



1770-1779 European Shipping Network

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Introduction/Motivation

Motivation:

1. Is there open source data on shipping networks from around the time of the American Revolution?
2. What is the relationship between European shipping hubs during the period of 1770-1779?
3. What, if any, connections exist between countries based on the hubs they visited?

Data:

1. Climatological Database for the World's Oceans: 1750–1850 (CLIWOC) from data.world

Notable Events From 1770 to 1779

1770 - France is still in the Period of Enlightenment

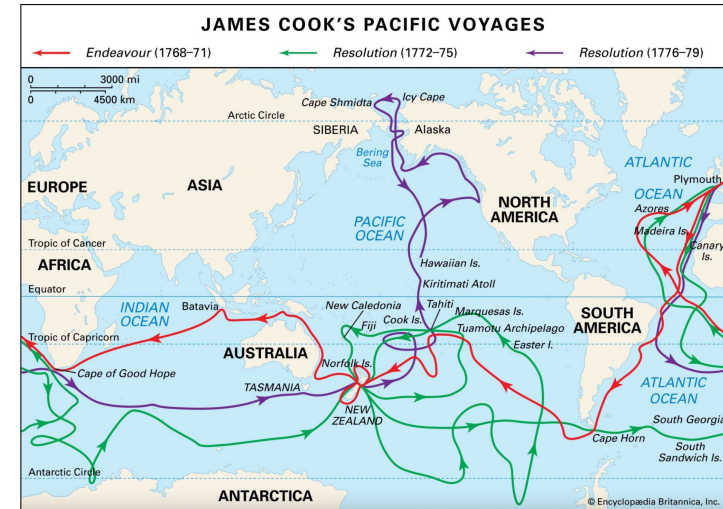
1771 - First circumnavigation of the world completed

1773 - First voyage to cross the Arctic Circle

1775 - Start of the American Revolution

1778 - Start of the Anglo-French Wars

1779 - Great Siege of Gibraltar



Data Description

The **Climatological Database for the World's Oceans: 1750–1850 (CLIWOC)** project compiled more than 3000 **shipping logbooks** from British, Dutch, French and Spanish vessels for the purpose of understanding pre-instrumental climate.

The dataset consists of **280,280 rows**, where each row corresponds to a daily logbook entry from a specific voyage. It encompasses **141 columns**, detailing a wide range of information including the institution in possession of the logbook, logbook ID, ship's name, voyage ID, start and end locations, the ship's nationality, ship type, UCT, latitude, longitude, wind direction, special weather conditions (such as snow), and remarks, among other information.

What do the logbooks looks like?

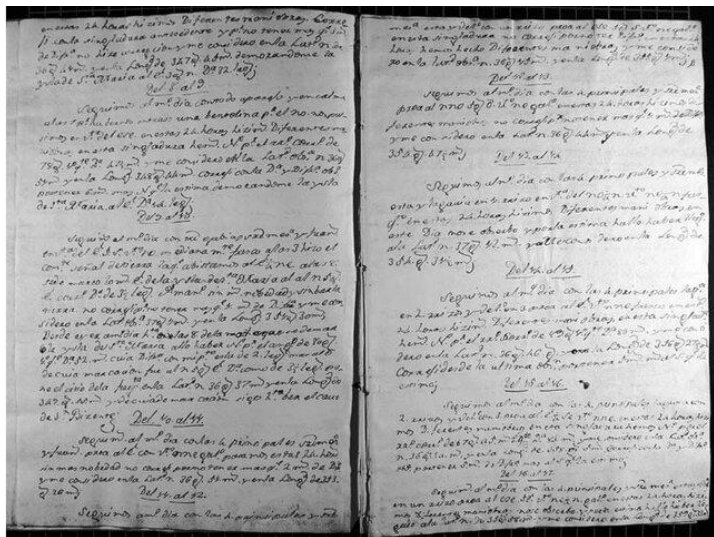


Figure 1. Typical Spanish text logbook.

