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Introduction to International Trade

Lecture 1 Trade and Industrialization

Dr. 戴谢尔(<http://xieerdai.com>)



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Needham Question(李约瑟之谜)

- A focus of his was what has come to be called the Needham Question of why and how China had ceded its leadership in Science and Technology to Western countries.



Noel Joseph Terence Montgomery Needham (/ˈniːdəm/; 9 December 1900 – 24 March 1995) was a British biochemist, historian of science and sinologist known for his scientific research and writing on the history of Chinese science and technology, initiating publication of the multivolume *Science and Civilisation in China*.



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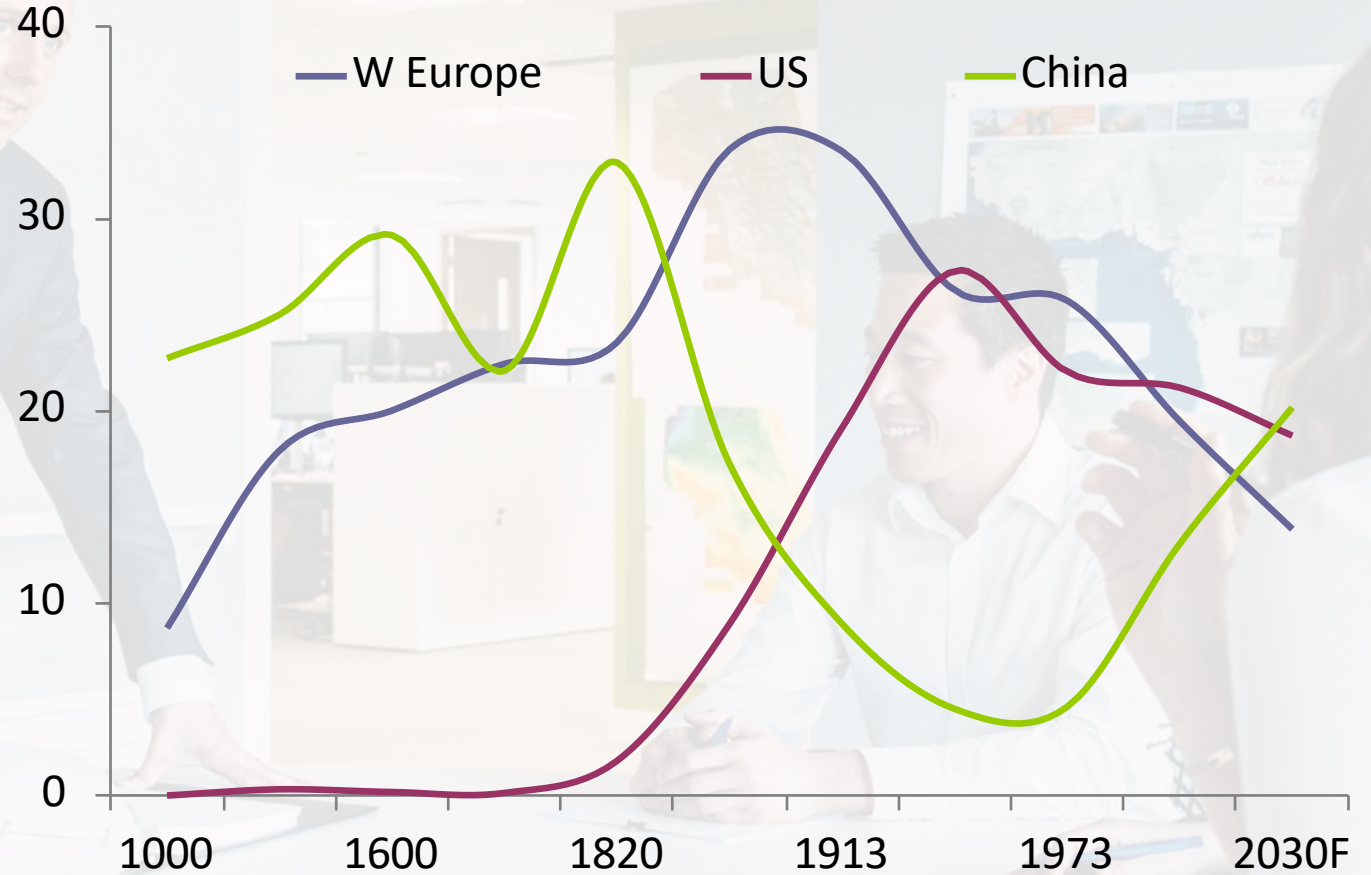
Needham Question

As he phrased it, “the essential problem [is] why modern science had not developed in Chinese civilization (or Indian) but only in Europe.”

He went on to consider another quite different question, equally important, and centered his historical research on it: “why, between the first century BC and the fifteenth century AD, Chinese civilization was much more efficient than occidental in applying human natural knowledge to practical human needs” (p. 190 of *The Grand Titration* [Needham 1969], cited under Basic Works by Needham).

Historical perspective

- According to Madison, China was the largest economy in the world until the 19th century
- China's share declined dramatically after that, until the late 1970s
- The upswing was more dramatically than even what Madison anticipated



Angus Madison (2006). Calculated in international dollar.

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Hypothesis

- According to Justin Lin, China did not make the shift from an experience-based technological invention process to an experiment-based innovation process.
- Yingqiu Liu and Chunjiang Liu argued that the issue rested on the lack of property rights and that those rights were only obtainable through favour of the emperor.
- The Chinese Empire enacted totalitarian control and was able to do so because of its great size. There were smaller independent states that had no choice but to comply with this control.



什么是李约瑟之谜？（知乎）

为什么中国古代为人类科技做出了很多重要贡献，但科技革命与工业革命都没有在近代的中國发生？这一问题由英国著名学者李约瑟在1976年提出，随后很多经济学家与历史学家都曾经尝试为这一问题给出自己的解答。

