

Endnotes

1. WELCOME TO THE MAP LIBRARY

- ¹ Melville, H., *Moby Dick or, The Whale*, New York: Harper & Brothers, 1851, Chapter 12.
- ² Noble, J., 'US–Soviet Oceanographers Share Both Vodka and Ideas', *New York Times*, 3 July 1973, p. 25.
- ³ Agence France-Presse, 2022, 'Melting glacier in Alps shifts border between Switzerland and Italy', *Guardian*, 26 July 2022, <https://www.theguardian.com/world/2022/jul/26/melting-alps-theodul-glacier-switzerland-italy-border-shifts>; and Giuffrida, A., 'Melting glaciers force Switzerland and Italy to redraw part of Alpine border', *Guardian*, 29 September 2024, <https://www.theguardian.com/environment/2024/sep/29/melting-glaciers-switzerland-italy-alpine-border-matterhorn>
- ⁴ Russia's most elite troops use Soviet-era paper maps, at <https://defence-blog.com/russias-most-elite-troops-use-soviet-era-paper-maps/>, and the SSU found that Russian commanders invaded Ukraine based on maps from the last century, at <https://ssu.gov.ua/novyny/sbu-vstanovyla-shcho-rosiiski-komandyry-vtorhlasia-v-ukrainu-keruiuchys-kartamy-z-mynuloho-stolittia>
- ⁵ The spring 1995 edition of the North American Cartographic Society's *Cartographic Perspectives* journal was themed *Map Libraries in Transition* and contained papers from map librarians across the US who wrote about the realities of 'map librarianship ... being challenged today as never before ... [as] map libraries are being forced to deal with the realities of digital cartography'. One contributor, Debra D. Lords from the Marriott Library in Salt Lake City, ended her paper with this vivid analogy: 'Our present situation is reminiscent of being on a mountainside, deep powder snow more hanging in the air than falling. And presented before us is that eerie, quiet beauty which precedes a deadly avalanche. We are only beginning to hear its roar. We cannot tell where it is – directly above us or slightly to one side. We only know we cannot stay where we are. We have to move. We innately understand one poignant fact: Stagnation is disenfranchisement.'



- Stagnation is death.’ From Lords, D. D., ‘Disenfranchisement: Paranoia or Possibilities’, *Cartographic Perspectives*, 1995, No. 21, pp. 21–23, at p. 23.
- ⁶ The Department of Geography at the University of Nottingham has been rediscovering the contents of its map library. See: Matless, D., ‘Somewhere downstairs: Re-animating a departmental geography collection’, *Journal of Historical Geography*, 2024, No. 84, pp. 123–38.
- ⁷ To British ears this sounds far-fetched now, but during the Cold War and also the Falklands War some maps were restricted and indeed needed permission to be shown. Of course nowadays sensitive maps still exist but they are locked away digitally, with their paper counterparts of similar regions in most, but not all, cases considered out of date. Map Librarians at the British Library have to sign the Official Secrets Act for this reason.
- ⁸ Berwick, I., ‘Beyond the Wall in Iceland’s “Game of Thrones” locations’, *Financial Times*, 14 February 2014, <https://www.ft.com/content/48e345f6-924d-11e3-9e43-00144feab7de>
- ⁹ ‘Why the Zaporizhzhia Nuclear Power Plant Matters ... for the Whole World’, at <https://www.wilsoncenter.org/blog-post/why-zaporizhzhia-nuclear-power-plant-mattersfor-whole-world>
- ¹⁰ Organised and funded by Meghan Kelly, now at Syracuse University.
- ¹¹ ‘Crowdsourcing in schools: The Land Utilisation Survey of Britain’, at <https://blogs.bl.uk/magnificentmaps/2021/03/crowdsourcing-in-schools-the-land-utilisation-survey-of-britain.html>
- ¹² “A modern Domesday Book”: Sir Dudley Stamp and the Land Utilisation Survey maps’, at <https://blogs.lse.ac.uk/lsehistory/2023/06/09/a-modern-domesday-book/>
- ¹³ ‘Crowdsourcing in schools: The Land Utilisation Survey of Britain’, at <https://blogs.bl.uk/magnificentmaps/2021/03/crowdsourcing-in-schools-the-land-utilisation-survey-of-britain.html>
- ¹⁴ Bishop, E., ‘The Map’, 1946, in Bishop, E., *Elizabeth Bishop: The Complete Poems, 1927–1979*, New York: Farrar, Straus and Giroux, 2011.
- ¹⁵ Maritime Affairs Program (MAP) Handbill Spotlight: Nine-Dash Line, at <https://chinaus-icas.org/research/map-spotlight-nine-dash-line/>
- ¹⁶ Brinkhof, T., ‘How Hollywood appeases China, explained by the Barbie

movie', *Vox*, 13 July 2023, <https://www.vox.com/culture/2023/7/13/23791805/barbie-map-nine-dash-line-vietnam-china>

- ¹⁷ Rissman, K., "Ted Cruz keeps attacking the Barbie movie as "Chinese communist propaganda" even though he hasn't seen it', *Independent*, 19 July 2023, <https://www.independent.co.uk/news/world/americas/us-politics/ted-cruz-barbie-movie-china-b2378196.html>
- ¹⁸ Donnelly, M., "Barbie" Map Controversy: Warner Bros. Explains the Drawing That Got the Film Banned in Vietnam', *Variety*, 6 July 2023, <https://variety.com/2023/film/news/barbie-map-meaning-why-banned-1235662437/>
- ¹⁹ Gerwig, G. and Baumbach, N., *Barbie*, Warner Bros Pictures.
- ²⁰ 'Dunmow driver almost sinks car after following Sat Nav directions', BBC, 11 December 2023, <https://www.bbc.co.uk/news/uk-england-essex-67682212>; and 'Tourists using sat-nav jam car in narrow Tenby footpath', BBC, 6 October 2023, <https://www.bbc.co.uk/news/uk-wales-67032246>
- ²¹ Britannica, T., Editors of Encyclopaedia, 'Sir George Everest', *Encyclopedia Britannica*, 2024, <https://www.britannica.com/biography/George-Everest>
- ²² Bassett, T. J. and Porter, P. W., "From the Best Authorities": The Mountains of Kong in the Cartography of West Africa', *Journal of African History*, 1991, Volume 32, No. 3, pp. 367–413.
- ²³ Bovill, E. W., 'The Death of Mungo Park', *Geographical Journal*, 1967, Volume 133, No. 1, pp. 1–9.
- ²⁴ *Ibid.*
- ²⁵ *Ibid.*
- ²⁶ Bassett and Porter, "From the Best Authorities".
- ²⁷ *Ibid.*
- ²⁸ The Atlas Company v Fullarton (1852), at <https://www.copyrightcartography.org/cases/the-atlas-company-v-fullarton/>
- ²⁹ Quoted in Withers, C., 'On Trial – Social Relations of Map Production in Mid Nineteenth-Century Britain', *Imago Mundi*, 2019, Volume 71, No. 2, pp. 173–95, at p. 177.
- ³⁰ *Ibid.* See footnote 19 for precise demands made by Johnston's company.
- ³¹ Withers, C., 'Map Making, Defamation and Credibility: The Case of the



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Athenaeum, Charles Tilstone Beke, and W. & A. K. Johnston's Edinburgh Educational Atlas (1874)', *Imago Mundi*, 2019, Volume 33, No. 1, pp. 46–63.

