

Digital history

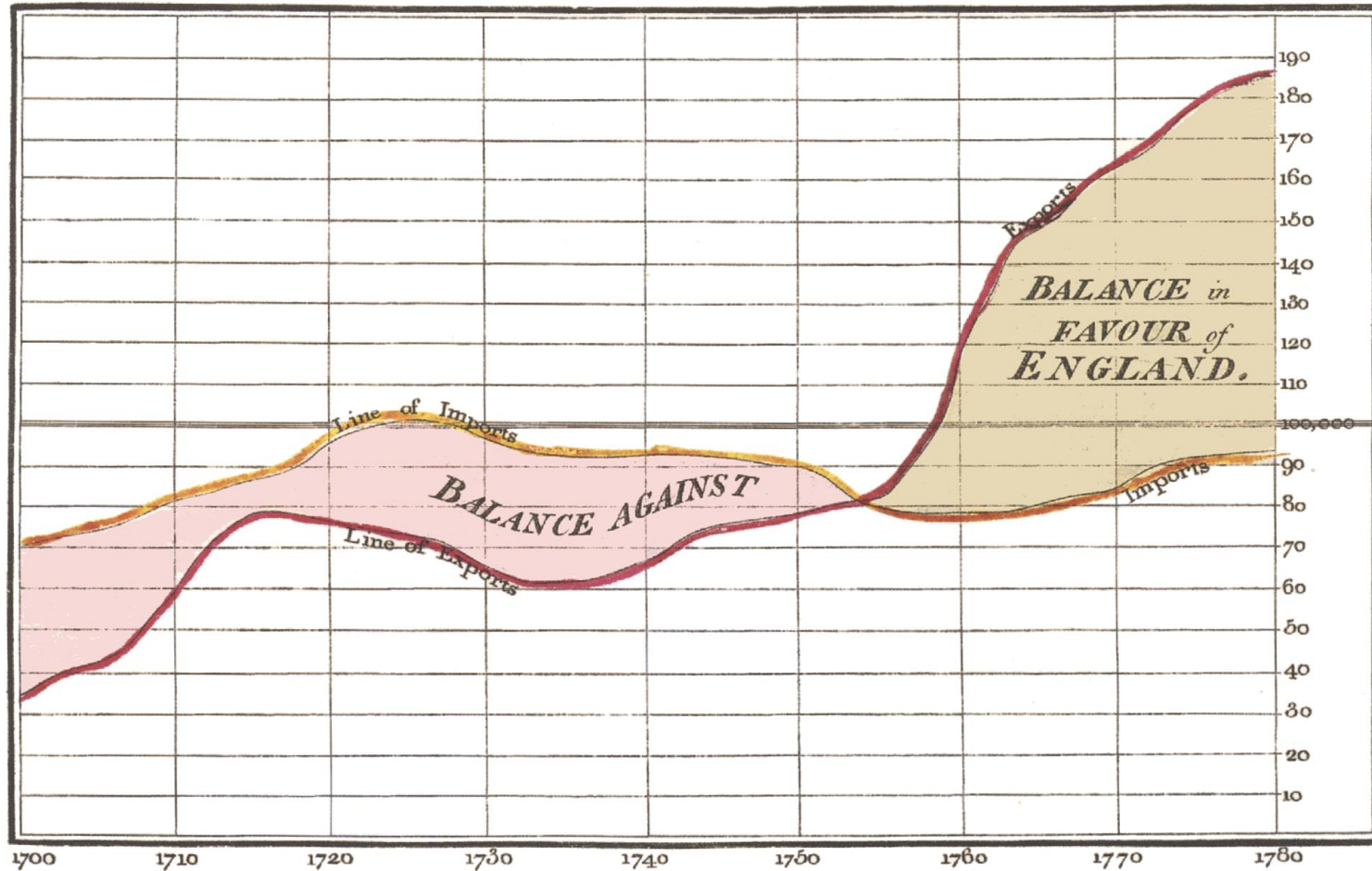
- Source (data) analysis methods
- Metasources
- Data visualization
- Communication modes

Spatial history

- Focus on visualization ([*Visualising Raynal*](#))
- Focus on space
 - The construction of space: not natural geography, but spatial relations changing over time (distance is in absolute space, itinerary or route is relational space)
 - Spatial practices and experiences
 - Representations of space (in order to modify it)
 - Representational space (symbolic associations defining kind of experiences)
 - Representation of *movement*
 - *Space as natural context, space as empirical result of movement*

William Playfair (1759-1823)

Exports and Imports to and from DENMARK & NORWAY from 1700 to 1780.



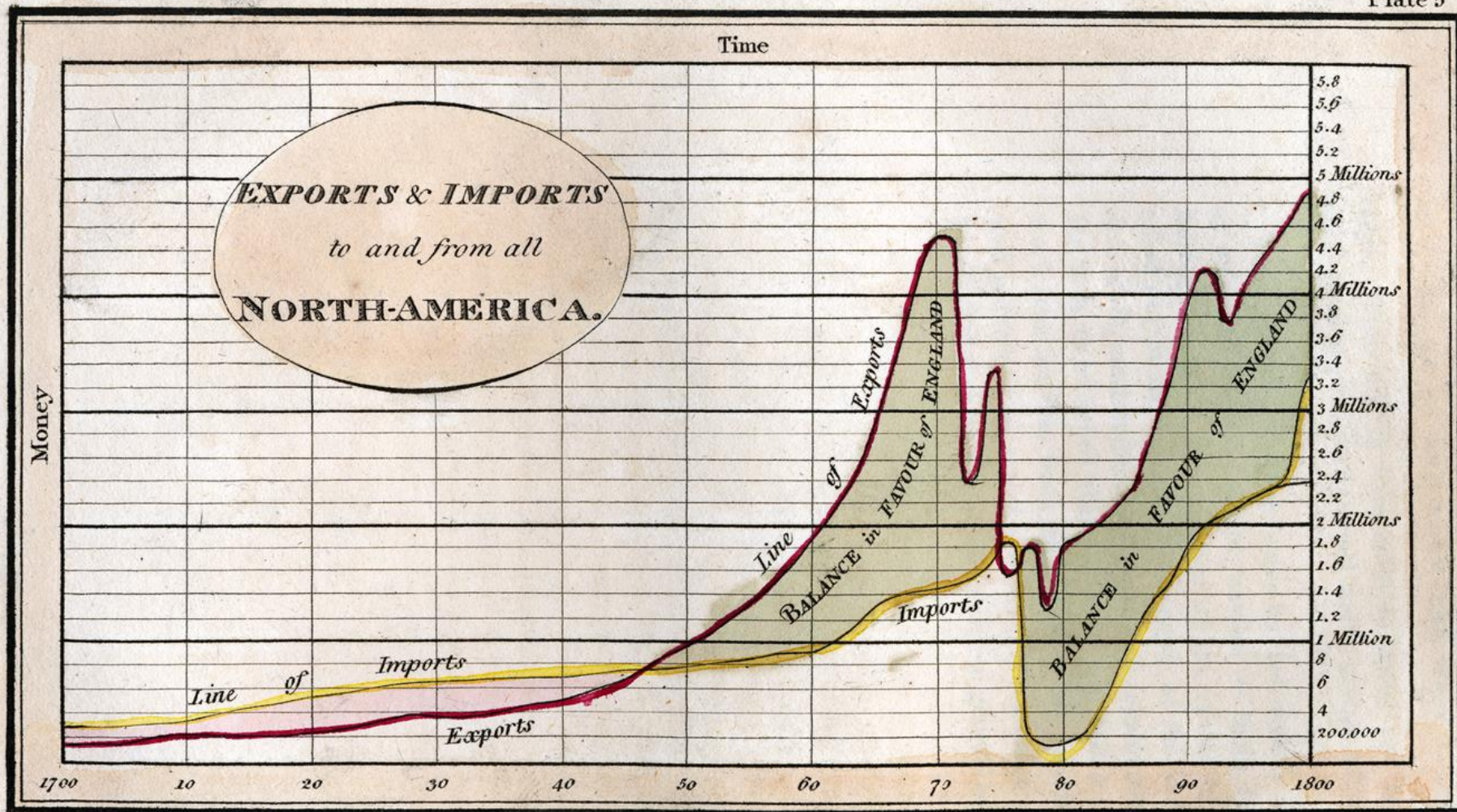
The Bottom line is divided into Years, the Right hand line into 10,000 each.