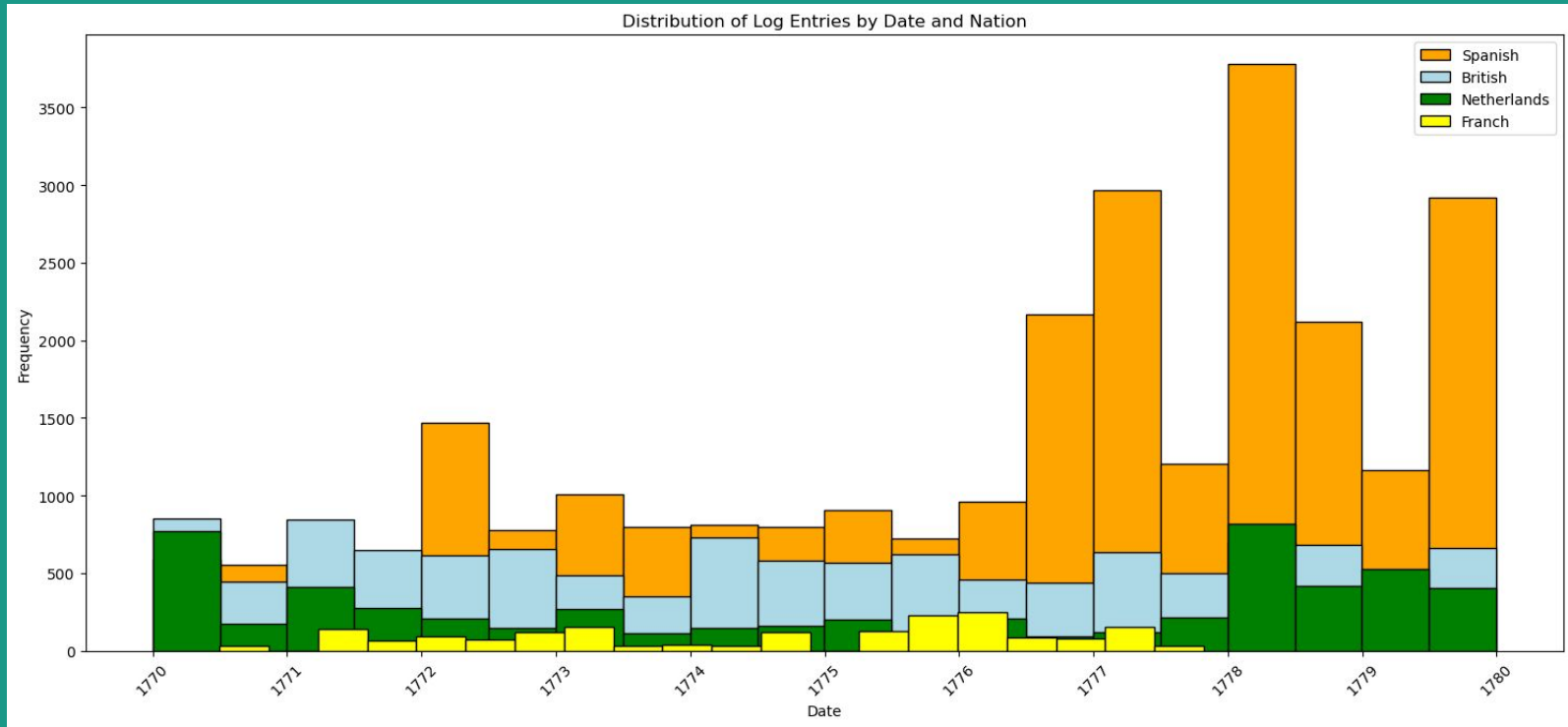
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Figure 2. Typical Spanish table + events logbook.