³² See Alexander, I., *Copyright and Cartography: History, Law, and the Circulation of Geographical Knowledge*, Oxford: Hart Publishing, 2023.

2. A ROOM FULL OF STORIES

¹ 'British Library shows new London "Life in Maps" exhibition', at <https://www.gettyimages.co.nz/detail/video/british-library-shows-new-londonlife-in-maps-exhibition-news-footage/838439116?adppopup=true>

² See 'Baedeker Raids', at <https://artsandculture.google.com/story/baedeker-raids-imperial-war-museums/uwWBrdvG3K3qLg?hl=en> and also 'Blitzed by Guidebook', BBC, 27 March 2022, <http://news.bbc.co.uk/1/hi/uk/1892714.stm>

³ 'The greatest double agent of the Second World War', at <https://www.mis.gov.uk/agent-garbo>

⁴ Reyes Nuñez, J. J., 'A forgotten atlas of Erwin Raisz: "Atlas de Cuba"', in Gartner, G., Jobst, M. and Huang H. (eds), *Progress in Cartography*, Springer, Cham: Lecture Notes in Geoinformation and Cartography, 2016, pp. 289–304.

⁵ This vibrant map was the precursor to the *Atlas de Cuba* within which Raisz and Canet wanted to celebrate a 'living picture ... of the island and its people'.

⁶ This is one of a number of ways that mapmakers – in this case Ordnance Survey during the 1860s – developed to transfer the drafted maps onto printing plates for mass production. In this case the original maps are photographed and a chemical process transfers the negative onto a zinc printing plate for use in the printing press. The full details of this particular process can be found in Scott, A. De C., *On Photo-Zincography and Other Photographic Processes Employed at the Ordnance Survey Office, Southampton*, London: Longman, 1863.

⁷ Not to be confused with author and illustrator Beatrix Potter, who was born eight years after Webb in 1866. They both died in 1943. See LSE,

‘Meet our founders’, at <https://www.lse.ac.uk/about-lse/125-anniversary/blogs/meet-our-founders>

- ⁸ Webb, B., *My Apprenticeship*, London: Longmans, Green and Co., 1946.
- ⁹ Rather than go to the original seventeen volumes, I would recommend looking at *Charles Booth’s London Poverty Maps*, London: Thames & Hudson, 2019.
- ¹⁰ From Booth (1887): ‘The School Board Visitors perform amongst them a house-to-house visitation; every house in every street is in their books, and details are given of every family with children of school age. They begin their scheduling two or three years before the children attain school age, and a record remains in their books of children who have left school. The occupation of the head of the family is noted down. Most of the visitors have been working in the same district for several years, and thus have an extensive knowledge of the people. It is their business to re-schedule for the Board once a year, but intermediate revisions are made in addition, and it is their duty to make themselves acquainted, so far as possible, with newcomers into their districts. They are in daily contact with the people and have a very considerable knowledge of the parents of the school children, especially of the poorest amongst them, and of the conditions under which they live.’ Booth, C., ‘The Inhabitants of Tower Hamlets (School Board Division), Their Condition and Occupations’, *Journal of the Royal Statistical Society*, 1887, Volume 50, No. 2, pp. 326–401.
- ¹¹ Llewellyn-Smith, H., ‘The New Survey of London Life and Labour’, *Journal of the Royal Statistical Society*, 1929. Volume 92, No. 4, pp. 530–58.
- ¹² Quote taken from O’Day, R., ‘Before the Webbs: Beatrice Potter’s Early Investigations for Charles Booth’s Inquiry’, *History*, 1993, Volume 78, No. 253, pp. 218–42, at p. 222.
- ¹³ Quote taken from *ibid.*, p. 237.
- ¹⁴ Llewellyn-Smith, ‘The New Survey of London Life and Labour’.
- ¹⁵ *Ibid.*
- ¹⁶ Thomas, B., ‘The New Survey of London Life and Labour’, *Economica*, 1936, New Series 3, No. 12, pp. 461–75.
- ¹⁷ Llewellyn-Smith, ‘The New Survey of London Life and Labour’.
- ¹⁸ Quoted in Vaughan, L., *Mapping Society*, London: UCL Press, 2018, p. 117.

- ¹⁹ Beveridge, W. H., ‘Sir Hubert Llewellyn Smith’, *Economic Journal*, 1946, Volume 56, No. 221, pp. 143–50, at p. 146.
- ²⁰ For a full appraisal of this dataset see: Abernethy, S., ‘Deceptive Data? The role of the investigators in the New Survey of London Life and Labour 1928–1932’, *Historical Methods*, 2017, Volume 50, No. 1, pp. 1–15.
- ²¹ How to look for records of ... census records, at <https://www.nationalarchives.gov.uk/help-with-your-research/research-guides/census-records/>
- ²² See <https://www.antiquemapsandprints.com>
- ²³ ‘Computerising and Coding the New Survey of London Life and Labour: A Companion Paper for the Codebook’ (Release 2.0), at <http://doc.ukdataservice.ac.uk/doc/3758/mrdoc/pdf/3758compan.pdf>
- ²⁴ ‘Charles Booth’s Poverty Map (1886–1903)’, at <https://booth.lse.ac.uk/map/>
- ²⁵ The ‘Second Land Use Survey’ (1960–1975) was directed by Alice Coleman at King’s College London and refined Stamp’s earlier experience. The Map Library has a couple of hand-coloured sheets from this, too.
- ²⁶ Alexander Maconochie is best known as a Scottish prison reformer recognised for pioneering humane penal reforms, which emphasised rehabilitation over punishment, laying the groundwork for modern parole and prison reform systems.
- ²⁷ I’m grateful to Professor Hugh Clout for sharing this with me from the UCL Department of Geography Archive.
- ²⁸ Bank of England inflation calculator, at <https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator>
- ²⁹ Demhardt, I. J., ‘A terrible mother of invention: cartographic progress during World War 1’, *International Journal of Cartography*, 2018, Volume 4, No. 3, pp. 241–4.
- ³⁰ Wilson, L. S., ‘Lessons from the Experience of the Map Information Section, OSS’, *Geographical Review*, 1949, Volume 39, No. 2, pp. 298–310, at p. 306.
- ³¹ Miller, G., ‘The Untold Story of the Secret Mission to Seize Nazi Map Data’, *Smithsonian* magazine, November 2019, <https://www.smithsonianmag.com/history/untold-story-secret-mission-seize-nazi-map-data-180973317/>
- ³² Nichols, L. H., *The Rape of Europa*, New York: Vintage Books, 1994, p. 262.

