

# History of Thought

**Sep 16 - Oct 21, 2014**

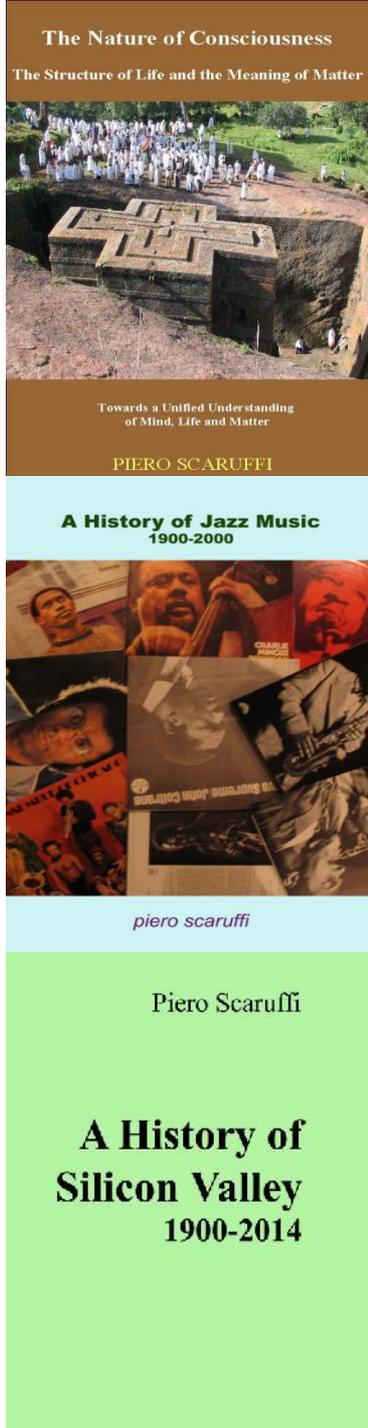
**(A brief History of Knowledge)**

**Piero Scaruffi**



# Who I Am

- Piero Scaruffi
  - Degree in Math/Physics (“Science” background)
  - Career in Cognitive Science (“Philosophy” background)
  - Career as Music/Cinema/Fiction critic (“Art” background)
  - Traveled to 150+ countries (“History” background)
  - Published 21 books
  - Website: [www.scaruffi.com](http://www.scaruffi.com)
  - E-mail: [p@scaruffi.com](mailto:p@scaruffi.com)



# This Class

- Six evenings Sep 16- Oct 21
- Textbook: A Brief History of Knowledge
- Reading/viewing material before class.
- Lectures during class.
- Course grade breakdown:
  - > 20% In-class assignments
  - > 20% short presentation (5-10 min.)
  - > 40% long presentation (20 min.)
  - > 20% Participation

**A Brief History of Knowledge**  
from 3000 BC to 2001 AD



*piero scaruffi*

# Table of Contents

1. Oldest Knowledge: The ancient Near East, Egypt, Greece
2. Oldest Knowledge: Ancient Greece, India and China
3. Classic Knowledge: Rome, Christianity, Tang, Song, European Middle Age, Islam
4. Modern Knowledge: Renaissance, Enlightenment, Scientific/Industrial Revolution
5. Modern Knowledge: The 19th century
6. Modern Knowledge: The 20th century

# Assets

- **Interdisciplinary**
- **Ancient and modern**
- **Western and Eastern**
- **Modular**
- **Emphasis on paradigm shifts**

# General Bibliography

William McNeill: A History of the Human Community (1987)

Charles VanDoren: A History of Knowledge (1991)

Peter Watson: Ideas (2005)

Ian McGreal: Great Thinkers of the Eastern World (1995)

David Cooper: World Philosophies (1996)

Mircea Eliade: A History of Religious Ideas (1982)

Gina Pischel: A World History of Art (1966)

Spiro Kostof: A History of Architecture (1985)

Donald Grout: A History of Western Music (1960)

# The other half of the story

Gay Robins: Women in Ancient Egypt (1993)

Elizabeth Wayland Barber: Women's Work - Women, Cloth and Society in Early Times (1995)

Sarah Pomeroy: Goddesses, Whores, Wives, and Slaves: Women in Classical Antiquity (1975)

Shulamith Shahar: The Fourth Estate: A History of Women in the Middle Ages (1983)

Marija Gimbutas: Goddesses and Gods of Old Europe (1974)

Georges Duby, Michelle Perrot, etc: Histoire des Femmes en Occident (1992)

Nikki Keddie: Women in the Middle East: Past and Present (2007)

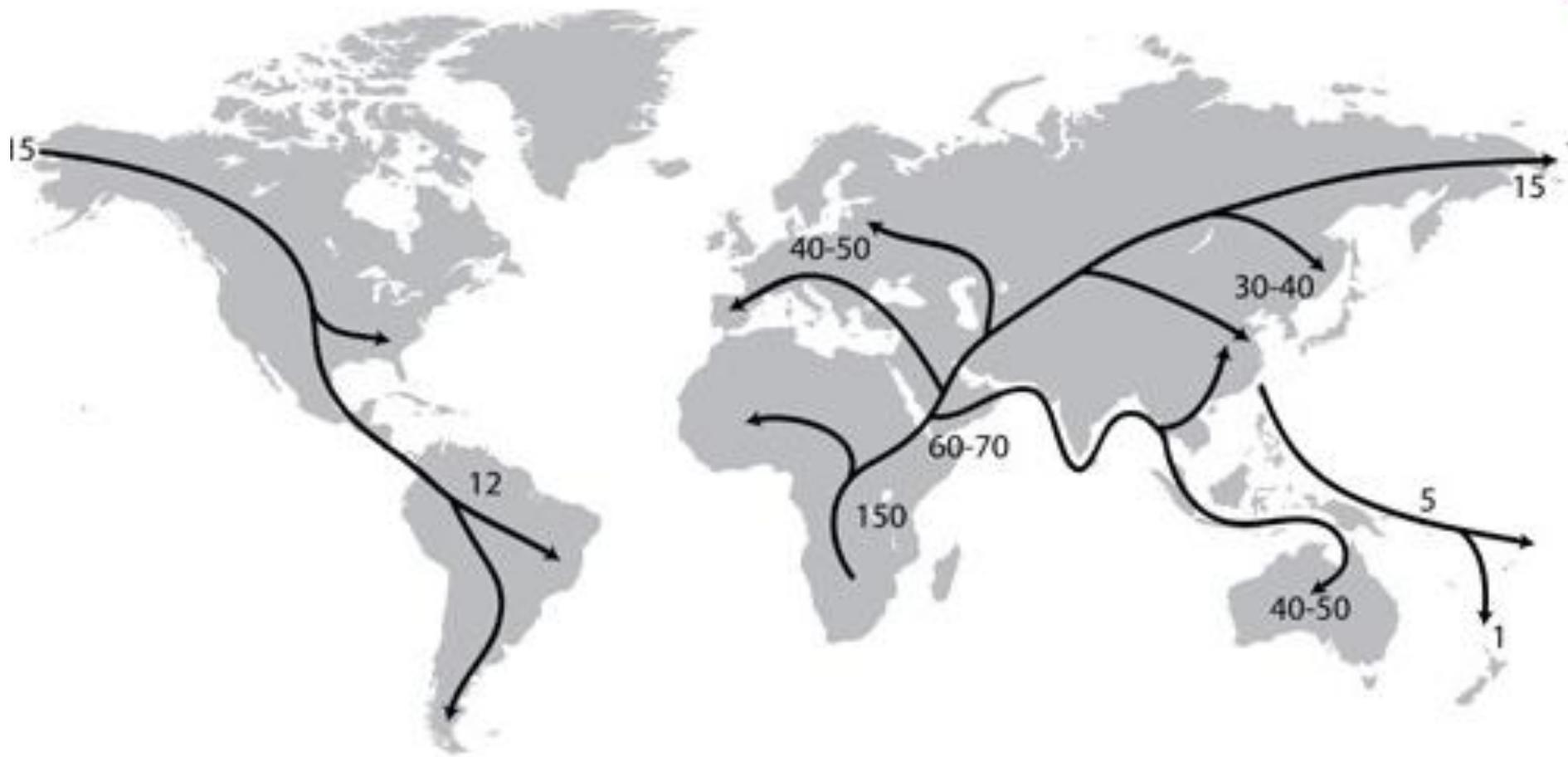
Stephanie Countz: Marriage, a History (2005)

Piero Scaruffi: "A Herstory of Women" (2010) slideshare <sup>7</sup>

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# A Brief History of Homo Sapiens



# A Brief History of Homo Sapiens

Homo Sapiens (150,000 BC)

Religious revolution (70,000 BC)

Artistic revolution (28,000 BC)

Agricultural revolution (10,000 BC)

Metalwork revolution (4,500 BC)

Urban revolution (3,700 BC)

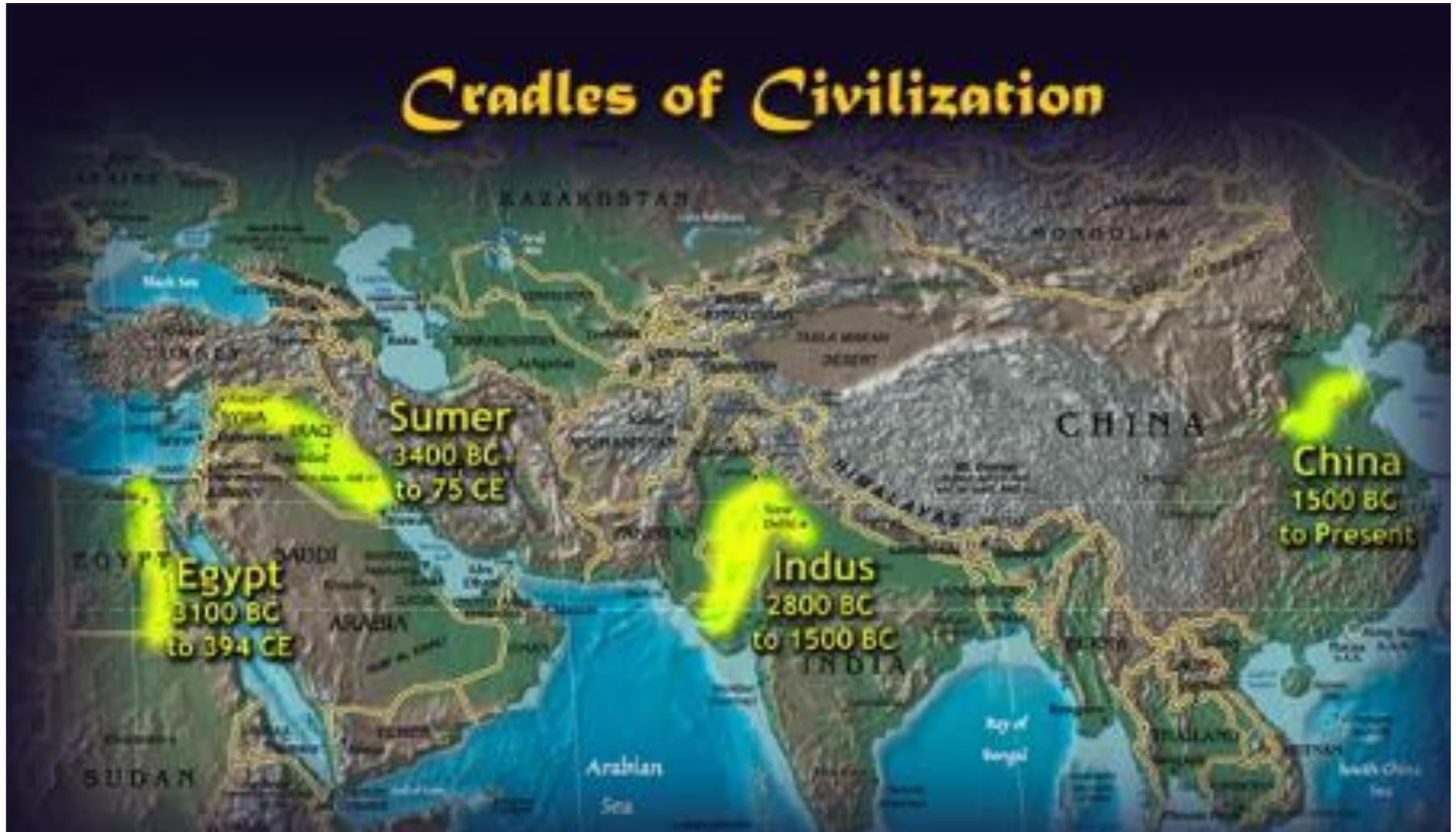
Writing revolution (3,300 BC)

Spiritual revolution (500 BC)

Scientific revolution (17th c)

Digital revolution (20th c)

# The Origins of Civilization



(Courtesy Rafael Olivas)

# The Origins of Civilization



(Courtesy Rafael Olivas)

<b>EMPIRE</b>	<b>CENTURIES</b>	<b>REGION</b>	<b>CAPITAL</b>
<b>SUMERS</b>	<b>XXXVI BC - XXBC</b>	<b>MESOPOTAMIA</b>	<b>UR</b>
<b>EGYPTIANS</b>	<b>XXXV BC - VI BC</b>	<b>EGYPT, SUDAN, PALESTINE</b>	<b>THEBES</b>
<b>CHINA</b>	<b>XXIII BC - NOW</b>	<b>CHINA</b>	<b>XIAN</b>
<b>ASSYRIA</b>	<b>XX BC - VII BC</b>	<b>MESOPOTAMIA</b>	<b>NINIVE</b>
<b>GREECE</b>	<b>XII BC - IV BC</b>	<b>GREECE, ITALY, TURKEY</b>	<b>ATHENS</b>
<b>PERSIA</b>	<b>IX BC - VII AD</b>	<b>EGYPT TO IRAN</b>	<b>PERSEPOLIS</b>
<b>ROME</b>	<b>VIII BC - V AD</b>	<b>PORTUGAL TO SYRIA</b>	<b>ROME</b>
<b>MAURYA</b>	<b>IV BC - II BC</b>	<b>INDIA</b>	<b>PATNA</b>
<b>BYZANTHIUM</b>	<b>V AD - XV AD</b>	<b>TURKEY TO NORTH AFRICA</b>	<b>CONSTANTINOPLE</b>
<b>ARABS</b>	<b>VII AD - XV AD</b>	<b>IRAN TO SPAIN</b>	<b>BAGHDAD</b>
<b>MAYA</b>	<b>IX AD - XV AD</b>	<b>CENTRAL AMERICA</b>	<b>TIKAL</b>
<b>RUSSIA</b>	<b>X AD - NOW</b>	<b>RUSSIA TO SIBERIA</b>	<b>KIEV</b>
<b>BRITAIN</b>	<b>X AD - XX AD</b>	<b>INDIA, NORTH AM, AFRICA, AUS</b>	<b>LONDON</b>
<b>MONGOLS</b>	<b>XIII AD - XV AD</b>	<b>CHINA TO MIDDLE EAST</b>	<b>KARAKORUM</b>
<b>OTTOMANS</b>	<b>XIV AD - XX AD</b>	<b>EGYPT TO MESOPOTAMIA</b>	<b>ISTANBUL</b>
<b>INCA</b>	<b>XV AD - XVI AD</b>	<b>SOUTHWEST AMERICA</b>	<b>CUZCO</b>
<b>MOGUL</b>	<b>XV AD - XVIII AD</b>	<b>AFGHANISTAN, NORTH INDIA</b>	<b>DELHI</b>
<b>USA</b>	<b>XIX AD - NOW</b>	<b>NORTH AMERICA</b>	<b>WASHINGTON</b>

# What the Sumerians knew

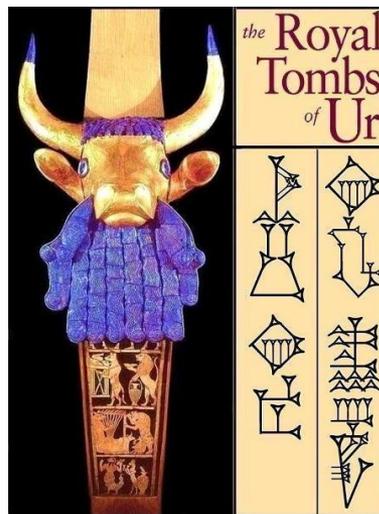


# What the Sumerians knew

- Domestic animals and plants (12,000 BC)
- Irrigation
- Urbanization
- Ziggurats (monumental buildings for religious purposes) (5,000 BC)
- Wheel (3,200 BC)
- Wheeled vehicles (chariot 3,000 BC)
- Bronze (3,000 BC, weapons and tools)
- Boat
- Plow

# What the Sumerians knew

- Bronze (3,000 BC, weapons and tools)
  - Copper + tin
  - Harder material than copper
  - Lowers the melting point of copper (easier to cast)
  - First used extensively in Sumerian tombs



# What the Sumerians knew

- Tyranny
  - Centralized authoritarian regimes are the inevitable consequence of large-scale irrigation agriculture
  - The Tigris and Euphrates (unlike the Nile) create a highly unpredictable rhythm of flooding and therefore required extensive waterworks.
  - The bigger the river the greater the promise of wealth the stronger the "hydraulic state" has to be.

