

# A History of Knowledge

## **Oldest Knowledge**

**What the Sumerians knew**

**What the Babylonians knew**

**What the Hittites knew**

**What the Persians knew**

**What the Egyptians knew**

**What the Indians knew**

**What the Chinese knew**

**What the Greeks knew**

**What the Phoenicians knew**

**What the Romans knew**

**What the Barbarians knew**

**What the Jews knew**

**What the Christians knew**

**Tang & Sung China**

**What the Japanese knew**

**What the Muslims knew**

**The Middle Ages**

**Ming & Manchu China**

**The Renaissance**

**The Industrial Age**

**The Victorian Age**

**The Modern World**

# What the Chinese knew

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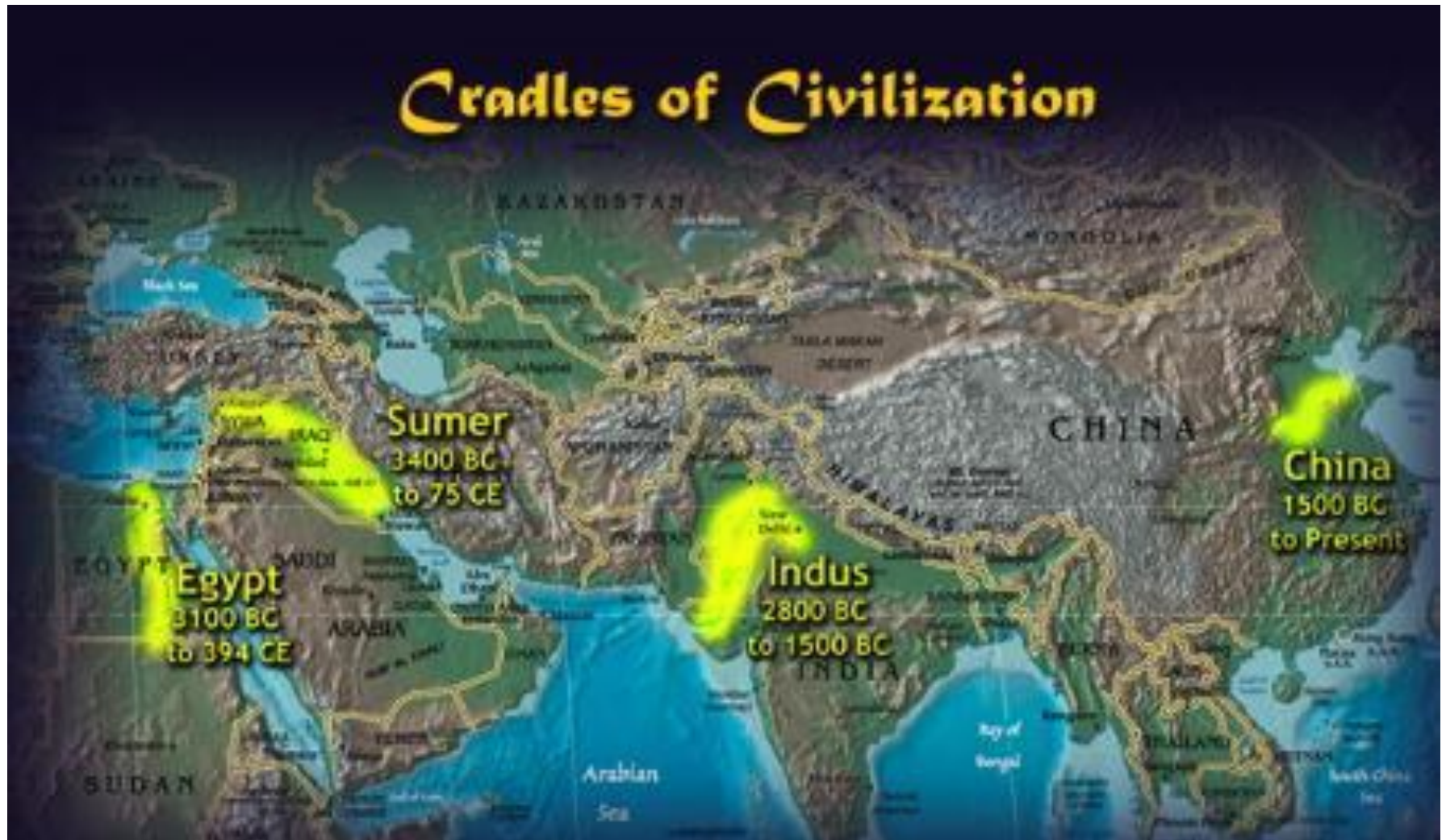
**"shi shi shi shi shi shi shi shi shi shi shi shi shi"**  
**= "the master is fond of licking lion spittle"**  
**(Chinese tonguetwister)**

# What the Chinese knew

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# Ancient Civilizations

## Cradles of Civilization



# Yellow River (Huang He) valley



# The Chinese Empire

- 2500BC: ink, tea and silk are invented
- 2205BC: the Xia dynasty is founded by Yu: Yellow River (Huang He) valley
- 900BC: I Ching/Yi Jing
- 700 BC: the Chinese invent gunpowder
- 500BC: Confucius
- 500BC: Daoism
- 350BC: the period of the "warring states" is characterized by coins, iron weapons, public works (canals, walls)
- 221BC: Qin Shi Huangdi conquers all of China and becomes the first emperor of China (first Great Wall of China, about 5,000 kms)

# The Chinese Empire

- **213BC: Shi Huangdi outlaws all schools of thought except the legalist one, and buries alive 346 scholars**
- **210BC: Shi Huangdi is buried in a colossal tomb near Xian, surrounded by thousands of terracotta soldiers**
- **206BC: the Han dynasty develops bureaucracy**
- **200BC: Mao-tun unites the Huns (Xiongnu, Hsiung-nu) in Central Asia around Lake Bajkal and southeastern Mongolia**
- **121BC: China defeats the Huns**
- **106BC: the Silk Road**
- **100 BC: the Chinese invent paper (made of mulberry)**
- **2 AD: the Han empire has 57 million people, the most populous country in the world**
- **68AD: Buddhism is introduced in China**
- **520: Bodhidharma brings Chan/Zen Buddhism to China**

# Chinese dynasties

- Liangzhu culture 3310 – 2250 BC
- Xia Dynasty 2070-1766 BC
- Shang Dynasty 1766-1122 BC
- Zhou 1122 - 403 BC
- Warring States
- Qin 256-210 BC
- Han Dynasty 206 BC - 220 AD
- Tang Dynasty 618-907
- Sung (960-1279)
- Mongol Yuan 1279-1368
- Ming Dynasty 1368-1644
- Manchu Qing 1644-1911
- Republic 1912-present



# Chinese capitals

- Shang (1600–1046 BC): Anyang
- Western Zhou: Haojing and Fengjing aka Fenghao/ Xi'an (1046–771 BC)
- Eastern Zhou: Wangcheng/ Chengzhou aka Luoyang (771-367 BC)
- Qin (350–206 BC): Xianyang/ Xi'an
- Western Han (206 BC - 9 AD): Xi'an
- Eastern Han (25-190 AD): Luoyang
- Western Jin (265-311): Luoyang
- Eastern Jin (317-420): Jiankang/ Nanjing
- Northern Wei (398-493): Datong
- Southern Dynasties (420-589): Jiankang/ Nanjing
- Northern Wei (493-534): Luoyang
- Tang (618-904): Xi'an
- Northern Song (960–1127): Dongjing/Bianjing/Keifeng
- Southern Song (1127-1276): Lin'an/ Hangzhou
- Jurchen Jin (1153-1215): Zhongdu/ Beijing
- Yuan (1267–1368): Dadu/ Beijing
- Ming (1368-1421): Nanjing
- Ming (1403-1644): Shuntian/ Jingshi/ Beijing
- Qing (1644-1912): Beijing

# What the Chinese Knew

- **China as a land of universal empires**
- **The ecological border between the fertile Chinese land and the arid steppes**
- **All Chinese empires were agricultural empires**
- **The defining feature of the Chinese empire is its unity against the nomads of the steppes**
- **China never conquered the steppes (difficult to grow crops)**
- **The nomads of the steppes conquered China but always assimilated and became part of the agricultural society**

# What the Chinese Knew

- Society as superior to the individual
- Government as a natural phenomenon
- Moral values
- Cyclic patterns
- Neither intolerance for other religions nor quest for material wealth
- But belief in Chinese superiority over other civilizations (China = “Middle Country”)

China: 中国 (chung-kuo)