Published as the Act directs, 14th May 1786. by W^m Playfair

Reale sculpt 352, Strand, London.

William Playfair (1759-1823)

Plate 5



Veale sc. Strand.

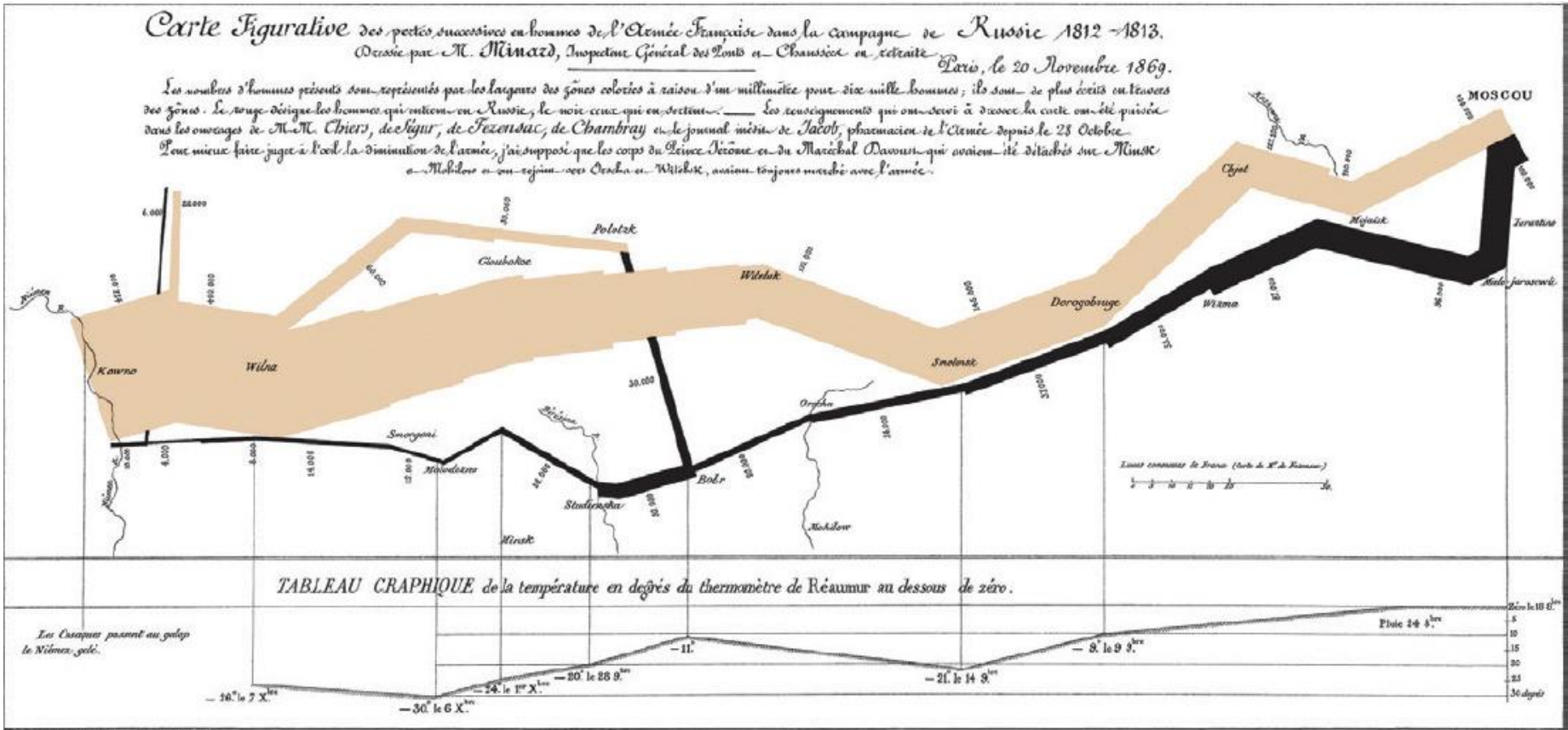
Charles-Joseph Minard (1781-1871),

Carte figurative des pertes successives en hommes de l'Armée dans la campagne de Russie 1812-1813 (1869) [one millimetre in width of coloured areas=10k men

Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

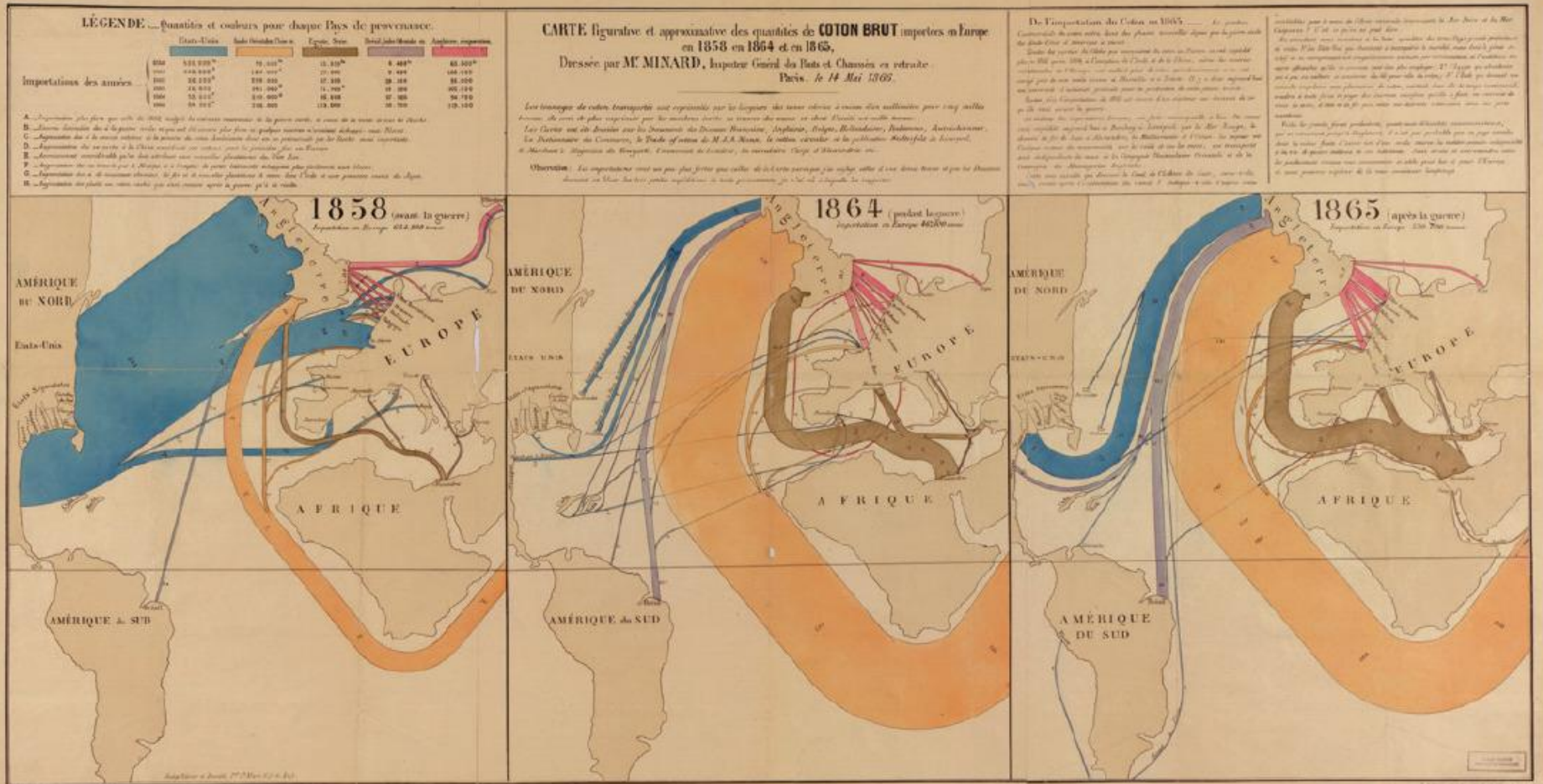
Dessiné par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite. Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les largeurs des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en lettres des zones. Le rouge désigne les hommes qui ont été en Russie, le noir ceux qui en sont restés. Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. de Chter, de Fezensac, de Chambray et le journal mémoires de Jacob, pharmacien de l'Armée depuis le 23 Octobre. Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Général Dornow qui avaient été détachés sur Minsk et Mohilew n'en rejoignent pas Orscha et Wilkik, ainsi qu'ils ont toujours marché avec l'armée.



