

Sea Empires

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The end of an era

- Death of Timur in 1405 (same year than the first Treasure fleet) represents the end of the big Nomads invasions (Manchu invasion will be very different).
- Traditional empires:
 1. Control of land routes in Euroasia.
 2. Tribute system.
- New empires:
 1. Sea Empires: Portugal, Spain, Dutch Republic, England, France.
 2. Land empires: Russia, Ottoman empire, Safavid Persia, Mughal India, China, Japan.
- Why? Military revolution induced by gunpowder. [Geoffrey Parker, The Military Revolution: Military Innovation and the Rise of the West, 1500-1800.](#)
- Basic reorganization of the world: growing integration of economies, environments, and peoples.

Timurid empire



Timur feasts in Samarkand



Sea empires

- Radically new type of empire.
- Instead of controlling large amounts of land, priority is controlling strategic ports, straits, sea-lanes.
- Limited control of land (in Africa and Asia) or total conquest (America).
- Relatively limited military commitment.
- Until the 19th century, small migration of Europeans.
- Production and shipment of high-value commodities.

Technological improvements

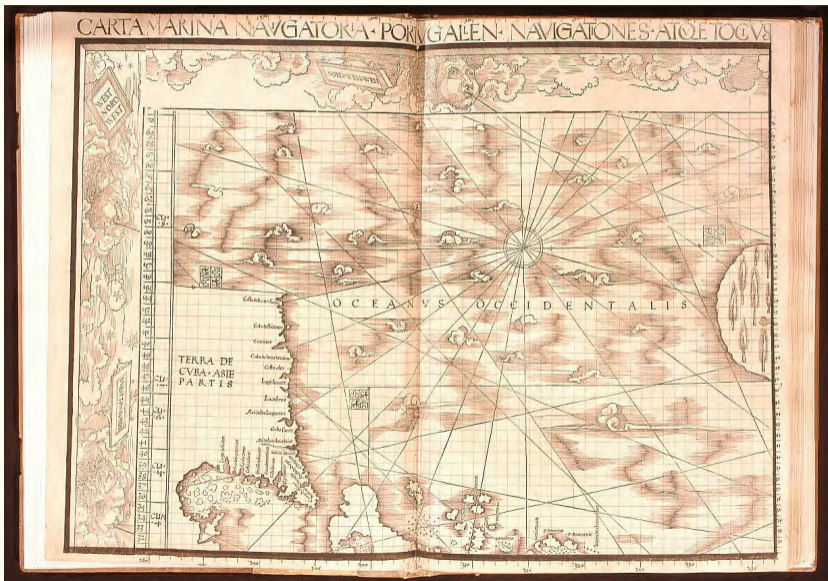
Carlo Cipolla, *Guns, Sails, and Empires*.

- Change driven by technological improvements:
 1. Sea charts.
 2. Square-rig and three-masted ships.
 3. Better ships: streamlined designs (caravels, galleons), rudders, bulkheads.
 4. Better navigational instruments: compass, astrolabe.
 5. Shipboard firepower and its placement.
- Why?
 1. Interaction between navigation in the Mediterranean and the Atlantic area.
 2. Shortage of labor after black death to hire oarsmen.
 3. Government sponsorship: Henrique o Navegador.
 4. Communication across different regions (hard to assess).
- Battle in 1575, 1 Portuguese caravel defeats 8 to 10 Japanese junks and 50 smaller ships.

Proto-cannon from the Ming dynasty



Carta Marina



Spanish galleon



Mary Rose in the Anthony Roll



Henry the Navigator, 1394-1460



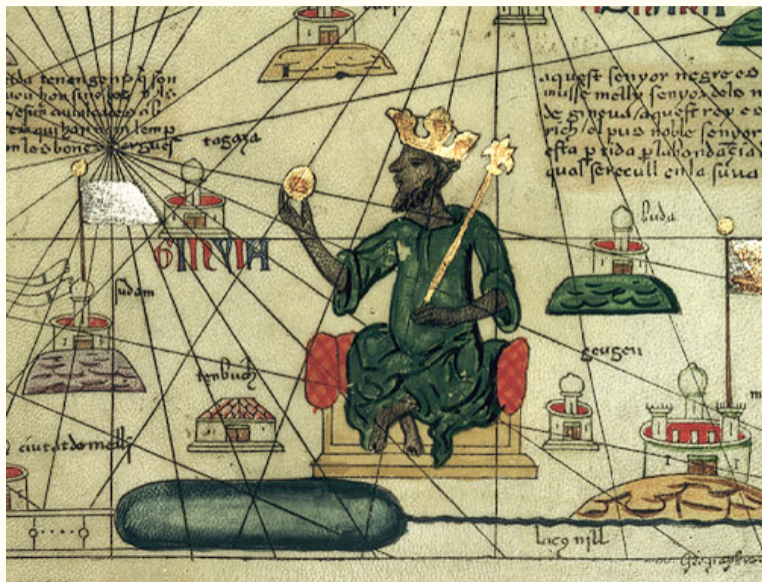
A reproduction of a Portuguese caravel



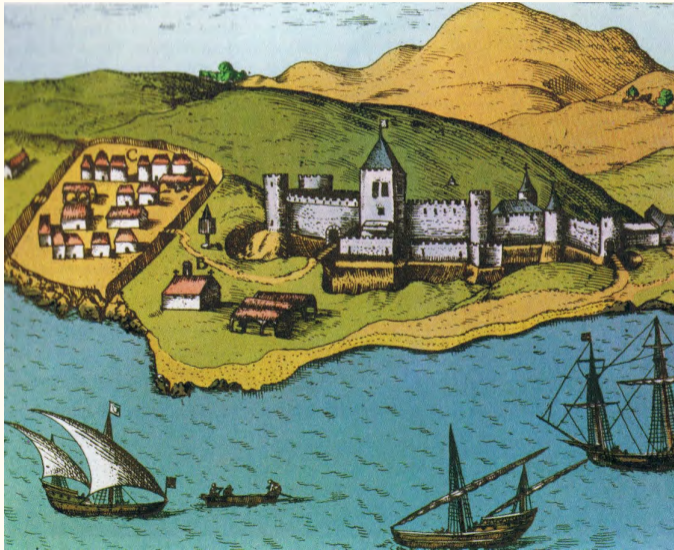
Iberian Empires I: Portugal

- Background in the middle ages.
- Treaty of Tordesillas, 1494.
- First try-outs: Azores and Madeira. Essays in colonization.
- 1498: Vasco de Gama reaches India.
- Within 15 years of arrival to India, they control the seas. Plunder and extortion, trade on spices, horses, silk,....
- Not a particularly well-run empire: sale of offices.
- Brazil, Africa, and Asia. Preference for small settlements and the role of sugar.
- Trade between Macao-Melaka-Nagasaki.