Chinese: 中文

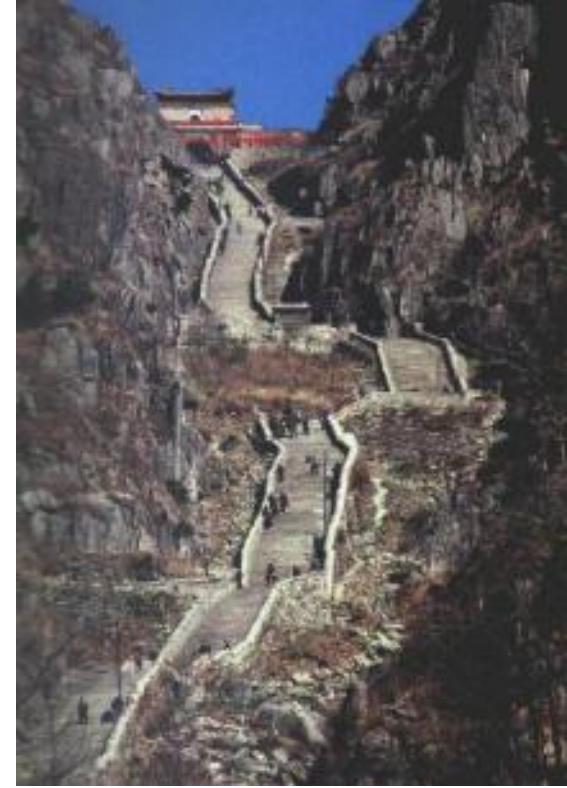
# What the Chinese Knew

- Pseudo-monotheism: Heaven
- Worship of ancestors

# What the Chinese Knew

- **Tai Shan**

- Holy mountain since 3rd millennium BC
- Home of the gods
- A deity in itself, son of Heaven, main communication channel between humans and Heaven
- Temple of the Jade Emperor, heavenly ruler of this world
- Temple of the Princess of the Azure Clouds, daughter of the Jade Emperor



# Mt Taishan



















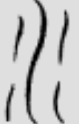
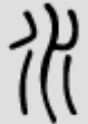
























# What the Chinese Knew

- **Chinese language**
  - **Monosyllabic**
  - **No grammatical inflections: words don't change according to number, tense, gender, case...**
  - **Tonal (“ma” = mother, hemp, horse and curse)**
  - **Many characters were originally pictographs (Note: the original symbol for “tree” represented BOTH branches and roots)**
  - **Many characters are ideograms (Note: the original symbol for “peace” is a woman under a roof)**
  - **Subtle meanings**



# What the Chinese Knew

Oracle Bone Script	Seal Script	Clerical Script	Semi-Cursive Script	Cursive Script	Regular Script (Traditional)	Regular Script (Simplified)	Pinyin	Meaning
						—	rì	Sun
						—	yuè	Moon
						—	shān	Mountain
						—	shuǐ	Water
						—	yǔ	Rain
						—	mù	Wood
						—	hé	Rice Plant



# What the Chinese Knew

- Chinese language

						—	mǔ	Mother
						—	mù	Eye
						—	niú	Cow
						—	yáng	Goat
							mǎ	Horse
							niǎo	Bird
							guī	Tortoise

# What the Chinese Knew

- **Chinese language**
  - **Written language prevails over spoken language (Chinese history is full of very important documents but very few important speeches)**
  - **High rate of literacy**
  - **Written language unifies China (that used to have thousands of dialects)**

# What the Chinese Knew

- Chinese language
  - The language may have shaped the mind:
    - Prevalence of analogical reasoning over deductive reasoning
    - Prevalence of sociopolitical science over natural science

# What the Chinese Knew

- Wu Jing (classics) are placed before shi (history), zi (philosophy), and ji (literature)
  - Classic of Changes (I Ching)
  - Classic of Poetry (305 folk and religious poems)
  - Classic of Rites (ancient rites and court ceremonies)
  - Classic of History (documents and speeches credited to rulers and officials of the early Zhou dynasty)
  - Spring and Autumn Annals (historical record of Confucius's native state of Lu from 722 B.C. to 479 BC)

# What the Chinese Knew

- Holistic approach to mind and body
- Interaction among nature, man, and government (as opposed to supernatural mythology)
- Fundamental unity of the physical, the emotional and the social
- The numbers are the logic of the universe (yin/yang, ten heavenly stems, twelve earthly branches, five elements)
- Five elements: wood, metal, fire, water and earth (corresponding to the dynasties: Xia, Shang, Zhou, Qin...)

# What the Chinese Knew

- **Holistic approach to meaning: a word/symbol is a sound that evokes emotions (not necessarily logical arguments)**
- **Short cryptic sentences are “gestalt”, not a simple statement**
- **Each sentence is all the interpretations it can possibly have**

# What the Chinese Knew

- **Dragons!**
  - Overall benevolent (protect communities and seafares)
  - Main symbol of imperial power



Datong: Nine Dragon Screen

# What the Chinese Knew

- **Milk**
  - **Abhorrence for milk and milk products**



# What the Chinese Knew

- Geography
  - Three great rivers: Yellow (Huang He), Yangtze (Chang Jiang), Pearl/ West (Zhu Jiang/ Xi Jiang)
  - Great fertility of soil from north to south
  - Mountain ranges: Tien Shan, Kwanlun, Hingan, Himalaya
  - Mineral wealth from the mountains
  - Rivers: communications
  - Mountains: protection from "barbarians" (non-Chinese)
  - Northern deserts (Gobi, Takla Makan)
  - A land oriented from west to east (mountains to sea), not north to south

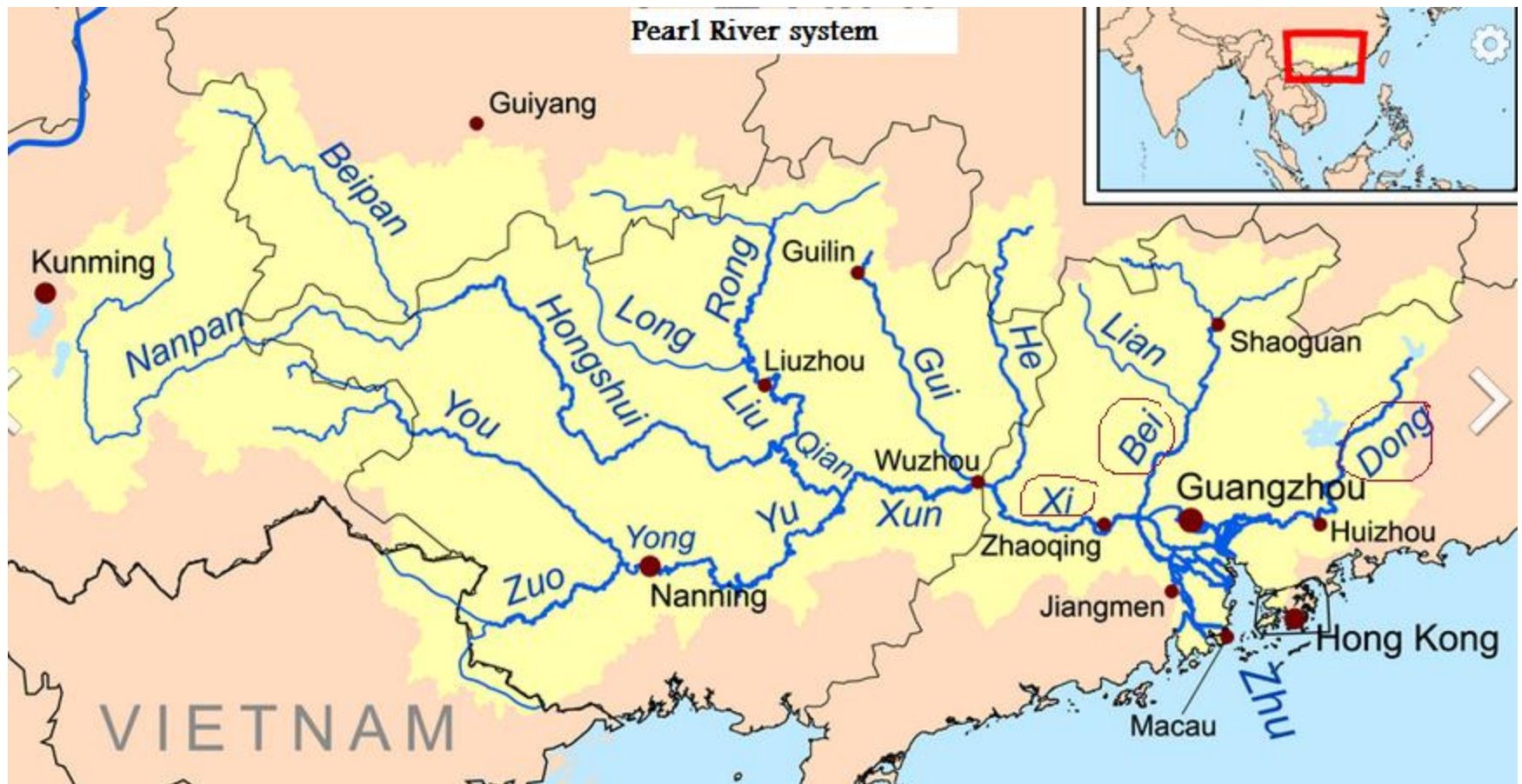
# What the Chinese Knew

- **Geography**



# What the Chinese Knew

- Geography
  - Pearl River



# What the Chinese Knew

- Geography
  - A land of floods
  - The river are dragons (the four dragons of the Jade Emperor)
  - A land divided in two by the Yellow River
    - North: cold and dry (wheat)
    - South: hot and wet (rice)

