa and Fulani in the north, the Yoruba in the southwest, and the Ibo in the oil-rich southeast. Probably because of oil, the British had developed the southeast more. As a result, the Ibo were better educated, holding positions as merchants, teachers, and soldiers who were scattered across

Nigeria in their various trades. To other ethnic groups, they represented Nigerian nationalism and modernization. Being the upper class, they were also widely resented by other groups as being part of a conspiracy to make Nigeria a nation in their image and for their benefit.

Given the ramshackle nature of Nigeria, its experiment with democracy collapsed in 1966 in a series of three military coups, the first two headed by Ibo officers, the last one by major general Yakubu Gowon, who was not Ibo. This last coup helped trigger an anti-Ibo vendetta across the nation.

In the north, the poorer Hausa turned on their Ibo neighbors, slaughtering 40,000 of them. One eye-witness, Olu Oguibe, saw "whole families set ablaze by their neighbours in the middle of the night, children hacked to death in their sleep, women violated by men who only the previous day would have doffed their hats to them,...some men burnt at the stake, some decapitated, others hounded through the streets and stoned, while their adversaries gambled for their clothes." To the Western press and public, ignoring and/or ignorant of the colonial forces that set these events into motion, these massacres were just proof of African savagery.



Meanwhile, some two million other Ibo fled to their native lands in the southeast, and a Colonel Emeka Ojukwu unilaterally declared the southeast as the independent nation of Biafra. Gowon wasn't about to let an oil rich area such as that break away, so he invaded. The Biafrans were able to defeat Gowon's forces, but not before they had damaged much of the country's agriculture. Therefore, Gowon decided to starve Biafra into submission by seizing the delta of the Niger River & cutting off vital supplies inland.



What starvation and Gowon's soldiers didn't accomplish, other ethnic groups did while the soldiers watched them massacre the Ibo population.

In December 1968, the Red Cross reported that 14,000 Biafrans, mostly women and children, were dying each day.

The outside world wringed its hands in horror, but did nothing to help. Britain, which got 10% of its oil from Biafra, supported Gowon and supplied him with weapons to secure their oil supply. France, under the pretext of humanitarianism, supported Biafra hoping the breakup of Nigeria would help its smaller former colonies in the region. Both sides hired professional mercenaries, mainly from Europe, who also committed atrocities under the cover of it being war. All these measures did nothing but prolong Biafra's agony.

In January 1970 Biafran resistance finally collapsed, by which time two million Biafrans had starved to death.

Civil War and One-legged Beauty Contests in Angola (1975-2002)



Sometimes, newly formed African nations also got caught up in the Cold War between the United States and Soviet Union. Angola was one such country. As a Portuguese colony on the southwest coast of Africa, Angola gained its independence in 1975, one of the last African

colonies to do so. Almost immediately a three-way struggle broke out between with the U.S.-backed National Front for the Liberation of Angola (FLNA), the Cuban backed Popular Movement for the Liberation of Angola (MPLA), and the South African supported Union for the Total Independence of Angola (UNITA). Being in the aftermath of Vietnam, Congress wasn't about to pour money and resources into another war, so the Cubans succeeded in defeating both UNITA and the FLNA.

All this settled nothing, as civil war resumed, the MPLA being backed by the Soviets and Cubans and funded by control of Angola's oil fields. The opposition, UNITA, was backed by the U.S. and South Africa, using the country's diamond fields to pay for its war.

Since oil and diamonds represent an estimated \$2 billion in revenue per year for Angola, funneling these huge financial resources to buy weapons meant both sides were well-armed and able to continue the civil war for years.

Oftentimes, the pattern in these wars was for the side that was losing to wage a guerilla war until it was rearmed and able to go back on the offensive. Therefore, as long as there was a market for oil and diamonds, both sides could fight almost indefinitely. Meanwhile, American corporations such as Chase Manhattan Bank and Gulf Oil continued business as usual.

In addition, between 5,000 and 8,000 underage girls had been forced into marriage by UNITA militants. Reportedly, they would be sent out to find food and, if they failed to bring back enough, they didn't eat. UNITA leaders were also rewarded for victories by being given women for sexual services and abuse. One girl from Uganda was kidnapped and given to a man in Sudan who had just murdered his wife.

By the official end of the war in 2002, half a million Angolans were dead, 4.28 million more (one-third of its population) were refugees, and preventable diseases were still killing one child every three minutes.



Miss Landmine of Angola is one of the more unusual beauty queen titles in the world. Contestants are women who have lost legs to some of the 15,000,000 landmines planted in Angola during its civil war. A total of 86,000 Angolans were casualties of landmines in the civil war, while only 43,000 mines had been removed by 2008, the rest probably not being gone until around 2020. Meanwhile every year 400 more local people are wounded or killed by hidden mines, many of them children who can be especially heedless of these hidden deathtraps.



