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
Ming and Manchu China

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1300-1900

"shi shi 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

- Bibliography:
  - Charles Hucker: “China’s Imperial Past” (1975)
  - Sherman Lee: A History of Far Eastern Art (1973)
  - Wolfgang Bauer: China and the Search for Happiness (1976)
  - Joseph Needham: Science and Civilisation in China (1954)
  - Jonathan Spence: “The Search for Modern China” (1990)
What the Chinese knew

• Insert pictures of Asian Art Museum
Chinese dynasties

• 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 1912-1949
• Communists 1949-present
The Chinese Empire

- 1368: the Ming dynasty is founded by a Chinese peasant and former Buddhist monk turned rebel
- 1380: Hungwo disbands the central administration and assumes absolute power
- 1409: Yung Lo moves the capital from Nanjing to Beijing
- 1421: construction of the Forbidden City begins in Beijing
- 1500: 100 million people live in the Ming empire
- 1644: the Manchus invade northern China and take Beijing, overthrowing the Ming and establishing the Qing dynasty
The Chinese Empire

• Not a far-flung empire but an organism that grows
  – Over the centuries China has expanded its empire by assimilating neighboring people not colonizing distant lands
  – A controllable empire: unified culture, concentrated power, defensible homeland
  – 1368-1644: 276 of peace and stability
  – Emphasis on tradition, not on innovation, that leaves China behind
What the Chinese Knew

• Ming (1368-1644)
  – Founded by a commoner
  – Emphasis on improving the lot of the poor and humbling the rich
  – Tyranny
  – Abolition of slavery
  – Confiscation of large estates
  – Extensive system of public education (national university and private academies)
  – Scholar-officials as natural leaders of society
  – But eunuchs establish a parallel government
  – “Censors” control the civil bureaucracy
What the Chinese Knew

• Ming (1368-1644)
  – First capital in Nanjing, shifting the center of mass towards the Yangtze river
What the Chinese Knew

• Ming (1368-1644)
  – Late Ming emperors
What the Chinese Knew

• Ming (1368-1644)
  – Donglin Shuyuan/Academy (founded in 1604, near Shanghai) dominates imperial bureaucracy
  – Restoration Society (1629)
  – Because academies have political power, they had little motivation to discover new theories: they simply trained more statesmen
What the Chinese Knew

- Ming (1368-1644)
  - Ho Hsin-yin (1517) organizes a utopian, egalitarian, self-regulated commune
What the Chinese Knew

• Ming (1368-1644)
  – 1600: Ming China is the largest nation in the world
  – Chinese confident of their cultural superiority over the rest of the world
    • 720,000 sheets of toilet paper are produced for the use of the court (Bureau of Imperial Supplies, 1393)
  – Population increases back to 100 million in 1500 and 200 million in 1600
  – Largest metropolis: Suzhou/ Soochow
  – Wealth as the main determinant of social status
  – Sao-chiao dominant religion
What the Chinese Knew

• Ming (1368-1644)
  – Wandi reign (1572-1620)
    • Isolated lifestyle of the emperor gives power to court eunuchs
    • Japanese invasion of Korea (1590s)
    • Trade with Europeans and USA (textile trade based in Manila, Philippines)
  • Economic growth disrupts traditional economic patterns
What the Chinese Knew

• Ming (1368-1644)
  – Wandi reign (1572-1620)
    • Massive influx of silver into China thanks to trade with Spain and Portugal (silver from the American colonies)
    • Massive drop of silver when Dutch and British prevail over Spanish and Portuguese
    • Peasants conduct trade in copper but still have to pay taxes in silver
What the Chinese Knew

• Ming (1368-1644)
  – Shipbuilding: 2000 new ships built between 1403 and 1419 including 250 long-distance 500-sailor ships
  – Still: the navy is a luxury, not a necessity
What the Chinese Knew