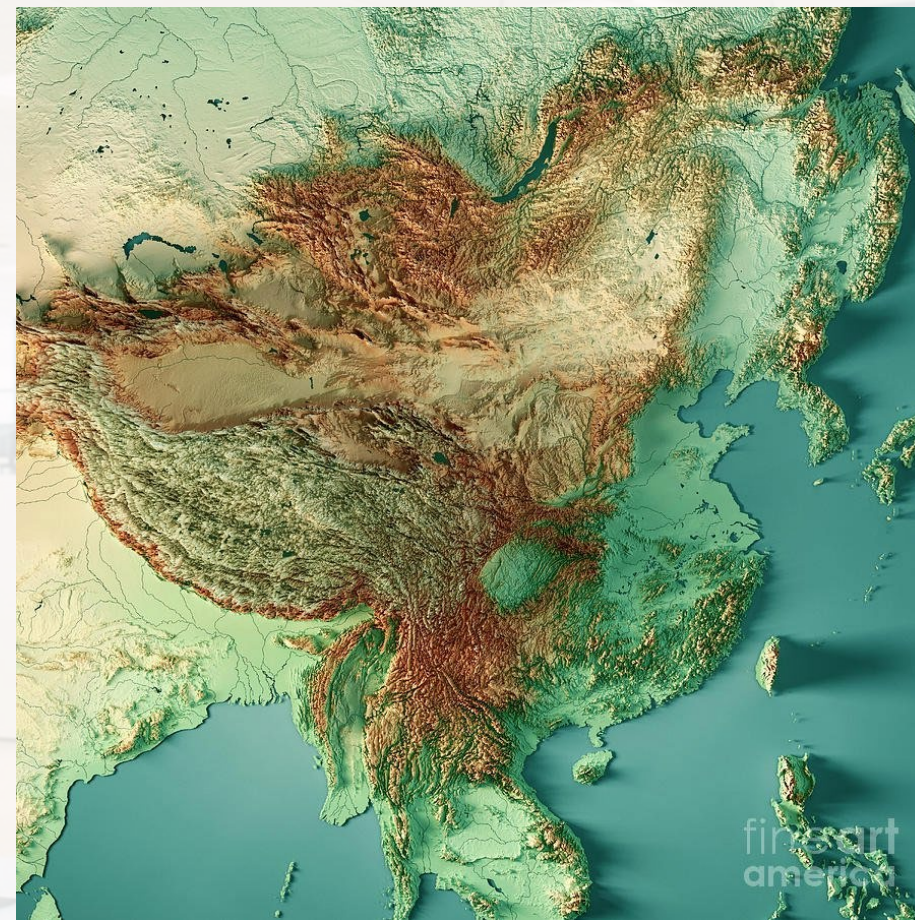
- （一）中国的科举制度问题
- （二）中国缺乏科学哲学的思想问题
- （三）中国人受小农经济影响缺乏冒险精神
- （四）中国部分时期自由民主的缺失
- （五）元朝和清朝对汉人的压迫问题



Geographic Hypothesis



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Geographic Hypothesis

Geography

Trade

Competition

Industrializa
tion

Technology



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Why Trade?



【原始技术：澳洲小哥（合集）已更新到最新，有字幕（视频右下角可以打开）】

https://www.bilibili.com/video/BV1ET411v7ih/?share_source=copy_web&vd_source=c14eef5e6b669ccb3aaaa1ae123098bd



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How Did International Trade Start?

- 国际贸易（International Trade）也称通商，是指跨越国境的货品和服务交易，一般由进口贸易和出口贸易所组成，因此也可称之为进出口贸易。
- International trade is the exchange of capital, goods, and services across international borders or territories because there is a need or want of goods or services.
- In most countries, such trade represents a significant share of gross domestic product (GDP). While international trade has existed throughout history (for example Uttarapatha, Silk Road, Amber Road, **scramble for Africa**, **Atlantic slave trade**, salt roads), its economic, social, and political importance has been on the rise in recent centuries.





Ancient history

- There is evidence of the exchange of obsidian and flint during the Stone Age. Trade in obsidian is believed to have taken place in New Guinea from 17,000 BCE.
- Materials used for creating jewelry were traded with Egypt since 3000 BCE. Long-range trade routes first appeared in the 3rd millennium BCE, when Sumerians in Mesopotamia traded with the Harappan civilization of the Indus Valley.
- From the beginning of Greek civilization until the fall of the Roman Empire in the 5th century, a financially lucrative trade brought valuable spice to Europe from the far east, including India and China.
- The Silk Road(Han Dynasty, 206 BC–220 AD). This allowed Chinese people to travel to central Asia and start businesses there. The Silk Road was also known as "the road of silk" because it transported silk from China to Rome.



Ancient history

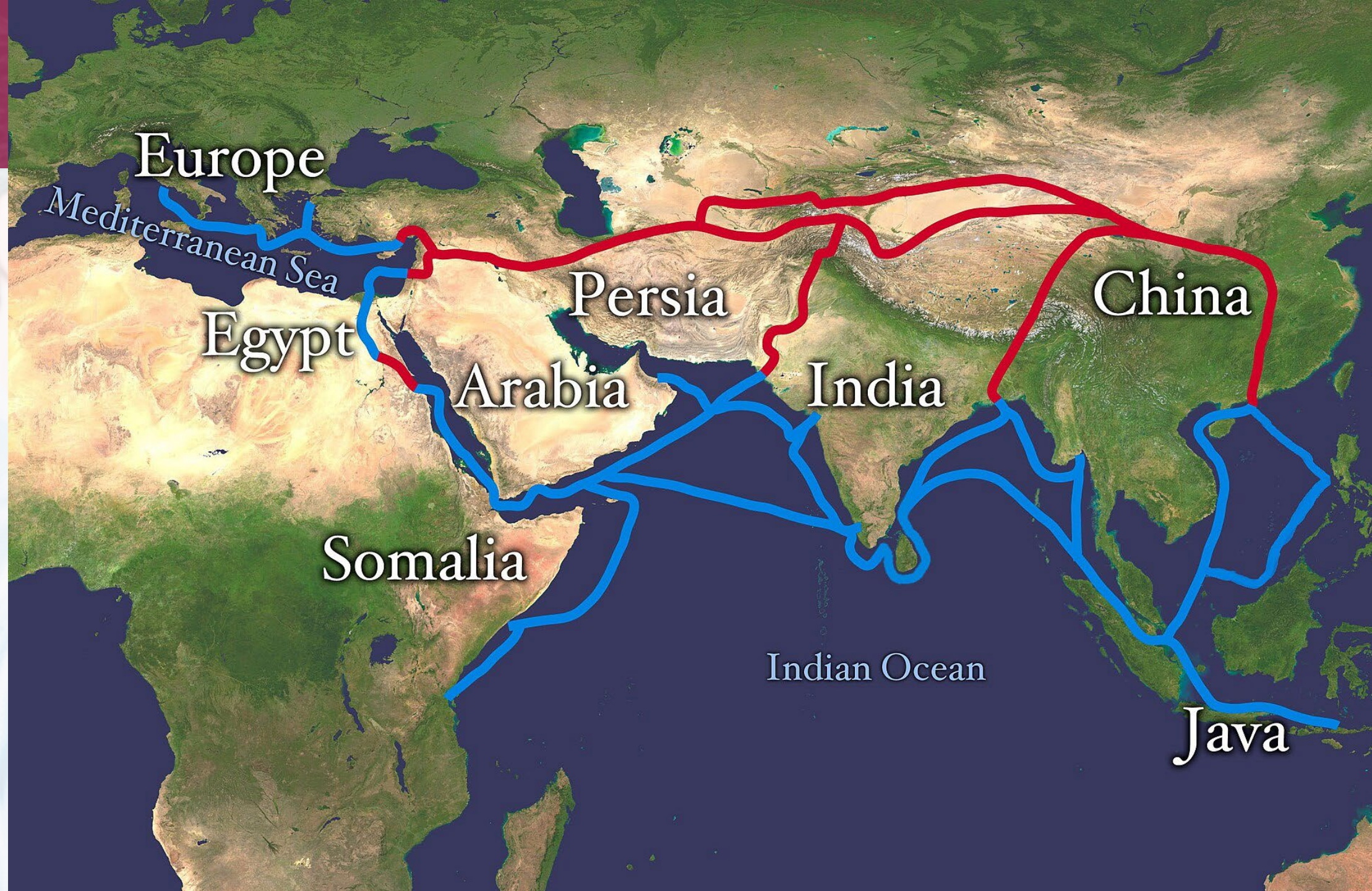


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The ancient Silk Road trade routes across Eurasia