Similarly, there are one-legged soccer games for landmine victims.

Trouble in the Congo (1960-2006)



For decades, the Belgian Congo had served as the poster child of how bad colonial rule could be. Even after replacing the notoriously vicious rule of Leopold II with its own in 1908, the Belgian government's rule proved little better. For one thing, the Congo was seen as a great place to go on safari and kill animals.

By 1960, the Belgians, like other colonial powers, were tired of ruling African colonies and were ready to give up the Congo politically, while

maintaining ownership of key assets in the country.

This would require a stable native regime to protect those assets. However, the Congo was a big country with a large number of tribal and ethnic groups whose only unifying factor was being under, and wanting to put an end to, Belgian rule. Once that was gone, the country would disintegrate, which was fine with the Belgians as long as things didn't get so out of hand they were a threat to their economic interests. If that happened, they would have to send in Belgian troops to "protect" the Congolese from themselves.

The one party with any hope of national appeal was the Movement National Congolais (MNC), since it drew its support from the large urban population that had flocked to the cities since 1940 and had lost many or most of their old tribal ties. In the first election, the MNC won 33 of 137 seats in the parliament, hardly a majority, but making it the single biggest party in the Congo.

Its leader was the handsome, intelligent, and charismatic Patrice Lumumba, who had personally suffered a lot under Belgian rule and was determined to create a nation out of this disparate collection of tribes and ethnic groups. He was also quite outspoken in his criticism of colonial rule, which raised red flags among the Belgians who feared he would cut them off from plundering the Congo's riches. At the same time, he was raising even redder flags among the Americans because of his frequent use of the term socialism in relation to his ambitions for the Congo and Africa overall. As a result, the Soviet Union was favorable to Lumumba's regime, which made him all the more frightening to the United States.



In addition, Lumumba was a very appealing leader to the emerging Civil Rights Movement in the U.S., even meeting with Malcolm X, which also made the authorities nervous. As Eisenhower privately expressed it, he wished Lumumba would fall into a river of alligators. Therefore, from the very start, Lumumba had three powerful sets of enemies: the Belgians, the Americans, and the various tribes that wanted to keep local power for themselves. One of the most serious threats came from the rich mining district of Katanga, which, with Western support/control, declared itself an independent country. Below: Mercenaries fighting for Katanga.



It largely came down to a race to see who could get to Lumumba first. After Eisenhower stunned his staff by essentially putting out a contract on Lumumba's life, the CIA sent an agent to Africa to poison Lumumba's toothbrush. However, the Belgians had the inner track, even beating Lumumba's dentist to the punch by arresting and torturing the popular leader in unsuccessful attempts to break his spirit. On January 18, 1961, a Congolese firing squad executed the deposed leader in the presence of four Belgian officers in Katanga. Later, his grave was dug up and his body hacked into pieces that were then dissolved in sulfuric acid to erase any trace his existence.

In the aftermath, Joseph Mobutu, who had the army's support, eventually seized power, presiding over a thirty-two year reign of terror (1965-97) that did keep the Congo under control with strong American support. In the eyes of many, the Congo reverted back to the status of a colony, more specifically an American one.

In 1970, Mobutu won election as president with 98.3% of the vote on a single party ballot by a margin of 10,131,699 to 157. The next year he renamed his country Zaire, banned the use of European names or attire, making all men wear a Mao-inspired tunic, the *abacost*. He also assumed a new name and title: Mobutu Sese Seko Nkuku Ngbendu Wa Za Banga, meaning "The all-powerful warrior who, because of his endurance and inflexible will to win, goes from conquest to conquest, leaving fire in his wake."

For his personality cult, the TV News would start with an image of him flying down from heaven through the clouds. While the nation's infrastructure rotted and public service workers went unpaid, Mobutu stole an estimated \$5 billion, stashing it in Swiss banks for safekeeping. He also owned a fleet of Mercedes Benzes and would privately charter a Concorde jet for shopping sprees in Paris.



The end of the Cold War in 1991 reduced Mobutu's value to the West. That plus growing economic problems led to growing opposition against his rule. What did him in, however, was his support in 1994 for the Rwandan Hutus and their attempted genocide of the Tutsis, many of whom had fled as refugees to eastern Zaire. In 1996, when he ordered the Tutsis to leave Zaire under penalty of death, they rose up against him in the first Congo War. With support from Uganda, Rwanda, and many locals, they took Kinshasa in 1997, overthrowing Mobutu (who was ailing with cancer), and renaming Zaire the Democratic Republic of the Congo (DRC). Unfortunately, the Congo's problems were far from over.