- Ming (1368-1644)
  - Kangnido map (1402)
  - Seven voyages of Zheng He/ Cheng Ho (1405-33)
    - A Chinese Muslim eunuch
    - Largest wooden ship ever built
    - Vietnam, Java, Sumatra, Malaysia, Thailand
    - Sri Lanka, India, Bangladesh
    - Persia, Yemen, Mecca
    - Somalia, Kenya
    - Legend that he brings gifts to foreign countries (not true)
What the Chinese Knew

• Ming (1368-1644)
  – Europeans travel to loot
  – Chinese travel to display the magnificence of their civilization (they bring presents for their vassals)
  – The Chinese don’t need anything that the rest of the world has (China is the only civilized country in the world)
  – Every tributary state worsens China’s trade deficit
  – The Chinese only bring back “curiosities”
  – 1449: Punishment for Chinese who venture abroad
Seven voyages of Zheng He

Model of Zheng He's ship, the largest ship ever built (150 m long) (Shisan Ling)
Gugong/ Forbidden City in Ming times
What the Chinese Knew

• Ming (1368-1644)
  – 1411: New Grand Canal completed with the Heaven Well Locks that guarantee travel even in dry seasons
  – 1419: Ocean shipbuilding halted
  – 1421: construction of the Forbidden City
  – 1433: Shipbuilding halted and sea travel forbidden
What the Chinese Knew

• Ming (1368-1644)
  – China had the knowledge, the technology and the power to conquer the world but instead forbade contact with foreign lands
  – Reasons: xenophobia, due to being a monocultural empire
  – No industrial revolution because abundance of cheap labor makes machines irrelevant
What the Chinese Knew

• Ming (1368-1644)
  – Portugal establishes the colony of Macao (1557)
  – Jesuits evangelise in China (1583)
  – Foreign trade a government monopoly
  – Silk from China traded for silver from South America in Manila (Spain)
  – Overseas merchants confined in Canton
  – Timur’s conquests (1400) cause the break down of the Mongol trade routes to the West
  – More knowledge about China in the West than knowledge about the West in China
What the Chinese Knew

• Encyclopedias
  – “Encyclopedia of the Yung-lo/ Yongle Period” (1407): 22,877 volumes compiled by more than 2,000 scholars
What the Chinese Knew

- Wang Yang-Ming/ Shou-jen (b1472)
  - Neo-Confucian Lu-wang school
  - Emphasis on individualism (individual intuition as the guiding rule of life)
  - Emphasis on meditation (but Buddhist meditation is to eliminate all desires whereas Wang’s meditation is to achieve virtue)
  - Moral virtues are part of the individual mind's intuitive knowledge
  - Unity of knowledge and action
    - Intuitive knowledge is the source of right action
    - Right action is the natural outcome of intuitive knowledge)
What the Chinese Knew

- Wang Yang-Ming/ Shou-jen (b1472)
  - Holism
  - “The great man regards Heaven and Earth and the myriad things as one body, the world as one family, and the country as one person”
  - The objective stance of people who investigate the objects of the world is the wrong stance, because it fails to appreciate the unity of nature
  - Things have an identity only inside the human mind, whereas in nature they have no particular identity
  - It makes no sense to investigate objects as objects, but it makes sense to investigate objects as products of our mind.
What the Chinese Knew

- Wang Yang-Ming (b1472)
  - Understanding the universe makes no sense, understanding the human mind makes sense
  - Virtue = knowledge
  - Humans have innate understanding of what good is
  - Goodness has to be reached inside, not be taught from outside
  - Then goodness will extend outside (eg, love)
What the Chinese Knew

• Yangming Wang (b 1472)
  – Neo-Confucian (Dàoxué) philosopher, official, calligraphist and general during the Ming dynasty
  – Wang challenged Zhu Xi's interpretation of the Great Learning
  – Unity of knowing and acting: it is not true that one must first know and only then can one act
  – The minds of all humans form one body with the rest of the universe
What the Chinese Knew

- Yangming Wang (b 1472)
  - “The master of the body is the mind”
  - “What the Mind generates are Thoughts”
  - “The object of Thoughts is Knowledge”
  - “Thought is about Objects”
What the Chinese Knew

