European Exploration
Technology

- Magnetic compass
- Sternpost rudder
- Lateen sail
- More accurate maps
- Astrolabe
European Caravel
Comparison: Ming Junk vs. European Caravel
Motivation for European Exploration

- Religion (Reconquista in Spain)
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- Fall of Constantinople
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  – Silk, cotton, pepper, spices
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- Trade (Goods and Wealth)
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- God, Gold, Glory
Why not China?

• Confucian scholars get the ear of the Ming emperor and turned attention inward

• China withdrawals in 1433
Portugal: Vasco Da Gama arrives in Calicut, India 1498
Change over time in the Indian Ocean trade

- Arab traders dominate at first
- India’s central location allows them to excel
- China and their technology under Zheng He dominate the trade until China withdrawals
- European technology and motivation has them in control starting in 1498
Ferdinand and Isabella unite Spain behind Catholicism
Columbus
Columbian Exchange
Columbian Exchange

• The transfer of diseases, plants, animals and people from the Old World to the New World (Americas) started by Columbus
Columbian Exchange
The only domesticated beast of burden in the Americas prior to Columbus was the llama.
Columbian Exchange
Important note:

• High caloric foods from the Columbian exchange will be diffused all around the world which will be the reason for massive population increases

• Despite the slave trade in Africa, the population increases due to the foods from the Columbian exchange
Small Pox Epidemic
Labor Systems

- Indentured servitude to slavery
90% of slaves from West Africa went to Latin America
Comparison: Interaction with indigenous population

• South America more of a mixture of races (Mestizo - a mixture between European and indigenous blood)

• North America more confrontational
Spread of Christianity in the Americas
Global Flow of Silver
Potosi Silver Mine
Spanish Galleon
Manila Galleon Trade Route
Price Revolution

• Massive inflation in Spain and China due to importing large amounts of silver from the Americas