# What the Sumerians knew

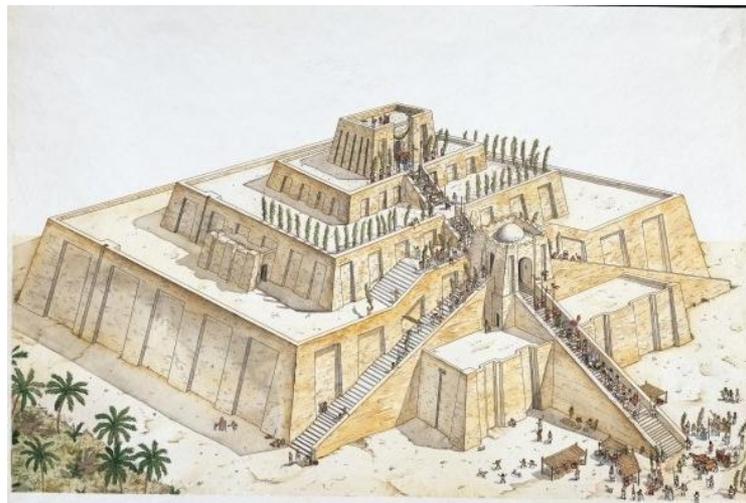
- Theocracy (4000-3000 BC)
  - The whims of rivers are ascribed to gods
  - Thus priests are natural arbiters of the community
  - Religious cults acquire political power

# What the Sumerians knew

- Theocracy (4000-3000 BC)
  - Priests are natural arbiters of the economic surplus
  - Temples become administration buildings
  - Religious cults acquire economic power
  - The irrigation society naturally creates cities, and such city-states are theocracies

# What the Sumerians knew

- Ziggurat
  - Little emphasis on burial and afterlife, but concern with propitiating the gods for success in this life
  - A substitute mountain (perhaps a memory of the Sumerians' ancestral home)

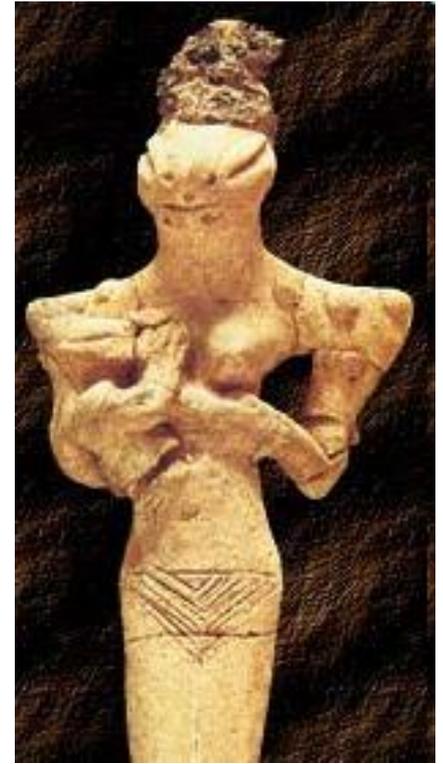


# What the Sumerians knew

- Religion
  - A religion for this life, not for the afterlife
  - Anthropomorphic gods, associated with the forces of nature (wind, months)
  - Deification of kings
  - Hierarchical vision of the universe (unified pantheon)
  - Each city was the property of a deity

# What the Sumerians knew

- Religion
  - The goddess Nammu, who had no beginning in time, created the world and all living creatures
  - 2500 BC: Enlil, dwelling in Nippur, becomes the greatest of the gods, and the god who punishes people
  - Assembly of the deities in Nippur, presided by Anu and Enlil, made strategic decisions (eg, capital) for the entire Sumer nation



# Women in Mesopotamia

- Temple of the goddess Bau: Lagash, 2350 B.C.
  - The temple was run by a chief priestess
  - 1,000 persons employed year round
  - Her domestic staff consisted of:
    - 150 slave women: spinners, woolworkers, brewers, millers, and kitchen workers
    - One female singer, several musicians
    - 6 women who ground grain for feeding pigs
    - 15 cooks
    - 27 other slaves doing menial work
    - Brewery: 40 men and 6 females
    - One wet nurse, one nursemaid
    - One hairdresser



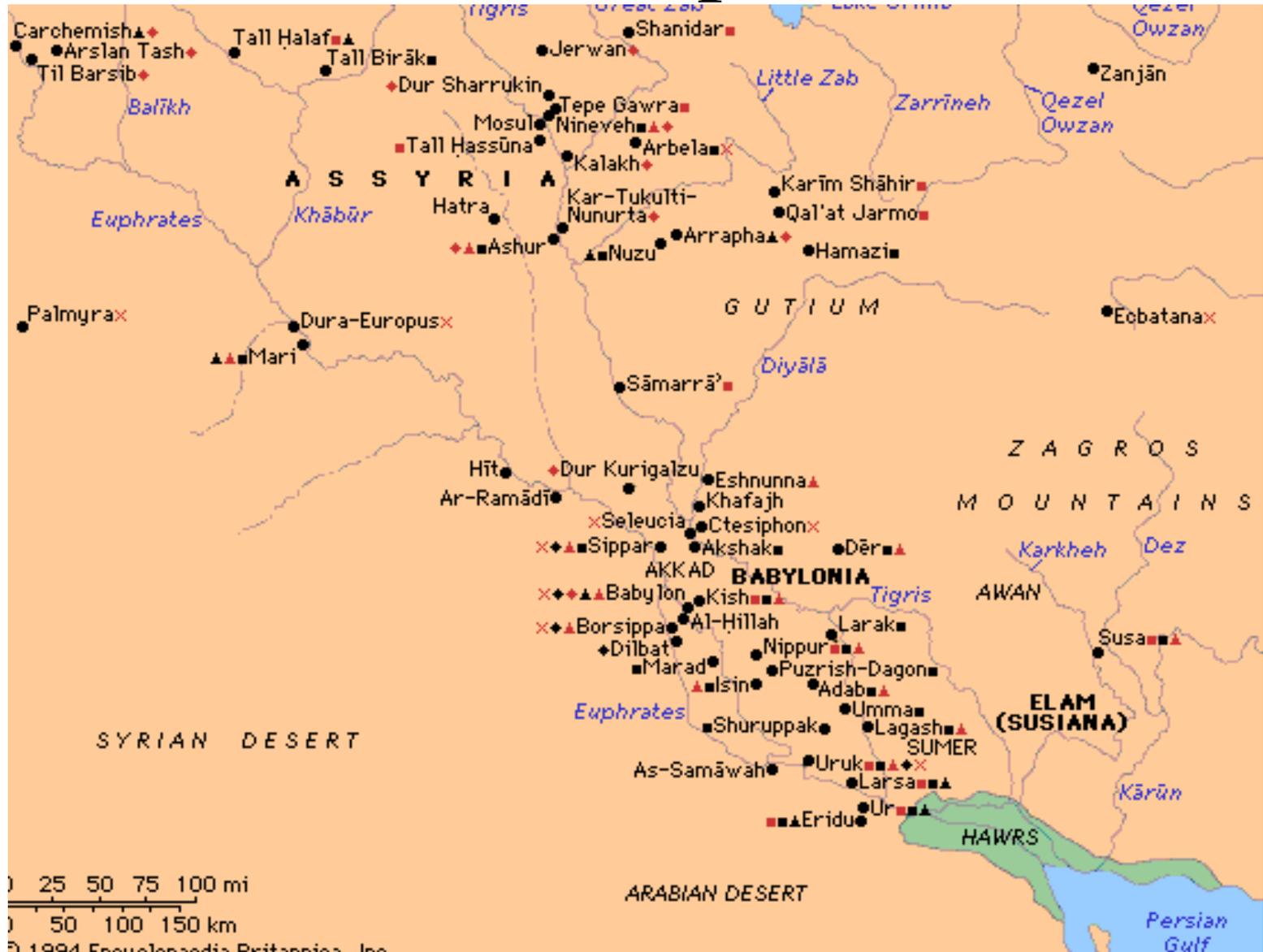
# What the Sumerians knew

- Creation myth (“Eridu Genesis”)
  - Humanity was created to serve the gods
  - The gods lived in **the Eden** (Bahrein island?)
  - Enki ate a forbidden plant and was cursed by his mother who cursed his rib which was cured by the goddess of life Nin-ti
  - Enlil, the god of the storm, caused **the Flood**

# What the Sumerians knew

- Cult of the Dead
  - No cult of the dead
  - Main architecture is the temple and the palace, not the tomb
- Problem of evil
  - No concern for evil
- Afterlife
  - Indifference towards immortality

# Cities of Mesopotamia



# What the Sumerians knew

- Urbanization
  - Towns (mud-brick walls, flat roofs, no streets)
  - Cities (3,900 BC, 13 cities in 3000 BC)
  - Uruk in 2700 BC (time of Gilgamesh):
    - 6 kms of ramparts protected by 900 towers
    - 10 square kms of houses, palaces, workshops and temples
    - 50,000 people, largest city in the world



# What the Sumerians knew

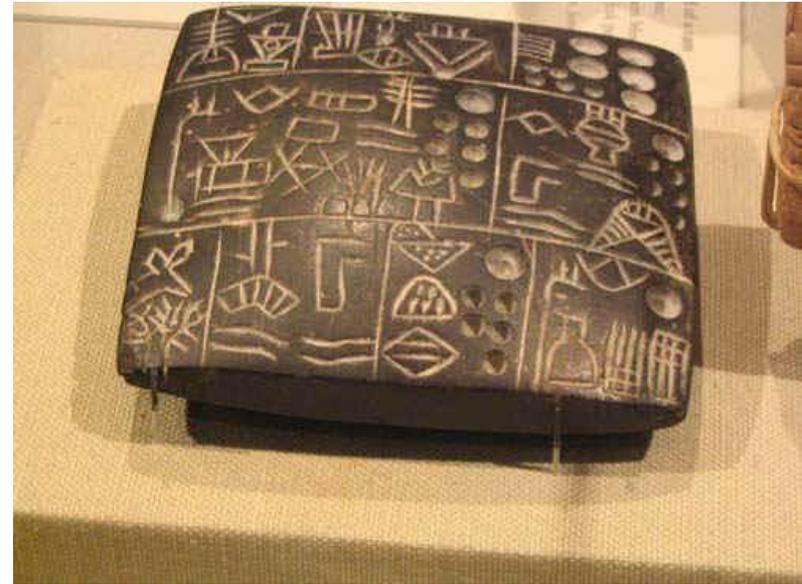
- Slavery
  - All early civilizations were built on slave labor (Mesopotamia, Babylon, Egypt, Greece, Rome, Central America, Africa)
  - People became slaves by being
    - an insolvent debtor
    - sold into slavery by their parents
    - born to slave parents
    - captured in war
    - kidnapped by pirates
  - The slave trade was an accepted way of life, legal, respected, recognized by all societies

# What the Sumerians knew

- Writing



Administrative tablet of Uruk 3000 BC  
(wheat and barley)



Administrative tablet of Uruk 3000 BC  
(grant of land to temple official)



Blau monument (4th millennium BC)  
Earliest cartoon (picture and words) - British Museum

# What the Sumerians knew

- Writing
  - An evolution of record keeping
    - The original symbols of record keeping were clay tokens
    - From envelopes containing three-dimensional representations (clay tokens) of the objects to the surface of the envelop displaying a two-dimensional representation (the imprint) of the three-dimensional representations to cuneiform writing

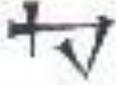
# What the Sumerians knew

- Writing
  - Capitalism led to the invention and diffusion of writing, the alphabet and (later) of coins.
  - Traders needed a way to keep track of their business
  - Traders traveled and thus spread their inventions

# What the Sumerians knew

- Writing
  - Akkadians conquer Sumeria (23rd c. BC)
  - Akkadian language: combination of non-phonetic ideograms and phonetic phonograms
  - The new language can also express abstract concepts

# What the Sumerians knew

	Original pictograph	Sumerian cuneiform	Early babylonian	Babylonian cuneiform
Bird				
Fish				
Ox				
Sun/day				

When symbols are turned on their side (about 2800 BC), writing becomes “cuneiform”

# What the Sumerians knew

- Writing
  - Cuneiform used to render Sumerian, Akkadian, Elamite (neither Semitic nor Indo-European), Hurrian, Hittite (Indo-European)
  - Decline of cuneiform in 1000 BC with Aramaic's alphabetical system (easier to learn)
  - Cuneiform still in use till 2nd century AD

# What the Sumerians knew

- Literature
  - Poetry, music and dance originated as collective expression of religious themes during rituals
  - The dance rhythm (clapping, stomping, chanting) evolved into rhythmic songs and rhymed poetry
  - Religious narratives (creation myths) evolved into epic poetry
  - Epic of Gilgamesh (2,600 BC): vain quest for immortality
  - Kings' List (2125 BC)
  - Enheduanna: poetry
  - The meaning became more important than the sound/rhythm

# What the Sumerians knew

- Mathematics
  - Sumerians employ mathematics on base 60 (360 degrees in a circle. 60 minutes in an hour)



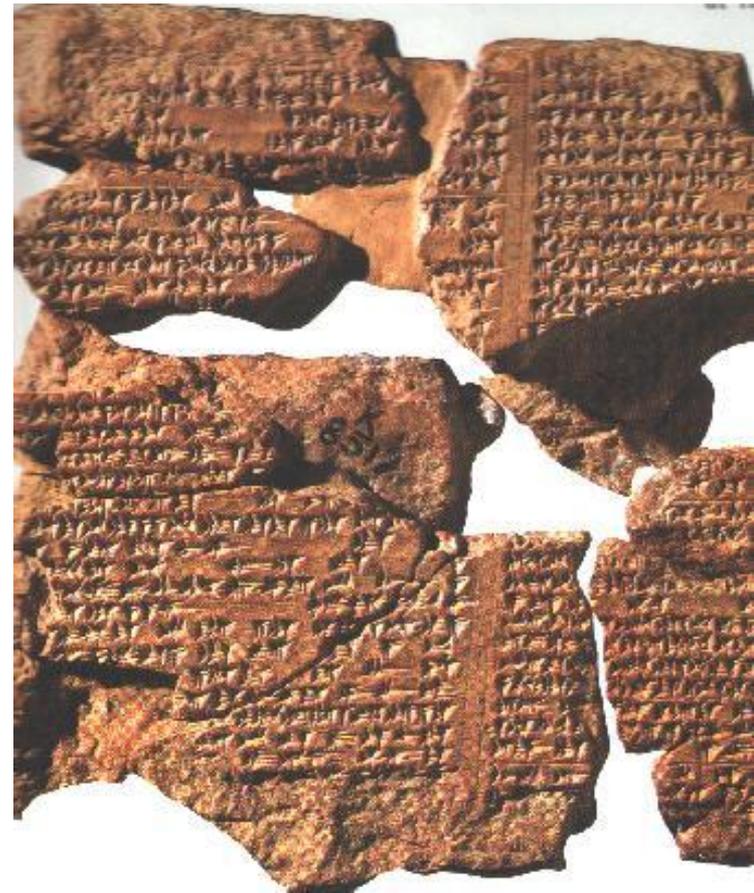
The Babylonian mathematical tablet Plimpton 322

# Literature

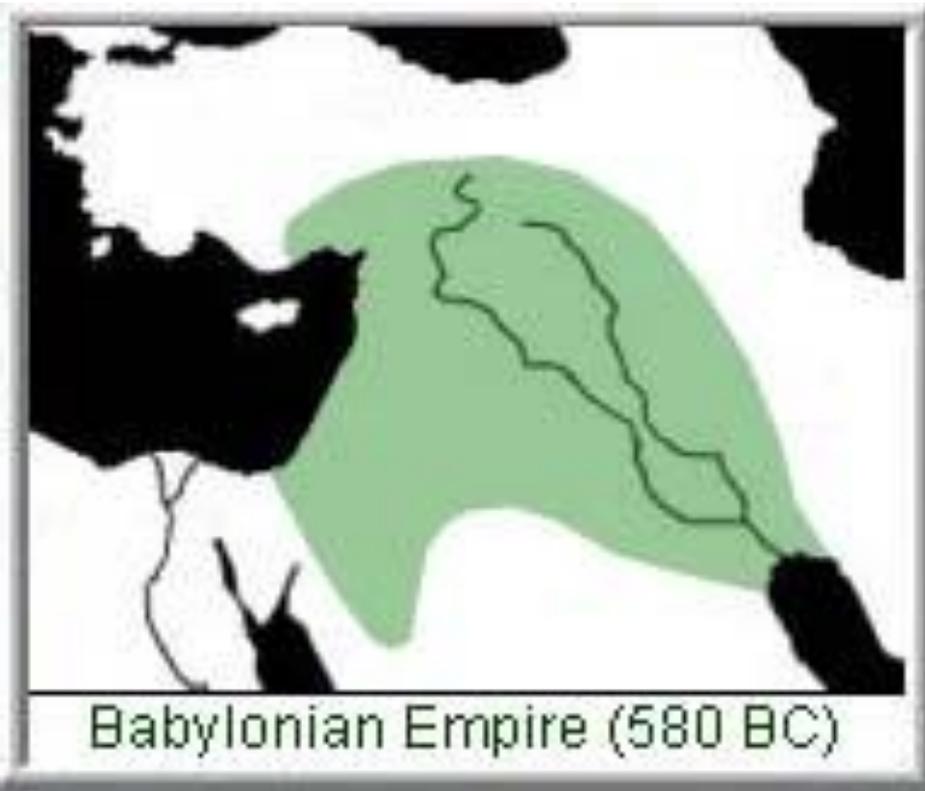
- Gilgamesh
  - King of Uruk (2300BC)
  - Leads a military expedition to a distant place to find cedar wood
  - Quest for immortality



Gilgamesh from palace of Sargon II, 721-705 BC (Louvre, Paris)