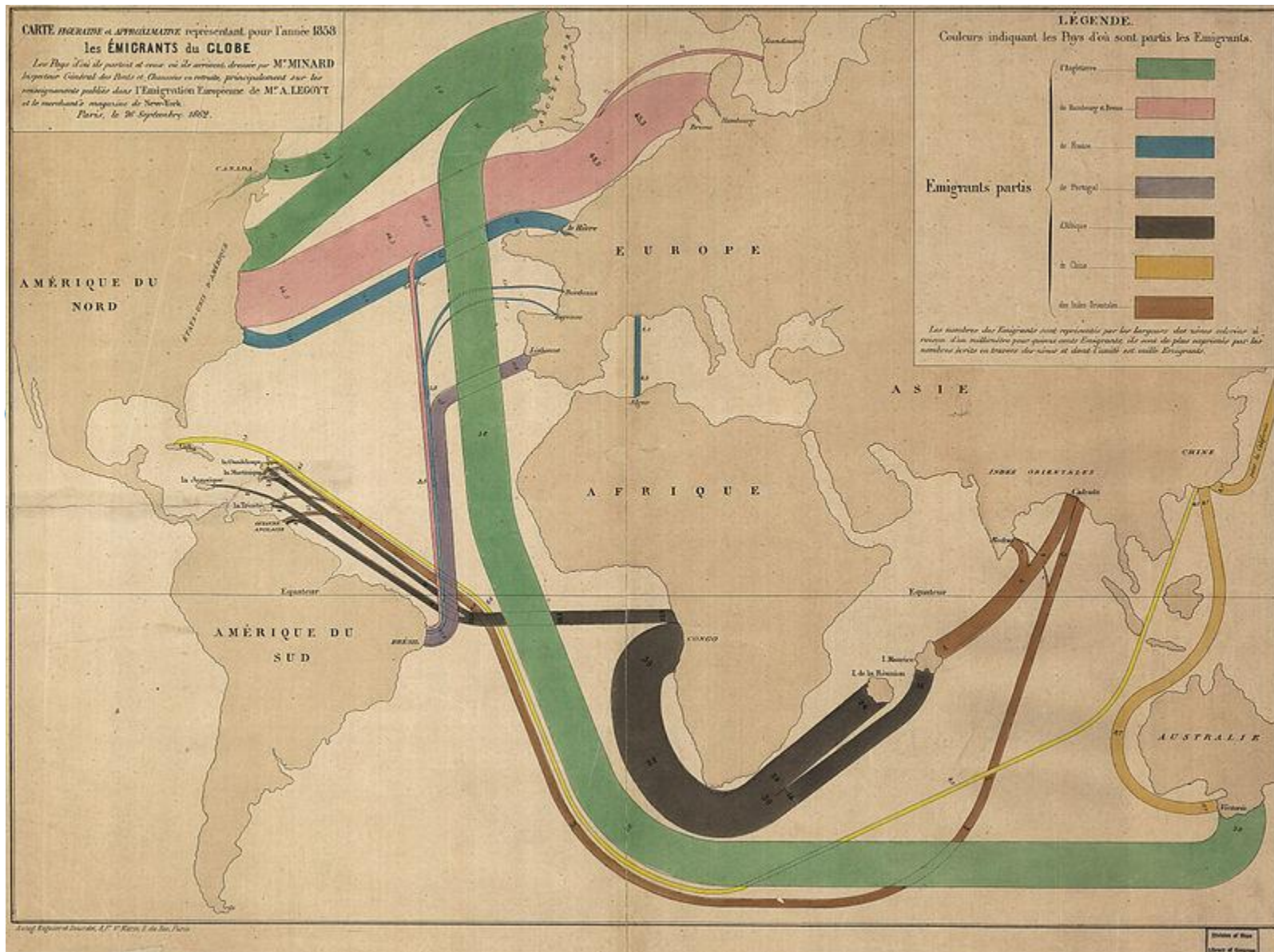
Charles-Joseph Minard (1781-1871),

Carte figurative et approximative des quantités de coton brut importées en Europe en 1854, en 1864 et en 1865



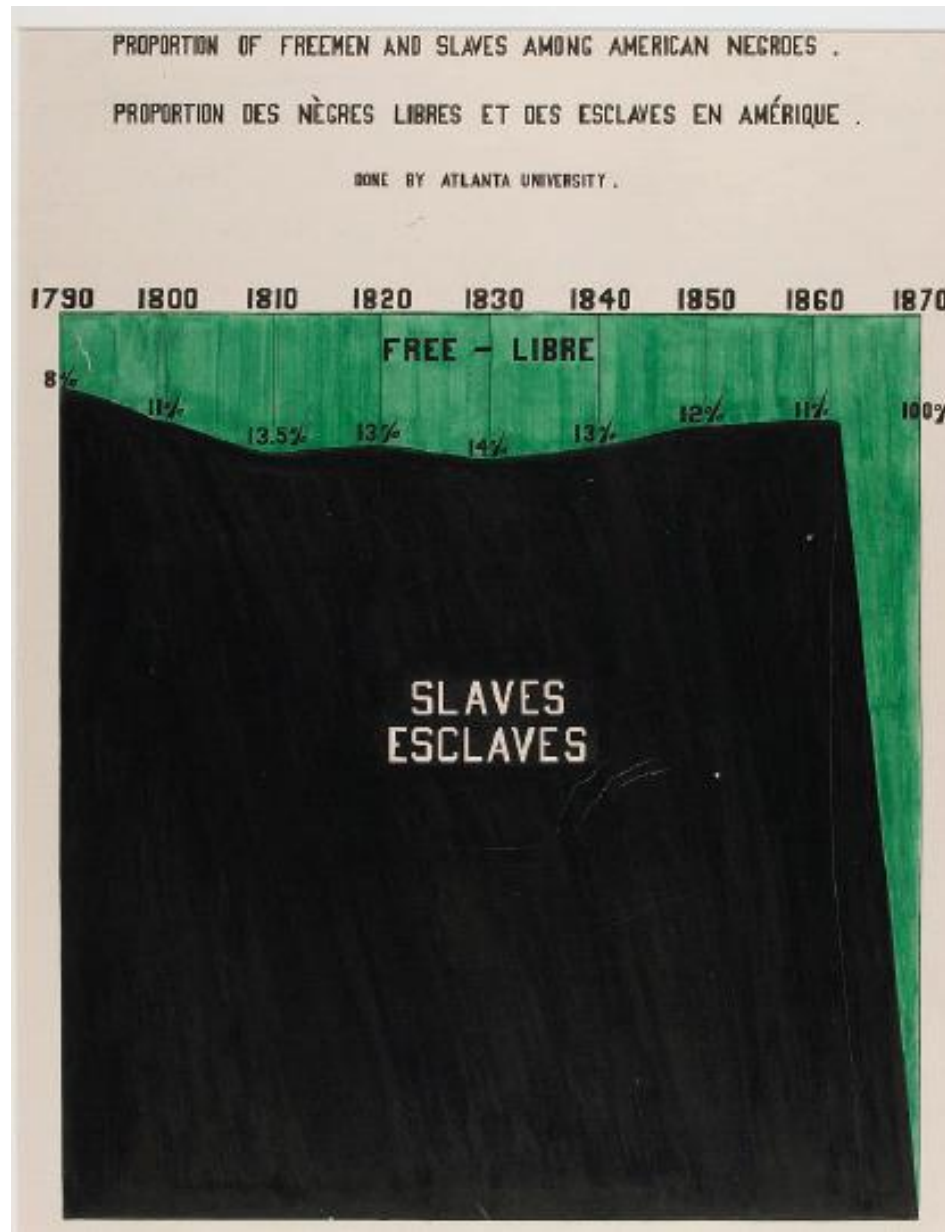
Charles-Joseph Minard (1781-1871),

Carte figurative et approximative représentant pour l'année 1858 les émigrants du globe (1862)



W.E.B. Du Bois

at the Paris Exposition Universelle in 1900



US Gun Deaths

U.S. GUN KILLINGS IN 2018

11,356
PEOPLE KILLED

472,332
STOLEN YEARS[®]

6,551 | 58%
Black

AGE 0

4,805 | 42%
All Other Victims

Use the categories below as additive filters.

Remove filters

About the <i>victim</i>			About the <i>incident</i>			
	Hispanic		Southwest	Unknown		Stranger
	Asian		Southwest	Shotgun		Acquaintance
	Native	Adults 30 and over	Northeast	Rifle	Multiple Victims	Significant Other
Female	White	Young Adults 18-29	Midwest	Handgun	Single Victim	Family Member
Male	Black	Children under 18				
SEX	RACE	AGE GROUP	REGION	GUN TYPE	VICTIM COUNT	ASSAILANT

A Look at Voluntarily Reported Gun Homicide* Data from U.S. Law Enforcement

This data does not include 24,432 deaths by suicide nor coroner reports that total 2018 gun deaths to 13,958.