[illegible]

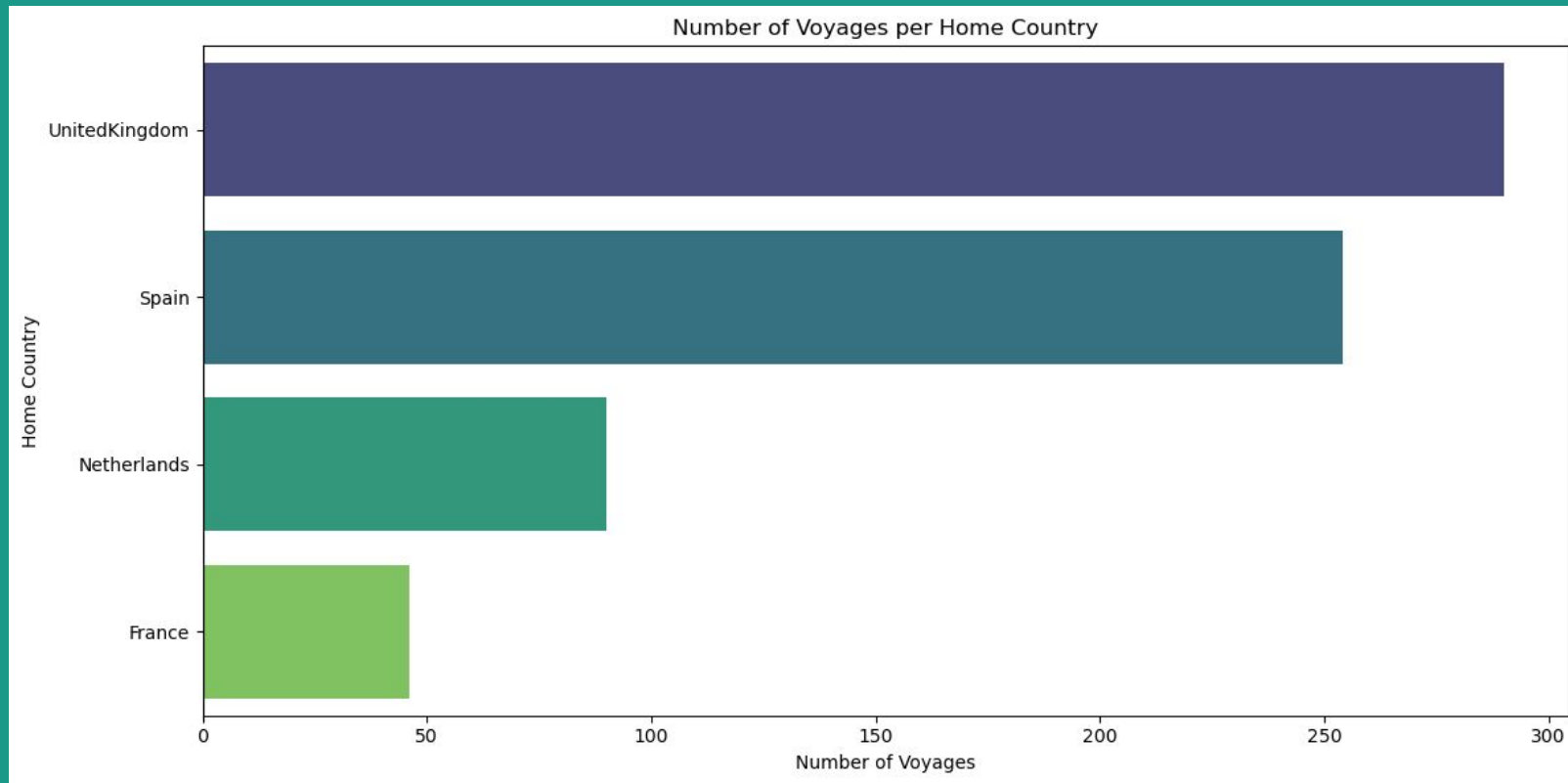
Figure 3. Typical 18th century English East India Company logbook

Looking only from 1770 - 1779:



*This is a histogram showing the distribution of 46,237 log entries by date and ship nationality. The x axis are years. The y-axis is the number of log entries.