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央视纪录片《河西走廊》

简介：《河西走廊》是一部由中共甘肃省委宣传部、中央电视台科教频道联合出品，北京伯璟文化传播有限公司承制的十集系列纪录片。该片以位于中国西部的重要通道，丝绸之路的黄金段——河西走廊为讲述对象，从政治、军事、经济、文化、宗教等多角度呈现了从汉代开始直至今天，河西走廊及其连接的中国西部的历史，以及它对中国历史和文明进程中所发挥的独特作用。“河西走廊关乎国家经略”是贯穿全篇的主题。

https://www.bilibili.com/bangumi/play/ss20790?spm_id_from=333.337.0.0



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Middle Ages

- In the history of Europe, the Middle Ages or medieval period (also spelled mediæval or mediaeval) lasted approximately from the late 5th to the late 15th centuries, aligning with the post-classical period of global history.
- It began with the fall of the Western Roman Empire in 476 AD and ended with the fall of Constantinople in 1453 AD before transitioning into the Renaissance and then the Age of Discovery.

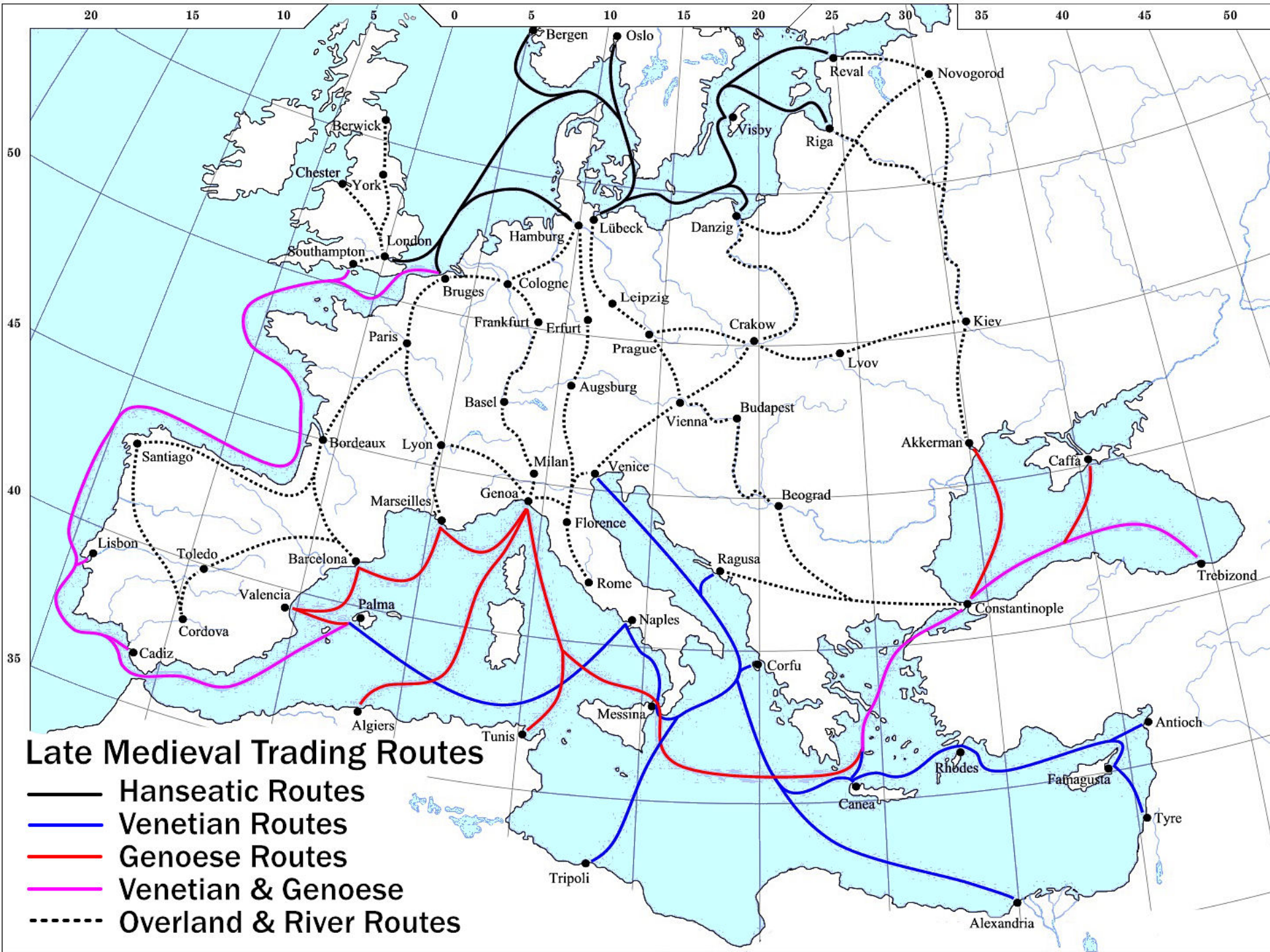




Middle Ages

- During the Middle Ages, commerce developed in Europe by trading luxury goods at trade fairs. Wealth became converted into movable wealth or capital.
- Banking systems developed where money on account was transferred across national boundaries. Hand to hand markets became a feature of town life and were regulated by town authorities.
- Western Europe established a complex and expansive trade network with cargo ships being the main carrier of goods; Cogs and Hulks are two examples of such cargo ships.
- Many ports would develop their own extensive trade networks. The English port city of Bristol traded with peoples from what is modern day Iceland, all along the western coast of France, and down to what is now Spain.







The Age of Sail and the Industrial Revolution

- Portuguese explorer **Vasco da Gama** pioneered the European spice trade in 1498 when he reached Calicut after sailing around the Cape of Good Hope at the southern tip of the African continent.
- Prior to this, the flow of spice into Europe from India was controlled by Islamic powers, especially Egypt.
- The spice trade was of major economic importance and helped spur the Age of Discovery in Europe. Spices brought to Europe from the Eastern world were some of the most valuable commodities for their weight, sometimes rivaling gold.