The new leader of the DRC, Laurent-Désiré Kabila, proved to be nearly as corrupt as Mobutu, and the Second Congo War (1998-2003) quickly followed the first.

This conflict, also called Africa's World War and the Great War of Africa, directly involved eight African nations and twenty-five other armed groups, and was the deadliest war since World War II, killing 5.4 million people, mostly from disease and starvation, and displaced millions more as refugees. Even after it was officially over, an estimated 1,000 people a day were still dying from hunger and disease.

With virtually no central authority, the Congo became a battleground between various neighbors and factions, some supporting Kabila's government (Namibia, Zimbabwe, Angola, Chad, Congolese militias from the Mai Mai community, and Hutu militias opposed to the Tutsi dominated regime in Rwanda), and others opposing it (the Movement for the Liberation of Congo (MLC), the Rally for Congolese Democracy (RCD), Uganda, Burundi, and Tutsi dominated Rwanda along with Tutsi militias.

The Rwandan presence further complicated the situation, as eastern Congo was home to thousands of Tutsi refugees fleeing the genocide being carried out by their Hutu rivals. Then the Tutsis regained power and Hutus fled to the Congo. The Tutsi regime had also supported Kabila in the First Congo War, but had a falling out with him afterwards. Therefore, Rwandan and Tutsi militias were operating in eastern Congo, treating it as occupied territory and alienating its people.

In 2001, president Laurent Kabila was assassinated and succeeded by his son Joseph. Over the next year he negotiated the withdrawal of Rwandan forces from the eastern Congo, while a multi-national agreement, the Pretoria Accord, arranged for a ceasefire and transitional government under Joseph Kabila until general elections in 2006. There were thirty-three candidates for president, reflecting the still

fragmented nature of the country. It came down to a turbulent runoff election between Kabila and Jean-Pierre Bemba. Kabila won and was sworn in as president in December 2006.

Blood Diamonds, Mercenaries, and Child Soldiers



Three factors that have especially prolonged many of Africa's wars (in such countries as the Congo, Sierra Leone and Angola) and made them so catastrophic are blood diamonds, foreign mercenaries, and child soldiers. What has been referred to as blood or conflict diamonds includes other minerals, as well, notably gold, and coltan (an ingredient crucial for producing cell phones, DVD players, and other electronic goods).

Collectively, both warlords and rebels in these conflicts have made billions in sales of these diamonds, which both fund their struggles and lead to more fighting to control the sources of the diamonds. Civil wars in countries such as Sierra Leone and Angola have cost an estimated 3.7 million lives and may have been funded by the rock sitting on your ring.

“Roland was a warrior from the Land of the Midnight Sun

With a Thompson gun for hire, fighting to be done

The deal was made in Denmark on a dark and stormy day

So he set out for Biafra to join the bloody fray

From '66' and '7 they fought the Congo war

With their fingers on their triggers knee deep in gore

Days and nights they battled the Bantu to their knees

The killed to earn their living and to help out the Congolese”

--Roland the Headless Thompson Gunner by Warren Zevon

Mercenaries in the African wars. Much of the most intense fighting in African wars of this era was done and led by Western mercenaries. While some were excellent soldiers devotedly followed by their men, others typically were deserters, men dishonorably discharged from other armies, ex-convicts, or men with no other prospects and looking for adventure. Of course, war is a risky two-way street, as Belgian mercenary, Marc Goosens (below), found out in Biafra in 1968.



All too often they were sadistic psychopaths who killed indiscriminately just for fun.

One exception to this profile was the German, Rolf Steiner. Born in 1933, he fought as a Hitler Youth during the last desperate days of the Third Reich. Apparently a sucker for lost causes, he fought in the French Foreign Legion at Dienbienphu in Vietnam in 1954 and later in Algeria. When he heard about Biafra, he signed on there and served with distinction but took no pay because he believed in the cause.

After that, he organized Anya-nya Christian forces in the Sudan (yet another losing cause). He was later arrested in Kampala, Uganda, flown to Khartoum, Sudan, where he was imprisoned, beaten and sadistically tortured for three years, before he was finally released thanks to pressure by the West German government. In the 1970s he wrote an autobiography, appropriately entitled *The Last Adventurer*.

Unfortunately, he was the exception to the rule.

Much more typical was Costas Georgiou (alias "Colonel Callan") (1951–1976), a Greek Cypriot mercenary who was tried and executed for war crimes in the war for Angolan independence. He served with distinction in the British army in Northern Ireland, although he supposedly fired 26 shots into the crowd on Bloody Sunday when a number of civilians were killed. Although not charged with that, he was court-martialed, convicted, and dishonorably discharged for robbing a post office.