Looking only from 1770 - 1779:



*This is a bar graph showing the number of voyages accounted for from 1770-1779 by country. The x-axis shows the number of voyages. The y-axis are nations that claim the voyage.

Restructuring Data

- Sliced data to only include log entries from 1770-1779
- Grouped data by VoyageID & added min and max dates which represents log dates
- Converted locations for Voyage To and Voyage From to modern locations

	VoyageIdni	VoyageFrom	VoyageTo	ShipName	MinDate	MaxDate	Duration	HomeCountry	FormattedMin	FormattedMax
0	17750605.0	Brest France	Martinique Caribbean	Amphitrite	1775-06-05	1775-07-06	31	France	June 05, 1775	July 06, 1775
1	17721225.0	Brest France	Cap-Haitien Haiti Caribbean	L'actionnaire	1772-12-25	1773-01-22	28	France	December 25, 1772	January 22, 1773
2	17730428.0	Cap-Haitien Haiti Caribbean	Brest France	L'actionnaire	1773-04-28	1773-06-05	38	France	April 28, 1773	June 05, 1773
3	17770409.0	Honfleur France	Grand Bank Newfoundland	L'aimable Marie Anne	1777-04-09	1777-06-22	74	France	April 09, 1777	June 22, 1777
4	17771004.0	Honfleur France	Grand Bank Newfoundland	L'aimable Marie Anne	1777-10-04	1777-10-27	23	France	October 04, 1777	October 27, 1777

- 680 unique voyages, organized into rows, each featuring 10 columns
- Columns include details such as the Voyage ID, Ship Name, departure and arrival locations, as well as the oldest and newest sliced dates of the voyages, among other information

Connecting the Dots

Overview:

Number of Unique Locations: 133

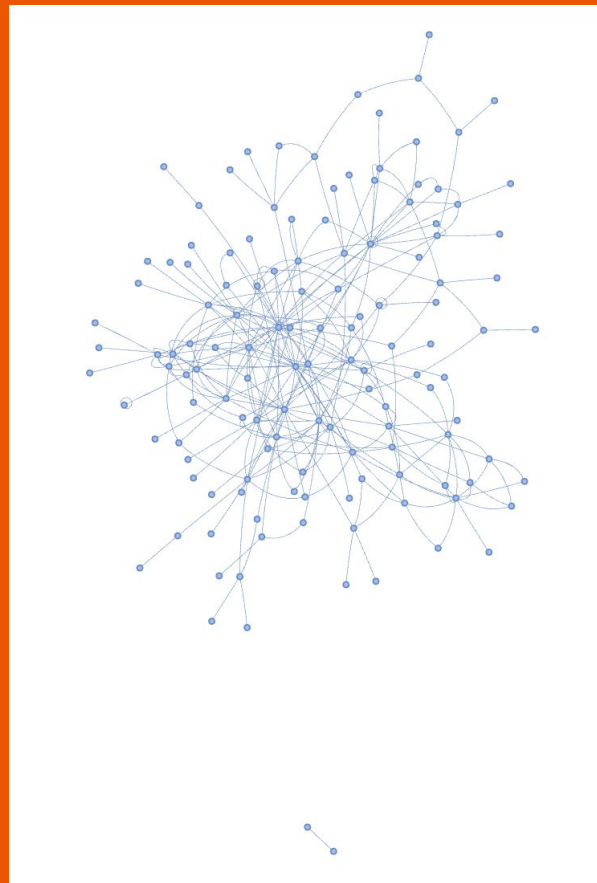
Number of Voyages: 680

Number of Unique Routes: 296

Nodes with Edges:

Masulipatnam, India and Cuddalore, India

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*This is an unweighted visualization of the connections between locations. The nodes are voyages destinations and the edges are voyages.

