

A collection of 15 lithographed maps, dissected and mounted on linen, original full wash colour, 14 signed, four inscribed, one with pasted printed slip, all with printed publisher’s label pasted to verso and tab with manuscript title, chemise, contained within black quarter morocco pull-off box.

FROM STATES TO STATISTICS

[Statistical Maps].

Author
MINARD, Charles Joseph

Publication date
1850-1861.

Publisher

Publication place
Paris,

Physical description
A collection of 15 lithographed maps, dissected and mounted on linen, original full wash colour, 14 signed, four inscribed, one with pasted printed slip, all with printed publisher’s label pasted to verso and tab with manuscript title, chemise, contained within black quarter morocco pull-off box.

Dimensions

Notes
Charles Joseph Minard (1781-1870) was “a true pioneer in thematic cartography and in statistical graphics” (Friendly). He began as a civil engineer, and by 1810 was working on behalf of the French government in Antwerp and Vlissingen. Minard went on to have a long and productive career,

working on projects throughout Europe, and was named Superintendent of the School of Bridges and Roads in France in 1830. Six years later, he became Inspector of the Corps of Bridges. In 1851, he took mandatory retirement, although still working in an advisory capacity, and undertook private research. This is when his cartographical career began in earnest. He created 56 statistical maps over his lifetime, the most famous of which was the 'Carte figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813', showing the losses suffered by Napoleon's army during his failed invasion of Russia.

Minard's genius lay in his realisation that maps could provide visually clear renditions of complicated statistics. He wrote that the aim of his work was not to convey statistical results, but to show the relations between them, which would otherwise have to be worked out by the reader. He would often alter geographical reality on a map in order to make a diagram clearer, and so added the term 'approximative' to the title of his works to explain his decision. He was possibly the first to use the flow-map technique (his writing indicates that he believed he had invented it) and he was certainly the first to use pie charts on a map.

The importance of Minard's work was quickly recognised by the French government. He was awarded the Legion d'Honneur, and throughout the 1850s all Ministers of Public Works in France had their portrait painted with a Minard chart in the background. In 1861, his work was presented to Napoleon III. Minard's maps were not widely known in his lifetime outside of the intelligentsia and upper levels of government, suggesting that he published them privately (Robinson).

The collection

The majority of the maps in the collection show the amount of cargo moved in France, by water and by rail, in a given year. They provide a fascinating insight into the growing importance of the railway, and its place in the rise of industry.

The effects of the American Civil War

The map entitled 'Carte… des quantités de coton en laine importés en Europe en 1858 et 1861' shows two flow-maps of the Atlantic trade in wool and cotton, three years apart. The time period covers the beginning of the American Civil War, which was sparked by the slavery policies of the Lincoln presidency. By January 1861, seven of the southern states had seceded to form the Confederacy. The war between the Confederacy and the states who remained in the Union lasted until 1865, and had a devastating effect on American exports. The seven separatist states are marked on both maps. A line graph in the upper right corner shows the yearly export amounts of wool and cotton for America (blue). There is a sharp drop in exports from 1860, when the issues provoking the Civil War came to prominence. Comparing the two maps gives an even clearer picture of the change; by 1861 the amount of cotton and wool imported into Britain from the East Indies (yellow) had almost tripled, whereas the amount imported from America (blue) had only risen by a paltry 16,000 tons. Britain was then re-exporting the excess to other European countries (pink), at a rate three times higher than before the start of the Civil War.

The end of slavery

The map entitled 'Carte… représentant pour l'année 1858 les émigrants du globe' shows global emigration in 1858. It highlights an interesting demographic period after the abolition of slavery in Britain (1838) and France (1848), creating a dearth of workers in European colonies. The black lines coming out of Congo to Mauritius and La Reunion show the passage of workers from Africa to work on the sugar plantations owned by the French. The brown lines show the influx of indentured labourers from French settlements in Tamil Nadu in India, to fill the void created by the end of

slavery. A substantial number of African and Indian migrants also make their way to the West Indies. The small blue line across the Mediterranean shows French migration to Algeria, one of its richest colonies.