Mansa Musa holding a gold nugget



Portuguese feitoria in Africa



Portuguese settlements in Africa



Carreira da Índia

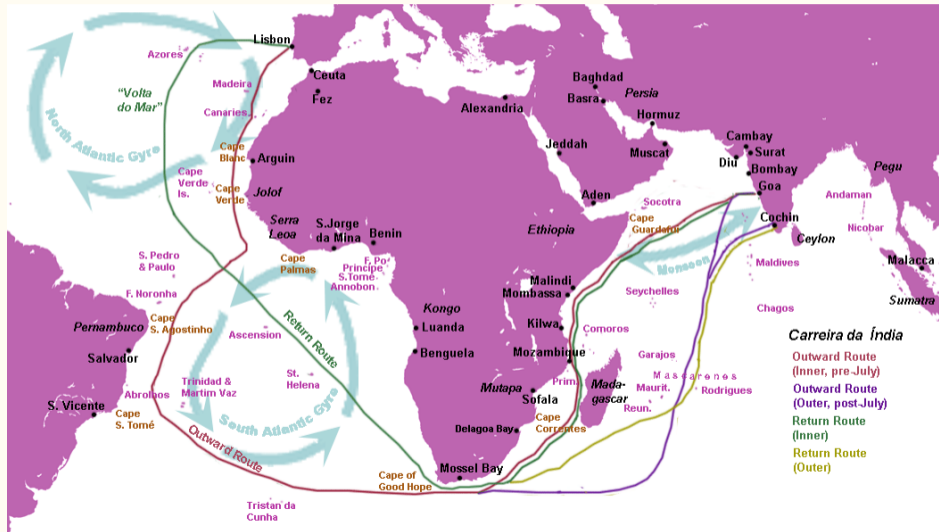


Table 3.5 Collapse of the Venice–Levant trade, 1496–1506 (annual averages, figures in tonnes)

Route commodity	Alexandria		Beirut	
	1496–8	1501–6	1496–8	1501–6
Pepper	480–630	135	90–240	10
Other spices	580–730	200	150–180	35
<i>Total</i>	1060–1200	335	270–420	45

(Source: Wake 1986: 633)

Japanese painting of a Portuguese carrack at Nagasaki



Killing of Sultan Bahadur



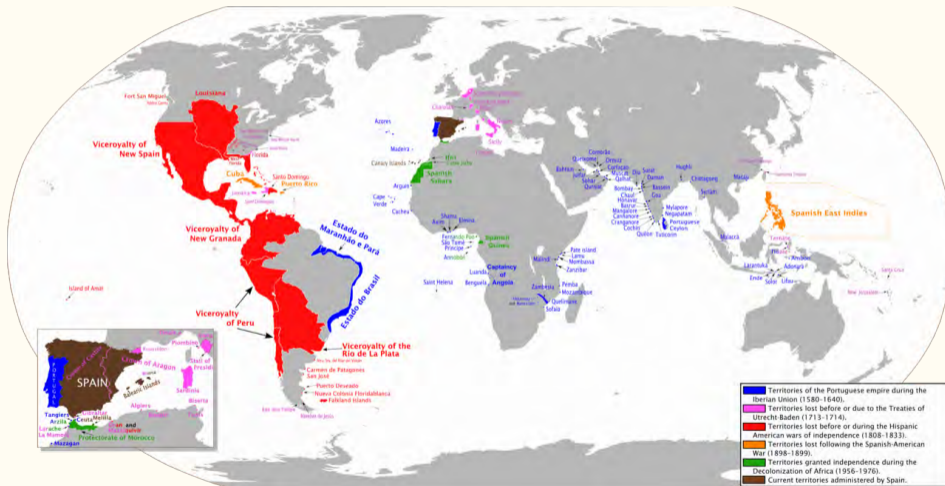
Iberian Empires II: Spain

- Late comer with respect to Portugal.
- End of Reconquista.
- Attempt a very different route⇒bump into America.
- Fast conquest of most America:
 1. First real world empire.
 2. Tremendous amounts of plunder.
- Relatively intense migration (close to 1 million out of an 8-10 million country).
- Inherently city-centered colonization.

The surrendering of Granada, 1492



Spanish empire



Ransom room



Cities of the Americas



Cathedral of Morelia



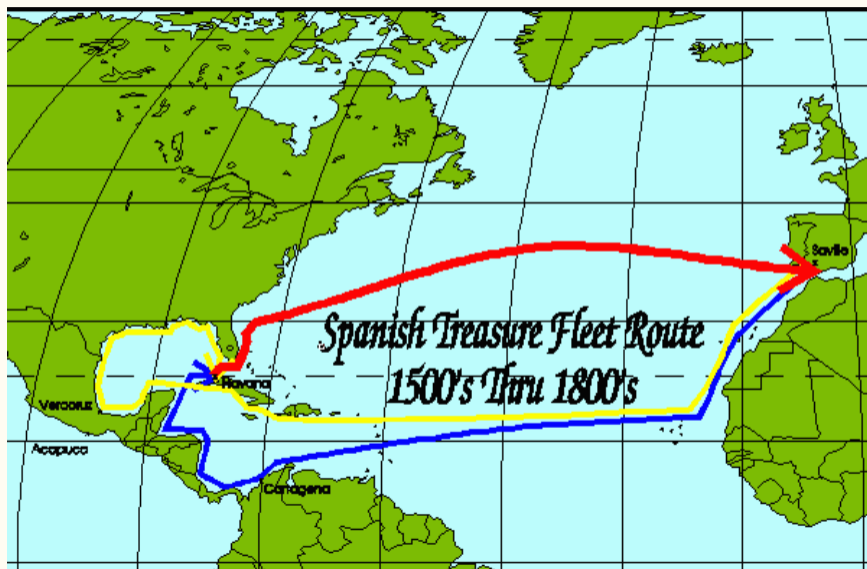
Las castas mexicanas



Treasure fleets

- Gold and silver (Cerro Rico in Potosí, Perú, México).
- Organized in treasure fleets (Carrera de Indias).
- From 17 ships in 1550 to around 100 in 1660, to about 25 in 1750.
- Highly successful system with only a few losses: between 1520 and 1776.
 1. four lost to Dutch or British (1628 by Piet Hein, 1656, 1657, and 1702).
 2. three to storms (1622, 1715, and 1733).
- Commerce directed from Seville (**Pierre Chaunu**, *Séville et l'Atlantique (1504-1650)*):
 1. Casa de Contratación.
 2. Quinto del Rey.
 3. Asiento de Negros.