- ³³ ‘Raleigh Ashlin Skelton (1906–1970)’, at <https://www.monumentsmenandwomenfnd.org/skelton-maj-r-a>
- ³⁴ See Parts V and VI of Pettegree, A., *The Book at War*, London: Profile Books, 2023.
- ³⁵ These numbers are taken from Chasseaud, P., *Mapping the Second World War*, Glasgow: Collins, 2015.
- ³⁶ Not just in the UK, but the USA as well: Sweetkind-Singer, J. and March, G., ‘Acquisition of World War II Captured Maps: A Case Study’, *Journal of Map & Geography Libraries*, 2021, Volume 16, No. 2, pp. 140–65.
- ³⁷ ‘Geography at the London School of Economics: Prof. R. O. Buchanan’, *Nature*, 1949, No. 164, p. 475.
- ³⁸ See Clout, H. and Gosme, C., ‘The Naval Intelligence Handbooks: a monument in geographical writing’, *Progress in Human Geography*, 2003, Volume 27, No. 2, pp. 153–73.
- ³⁹ For more on Darby see Williams, M., ‘Henry Clifford Darby 1909–1992’, *Proceedings of the British Academy*, 1995, No. 87, pp. 289–306.
- ⁴⁰ There are 769 atlases in all, and I am grateful to the Bodleian for identifying that 200 atlases are not in their collection.
- ⁴¹ Clark’s efforts to share out the maps from the MoD collection probably made him and his colleagues the single biggest supplier of maps to universities in the UK. See Hodson, Y. and Bond, B., ‘Peter Kenneth Clark: A Quiet Giant of Cartography’, *Cartographic Journal*, 2022, Volume 59, No. 2, pp. 165–6.
- ⁴² The Department of Geography also benefited from Tony French on its academic staff, who was the foremost British specialist on the geography of the Soviet Union and would almost certainly have contributed atlases from his travels.
- ⁴³ Clout, H., ‘Obituary: Francis Carter’, *Guardian*, 9 May 2001, <https://www.theguardian.com/news/2001/may/09/guardianobituaries.humanities>
- ⁴⁴ These photos are available from the UCL SSEES Library Special Collections, at <https://www.ucl.ac.uk/library/digital-collections/collections/ssees>
- ⁴⁵ From conversations with Anne Oxenham in the summers of 2022 and 2023.



3. GEORGE BELLAS GREENOUGH'S REMARKABLE MAPS

- ¹ Greenough, G. B., 'Address to the Royal Geographical Society of London, 1841', *Journal of the Royal Geographical Society of London*, 1841, No. 11, pp. xxxix–lxxvii, at p. lxxii.
- ² Toland, Christopher, 'George Bellas Greenough's General Sketch of the Physical and Geographical Features of British India (1854, 1855): Its Production, Distribution, Variants and Survivorship', *Earth Science History*, Volume 41, No. 2, pp. 285–321.
- ³ Pink is also political in colonial mapping of India. It is normally associated with areas under direct British rule, while yellow (and other colours) were for the Princely States.
- ⁴ It may have been an idea seeded by Sir Mark Wood, the patron of the Gotton rotten borough for which Greenough was once the Member of Parliament and who had also been Surveyor General of India. Greenough had also bought 'India Bonds' so had clearly viewed India as – at the very least – an area of economic opportunity. His interests may well have been reignited by an 1843 speech by the President of the Geological Society of London, Roderick Murchison, bemoaning a lack of a geological map covering all of India, and the knowledge that the East India Company was seeking coal reserves at this time. See Toland, 'George Bellas Greenough's General Sketch'.
- ⁵ As Christopher Toland sets out in *ibid.*, there were in fact two copies of this map – one for Greenough's lectures, the other forming the basis of the final version.
- ⁶ UCL Archives GREENOUGH 1-4/3-20/19.
- ⁷ UCL Archives GREENOUGH 1-4/3-20/20.
- ⁸ *Ibid.*
- ⁹ For comparison, the 'Cassell's Household Guide' (published in 1869) places £500 at the top end of an annual income for a family, who for that money could employ three servants among their cost-of-living expenses.
- ¹⁰ UCL Archives GREENOUGH/B/1/8.
- ¹¹ Toland, 'George Bellas Greenough's General Sketch'.

- ¹² This was most likely caused by congestive heart failure.
- ¹³ Page xxxii of Hamilton, W. J., 'Anniversary Address of the President', *Proceedings of the Geological Society*, 1856, No. 12, pp. xxvi–xxxiv.
- ¹⁴ Toland, 'George Bellas Greenough's General Sketch'.
- ¹⁵ Quoted in *ibid.*, p. 310.
- ¹⁶ Toland, 'George Bellas Greenough's General Sketch'.
- ¹⁷ Rose, E. P., Ehlen, J. and Lawrence, U. L., 'Military use of geologists and geology: a historical overview and introduction', *Geological Society, London, Special Publications*, 2019, No. 473, pp. 1–29.
- ¹⁸ Rogers, S. L., Lau, L., Dowey, N., Sheikh, H. and Williams, R., 'Geology uprooted! Decolonising the curriculum for geologists', *Geoscience Communication*, No. 5, pp. 189–204.
- ¹⁹ His adverts appeared in North America: <https://americanhistory.si.edu/explore/stories/brush-history>
- ²⁰ A quack medicine that was, according to Greenough, 'by far the pleasantest and most effectual remedy of the kind, in all tickling coughs'. See: 'Tobacco – Tolu lozenges', at <https://www.british-history.ac.uk/no-series/traded-goods-dictionary/1550-1820/tobacco-tolu-lozenges#h2-s14>
- ²¹ Listed in the National Archives: <https://discovery.nationalarchives.gov.uk/details/r/C7768355>
- ²² See <https://www.geolsoc.org.uk/the-library/online-exhibitions/Making-maps-George-Bellas-Greenoughs-mapping-of-the-British-Isles/Introducing-Mr-Greenough>
- ²³ The items are listed here: 'Accessions to the Library and Map-Room, to May 1856', *Journal of the Royal Geographical Society of London*, No. 26, pp. xlii–clxii.
- ²⁴ This would probably have been against Greenough's wishes given that he donated the maps and funds for their upkeep.
- ²⁵ The Society did get a complete version of the Pyrenees map donated by the Duke of Wellington on 4 January 1944. This copy is divided into two sheets, rather than the ten as in the Map Library version, and is coloured. See Royal Geographical Society Archives mr Spain S/Div.I.
- ²⁶ Greenough bequeathed his fossil collection to the Geology Department at University College London (UCL) and his notebooks are in the Greenough

Papers collection held at UCL Special Collections. The student geological society at UCL is named after Greenough.

²⁷ UCL Archives GREENOUGH/7-10/7/36-40.

²⁸ UCL Archives GREENOUGH/7-10/8/3.

²⁹ Ibid.

³⁰ See Wyatt, J. F., 'George Bellas Greenough: a Romantic geologist', *Archives of Natural History*, 1995, Volume 22, No. 1, pp. 61–71; Wyatt, J. F., *Wordsworth and the Geologists*, Cambridge: Cambridge University Press, 1995.