# What the Chinese Knew

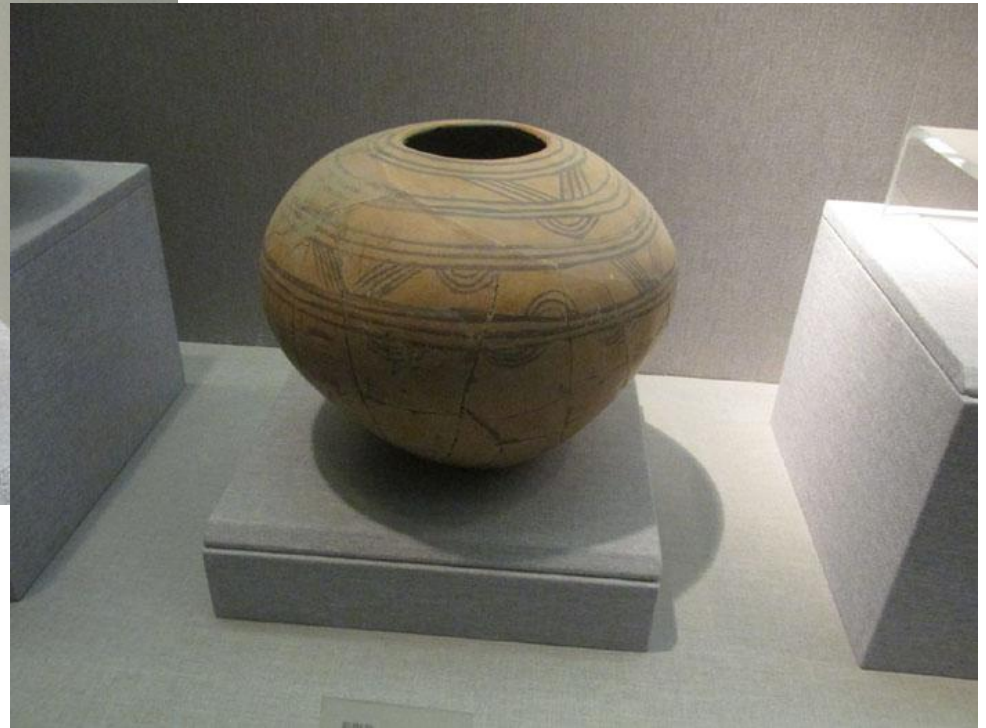
- **Geography**
  - **Yellow River/ Huang He (north): semiarid land protected by the steppes, ideal for millet; shallow river not ideal for navigation, prone to devastating floods**
  - **Yangtze River (south): monsoonal land, ideal for rice; deep river ideal for navigation**
  - **Both originate from Tibet**

# What the Chinese Knew

- Culture Heroes
  - Three huang (early rulers)
  - Five ti (emperors)
  - Inventors of fire, agriculture, fishing, hunting, calendar, medicine, writing
  - The fourth emperor Yao appoints his minister Shun (not his son) as new emperor and Shun appoints his minister Yu as new emperor (meritocracy)

# What the Chinese Knew

- 8,000-7,000 BC



Luoyang Museum

# What the Chinese Knew

- **Chengtoushan**
  - **Most ancient Chinese city (4,000 BC)**
  - **Yangtze valley, northwest of Hunan province**
  - **A city of rice farmers and fishermen**
  - **First paddy field (4,500 BC)**
  - **Rice requires the continual supply of water of a river (unlike wheat that relies on rainfall)**
  - **Irrigation of paddy fields requires large-scale cooperation (unlike wheat cultivation that can be more individualistic)**
  - **No deforestation because it would disrupt the water cycle that is vital to rice cultivation**
  - **Rice/fish civilization needs to coexist with nature as opposed to control nature (wheat/livestock civilizations)**

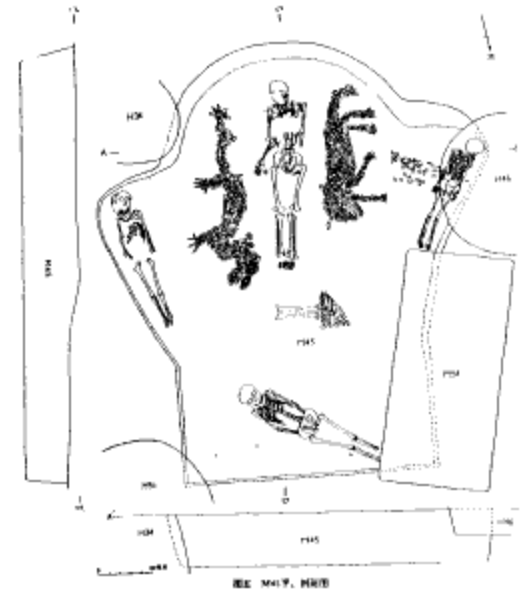


# What the Chinese Knew

- Yangshao culture (Henan and Shaanxi provinces)
  - 5000 BC - 3000 BC
  - Yellow River plateau
    - No bronze
    - No horse
    - No writing
  - Belief in the afterlife (utensils in graves)
  - Cemeteries
  - Matrilineal society
  - Painted pottery



# What the Chinese Knew



Tomb 45 of Xishuipo (Puyang, Henan):  
Dragon and tiger images made of clamshells next to corpse

# What the Chinese Knew

- Banpo (occupied since about 4,500 BC)
  - Yangshao culture
  - Matriarchal society (you know who your mother is, not who your father is)
  - Fishing and agriculture
  - Painted pottery
  - Math?
  - Burial of the dead
  - The xun, the oldest musical instrument
  - Mysterious language

# What the Chinese Knew

- Banpo

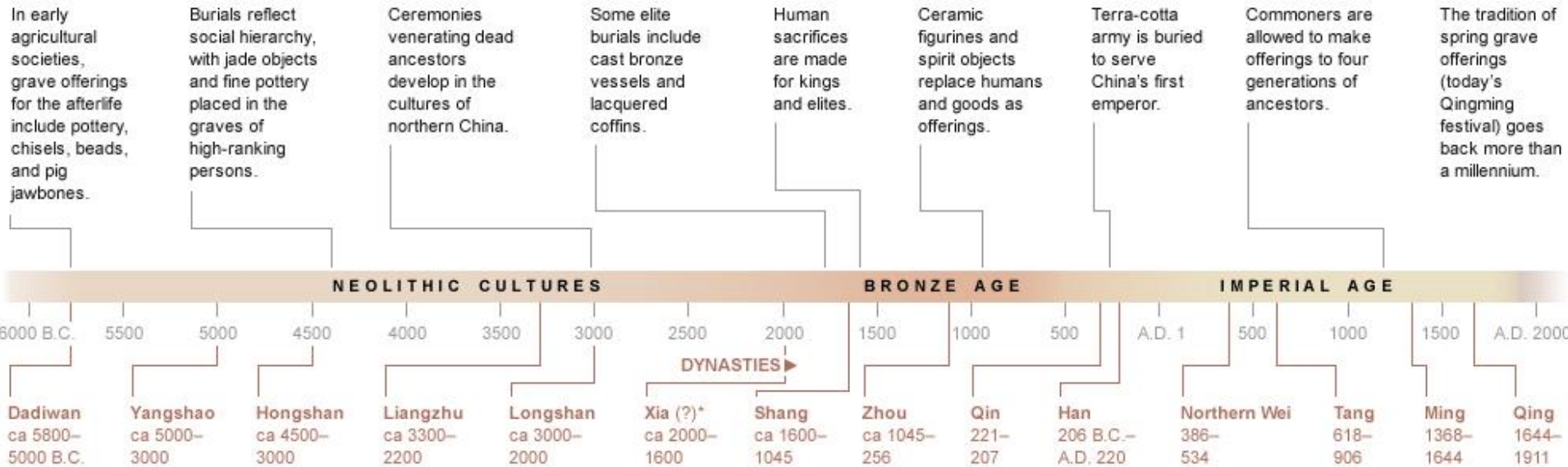


Banpo Museum (near Xian)