# Babylonia and Assyria



<http://victorian.fortunecity.com/kensington/207/mideast2.html>

# What the Akkadians knew

- Akkadian empire (2340-2180 BC)
  - 2334 BC: Sargon of Kish unifies Akkadians and Sumerians
  - Regular postal service
  - Catalog of astronomical observations
  - The ziggurat dominates the city
  - 2095-2047 BC: Shulgi/Dungi of Ur writes the oldest law code



**Flood, epic of Atrahasis  
(Babylonia, 1635 BC)**



**Babylonia cylinder 1823 BC  
(dedication of a temple)**

# What the Babylonians knew

Hammurabi



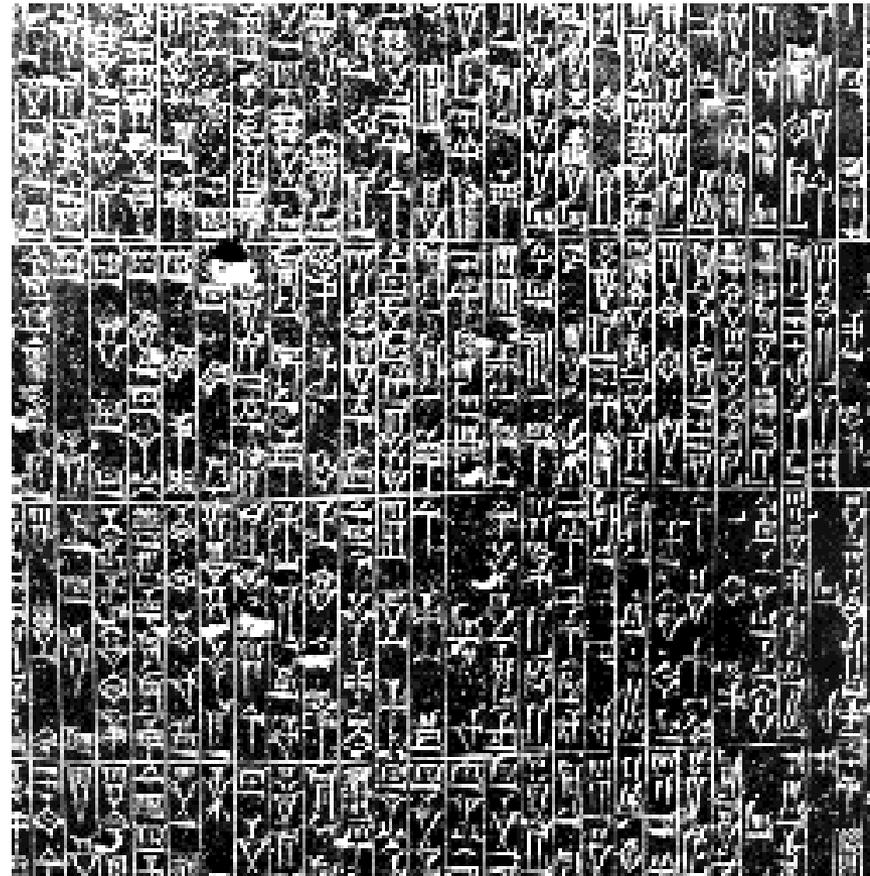
(Louvre, Paris)

# What the Babylonians knew

- Hammurabi law code (18th c BC)
  - An eye for an eye and a tooth for a tooth
  - Pragmatic: avoid endless cycles of revenge
  - Each group has rights and duties proportional to its status
  - Codification of patriarchy
  - Protection of women and children from indiscriminate abuses
  - Even slaves have rights
  - Severe restrictions on female sexuality
  - Professional standards for physicians, architects and engineers enforced via draconian punishments

# What the Babylonians knew

Hammurabi law code



# What the Babylonians knew

- “Enuma Elish” (1700 BC):
  - Marduk, the supreme god (a third-generation god), and Ishtar (his wife), goddess of the Earth
  - The male freshwater ocean (Apsu) and the female saltwater ocean (Tiamat) created the **elohim** (gods) that created the world
  - Conflict between the gods (Apsu gets killed, Tiamat leads persecution of the gods, Marduk kills her)
  - Gods are tired of their tough life and want servants
  - After sacrificing Tiamat’s son Kingu, Marduk creates humankind out of Kingu’s dead body to be the servants of the gods
  - Demise of the female goddess and rise of Marduk as<sub>44</sub> chief god

# What the invaders knew

- The Chariot
  - 1700 BC: the Hyskos (Semitic people from Arabia) invade Egypt
  - 1500 BC: the Mitanni/Hurrians (Indo-Europeans from the northern mountains) invade Mesopotamia
  - 1600 BC: Indo-Europeans invade the Indus valley
  - 1500 BC: the Shang invade China
  - Enabling technologies:
    - Metallurgy (lightness)
    - Woodworking (integration)
    - Tanning (comfort)
    - Domestication of horses (motor)



Mesopotamian chariot of 2500 BC  
(mainly used for transportation)



Egyptian chariot of 1275 BC



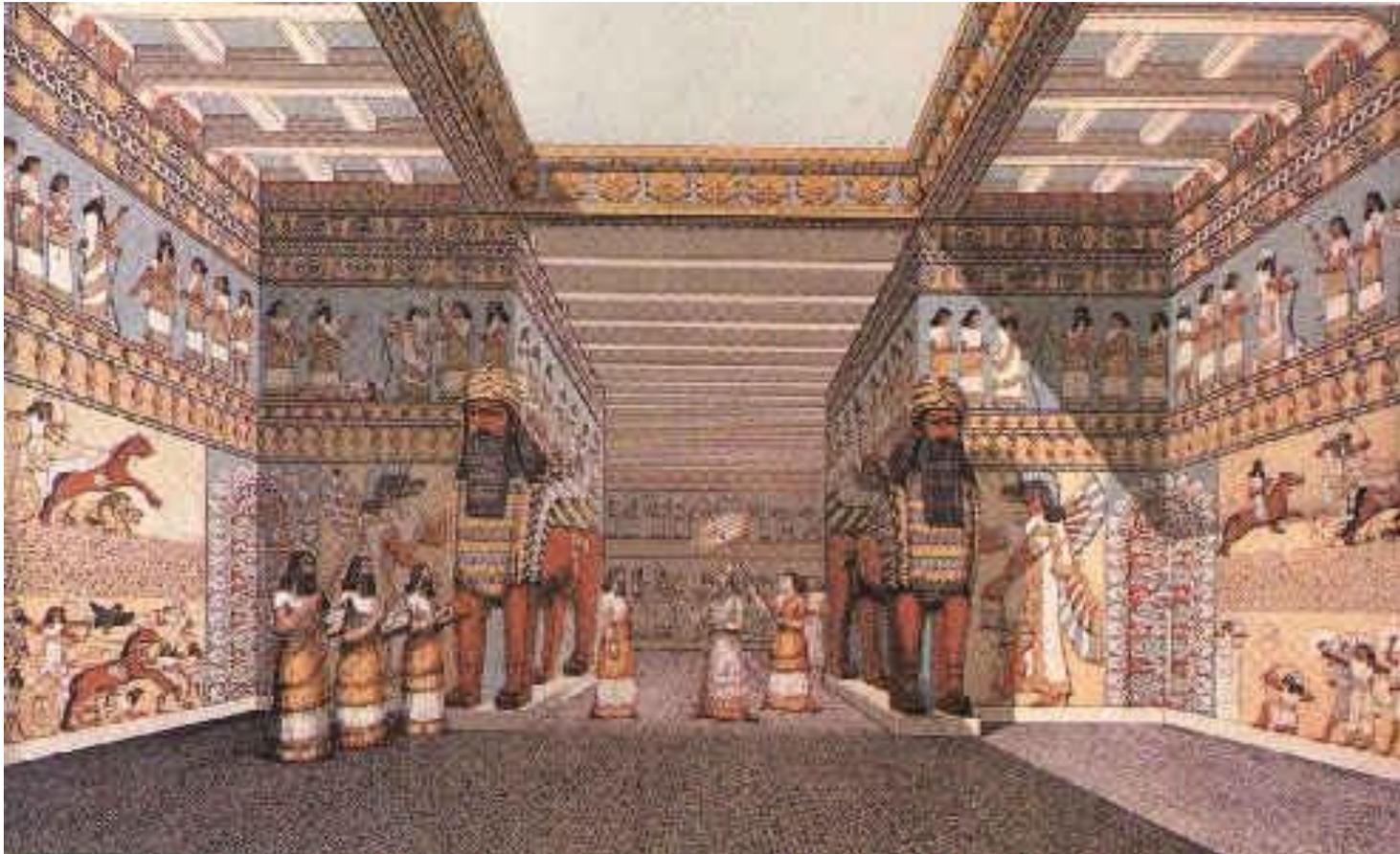
Hittite chariot 1200 BC

# What the Assyrians knew

- Empire of Tiglath-pileser III (746 BC-727 BC)
  - Multi-ethnic imperial system
  - Scientific warfare
    - Army of peasants and slaves replaced by professional army from the conquered lands
    - **Iron weapons** employed on a massive scale
    - Balance of infantry, cavalry and chariots
  - Imperialist ideology
    - Warfare a religious duty
    - Control of subjects via terror

# What the Assyrians knew

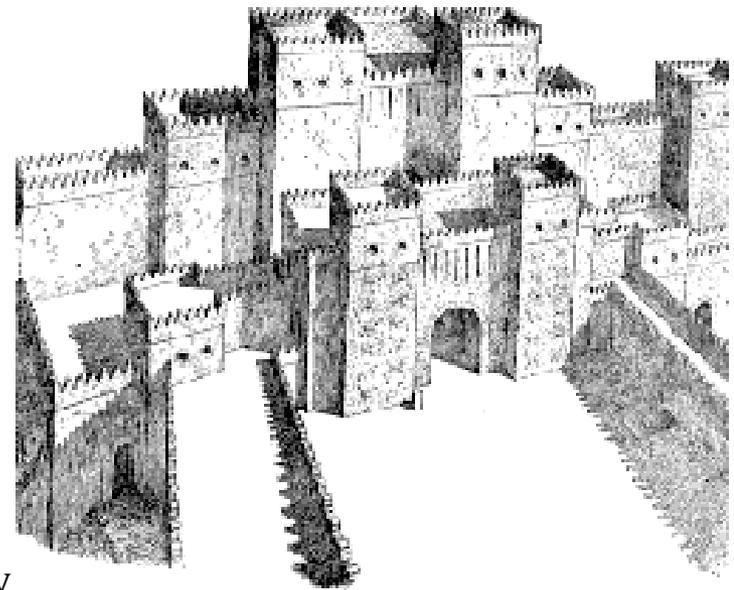
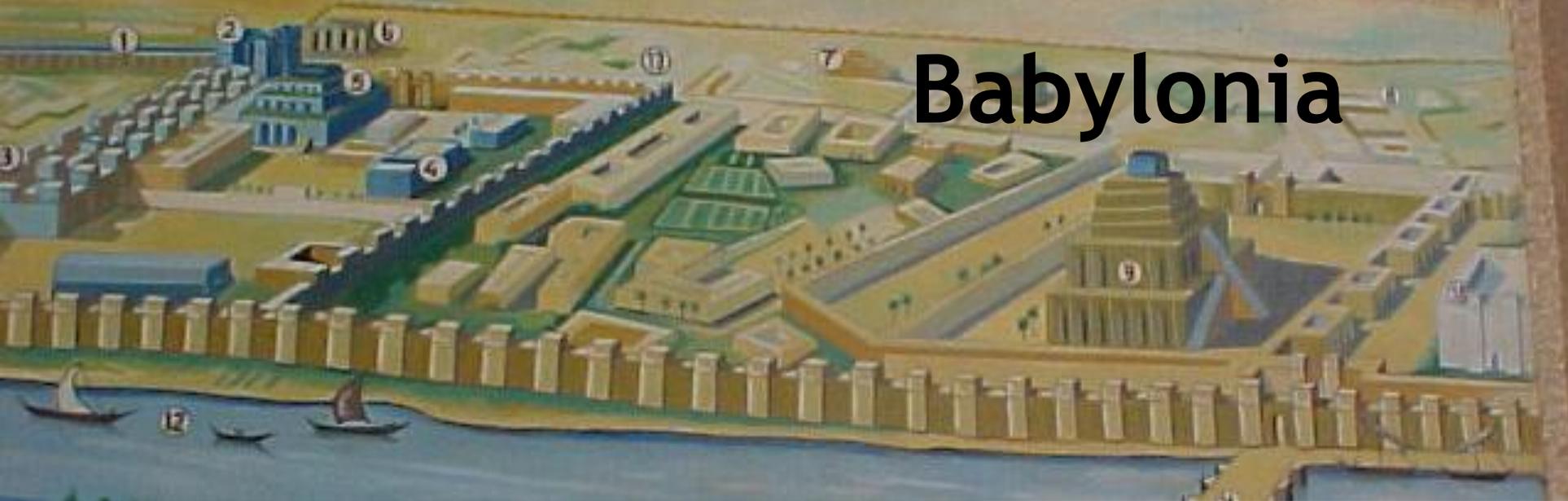
The Palace of Sennacherib at Nineveh, 700 BC



# What the neo-Babylonians knew

- Empire of Nebuchadnezzar II (605 BC - 562 BC)
  - Babylonia has 100,000 people
  - Eight monumental gates
  - Esagila complex
  - Seven-story ziggurat
  - Hanging gardens

# Babylonia



Samuel M. Ronaya,  
Al-Hikma University

In Ishtar Gate in its kind and fine letters of construction. Heron's reconstruction of

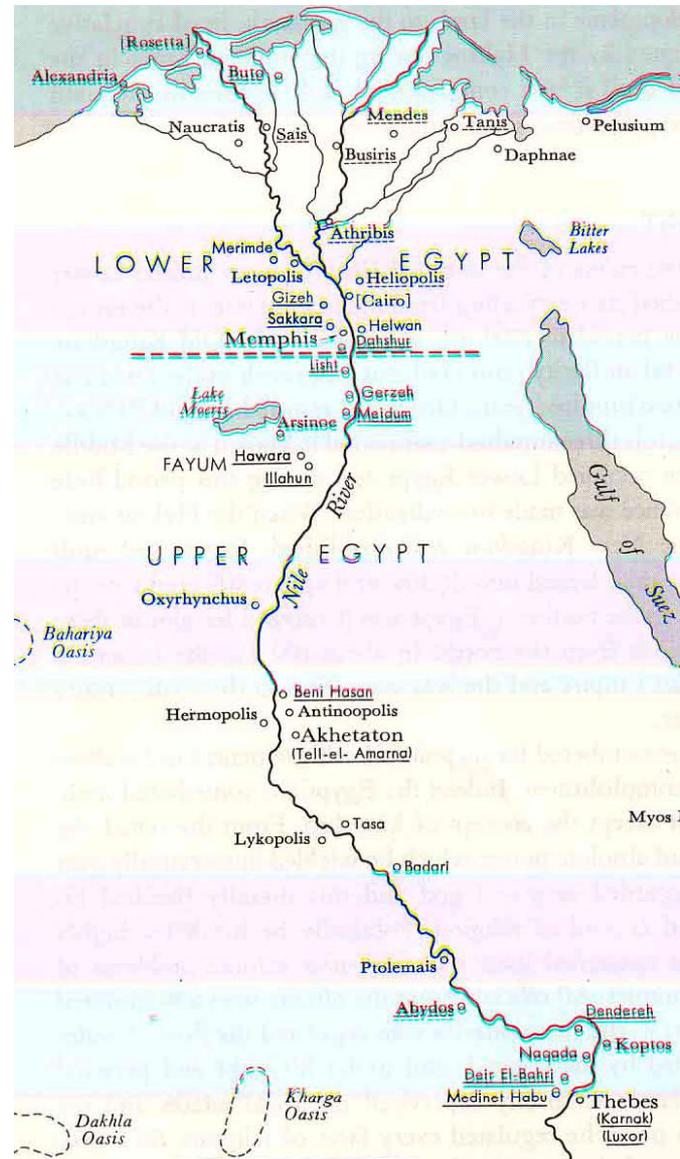
# What the neo-Babylonians knew

- Astral religion
  - Gods identified with planets (Marduk=Jupiter, Ishtar=Venus)
  - Gods lose their “human” attributes
  - Gods are inscrutable
  - Humans can only have faith
  - Humans have sinned
  - Humans are depraved beings
  - Rise of astronomy (understanding the gods)

# What the neo-Babylonians knew

- Time keeping
  - Week of seven days
  - Day of twelve double-hours of 120 minutes each

# What the Egyptians knew



# What the Egyptians knew

- The Nile
  - An easy river to tame:
    - the flood season is highly predictable and even synchronized with the seasons for planting
    - the river is navigable in both directions (float downriver and sail upriver)
    - the surrounding desert provides a natural protection from enemies.

# What the Egyptians knew

- 3000 BC: Narmer/Menes of Hierakonpolis unifies Egypt and founds a new capital Hiku-Ptah (Memphis) in the north (Delta)
  - Memphis: first megalopolis
  - This/Abydos (100 km north of Thebes): main religious center
  - Saqqara: royal burials
  - Worship of the sun

# What the Egyptians knew

- **The Narmer Palette (from Hierakonpolis) commemorates the unification of Egypt**

Preceded by four people holding standards, Narmer inspects a heap of beheaded corpses

King's name

Two men tying together the necks of two fabulous animals.