What This Data Reveals

YOUTH ARE LARGELY AT RISK



In 2018, 5,609 victims killed by guns were under 30, 6% (724) were under 18 — only children. To reduce youth homicides, we must assess youth violence risk factors at several

HANDGUNS CONTINUE TO BE THE MOST DEADLY



65% of gun murders involved a handgun. While banning assault rifles and high-capacity magazines are necessary steps in saving lives, they just aren't enough. Real

Isochronic maps

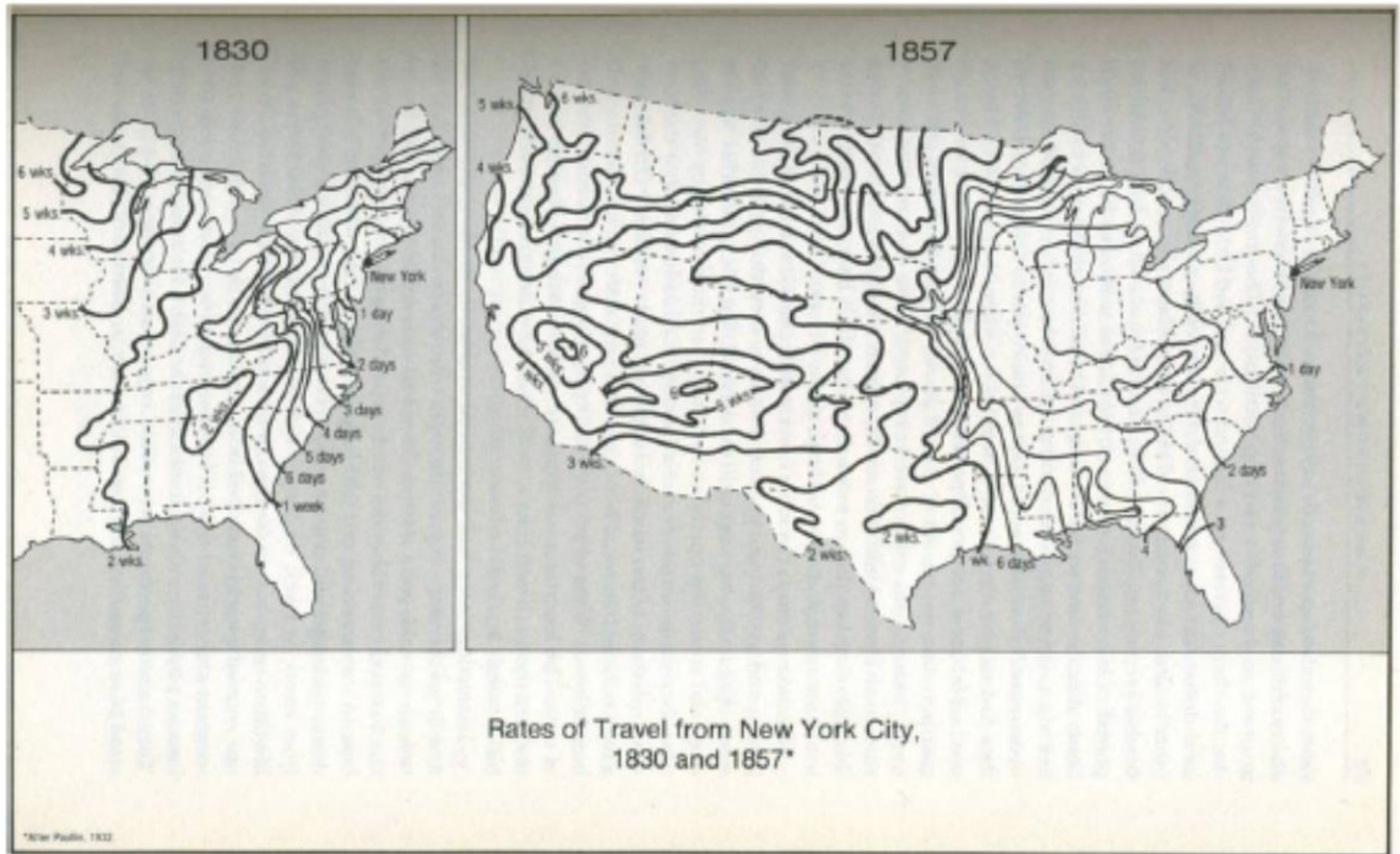


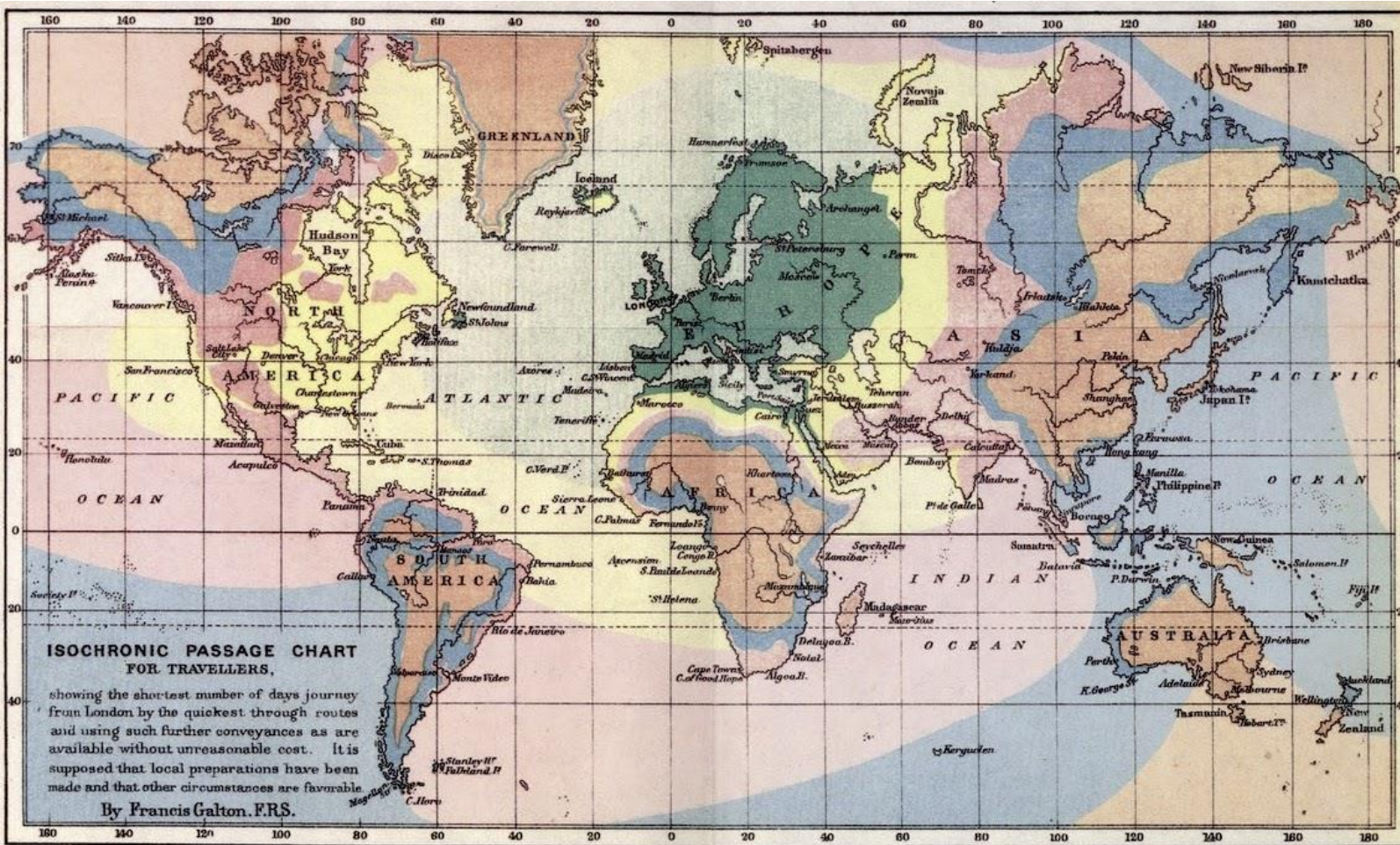
Figure 1 | Rates of Travel from New York City, 1830 and 1857 by Charles Puallin, 1932. From William Cronon's book, *Nature's Metropolis: Chicago and the Great West*, published by W.W. Norton & Co. in 1991. This chart shows decreasing travel times between 1830 and 1857 from New York City to points West. These changes were almost entirely due to the expanding American railway system¹.