Marco Polo

- Marco Polo travelled through Asia along the Silk Road between 1271 and 1295.
- During their travels in China, **Marco Polo** served as an emissary and advisor to Kublai Khan, the Mongol Emperor of China.
- He spent about 17 years in China, and his detailed accounts of the Chinese culture, geography, and economics, as well as his descriptions of the Mongol Empire, became the basis for his famous travelogue, "The Travels of Marco Polo."





Atlantic Ocean (1419–1507)

- From the 8th century until the 15th century, the Republic of Venice and neighboring maritime republics held the monopoly of European trade with the Middle East.
- The silk and spice trade, involving spices, incense, herbs, drugs and opium, made these Mediterranean city-states phenomenally rich.
- Spices were among the most expensive and demanded products of the Middle Ages, as they were used in medieval medicine, religious rituals, cosmetics, perfumery, as well as food additives and preservatives. They were all imported from Asia and Africa.



Age of Sail

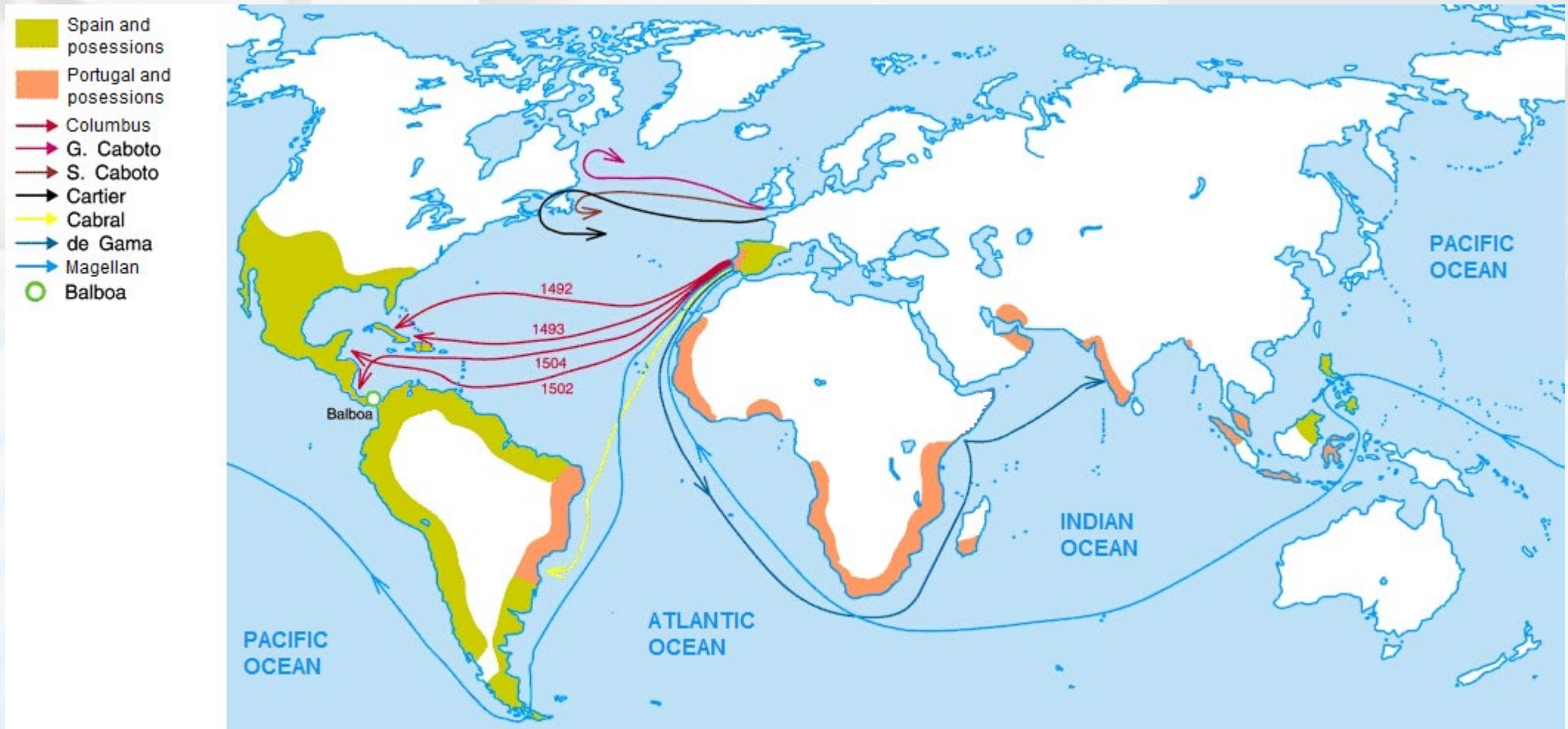
- The Age of Sail is a period that lasted at the latest from the mid-16th (or mid-15th) to the mid-19th centuries, in which the dominance of sailing ships in global trade and warfare culminated, particularly marked by the introduction of naval artillery, and ultimately reached its highest extent at the advent of the analogue Age of Steam.
- Enabled by the advances of the related Age of Navigation, it is identified as a distinctive element of the early modern period and the Age of Discovery.
- Especially in context of the latter, it refers to a more particular Eurocentric Age of Sail, while generally the Age of Sail is the culminating period of a long intercontinental history of sailing.