From Britain, he went to Africa. Although he never officially rose above the rank of corporal or had any officer's rank in the British army, he was able to pass himself off as "Colonel Tony Callan" in the wilder, less structured, environment of Africa's post colonial wars. He adopted the name Callan from a fictional espionage agent and signed on with the U.S.-backed National Front for the Liberation of Angola (FLNA) to fight the more heavily armed Cuban forces supporting the Popular Movement for the Liberation of Angola (MPLA).

Callan and his small band of comrades fought well, but were heavily outgunned, defeated, captured, and then tried for war crimes by the victorious MPLA. More specifically, he was accused of executing fourteen of his own men (Angolans) after, in the confusion of combat, they accidentally fired on their own trucks. He was also charged with shooting villagers who resisted his men plundering their homes, and torturing civilians for information.

As a CIA agent John Stockwell, described Callan *"He turned a couple of incidents around very dramatically and we were very impressed. And then almost instantly it turned out he was humiliating Zairian paracommando leaders. He would strip their clothes off and have them beaten publicly. He was executing people."*

Callan was also wanted by Scotland Yard for executing several British mercenaries in Angola. He was convicted and executed in 1976 along with three others, one of them an American who had been in the field for only three days and claimed he had never fired a shot. His main crime had been advertising his services in *Soldier of Fortune* magazine.

Child soldiers are another issue still plaguing Africa. While this is a worldwide problem, it is especially prevalent in Africa with an estimated 120,000 children serving in government and/or rebel forces in Algeria, Angola, Burundi, Congo-Brazzaville, the Democratic Republic of Congo, Liberia, Rwanda, Sierra Leone, Sudan and Uganda.

Who are these children and how are they recruited?

Many are orphans, their parents being killed in the wars in which they are now forced to take part. Others are kidnapped from their families. Every afternoon during Uganda's civil war, children would flock in from surrounding villages to the cities to escape "recruiters," spending the nights in makeshift shelters or on the streets and returning home in the morning.

Once captured, young recruits would be transformed into desensitized killers by forcing them to kill other children while being plied with drugs and alcohol to further distort their thinking. In one case, a sixteen-year old girl, under threat of death, was forced to kill a boy from her village with a stick.

In Algeria, a young woman and the sole survivor of the massacre of her village, watched as a bunch of boys, probably no older than twelve, decapitated a girl and played catch with her head.

Of course, at such a young age these children could not mentally or psychologically appreciate the finality of their actions. By the time they were old enough, it was usually too late. Children unable to keep up or stay healthy, along with those trying to

escape or fight back, would be killed. Even those successfully escaping the warlords might still be executed if captured by the government for their previous role in the revolt. In January 1995 the Ugandan government executed five children on those charges.

16. PRE-COLUMBIAN AMERICA TO C.1500 C.E.

Introduction. What if a bunch of Cro Magnons (i.e., our species 30,000 years ago) were dropped onto another planet with the same basic conditions and ecology as earth? Being isolated from any other cultures, would they develop civilizations comparable to those that developed in the eastern hemisphere? To answer that question, we need look no further than the Americas, because civilizations did develop there most likely without any outside cultural contacts.

However, the civilizations that developed there lagged significantly behind those in Eurasia and North Africa, largely because of four environmental factors. First of all, the Americas, like Africa, are aligned along a north-south axis, unlike the civilizations in Eurasia and North Africa, which are aligned along an east-west axis. The significance of this is that being in roughly the same latitudinal zone with similar cycles and amounts of daylight, civilizations in Eurasia could more easily share crops with one another. By contrast, in the Americas it was harder to spread cultivation of crops such as corn from Mexico because it took a long time to adapt them to regions with different amounts of sunlight. Secondly, corn, the main domestic crop, was originally a grass that was much harder than other crops, such as wheat and rice, to develop into a plant yielding enough food to sustain large populations, one of the primary requirements for developing a civilization. Third, the two main centers where civilizations developed in the Americas, Mexico and Peru, were cut off from contact with one another by jungles and mountains, which minimized their ability to share new ideas and technology. In fact, they seem to have been unaware of each other's existence when Europeans arrived. Contrast this with Eurasia, where all sorts of ideas and technology did spread between civilizations. Early China borrowed quite a bit from the Middle East, and later became the source of much technology used in the West, such as the compass, which allowed the Europeans to reach the Americas and effectively destroy the civilizations that were developing there.

The fourth factor was largely man-made, namely excellent hunting technology and techniques that wiped out horses and camels, which did exist in the Americas when humans first arrived. This had two major effects. First, it left Native Americans with

no large draught animals for pulling plows. This severely reduced the amount of land one person could farm and the amount of food available to sustain extra populations in cities and civilization. Secondly, since large herds of domestic animals have been the primary source of communicable diseases from which humans suffer, the lack of such animals made the Americas relatively free of such diseases. In the short run this helped Native Americans. However, having had no prior exposure to such diseases as smallpox and measles, they had virtually no resistance when first exposed to them by Europeans. Some estimates of Native American population loss between 1500 and 1600 run as high as 94%. As stated previously, civilization in the Americas developed independently in two primary locations: Central America, especially Mexico, in the north and Peru in the south.

