

(A) Group Study Guide: Economic Development in Tang & Song China

1) Fast-Ripening Rice and New Agriculture Techniques (pp. 271-272) [Kala Peoples Gwyneth Casey]

- During Song and Tang dynasty, lands were incredibly prosperous
- The Foundation of economic development was a surge in agricultural production.

Sui and Tang imposed their control over southern china and ventured into vietnam

Before imposing their control, their armies prepared the way for increased agriculture productivity

- After imposing on Vietnam, they found a fast-ripening type of rice that enabled people to harvest two times a year. This strain of rice crop was introduced to Southern China and spread widely, expanding China's food supply.
- Tang and Song china benefited enormously from the introduction of new crops
- Chinese cultivators increased productivity by adopting improved agricultural techniques
- Made use of iron plows, harnessed oxen and water buffaloes to help prepare land cultivation
- Enriched soil with manure and composted organic matter
- Also organized an extensive irrigation systems consisting of dams, dykes, reservoirs, canals, pumps and waterwheels.
- Artificial irrigation made it possible to cultivate different types of terrain that may have been difficult otherwise, such as hills and mountainsides.

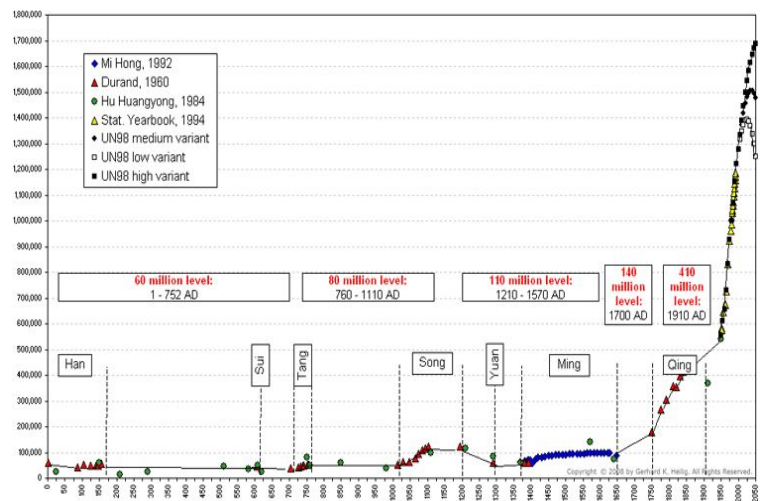
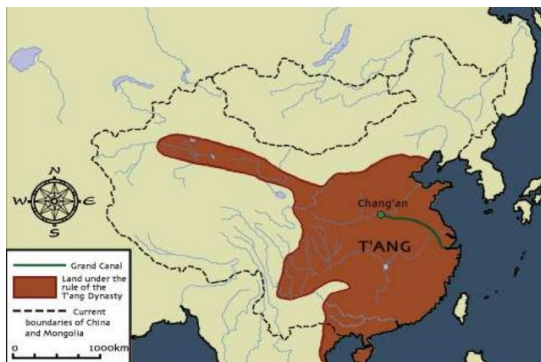
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2) Population Growth and Urbanization (pp. 272-273) [Jordan Gibson and Faith Walter]

- Increased food production led to population increase :
- After the fall of Han dynasty, China reaches low point of 45 mill., then rapidly increases
 - 600 C.E. = 45 million
 - 800 C.E. = 50 million
 - 1000 C.E. = 60 million
 - 1127 C.E. = 100 million
 - 1200 C.E. = 115 million
- Pop. growth “reflected agricultural economy and the well-organized distribution of food through transportation networks built during Sui and Tang times.”
- Increased food supplies led to the growth of cities
 - Chang'an = the imperial capital during the Tang Dynasty was the world's most populous city, with maybe up to two million residents
 - During the Song Dynasty, China was the most urbanized land in the world
 - Late 13th century = Southern Song Dynasty capital, Hangzhou, had more than one million residents

- Cities supported hundreds of restaurants, noodle shops, taverns, teahouses, brothels, music halls, theaters, clubhouses, gardens, markets, craft shops, and specialty stores dealing in silk, gems, porcelain, lacquerware, and other goods
- Li Bai, the most popular poet of the Tang era, used the social life of the cities as one of his principal themes
- Increased food supplies also led to the emergence of a commercialized agricultural community
 - This commercialization created high prices in northern markets
 - Fast ripening rice = bountiful harvests = cultivators could purchase inexpensive rice and raise vegetables and fruits for sale on the commercial market
 - Market oriented cultivation went so far that authorities tried to require Fujianese to grow rice so as to avoid excessive dependence on imports



3) Patriarchal Social Structures, Foot Binding, and Wu Zhao (p. 273) [Cydney Williams & Cece Castro]

- **Foot Binding:** (Spread widely during the Song Era)- “Tight wrapping of young girls’ feet with strips of cloth that prevented natural growth of the bones and resulted in tiny , malformed, curved feet.”
 - Women with bounded feet could not walk naturally.
 - Women needed assistance for walking (Canes to walk by themselves and servants)
 - Both wealthy and peasant families bounded the feet of their daughters to enhance their attractiveness and to be in control of the young girls behavior and life.