# What the Chinese Knew

## CHINESE BURIAL TRADITIONS



SELECTED CULTURES AND DYNASTIES SHOWN  
 \* CHINA'S LEGENDARY FIRST DYNASTY

NGM MAPS. NG ART. SOURCES: PATRICIA EBREY, UNIVERSITY OF WASHINGTON; ROWAN FLAD, HARVARD UNIVERSITY; LOTHAR VON FALKENHAUSEN, UCLA

# What the Chinese Knew

- Lungshan/ Longshan culture (Shandong province)
  - 5,000-2,000 BC
  - Yellow River plains
    - Bronze in 2000BC
    - No horse
    - No writing
  - Walled cities
  - Matrilineal society
  - Ancestor cult
  - Silk
  - Black pottery
  - Divination(bones)



# What the Chinese Knew

- Liangzhu culture
  - 3310 – 2250 BC
  - Southeast China (Tai Hu Bandao peninsula near Shanghai)
  - Jade
  - Human sacrifice
  - Large-scaled rice cultivation



Liangzhu's ritual jade disc  
(Metropolitan Museum)



Jade objects of 3000 BC  
(Art Institute of Chicago)



# What the Chinese Knew



Batad, Philippines (2,000 BC)

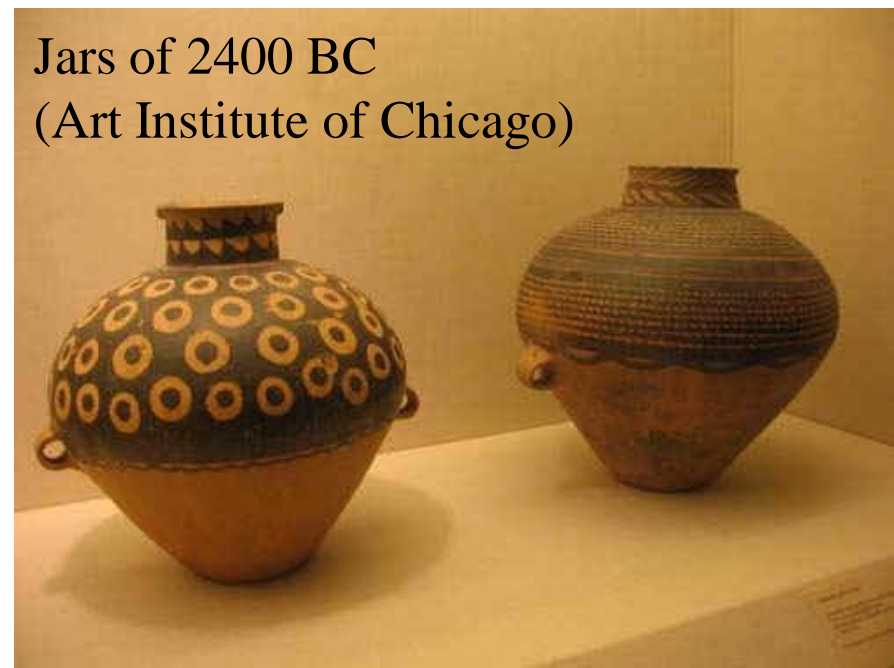


# What the Chinese Knew

- Majiayao culture
  - 3100 – 2700 BC
  - Earliest artifacts of copper and bronze in China



Jar of 3000 BC  
(Art Institute of Chicago)



Jars of 2400 BC  
(Art Institute of Chicago)

# What the Chinese Knew

- Mythical emperors
  - Fuxi invents hunting, fishing, writing and music
  - Shennong invents agriculture, trade and medicine
  - Huangdi (Yellow emperor, 2600 c BC?) invents boats, clothing, ceramics and calendar
  - Yao (2300 BC?) invents flood control
  - Shun (2200 BC?)

# What the Chinese Knew

- Xia/Hsia dynasty (2070-1600 BC or 2200-1750 BC or 1900-1300 BC)
  - Mythological first dynasty
  - Legendary founding father of the Yellow River civilization: Yu the Great, a water engineer
  - Capital in Erlitou village (Henan province)?
  - Erlitou: furnace for smelting bronze



Jue from Erlitou

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - From northern China
  - Chinese-speaking descendants of Lungshan neolithic peoples
  - **Chariot**-riding warrior elite (military aristocracy)
  - Centralized absolutism



Chariot from royal tomb in An-yang (11<sup>th</sup> c BC)

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Capital in Zhengzhou until ~1300 BC
  - Capital in Anyang from ~1300 BC
  - The Shang king is both
    - General (warrior)
    - High priest (performed religious ceremonies)
    - Calendar regulators (to determine the right time to plant and harvest)
    - Manager of bronze production, and of copper and tin mining (bronze is used for weapons and for chariots)

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Sophisticated bronze technology (supercedes jade as status symbol)
  - But bronze too expensive for tools (that remain made of wood and stone)
  - Cowrie shell as coins



# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Shang king Pangeng establishes his capital at Yin near An-yang (14th c. BC)
  - Royal tombs (pits)
  - Belief in afterlife
  - Aristocrats and servants buried with the king



Tomb of Fu Hao

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Oldest known form of Chinese writing for divination purposes, using more than 2,000 characters
  - Chinese alphabet (writing, about 1,300 BC)
  - Over 3,000 characters found on divination bones
  - Dating system: ten-day week and 60-day cycle



# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Evolution of Chinese writing
    - Pictographs for words referring to objects
    - Ideographs (combination of pictographs to express a concept)
    - Phonetic signs (pictographs “borrowed” in other words because of the sound they represented)
    - Disambiguation signs
    - Top to bottom, right to left

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Oracle bones for divination
  - Intermediaries (shamans) between humans and spirits
  - Human sacrifice (widespread)
  - Slavery (widespread, mostly war prisoners)
  - Supreme god Ti/Di or Shangdi (上帝)
  - Royal ancestors subordinate to Ti
  - The king as the son of Heaven
  - Cult of ancestors



# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Shang villages near the Yellow River (Huang He)
    - central walled area with large buildings
    - villages, each specialized in a different craft
    - underground pit houses

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Succession from elder brother to younger brother and then to the oldest maternal nephew
  - Matriarchal elements survive from an older age
  - Capital at Yin, near Anyang (1395BC)
  - No creation myth: no need to explain the universe, no need to explain where the Chinese race came from
  - Many gods: royal ancestors, nature spirits, high god Di

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - Kings buried in large cruciform graves with scores of human victims and horses, including five chariots and their charioteers



# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - The tomb of consort Fu Hao (1250 BC) at Anyang



Turquoise inlaid ivory cup  
(Chinese Academy of  
Social Sciences Institute of  
Archaeology)



# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - The tomb of consort Fu Hao (1250 BC) at Anyang Yinxu contains
    - 16 human bodies (prisoners of war?)
    - 468 bronze objects including 130 weapons, 23 bells, 27 knives, 4 mirrors, and 4 tigers or tiger heads (total 1.6 ton)
    - 755 jade objects (often tigers)
    - 63 stone objects
    - 5 ivory objects (from the royal menagerie of elephants)
    - 564 bone objects including nearly 500 bone hairpins and over 20 bone arrowheads
    - 11 pottery objects
    - 6,900 pieces of cowry shell

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - First woman and first man: Nuwa and Fuxi



# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - 1300 BC: first known writing in China (probably invented independently of Mesopotamia)
  - Alphabet of three thousand characters, partly pictorial and partly phonetic
  - Emphasis on predicting the future (divination bones to ask ancestors questions)
  - Mystery of Chinese alphabet: it is easier for a Chinese child to learn Chinese using pinyin (the phonetic romanization) than the Chinese characters

# Shang Oracle Bones



Will it rain tomorrow?



Will the eastern land enjoy a good harvest?