Nodes with the Most Diversity of Connections:

Madeira, Portugal; 22

Cadiz, Spain; 19

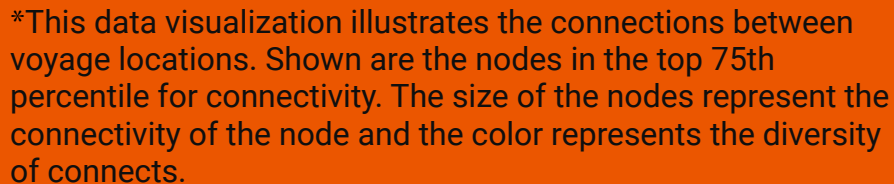
Cape of Good Hope, South Africa; 18

Plymouth, England; 17

London, England; 16

Antigua; 16

St Helena Island; 13



Nation Connections

Shared Locations:

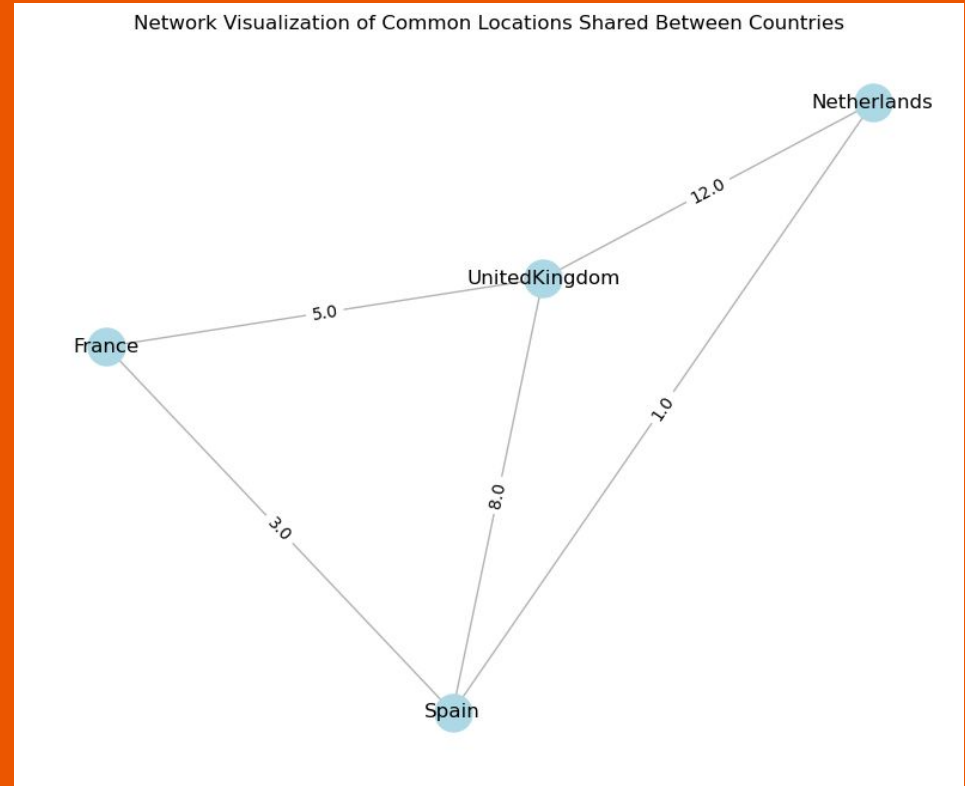
Cadiz, Spain - France, United Kingdom, Spain

Gibraltar - United Kingdom, Netherlands, Spain

Guadeloupe - France, United Kingdom, Spain

Number of Unique Locations: 133

**Number of Locations Visited by more than one
Country: 23**



*This data visualization illustrates the connections between nationalities and shared locations. It reveals that the United Kingdom and the Netherlands share the most locations, while the Netherlands and France do not have any common final destinations.

Key Takeaways

1. There is overlap in the locations visited by the nations of England, French, Netherlands and Spain
2. There is no data to indicate that France and the Netherlands traveled to the same locations during this period
3. There is a connected web between all locations at this time except for Masulipatnam, India and Cuddalore, India which are only connected to each other