Francis Galton,
*Isochronic chart of
 travel time to
 different parts of the
 world, Royal
 Geographical Society,
 London, 1881*

«showing the shortest
 number of days journey
 from London by the
 quickest through routes
 and using such further
 conveyances as are
 available without
 unreasonable cost. It is
 supposed that local
 preparations have been
 made and that other
 circumstances are
 favourable»

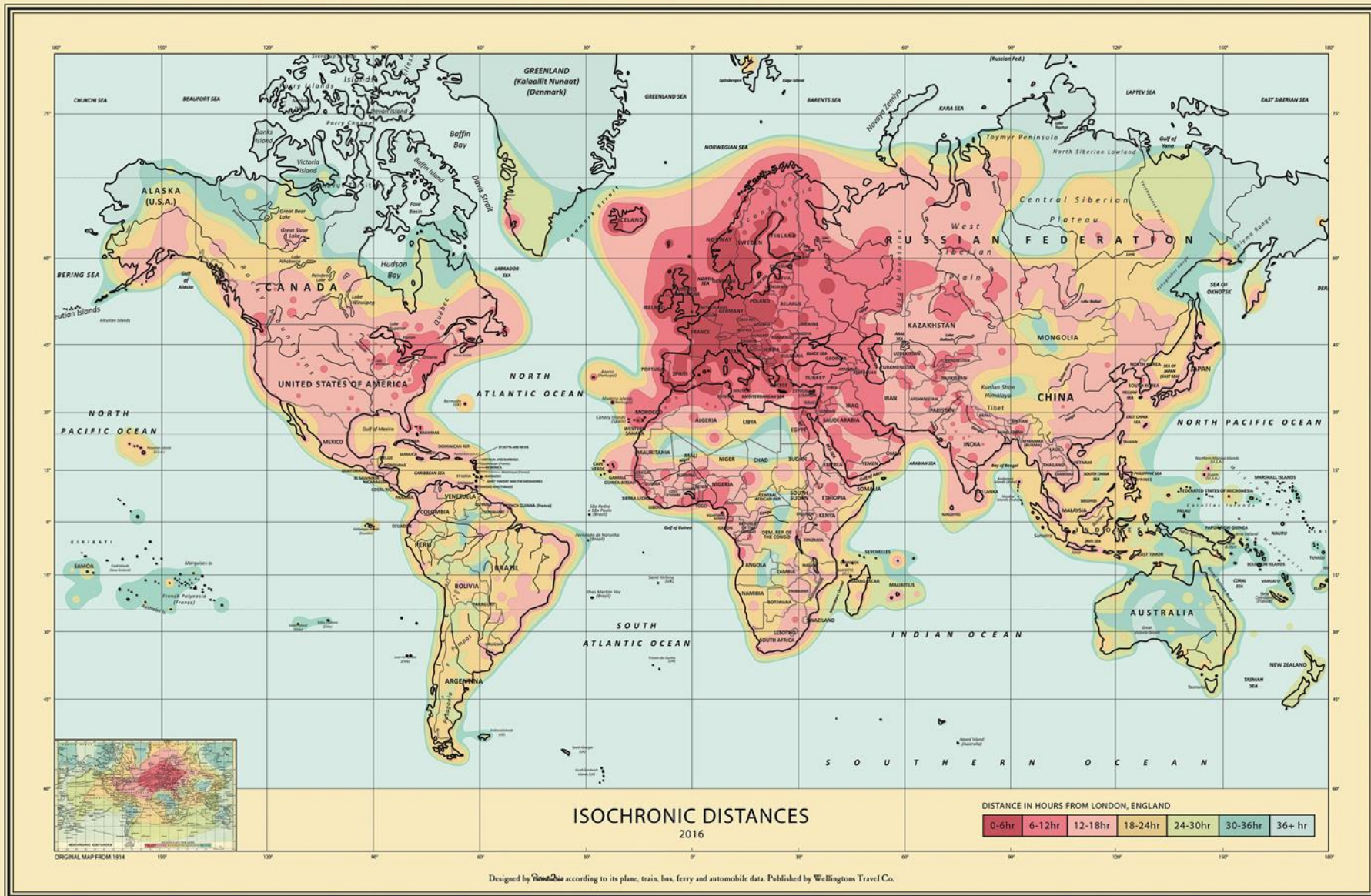
Verne: «Phileas Fogg had
 won his wager, and had
 made his journey around
 the world in eighty days.
 To do this he had
 employed every means of
 conveyance—steamers,
 railways, carriages,
 yachts, trading-vessels,
 sledges, elephants.