King Hsin' prayers for victory as he undertakes a punitive expedition against the Yu

# Shang Oracle Bones



Oracle bone script graphs turned 90 degrees:

horse, tiger, swine, dog, rat, elephant, predator, turtle, bed, to lead, illness

# What the Chinese Knew

- Shang (1766 BC - 1122 BC)
  - 1900 BC: first known calendar of China
  - Sexagenary cycle (gānzhī) to record events: 2 interlocking cyclical characters, 10 celestial names and 12 terrestrial names



Shang bronze of 12th c BC  
(unusually an animal)  
(Art Institute of Chicago)



Shang bronze of 12th c BC  
(Art Institute of Chicago)

Shang bronze of 13th c BC  
(Art Institute of Chicago)



Shang bronze of 13th c BC  
San Francisco Asian Art Museum

# Shang Bronze Objects



Bronze vessel, Shang, 1200 BC  
Miho Museum, Kyoto



Bronze vessel, Shang, 1100 BC  
San Francisco Asian Art Museum



Shang bronze vessel of 11th c BC (Boston Museum of Fine Arts)



Shang bronze vessel of 11th c BC (Beijing Museum of History)



Shang animal-shaped wine vessel of the 8th-5th c BC (Beijing Museum)



Shang lamp of the 5th-3rd c BC (Beijing Museum)

Shang owl-shaped wine vessel (Beijing Museum)



# What the Chinese Knew

- Contemporary to Shang
  - Sanxingdui (Sichuan province)



Bronze tree



2.6 meter bronze statue



# What the Chinese Knew

- Contemporary to Shang
  - Xingan/ Dayangzhou Chengjia tomb (almost as rich as Fu Hao's tomb)
    - Over 1,000 jade artefacts
    - 54 bronze vessels



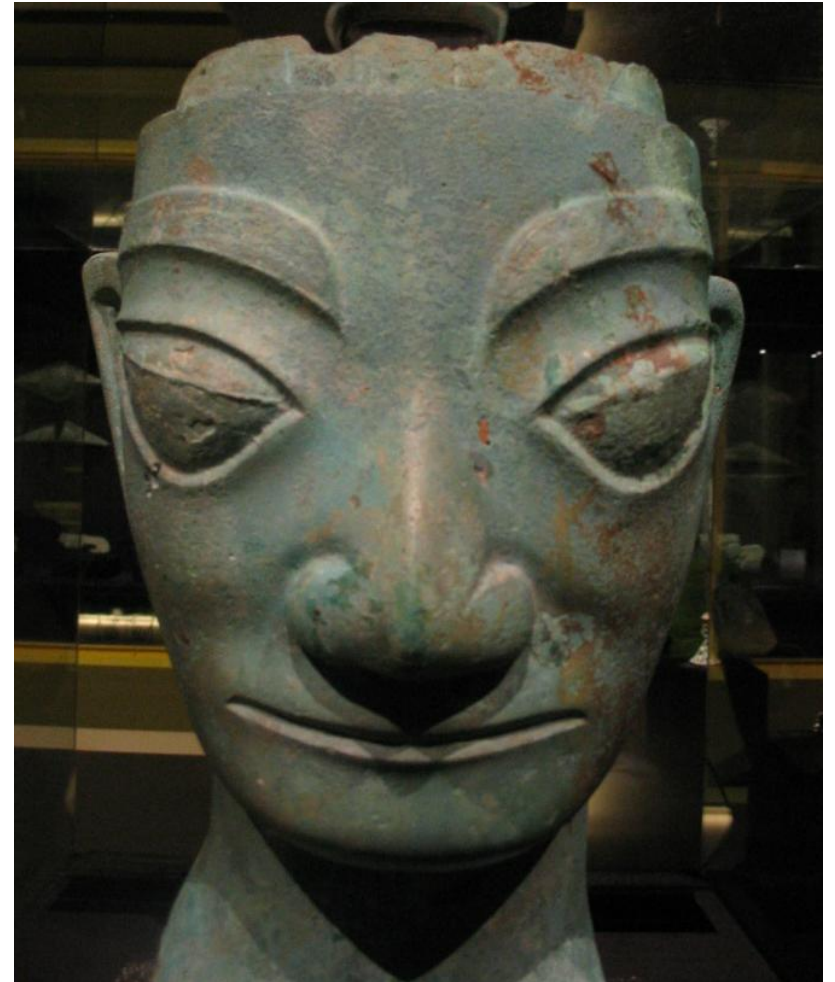
Jiangxi Provincial Museum

# What the Chinese Knew

- Shu (13th-11th BC)
  - Sanxingdui, Sichuan province
  - Bronze and jade artifacts
  - Sophisticated textile industry

# What the Chinese Knew

- **Shu (13th-11th BC)**



Heads

# What the Chinese Knew

- **Shu (13th-11th BC)**



Masks

# What the Chinese Knew

- **Shu (13th-11th BC)**



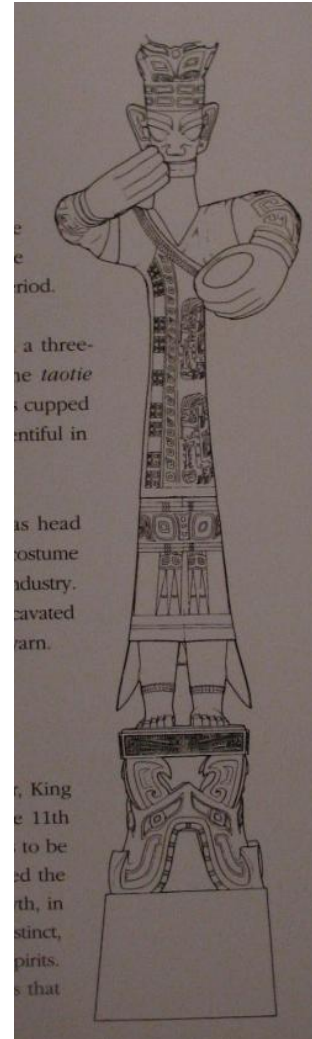
Masks

# What the Chinese Knew

- **Shu (13th-11th BC)**



Four-meter tall bronze tree



Lifesize human statue

# What the Chinese Knew

- Zhengzhou
  - Central Plains, Henan
  - Largest urban center of the Bronze age

# What the Chinese Knew

- Zhou/Chou (1122 BC - 403 BC)





# What the Chinese Knew

- Zhou/Chou (1122 BC - 403 BC)
  - Chinese-speaking descendants of Lungshan neolithic peoples
  - From western China expansion through the Yangtze River
  - Longest-lived dynasty of Chinese history
  - Idealized model for subsequent dynasties
  - Early rituals are military in nature, with an emphasis on archery and chariots


# What the Chinese Knew

- Zhou/Chou (1122 BC - 403 BC)
  - Decentralized feudal rule (federation of city-states, parceling out of conquered territories among relatives and friends)
  - Father-to-son succession system (definitive demise of the ancestral matriarchal system)
  - Capital at Haojing (southern part of Xian) and Luoyang (771BC)


# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Mandate of Heaven (tien-ming): the cosmos is dominated by Heaven (tien) which bestows the emperor (the son of Heaven) with the power to rule over the empire (tien-hsia)
  - Heaven is the ancestor of the emperor (and originally anthropomorphic)



Chinese Bronze script for *tian* 天   
"heaven"



Chinese Oracle script for *tian* 天   
"heaven"

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Supreme god (Tien or Ti) becomes more abstract and less “divine” (a cosmic principle, not an anthropomorphic deity)
  - Creation myth: the world originated from the corpse of the primordial being Pan-ku/ Pangu (when he died his flesh became the earth, his blood the rivers, his bones the mountains and his hair the stars)



# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Government's function is to provide peace, order and prosperity: Heaven wants humans to live harmoniously (both among themselves and with the rest of the universe)
  - Government should be humane and compassionate

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Royal tombs: square earthen pyramids
  - Tomb of Count of Yu near Xian (950-900 BC)
    - Over 2,700 bronze objects
    - 4 musical instruments
    - over 100 chariot parts
    - 11 pieces of pottery
    - over 280 jade and stone objects



Bronze elephant



Bird vessel



Bronze ding

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Classes: bureaucrats, farmers, artisans, merchants (no priests, no intellectuals/artists)
  - Merchants despised (a new class that emerges thanks to economic boom)
  - Optimistic age: this life is all that matters, and it can always be improved

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Silk (2,600 BC)
  - Coal (1,000 BC)
  - Gunpowder (700 BC)
  - Glass (600 BC)
  - Iron (513 BC)
  - Technological and organizational advances in agriculture (the "well-field" system)
    - The Grand (Jinghang) Canal (486 BC)



# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Bronze animals
  - Clay figurines (“ming-chi”) of animals and objects for tombs (instead of the actual animals and objects)
  - Laquered wood



Zhou bronze vessels of 11th c BC  
(Boston Museum of Fine Arts)

Zhou bronze of 12th c BC  
(Art Institute of Chicago)



Lacquered wood, late Zhou  
(Cleveland Museum)



# What the Chinese Knew

- Zhou (1122 BC - 403 BC)



Bronze vessel, Zhou, 1000 BC  
Miho Museum, Kyoto



Lampstand of 4th c BC  
(Miho Museum, Kyoto)

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - The universe is a single whole/organism, with no beginning and no end, and is divided in three main realms: an all-powerful Heaven (tien), Earth and Human
  - Polytheism: the world is inhabited by a multitude of spirits (one for each natural phenomenon) and ghosts
  - Humans have two souls, one that sinks into Earth and one that rises into Heaven
  - The supernatural is natural