³¹ This was on his first trip to Italy. UCL Archives GREENOUGH B/2/1/4.

³² UCL Archives GREENOUGH/7-10/8/3.

³³ His obituary in *The Gentlemen's Magazine* anticipates this likely fall into obscurity: 'There is not much record of Mr Greenough's literary productions, for, though he wrote much on various scientific subjects, geological, geographical, and ethnological, and has left behind him a large accumulation of manuscripts, his reserved manners and comparative disregard of worldly renown, made him extremely careless of publication.' *The Gentleman's Magazine and Historical Review*, 1 May 1855, Volume 43, pp. 532–4.

³⁴ Duncan Hawley (Chair of the Geological Society's History of Geology Group) tells me that 'Greenough also had ambitions to publish a geological map of Europe, which led to a contretemps with the Rev. William Daniel Conybeare over a misunderstanding over who had established priority for compiling a geological map of Europe: started in January 1823 it continued until December 1824, following which they restored their friendship. Before this "spat" they had been good friends and in 1816 Greenough had travelled on the continent with Conybeare and Buckland and on numerous other trips in England & Wales also.'

³⁵ A widely quoted phrase from a letter from Humphry Davy on 13 November 1807. See Rudwick, M. J. S., 'The Foundation of the Geological Society of London: Its Scheme for Co-operative Research and Its Struggle for Independence', *British Journal for the History of Science*, 1963, Volume 1, No. 4, pp. 325–55, at p. 328.

- ³⁶ For an interesting paper on how these men engaged with the wider public see O'Connor, R., 'Facts and fancies: the Geological Society of London and the wider public, 1807–1837', in Lewis, C. L. E. and Knell, S. J. (eds), *The Making of the Geological Society of London*, The Geological Society, London, Special Publications, No. 317, 2009, pp. 331–40.
- ³⁷ Rudwick, 'The Foundation of the Geological Society of London.'
- ³⁸ Playfair, J., 'Transactions of the Geological Society', *Edinburgh Review*, 1811–12, No. 19, pp. 207–29, at p. 207.
- ³⁹ *Ibid.*
- ⁴⁰ O'Connor, R., 'Facts and fancies: the Geological Society of London and the wider public, 1807–1837', in Lewis and Knell (eds), *The Making of the Geological Society of London*, p. 331.
- ⁴¹ *Ibid.*
- ⁴² The word 'largely' is significant. There was geology marked on Smith's map for locations that he never visited, such as the Isle of Man, so his source of the geology for IoM was second-hand (and unknown).
- ⁴³ Quoted in Cox, L. R., 'New Light on William Smith and His Work', *Proceedings of the Yorkshire Geological Society*, 1942, No. 25, pp. 1–99, at p. 42.
- ⁴⁴ *Proceedings of the Geological Society*, 1831, No. 20, p. 278.
- ⁴⁵ Thompson, C., 'Earthquakes and Petticoats: Maria Graham, Geology and Early Nineteenth-Century "Polite" Science', *Journal of Victorian Culture*, 2012, Volume 17, No. 3, pp. 329–46.
- ⁴⁶ Blog post from the Geological Society of London: <https://blog.geolsoc.org.uk/2016/03/08/the-road-to-fellowship-the-history-of-women-and-the-geological-society/>
- ⁴⁷ Graham, M., 'An Account of some Effects of the late Earthquakes in Chili. Extracted from a letter to Henry Warburton, Esq. V.P.G.S.', *Transactions of the Geological Society of London*, 1824, Volume 2, No. 1, pp. 413–15.
- ⁴⁸ Lyell, C., *Principles of Geology*, New York: D. Appleton & Co., 1853.
- ⁴⁹ This is a quote Greenough extracts from the fourth report he consulted – *La Abeja Argentina*, an Argentinian journal and newspaper – sent to him by Buenos Aires diplomat Sir Woodbine Parish, rather than a direct plea to the audience, although it was part of his rhetoric to imply this report was

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more reliable than that of Maria Calcott. Greenough, G. B., 'Address to the Geological Society', *Athenaeum*, 1834, No. 456.

- ⁵⁰ Quoted in Thompson, 'Earthquakes and Petticoats', p. 335.
- ⁵¹ Callcott, M., *A Letter to the President and Members of the Geological Society, in Answer to Certain Observations contained in Mr Greenough's Anniversary Address of 1834*, London: Thomas Brettell, 1834.
- ⁵² See *Foreign Quarterly Review*, April 1836, Volume 17, No. 33, p. 13.
- ⁵³ *American Journal of Science and Arts*, July 1835, No. 28, pp. 236–47.
- ⁵⁴ Quoted from Thompson, 'Earthquakes and Petticoats', p. 338.
- ⁵⁵ Taken from Greenough's obituary in *The Gentleman's Magazine and Historical Review*, Volume 43, 1 May 1855, pp. 532–4.
- ⁵⁶ UCL Archives GREENOUGH 29/7.
- ⁵⁷ Quoted in Wyatt, J. F., *Wordsworth and the Geologists: A Correlation of Influences*, University of Southampton PhD Thesis, unpublished, p. 123.
- ⁵⁸ Quoted in *Strata: William Smith's Geological Maps*, London: Thames & Hudson, in collaboration with Oxford University Museum of Natural History, 2020, p. 170.
- ⁵⁹ To John Forbes Royle [24 May 1838]. See Darwin Correspondence Project, at <https://www.darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-415.xml&query=greenough>
- ⁶⁰ Satirical print, at https://www.britishmuseum.org/collection/object/P_1868-0808-3865

4. BLOOMSBURY

- ¹ *Geographical Review*, July 1949, Volume 39, No. 3, pp. 488–90, at p. 490.
- ² Literacy rate, 1475 to 2023, at <https://ourworldindata.org/grapher/cross-country-literacy-rates>
- ³ Brougham, H., *Practical Observations Upon the Education of the People Addressed to the Working Classes and their Employers*, London: Richard Taylor, 1825.
- ⁴ *Ibid.*, pp. 31–2.