The Age of Sail

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Age of Discovery





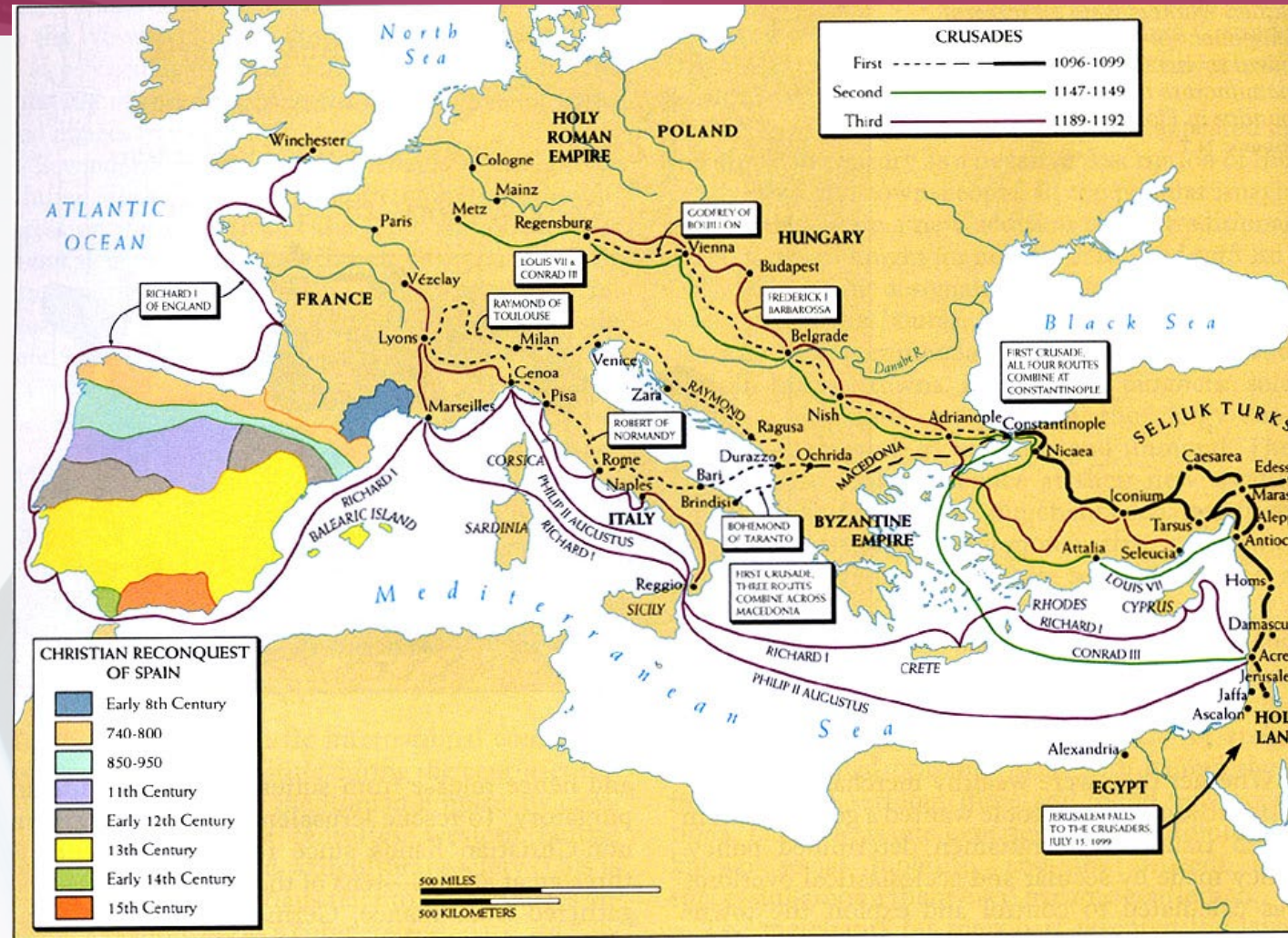
Background

Rise of European trade

- After the fall of the Western Roman Empire largely severed the connection between Europe and lands further east, Christian Europe was largely a backwater compared to the Arab world, which quickly conquered and incorporated large territories in the Middle East and North Africa.
- The Christian Crusades to retake the Holy Land from the Muslims were not a military success, but it did bring Europe into contact with the Middle East and the valuable goods manufactured or traded there.
- From the 12th century, the European economy was transformed by the interconnecting of river and sea trade routes, leading Europe to create trading networks.
- Before the 12th century, a major obstacle to trade east of the Strait of Gibraltar, which divided the Mediterranean Sea from the Atlantic Ocean, was Muslim control of great swaths of territory, including the Iberian Peninsula and the trade monopolies of Christian city-states on the Italian Peninsula, especially Venice and Genoa.



Christian Crusades



Technology: Ship design and the compass



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- Technological advancements that were important to the Age of Exploration were the adoption of the magnetic compass and advances in ship design.
- The compass was an addition to the ancient method of navigation based on sightings of the sun and stars. The compass was invented during the Chinese Han dynasty and had been used for navigation in China by the 11th century. It was adopted by the Arab traders in the Indian Ocean.
- Early geographical knowledge and maps



Ptolemy's world map (2nd century) in a 15th-century reconstruction by Nicolaus Germanus.



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Religion



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- Religion played a critical role in motivating European expansionism.
- During the Middle Ages, the spread of Christianity throughout Europe fueled the desire to sermonise in lands far and beyond. This evangelical effort became a significant part of the military conquests of European powers like Portugal, Spain, and France, often leading to the conversion of indigenous peoples upon arrival, be it voluntary or forced.



An idealized depiction of Pilgrims and Native Americans who gather to share a Thanksgiving meal.

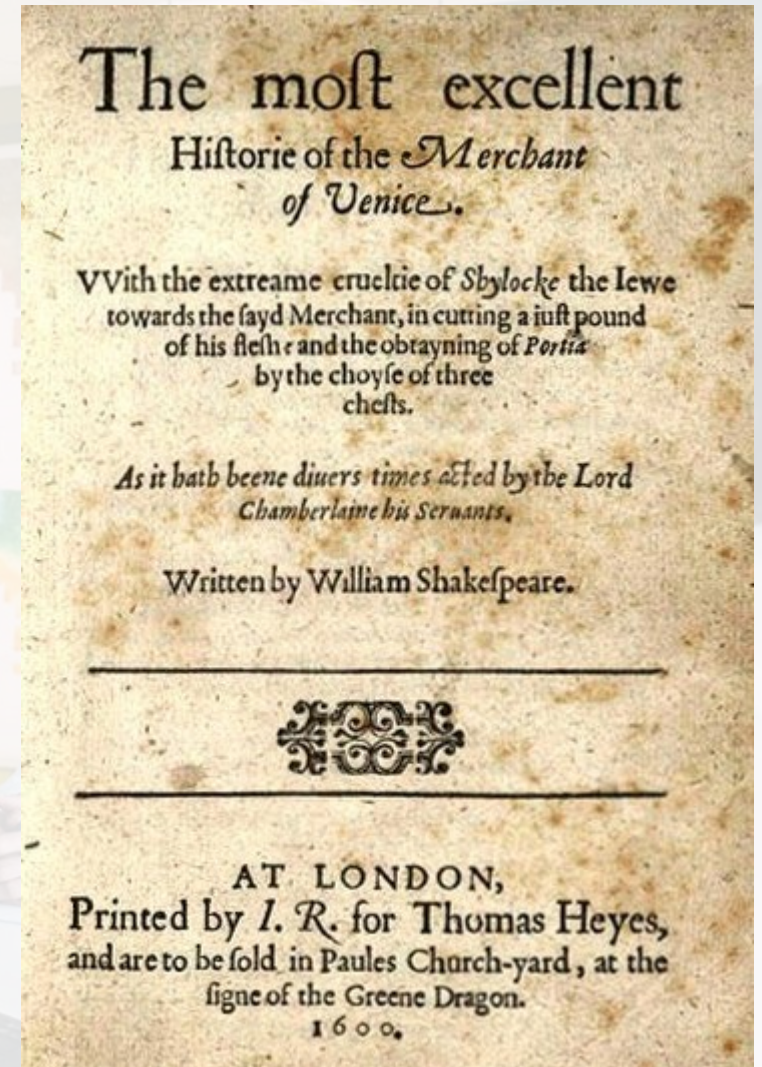


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The Merchant of Venice

- The Merchant of Venice is a play by William Shakespeare, believed to have been written between 1596 and 1598. A merchant in Venice named Antonio defaults on a large loan on behalf of Bassanio, his dear friend, provided by a Jewish moneylender, Shylock.