• Ming (1368-1644)
  – Tsung-shu (collections of classics): "Yung-lo Ta-tien" (1407) collection of 12,000 volumes of classics
  – Drama
    • Most famous chuan-chi is Tang Hsien-tsu/Xianzu (1550): "Ma-tan ting/ Peony Pavilion"
What the Chinese Knew

• Ming (1368-1644)
  – Fiction
    • Boom of the novel, with several 2000-page novels
What the Chinese Knew

- Ming (1368-1644)
  - Fiction
    - Novels (colloquial-language fiction)
      - Lo Kuan-chung (1330): "San-kuo chih yen-i/ Romance of the Three Kingdoms" (first published in 1522)
      - Shih Nai-an (14th c): "Shui-hu chuan/ Water Margin" (first published in 1540) best loved Chinese novel
      - Wu Cheng-en (1506): "Hsi-yu chi/ Pilgrimage to the West" (fantastic/allegorical novel)
      - Wang Shih-ch'en (16th c): "Chin Ping Mei/ Golden Lotus" (erotic novel)
What the Chinese Knew

- Ming (1368-1644)
  - Colloquial tales
    - Feng Meng-lung (1574)
  - Literary tales
    - Pu Sung-ling (1640): "Liao-chai chih-i/Strange Stories from an Eccentric's Studio" (1740)
What the Chinese Knew

- Ming (1368-1644)
  - Landscape painting: Chou Tuan (1368)
  - Bamboo painting: Hsia Chang (1388)
  - Landscape painting: Shen Zhou (1427)
  - Landscape painting: Li Tsai (14?)
  - Wen Zhengming/ Wen Cheng-ming (1470)
  - Calligraphy/painting: Hsu Wei (1521)
  - Calligraphy/painting: Tung Chi-chang (1555)
  - Landscape painting: Fan Ch’i (1616)
What the Chinese Knew

• Ming (1368-1644)
  – Zhe realism of Hangzhou

"Elegant Gathering in the Apricot Garden" (1437?)
What the Chinese Knew

Ming (1368-1644)
– Shen Zhou (1427)
  • Founder of the Wu school of Suzhou: abstract dreamscapes

"Anchorage on a Rainy Night" (1477)
Shen Zhou (b. 1427)  Hsu Wei (1521)  Tung Chi-chang (1555)
Baiyuan, Beijing: Visit to the West (1443)

Li Tsai
Tokyo Museum 275x104 cm hanging scroll
"Living Aloft: Master Liu's Retreat" (1543) by Wen Zhengming
"Tang emperor Xuanzong's flight to Shu"

"Travelers in a Wintry Forest"
What the Chinese Knew

• Representations of daily life

Portrait (15th c)  
(National Museum of Taiwan)

Chiu Ying: Detail of a scroll (1540)  
(National Museum of Taiwan)
What the Chinese Knew

- Buddhist art

Eleven-faced bodhisattva
Avalokitesvara
What the Chinese Knew

- Buddhist art

Eleven-faced bodhisattva
Avalokitesvara
What the Chinese Knew

- Buddhist art

Avalokitesvara
What the Chinese Knew

• Ming (1368-1644)
  – “Blue and white” porcelain made possible by blue cobalt from Persia (the “Mohameddian” blue)

The "Pilgrim" flask (1350), purchased in 2003 for $5,831,500.
What the Chinese Knew

• Ming (1368-1644)
  – Tianan Men (1417)
  – Qian Men (1420)
  – Gugong/ Forbidden City (1420)
    • Imperial palace from 1420-1912
    • 720,000 square meters, 800 buildings and 9,999 rooms
    • The world's largest palace complex
    • The largest collection of wooden structures in the world
    • Construction took 14 years for an estimated 200,000 men
What the Chinese Knew

- Ming (1368-1644)
  - Little interest for science
  - 1578: Italian Jesuit Matteo Ricci in China brings portable clocks as presents to the emperor
  - 1629: Jesuits correctly predict an eclipse and gain the trust of the emperor (that asks them to translate Western books and build telescopes)
  - The Chinese emperor expects clockmakers to build entertaining automata, not time-keeping machines
What the Chinese Knew