Spanish treasure fleet route



Piet Pieterszoon Hein



Seville in the 16th century



Manila galleon route



Consequences

- Consequences for Spain. Earl J. Hamilton, *American Treasure and the Price Revolution in Spain, 1501-1650*:
 1. Quantitative theory (David Hume, Milton Friedman).
 2. First example of Dutch Disease: exchange rates, political-economic equilibrium.
- Consequences for prices in Europe.
- Consequences for world trade with Asia (Annual Manila Galleon from Acapulco to Manila, W. Schurz, *The Manila Galleon*).

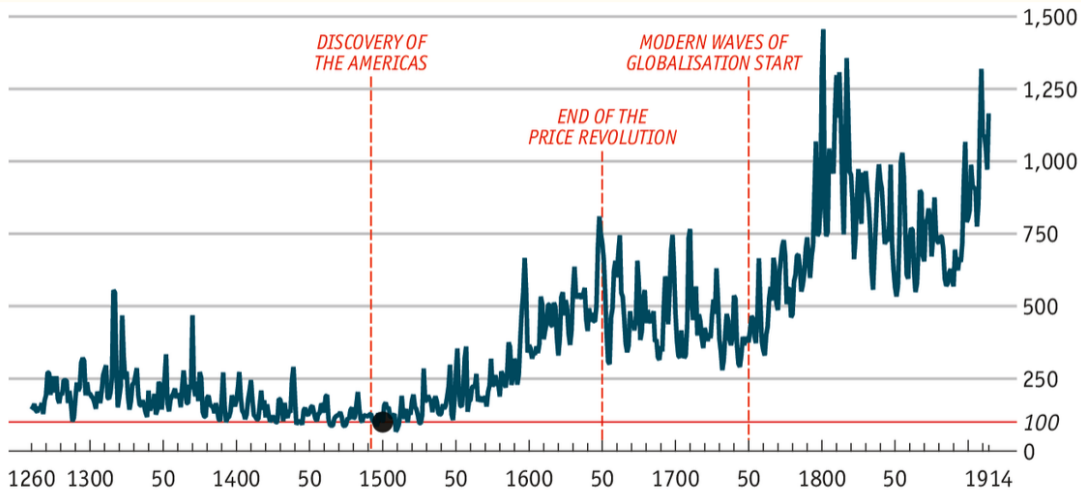
Spanish piece of eight silver coin



Martín de Azpilcueta



London wheat prices in silver, 1500=100



- Portuguese were inefficient traders and could not keep up with rising demand.
- Moreover, Dutch learned about trade routes and were enemies of the Portuguese.
- Dutch East India Company (Vereenigde Oost-Indische Compagnie) created in 1602:
 1. Monopoly for trade with Asia for 21 years.
 2. First multinational corporation.
 3. First company to issue stock.
 4. Hire a small army (10,000 soldiers) and navy (40 warships).
 5. Immensely profitable for decades (27% annual return on initial investment).
 6. Employed 30.000 persons in a 2 million persons country.
- Quickly copied: Danish East India Company (EIC), 1615, and Swedish EIC, 1731.

Provinces of the Dutch Republic and the Generality Lands



ITINERARIO, Voyage ofte Schipvaert / van Jan

Huygen van Amstelredam naer Oost ofte Portugaels Indien in houdende een rechte beschrijvinghe der selver Landen ende Zee-cullen. met aen-
wysinge van alle de voornaemste principa- l'keeren hoelen ende plaatsen tot noch
toe vande Postingen ontdeckt ende bekent: Ware by ghevoert syn / met alleen die Con-
septsels vande habyten dyachten ende wesen. so vande Postingen aldare residentz / als vande
de ingeboornen Indianen ende haere Consequ- Afgeden. Vuydinge met die boornarische
Doosers Vyachren kerouwen. Spereeren ende siegelyche manieren als oec die
manieren des selfden Volktes so in hunnen Oedts- diensten / als in Politie
en Quys- houdinghe: maer oec een rechte verhalinge van de Coophan-
delingen hoe en ware die gheschreyen en ghebonden woorden
met die ghebenedicte rijckhe get'hebemissen
voeggheliken den eynde sijnder
residentie aldare.

• Alles beschreven ende by een vergadert, door den selfden, seer nut, oorbær,
ende oock vermakelijcken voor alle curiente ende Lief-
hebbers van vreemdigheden.

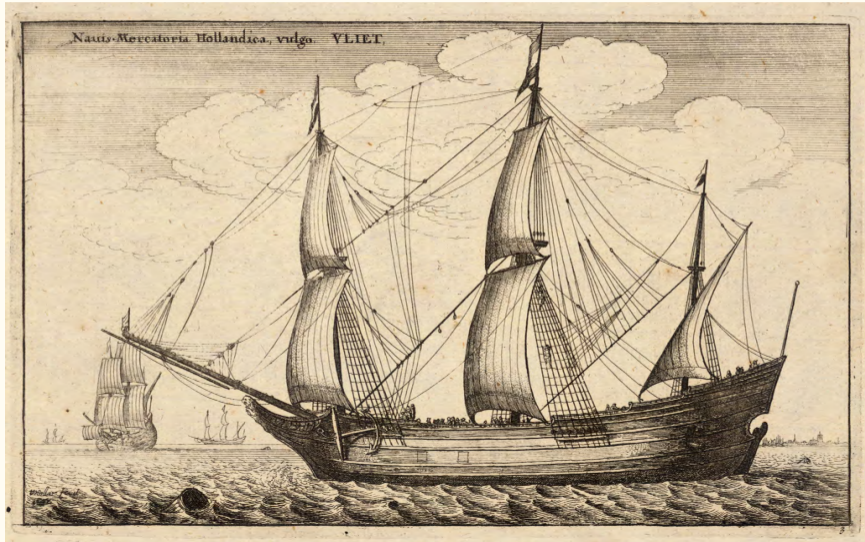


AMSTELREDAM.