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Religion is natural philosophy: no holy wars, crusades, jihad, etc, no fear of damnation, no anxiety of salvation, no prophets, no dogmas
  - Shamanic heaven is on Earth
    - There are wonders on Earth
    - There are dangers in the Otherworld

# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - 771 BC: Western barbarians sack Zhou's capital and the Zhous move their capital east to Luoyang
  - Beginning of “Spring and Autumn period”
  - Eastern Zhou age is plagued by endemic disunity and chaos
  - Disintegration of central authority

# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - States at the periphery of the empire emerge to the expense of the central states
    - Qi (modern Shandong)
    - Qin
    - Yen (modern Beijing)
    - Chu
    - Wu
    - Yueh



# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - However, it is also a golden age of creativity
  - Iron replaces bronze for weapons and tools
  - Agricultural revolution
    - Ox-drawn plow
    - Large-scale irrigation
    - Transport canals

# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - Economic growth
  - Rapid growth of trade
  - Copper coins
  - Merchants emerge as a powerful class but are considered inferior to warriors, peasants and artisans

Coins of 265BC





# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - State of Qi
    - Reforms of Guan Zhong (7th c BC)
      - Uniform tax system
      - State monopoly of salt and iron
      - Qi becomes the most powerful of the feudal states
  - State of Wei
    - Earliest written law code
  - State of Wu
    - Sun-tsu/ Sunzi writes “The Art of War” (5th c BC)

# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - State of Lu
    - 594: Peasants are required to pay taxes instead of providing labor

# What the Chinese Knew

- Eastern Zhou (771 BC - 403 BC)
  - Decline of aristocracy and rise of meritocracy
  - Armies made of ordinary people
  - Modernization of agriculture (iron plough)

# What the Chinese Knew

- Zhou (1122 BC - 403 BC)
  - Yang and ying
  - I Ching/Yi Jing
  - Qiu Kong/ Confucius (native of the Zhou heartland)
  - Daoism
  - Legalism (7th c BC): totalitarian regimentation of society to serve the interest of the state

# What the Chinese Knew

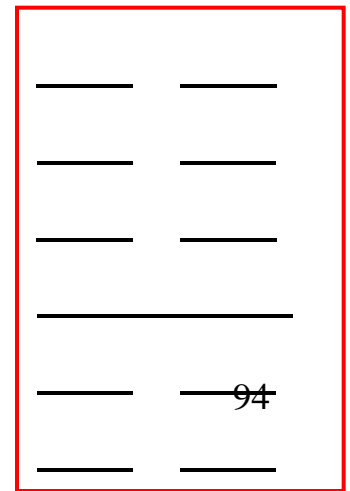
- Zhou (1122 BC - 403 BC)



Confucius and Laozi  
(Shandong tomb)

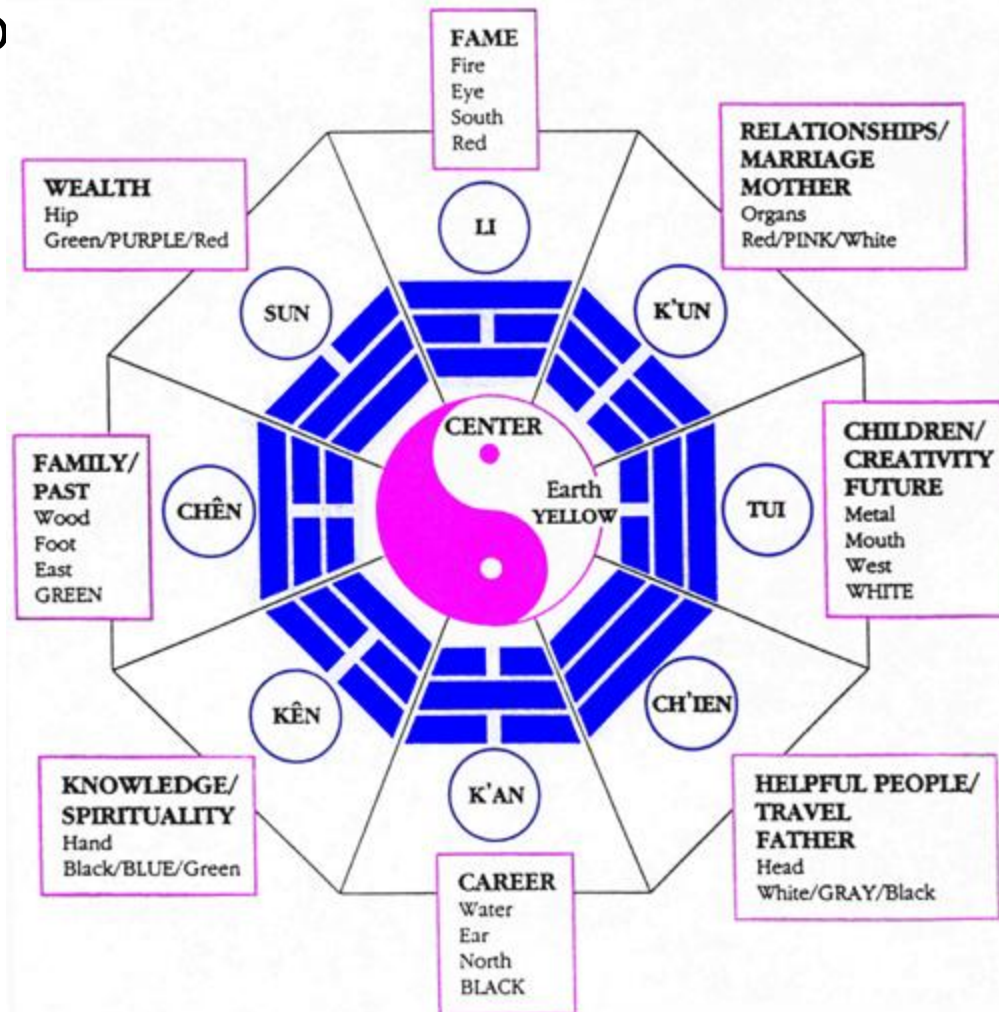
# What the Chinese Knew

- I Ching/Yi Jing Book of Changes (900 BC)
  - 64 symbolic hexagrams, each hexagram consisting of a pair of trigrams chosen from a family of eight basic trigrams, each named for a natural phenomenon
  - The eight trigrams represent the possible combinations of Yang and Yin, or unbroken and broken lines
  - Divination and numerology
  - Commentaries on change
  - "Yin" (quiescence)
  - "Yang" (movement)



# What the Chinese Knew

- I Ching/Yi Jing Book of Changes (900 BC)
  - Feng Shui: arranging sp harmony



# What the Chinese Knew

- Changzhou museum for 8<sup>th</sup> c BC – 5<sup>th</sup> c BC



# What the Chinese Knew

- “Shijing or Shih-ching/ Book of Songs”
  - 305 poems (11<sup>th</sup> to 7<sup>th</sup> centuries)
  - One of the 5 classics with Shujing/ Book of Documents, Liji/ Book of Rites, I Ching/Book of Changes and Spring and Autumn Annals

# What the Chinese Knew

- Qiu Kong/ Confucius/ Kung Fu-tzu (500 BC, Shandong)
  - Lun Yü (Analects)
  - Shih Shu (Four Books)
  - Philosophy of social organization
  - Literal objective: ethical basis for family
  - Abstract objective: social harmony through moral values
  - All humans are born alike
  - Human nature is not evil or good, humans become evil or good
  - The power of example



# What the Chinese Knew

- Qiu Kong/ Confucius/ Kung Fu-tzu (500 BC, Shandong)
  - Ideal: the “junzi/ chun tzu”, ideal person, humanity at its best, superior not because of his ancestry but because of his knowledge and accomplishments
  - Confucius played two instruments

# What the Chinese Knew

- Confucius
  - Cultivation of the self
  - Ultimate goal of an individual's life: self-realization through socialization
  - Method to transform the ordinary individual into a superior man (“chun tzu”)
  - Foundations: yi (righteousness, fairness) and ren/jen (love, kindness, virtue, benevolence)
  - Yi includes “shu” (reciprocity: don't do to others what you would not want done to yourself)
  - Greed is source of evil
  - Limitation of self-interest

# What the Chinese Knew

- Confucius
  - Regularity and morality
  - Public = private
  - Duty of obedience of the subordinate to the superior (ruler, father, husband) contingent upon benevolence and care of the superior for the subordinate (subject, child, wife)
  - Benevolent ruler
  - Government by example of virtue (by moral education)
  - Transformative power of education
  - Indifferent to gods