A bull, symbolizing the king, destroys the walls of a city



King barefooted wearing a skirt, an animal's tail and the Upper Egypt crown, striking at a naked captive, followed by a servant

Falcon over six papyrus plants

Two dead enemies



# What the Egyptians knew

- Old Kingdom (dynasties 3-6, 27th c.BC-22nd c.BC)
  - 1.5 million people
  - Centralized theocracy
  - Only the king (demigod) is eternal
  - Religious centers: Iwnw/Heliopolis (Re), Hermopolis (Thoth), Memphis (Ptah)
  - Chief deity: Re/Atum/Khepri (Sun cult)
  - The king is the son of the Sun god (Re, Atum)
  - Six temples to the Sun (dynasty 5), modeled after Heliopolis' temple (never found)

# What the Egyptians knew

- Obsession with the afterlife
  - Everything in this life is functional to the afterlife
  - The entire economy of the state revolves around the preparation for the king's afterlife
  - Palaces (pharaohs) are comfortable but negligible (mud bricks and wood), tombs must be monumental and eternal (today we visit tombs, not palaces, Giza not Memphis)
  - The best furniture is for the tomb, not for the palace

# What the Egyptians knew

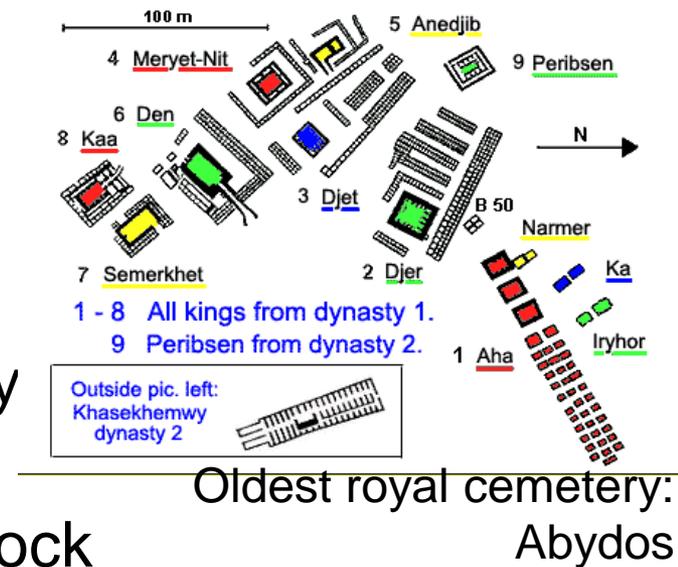
- Obsession with the afterlife
  - Mummies (2600BC-400AD)
  - Tomb not as the resting place of the dead, but as the instrument by which death can be overcome, a place of connection with the heavens and the afterlife
  - Death as the gateway to eternal life
  - Faith on a monumental scale (Karnak for Amon)

# What the Egyptians knew

- Old Kingdom (dynasties 3-6, 27th c.BC-22nd c.BC)
  - Pyramid-driven economy
    - Pyramids and temples become a focus of Egypt's economy, from training to quarrying to transportation to engineering
    - Up to 70,000 workers per pyramid
    - Agricultural surplus used to feed the pyramid and temple workers
    - Furnishing pyramids and temples creates demand for luxury goods

# What the Egyptians knew

- Royal burial
  - First dynasty (3032 BC): Abydos (tumuli)
  - Third dynasty (2707) - Eight dynasty (2216): Memphis (pyramid)
  - Eleventh dynasty (2119): Thebes (rock caves)
  - Twelfth dynasty (1976): Memphis (pyramid)
  - Seventeenth dynasty (1645): Thebes (rock caves)
  - Eighteenth dynasty (1550) - Twenty second dynasty (946): Thebes, Valley of the Kings (rock caves)

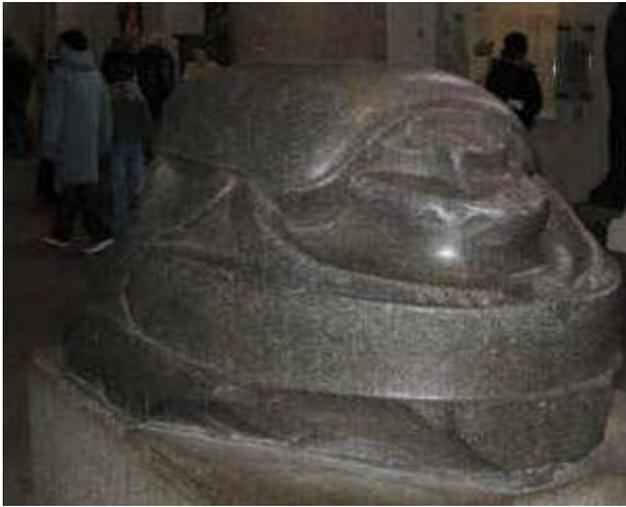


# What the Egyptians knew

- Pharaoh
  - Pharaoh as intermediary between gods and humans (son of the Sun god)
  - The king is a divine administrator, not a warrior
    - The Old Kingdom had few enemies
    - The Old Kingdom had no standing army
    - The king's job is to administer the land of the Nile, not to conquer

# What the Egyptians knew

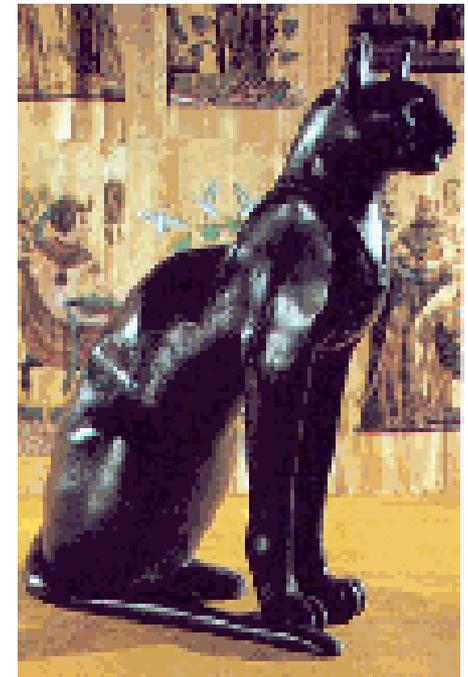
- Deities
  - Gods behave like humans: mythology not theology (legend of Isis, wife of Osiris, who died, etc)
  - Animals to represent gods (Apis the bull, Anubis the jackal, Uadjet the cobra, Horus the falcon, Thoth the ibis)
  - Festivals to rehearse god's myths: "Osiris' mysteries" recount the death and resurrection of Osiris, lord of the Underworld, and bring salvation, resurrection and eternal bliss to humans



**Khepri**



**Taweret**



**Bastet**



**Thoth**



**Uadjet**



**Apis**

# What the Egyptians knew

- Anthropomorphic deities
  - Maat: goddess that personifies cosmic harmony and a model for human behavior
  - Tuat as the immortal omniscient creator and as the Underworld
  - Ptah (and later Amon) as the creator, and the other gods as a manifestation of his creative powers



**Amon**



**Ptah**



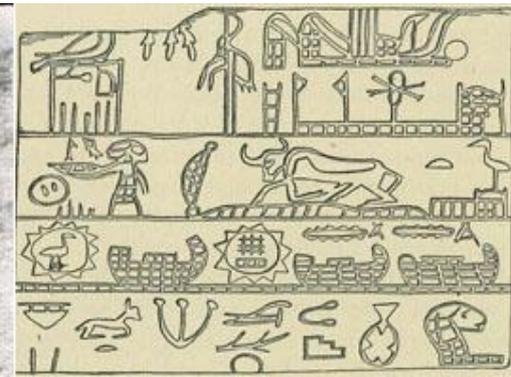
**Maat**

# What the Egyptians knew

- Abydos
  - Chief deity: Osiris (originally symbolized the annual rebirth of the land)
  - Risen from the dead, became the ruler of the world of the dead
  - Osiris determines if one will live forever or not
  - Osiris presides over the universal judgement (Book of the Dead)
  - Mysteries of Osiris
  - His wife Isis more famous during the Roman era outside Egypt

# What the Egyptians knew

- Writing
  - Hieroglyphic system: 700 signs expressing different phonetic combinations
    - Pictographic, syllabic and (24) alphabetic characters
  - A hieroglyphic sign can indicate either an object, an idea or a sound
  - Mainly used for official and monumental purposes
  - Abbreviated scripts for business and literary purposes: Hieratic, Demotic, Coptic



Oldest pictographic writing: Ivory tablet of King Zet (3100 BC) (Cairo Museum)

# What the Egyptians knew

- Society
  - Motivation for linking the scattered communities of Egypt:
    - Irrigation
  - Motivation for bureaucracy:
    - Funerary monuments (e.g., pyramids)
  - Motivation for technological progress:
    - Funerary architecture (furniture, jewelry, pottery, clothing)

# What the Egyptians knew

- Egyptian women
  - Women could become Pharaoh
  - Laws were equal for men and women
  - Women could own land and run businesses
  - Women could divorce
  - People of both sexes could have more than one spouse
  - Queens (Meryt-Neith of 3000 BC and Hatshepsut of 1504 BC)
  - Descent traced through the female line
  - Incest

# What the Egyptians knew

- Theater
  - “Memphite Drama” (inscribed on a a black basalt stela of 8th c BC at the Temple of Ptah at Memphis that copied a papyrus of 3,000 BC): Ptah creates the world
  - Texts of the pyramids of 2800 - 2400 BC that include dialogue and prescribe a “play” to be performed periodically by priests to insure the well-being of the dead pharaoh
  - Abydos Passion Play (inscribed on the tomb of a court official in 1849 BC): reenacts the legend of Osiris and his sister/wife Isis
    - Osiris is killed by his brother Set. Isis resurrects Osiris. Osiris and Isis have a son, Horus, before Osiris dies again. Horus avenges his father’s death.

# What the Egyptians knew

- First Intermediate Period, Middle Kingdom, Second Intermediate Period (dynasties 6-17, 22nd c.BC-17th c.BC)
  - Osiris replaces Re, promising eternal life to everybody
  - Democratization and decentralization of power
  - The king is the son of Osiris (and the incarnation of Horus at death)
  - Egyptian Book of the Dead (2100 BC)
  - Ceremonies are held in Abydos to honor Osiris ("Osiris' mysteries") that recount the death and resurrection of the god (1900 BC)

# The Papyrus of Ani (1250 BC)

The soul declares its innocence in front of gods assembled from all over Egypt



Anubis, master of ceremonies, leads the deceased by his hand to the Hall of Maat. In his left hand he holds the ankh, the symbol of life.

Thoth writes down the decision.

The scales are topped by Maat wearing a feather on her head. Ammut is ready to destroy the deceased should his heart's sins weigh more than the feather of Truth.

# What the Egyptians knew

- Fiction
  - "The Shipwrecked Sailor" (1990 BC): fairy tale of a castaway on an island with a talkative serpent
  - "The Tale of Sinuhe" (1875 BC): epic novel about the picaresque and exotic adventures of a servant who flees Egypt, becomes powerful and then returns to die in his homeland
  - "The Plea of the Eloquent Peasant" (1875 BC): fiction (story of a peasant who is robbed by an official) + didactic (moral duties of the state official)

# What the Egyptians knew

- Philosophy
  - “Song of the Harp Player” (2100 BC): fear of the afterlife
  - “Dialogue of a Misanthrope and his Soul” (2000 BC): a portrait of social decadence and corruption
  - Amenemope: “The Wisdom” (1290 BC)
    - Monotheism: God as the architect of the universe and of human destiny
  - Khekheperre-sonbu: “The Admonitions” (late 19th c BC): indictment of social injustice
  - Ipuwer: “The Admonitions” (1780 BC): apocalyptic vision of the present and messianic vision of a savior who will deliver the Egyptians from all evils

# What the Egyptians knew

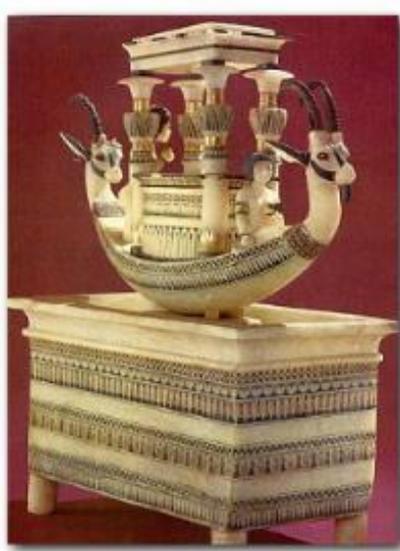
- 1640 BC - 1532 BC: Hyksos invasion of the Delta (during dynasties 15-17)
  - Semitic people from Palestine
  - Horse-driven chariot (of Aryan origin)
  - Spoked wheel (faster chariots)
  - The foreign world
  - Main political center: Memphis

# What the Egyptians knew

- New Kingdom (dynasties 18-20, 1532 BC - 1070 BC)
  - Main political center: Thebes (liberated Egypt from the Hyksos)
  - Main religious center: Karnak (Thebes), temple of Amun (1530 BC)
  - Chief deity: Amun, associated with the north's Re and now regarded as creator of all people
  - The king's chief wife becomes the divine wife of Atum
  - Thebes as the original place of creation (creation myth)
  - Royal burial: rock-cut tombs in the Valley of the Kings (Karnak)
  - Ramesses II rock-cut temples at Abu Simbel (1250 BC)

# What the Egyptians knew

- New Kingdom (dynasties 18-20, 1532 BC - 1070 BC)
  - Old Kingdom: age of the pyramids; New Kingdom: age of the grandiose temples
  - Pyramid: belief that the immortality of the nation depends on the immortality of the pharaoh
  - Temple: a manifestation of the nation's immortality



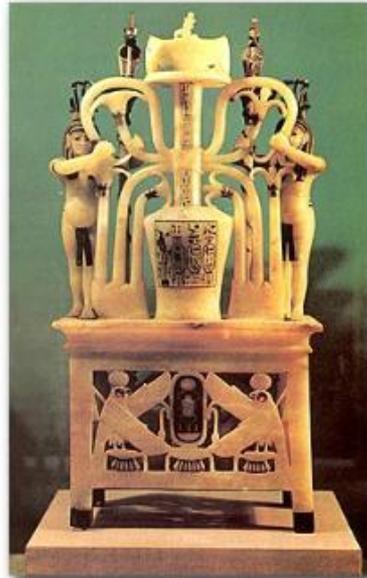
Alabaster basin and boat



Alabaster chest



Wood-stucco casket



Alabaster perfume vase



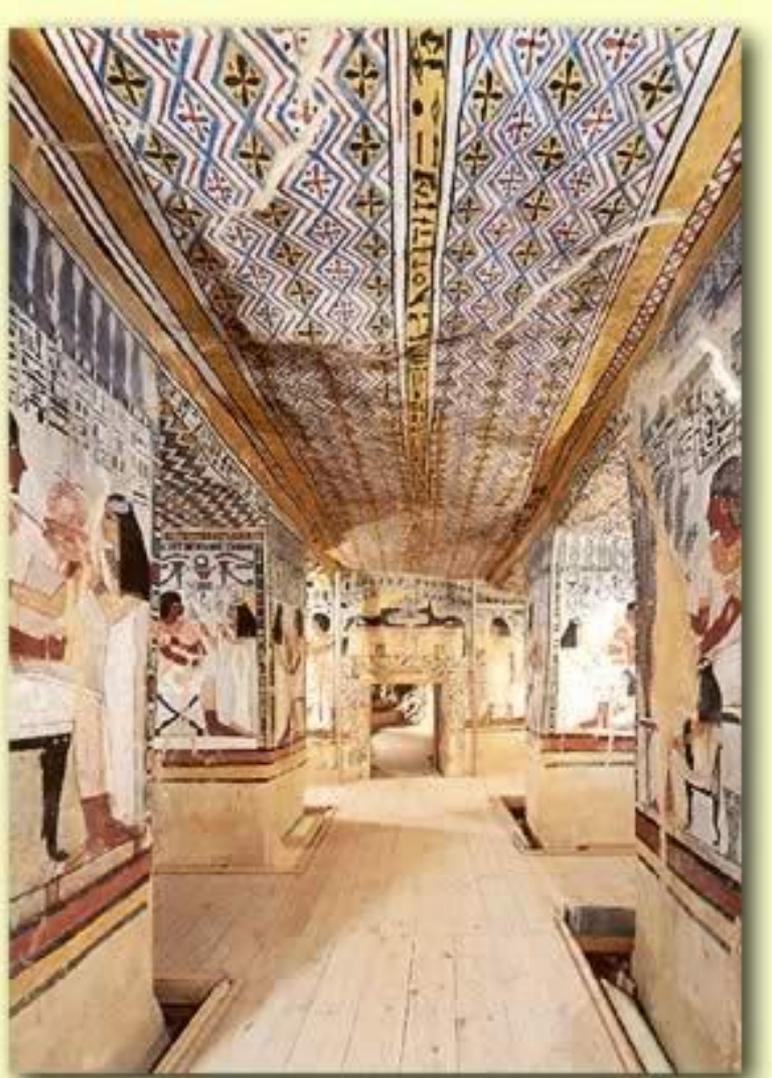
# Tutankhamun Treasure (1300 BC)



Second coffin

Tutankhamun's tomb contained more gold than the Bank of Egypt in 1922.