By Cornelis Claesz. op 't VVater, in 't Schrijf-boeck, by de oude Brug ghe.

Anno CIO. IO. XCVI.

Dutch fluyt, 1677



Business Model of VOC by Jan Pieterszoon Coen

- Establish settlements in today's Indonesia and later Ceylon (Sri Lanka). Trading posts all over Asia.
- Headquarters in Batavia (today Jakarta).
- Spices where it was easier to control the market: clove, nutmeg, cinnamon.
- Trades:
 1. Netherlands to Batavia: supplies for VOC settlements in Asia.
 2. Japan to India and China: silver and copper to trade for silk, cotton, porcelain, and textiles.
 3. Change these products within Asia for spices or exported to Europe.
 4. Elephants from Ceylon to India, clothes to Europe (eventually, even more important than spices).
- For a while, only merchants allowed in Japan.
- Price wars: monopolist, contestable market.

The return to Amsterdam of the second expedition to the East Indies



Boardroom of the Dutch East India Company



The Oost-Indisch Huis



Bond issued by the Dutch East India Company

WY onderschreven Reecken-meesters vande Camere der Oost-Indische Compagnie binnen Middelburgh, Bekennen midts desen gheacordeert te hebben, ende by den Ontfangers der voorschreven Compagnie ontfanghen te wesen, vanden Eerfamen *Jacob van der Berg* de Somme van *Widderhulst* hondert *duert* Welcke voorschreven somme van *Widderhulst* metten Interesse van dien jegens *196* argpiart ten hond. Int Jaer gherekent, wy aen vooru. *196* oft den Thoonder deses, door ditto Ontfangers wederomme belooven te betalen over *196* Maenden naer date deses. Sonder argh ofte lit. Actum in Middelburgh den *7. Novembri* a' *1671* *Widderhulst*

2400 — *J. B. Coen*
Commissaris

Jan Pieterszoon Coen



Residence of the VOC Governor General in Batavia



The trading post of the Dutch East India Company in Hooghly, Bengal



Willem Berg's Tavern in Dorp Street, Cape Town



Nutmeg



Dejima island



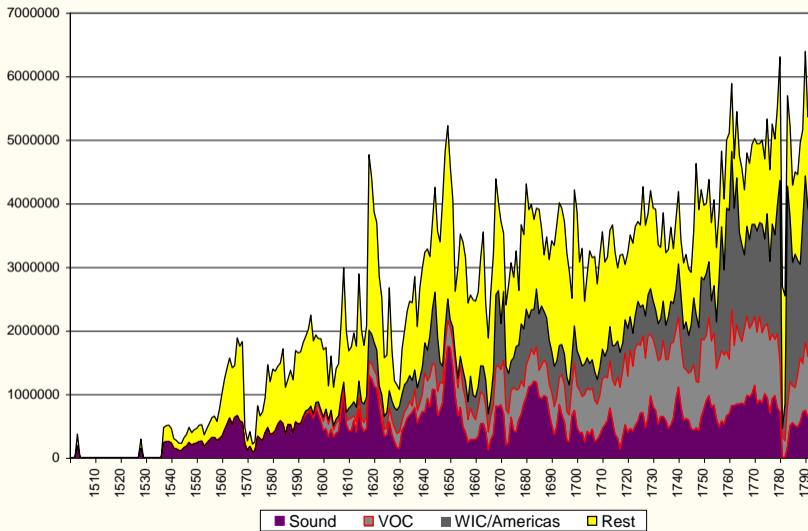
New Amsterdam



The first modern economy

- Part of a much richer and sophisticated economy: [Jan de Vries and Ad van der Woude, The First Modern Economy: Success, Failure, and Perseverance of the Dutch Economy, 1500-1815.](#)
- Import wheat from Baltic sea (Baltic trade was the “mother trade”).
- Herring fisheries, whaling.
- Entrepôt for Europe.
- High level of urbanization.
- High level of manufacturing and services.
- Role of Dutch financial markets in European wars.
- Golden Age of the Dutch Republic.
- Political and social success.

Volume of Dutch Shipping 1500-1793 (in 1,000 ton/km)



NB for the period before 1537 only two point estimates are available (1503 and 1528)

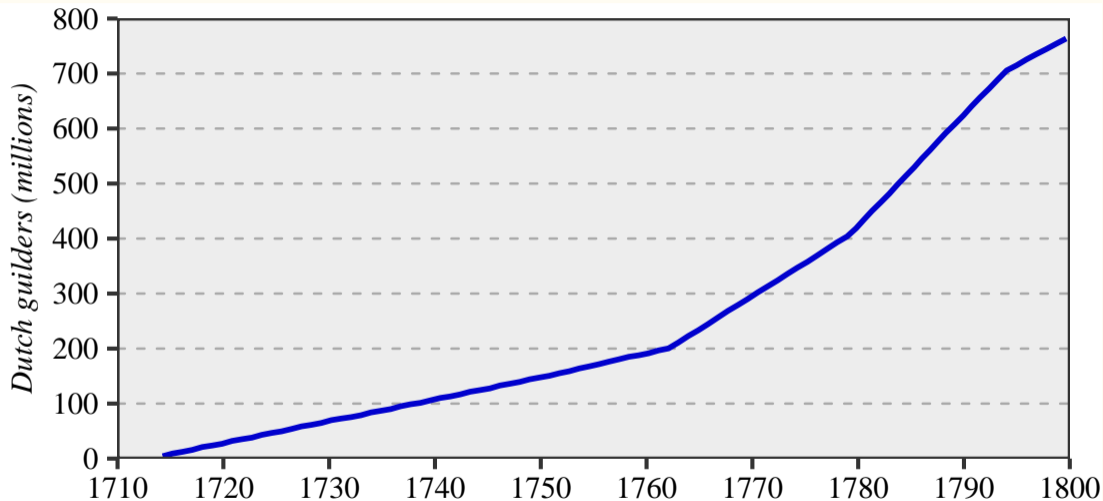
First stock exchange

- State loans negotiated in Venice at a very early date, in Florence before 1328, and in Genoa.
- By early 16th century, fluid and sophisticated stock market in Amsterdam.
- In 1585, 339 commodities quoted, 550 in 1686.
- By 1630s, Christoffel and Jan Raphoen behave as market-makers with VOC shares.
- Amsterdam becomes the first world financial center.