The Merchant of Venice

Plot: Bassanio, a young Venetian of noble rank, wishes to woo the beautiful and wealthy heiress Portia of Belmont. Having squandered his estate, he needs 3,000 ducats to subsidise his expenditures as a suitor. Bassanio approaches his friend Antonio, a wealthy merchant of Venice, who has previously and repeatedly bailed him out. Antonio agrees, but since he is cash-poor – his ships and merchandise are busy at sea to **Tripolis, the Indies, Mexico and England** – he promises to cover a bond if Bassanio can find a lender, so Bassanio turns to the Jewish moneylender Shylock and names Antonio as the loan's guarantor.



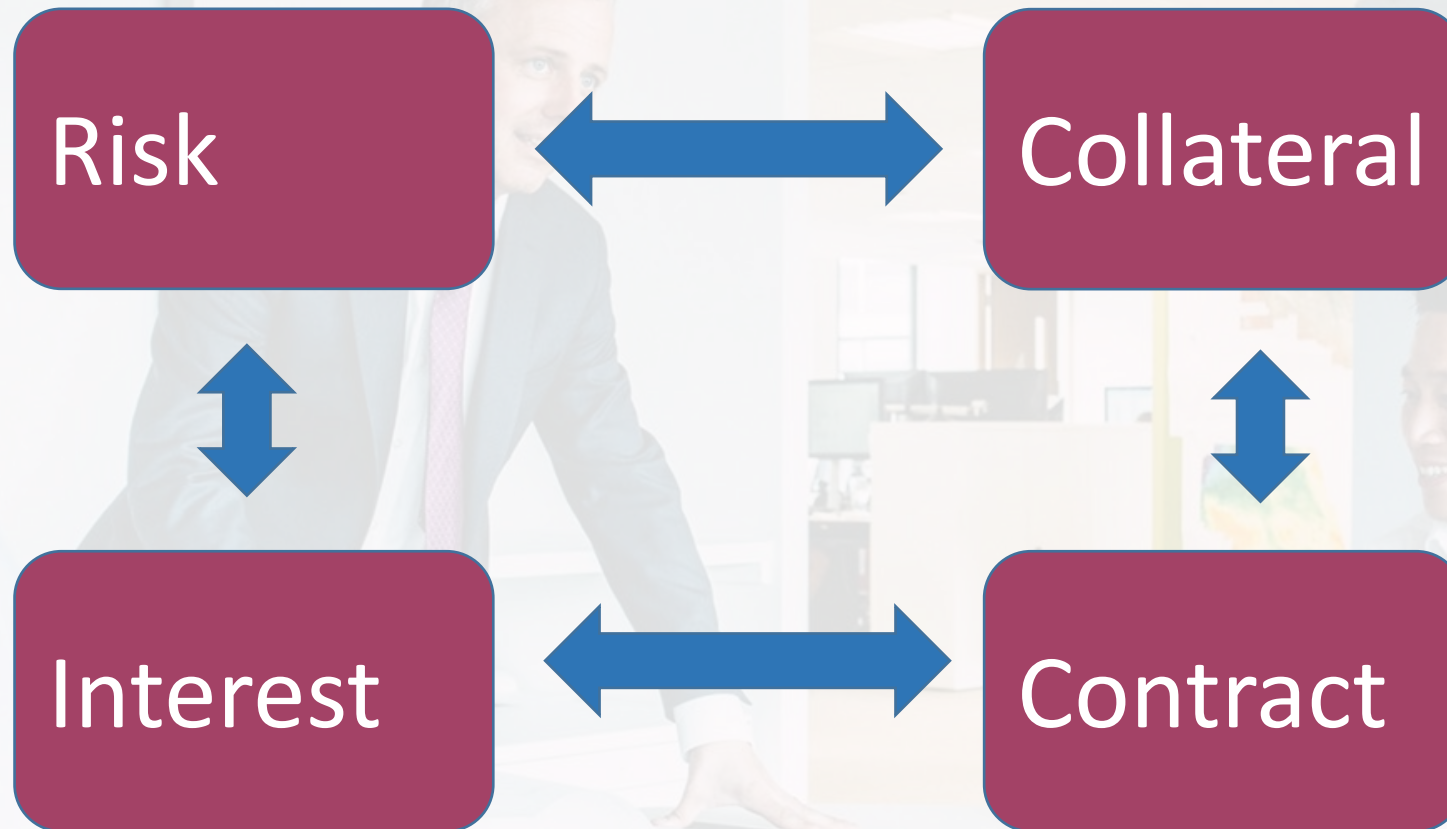
The Merchant of Venice

- Antonio – a prominent merchant of Venice in a melancholic mood
- Bassanio – Antonio's close friend; suitor to Portia; later the husband of Portia
- Shylock – a miserly Jew; moneylender; father of Jessica





Origin of Modern Finance





International Trade and Modern Finance

- Late 1400s: Antwerp, or modern-day Belgium, becomes the center of international trade. Merchants buy goods anticipating that prices will rise in order to net them a profit. Some bond trading also occurs.
- 1611: The first modern stock trading was created in Amsterdam. The Dutch East India Company is the first publicly traded company, and for many years, it is the only company with trading activity on the exchange.
- Late 1700s: A small group of merchants made the Buttonwood Tree Agreement. The men meet daily to buy and sell stocks and bonds, a practice that eventually comes to form the New York Stock Exchange.
- 1790: The Philadelphia Stock Exchange is formed, helping spur the development of financial sectors in the U.S., and the country's expansion west.
- 1896: The Dow Jones Industrial Average is created. It initially had 12 components that were mainly industrial companies.





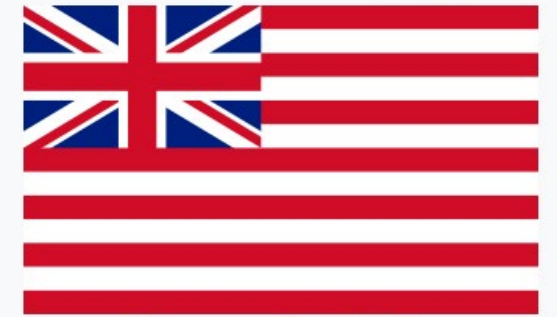
Dutch East India Company

- The United East India Company was a chartered company established on 20 March 1602 by the States General of the Netherlands amalgamating existing companies into the first joint-stock company in the world, granting it a 21-year monopoly to carry out trade activities in Asia.
- Shares in the company could be bought by any resident of the United Provinces and then subsequently bought and sold in open-air secondary markets (one of which became the Amsterdam Stock Exchange).