Philosophy and Purpose of this app

For years, I've taught world history using flowcharts as a means to get students to understand the long-term causes and effects of history. Recently, I have worked with my colleague, Dr. Bill Sutton, on designing flowcharts and readings covering American history in a similar way.

However, it became apparent that one can only truly understand American history within the broader context of world history in which it has taken place. As a result, it seemed only appropriate to include the corresponding flowcharts and readings on the history taking place in other parts of the world at the same time as events in American history.

Therefore, this app (or document, if you prefer) is designed to function as both a U.S. History app and Modern World History Since 1500 app as well as a cross-referenced combination of the two.

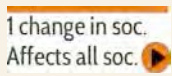

(Below is a section describing the philosophy and design of historical flowcharts.)

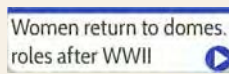

Timelines. To keep you oriented in terms of time, each flowchart has an illustrated timeline to give an overview of the important events going on at the time covered by that flowchart. Some events are specific to that flowchart, while others are not, thus helping to put everything in context.

How to use this app

This is a big document, with over 1200 pages. However, it's designed to help you navigate quickly and easily from one historical era to the next and back again using several features I've built in.

Links. The following types of boxes, when clicked, take you to other parts of the document as described.

 1 change in soc.
Affects all soc.  A text box with an orange stripe on top and arrow in the lower right corner links to the world history flowchart indicated by that text.

 Women return to domes.
roles after WWII  A text box with a blue stripe on top and arrow in the lower right corner links to the U.S. history flowchart indicated by that text.

Index This links to the master index for U.S. history flowcharts, and the unit index for world history flowcharts (e.g., Renaissance or Industrial Revolution).

Prev. This links to the previously *viewed* flowchart. This is particularly useful if there is no specific link back to the box you previously viewed. Note: This works on the computer, but seems to have difficulty on tablets and phones, taking you instead to the previous slide.


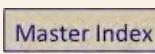
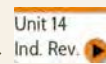
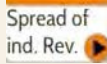
Flowchart Reading This takes you to the reading for the flowchart and any related essays (many of them illustrated) that aren't specifically discussed in the flowchart. For example, there are nineteen such essays at the end of the flowchart reading on the rise of Hitler, covering such topics as Hitler's love life, Nazi math, and the Hitler Youth. The first and last page of each reading have a link taking you back to the flowchart so you can easily navigate between the two.

Back This takes you to the preceding slide in the document.

Next This takes you to the next slide in the document.

The master index is page 1. It lists all the U.S. history flowcharts and units of world history covered in this document. The index for each unit has links to each flowchart in that unit. There is a link to the master index on every unit index page.

Using these links, you can go from any flowchart to any other flowchart in four or less clicks. The worst case scenario being from two world history flowcharts without a direct link and in different units. For example, going from the flowchart on the Italian Renaissance to the Spread of the Industrial Revolution would involve clicking:

 →  →  → 

The Design and Use of Flowcharts

The flowchart is a mnemonic device to help students organize sophisticated concepts into an intelligible and digestible form. Therefore, they should be fairly simple and sparse in design to provide a basic framework on which students can hang the more detailed information provided in an accompanying text organized parallel to the flowchart. The flowcharts are also cross-referenced to help students find relevant information on events both leading up to and coming out of a particular historical event, thus providing a unified concept of history.

A good flowchart should be aesthetically pleasing to view and create an immediate visual impression that makes the material more dynamic and accessible for students while capturing their attention and interest. This includes dividing it into boxes of discrete and digestible amounts of material, arrows that dynamically show how those discrete chunks of information fit together, the use of color to indicate such things as feedback models (red fields), more detailed information about a heading (blue fields), and cross-referencing with other flowcharts (blue outline). Symmetrical design also serves as a useful mnemonic device.

Flowcharts provide a middle ground between over-analyzing and over-simplifying the crucial issues in history without trivializing them. Their graphic nature gives students a sense of cause and effect in history without either over-burdening them with too many facts and arguments or insulting their intelligence.

To help students learn effectively through flowcharts, I constantly stress understanding over memorization. And since an entire flowchart can look pretty daunting at first, I encourage students to just look at it one box at a time, constantly asking themselves if they understand the simple statement in that box and why it leads to the next one. The beauty of flowcharts is that they are logical in the relationships they show and thus easy to remember, as long as the student is not just trying to memorize them in their entirety. Students must understand that by seeing the logical relationships that the flowchart by definition promotes, they are learning it more deeply. Therefore, if they forget a particular

part, they can logically reconstruct it from the other parts they learned. What this promotes is a more sophisticated level of critical thinking. Surprisingly, the most common feedback I get from former students is how they take notes for classes besides history in flowchart form.