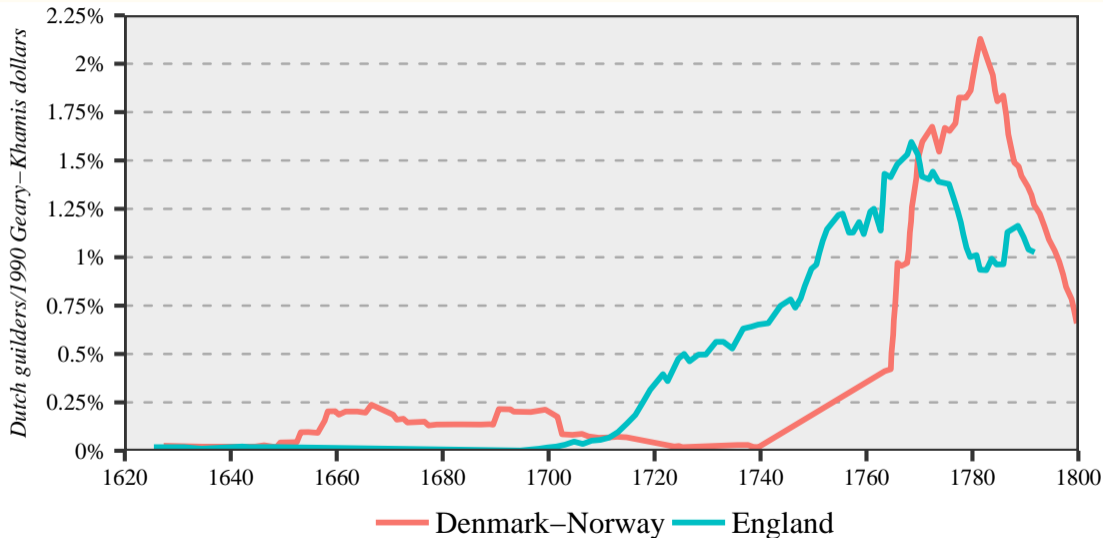
The courtyard of the Old Exchange in Amsterdam



Dutch foreign investment



Dutch investment in England and Denmark-Norway



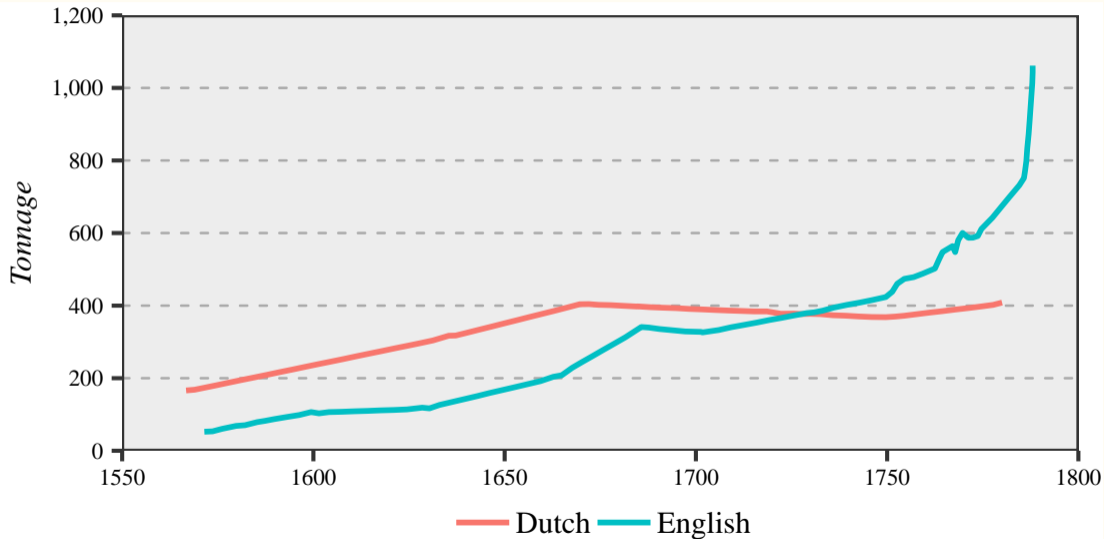
The Syndics of the Amsterdam Drapers' Guild, 1662



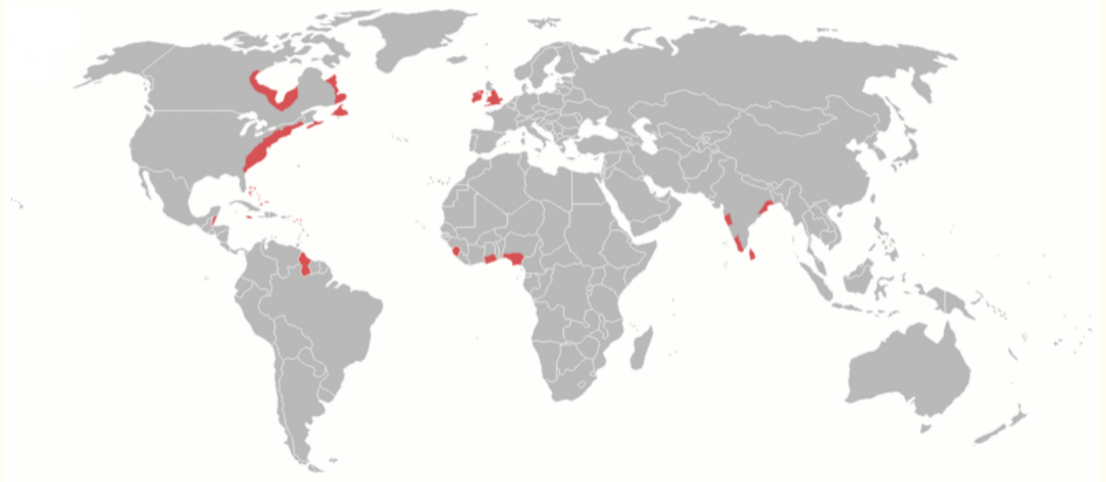
Late comers: England and France

- England:
 1. Ireland.
 2. First British Empire: (1583–1783):
 - 2.1 North America (13 colonies, Newfoundland, Nova Scotia).
 - 2.2 Bermuda, Bahamas, British Honduras, Jamaica, Lesser Antilles.
 - 2.3 Settlements in Asia.
 3. Triangular trade between Africa, North America, and Antilles (Royal African Company).
 4. **Phillip Curtin**, *The Atlantic Slave Trade: A Census*.
- France: Québec and India.
- Big rivalry between England and France between 1688-1815: Seven Years War (1756-1763) is the First Global War.
- The U.S. is, to a large extent, the consequence of that rivalry.
- **John Brewer**, *Sinews of Power*.

