

## 11: CHINA'S EARLY INDUSTRIAL REVOLUTION AND ITS ANTECEDENTS (8/96): TUTORIAL

- The Chinese caught up materially with the Western Eurasians by
  - the Beginning Neolithic.
  - the Late Neolithic.
  - the beginning of the Bronze Age.
  - the middle of the Bronze Age.
  - the beginning of the Iron Age.
- In material terms, the Chinese began to move ahead of the West Eurasians during
  - early Eastern Zhou times
  - late Warring States & Han times.
  - the Late Neolithic.
  - the Early Bronze Age.
  - the Late Bronze Age.
- Chinese iron technology during late antiquity was \_\_\_\_\_ and produced a more useful form of the metal, \_\_\_\_\_, than was available in western Eurasia.
  - more expensive, cast iron
  - cheaper, wrought iron
  - cheaper, cast iron,
  - more expensive, wrought iron
  - more expensive, high carbon steel
- The most advanced of the Europeans caught up with the Chinese in material terms by the
  - 13th-16th centuries.
  - 9th-10th centuries.
  - 17th-18th centuries.
  - 6th-7th centuries.
  - 8th-9th centuries.
- England in the late 18th century and Song China in the 11th century were most similar in their
  - rates of investment.
  - market interest rates.
  - savings rates.
  - production per capita.
  - technological recipes.
- Generally speaking, both historically and recently, new technology tends to be widely used not too long after it is discovered.
  - True.
  - False.
- As an economy moves toward and then into an early, and then into a full industrial revolution, production becomes
  - ever more direct.
  - ever more indirect.
  - at first more direct, then indirect.
  - at first more indirect, then direct.
  - less dependent on savings.
- Once Robinson Crusoe makes his stick,
  - he is producing more directly.
  - he need not continue to save berries.
  - he must maintain & periodically replace it to keep up production.
  - he needn't save more to maintain the new production level.
  - he has shown that men at any historical stage can produce indirectly.
- Crusoe and Friday (in the novel) were essentially the same in their propensity to save and produce indirectly because they had the same standard of living.
  - True.
  - False.
- A 1% compound growth rate will double the growing entity in \_\_\_\_ years.
  - 11
  - 24
  - 36
  - 72
  - 100
- Long-run falling interest rates indicate
  - no significant absolute growth rate.
  - a positive but static growth rate.
  - a positive and rising growth rate.
  - a positive or negative growth rate.
  - time preference has increased.
- The average for market interest rates in China fell by half between \_\_\_\_\_.
  - Han and Tang and Tang and Song
  - Tang and Song and Song and Ming
  - Han and Tang and Song and Ming
- Since the first *public* credit moneys date to early to mid Tang times, by assuming that, as in earlier market innovations, the private sector moved first, we can plausibly surmise that private credit moneys may have been circulating during at least by the latter part of the age of disunion.
  - True.
  - False.
- According to Jane Jacobs, cities
  - reverse engineer imported goods.
  - are only administrative centers.
  - have only a small role as innovators.
  - have little to do with foreign trade.
  - deal with goods, not with ideas.
- Commercialization of China's agriculture
  - was largely the result of the state.
  - had little to do with the state.
  - was stimulated by the tax system.
  - kept farmers tied to the land.
  - was of little importance compared to urban commerce and manufacture.
- Which of the following were closely tied to the Han and post-Han shift from millet to wheat?
  - The breast harness.
  - Moldboard plows.
  - Water-mills.
  - Pasta.
  - (All of the above.)
- Buddhism was closely associated with which of the following?
  - Tea.
  - Water-mills.
  - Pawn shops.
  - "a" and "b," but not "c."
  - "a," "b," and "c."
- Confucian clan-corporations may have been marginally more likely to divert savings from real investments to disguised consumption than the Buddhist monastic corporations they were modeled on.
  - True.
  - False.
- Technology is normally the \_\_\_\_\_ variable in economic growth. \_\_\_\_\_ is the \_\_\_\_\_ variable.
  - most trivial, Time preference, decisive
  - most important, Savings, least important
  - independent, Savings, dependent
  - dependent, Time preference, independent
  - independent, Time preference, dependent
- New technology
  - inevitably evokes the savings to use it.
  - is mostly the result of domestic ideas.
  - appears in small, steady increments.
  - stays on the shelf without savings.
  - is independent of its socio-political context.
- Interregional transport canals in China
  - appeared before irrigation canals.
  - were common by Warring States.
  - were built with bronze digging tools.
  - at first climbed hills via inclined planes
  - began when double-locks appeared.
- Worldwide, government-built transport and communications techniques
  - are never used by men of the market.
  - do not interfere with markets.
  - help markets more than they hurt.
  - distorted early but not recent markets.
  - tend to distort market operations.
- The Chinese wheel-barrow is more efficient than the European design because it is more labor-easing.
  - True.
  - False.
- The magnetic compass and maps divided into coordinates were
  - invented by 11th c. Chinese mariners.

- b. invented by 11th c. Chinese Daoists.
  - c. invented by Han Dynasty Daoists.
  - d. applied to navigation during Han.
  - e. Medieval Venetian inventions.
25. Paper was probably invented by
- a. Han Dynasty government contractors.
  - b. Warring States artisans as a wrapping material.
  - c. the first printers during Tang times.
  - d. Daoist alchemists seeking immortality.
  - e. people seeking a substitute for bamboo strips.
26. The ancient *basic* technological model for printing was provided in Han Dynasty China by stone drums bearing intaglio engraving of the texts of the Confucian classics from which rubbings were taken by scholars.
- a. True.
  - b. False.
27. Printing of books from wood blocks
- a. began under the Mongols' Yuan.
  - b. began in Sui or Tang times.
  - c. came after use of metal movable types.
  - d. was much cheaper than hand copying.
  - e. was only a bit cheaper than hand copying.
28. The first early industrial age industry in China to enjoy what amounted to a world market was
- a. Chinese porcelain ceramics.
  - b. Chinese cast iron.
  - c. Chinese paper.
  - d. Chinese printed books.
  - e. Chinese cotton cloth.
29. The compound annual absolute growth rate of the economy in 11th c. China was \_\_\_\_\_; in 18th c. England it was \_\_\_\_\_.
- a. 0.75-1%, 1.5%
  - b. 1.5%. 0.75-1%
  - c. 1.5%, 2-3%
  - d. 0.5%, 0.5%
  - e. 0.2%, 0.2%
30. The shift from private credit money to public fiat money from Song through mid Ming times
- a. had little to do with growth of banks.
  - b. encouraged development of banks.
  - c. slowed development of modern banks.
  - d. encouraged private money-forwarding.
  - e. had little effect on inflation rates.