• Matteo Ricci’s map of the world (1602)
What the Chinese Knew

• Ming (1368-1644)
  – Little interest for science
    • The calendar was an imperial institution. It changed with every new dynasty.
    • Astronomy serves the emperor’s need to read the will of Heaven
    • Astronomy also determines which wives/concubines sleep with the emperor on a given night
    • Astronomy is a secret of state
    • Japan starts building watches when in China watches are still toys for emperors
What the Chinese Knew

• Ming (1368-1644)
  – Tiantan/ Temple of Heaven (1420)
    • Praying Heaven for good harvest
    • Three tiers (man, Earth, Heaven)
    • Top tier with nine rings of groups of tiles in multiples of nine
    • Stairs and railings also made up of stone slabs in multiples of nine
    • Nine = Yang = Heaven
What the Chinese Knew

Ming (1368–1644)

- Gugong/ Forbidden City (1420)
- Tiantan/ Temple of Heaven (1420)
- Tianan Men (1417)
- Qian Men (1420)
What the Chinese knew

• Manchus/Qing (1644-1912)
What the Chinese knew

• Manchus/Qing (1644-1912)
  – A small nomadic people rules over hundreds of million of Han
  – Bilingual regime
  – Greatest territorial extent of Chinese empire
  – Five nations under heaven: Han, Mongol, Manchu/Jurchen, Tibetan, Muslim
  – An empire, just like the European empires
  – “Pacification” and “Unification”
  – The concept of “Chinese” did not exist until the 18th century: Manchus, Mongols and Hans
What the Chinese knew

- Manchus/Qing (1644-1912)
What the Chinese knew

- Manchus/Qing (1644-1912)
What the Chinese knew

• Land empires of 1700
What the Chinese knew

- Manchus/Qing (1644-1912)
  - Manchu warfare (highly mobile cavalry)
  - Mongol script
  - Chinese scholarship and administration
  - Tibetan Buddhism
  - Western learning
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Self-sufficient agriculture
  – Exports: silk, cotton, tea, porcelain
  – Imports: silver
  – 1760: All foreign trade confined to Guangzhou
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Prosperity
  – Population explosion (300 million in 1750, 412 million in 1850, mostly in the south)
  – Education widespread at regional level (decline of the national university)
  – Scholar-officials as collaborating with the foreign oppressors
What the Chinese knew

- **Manchus/Qing (1644-1912)**

  - The Kangxi Emperor (reigned till 1722)
  - Yongzheng Emperor (reigned 1723 –1735)
  - Qianlong Emperor (reigned 1735 –1795)
What the Chinese knew

- Manchus/Qing (1644-1912)
  - Russian-Chinese treaty of Nerchinsk, first Chinese treaty with a European nation (1689)
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Lagging firearm technology (cannons imported from Portugal)
  – Free-trade ideology from the USA (1800)
  – Boom of Chinese exports (tea, silk, ceramics) to the west (paid in silver)
  – Opium only western good that the Chinese want to buy
  – Contact with foreigners brings new crops (maize, potatoes, peanuts) sustain population growth, but also land deforestation and utilization near saturation (probably reached around 1750)
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Maps

Map of the world from “Hai-kuo wen-chien lu/ A Record of Things Seen and Heard” (1730)

Homann Heirs
Map of Asia (1730)
What the Chinese knew

- Manchus/Qing (1644-1912)
  - Water transport is the backbone of trade
    - Yangtze Kiang to the caravans of Mongolia
    - Yangtze Kiang from Szechuan to the coast
    - Grand Canal (Yangtze to North China)
    - Kan river (Fulkien to Canton)
    - Coast from Manchuria to Southeast Asia
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Wealth gap (lavish lifestyle of the salt monopolists)
  – Rapidly growing class of the dispossessed (no land, no jobs)
  – Sao-chiao dominant religion
What the Chinese knew