# What the Chinese Knew

- Confucius
  - Individual happiness is inseparable from collective happiness
  - The “world” is the kingdom
  - The history of the world begins with the creation of the kingdom (not interested in the creation of the universe)

# What the Chinese Knew

- Confucius
  - Confucius' religious revolution: it is not sacrifice and ritual that matters but behavior towards the other members of society (duty)
  - The Upanishad's religious revolution in India: it is not sacrifice and ritual that determines one's fate in the afterlife but dharma/duty

# What the Chinese Knew

- Confucius
  - A woman has to obey her father, her husband and even her son



# What the Chinese Knew

- Confucius
  - Early Zhou was the golden age of China

# What the Chinese Knew

- Lao-tzu/ Laozi (520 BC)
  - Daoism
  - “Dao-te Ching/ Dao De Djing ” (The Virtue of the Way)
  - The “Dao” (the “way”): ultimate unity that underlies the world’s multiplicity
  - The “Dao” underlies the continuous flow and change of the world
  - The way things do what they do
  - Understanding the “Dao” means identifying the patterns in the flow and change of the world (harmony with nature)

# What the Chinese Knew

- Lao-tzu/ Laozi (520 BC)
  - The fundamental pattern is the cycle
  - The cycle is due to the interplay of yin and yang
  - Contraries are aspects of the same thing

# What the Chinese Knew

- Lao-tzu
  - Philosophy of nature
  - Change is inherent in nature (not caused by a god)
  - "Dao" (empty void of infinite potential) is the supreme being
  - "Qi" is vital energy in constant flux that arises from the "Dao"
  - "Yin" and "Yang" are opposites that harmonize to direct the movement of Qi
  - Everything is made of yin and yang
  - Matter = energy (matter "is" Qi)

# What the Chinese Knew

- Lao-tzu
  - Action through inaction (wuwei, flow with the natural order)
  - Primacy of “feminine” behavior (yin)
  - Advocates a return to infancy (yin)
  - Hostile to civilization/progress and ahistorical
  - Critique of Confucianism:
    - Spontaneous behavior vs calculated behavior (eg, rituals, education, learning)
    - Government is an obnoxious interference with nature

# What the Chinese Knew

- The “Six Classics” (canonized by the Han dynasty)
  - Four books of Confucianism/ Shih Shu/ Ssu Shu
    - Lun Yü (Analects)
    - Daxue (Great Learning)
    - Zhongyong (Doctrine of the Mean)
    - Mengzi (Mencius)
  - Two books of Daoism
    - Dao-te Ching (The Virtue of the Way)
    - Zuangzi/ Chuang Tzu

# What the Chinese Knew

Founders of major religions



# What the Chinese Knew

- Mozi (Mo Tzu or Mo Ti, b 470BC)
  - Anti-Confucianism
  - Heaven/God and spirits ensure the world's moral order (instead of Confucius' atheism)
  - Utilitarianism: moral values are determined by the welfare of the community (towards general utility and away from general harm)
  - But humans are selfish and cannot understand what is good for them as a whole
  - Organized society is to be preferred over the original state of nature for utilitarian reasons
  - Absolute obedience and rigid discipline are required



# What the Chinese Knew

- Mozi (Mo Tzu or Mo Ti, b 470BC)
  - Proto-socialism, proto-democracy
  - Mutual love (ai) produces mutual profit (li)
  - War is the worst ill (built anti-war militia specialized in defensive warfare)
  - Universal love and pacifism
  - Universal love (one loves all fathers like his own father) can be achieved only by rulers who respect the Heaven (pseudo-monotheism)
  - Universal unbiased love (same love criteria for everybody) instead of Confucius' "partial love" (more love for one's own family than others)

# What the Chinese Knew

- Mozi (Mo Tzu, b 470BC)
  - Pragmatic view of language - its social function: guiding and coordinating group behavior
  - A word is defined by a way to shi (is this/right) and to fei (is not this/wrong) in using it. Society should prefer the shi/fei practice of natural 'will' toward benefit (and against harm)

# What the Chinese Knew

- Mohist canon
  - politics
  - military
  - philosophy
  - ethics
  - logic
  - science
- Had the Mohist school won over the Confucian school, China may have undergone a scientific revolution before the West

# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - 403 BC: Zhou officially recognizes Han, Zhao and Wei as states
  - Anarchy: Chinese nadir to Zhou's golden age
  - Iron weapons replace expensive bronze weapons
  - **Peasant foot soldiers** replace the aristocratic charioteers
  - Much larger armies, much broader bloodshed and destruction
  - Cavalry armed with **crossbows** replaces the chariots



# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Cast iron
  - Coins

# What the Chinese Knew

- Mencius/ Meng-zi (b 371BC, Shandong)
  - “Mengzi” (second book of Confucianism)
  - Systematization of fragmentary Confucian philosophy into an organic and rational ethico-metaphysical doctrine Government is an exercise in ethics

# What the Chinese Knew

- **Mencius/ Meng-zi (b 371BC)**
  - **Anti-utilitarian: government should not be guided by profit but by righteousness**
  - **Five moral principles govern the relationship between ruler and subject: sovereign and minister, father-son, elder-younger brother, husband-wife, elder-younger friend**
  - **Five moral values: benevolence, propriety, justice, wisdom, faith**

# What the Chinese Knew

- Mencius/ Meng-zi (b 371BC)
  - Human nature (xing) was generated by Heaven
  - Heaven is good, therefore human nature is also good
  - All humans are equally good by nature
  - If people live a relaxed, orderly life, their good nature prevails
  - Humans should seek out their "lost child's mind" (good nature)



# What the Chinese Knew

- Mencius/ Meng-zi (b 371BC)
  - If the ruler cannot provide that orderly life, the people are relieved of their duties towards the ruler
  - If an uprising deposes the ruler, it means that Heaven has withdrawn the mandate

# What the Chinese Knew

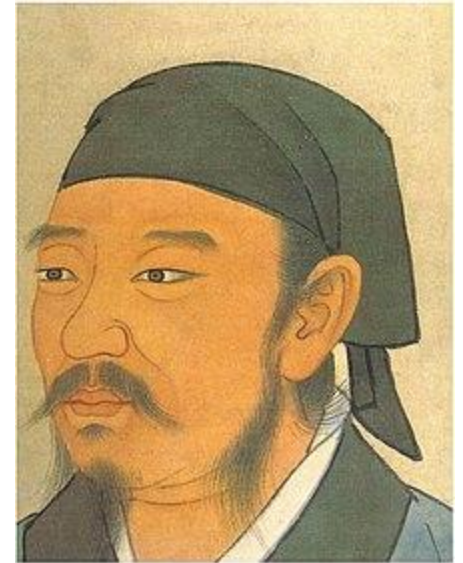
- Zhuang Zhou: “Zhuangzi/ Chuang Tzu” (330BC)
  - Second classic of Daoism
  - Everything is good in nature
  - *“If one asks about the Dao and another one answers it, neither of them knows it”*
  - *“Long long ago, Zhuangzhou became a dancing butterfly in his dream. He was so happy that he forgot he was Zhuangzhou. When he woke up he was sad to find that he was still Zhuangzhou. But the following question confused him: ”Did Zhuangzhou become a butterfly in his dream? Or did a butterfly become Zhuangzhou in its dream?”*

# What the Chinese Knew

- “Zuangzi/ Chuang Tzu” (330BC)
  - Daoism is ultimately relativism
    - Truth depends on the perspective
    - Words have meaning only insofar as they are part of a context (contextual semantics)
    - The "butterfly" model of life: am I piero dreaming of a butterfly or a butterfly dreaming of piero? They are interchangeable.
    - Death is life, and life is death. They are interchangeable.
    - Perfect knowledge avoids the duality of this world
    - “The perfect man is pure spirit”

# What the Chinese Knew

- Xun Kuang/ Xunzi (born 313 BC)
  - Confucian philosopher
  - Rhythmic writing
  - Human nature is evil
  - Legalism



# What the Chinese Knew

- Great Learning/ Da Xue (3rd c. BC)
  - Third book of Confucianism
  - Political program, from educating people to world peace
  - The order of the state is based on the order of the family which is based on the order of the individual

# What the Chinese Knew

- Doctrine of the Mean/ Zhong Yong (3rd c BC)
  - Fourth book of Confucianism
  - Metaphysical foundation
  - Unity of man and Heaven (Tian)
  - Zhong = equilibrium; Yong = harmor. 周 朝
  - Xing (human nature) is from Tian
  - To follow Xing is to follow the Dao

# What the Chinese Knew

- Gongsun Long/ Kung-sun Lung (b 320BC)
  - Naming ("a white horse is not a horse")
- Kung-sun Yang: "Shang-chun Shu/ Book of Lord Shang" (300 BC)
  - Oldest legalist treatise