- **Wu Zhao:** was this awesome lady who had a rough start! She was the daughter of this scholar official, Zhao but later became the concubine of the emperor at 13!!! He actually came to love her and was like, here! be the wife of my successor. When her husband died she took the throne because she was cool and tough as steel!! However these rich snobby aristocrats opposed her rule and only wanted money and military!! She was a really good ruler and had strong supporters but was constantly fighting those boujee bros to maintain the throne. She replaced by her son when she was 80. RIP. We loved you Wu Zhao.
- **Patriarchal Social Structures:** Rich families grew closer and practice rituals to gather and grow family bonds to preserve wealth. Men were still at the head of the family and had control of the household's status.

4) Porcelain and Metallurgy (p. 274) [Claire and Jules]

- Porcey
 - Started in early Han Dynasty during 206 C.E.- 200 C.E.
 - Tang began to trade with the Islamic World in 618 C.E.
 - Replaced gold, silver, pottery and jade house appliances due to its durability, luster and cheaper price.
 - During the Song dynasty it was also seen as art with blue and white designs. People collected porcelain for exotic/intricate designs
 - Each was handcrafted making them one of a kind.
 - High demand in China expanding the wealth of artisans and merchants and bringing them into the middle class
 - The art allowed the lower class to have artistic expression usually reserved for the higher class. They were able to move themselves into higher classes by making different pieces and selling them in the market.
 - Helped bridge the social gap
 - Made life easier.
 - Graced tables in South-east Asia, India, Persia, and the port cities of east Asia.



- Metally
 - Technologies assisting in the production of iron and steel resulted in stronger and more useful metals.
 - Craftsmen used coke (the fuel, not the drug or the drink- yah, crazy. I know; pictured) instead of coal in their furnaces to produce higher quality metals. Coke is a fuel with very low impurities and high carbon content. When coal is used in smelting instead of coke the higher impurities content of coal will react with the molten iron formed and would result in undesirable products.
 - From the ninth to the twelfth centuries, iron production increased 10x, with a majority of this supply going into weaponry and agricultural tools.



- The Song Dynasty produced over 16.5 million arrowheads (made of iron) per year.
- Large construction projects such as bridges and pagodas (pictured) were great uses of iron and steel.
- Just like porcelain development (#Twinning), metallurgical technologies spread beyond China. Many military difficulties resulted from nomadic people learning to fashion their own iron weapons against China.



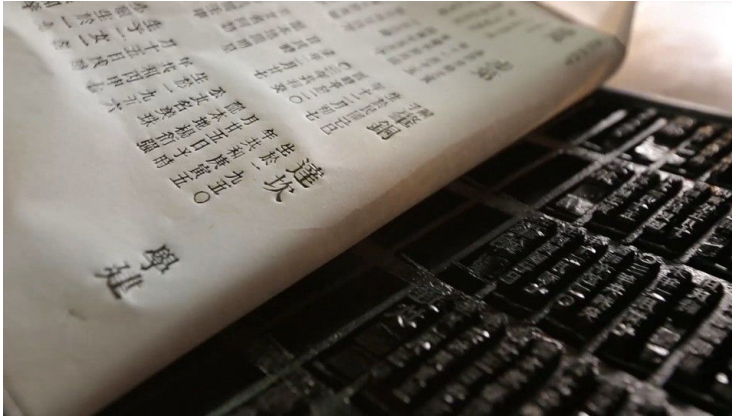
5) Gunpowder (p. 274) [Dangela & Adriana]



< Left: The earliest type of gun, the fire spear. (Dun Huang Caves, 900s AD)

- An notable invention that Tang and Song craftsmen made and improved
 - Discovered by Daoist alchemists during the Tang Dynasty who were actually trying to make elixirs to prolong life
 - It was the result of mixing charcoal, saltpeter, sulfur, and arsenic (It was a deadly mixture known to destroy buildings)
 - By the tenth century, it was used as a kind of bamboo flamethrower called “fire lances” & by the eleventh they had made bombs
- The earliest gunpowder caused much confusion as a deadly producer of smoke rather than an upper hand. It was later refined to be just as deadly while still able to be contained and controlled.
 - After being refined by China, the knowledge of gunpowder spread through Eurasia, southwest Asia, and Europe causing them to experiment with it as well
 - The first recorded army use of gunpowder was in 904 AD by Prince Yang Xingmi of the Tang Dynasty, who may have used fire arrows against Du Hong in the siege of Wuchang in Southern China.
 - By the late thirteenth century, metal-barrelled cannons were developed to refine and further enhance the effectiveness of gunpowder.