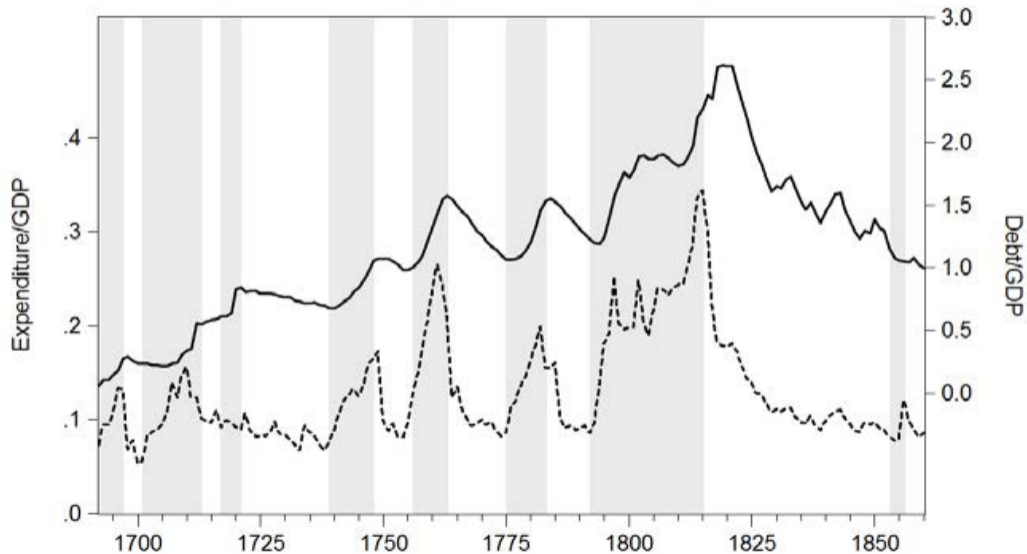
England vs. Holland



First British Empire, 1700



Debt and government expenditure in the U.K., 1692-1860



The economic consequences of sea empires

- World transmission of monetary forces.
- Convergence of world prices.
- New world slavery.
- Changes in Europe.
- Columbian Exchange.

Silver flow

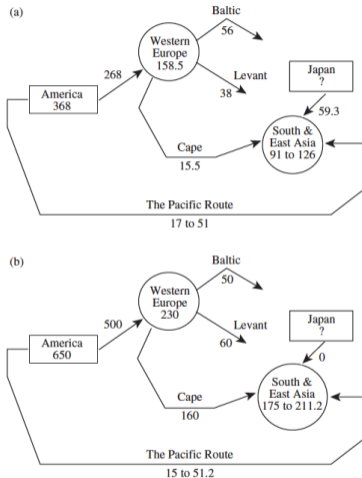
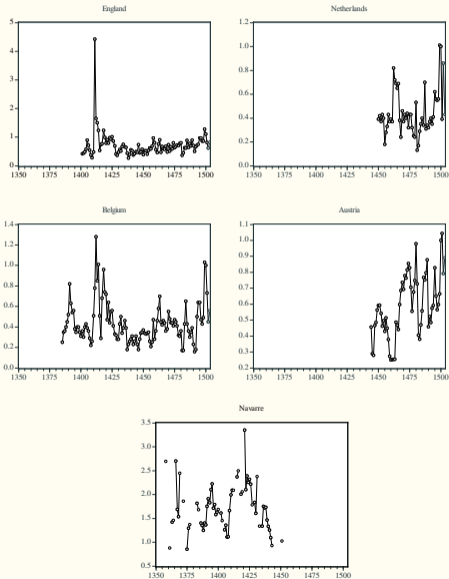
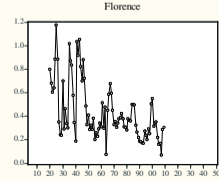
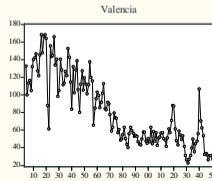
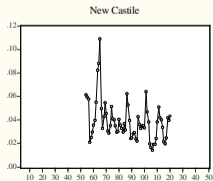
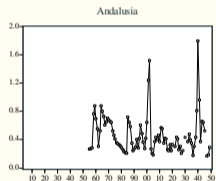
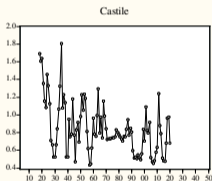
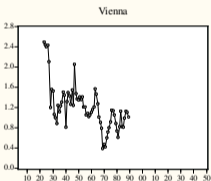
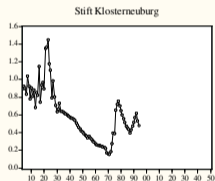
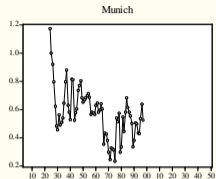
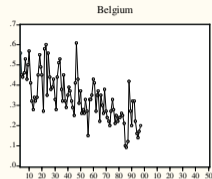
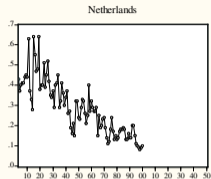


FIGURE 4.7. Intercontinental silver flows, early seventeenth and eighteenth centuries (kilograms per annum): (a) 1600-50; (b) 1725-50. *Source:* de Vries (2003, figure 2.3a,b). Note: the figures in rectangles (exporting regions) represent production, while the figures in circles (importing regions) represent domestic absorption.