Beyond individual flowcharts, students also learn to see an even bigger picture of recurring historical patterns. Therefore, when reading about the Russian Revolution, they should see the patterns they had read about in the English and French Revolutions. In order to facilitate this sophisticated level of learning, I constantly repeat very simple slogans as hooks on which students can hang more detailed. For example, Napoleon's saying, "Great powers die of indigestion" serves as a perfect lead-in to discussions on how societies as diverse as Babylon, Rome, the Ottoman Turks, most of China's dynasties up to the twentieth century, and the USSR went into decline. This, in turn, helps students gain deeper insight into contemporary issues and how to solve them

While I have developed and used the flowcharts for my 10th grade honors level modern history course, I've received feedback from teachers on their successful use in mainstream 8th grade classes.

Any questions and comments are welcome and should be directed to cbutler@flowofhistory.com

Fifteen Lessons of History to Remember

In order to make history something manageable and meaningful for my students, I have tried to distill it into a few basic lessons about life as well as history in general. I make no pretense of claiming this is a definitive list, but I hope that you, the reader, may find some or all of these of some value.

1. *My pain hurts worse than your pain.* We each view the world from inside our own skins and only truly feel the pain inflicted upon it. Of course, everyone else experiences the world in the same way from inside their own skins. History helps us look at both sides of a problem from a detached point of view where we can appreciate the pain on both sides equally. Keeping in mind that everyone in that historical situation was only feeling their own pain, we can see how things have turned out so badly so often. By the same token in our own personal lives, learning to empathize with others and feel their pain can go a long way toward resolving personal conflicts. On a larger scale, it could save the world.

2. *The Rubber Band Effect: Everything is connected.* Think of society as a bunch of marbles enclosed by a rubber band. Each marble represents one aspect of society (social structure, political structure, technology, the arts, etc.). If one marble starts moving, it puts stress on the rubber band, causing the other marbles to move in sync with the first marble. If that marble encounters resistance from other marbles, the rubber band keeps stretching as the marbles are more removed from one another. If the first marble doesn't stop moving or the others don't catch up, the stress on the rubber band eventually causes it to snap, signifying a revolution or systemic breakdown of society.

Along these lines, the old sci-fi TV series, *Star Trek*, had a principle known as the Prime Directive that recognized the Rubber Band Effect, dictating that a technologically superior civilization should never tamper with a less technologically advanced culture.

3. *No one goes against the flow of history.* "At least I am not so arrogant as to assume that the

likes of us are able to make history. My task is to keep an eye on the currents of the latter and steer my ship in them as best I can."—Otto von Bismarck (1869)

Until the 19th century when more complete records and statistics started being kept, what is sometimes referred to as the Great Man school of history was how most people studied and interpreted the past. In other words, they saw history as being driven by a few great men (and much fewer women), such as Charlemagne, Caesar, and Alexander who did great deeds, all too often at the point of a sword.

But this approach made sense to the extent that the few written records that were made, copied, and survived were about such people (who often commissioned such writing). Similarly, artifacts that survived were generally rich treasures or works of art belonging to the great and powerful.

On the other hand, day-to-day details of people's lives, (e.g., clothes, toys, what they had for breakfast, used for toilet paper, etc.) were either irretrievably lost or buried waiting for someone in the future to find and appreciate them as historical artifacts as valuable as Charlemagne's scepter or Caesar's funeral mask.

Even when people, such as Heinrich Schliemann at Troy, started digging up ancient sites, it was typically in a desperate treasure hunt for gold that destroyed the more mundane artifacts that got in the way. For example, when the lease ran out for treasure hunters digging up Indian burial mounds near Spiro, Oklahoma, they dynamited what was left of the mounds since they couldn't have what they contained.

4. *History is often a process of old mentalities running up against new realities.* While change has always been taking place, this is especially true since the industrial revolution in the nineteenth century. And every day it becomes truer than the day before. A prime example was World War I when nineteenth century style human wave assaults were used with disastrous results against modern killing technology such as the machine gun protected by trenches. Unfortunately, generals are often planning for the last war. Therefore, the

French in particular planned for World War II to be another war of trenches and machine guns. Meanwhile, the Germans recognized that the rapidly advancing technology of tanks and airplanes would transform the next war. The result was the Blitzkrieg that overran much of Europe in 1939 and 1940. Of course, that war ended with an even more advanced and devastating technology, the atomic bomb (followed only seven years later by thermonuclear weapons) that has forced us to totally reassess how and if we fight another total war, given its likely catastrophic results.