# Tomb of mayor Sennefer



(Emphasis on his love for his wife)

# What the Egyptians knew

- Battle of Kadesh (1275 BC): Egyptian Empire under Ramesses II vs the Hittite Empire under Muwatalli II



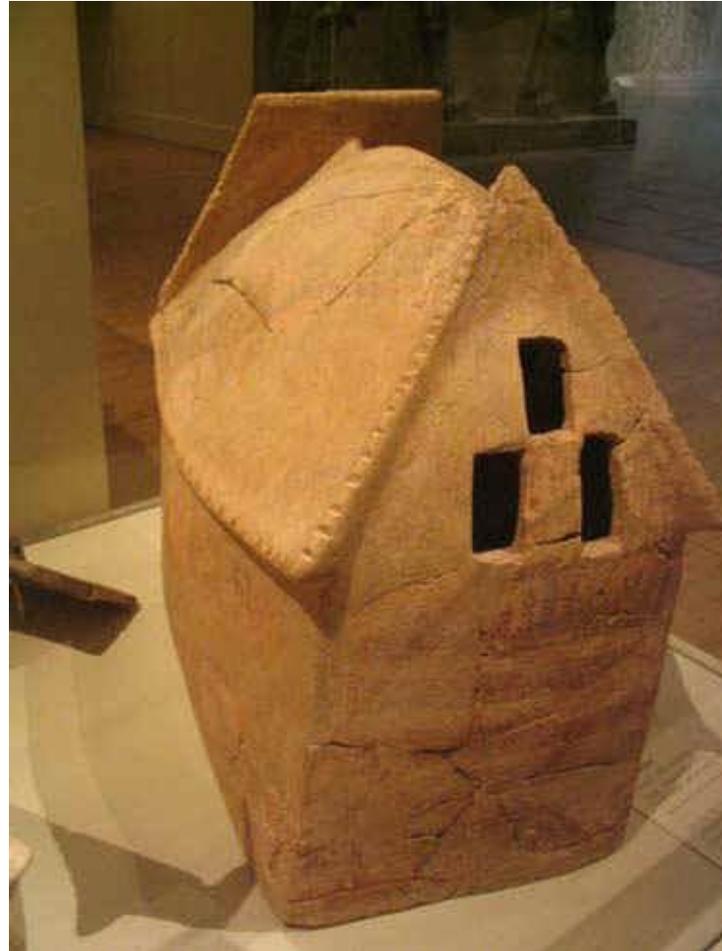
# What the Phoenicians knew

- No name for "Phoenician" people ("phoenician" means "purple people" in Greek)
- Canaanites (Northern Semitic people, ancestors of both Phoenicians and Hebrews, 2500 BC - 1000 BC)
- El chief god of the Canaanites, and his wife Anat



# What the Phoenicians knew

Ossuary of Azor, Canaan 3-4,000 BC shaped like a building of the era



(Metropolitan Museum)

# What the Phoenicians knew

- 1800 BC-1400 BC: Phoenicia occupied by Egypt
  - tin and lapis lazuli from Afghanistan to Egypt
  - copper from Cyprus to Egypt
  - timber from Phoenicia to Egypt
- 12th c BC: Collapse of Egyptian and Mesopotamian economies
  - Reshaping of the old trade routes
  - Phoenician merchants became the protagonists not the serfs of international trade
- City-states (Tyre, 950 BC; Carthage , 814BC)
- 600 BC: Phoenicians circumnavigate Africa
- 146 BC: Rome destroys Carthage

# What the Phoenicians knew

- Shipbuilding (1200BC) and navigation (north star)
- Sea trade
- Colonization
- 1100 BC: founding of trading post in Tunisia (Utica)
- 1104 BC: founding of trading post on the Atlantic (Cadiz): tin, gold, copper
- Trinity of gods: the father El/Baal, creator of the universe; the son Baal/Melqart, responsible for the annual cycle of vegetation; the heavenly mother Astarte/Asherar-yam/Baalat, protector of the homes

# What the Phoenicians knew

Byblos (Lebanon)



# What the Phoenicians knew

- Byblos
  - Golden age 3rd millennium BC
  - Most important trading post in the Mediterranean
  - Crossroads of Anatolia, Mesopotamia, Egypt
  - Exporting cedar wood, resin, oil, wool, boats (eg boat for king Snofru)
  - Importing gold, linen, papyrus ("byblos"= collection of sheets in Greek) from Egypt, ebony (Sudan), lapislazuli (Mesopotamia), copper (Cyprus)
  - 2150 BC: conquered by Amorites
  - 1725: by Hyksos
  - 1580: by Egypt
  - 12th c BC: A Phoenician city

# What the Phoenicians knew

- Language
  - 1500 BC: Canaanites develop an alphabet of 24 symbols by removing the vowels from the old Semitic cuneiform alphabet
  - 1000 BC: Byblos condenses original 30 signs to 22
  - Ahiram sarcophagus from Byblos (10th c BC) with oldest Phoenician inscription
  - Right to left writing because stonemasons used a chisel in the left hand and a hammer in the right hand



First alphabet, 1400 BC  
(Damascus museum)



# What the Phoenicians knew

Phoenician:

𐤀 𐤁 𐤂 𐤃 𐤄 𐤅 𐤆 𐤇 𐤈 𐤉 𐤊 𐤋 𐤌 𐤍 𐤎 𐤏 𐤐 𐤑 𐤒 𐤓 𐤔 𐤕 𐤖 𐤗 𐤘 𐤙 𐤚 𐤛 𐤜 𐤝 𐤞 𐤟 𐤠 𐤡 𐤢 𐤣 𐤤 𐤥 𐤦 𐤧 𐤨 𐤩 𐤪 𐤫 𐤬 𐤭 𐤮 𐤯 𐤰 𐤱 𐤲 𐤳 𐤴 𐤵 𐤶 𐤷 𐤸 𐤹 𐤺 𐤻 𐤼 𐤽 𐤾 𐤿

Greek: 

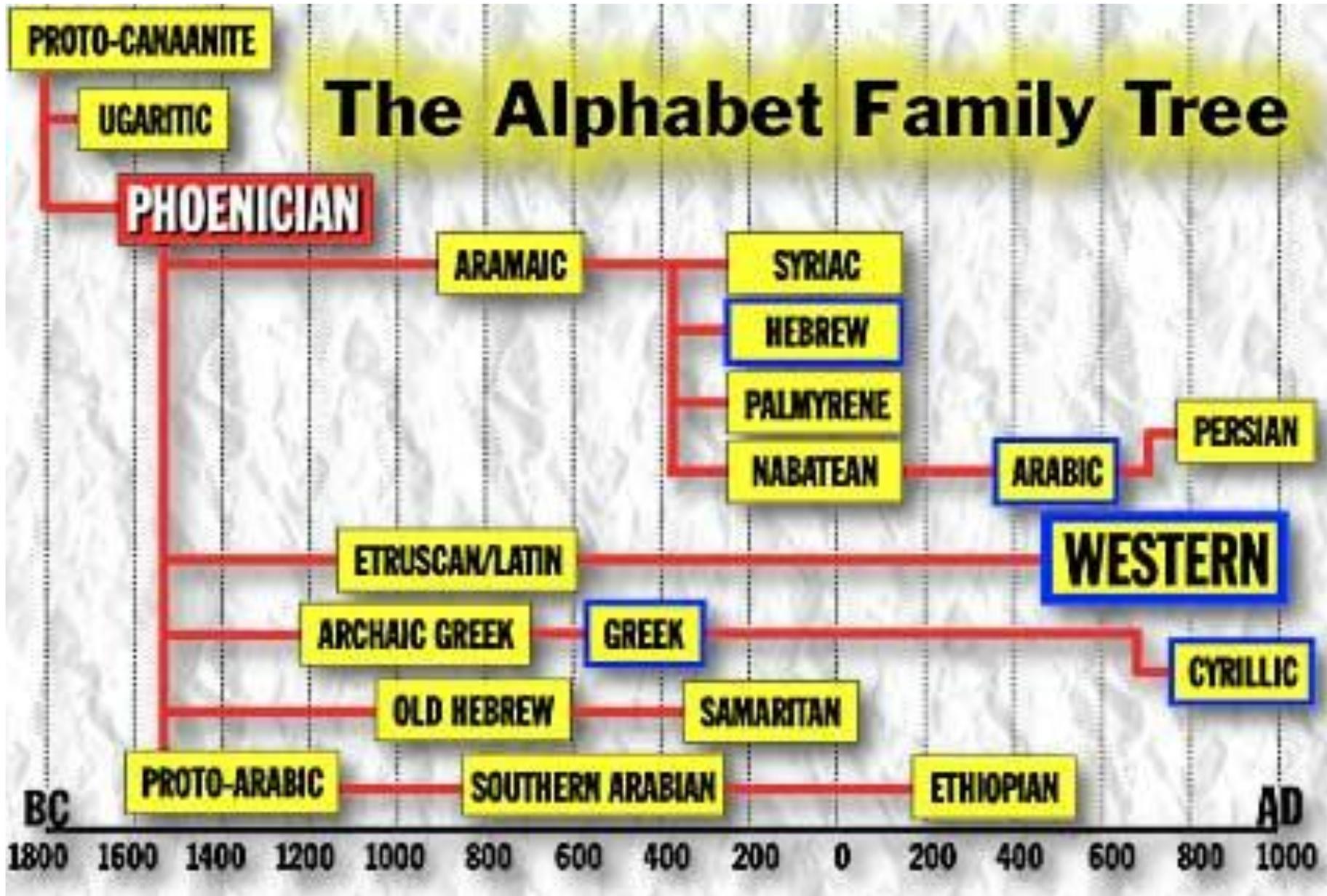
Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

Hebrew: 

א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ ק ר ש ת

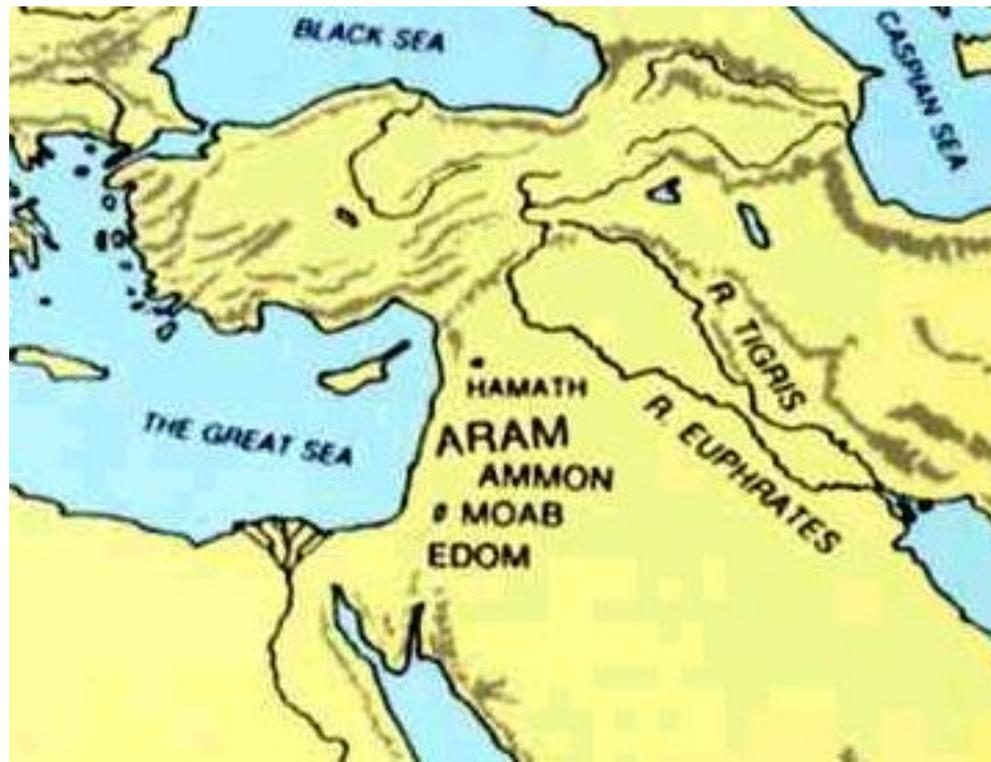
Phoenician -- c. 900 B.C.	𐤀 𐤁 𐤂 𐤃 𐤄 𐤅 𐤆 𐤇 𐤈 𐤉 𐤊 𐤋 𐤌 𐤍 𐤎 𐤏 𐤐 𐤑 𐤒 𐤓 𐤔 𐤕 𐤖 𐤗 𐤘 𐤙 𐤚 𐤛 𐤜 𐤝 𐤞 𐤟 𐤠 𐤡 𐤢 𐤣 𐤤 𐤥 𐤦 𐤧 𐤨 𐤩 𐤪 𐤫 𐤬 𐤭 𐤮 𐤯 𐤰 𐤱 𐤲 𐤳 𐤴 𐤵 𐤶 𐤷 𐤸 𐤹 𐤺 𐤻 𐤼 𐤽 𐤾 𐤿
← Earliest Greek -- c. 750 B.C. (Western Variant)	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω
← Etruscan -- c. 650 B.C.	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω
← Latin -- c. 500 B.C.	A B C D E F G H I K L M N O P Q R S T V X
→ C to G -- 3rd cent. B.C.	A B C D E F G H I K L M N O P Q R S T V X Y Z
→ Latin -- 1st cent. B.C.	A B C D E F G H I K L M N O P Q R S T V X Y Z
→ Latin -- Middle Ages	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

# The Alphabet Family Tree



# What the Phoenicians knew

- Arameans or Syriacs
  - Semitic, nomadic people of Mesopotamia
  - Settled in Syria in the 14th century BC
  - Small tribes that never unified in an empire



# What the Phoenicians knew

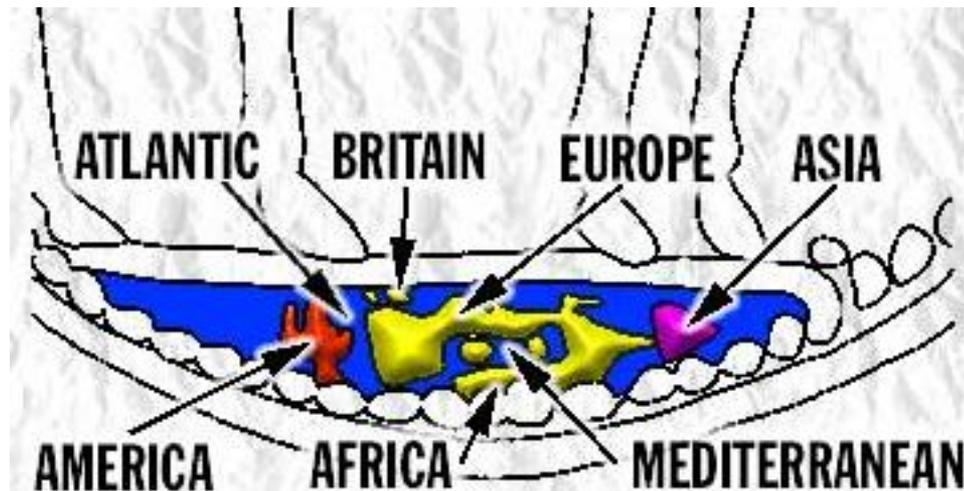
- Aramaic
  - Aramaic language (originally a dialect of Akkadian) written with the Phoenician alphabet
  - International trade language of the Middle East between 1000 and 600 BCE
  - Official language of the Persian Empire (539-337 BC)
  - Aramaic used as far as Egypt and China
  - Aramaic becomes the language of the Jews in Palestine (Jesus preaches in Aramaic)

# What the Phoenicians knew

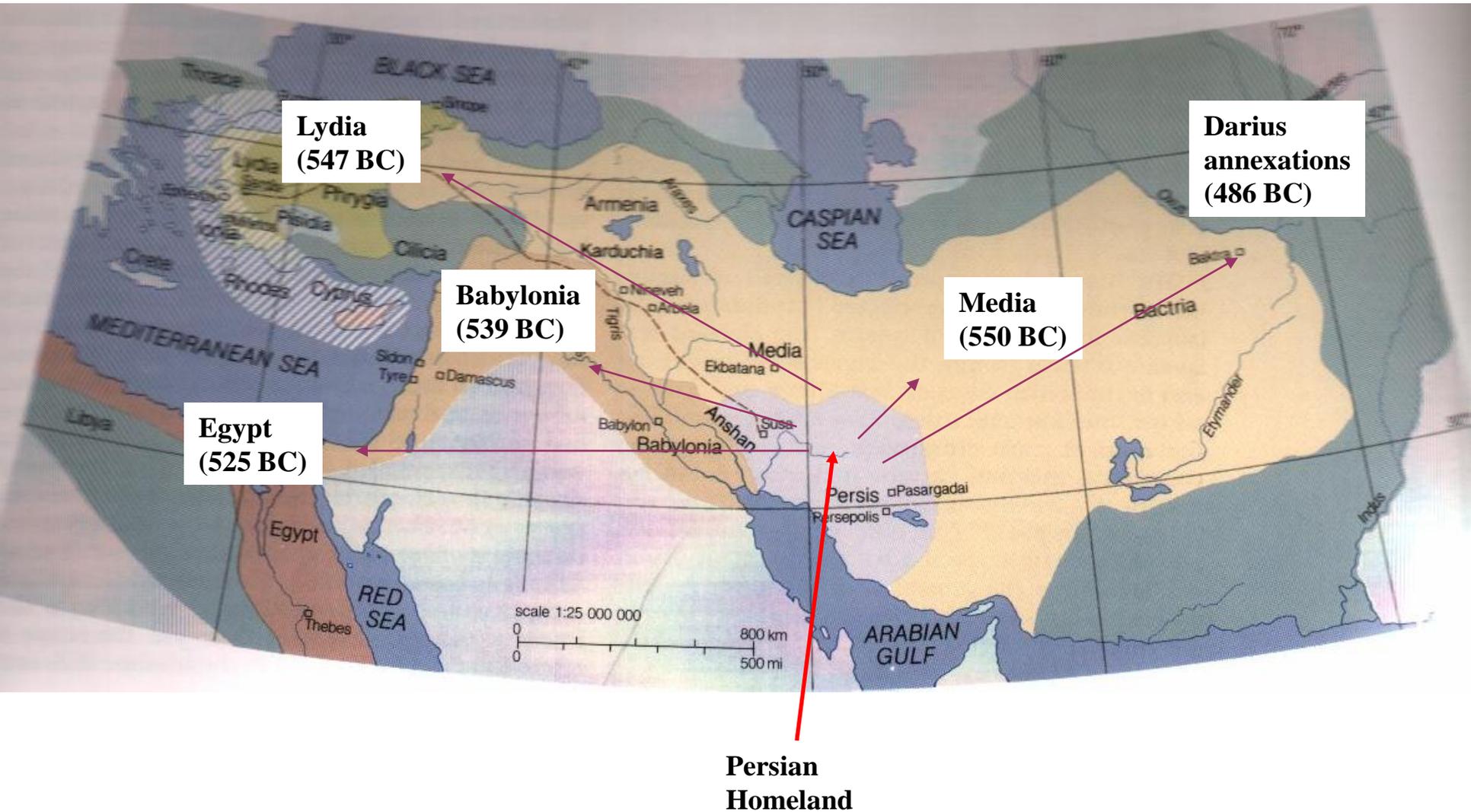
- Aramaic
  - 850 BC: 22-character alphabet derived from Phoenician