Real prices of pepper before 1503



Nominal prices of pepper after 1503



Composition of European overseas imports, 1513-1780

(a) Imports from Asia to Lisbon, 1513-1610 (% by weight)						
	1513-19	1523-31	1547-48	1587-88	1600-3	1608-10
Pepper	80.0	84.0	89.0	68.0	65	69.0
Other spices	18.4	15.6	9.6	11.6	16.2	10.9
Indigo	0.0	0.0	0.0	8.4	4.4	7.7
Textiles	0.2	0.0	0.0	10.5	12.2	7.8
Misc.	1.4	0.4	1.4	1.5	2.2	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
(b) Imports of VOC into Europe, 1619-1780 (% by invoice value)						
	1619-21	1648-50	1668-70	1698-1700	1738-40	1778-80
Pepper	56.5	50.4	30.5	11.2	8.1	9
Other spices	17.6	17.9	12.1	11.7	6.1	3.1
Textiles	16.1	14.2	36.5	54.7	41.1	49.5
Tea and coffee				4.2	32.2	27.2
Drugs, perfumes, and dye-stuffs	9.8	8.5	5.8	8.3	2.8	1.8
Sugar		6.4	4.2	0.2	3.7	0.6
Saltpeter		2.1	5.1	3.9	2.6	4.4
Metals	0.1	0.5	5.7	5.3	1.1	2.7
Misc.		0.2	0.1	0.4	2.3	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Composition of European overseas imports, 1513-1780

(c) Imports of English East India Company into Europe, 1668-1760 (% of invoice value)				
	1668-70	1698-1700	1738-40	1758-60
Pepper	25.25	7.02	3.37	4.37
Textiles	56.61	73.98	69.58	53.51
Raw silk	0.6	7.09	10.89	12.27
Tea	0.03	1.13	10.22	25.23
Coffee	0.44	1.93	2.65	
Indigo	4.25	2.82		
Saltpeter	7.67	1.51	1.85	2.97
Misc.	5.15	4.52	1.44	1.65
Total	100.00	100.00	100.00	100.00

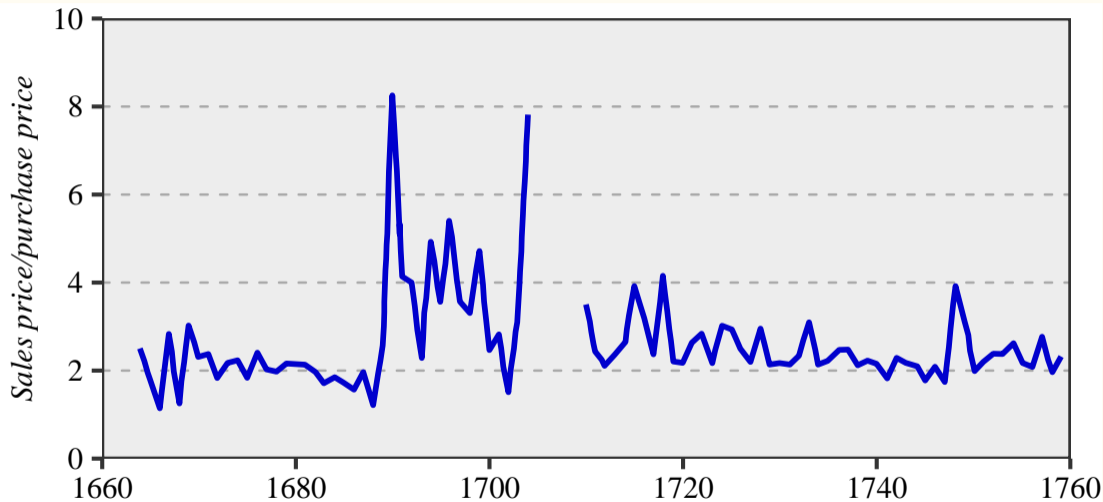
(d) Estimated annual sales of colonial imports, England and Netherlands, 1751-54			
	Total sales (1000 pesos)	Percentage of sales	
		From Asia	Of total
Textiles	6,750	41.7	21.1
Pepper	1,100	6.8	3.4
Tea	2,800	17.3	8.7
Coffee	1,000	6.2	3.1
Spices	1,850	11.4	5.8
Misc.	2,700	16.7	8.4
Total from Asia	16,200	100.0	50.5
		From America	Of total
Sugar	8,050	50.8	25.1
Tobacco	3,700	23.3	11.5
Misc.	4,100	25.9	12.8
Total from America	15,850	100.0	49.5
Total overseas imports	32,050		100.0

Source: Prakash (1998, pp. 36, 115, 120) and Steensgaard (1990, p. 12).

Spice markups, Amsterdam price over Southeast Asia price, 1580-1890

(a) Imports from Asia to Lisbon (1513-1610, % by weight)						
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Misc.		0.2	0.1	0.4	2.3	1.7
Total	100	100	100	100	100	100

Asian textile trade markups, 1664-1759



Why Slavery? I

- [Evsey Domar \(1970\)](#), [The Causes of Slavery or Serfdom: A Hypothesis](#).

To have a rich upper class of warriors/bureaucrats, you need:

1. Sufficient productivity to support an upper class.
2. Sufficient differential in military effectiveness to make becoming a lord or an unproductive specialist in coercive violence worth the risk.
3. Scarce land, or an effective "recapture technology" (Cossacks, language competence, black skin as a marker, etc.) to keep your slaves/serfs/debt peons from successfully running away.

Why Slavery? II

- **Ralph Austen and Woodruff D. Smith (1992)**, **Private Tooth Decay as Public Economic Virtue: The Slave-Sugar Triangle, Consumerism, and European Industrialization.**

Colonial-era Caribbean slavery requires:

1. Guns that European merchants can sell to African kings on the coast.
2. Prior slave-raiding made more effective and larger scale by guns.
3. Caravels and equivalent to carry slaves to the Caribbean reliably.
4. Europe with a taste for sugar and rich enough to pay for it.
5. Legal systems that will support colonial slavery.