- ⁵ Ibid., p. 32.
- ⁶ Ashton, R., *Victorian Bloomsbury*, New Haven and London: Yale University Press, 2012, p. 14.
- ⁷ Britannica, T., Editors of Encyclopaedia, 'Bloomsbury group', *Encyclopaedia Britannica*, 12 January 2024, <https://www.britannica.com/topic/Bloomsbury-group>
- ⁸ Known simply as the University of London in its first decade, it was renamed University College on 28 November 1836 when it was incorporated under royal charter.
- ⁹ Ashton, *Victorian Bloomsbury*, p. 58.
- ¹⁰ See *Leicester Chronicle*, 7 December 1833, British Library Newspapers.
- ¹¹ 'Auto-Icon', at <https://www.ucl.ac.uk/bentham-project/about-jeremy-bentham/auto-icon>
- ¹² For more on the history of UCL see Harte, N., North, J. and Brewis, G. (eds), *The World of UCL*, London: UCL Press, 2018.
- ¹³ Cain, M. T., 'The Maps of the Society for the Diffusion of Useful Knowledge: A Publishing History', *Imago Mundi*, 1994, No. 46, pp. 151–67.
- ¹⁴ Don't tell Anne! Strictly no food allowed in the Map Library!
- ¹⁵ The place the *Oxford English Dictionary* defines as 'the most distant place imaginable'.
- ¹⁶ Smith, D., *Victorian Maps of the British Isles*, London: Batsford Books, 1985.
- ¹⁷ UCL Archives SDUK Paper 55.
- ¹⁸ Sent April 1828.
- ¹⁹ UCL Archives SDUK Papers 105.
- ²⁰ UCL Archives SDUK Papers 1.
- ²¹ Quoted from Cain, 'The Maps of the Society for the Diffusion of Useful Knowledge', p. 154.
- ²² UCL Archives SDUK Papers 39.
- ²³ Edward Molineux to Coates, 11 October 1841 [SDUK Papers 38].
- ²⁴ Quoted from Grobel, M., 'The Society for the Diffusion of Useful Knowledge 1826–1846', unpublished MA thesis, University of London, p. 547.
- ²⁵ I think this is a – perhaps misquoted – version of 'Nil sine magno vita labore', which means 'Nothing is gained in life without great effort' and was

a motto of Horace (65–8 BCE) in his *Satires* (I, 9, 59). See another use of it at <https://www.getty.edu/art/collection/object/1oNKHD>

²⁶ SDUK Papers 20.

²⁷ A ‘friend of the Society’ wrote in August 1831 that they were concerned about the total cost of the full-colour atlas once complete: ‘the price will be nearly five pounds ... This is evidently too large a sum for many of the intelligent mechanics ... It may perhaps be deemed impertinence in a Stranger interfering in a Society composed of the Greatest Literary Men in the Empire, but the justness and disinterestedness of the cause must plead my excuse ...’

²⁸ Quoted in Grobel, ‘The Society for the Diffusion of Useful Knowledge 1826–1846’, p. 545. Beaufort’s response went on: ‘Afterwards indeed, as I became more interested in the work and more attached to the members of the society, I exerted myself in acquiring new matter, but from such a variety of sources and from the nature of my public duties in so desultory manner from libraries, manuscripts, and travellers that I could keep no notes of [the] where and how or the when. With respect to my name appearing as editor I have for various reasons, great repugnance ... if we had agreed that mine was to be so employed, I should have gone to work with other instruments than scissors and tracing paper.’

²⁹ SDUK Map 124.

³⁰ *Penny Magazine*, 31 October 1840, p. 1.

³¹ Quote is taken from the *Journal of the Royal Geographical Society of London*, 1840, Volume 10, pp. xliii–lxxxiii.

³² Grobel, ‘The Society for the Diffusion of Useful Knowledge 1826–1846’.

³³ The Piazza: Nos 10–12 (consec.) Great Piazza, at <https://www.british-history.ac.uk/survey-london/vol36/pp88-89#anchorn17>

³⁴ Edward Stanford worked under the business name ‘Trelawney Saunders’ that was founded in 1848, and where he became a partner in 1852. But the partnership dissolved so he became sole proprietor and renamed the store Stanfords in 1853.

³⁵ Charles Knight, who took on the publishing of the final few maps, purchased the steel printing plates in January 1846 for £4,500 and kept the

maps up to date and rolling off the printing press until 1852. He then sold them on to a George Cox before they were acquired four years later by Edward Stanford. See Cain, ‘The Maps of the Society for the Diffusion of Useful Knowledge’, pp. 151–67.

- ³⁶ Toland, ‘George Bellas Greenough’s General Sketch’
- ³⁷ Whitfield, P., *The Mapmakers: A History of Stanfords*, London: Compendium, 2003.
- ³⁸ ‘Literary Memoranda’, *Northampton Mercury*, 19 December 1863, p. 3.
- ³⁹ ‘LITERATURE AND VARIETIES’, *Cheshire Observer*, 24 December 1863, p. 2.
- ⁴⁰ Whitfield, *The Mapmakers*, p. 21.
- ⁴¹ Somervell, R., *A Protest Against the Extension of Railways in the Lake District*, Windermere: J. Garnett, 1876, p. 5.
- ⁴² Stanfords’ heyday as a map publisher was over by the middle of the twentieth century but it continued to be an important source of maps for universities and other institutions the world over. The ledger I found that noted some of the Map Library’s acquisitions contained details of many orders with Stanfords, and when I was rescuing maps from the London School of Economics Map Library there were Stanfords stickers still on the sheets of brown paper I found to wrap the maps up to take them home.

5. KNOWLEDGE IS POWER

- ¹ Quote from Scene 6 in the voice of William Pitt the Younger, in Hardy, T., *The Dynasts: An Epic-Drama of the War with Napoleon*, London: Macmillan & Co., 1903.
- ² UCL Archives GREENOUGH 13/28-15/1.
- ³ Well worth a read is Wulf, A., *The Invention of Nature*, London: Vintage, 2016.
- ⁴ Alexander von Humboldt, ‘Excerpts from Cosmos (1845–58)’, in ‘German History in Documents and Images’, at <https://germanhistorydocs.org/en/from-vormaerz-to-prussian-dominance-1815-1866/ghdi:document-355>
- ⁵ Quoted in Camerini, J. R., ‘Heinrich Berghaus’s map of human diseases’, *Medical History Supplements*, 2000, No. 20, pp. 186–208, at p. 192.

ENDNOTES

- ⁶ Ibid.
- ⁷ These came a few decades after the invention of contour lines, which are probably most familiar to us as a way of showing lines of equal altitude. According to P. D. A. Harvey's *The History of Topographic Maps*, London: Thames & Hudson, 1980, contour lines first appeared in the 1730s as a way of showing depths of water, but it was not until 1771 that they were put before the French Academy as a technique for mapping terrain on land. Uptake was slow and it was another twenty years before more widespread adoption. Humboldt first introduced the idea of isolines in 1817, published in the paper 'Sur les lignes isothermes', in *Annales de chimie et de physique*, No. 5, pp. 102–11.
- ⁸ Dunbar, G. S., 'Lorin Blodget 1823–1901', in Freeman, T. W. (ed.), *Geographers: Biobibliographical Studies*, Volume 5, London: Mansell, 1981, pp. 9–12.
- ⁹ Alexander von Humboldt's brother Wilhelm was a pioneer in the study of linguistic differences between areas so would have doubtless informed this, too.
- ¹⁰ 'Barry Lawrence Ruderman Antique Maps Inc.', at <https://www.raremaps.com/gallery/detail/91494/six-ethnographic-maps-illustrative-of-the-natural-history-prichard>
- ¹¹ Although it should be noted, as Stocking points out on p. 385 of his paper, 'some of the more important Darwinians did try to come to terms with polygenism'. Stocking, G. W., Jr., 'What's in a Name? The Origins of the Royal Anthropological Institute (1837–71)', *Man*, 1971, Volume 6, No. 3, pp. 369–90.
- ¹² Ibid.
- ¹³ Norman B. Leventhal Map and Education Centre Collection, at <https://collections.leventhalmap.org/search/commonwealth:jh343z86b>
- ¹⁴ Universität Erfurt Digitale Historische Bibliothek, at https://dhh.thulb.uni-jena.de/receive/ufb_cbu_00012855
- ¹⁵ Palsky, G., 'Emmanuel de Martonne and the ethnographical cartography of central Europe (1917–1920)', *Imago Mundi*, 2002, Volume 54, No. 1, pp. III–19.