𐤀	𐤁	𐤂	𐤃	𐤄	𐤅
'	b	g	d	h	w
𐤆	𐤇	𐤈	𐤉	𐤊	𐤋
z	ḥ	ṭ	y	k	l
𐤌	𐤍	𐤎	𐤏	𐤐	𐤑
m	n	s	'	p	š
𐤒	𐤓	𐤔	𐤕		
q	r	š	t		

# What the Phoenicians knew



# The Persian Empire



# What the Persians knew

- Persia
  - Medes
  - Achaemenids (700-331 BC)
  - Seleucids (305-64 BC)
  - Parthians (205BC-225AD)
  - Sassanids (227- 641 AD)

# What the Persians knew

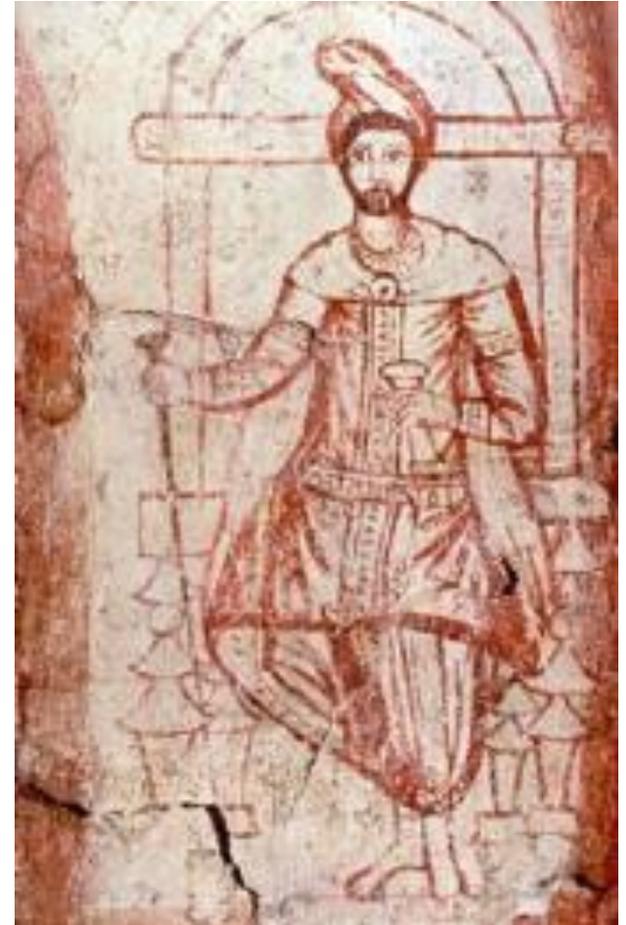
- Mazdaism
  - God of Light vs God of Darkness
  - The world was created by Ahura Mazda
  - A spiritual, immaterial God
  - Ahriman later corrupted the world



Ahura Mazda in Persepolis

# What the Persians knew

- Zarathustra (b 628BC)
  - Prophet of Mazdaism
  - Monotheism
  - Zoroaster preached against all the other gods except Ahura Mazda
  - Holy book: “Avesta” (including the “Gatha”)



# What the Persians knew

- Zarathustra/ Zoroaster (b 628BC)
  - A revealed religion (God revealed the truth to some people)
  - Eschatological (at the end of time, a messiah will come, Ahura-mazda will emerge victorious, the dead will be raised from their graves and be judged)
  - Frasho-Kereti (“Rehabilitation”):  
apocalyptic ending/judgement that takes place on Earth
  - Ristaxe: resurrection of the body

# What the Persians knew

- Zarathustra/ Zoroaster (b 628BC)
  - Dualist: separates good and evil (Egyptian and Mesopotamian gods were capable of both good and evil)
  - Man is free to choose God or not. Man is not a slave.

# What the Persians knew

- Mithras (300 BC):
  - Later Mazdaism (Darius I's era) introduces other gods, notably the sun-god Mithras
  - Chief lieutenant of Mazda
  - Born on 25/12
  - Captures the bull
  - Eats a last meal and ascends to heaven
  - Messiah who will return to save humankind

# What the Persians knew

- The Cyrus Cylinder, 538 BC
  - First Charter of The Rights of Nations
  - The First Declaration of Human Rights

*"Cyrus... has dictated a new world order, for the man to be free, for the man to live as he pleases and be protected by the law, all men to have rights..."*

*"We shall not rule by force and oppress no nation. Each is free to accept or reject, we shall bestow internal autonomy to all states..."*

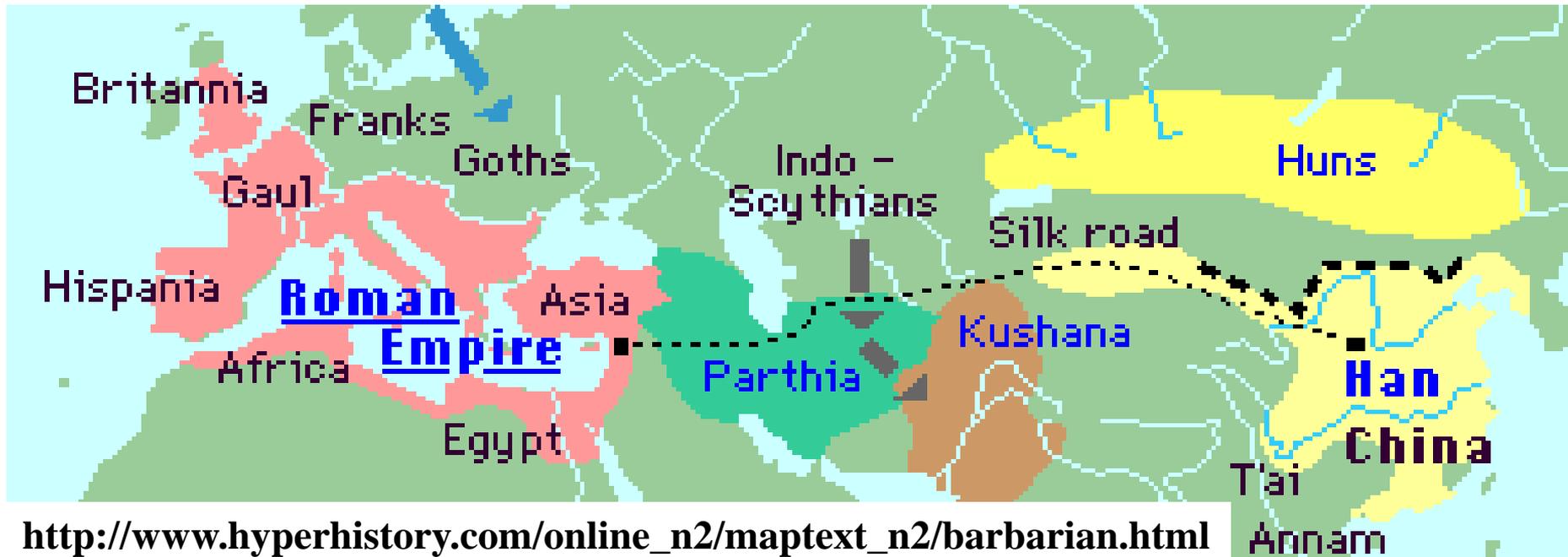


# What the Persians knew

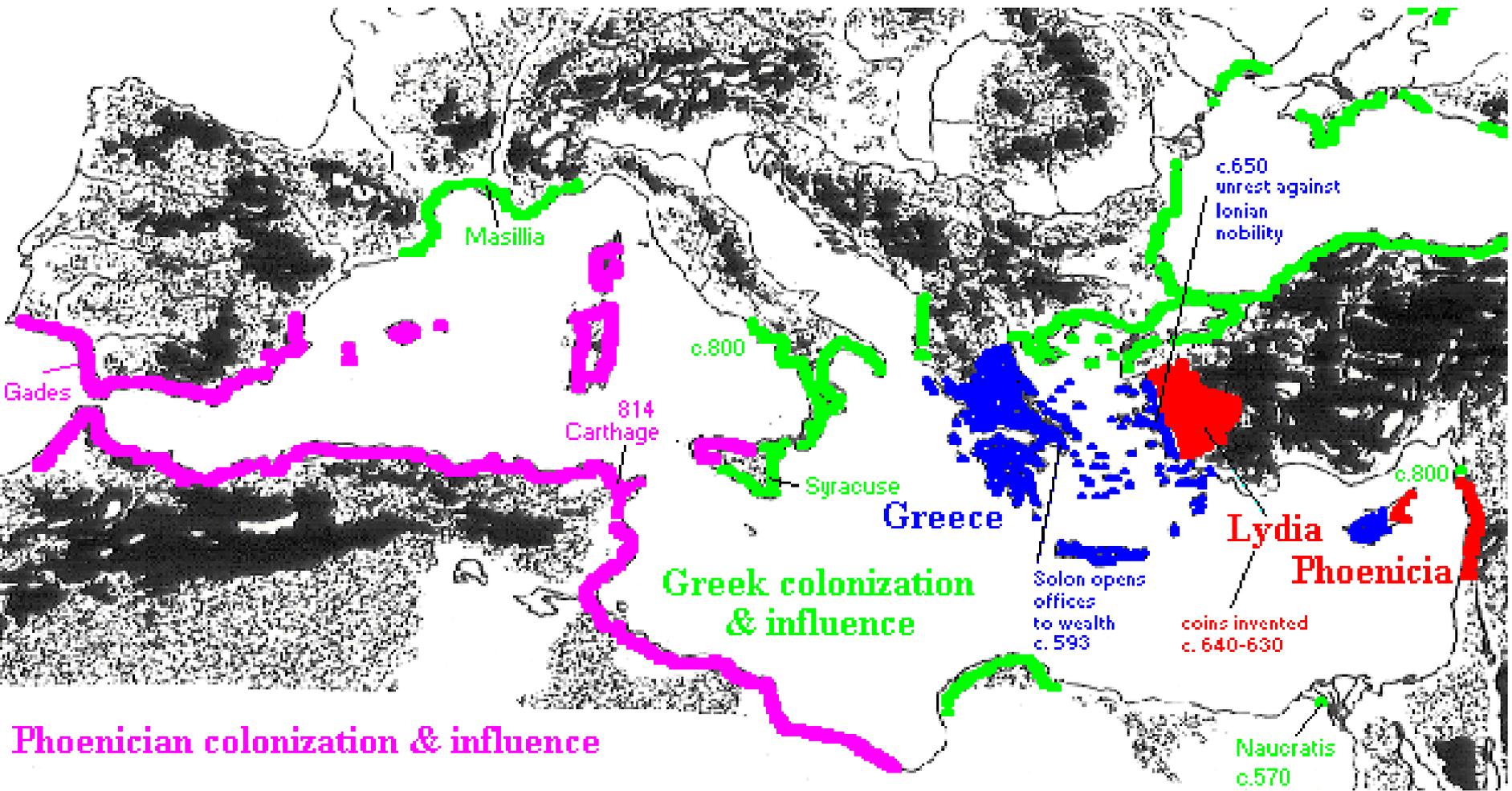
- Arsacids/ Parthia (250 BC - 227 AD)
  - Wars against Rome
  - Zoroastrianism becomes the official religion, but foreign religions are pervasive (Judaism, Christianity, Manicheism)
  - Strong influence of Greek culture
  - Inauguration of the Silk Road

# What the Persians knew

- 0-300 AD four empires in Eurasia:
  - Han (Buddhist and Taoist)
  - Roman (Christian)
  - Parthian (Zoroastrian)
  - Kushan (Buddhist)



# Phoenicians and Greeks



# What the Greeks knew

- The Mediterranean
  - Peninsulas with long shores
    - Greece
    - Iberia
    - Italy
    - Asia Minor
  - Islands

# What the Greeks knew

- The Mediterranean
  - Contrast between centralized river civilizations (Egypt, Mesopotamia, China) and decentralized seafaring civilizations (Minoan, Phoenician, Greek)
  - Relationship between “democracy” and seafaring culture
  - Relationship between free market and seafaring culture



# What the Greeks knew

A brief history of ancient Greece

- 2800 BC: Minoan civilization in Crete
- 2200 BC: Indo-European people (Achaeans) invade Greece creating the Greek language and founding Mycenae
- 1628 BC: a volcanic eruption in Thera causes destruction in Crete (legend of Atlantis)
- 1450 BC: the Minoan civilization is destroyed by the Myceneans
- 1184 BC: Troy falls to Mycenae
- 1100 BC: Mycenae is destroyed by Dorian invaders who have iron weapons

# Knossos, Crete (Minoan)



# Mycenae (Achaean)



# Phaistos Disc

The earliest printed document in the world (characters punched into clay by stamps)  
And possibly the first alphabet

What language is this?  
Who were these people?



Southern Crete, 1700 BC (Heraklion Museum, Crete)

# What the Greeks knew

A brief history of ancient Greece

- 900 BC: origin of the Homeric poems
- 776 BC: the first Olympic Games
- 760 BC: Euboea founds the colony of Cumae in Italy
- 594 BC: Solon founds the Athenian democracy
- 585 BC: Thales in Miletus founds philosophy
- 530 BC: Pythagoras founds Mathematics
- 525 BC: tragedy (Aeschylus, Sophocles, Euripides)
- 450 BC: Herodotus founds historiography
- 450 BC: Hippocrates founds Medicine
- 388 BC: Plato, a pupil of Socrates, founds his philosophical Academy, the first university
- 332-24 BC: Alexander conquers Egypt and Persia

# What the Greeks knew

- The Dark Age (1174-961 BC)
  - Arrival of Iron
  - Collapse of Hittite empire
  - Collapse of Achaean kingdoms
  - Disappearance of architecture and writing
  - Urban decline
  - Decline of gold and jewelry
  - A society of farmers and herdsman
  - The wealthy urban civilizations of the bronze age become a legendary memory, originating myths

# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Homeros/Homer
  - A Greek from Ionia (Asia Minor), perhaps from the island of Chios
  - Lived between 850 BC and 750 BC.
  - Blind wandering minstrel reciting poems from a very old oral tradition
  - Homer used material of 200 or 300 years before an alphabet reached Greece in the 9th or 8th century BC
  - Homer lived in the Iron Age but told his stories about the Bronze Age
  - Homer was Greek but sang about the Mycenaean court

# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Iliad
    - Poem of 15,693 verses in dactylic hexameter (as in “Canada Canada”)
    - Earliest extant copy of Iliad: 400 BC
    - Tenth year of the war between the Achaeans and Troy
    - Achilles’ wrath (withdraws from battle because of his anger at Agamemnon, returns to avenge the death of his friend Patroklos, kills Trojan hero Hector)
    - Odysseus of Ithaca reluctantly joins the Greeks in the siege of Troy

# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Iliad
    - Gods, oracles and heroes drive the action
    - Gods witness, root, plot and participate
    - Zeus also foresees the events and makes sure that Fate is respected
    - Ends with the funerals of the opposing heroes, Hector and Patroklus

# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Odyssey
    - Odysseus/Ulysses' adventures and ultimate return home ten years after the fall of Troy
    - Cyclopes, nymphae, witches, sirens, monsters
    - Ulysses recovers his kingdom
    - Fantasy not chronicle



# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Odyssey
    - The poem begins with Odysseus/Ulysses' refusal of immortality (the opposite of the Gilgamesh, which begins with a quest for immortality)
    - Paradise is a prison: Ulysses does not want immortality with the goddess Calypso; the immortality granted to him by Calypso prevents him from fulfilling his duty
    - Ulysses travels to Hades (the underworld/afterlife) and meets famous deceased (including Achilles)

# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Odyssey
    - Ulysses is not an adventurer but simply a victim who wants to go home
    - Travel brings him misfortune, home means happiness

# What the Greeks knew

- The Homeric poems (1000BC-800BC)
  - Heroic virtues
  - Fate (the best do not always win)
  - Life as a continuous titanic struggle
  - Gods are capable of evil
  - Retelling of familiar stories, no suspense no surprises
  - Meant to be recited, not read (not a solitary reader but a collective experience)
  - No unity of soul: psyche (vital spirit?), thymos (consciousness?), nous (intellect?)
    - At death, psyche wanders in Hades, thymos leaves the body

# What the Greeks knew

- Greek afterlife
  - Indifferent to afterlife
  - Hades: not punishment or reward, simply a place (underworld) where the dead go
  - Very detailed geography and bureaucracy of Hades, but no description of the heavens
  - Elysium (Elysian Fields): a perfect land located at the westernmost edge of the world where dead heroes lived forever
  - Immortality via
    - Heroism
    - Family