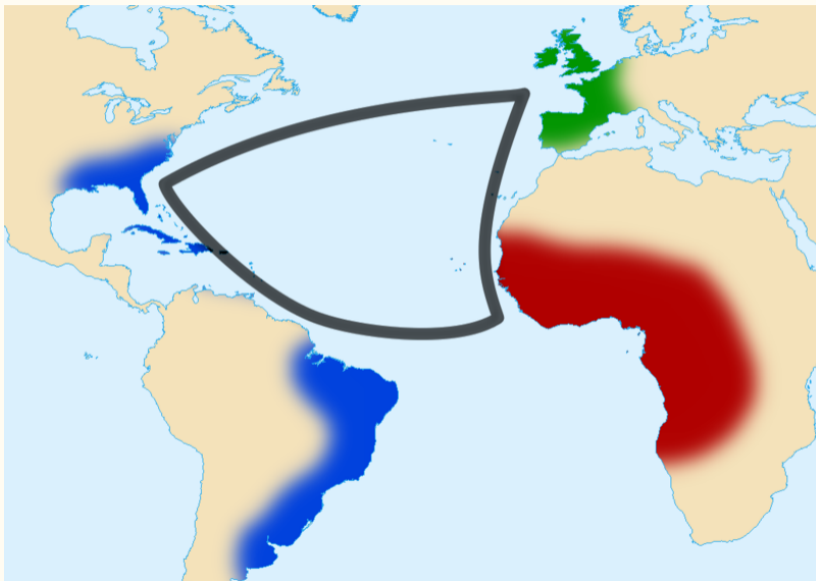
Slavery in the Americas

- Shortage of labor in mining, plantations, and domestic service.
- Biggest movement of peoples into the Americas.
- Phillip Curtin, *The Atlantic Slave Trade: A Census*.
- Consequences for Africa.
- Consequences for America. The Engerman-Sokoloff hypothesis.

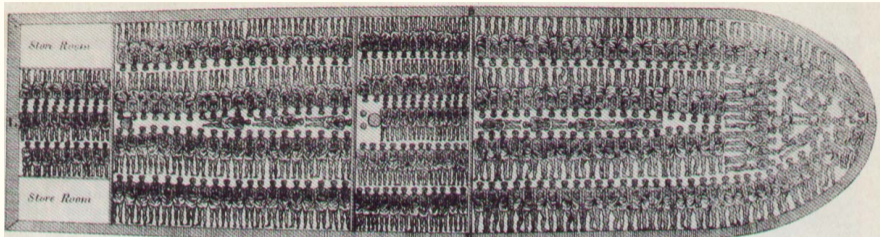
Elmina castle



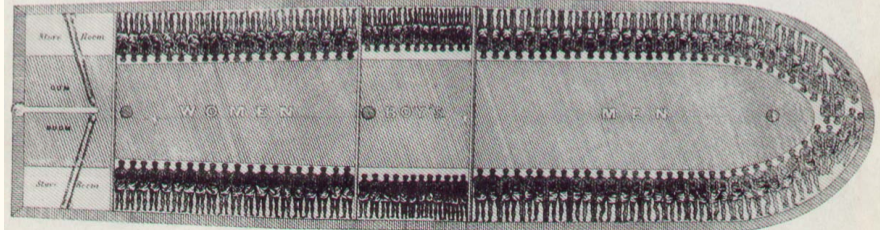
Triangular trade



Slavers ship

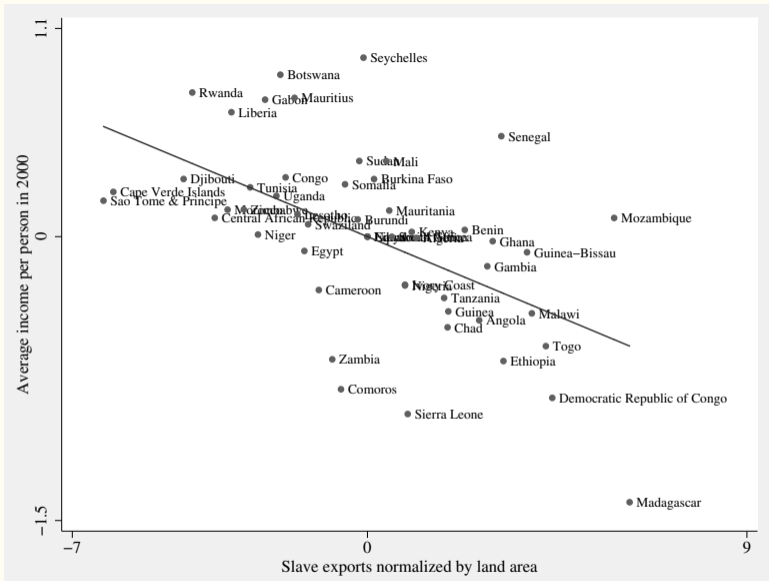


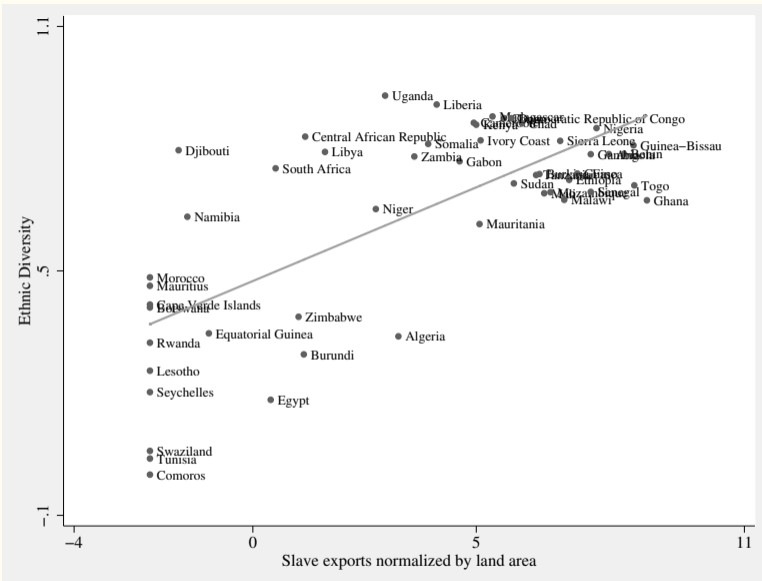
PLAN SHEWING THE STOWAGE OF 130 ADDITIONAL SLAVES ROUND THE WINGS OR SIDES OF THE LOWER DECK BY MEANS OF PLATFORMS OR SHELVES (IN THE MANNER OF GALLERIES IN A CHURCH) THE SLAVES STOWED ON THE SHELVES AND BELOW THEM HAVE ONLY A HEIGHT OF 2 FEET 7 INCHES BETWEEN THE BEAMS AND FAR LESS UNDER THE BEAMS. See Fig 1.



Census of slave trade







Consequences for Europe

- Accumulation of capital.
- Political-economic equilibrium within European.
- Deep changes in diet (sugar, tea, coffee, chocolate, tobacco).
- **Sidney W. Mintz**, **Sweetness and Power: The Place of Sugar in Modern History**.

London coffee-house, 17th century