- ¹⁶ ‘The Annexation of Alsace-Lorraine’, at <https://www.dhm.de/mediathek/en/ida/menethekel/>
- ¹⁷ For more on the breadth of mapping associated with Alsace-Lorraine, see Dunlop, C. T., *Cartophilia: Maps and the Search for Identity in the French-German Borderland*, Chicago: Chicago University Press, 2015.
- ¹⁸ Indian customs guide for travellers available at https://www.newdelhiairport.in/media/1465/guide_for_travellers_v5-customs-document.pdf
- ¹⁹ Ormeling, F., ‘National Atlas’, in Monmonier, M. (ed.), *The History of Cartography*, Volume 6, Chicago: Chicago University Press, 2015, p. 96.
- ²⁰ Herb, G. and Kaplan, D., ‘How Geography Shapes National Identities’, *National Identities*, 2011, No. 13, pp. 349–60.
- ²¹ Hansen, Jason D., *Mapping the Germans: Statistical Science, Cartography, and the Visualization of the German Nation, 1848–1914*, Oxford: Oxford University Press, 2015.
- ²² Herb, G., ‘Geopolitics and Cartography’, in Monmonier (ed.), *The History of Cartography*, Volume 6.
- ²³ One of the discussants said ‘I was listening to the paper, I looked with regret on some of the space that is unoccupied ...’
- ²⁴ Mackinder, H. J., *Democratic Ideals and Reality*, London: Constable, 1919, p. 194.
- ²⁵ Mackinder, H. J., ‘The Geographical Pivot of History’, *Geographical Journal*, 1904, Volume 23, No. 4, pp. 421–37, at p. 436.
- ²⁶ Wilkinson, S. Holdich, T., Amery, Hogarth and Mackinder, H. J., ‘The Geographical Pivot of History: Discussion’, *Geographical Journal*, 1904, Volume 23, No. 4, pp. 437–44, at p. 438.
- ²⁷ Quoted in Farinelli, F., ‘Friedrich Ratzel and the nature of (political) geography’, *Political Geography*, 2000, Volume 19, No. 8, pp. 943–55, at p. 951.
- ²⁸ Quote from Smith, W. D., ‘Friedrich Ratzel and the Origins of Lebensraum’, *German Studies Review*, 1980, No. 3, pp. 51–68, at p. 54.
- ²⁹ Abrahamsson, C., ‘On the genealogy of Lebensraum’, *Geographica Helvetica*, 2013, No. 68, pp. 37–44.
- ³⁰ Herb, ‘Geopolitics and Cartography’.

- ³¹ Thanks to Nick Millea of the Bodleian for doing the detective work on this.
- ³² Parker, G., 'Ratzel, the French School and the birth of Alternative Geopolitics', *Political Geography*, 2000, Volume 19, No. 8, pp. 957–69.
- ³³ Winch, K. L., 'Journalistic Cartography', in Monmonier (ed.), *The History of Cartography*, Volume 6.
- ³⁴ 'The Great War and Modern Mapping: WWI in the Map Division', at <https://www.nypl.org/blog/2015/05/15/wwi-map-division>
- ³⁵ Espenhorst, J., 'Germany and Austro-Hungary: the cartography of the defeated', *International Journal of Cartography*, 2018, Volume 4, no. 3, pp. 308–35.
- ³⁶ How to look for records of ... Military maps of the First World War, at <https://www.nationalarchives.gov.uk/help-with-your-research/research-guides/military-maps-first-world-war/>
- ³⁷ Ibid.
- ³⁸ Quoted from Gregory, D., 'Gabriel's Map: Cartography and Corpography in Modern War', in Meusburger, P., Gregory, D. and Suarsana, L., *Geographies of Knowledge*, Berlin: Springer Dordrecht, 2015, p. 92.
- ³⁹ Close, C. F., *Textbook of Topographical and Geographical Surveying*, London: His Majesty's Stationery Office, 1905.
- ⁴⁰ 'Mapping for War and Peace – Ordnance Survey's Maps and the First World War', at <https://history.blog.gov.uk/2014/05/13/mapping-for-war-and-peace/>
- ⁴¹ Rates quoted from Close, *Textbook of Topographical and Geographical Surveying*, p. 113.
- ⁴² Interestingly, C. B. Fawcett, UCL Geography's Head of Department throughout the Second World War, worked there during the First World War.
- ⁴³ 'Mapping for War and Peace – Ordnance Survey's Maps and the First World War', at <https://history.blog.gov.uk/2014/05/13/mapping-for-war-and-peace/>
- ⁴⁴ Chasseaud, P., *Topography of Armageddon: A British Trench Map Atlas of the Western Front 1914–1918*, Lewes, East Sussex: Mapbooks, 1991.
- ⁴⁵ Wilfred Owen, letter to Osbert Sitwell, 4 July 1918, quoted in Gregory, 'Gabriel's Map'.
- ⁴⁶ Das, S., *Touch and Intimacy in First World War Literature*, Cambridge: Cambridge University Press, 2014.

- ⁴⁷ Quote taken from *ibid.*, p. 35. The note accompanying Das's source reads: 'Le Bochofage, 26 March 1917. The translation used is from Stéphane Audoin-Rouzeau, *Men at War 1914–1918: National Sentiment and Trench Journalism in France during the First World War*, trans. Helen McPhail (Oxford: Berg, 1992), p. 38. Also refer to the fascinating collection of English trench newspapers, *Wipers Times 1916–18* (London: Peter Davies, 1973).'
- ⁴⁸ Gregory, 'Gabriel's Map'.
- ⁴⁹ *Ibid.*, p. III.