# What the Chinese Knew

- Xun-zi/ Hsun-tzu (b 300BC)
  - Human nature is evil
  - Human instinct leads to conflicts and therefore must be curbed
  - Goodness must be learned (fundamental role of teachers in society)
  - All humans are equally uncivilized by nature
  - Goodness must derive from society's action (wei)
  - Human nature (xing) is both innate (evil) and acquired (good) because of desires
  - Human selfishness requires draconian laws ("legalism")



# What the Chinese Knew

- Demise of legalism
  - Favors impersonal laws to “educate” the people
  - Little attention to civil law to protect the citizen from the tyrant
  - Rule by impersonal law viewed less favorably by the Chinese than rule by a moral emperor
  - Opposite trend of the West (that trusts impersonal laws over the tyrant’s judgment)

# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Music (64 musical instruments found in the Tomb of Marquis Yi of Zeng)
  - Dance
  - Beginning of painting

# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Poetry
    - Chu Yuan (332 BC): lush and verbose poems (chu-tzu style)
    - Shih style (folk songs)

# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Medicine
    - The cause of illness is an imbalance of yin and yang
    - Acupuncture
    - Herbs
    - Mawangdui medical manuscripts (buried in a tomb of 168 BC but dating from the 3rd century): oldest text of anatomy in the world

# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Astronomy
    - Astronomers estimate the year to be 365 and half days
    - Record of eclipses
    - Compass

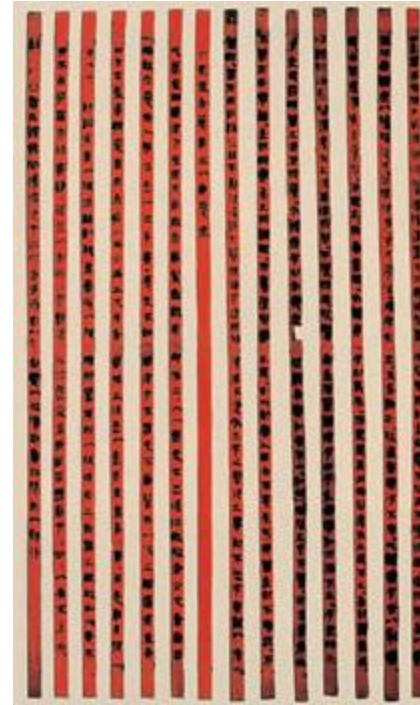
# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Books
    - Guodian Chu Slips, the oldest book in the world (804 bamboo slips from the Guodian tombs in Jingmen, Hubei Province)



# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Books
    - Shuihudi Qinmu zhujian (1155 bamboo slips from tomb no 11 of scribe Xi, Hubei province near Wuhan) includes
    - Biannianji chronicle from 306 BC to 217 BC
    - Divination manuals
    - “18 laws of the Qin” on agriculture, stables, granaries, currencies, markets, artisans



# What the Chinese Knew

- Civil war/ Warring states (403 BC - 256 BC)
  - Written languages of the various states diverge



## The God of the River

*With you I wander the Nine Rivers.  
The whirlwind and the waves arise.  
Riding the water chariot with the roof of lotus leaves,  
I am drawn by two dragons and a hornless serpent.  
Climbing on K'un-lun Mountains I look in the four directions.  
My spirit wanders over the face of the deep.  
The day is waning. Bemused, I forget my home.  
I am dreaming of a distant shore.  
In a fish-scale house, in a hall of dragons,  
Under a purple-shell gateway, in a palace of pearl,  
O spirit, why do you dwell in the waters?  
Riding the white tortoise, chasing the spotted fishes,  
I wander with you among the small islets.  
The swift-flowing freshet comes swirling down-river.  
With a gentle bow you turn towards the East.  
So I escort the beautiful one to the south anchorage.  
Wave after wave comes to welcome me;  
Multitudes of fishes bid me farewell.*



Chu Yuan (332 BC)

# What the Chinese Knew

- Qin/Ch'in (256BC - 210 BC)
  - Based in the Wei Valley (Shaanxi and Gansu provinces, west of Xian)
  - 361 BC: reforms of Gongsun Yang
    - Legalism instead of Confucianism (strict laws and severe punishments)
    - abolition of feudalism
    - agrarian reforms
    - reward for farming productivity
    - enticements for foreigners to settle in Qin
    - New capital at Xianyang

# What the Chinese Knew

- Qin/Ch'in (256BC - 210 BC)
  - 256 BC: Qin defeats and annexes Zhou, ending the Zhou dynasty after 800 years of rule
  - Fei Han's "Han Feizi" (treaty of legalism) inspires Qin emperor Shih Huangdi
  - 250 BC: Buwei Lu appointed prime minister of Qin and engineers the ascent of 13-year-old Zheng Ying to emperor of Qin (247 BC)
  - 221 BC: Si Li's "Memorial on Annexation of Feudal States" advises Shih Huangdi on how to divide the empire in prefectures ignoring the feudal aristocracy

# What the Chinese Knew

- Qin/Ch'in (256BC - 210 BC)
  - 221 BC: First unification of China (the Western word “Cina” derives from “Qin”)
  - It creates the expectation that China should always be unified in one empire
  - Practical application of the Legalist political and military organization
  - First ruler of China to use the name reserved for the legendary first emperors (Shih Huangdi = “first emperor”)

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Defeudalization: centralization of Chinese government in a non-feudal, non-hereditary, bureaucracy
  - Meritocracy (emphasis on merit, not on inherited status)
  - Tyranny

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Large-scale projects
    - The first Great Wall (221 BC, from Lintao to Liaodong, about 5000 kms, to protect from the Xiongnu, to the north of today's Great Wall)
    - Palaces
    - 6000 kms of roads (imperial highways radiating from Xianyang, 228 BC “Straight Road” from Xianyang to Inner Mongolia)
    - Canals: Lingqu in the south, Zheng Guo near Xi’an, Dujiangyan irrigation system in Sichuan (designed by Li Bing)
    - Scientific and technology progress

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Water management
  - Cheng-kuo/ Zheng Guo Canal (246 BC) irrigates area north of Xian
  - Sichuan provincial governor Li Bing (272 BC) builds waterworks on the Min River to irrigate eastern Sichuan (“Dujiangyan”)
  - Ling Chu/ Lingqu (219 BC), a canal through the mountains dividing north and south China, which connects the waterways of the Yangtze to the waterways of the Xi River and to the sea (the “Magic Canal”)

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Tripartite division of power (administration, military, censorship)
  - Eunuchs
  - Elimination of social classes
  - Freehold farmers
  - Merchants despised as unproductive
  - Slaves (prisoners of war, criminals, debtors)



# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Sophisticated law code (derived from Gongsun Yang)
    - “18 laws of the Qin” on agriculture, stables, granaries, currencies, markets, artisans in the Shuihudi Qinmu zhujian (1155 bamboo slips from tomb no 11 of scribe Xi, Hubei province near Wuhan)
  - Taxation based on fu (compulsory military service) and zu (land tax)
  - However, the first emperor paints himself as a Confucian wise man and believes in Daoist magic for immortality

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Standardization of the Chinese script -> fosters a national literature
  - Standardization of weights and measures
  - Intellectual persecution of non-legalist schools (burning of books)
  - Art: Cast bronze vessels, non-representational (decorative)

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Imperial journeys to visit his empire (seven stone stelae)
  - 220BC: from Xianyang to Gansu
  - 221BC: from Xianyang to Taishan (Shandong)

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Main crops in the north: millet, wheat, hemp and beans

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Burial customs

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Shihuangdi
    - 221 BC: unifies China
    - 221 BC: begins construction of new royal palace at Xianyang, the Epang/Ebang
    - 212 BC: begins construction of his own tomb/mausoleum
    - 210 BC: dies
    - 209 BC: Popular uprising led by peasants, the first major popular revolt in China's history
    - 202 BC: Liu Bang wins the Battle of Gaixia and establishes the Han dynasty

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Shihuangdi's tomb
    - 7,500 life-size terra-cotta soldiers (individual faces)
    - Horses
    - 1,400 chariots and mounted soldiers
    - Objects of silk, linen, jade, bone, iron, bronze
    - Bows, arrows, spears, swords
    - Additional chamber with more than 1,300 ceramic figures of foot soldiers, chariots, and cavalry
    - Note: the tomb itself has not been excavated yet
    - The people who designed and built the tomb were buried with the emperor

# What the Chinese Knew

- Qin (256BC - 210 BC)
  - Terracotta soldiers of Xian
  - Bronze chariots of Xian







What the Chinese Knew

Piero Scaruffi

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