• Manchus/Qing (1644-1912)
  – The long skirt (Beijing: qipao, Shanghai: changshan, Canton: cheongsam)
  – Fashionable until the "Cultural Revolution"
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Neo-Confucianism: philological rediscovery of the original texts of the classics, before the Sung-Ming interpreters added their own biases ("school of Han")
    • Philology: Ku Yen-wu (1613), Tsui Shu/Tung-pi (1740)
    • Encyclopedias of classics
What the Chinese knew

- Manchus/Qing (1644-1912)
  - Colossal encyclopedias
    - “Gujin tushu jicheng/ Ku Chin Tu Shu Chi Cheng/ The Chinese Encyclopedia of Ancient and Modern Times” (1725) in five thousand volumes
    - "Ssu-ku Chuan-shu/ Library of Four Treasures" (1770): collections of religious, historical, philosophical and literary classics (employed thousands of copyists for 20 years)
    - "Huang Ching ching-chieh" (1829): 366-volume compendium of classics
What the Chinese knew

- Dai Zhen/ Tai Chen (1724)
  - “Inquiry into Goodness” (1766)
  - Matter (chi) is all that exists, li is only the way it looks like to us
  - Each person’s nature is different from other persons
  - A person’s nature is her knowing mind
  - People’s natures consist of yin, yang and the five elemental forces
  - Humans can be good because their knowing minds can understand others
  - Growth of the mind is similar to growth of the body
What the Chinese knew

Qing map
What the Chinese knew

• Zhang Zhidong/ Chang Chih-tung (1898)
  – Marriage of Western technology and Confucian philosophy
What the Chinese knew

• Kang Yu-wei/ Youwei (1902)
  – Classification of different kinds of suffering
  – Suffering is caused by nine “boundaries”
    • Frontiers between countries
    • Social classes
    • Race
    • Family role
    • Job
    • Unjust laws
    • Separation of men from other animals
    • Suffering that causes more suffering
What the Chinese knew

• Kang Yu-wei (1902)
  – Utopia
    • “Great Equality”
    • Only one world language
    • Western technological progress to reduce human labor
    • Proto-communes
    • Liberation of women
    • Only four prohibitions: laziness, cult of personality, competition, abortion
    • Futuristic vision of cities
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Fiction
    • Tsao Hsueh-chin (1724): "Hung-lou meng/ Dream of the Red Chamber" (realist novel)
  – Landscape painting
    • Chu Ta/Pa-ta shan-jen (1626)
    • Tao CHi/ Shitao (1630)
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Landscape painting

Yuan Yao: 1750 Secluded garden (wall size, 12 scrolls) (Boston Museum of Fine Arts)
Yuan Yao: 1744 Epang Palace (Boston Museum of Fine Arts)
What the Chinese knew

• Shitao (b 1630)

10,000 Ugly Inkblots (1685)
What the Chinese knew

- Shitao

The Crosses Torrent, 1699
What the Chinese knew

- Shitao

Landschapes depicting a poem of Huang Yanli (1702)

Sound of thunder in the distance, 1690
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Jade sculptures

(Redwood City, City Hall)
What the Chinese knew

• Manchus/Qing (1644-1912)
  – Souvenirs

(Auguste Borget: “Lamqua's studio” (1845)
What the Chinese knew

- Manchus/Qing (1644-1912)
  - Summer Palace (18th c, destroyed 1860)
  - Summer Palace (1888)
What the Chinese Knew

• **Qing tools**

  - Candleholder of Qing era (Folk Museum of Hangzhou)
  - A window of Qing era (Folk Museum of Hangzhou)
  - Tool to make shoes of Qing era (Folk Museum of Hangzhou)

Hangzhou’s Folk Museum
What the Chinese knew

• Decline of Manchu China
  • “We possess all things. I set no value on objects strange and ingenious, and we have no use for your country’s manufactures” (Qian Long, Emperor of China, 1793, responding to British king George III’s offer of trade)
What the Chinese knew