6. 'TIDYING' THE MAP

- ¹ Nicolson, H., *Peacemaking 1919*, Boston and New York: Houghton Mifflin Company, 1933, p. 351, where he recalls events that took place on 29 May 1919.
- ² Smith, L. V., *Sovereignty at the Paris Peace Conference of 1919*, Oxford: Oxford University Press, 2018.
- ³ I've seen this translated a number of ways. I have taken this version from Smith, *Sovereignty at the Paris Peace Conference of 1919*, p. 1.
- ⁴ Wintle, M., *The Image of Europe*, Cambridge: Cambridge University Press, 2009, p. 5.
- ⁵ Górný, M., *Drawing Fatherlands: Geographers and Borders in Inter-War Europe*, Paderborn: Brill Schöningh, 2023, pp. 31–2.
- ⁶ Translated from the German. Alfred Hettner, 'Unsere Aufgabe im Kriege', *Geographische Zeitschrift*, 1914, Volume 20, No. 11, pp. 601–3, at p. 603.
- ⁷ Quoted in Górný, *Drawing Fatherlands*, p. 39.
- ⁸ Seegel, S., *Map Men*, Chicago: University of Chicago Press, 2018.
- ⁹ Sinnhuber, K. A., 'Central Europe: Mitteleuropa: Europe Centrale: An Analysis of a Geographical Term', *Transactions and Papers (Institute of British Geographers)*, 1954, No. 20, pp. 15–39.
- ¹⁰ Quoted from p. 202 of Jędrzejczyk, D., 'Geopolitical Essence of Central Europe in Writings of Eugeniusz Romer', *Miscellanea Geographica*, 2004, No. 11, pp. 199–206.

- ¹¹ Jędrzejczyk, 'Geopolitical Essence of Central Europe in Writings of Eugeniusz Romer'.
- ¹² Labbé, M., 'Eugene Romer's 1916 Atlas of Poland: Creating a New Nation State', *Imago Mundi*, 2018, Volume 70, No. 1, pp. 94–113.
- ¹³ *Ibid.*, p. 99.
- ¹⁴ Osowska, A. and Przybytek, D., 'Thematic Maps in Eugeniusz Romer's Geographical and Statistical Atlas of Poland from 1916 – the historical and methodological perspective (on the 100-year anniversary of the publication)', *Polish Cartographical Review*, 2016, Volume 48, No. 2, pp. 77–86.
- ¹⁵ See KONSTYTUCJE II RP, at <https://www.sejm.gov.pl/KonstytucjaMarcowa.nsf/>
- ¹⁶ Lyde, L. W., Trotter, Henry et al., 'Distribution of Nationalities in Hungary: Discussion', *Geographical Journal*, 1915, Volume 47, No. 3, pp. 187–8, at p. 187.
- ¹⁷ Wallis, B. C., 'The Distribution of Nationalities in Hungary', *Geographical Journal*, 1916, Volume 47, No. 3, pp. 177–87, at pp. 178–80.
- ¹⁸ Lyde, Trotter et al., 'Distribution of Nationalities in Hungary: Discussion', p. 187.
- ¹⁹ At the time he was 'Lecturer in Education with Special Reference to Geography' in what would become the Institute of Education, now part of UCL. The Map Library has been in the same building since the sixties. See Fleur, H. J., Brooks, L., Scaife, N. and Honeybone, R. C., 'OBITUARY: James Fairgrieve', *Geography*, 1953, Volume 38, No. 4, pp. 316–320.
- ²⁰ Thanks to Felix Driver for pointing out that women could attend meetings without being Fellows (which may have been the case here). For the full story see here: Bell, M. and McEwan, C., 'The admission of women Fellows to the Royal Geographical Society, 1892–1914: the controversy and the outcome', *Geographical Journal*, 1996, Volume 162, No. 3, pp. 295–312.
- ²¹ Lyde, Trotter et al., 'Distribution of Nationalities in Hungary: Discussion', p. 188.
- ²² In this case Wallis was using the Hungarian census conducted in 1910, the validity of which was questioned by Hungary's neighbours. See footnote in Glant, T., 'The Inquiry and the Paris Peace Conference: American Preparations for Peace and the Future of Hungary, 1917–1920',

- KISEBBSÉGVÉDELEM*, 2020, pp. 85–124, at p. 105.
- ²³ Wallis, B. C., ‘The Rumanians in Hungary’, *Geographical Review*, 1918, Volume 6, No. 2, pp. 156–71.
- ²⁴ I was delighted to see this paper published as I tweaked the final draft of this book, which sets out the Wallis story in more detail: Győri, R. and Withers, C. W. J., ‘Mapping Europe in war and peace, 1915–1919: B. C. Wallis and the 1919 Peoples of Austria-Hungary geographical handbook and atlas’, *Journal of Historical Geography*, 2024, No. 86, pp. 428–38.
- ²⁵ For detail on Bowman and his role at the American Geographical Society see, in particular, Chapter 4 in Smith, N., *American Empire: Roosevelt’s Geographer and the Prelude to Globalization*, Oakland: University of California Press, 2003.
- ²⁶ Glant, ‘The Inquiry and the Paris Peace Conference’.
- ²⁷ *Ibid.*, p. 105.
- ²⁸ Britannica, T., Editors of Encyclopaedia, ‘Treaty of Trianon’, *Encyclopaedia Britannica*, 2024, <https://www.britannica.com/event/Treaty-of-Trianon>
- ²⁹ Crampton, J., ‘Race, Maps and the Social Construction of’, in Monmonier (ed.), *The History of Cartography*, Volume 6.
- ³⁰ Seegel, *Map Men*.
- ³¹ Dominian, L., *The Frontiers of Language and Nationality in Europe*, New York: Henry Holt and Company, 1917.
- ³² *Ibid.*, p. 7.
- ³³ *Ibid.*
- ³⁴ Lyde, L. W., *Some Frontiers of To-Morrow: An Aspiration for Europe*, London: A. & C. Black, 1915, p. 3.
- ³⁵ Crampton, J. W., ‘The cartographic calculation of space: race mapping and the Balkans at the Paris Peace Conference of 1919’, *Social and Cultural Geography*, 2006, No. 7, pp. 731–52, at p. 733.
- ³⁶ Crampton, ‘Race, Maps and the Social Construction of’, p. 1,235.
- ³⁷ *Ibid.*, Volume 6.
- ³⁸ House, E. M. and Seymour, C., *What Really Happened at Paris*, London: Hodder & Stoughton, 1921, pp. 98–9.
- ³⁹ Gelfand, L. E., *The Inquiry*, Binghamton: Vail-Ballou Press Inc., 1963.