40/50 days eastward + 30
 days westward



H. Sharbau. N.G.S. del. Explanation of colours. Green within 10 days. Yellow 10-20 days. Pink 20-30 days. Blue 30-40 days. Brown more than 40 days journey. E. Waller. lith.

Published for the Proceedings of the Royal Geographical Society, 1881.



Advanced practices

Slave Voyages



Global Sea Routes





Global Sea Routes: A Historical Geodatabase of Global Navigation (1500-1900)

Year	Start Date	End Date	Origin	Destination	Ship Name	Commander	Company
1500	1500-01-01	1500-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1501	1501-01-01	1501-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1502	1502-01-01	1502-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1503	1503-01-01	1503-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1504	1504-01-01	1504-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1505	1505-01-01	1505-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1506	1506-01-01	1506-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1507	1507-01-01	1507-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1508	1508-01-01	1508-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1509	1509-01-01	1509-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco
1510	1510-01-01	1510-12-31	Genoa	India	San Marco	Antonio di Negro	San Marco

"The temporal dimension of world connectedness, or: how long did it take to travel by sea to several overseas destinations and how did that change over the four centuries of the modern era?"

Guido Abbattista
PI
Team:
Andrea Favretto, Giulia Iannuzzi, Filippo Chiochetti, Erica Grossi
Department of Humanities - University of Trieste (Italy)

Global Sea Routes

A historical geodatabase of European global navigation (1500-1900): basic principles and ongoing developments

Guido Abbattista, Erica Grossi, Ginevra Zelaschi (University of Trieste)

GSR - Global Sea Routes is a **relational geospatial database** aimed at the study of **European navigation on a global scale** in the modern and contemporary ages, in order to understand how the degree of world **interconnectedness** from the standpoint of maritime journey times evolved over four centuries (1500-1900).

Project launch: January 2019
 Prototype development and fine-tuning: late 2020-1st trimester 2021
 Web interface implementation: from second trimester 2021

Software used for the prototype database: PostgreSQL, PgAdmin, PostGIS, QGIS
Online database and data visualization: Nodegwt

GSR is
 - a **relational database** with a **spatial component** (Geodatabase)
 - a **scientific cooperation** between the University of Trieste and the Italian Navy Hydrographic Institute

Ongoing developments

- debug of the database structure
- data entry
- web application

Web application

- enables final users to obtain **comparative synoptic visualisations**, e.g. **dynamic maps** and comparative quantitative **tabulations**, designing routes according to specific research interests and needs
- **search options** based on series of **variables**, such as:
 - time **periods**
 - geographical **areas and relations**
 - vessels **nationality and purpose** of the voyages
 - **technical characteristics** of vessels and propulsion systems
 - **navigation techniques**, relating to nautical, astronomical and cartographical **knowledge** and skills

- GSR objectives:**
- analysing and representing **maritime connections** fostered by European navigation
 - understanding **globalisation** as a function of European overseas expansion and the connected voyages, explorations and transportations in order to visually represent **global Europeanness** from the late-15th century to the beginning of the 20th century
 - collecting data from **printed sea voyage accounts** and **manuscripts shiplogbooks**
 - building relational **online geodatabase** to be accessed on the Web



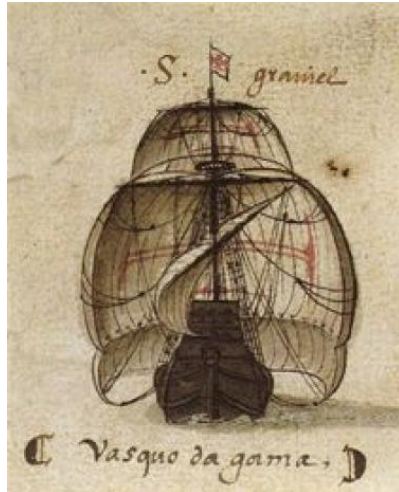
Funding and awards (2018-20)

- 1 twenty-eight months research grant from an Italian national project PRIN 2017 "Global Europeanness: toward a differentiated approach to global history 1450-1900", dir. University of Trieste Research Unit Guido Abbattista.
- one-year research grant from the University of Eastern Piedmont (out of Prin 2017);
- one-year research grant in «Social Sciences and Humanities» from the Friuli Venezia Giulia Region;
- financial contribution of the Foreman-Casali Foundation;
- scientific patronage of the Italian Cartographic Association

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 Update: May 2021



GSR-Global Sea Routes



GSR is a **relational geospatial database** aimed at the study of the routes of European shipping on a global scale in the modern and contemporary age. Its purpose is a better understanding of:

- the historical evolution of European navigations in *quantitative* and *comparative* terms
- the historical evolution, in terms of voyage timing, of *world maritime interconnectedness* fostered by European transoceanic enterprises over four centuries (1500-1900)
- the real details and specifics of overseas routes through their *digital* and *dynamic* cartographic reconstruction
- the *actual circumstances* affecting overseas navigation, as inferred from a key typology of sources previously exploited in a limited way and on a case-study basis, and their long-term changes according to specific historical conditions

Oggetto:

- Non storia delle esplorazioni e delle connessioni mondiali via mare
- Storia e rappresentazione della navigazione
 - europea
 - transoceanica
 - commerciale
- Variabili delle connessioni via mare e loro evoluzione:
 - modi (volume, mezzi, rotte, luoghi, tecniche, condizioni)
 - tempi (regolarità, continuità, intensità, velocità, durata)
 - saperi (*hardware, software, wetware* nautico, geografico, matematico, naturalistico)
- Rappresentazione:
 - grafica (cartografica, grafica, tabulare; non generica o sintetica, non schematica, non ripetitiva)
 - georiferita (*tendenzialmente* realistica)
 - con visualizzazione spazio-temporale dinamica
 - relazionale (analitica, comparativa)

Le grandi compagnie commerciali dei secoli XVII-XVIII: Inghilterra e Olanda

- **Macchine** complesse per lo svolgimento di attività economiche e commerciali (import/export, immagazzinamento, vendita, controllo alla produzione), finanziarie, di navigazione (costruzione, affitto, equipaggiamento, arruolamento, logistica, riparazione, istruzione), politico-diplomatico-militari
- **Sistemi** di mobilitazione e impiego di risorse umane
- **Apparati** di produzione di dati, saperi, conoscenze
- **Organizzazioni** di produzione, scambio, raccolta, sistemazione e circolazione di informazione scritta (testuale e cartografica)
- **Dispositivi** di ricerca e formazione di consenso
- **Attori co-protagonisti** della prima globalizzazione commerciale