- Decline of Manchu China
  - 18 provinces of China proper + vassal states of Mongolia, Tibet, Eastern Turkestan, Manchuria, Korea, Annam (Vietnam)
  - Fertile land but overpopulated
  - Mostly rural (80%), village-centered
  - Small allotments of land
  - Intensive farming
  - Frequent famines
  - Tens of millions killed in the internal rebellions (Taiping 1851-64, Nian 1851-68, Muslim 1855-71)
  - Emigration to western USA, Latin America and Southeast Asia
What the Chinese knew

• Decline of Manchu China
  – Opposition mostly organized by secret societies
    • White Lotus Society
    • Taiping
    • Boxers
What the Chinese knew

• Decline of Manchu China
  – Society organized around the family
  – Wives and concubines incorporated into husband's family
  – Oldest male head of the extended family
  – Worship of ancestors
  – Importance of male offspring (thus concubines)
  – Council of the elders (not government officials) administer justice in the village
What the Chinese knew

- Decline of Manchu China
  - Highest social status: scholars
  - Scholars study the past (literature, philosophy, ethics), and are judged based on their knowledge of the past
  - Examinations based on Confucian Analects, Great Learning, Doctrine of the Mean, Book of Changes, Annals, Mencius, etc
  - Hierarchical system of examinations (district, provincial capital, metropolitan capital)
  - Highest degree: Hanlin (admission to imperial academy)
What the Chinese knew

• Decline of Manchu China
  – Little or no interest in science, technology, foreign cultures
  – Emphasis on the past (stability of society), not on the future
  – Past viewed as wisdom for all times (the world as immutable)
  – Little or no contact with other civilizations
  – New ideas viewed as offensive
What the Chinese knew

• Decline of Manchu China
  – Craftsmen and merchants also organized around the family (no industrial revolution, no capitalist/worker employer/employee class struggle)
  – Crafts and trade also regulated by a guild
  – The entire economic life of the Chinese empire was self-regulated
What the Chinese knew

• Decline of Manchu China
  – Superstitious beliefs in good and evil spirits still widespread despite Buddhism, Taoism and Confucianism (all of them deified)
What the Chinese knew

• Decline of Manchu China
  – Syncretic folk religion
    • Heaven as the supreme force of nature
    • But Buddha as the supreme force of human affairs
    • Heaven for punishment, Buddha for mercy
    • Heaven omnipotent, but not always good and not always fair (his imperfection causes evil)
What the Chinese knew

• Decline of Manchu China
  – 1557: Portugal establishes a trading post in Macao
  – 1575: Spanish traders
  – 1583: Matteo Ricci, Jesuits
  – 1604: Dutch traders
  – 1624: the Dutch introduce the Chinese of Formosa (Taiwan) to opium
  – 1637: British traders
  – 1715: the East India Company opens a factory in Canton
  – 1724: the Manchus forbid missionary activities
  – 1752: the Manchus limit trade with westerners to a small guild of Chinese merchants, the Co-Hong
  – 1757: The Manchus limit all trade to southernmost port of China, Canton (and Macao)
  – 1784: USA traders
  – 1800: the Manchus forbid importation of opium
What the Chinese knew

• Decline of Manchu China
  – Britain and USA main trading partners of China (British traders are organized under the East India Company, USA traders are individuals)
  – One-sided trade: Chinese do not desire western goods (huge trade surplus, paid in coins and gold)
  – Chinese believe that the world depends on their exports
  – Chinese believe that they are culturally and morally superior: Celestial Empire vs "yi" (barbarians)
  – British break Chinese trade surplus by starting triangular trade: sell to China goods bought in other (Asian) countries
  – Opium (from India) is the most requested good by Chinese, even after it was banned
What the Chinese knew

- Decline of Manchu China
  - 1830: China has a trade deficit for the first time in its history
  - 1834: Britain ends the monopoly of the East India Company but replaces its emissary with a politician who represents political (not commercial) interests
  - 1840-42: Opium war and Treaty of Nanjing (Hong Kong to Britain, five ports open to trade including Shanghai, end of the Co-Hong monopoly)
  - France helps Britain, while USA and Russia befriend China
What the Chinese did not know