# What the Greeks knew

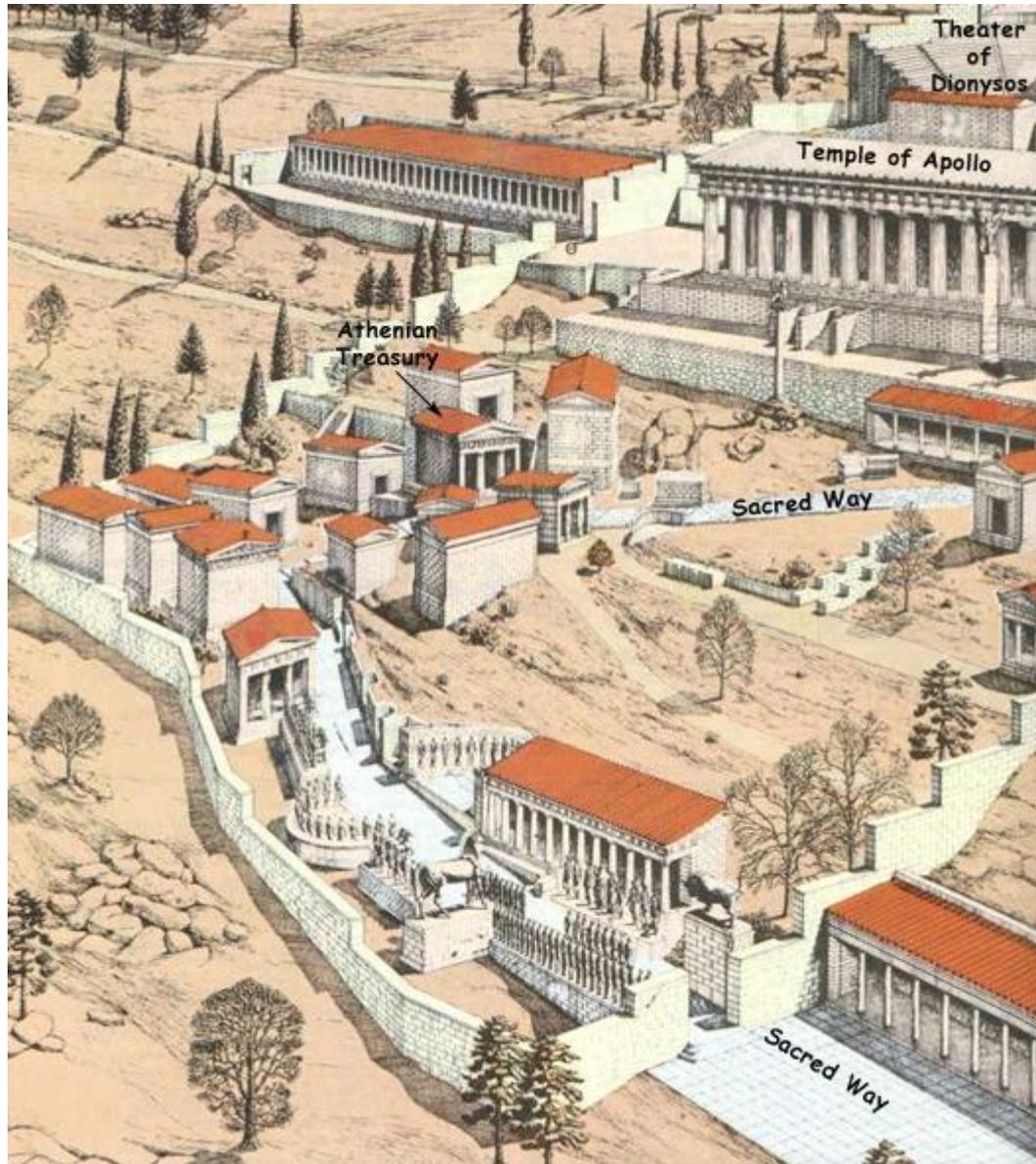
- Greek religion
  - Gods as vehicles of the force
  - Gods did not create the world, they only conquered it thanks to their powers
  - Powerful but not omnipotent gods
  - Problem of evil: gods are indifferent to humans and gods are not omnipotent, therefore evil just happens
  - Religion is worship and sacrifice

# What the Greeks knew

- Greek religion
  - Oracles (persons through which the gods respond with advice/prophecy when consulted, often via enigmatic allegories)
    - Dreams are about the future, not the past
  - Sybils (female prophets) and Bakides (male prophets) interpreted by “exegetai”
  - Sanctuaries: Delphi (Apollo), Olympia (Zeus), etc
  - Apollo (god of all knowledge) is the highest religious and moral authority

# Delphi





(<http://mkatz.web.wesleyan.edu>)

# What the Greeks knew

- Religion as rational superstition
  - The gods are exempt from aging and death
  - The gods are powerful
  - The gods control natural phenomena and human destiny
  - Gods are capricious and there is nothing humans can do about it (Problem of evil)
  - The head of all gods (Zeus) was not one of the earliest and did not create the universe
  - Gods have no effect on the working of the universe.
  - Gods have feelings

# What the Greeks knew

- Religion as rational superstition
  - Gods have no effect on the working of the universe.
  - Thus Science and Religion never contradict each other
- No organized church
  - Priests (oracles) are mere interpreters between gods and humans
  - No theocracy: powerless “priests”
  - Priestly duties were duties of every good citizen, just like many other duties

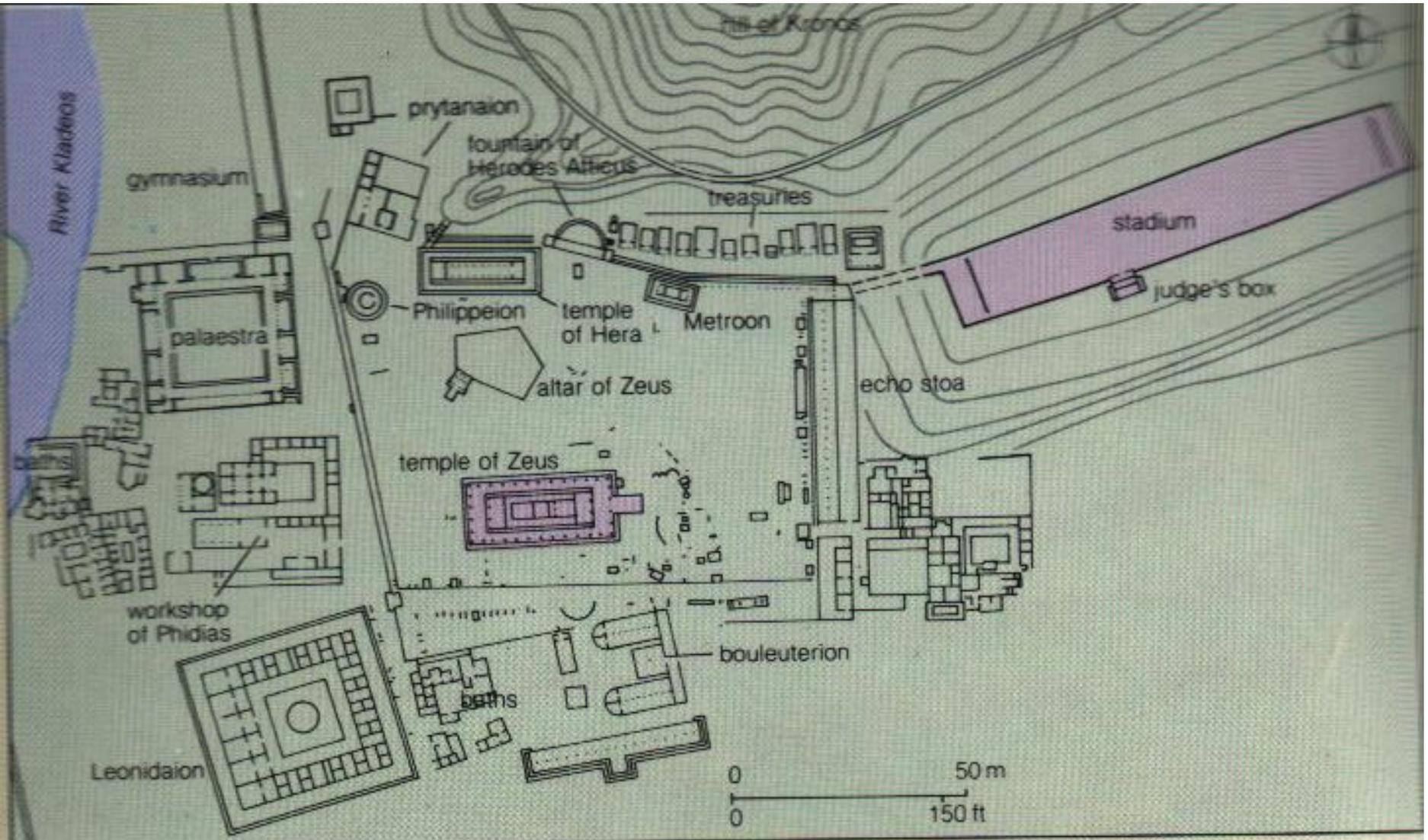
# What the Greeks knew

- Heroism
  - Humans are halfway between beasts and gods
  - In virtue of their achievements, heroes are more godly than beastly (heroism is an everlasting quality just like the powers of the gods)
  - Heroes struggle against human destiny
  - Heroism is a titanic struggle to become more divine than human
  - Value system based on competition ("agon")

# What the Greeks knew

- Olympic games (776BC): festival of Zeus
  - affirmation of the pan-hellenic identity
  - athletes, dramatists, poets
  - agon (competition)
- 582 BC: the Pythian games are established in Delphi and the Isthmian games are established in Corinth
- Games pervasive for all sorts of activities and cults
- Foreigners, slaves, convicts are not allowed (it's a religious "game")
- Victory depends on destiny (divine favor) not on skills
- Prize: a simple garland of olive

# Olympia



# What the Greeks knew

- Cults of immortality outside mainstream religion
  - Eleusinian mysteries
  - Dionysian mysteries
  - Orphic mysteries

# What the Greeks knew

- Eleusinian mysteries
  - Most important religious festivals
  - Nine days of the Eleusinian mysteries
  - Lasted for 2,000 years
  - Demeter's search through the underworld for her daughter Persephone, abducted by Hades
  - Demeter as the bringer of immortality to humankind

# What the Greeks knew

- Cult of Dionysus/Bacchus
  - God of frenzy (pleasure, wine)
  - Remnant of an earlier religion
  - Dionysus, god of wine and pleasure
  - Accompanied by satyrs, centaurs, nymphs
  - Dionysus died each winter and was reborn in the spring
  - Dionysia involved dramatic performances
  - Female devotees (mainades/maenads) worship him in frenzied savagery, tearing children and animals limb from limb
  - During the orgy the human soul becomes one with the god

# What the Greeks knew

- **Dionysian Festival**



Floor mosaic in the 'House of Good Fortune', 432-348 BC, Olynthos.

# What the Greeks knew

- Theater
  - Theater began as a religious ceremony
  - The Athenian theatre focused on Dionysus, god of fertility, wine, sexuality, agriculture
  - Yearly Dionysian fertility festival in March, including
    - one week of public wine drinking
    - phallus-worshiping orgy
    - dithyrambos (dance and chant to the god)
  - The dithyrambos evolves into tragedy

# What the Greeks knew

- Orphic mysteries
  - Founder of the mysteries: poet and musician Orpheus (first mentioned in the 6th c BC), who almost succeeded in bringing back his dead wife Eurydice from the underworld (“katabasis”)
    - devoted to Apollo
    - killed by Dionysus
  - Zeus resurrected his (Zeus’) son Dionysus (born of a god and a mortal woman) and created the human race from the ashes of his assassins, the Titans
  - Dionysus himself rescued his mother from Hades
  - Dionysus has both a divine and a human nature
  - His death and resurrection saves humans

# What the Greeks knew

- Orphic mysteries
  - Earthly life determines if the soul will be happy or unhappy for eternity
  - The damned shall suffer for eternity (proto-concept of hell)
  - Ultimate goal of Orphism: permanent (not only temporary) union of the soul with the divinity
  - Immortality of the soul
  - Orphism vs Bacchism: purification instead of orgy, permanent instead of temporary union of soul and god, immortality instead of mortality

# What the Greeks knew

- Legendary heroes
  - Prometheus created humankind, made humans superior to animals, gave them the gift of fire (stolen from the gods); Zeus, angry, punished Prometheus by chaining him to a rock.
  - Theseus kills the Minotaur
  - The king of Crete puts Daedalus as well as his son Icarus in the Labyrinth so he cannot escape; Daedalus makes wings of wax that allow the two to fly out of the Labyrinth

# What the Greeks knew

- Legendary heroes
  - Icarus flies too near the Sun and his wings melt, killing him
  - Jason and his Argonauts search for the Golden Fleece
  - Perseus beheaded the Gorgon Medusa, and saved Andromeda from the sea monster
  - Heracles (Hercules)

# What the Greeks knew

- Greek superstition (“religion”?)
  - The gods (Zeus, Apollo, etc)
  - The mysteries
  - The heroes
- Because it is so chaotic and contradictory, Greek religion is quite tolerant of other philosophical, scientific) ideas

# What the Greeks knew

- Eros
  - The Greeks saw eros as a threat to society
  - Aphrodite: destructive power of sex
  - Pandora: symbol of female evil
  - Circe: symbol of how woman can enslave even the greatest of men
  - Medea: symbol of female power (protofeminist speech about the condition of women)
  - Diotima: desexualizes sex (origin of “Platonic love”)
  - Homosexuality: common in the age of Sparta and Athens but only as pederasty

# What the Greeks knew

- Sparta
  - Warrior society (Sparta did not lose a single war between 800 and 371BC)
  - Egalitarian society (even gender equality)
  - Austere living
  - The state comes before the family
  - Education = harsh discipline, martial arts, murder of serfs (collective education run by the state)
  - Women train and live just like men
  - Military agrarian state (never underwent the urban revolution)
  - Economic activities banned

# What the Greeks knew

- Athens
  - Solon's reforms 594 BC
    - A tyrant chosen by the people
    - Membership in the assembly (ekklesia) extended to merchants, not only landowners
    - The assembly's power increases dramatically
  - Democracy: Cleisthenes' constitution 507 BC
  - Pericles (461 BC-429 BC): the assembly includes every free adult male
  - Checks in place to prevent individuals from acquiring too much power (even heroes were sent into exile)

# What the Greeks knew

- Athens
  - Economic empire
  - Evolution of the Delian League (478 BC), originally created to defend Greece from the Persians (the NATO of the Aegian Sea)
  - Athens dominates because of superior fleet
  - Athens controls Black Sea agriculture and the flow of grains through the Dardanelles straight
  - Athens imposes puppet democratic governments on other cities
  - Between the Persian Wars and the defeat at Chaeronea by Macedonia, Athens was at war on average two years out of three

# What the Greeks knew

- Athens:
  - 450BC: Piraeus largest port in the western world
  - Athens exported: arms, luxury articles, wine, olive oil, ceramics, art, books
  - Athens imported: slaves, cereals (Egypt, Libya, Ukraine), fish, cheese, fruit, iron, copper, wood, wax, ivory, wool, papyrus, tiles (Corinth), furniture (Miletos), carpets (Persia), textiles (Egypt), perfumes (Arabia)
  - Largest trade till 15th century Italy
  - The polis temple as a bank to fund the city's ventures (lender at low interest rate)
  - 450 BC: first bank at Athens (Antisthenes & Archestratos)

# What the Greeks knew

The Greek world (7<sup>th</sup> c. BC)



Phoenician

Greek

# What the Greeks knew

- Greek Technology
  - Barely more advanced than neolithic technology:
    - Agriculture
    - Metallurgy
    - Pottery
    - Textile-making
  - No significant technological improvements
  - No significant improvement in manufacturing

# What the Greeks knew

- Greek warfare
  - Phalanx warfare (allows a smaller, disciplined force to defeat a larger mob force)
  - Triremes (sea formations) (from Phoenicians)
  - Iron weapons (from Celts)
  - Catapult (Dionysius of Syracuse, 400 BC)
  - Persians wars (499-479BC)
    - End of the Archaic era and beginning of the Classical era

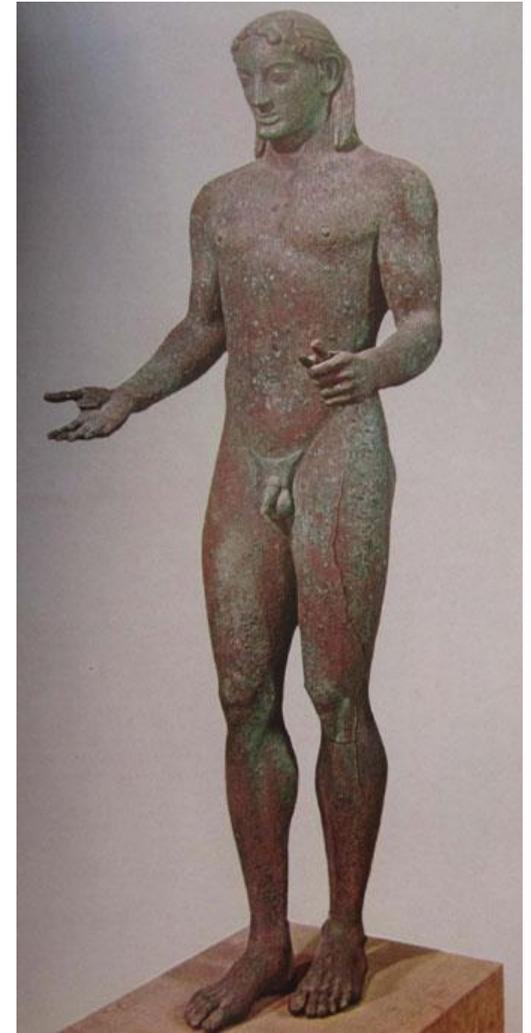
# What the Greeks knew

- Art

Paestum temple 6th century BC



The Piraeus  
Apollo, the oldest  
known  
bronze statue of  
Greece (530 BC)  
(National Museum,  
Athens)