English East India Company: alcune definizioni

- “Monopolistic trading body”, “joint-stock [temporary, permanent]”, “chartered company”
- “The world’s most powerful corporation” (Tirthankar Roy)
- “The Company-State” (Philip Stern)
- “Perhaps, the greatest military power in Asia” (Robert Blythe)
- “A cooperation-enhancing institution”, “publicly-held business corporation” (Ron Harris)
- “A model of commercial efficiency [...] the supreme actor of corporate violence in world history” (William Dalrymple)

Pratiche e culture della navigazione della EEIC

- **Creazione di reti:** collegamento marittimo tra Nord Europa e destinazioni asiatiche
- **Costi di trasporto:** velocità, sicurezza, controllo del rischio, competenza e affidabilità del personale di bordo
- **Conoscenze e informazioni:** attendibili, aggiornate, disponibili e metodi di trasmissione
- **Strumentazione:** cartografia, strumenti nautici, manuali, guide, istruzioni, resoconti, corrispondenze, *logbooks*
- **Il viaggio:** tra ricerca di regolarità e ripetitività e singolarità esperienziale

Storia digitale per l'analisi del viaggio transoceanico come vettore storico-globale

- GSR: strumento di accesso e ricomposizione di un quadro integrato di dati e della loro rappresentazione
- Strumento di rappresentazione finalizzata all'interpretazione
- Integrazione multilivello (GIS e forma analitico-descrittiva) con la forma scritta tradizionale
- Analisi e rappresentazione del viaggio transoceanico come punto di convergenza di
 - prassi consuetudinarie
 - abilità, esperienze
 - circostanze e contesti
- ricostruiti attraverso fonti non narrative incrociate con fonti accessorie

JOURNAL

of a VOYAGE to PERIN. the

CAPITAL of CHINA.

In the East India Ship.

HINDOSTAN,

WILLIAM. MACKINTOSH. ESQ.^R COMMANDER.


accompanying LORD. VISCOUNT. MACARTNEY. on the

Embassy to the

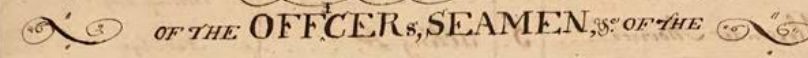
EMPEROR.

BY HENRY LINDEMAN.
THIRD OFFICER


EIC ship "Hindostan",
manuscript logbook,
1792-1793



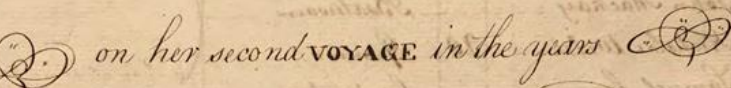
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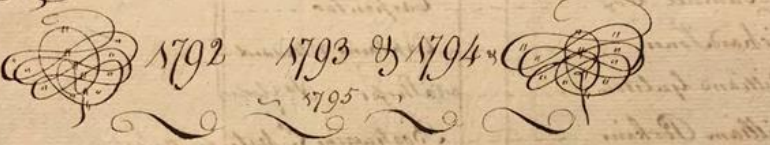
 OF THE OFFICERS, SEAMEN, & OF THE



HINDOSTAN.



 on her second VOYAGE in the years



 1792 1793 & 1794

 1795

Names	N ^o	Stations	Disch. Ann ^d . Disch. in the Voyg ^e
William Mackintosh Esq		Commander	} disch ^d . clearing day
M ^r . Gilbert Michell		Chief Officer	
John Hamilton		2 ^d . L ^o	dis ^t . 20 th Nov. 1792
Henry Lindeman		3 ^d . L ^o	} disch ^d . clearing day
James Allen	5	4 th . L ^o	
James Peter Warren		5 th . L ^o	dis ^t . 18 Dec ^r . 1792
Charles Bell		6 th . L ^o	dis ^t . 1 st Dec ^r . 1792
Joseph Bushby		Purser	dis ^t . clearing day
Sarguhav Macrae		Surgeon	} dis ^t . 10 th Sep ^r . 1792
Hugh Dove	10	L ^o . Mate	

EIC ship "Hindostan",
manuscript logbook, 1792-
1793

Ship Princess Charlotte bound for Bombay

Tuesday, April 16, 1799

Hour	Course	Wind	Sea	Remarks
1	Nbd	3	4	Light Breeze and fair weather throughout.
2		3	4	
3		3	4	
4		3	4	
5		3	4	
6		3	4	
7		3	4	
8		3	4	
9		3	4	
10		3	4	
11		3	4	
12		3	4	
1		3	4	
2		3	4	
3		3	4	
4		3	4	
5		3	4	
6		3	4	
7		3	4	
8		3	4	
9		3	4	
10		3	4	
11		3	4	
12		3	4	

At 11. At about the gun Deck took the Sloop and secured the great guns and small arms.

Wednesday, April 17, 1799

Hour	Course	Wind	Sea	Remarks
1	Nbd	3	4	Moderate breeze and pleasant weather throughout.
2		3	4	
3		3	4	
4		3	4	
5		3	4	
6		3	4	
7		3	4	
8		3	4	
9		3	4	
10		3	4	
11		3	4	
12		3	4	
1		3	4	
2		3	4	
3		3	4	
4		3	4	
5		3	4	
6		3	4	
7		3	4	
8		3	4	
9		3	4	
10		3	4	
11		3	4	
12		3	4	

Non profit 5.30 hrs

Thursday, April 18, 1799

Hour	Course	Wind	Sea	Remarks
1	Nbd	3	4	
2		3	4	
3		3	4	
4		3	4	
5		3	4	
6		3	4	
7		3	4	
8		3	4	
9		3	4	
10		3	4	
11		3	4	
12		3	4	

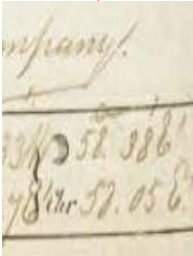
12

Distance 88'

Baker in Company.

Course & Dist.	Lat	Long	Lat	Long	Lat	Long	Lat	Long
1/2 N. 28	12 5	23 0	10 53 N	14 33 W	52 38 6'			
Depart. 25 1/2	of the	of the	Bar.	Ther.				

At 11. At about the gun Deck took the Sloop and secured the great guns and small arms.



From the logbook of the East Indiaman "Princess Charlotte", bound to Bombay, Madras and Calcutta, 1798-1800