5. *The Butterfly Effect: History as the intersection of the infinitely great and infinitesimally small (or close to it).* The significance of big events like the world wars or a comet hitting the earth hardly needs explanation. The importance of more apparently innocuous events, such as Kaiser Wilhelm's breech birth in 1859, does bear discussion. Or just imagine the effects if an X chromosome were substituted for a Y chromosome and Julius Caesar became Julia Caesar.

6. *Two things about human nature that never seem to change are greed and our capacity for self-delusion or "If it seems too good to be true, it probably is."* How else can we explain the ridiculous sums paid for tulips in the 1630s, dot.com stocks in the 1990s, and houses in the 2000s?

7. *We are a social species prone to herd behavior.* This is both good and bad news. It's good because it's been our collective will and efforts that have allowed us to survive as a species and societies. But it's been bad when our collective will has been turned into a panicked stampede behavior and wrongly directed. Luckily, there are always individuals who dare to think differently and set us back on the right path. Even when, as all too often happens, they are forced to drink a cup of hemlock or get nailed to a cross, there will be others who are listening and willing to take up the standard.

8. *Ideologues and the rest of us.* There are certain people in history I call ideologues (e.g., Cromwell, Robespierre, and Lenin) that are largely remembered as evil dictators and lumped together with history's other truly evil dictators (e.g.,

Napoleon and Stalin). I draw the distinction between what drove these two types of men. Unlike the truly evil dictators, who were primarily driven by a hunger for power, ideologues seem to have been driven by an idea that assumed total importance in their lives to the exclusion of anything else, including people's (and their own) basic human needs. For Robespierre that idea was his Republic of Virtue enforced with the Reign of Terror; for Lenin it was Marxism enforced with the Red Terror. Both these men used power ruthlessly to promote their agendas, but the fact that they lived fairly Spartan lives rather than exploiting power to pad their own nests indicates that personal power and wealth were not the driving factors.

The fact that they also targeted people who were no real threat to their personal rule but were seen as a moral threat to their ideas (e.g., prostitutes) also suggests their motives went beyond personal power. While it's risky to speculate on the psychological makeup of such historical figures as Robespierre and Lenin, their behavior seemed more consistent with a one-track, almost autistic, obsession with a single idea and inability to empathize with the basic human needs that primarily concern most people.

This isn't to say such men are not dangerous. In fact they can be more dangerous than your typical dictator, since they aren't concerned with such things as own personal comfort or safety, and thus drive themselves and their countries to the point of self-destruction. This also isn't to say that their ideas and the rule they inspire aren't also evil. Hitler would probably be the most salient example of this last point.

9. *Politics, like chess, is a game for control of the center of the board.* If we divide people along the spectrum from extremely radical to extremely conservative, the vast majority of them will cluster in the center. Instead of being obsessed with some radical or conservative ideology, they're mainly concerned with getting by on a day to day basis: being able to pay the rent, buy groceries, keep a job, educate their kids, etc. Therefore, while most people might characterize themselves as conservative, liberal, moderate, or whatever, they're first concern is paying the bills. And it doesn't matter so much whether their officials are

conservative or liberal, as long as they keep things running smoothly.

Therefore, the common wisdom is that people “vote their pocketbooks.” That is, they vote for whoever they think will be best at running the economy). Or as the Chinese reformer Deng Xiaoping said: “It doesn't matter if a cat is black or white, so long as it catches mice.”

As a result, in the battle for public opinion, each side wants to paint the other as lunatics who will wreck the economy with their extremist policies. Whoever beats the other in that game generally wins public support.

10. Revolutions follow a somewhat similar and predictable long-range pattern that can take century or more to resolve:

- Revolutions start when people have something and want more, not when people have nothing and want something. After all, people who have nothing don't have it in their experience that they could have something. Only when they have something do they get it in their heads that they could do even better.
- Revolutions are long-term processes that are as evolutionary as they are revolutionary.
- Revolutions start out moderately and may not even be recognized as revolutions, which evade the attention of authorities until they have had time to grow and become truly revolutionary.
- Revolutions succeed against weak-willed regimes (e.g., Louis XVI of France and Tsar Nicholas II) that fail to react decisively until it is too late.
- Revolutions are like getting a new football coach or cleaning your room. Before things get better, they get worse, leading to frustration from expectations that things would immediately improve.

- Revolutions become progressively more radical as things get worse, eventually leading to a crisis stage as

conservative reactions from within and foreign intervention from without combine to make things even worse.