# What the Greeks knew

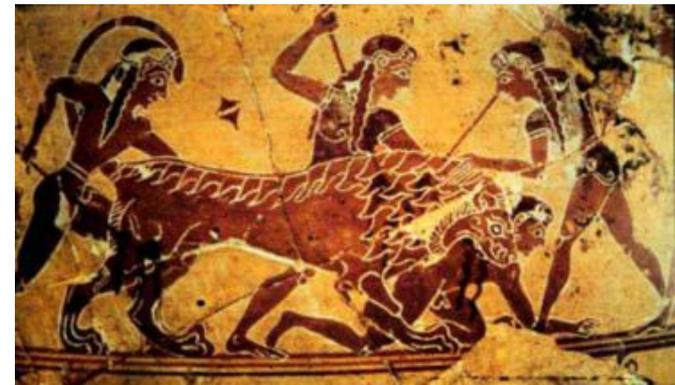
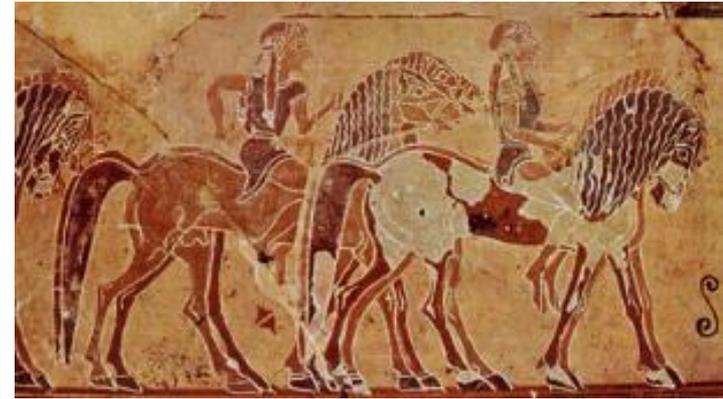
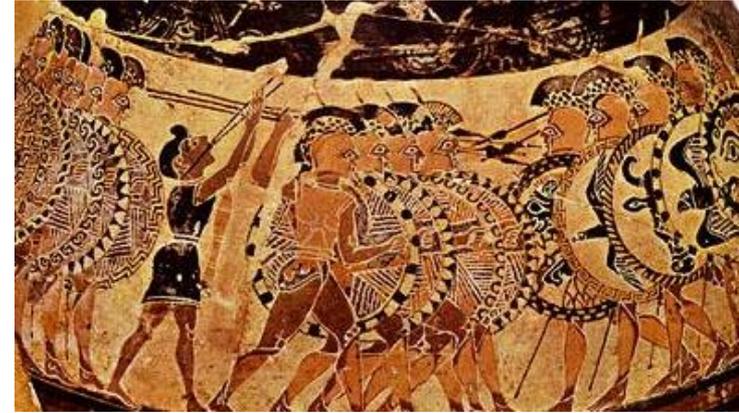
- Painting  
“Chigi vase” (650 BC)



Phalanx

Horsemen

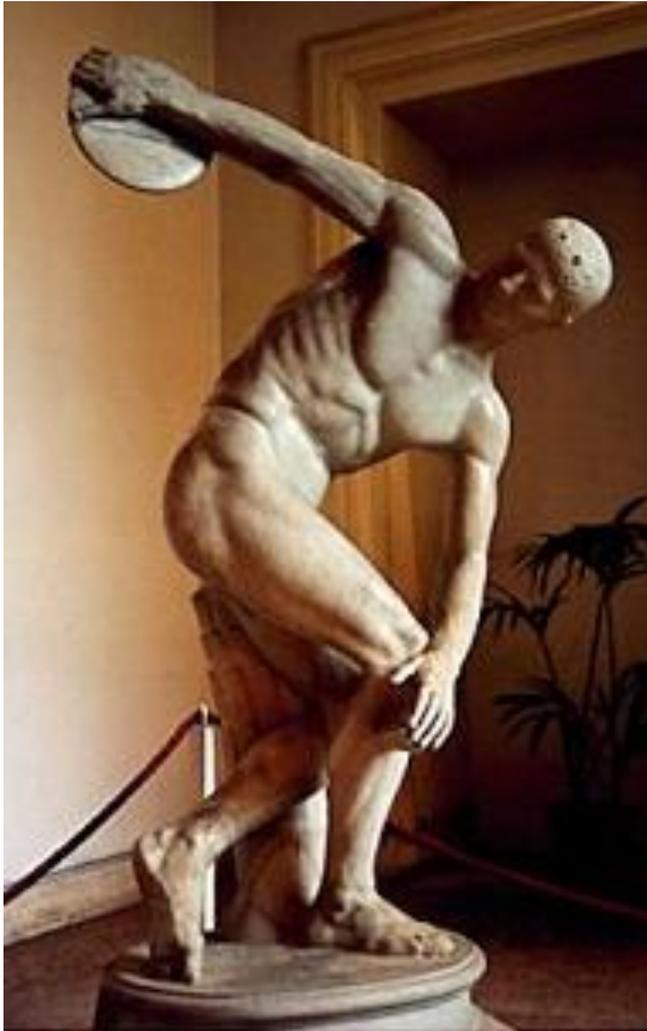
Lion hunt



(Villa Giulia, Roma)

# What the Greeks knew

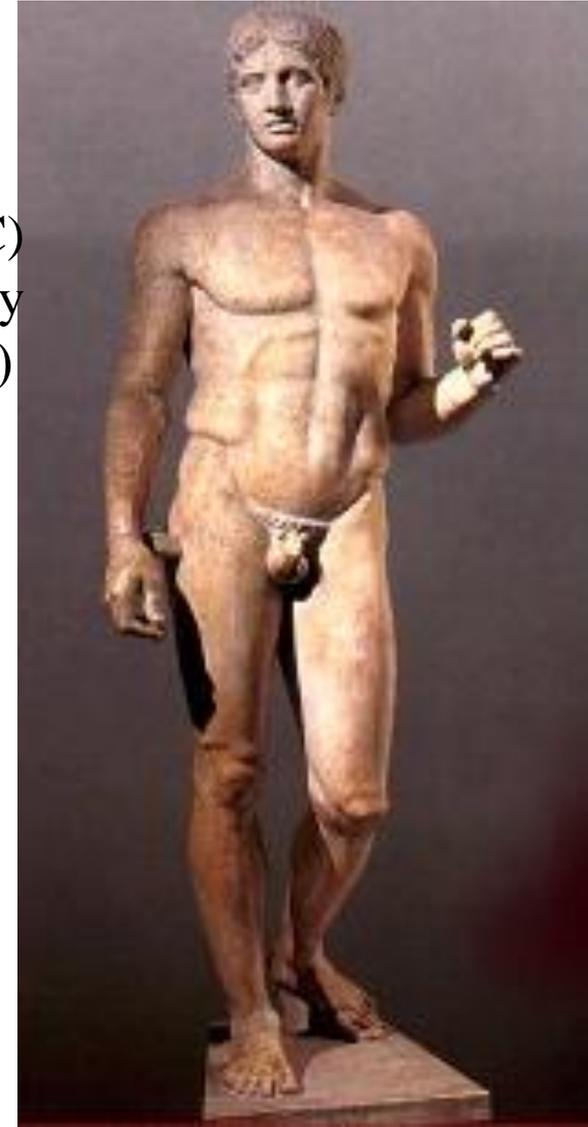
- Greek sculpture



Copy in Rome

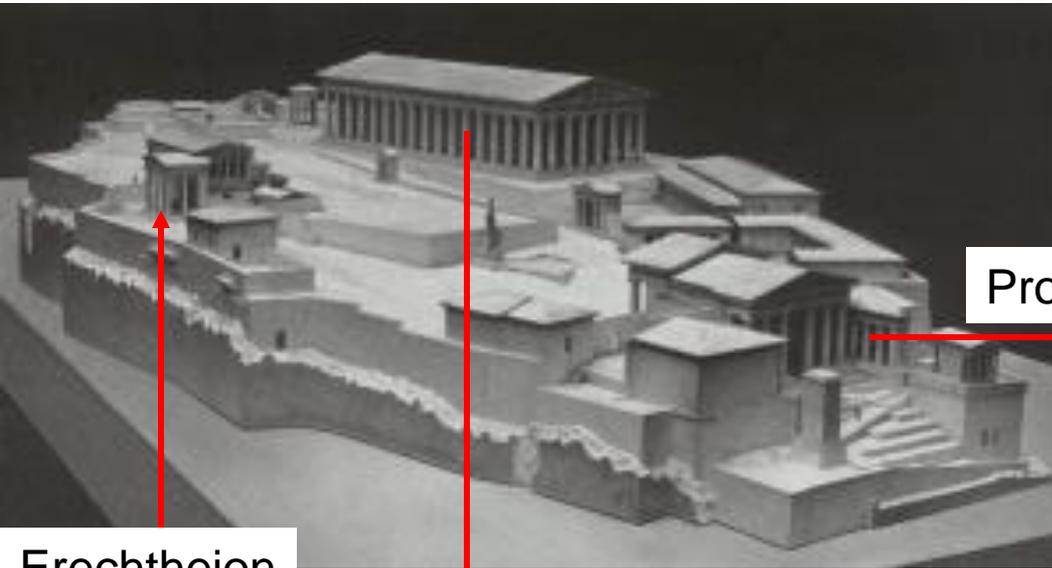
Polyclitus (450BC)  
proportion and symmetry  
("Doryphoros")

Myron (450BC)  
movement  
("Diskobolos")



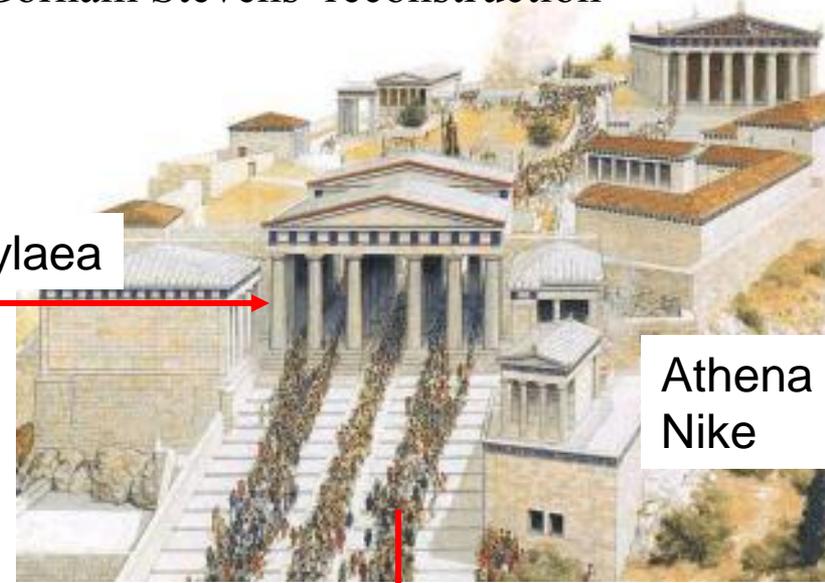
# Acropolis

Gorham Stevens' reconstruction



Erechtheion

Propylaea



Athena Nike

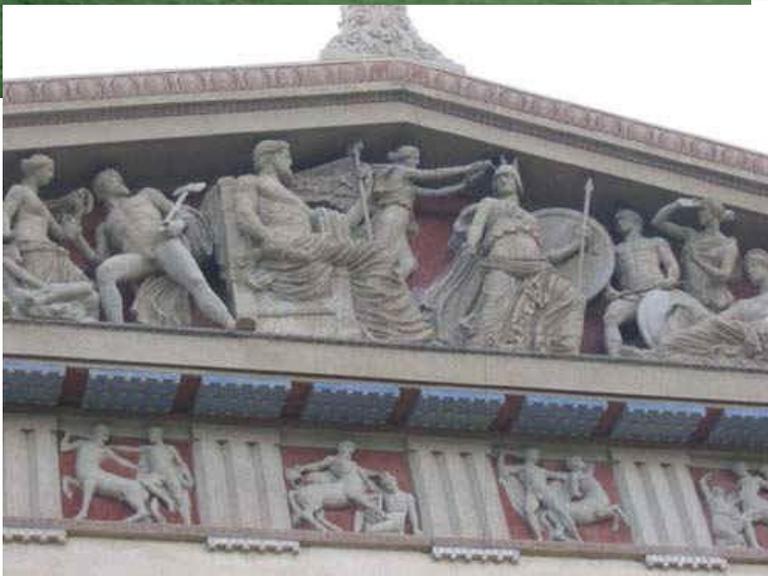
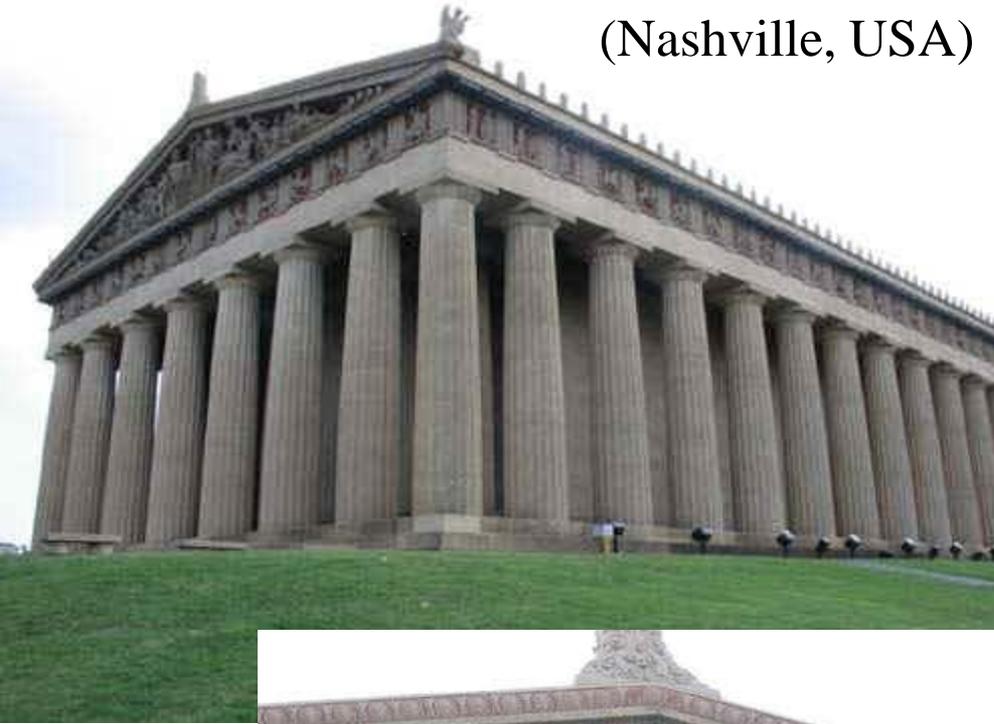


# What the Greeks knew

- Ictinus' and Kallicrates' Parthenon (438 BC)
  - A rectangle of 30.9 m x 69.5 m
  - Golden ratio
  - Not one right angle in the Parthenon
  - Doric columns 1.9 m in diameter and 10.4 m high
  - Phidias: three levels of sculptures
    - Pediment (bigger than life-size)
    - Metopes frieze above the columns (life-size)
    - Frieze at the top of the walls (smaller than life-size)

# What the Greeks knew

(Nashville, USA)





Parthenon's eastern frieze: the Panathenaic procession (first representation of a non-mythological subject on a temple relief)



Reconstruction of Parthenon's East Frieze slabs 4-6  
(Royal Ontario Museum, Toronto, Canada)

# What the Greeks knew

- Athens 431 BC
  - Resident aliens (metoikoi: Thracians, Phrygians, Lydians, Syrians, Jews, Phoenicians, Egyptians, Arabians)
    - Free men
    - No political rights
    - No land ownership
    - Ran the economy
    - Paid taxes
    - 25,000 (male) metics
    - 15-20% of population

# What the Greeks knew

- Athens 431 BC
  - Slaves
    - Athens a slave-based society (from sex to domestic chores to labor)
    - Not free
    - No political rights
    - No land ownership
    - Not based on racial or ethnic grounds
    - Anyone could become a slave (even Plato)
    - Did not pay taxes
    - 100,000 slaves
    - 40-50% of population

# Greek Society

- Athens 431 BC
  - Women
    - No rights outside the household
    - Typical newlyweds: groom over 30 and bride under 16
    - Stereotype: women have strong emotions and weak minds, thus they need to be protected from themselves and men need to be protected from them
    - Every woman had a "kyrios" (guardian): nearest male relative or husband
    - Women could not own property

# What the Greeks knew

- Athens 431 BC
  - Women
    - Only prostitutes, slaves and concubines were allowed to leave the house alone
    - Women could attend only special religious functions for women
    - Women could not socialize with men
    - Women received no education
    - Wives were assumed and expected to be dumb: heteras (call girls and courtesans) were providing the (intellectual, social, sexual) entertainment
    - Men could also use prostitutes, concubines and female slaves