The thick green lines dominating the map show the huge wave of immigration from Britain to America, Canada and Australia; Australia became particularly attractive to prospective settlers after gold was found there. The number of British emigrants to America, however, was dwarfed by the number of Germans; in the period 1840-80, they made up the largest percentage of American immigrants. The pink line representing them comes out of the major port cities Hamburg and Bremen. Hamburg was the home of the Hamburg-America line, the largest transatlantic shipping company of its time. Migration was motivated by economic prospects and after the 1848 revolutions in some German states, there was also a wave of political refugees fleeing to North America. Brazil gained independence from Portugal in 1822, but immigration there from Portugal actually increased after it stopped being a colony, mainly peasants from rural areas. There was also a substantial minority of immigrants from Germany, to the point that Prussia banned immigration to Brazil in 1859 after reports of ill treatment on coffee plantations

China became an important source of labour in the mid-eighteenth century. The southern areas of the country suffered from political and economic instability, thanks to the weakness of the ruling Qing dynasty and the ongoing Opium Wars with the British. Chinese immigration to Cuba began in 1847 after the abolition of slavery; the Spanish replaced African slaves with Chinese indentured labour. Similarly, Chinese workers were often shipped under contract by agents to California during the Gold Rush, where they faced harsh working conditions and routine violence. The Chinese population in Australia, also spurred by the Gold Rush, grew large enough for the government to initiate anti-Chinese legislation.

List of maps:

1. Carte figurative et approximative des tonnages de marchandises (flottage compris) qui ont circulé sur les voites navigables de France pendant l’année 1850 [Flow of merchandise in France on waterways during the year 1850], 825 x 950 mm. Pasted printed slip. Signed.

2. Carte figurative et approximative qui ont circulé sur les chemins de fer et les voies navigables (en flottables) de France en 1850 [Flow of merchandise in France on railways and waterways in the year 1850], 670 x 940 mm. Signed.

3. Carte figurative et approximative des tonnages de marchandises (flottage compris) qui ont circulé en 1850 et 1853 sur les voies navigables de France [Flow of merchandise in France on waterways in 1850 and 1853], 840 x 945 mm. Signed.

4. Carte figurative et approximative des tonnages de marchandises qui ont circulé sur les chemins de fer et les voies d’eau en France en 1853. [Flow of merchandise in France on railways and waterways in the year 1853], 1855, 665 x 940 mm. Signed.

5. Carte figurative et approximative des tonnages de marchandises qui ont circulé en 1855 sur les voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1855], 640 x 835 mm.

6. Carte figurative et approximative des tonnages de marchandises qui ont circulé en 1856 sur les voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1856], 665 x 865 mm. Inscribed to Charles Didion.

7. Carte figurative et approximativedes tonnages de marchandises qui ont circulé en 1857 sur les

voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1857], 680 x 955 mm. Inscribed to Charles Didion.

8. Carte figurative et approximative des tonnages de marchandises qui ont circulé en 1858 sur les voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1858], 665 x 930 mm. Signed.

9. Carte figurative et approximative des tonnages de marchandises qui ont circulé en 1859 sur les voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1859], 725 x 960 mm. Inscribed to Charles Didion.

10. Carte figurative et approximative des tonnages de marchandises qui ont circulé en 1860 sur les voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1860], 665 x 890 mm. Signed.

11. Carte figurative et approximative des tonnages de marchandises qui ont circulé en 1861 sur les voies d’eau et fer de l’Empire français. [Flow of merchandise in France on railways and waterways in the year 1861], 665 x 940 mm. Signed.

12. Carte figurative et approximative du mouvement des combustibles minéraux sur les voies d’eau et de fer de l’Empire français pendant l’année 1859 [Movements of mineral fuels on railways and waterways in the year 1859], 810 x 965 mm. Inscribed to Charles Didion.

13. Carte figurative et approximative du mouvement des combustibles minéraux sur les voies d’eau et de fer de l’Empire français pendant l’année 1860 [Movements of mineral fuels on railways and waterways in the year 1860], 800 x 965 mm. Signed.

14. Carte figurative et approximative représentant pour l’année 1858 les émigrants du globe, les pays d’où ils partent et ceux où ils arrivent [Worldwide flow of emigrants in the year 1858], 760 x 570 mm. Signed.

15. Carte figurative et approximative des quantités de coton en laine importés en Europe en 1858 et 1861 [Quantities of cotton and wool imported into Europe in 1858 and 1861], 1015 x 630 mm. Signed.

Charles Didion (1803-1882) was a French engineer and presumably made Minard’s acquaintance at the School for Bridges and Roads, where Didion later became secretary of the general council.

Bibliography

Michael Friendly, ‘Revisions of Minard’, Statistical and Computing Graphics Newsletter 11 (1999); Arthur H. Robinson, ‘The Thematic Maps of Charles Joseph Minard’, Imago Mundi 21 (1967), pp. 95-108.

Provenance

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