- Revolutions go from arbitrary power to arbitrary power. The initial arbitrary power is the weak-willed regime

the revolution replaced. The second arbitrary power is much more hard-nosed and ruthless in pursuing and preserving its goals. Typically it is also highly ideological in nature (e.g., Oliver Cromwell, Robespierre, and Lenin). Oftentimes, this may go to a third arbitrary regime with a less ideological and more pragmatic and power-hungry leader who betrays the aspects of the revolution that stand in his way while keeping and using those ideals that he can manipulate while seeming to uphold them (e.g., Napoleon and Stalin).

- Revolutions, if successful, culminate with a “Napoleon III” phase (named after the French emperor who ruled

France from 1851 to 1870) characterized by a combination of strict autocratic rule with market reforms that eventually lead to a moderate sustainable democracy a generation or so down the road. More specifically, an improving economy leads to a more broadly based middle class that can afford education for its children. And those children have a tendency to ask a lot of questions that, if not adequately addressed, lead to more substantial challenges to the authorities. Currently, China and Russia are entering these phases and should be interesting to watch in the coming years.

11. *The fatal flaw of dictators* is that they only listen to what they want to hear and that increasingly is bad advice. This is the result of a vicious cycle that starts with the dictator clawing his way to the top and convincing himself he is there because of his own genius. However true that may be, it also encourages him to feel superior to everyone else (since he is on top), the natural corollary to that being that anyone who disagrees with him must be wrong. Therefore, he gets rid of

anyone with differing opinions and surrounds himself with sycophants and yes-men who only tell him what he *wants* to hear instead of what he *needs* to hear. That, in turn provides him with faulty information upon which he bases increasingly disastrous decisions. However, his inflated ego convinces him that those disasters are the result of inferior or traitorous subordinates, whom he purges and replaces with even more submissive yes-men, and so on. Classic examples include the invasions of Russia by Napoleon and Hitler, Stalin's Five Year Plans and collectivization of the agriculture, and Mao's Great Leap Forward and his Cultural Revolution.

12. *The Blame Game or "Not It"*. In addition to starting riots against their enemies, the Fascists played a game I call "Not it". Just like the children's game of Tag where the last person to say "Not It" is "It", so it goes in politics. A common political tactic is for one side to blame the other side for its own crimes and faults, because, whatever the truth of the matter, whoever gets blamed first is in a weakened position by right of having to defend itself. Even if it justly counter-blames the other side, it looks like it is only copying the other side, making it look unoriginal and guilty, since the other side first has already put it into people's heads that the innocent side is guilty. Hitler and the Nazis would copy Mussolini in this and various other tactics.

13. *We are basically prehistoric beings that are less and less biologically adapted for in a progressively technological environment and the primary thing we have to fear is fear (tactics)*. One of the most important examples is the amygdala, the primitive part of the brain that triggers a fear response to any unexpected sound or motion. This served us well for millions of years when a sudden noise or motion could signal a fatal attack by a predator. However, in this relatively orderly thing we call civilization, we are rarely ambushed by tigers, while the biggest threat to our individual existence, moving automobiles, usually stay off sidewalks and stop for traffic lights.

Unfortunately, political leaders with nothing positive to contribute typically focus on negative things, and this often involves scare tactics to

conjure up fears about imaginary threats or exaggerate minor ones, thus exploiting the amygdala's fear response in inappropriate ways. The classic case of this is when Hitler and the Nazis stirred up hysterical fears about the Jews that led to the Holocaust. Not that this was the first time the Jews were made the scapegoats of real or imaginary problems people couldn't understand. Medieval Christians also carried out purges and massacres, notably during the First Crusade and Black Death. And just to be fair to Christians, they were the victims of similar actions during the Roman Empire.

14. *Soldiers' riots*. Normally, the culture of killing inherent in armies is restrained by military discipline to be used only against other armies. However, when the restraints of that discipline are relaxed, raw and uninhibited violence is unleashed, causing even normally civilized humans to engage in unspeakable acts.

In 1099 that became Jerusalem's story when Crusaders stormed its walls.

In 1631 it became Magdeburg, Germany's story as Christian troops stormed its walls to kill other Christians in the name of God.

In 1937 it became Nanjing's story when Japanese soldiers took the Chinese city of Nanjing and massacred an estimated 300,000 helpless civilians.

In, 1968 it became the story of a small Vietnamese village named My Lai.

Rather than being extraordinary acts committed by extraordinarily cruel humans, these were extraordinarily cruel acts committed by normal humans in extraordinary circumstances. War does that to even the best of us.

15. *Finding a middle path between aggression and appeasement (which encourages more aggression) to avoid a catastrophic war*. This was the primary challenge facing diplomats during the Cold War (1945-91) when total war between the superpowers could have led to nuclear annihilation for us all. The answer was a one requiring a *nuanced balance* between being too provocative and too passive.