East India Company

- The East India Company (EIC) was an English, and later British, joint-stock company founded in 1600 and dissolved in 1874.
- It was formed to trade in the Indian Ocean region, initially with the East Indies (the Indian subcontinent and Southeast Asia), and later with East Asia. The company seized control of large parts of the Indian subcontinent and colonised parts of Southeast Asia and Hong Kong.
- At its peak, the company was the largest corporation in the world by various measures. The EIC had its own armed forces in the form of the company's three presidency armies, totalling about 260,000 soldiers, twice the size of the British army at the time.
- The operations of the company had a profound effect on the global balance of trade, almost single-handedly reversing the eastward drain of Western bullion, in effect since Roman times.

East India Company



Company flag (1801)



Coat of arms (1698)

Colonial India



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Colonial India was the part of the Indian subcontinent that was occupied by European colonial powers during the Age of Discovery. European power was exerted both by conquest and trade, especially in spices.

Austrian India 1778–1785

Swedish India 1731–1813

Dutch India 1605–1825

Danish India 1620–1869

French India 1668–1954

British India (1600–1947)

EIC in India 1600–1757

Company rule in India 1757–1858

British rule in Portuguese India 1797–1813

British Raj 1858–1947

British rule in Burma 1824–1948

Princely states 1721–1949

Partition of India 1947–



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East India Company Initial expeditions

Year	Vessels	Total Invested £	Bullion sent £	Goods sent £	Ships & Provisions £	Notes
1603	3	60,450	11,160	1,142	48,140	
1606	3	58,500	17,600	7,280	28,620	
1607	2	38,000	15,000	3,400	14,600	Vessels lost
1608	1	13,700	6,000	1,700	6,000	
1609	3	82,000	28,500	21,300	32,000	
1610	4	71,581	19,200	10,081	42,500	
1611	4	76,355	17,675	10,000	48,700	
1612	1	7,200	1,250	650	5,300	
1613	8	272,544	18,810	12,446		
1614	8		13,942	23,000		
1615	6		26,660	26,065		
1616	7		52,087	16,506		



Indian exports of textiles to Europe (pieces per year)

Years	EIC					VOC	Total
	Bengal	Madras	Bombay	Surat	EIC (total)	VOC (total)	
1665–1669	7,041	37,078	95,558		139,677	126,572	266,249
1670–1674	46,510	169,052	294,959		510,521	257,918	768,439
1675–1679	66,764	193,303	309,480		569,547	127,459	697,006
1680–1684	107,669	408,032	452,083		967,784	283,456	1,251,240
1685–1689	169,595	244,065	200,766		614,426	316,167	930,593
1690–1694	59,390	23,011	89,486		171,887	156,891	328,778
1695–1699	130,910	107,909	148,704		387,523	364,613	752,136
1700–1704	197,012	104,939	296,027		597,978	310,611	908,589
1705–1709	70,594	99,038	34,382		204,014	294,886	498,900
1710–1714	260,318	150,042	164,742		575,102	372,601	947,703
1715–1719	251,585	20,049	582,108		534,188	435,923	970,111
1720–1724	341,925	269,653	184,715		796,293	475,752	1,272,045
1725–1729	558,850	142,500	119,962		821,312	399,477	1,220,789
1730–1734	583,707	86,606	57,503		727,816	241,070	968,886
1735–1739	580,458	137,233	66,981		784,672	315,543	1,100,215
1740–1744	619,309	98,252	295,139		812,700	288,050	1,100,750
1745–1749	479,593	144,553	60,042		684,188	262,261	946,449
1750–1754	406,706	169,892	55,576		632,174	532,865	1,165,039
1755–1759	307,776	106,646	55,770		470,192	321,251	791,443

The Thirteen Factories

The Thirteen Factories, also known as the Canton Factories, was a neighbourhood along the Pearl River in southwestern Guangzhou (Canton) in the Qing Empire from c. 1684 to 1856 around modern day Xiguan, in Guangzhou's Liwan District. These warehouses and stores were the principal and sole legal site of most Western trade with China from 1757 to 1842.

The Thirteen Factories, the area of Guangzhou to which China's Western trade was restricted from 1757–1842





The Opium Wars

- The East India Company started selling opium to Chinese merchants in the 1770s in exchange for goods like porcelain and tea, causing a series of opioid addiction outbreaks across China in 1820.
- The ruling Qing dynasty outlawed the opium trade in 1796 and 1800, but British merchants continued illegally nonetheless.
- The Qing took measures to prevent the East India Company from selling opium, and destroyed tens of thousands of chests of opium already in the country.
- This series of events led to the First Opium War in 1839, which involved a succession of British naval attacks along the Chinese coast over the course of several months.
- As part of the Treaty of Nanjing in 1842, the Qing were forced to give British merchants special treatment and the right to sell opium. The Chinese also ceded territory to the British, including the island of Hong Kong.



Mercantilism (重商主义)

- Mercantilism is a nationalist economic policy that is designed to maximize the exports and minimize the imports for an economy. In other words, it seeks to maximize the accumulation of resources within the country and use those resources for one-sided trade.
- Mercantilism became the dominant school of economic thought in Europe throughout the late Renaissance and the early-modern period (from the 15th to the 18th centuries).
- Evidence of mercantilistic practices appeared in early-modern Venice, Genoa, and Pisa regarding control of the Mediterranean trade in bullion. However, the empiricism of the Renaissance, which first began to quantify large-scale trade accurately, marked mercantilism's birth as a codified school of economic theories.





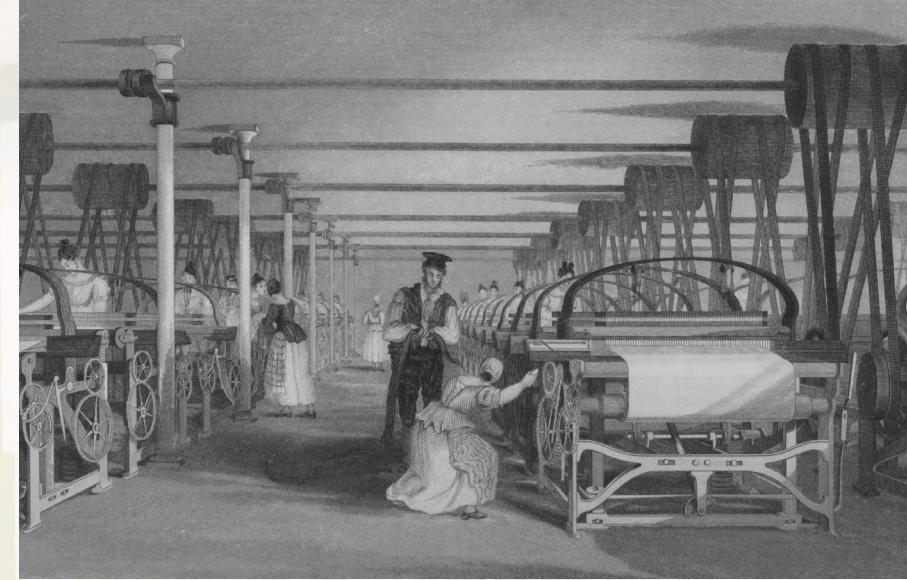
Industrial Revolution

Six factors facilitated industrialization:

- high levels of agricultural productivity (see British Agricultural Revolution) to provide excess manpower and food;
- a pool of managerial and entrepreneurial skills;
- available ports, rivers, canals, and roads to cheaply move raw materials and outputs;
- natural resources such as coal, iron, and waterfalls;
- political stability and a legal system that supported business;
- and financial capital available to invest.