- Most civilizations liked to explore new worlds. The Chinese almost never did, even if they had the technology.
  - The Polo brothers went to China, but no Chinese went to Venice.
  - The Portuguese and English explored the coast of China, but the Chinese rarely explored other coasts, not even Japan's
  - Indian monks traveled to China, but Chinese monks or philosophers did not usually travel to India
What the Chinese did not know

- European/Christian tradition: subordination of nature to humans
- Chinese/Animistic tradition: subordination of humans to nature
What the Chinese did not know

- Why did Chinese empires last so long?
  - The (meritocratic) civil service examination system limited access to power by aristocrats and other wealth-holders who could have challenged the status quo
What the Chinese did not know

- Why did the Chinese empire collapse?
  - Isolation
  - Confucianism
  - Europe (and, to some extent, Japan) was fragmented in a multitude of ever competing states, while China was one monolithic empire that did not need to compete
What the Chinese did not know

- When did China’s technological and scientific decline begin?
  - Thesis 1: 15th century with the trade closures and voyage bans
  - Thesis 2: 17th century with China’s failure to develop science
  - Thesis 3: The Ming (and later the Qing) discouraged commerce
- Traditional view: Tang (619-907) and Song (960-1279) represent the peak of Chinese creativity
What the Chinese did not know

- When did China’s decline begin?
  - Thesis 4 Yasheng Huang (MIT) & Wei Hong (Tsinghua): the decline began in the 6th century
  - The peak of China’s creativity: Han-Sui interregnum (220-580 AD)
  - The second most creative period: the Warring States period (475 BC – 221 BC)
What the Chinese did not know

• When did China’s decline begin?

Empires are bad at inventions
What the Chinese did not know

• When did China’s decline begin?
  – There is no unique Chinese model: all over the world technological progress booms when there is a balance of scale (which generally corresponds with state capacity) and scope (ideological diversity)
  – The peak of China’s creativity was associated with political fragmentation and ideological heterogeneity (high scope) before the consolidation of imperial power
  – The declining eras of Chinese creativity are associated with political unification and ideological homogeneity (high scale but low scope)
What the Chinese did not know

• When did China’s decline begin?
  – There are lots of studies on the decline of Chinese technology but not much discussion on why China came to lead in the first place
  – Joel Mokyr: a politically fragmented Europe created a competitive “market for ideas” with multiple competing funders interested in practical applications of inventions
  – The same is true of ancient China
  – Sui dynasty: the civil service examination system unifies China
  – But it also destroys ideological and territorial competition
What the Chinese did not know

- When did China’s decline begin?
  - Europe became Europe after the fall of the Roman Empire
  - Europe had the Renaissance after the fall of the Roman Empire
  - China went the opposite way: from political fragmentation to empire
  - China had its Renaissance before it became a great empire
  - The political disintegration of Europe coincides with the political integration of China
  - The rise of European creativity coincides with the decline of Chinese creativity
What the Chinese did not know

• When did China’s decline begin?
  – The role of the state:
    • Scientists and engineers were mostly officials
    • Their inventions were funded even if payoff was uncertain
    • The state liberated creative people from subsistence-income activities
    • Most humanists were on government’s payroll
What the Chinese did not know

• When did China’s decline begin?
  – The role of religion:
    • Decline of Buddhism and Daoism and rise of Confucian orthodoxy correspond with decline of creativity and innovation
What the Chinese did not know

• When did China’s decline begin?

Collapse of Buddhism during the second era of technology

First era: 24.2
Second era: 9.2
Third era: 5.3
What the Chinese did not know

• When did China’s decline begin?

Collapse of Daoism during the third era of technology
What the Chinese did not know

- When did China’s decline begin?

Step-wise rising dominance of Confucianism: 10\textsuperscript{th} century-13\textsuperscript{th} century

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