6) Printing (pp. 274-275) [Joseph Novales and Ingrid Koppisch]



Movable Type



Woodblock Writing

Tang China

- Printing became common during the Tang era.
- The first writing techniques involved carving onto wooden blocks and transferring the writing with ink onto paper
- This woodblock printing is associated with Buddhism, which allowed for the spread of sutras and charms.
- Writing then transformed into what was called moveable type-Instead of carving into wood, people would create stamps with individual characters per block.
- Movable type was a revolving table which stored thousands of Chinese characters.
- Movable type was inconvenient though compared to wooden blocks considering the Chinese language has more than 40,000 characters (wow), so movable type was not commonly used
- The invention of printing allowed the Tang dynasty and dynasties following it to quickly produce documents of all kinds- Confucian and Buddhist texts were made
 - pamphlets and flyers were created
 - allowed for mass production of writing

7) Naval Technology (p. 275) [Tamia Nock]

Before Tang times, Chinese mariners did not venture far from land

- They traveled the sea lanes to **Korea, Japan, and the Ryukyu Islands** but **relied on Persian, Arab, Indian, and Malay mariners for long distance maritime trade.**
- During Tang dynasty, Chinese consumers developed a taste for spices and exotic products of southeast Asian Islands, and Chinese mariners visited those lands in their own ships.
- By Song dynasty, Chinese seafarers sailed ships fastened w/

- **Iron nails, waterproofed with oils, furnished with watertight bulkheads, driven by canvas and bamboo sails, steered by rudders, and navigated with the help of the “south-pointing needle” (the magnetic compass)**
- Larger ships sometimes even had small rockets powered by gunpowder
- Chinese ships mostly plied the waters **b/t Japan and Malay peninsula**
- Some ventured into the Indian Ocean and called at ports in **India, Ceylon, Persia, and east Africa**
- The long-distance travels helped to diffuse elements of Chinese naval technology, particularly the **compass**
- The compass soon became the common property of mariners **throughout the Indian Ocean basin.**

8) Financial Instruments and Paper Money (pp. 275 - 276) [Karina Greco & Sol Laboy]

Financial Instruments

- Trade grew so rapidly during the Tang and Song dynasties that China experienced a shortage of copper coins that served as money for most transactions.
- To ease the shortage, Chinese merchants developed alternatives to cash that resulted in even more economic growth.
- Letters of credit, known as “flying cash”, came into common use during the early Tang Dynasty.
 - “Flying cash” enabled merchants to deposit goods or cash at one location and draw the equivalent in cash or goods elsewhere in China.
- Later developments included the use of promissory notes, which pledged payment of a given sum of money at a later date.
- Checks also came into use, which entitled the bearer to draw funds against cash deposited with bankers



Paper Money

- Wealthy merchants used the printed paper money during the ninth century.
 - They issued printed notes that clients could use to redeem merchandise in return for cash deposits.
- The society was so short of cash so the notes were greatly facilitated commercial transactions.
 - However b/c of poor management merchants notes were not honored and the discontent resulted into riots and disorder.
- 11th century the chinese economy dependence were on alternatives to cash that it was impractical to banished it all together.
 - Government authorities forbade private parties to issue paper money.
- The first paper money printed by the government was in 1024 in Sichuan province, the most active center of printing.
- By the end of the century, China issued paper money.
 - It had serial numbers and dire warnings against the printing of counterfeit notes.
 - Rulers of nomadic people in central Asia then began to practice in their states.



- Printed paper money brought conflict such as contamination of the money supply by counterfeit notes and government authorities printing currencies that had more value than what it originally was.
 - Resulted in loss in paper money.
- Late 11th century some notes of paper would face 95% of the value of cash.
 - Qing dynasty (1644-1911 C.E.) Chinese authorities placed issues of money under strict fiscal controls.

9) A Cosmopolitan Society and China and the Hemispheric Economy (p. 276)

[Cynthia Jickling and Angela Serrano]

Cosmopolitan Society

- Cosmopolitan Society - Consists of many people from different parts of the world
- The Tang & Song dynasties became prosperous cosmopolitan societies due to trade & urbanization
- The silk roads were utilized by Muslim merchants & Byzantine subjects to trade and travel to China (cities such as Chang'an & Luoyang)
- The Indian Ocean and South China Sea were used by the Arabs, Persians, Indians & Malays to set up merchant communities in Southern China (cities such as Guangzhou & Quanzhou)
- The rebel general Huang Chao killed 120,000 foreigners in Guangzhou and brought a reign of terror in 879



China and the Hemispheric Economy

- Chinese consumers were interested in exotic goods, which stimulated trade throughout most of the eastern hemisphere
- Goods that traveled to China that were symbols of a refined, elegant lifestyle:
 - Spices from southeast Asian islands
 - Kingfisher feathers and tortoise shells from Vietnam
 - Pearls and incense from India
 - Horses and melons from central Asia
- Chinese sent vast quantities of silk, porcelain, and lacquerware in exchange for these items
- China's economic surge promoted trade and economic growth throughout most of the eastern hemisphere