Industrial Revolution

- Once industrialization began in Great Britain, new factors can be added: the eagerness of British entrepreneurs to export industrial expertise and the willingness to import the process.
- Britain met the criteria and industrialized starting in the 18th century, and then it exported the process to western Europe (especially Belgium, France, and the German states) in the early 19th century.
- The United States copied the British model in the early 19th century, and Japan copied the Western European models in the late 19th century.



A Roberts loom in a weaving shed in Great Britain in 1835



Important technological developments

- Textiles – mechanised cotton spinning powered by water, and later steam, increased the output of a worker by a factor of around 500. The power loom increased the output of a worker by a factor of over 40.
- Steam power – the efficiency of steam engines increased so that they used between one-fifth and one-tenth as much fuel.
- Iron making – the substitution of coke for charcoal greatly lowered the fuel cost of pig iron and wrought iron production.
- Invention of machine tools – the first machine tools were invented included the screw-cutting lathe, the cylinder boring machine, and the milling machine.





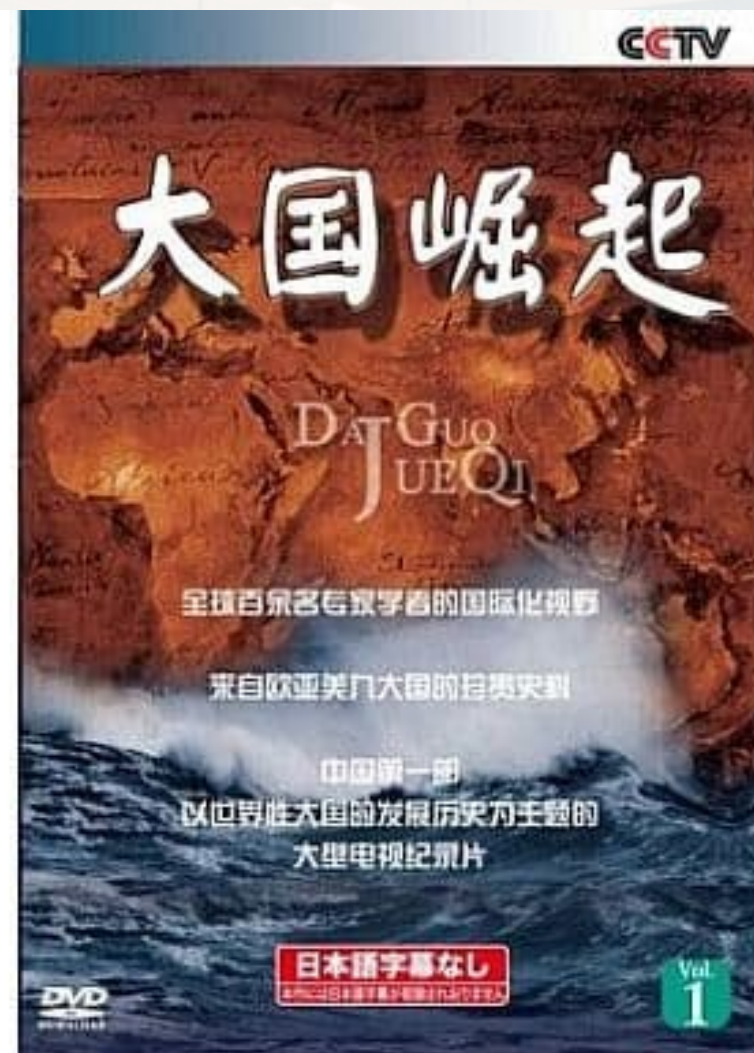
Industrial Revolution

- In 1776, Adam Smith published the paper *An Inquiry into the Nature and Causes of the Wealth of Nations*. It criticized Mercantilism, and argued that economic specialization could benefit nations just as much as firms. Since the division of labour was restricted by the size of the market, he said that countries having access to larger markets would be able to divide labour more efficiently and thereby become more productive. Smith said that he considered all rationalizations of import and export controls "dupery", which hurt the trading nation as a whole for the benefit of specific industries.
- In 1799, the Dutch East India Company, formerly the world's largest company, became bankrupt, partly due to the rise of competitive free trade.



央视纪录片《河西走廊》

- 简介：本片由中央电视台委托制作，三多堂传媒承制了其中六集以及全片的音乐编辑工作。该片全面展示了葡萄牙、西班牙、荷兰、英国、法国、德国、日本、俄罗斯和美国等九个大国兴衰更替的故事。该片力求以历史的眼光和全球的视野，在风云四起的时代变迁中，寻找推动国家发展的根本力量，寻找各国在强国过程中创造的属于全人类的文明成果。该片播出后，在海内外获得强烈的反响，成为改革开放以来国内外影响力最大的纪录片之一。
- <https://www.bilibili.com/bangumi/media/md28233889>





Other Places in the world

- From 1070 onward, kingdoms in West Africa became significant members of global trade.
- This came initially through the movement of gold and other resources sent out by Muslim traders on the Trans-Saharan trading network.
- Beginning in the 16th century, European merchants would purchase gold, spices, cloth, timber and slaves from West African states as part of the triangular trade. This was often in exchange for cloth, iron, or cowrie shells which were used locally as currency.



央视纪录片：《资本的故事》

- 《资本的故事》全3季，共60集。该纪录片以故事为载体，以400多年来世界经济的发展历程为背景，勾画出资本流动和变化的轨迹，以当下的视角剖析资本在市场经济中的作用和地位，为中国经济下一步的深化改革和发展提供借鉴。
- 第一季每集8分钟。讲述了从股票的诞生到次贷危机四百年间的20个精彩的资本故事。
- 第二季共20集，由20个相互独立的故事组成，每集8分钟。节目讲述了历史上20家著名的公司，试图通过资本改变一个产业、一种生活方式乃至世界经济版图所作出的努力。它们有些成功了，有些却以失败告终，但是在资本的历史长河中，它们都不失为一个一个值得记住和探究的经典案例。
- 第三季共20集，由20个相互独立的故事组成，每集8分钟。节目讲述了历史上以及如今也很有名的20个资本家。阐述他们成功的秘诀，以及对资本事业的贡献。他们中间有些成功了，有些却以失败告终，但是在资本的历史长河中，他们都不失为一个一个值得记住和探究的经典案例。



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