- ⁴⁰ Of the University of Illinois at the time.
- ⁴¹ Nicolson, *Peacemaking 1919*, p. 223.
- ⁴² Scala Nova, known today as Kuşadası.
- ⁴³ Nicolson, *Peacemaking 1919*, pp. 332–3.
- ⁴⁴ Despite their good reputation, this was a crisis that, according to Nicolson, was triggered by the American experts who ‘ranged themselves behind Mr. Isaiah Bowman’ and lobbied President Wilson to take an inflammatory course of action.
- ⁴⁵ House and Seymour, *What Really Happened at Paris*, p. 142.
- ⁴⁶ It became prominent after Count Albert Apponyi, who was head of the Hungarian delegation, gave a rousing speech to the Peace Conference’s Grand Council in January 1920. See *Office of the Historian*, ‘Notes of a Meeting Held in M. Pichon’s Room, Quai d’Orsay, Paris, Friday, January 16, 1920, at 4:30 [2:30] p.m.’, at <https://history.state.gov/historicaldocuments/frus1919Parisv09/d46>. See also Carte Rouge 100, at https://pangea.blog.hu/2019/05/29/carte_rouge
- ⁴⁷ Bowman quote from Segyevy, D. Z., ‘100 years of Carte Rouge – a Hungarian ethnographical map by Pál Teleki’, *Abstracts of the International Cartographic Association: 29th International Cartographic Conference (ICC 2019)*, 15–20 July 2019, Tokyo, Japan.
- ⁴⁸ Seegel, *Map Men*, p. 67.
- ⁴⁹ Segyevy, ‘100 years of Carte Rouge’.
- ⁵⁰ Seegel, *Map Men*. But also, the map, and copies of it, appears in media, museums and on social media.
- ⁵¹ Nicolson, *Peacemaking 1919*, p. 269.
- ⁵² Heffernan, M., ‘Geography, Cartography and Military Intelligence: The Royal Geographical Society and the First World War’, *Transactions of the Institute of British Geographers*, 1996, Volume 21, No. 3, pp. 504–33.
- ⁵³ As Róbert Győri and Charles Withers set out, a British geographer, Alan Ogilvie, did have a direct involvement in the new Hungarian borders, fixed in the Treaty of Trianon. Győri, R. and Withers, C., ‘Trianon and its aftermath: British geography and the “dismemberment” of Hungary, c.1915–c.1922’, *Scottish Geographical Journal*, 2019, No. 135, pp. 1–2, 68–97.

- ⁵⁴ Herb, G., *Under the Map of Germany: Nationalism and Propaganda 1918–1945*, London: Routledge, 1997.
- ⁵⁵ House and Seymour, *What Really Happened at Paris*, p. 101.
- ⁵⁶ Quoted in Martin, ‘Paris Peace Conference’, in Monmonier (ed.), *The History of Cartography*, Volume 6, pp. 1,049–53.
- ⁵⁷ *Ibid.*, p. 1,053.

7. MANIPULATIVE MAPS

- ¹ Turchi, P., *Maps of the Imagination: The Writer as Cartographer*, San Antonio, Texas: Trinity University Press, 2004.
- ² Especially Eastern Europe and Russia, the numbers from those regions bolstered by a donation from UCL’s School of Slavonic and East European Studies.
- ³ Quote from Herb, *Under the Map of Germany*, p. 79.
- ⁴ To make a map that is effective beyond seven to ten colour classes is surprisingly hard to do. See Harrower, M. and Brewer, C. A., ‘ColorBrewer.org: An Online Tool for Selecting Colour Schemes for Maps’, *Cartographic Journal*, 2003, Volume 40, No. 1, pp. 27–37.
- ⁵ Brendel, H., ‘“Hasty observations”? Geographical field research and intercultural encounters in the Austro-Hungarian occupied Western Balkans, 1916–1918’, *First World War Studies*, 2018, Volume 9, No. 2, pp. 184–208.
- ⁶ *Ibid.*, p. 185.
- ⁷ ‘Lexikon der Österreichischen Provenienz Forschung, Arthur Haberlandt’, at <https://www.lexikon-provenienzforschung.org/en/haberlandt-arthur>
- ⁸ Herb, *Under the Map of Germany*, p. 2.
- ⁹ *Ibid.*, p. 29.
- ¹⁰ *Ibid.*, pp. 37–8.
- ¹¹ Haushofer, K., ‘Die suggestive Karte?’, *Die Grenzboten*, 1922, No. 81, pp. 17–19.
- ¹² Herwig, H. H., *The Demon of Geopolitics: How Karl Haushofer ‘Educated’ Hitler and Hess*, London: Rowman & Littlefield, 2018.
- ¹³ *Ibid.*

- ¹⁴ Ibid.
- ¹⁵ His military pension meant he was not eligible to take a salary.
- ¹⁶ Despite the enthusiasm for the author of *Treasure Island*, Haushofer is crediting the wrong man as he suggests the entire essay was written by him, despite it being published after his death. Instead, it was simply some reflections from someone – and I can't work out exactly who – from the Royal Geographical Society, who had penned their thoughts in January 1895. The most likely candidate is John Scott Keltie since he was the (assistant) secretary of the Society and editor of the journal at the time.
- ¹⁷ 'The Monthly Record' *Geographical Journal*, 1895, Volume 5, No. 1, pp. 75–83, at p. 83.
- ¹⁸ Haushofer, 'Die suggestive Karte?', p. 19.
- ¹⁹ Herwig, *The Demon of Geopolitics*.
- ²⁰ Ibid.
- ²¹ Quoted from p. 43 of Abrahamsson, C., 'On the genealogy of Lebensraum', *Geographica Helvetica*, 2013, No. 68, pp. 37–44.
- ²² Herwig, *The Demon of Geopolitics*, pp. 102–3.
- ²³ Ibid., p. 102.
- ²⁴ Kershaw, I., *Hitler 1889–1936: Hubris*, 1998, London: Penguin Books, 1998.
- ²⁵ Cheshire, J. and Kent, A. J., 'Getting to the Point? Rethinking Arrows on Maps', *Cartographic Journal*, 2023, pp. 1–17.
- ²⁶ Henrik Herb cautions against assuming a direct link from the Haushofer cartographic standards for a suggestive map and what the Nazis produced for their propaganda. See Herb, G. H., 'Persuasive cartography in Geopolitik and national socialism', *Political Geography Quarterly*, 1989, Volume 8, No. 3, pp. 289–303.
- ²⁷ Cheshire and Kent, 'Getting to the Point? Rethinking Arrows on Maps'.
- ²⁸ For an excellent discussion of the visual elements of this atlas see: Jankó, F., *From Borderland to Burgenland: Science, Geopolitics, Identity, and the Making of a Region*, Central European University Press, 2024.
- ²⁹ Ibid.
- ³⁰ Svatek, P., 'Ethnic cartography and politics in Vienna, 1918–1945', *British Journal for the History of Science*, 2018, Volume 51, No. 1, pp. 99–121, at p. 109.

- ³¹ Fahlbusch, M., ‘The Role and Impact of German Ethnopolitical Experts in the SS Reich Security Main Office’, in Haar, I. and Fahlbusch, M. (eds), *German Scholars and Ethnic Cleansing, 1919–1945*, New York: Berghahn Books, 2005, pp. 37–8. See also Fahlbusch, M., ‘Politische Beratung in der NS-Volkstumspolitik: Südostdeutsche Forschungsgemeinschaft Wien’, *Annali dell’Istituto storico italo-germanico in Trento*, 2001, No. 27, pp. 467–92.
- ³² Translation quoted from Jankó, *From Borderland to Burgenland*, p. 178.
- ³³ Svatek, ‘Ethnic cartography and politics in Vienna, 1918–1945’, p. 110.
- ³⁴ Translation quoted from Jankó, *From Borderland to Burgenland*, p. 177.
- ³⁵ Hartshorne, R., ‘Review: The Territory of the Saar’, *Geographical Reviews*, 1934, Volume 24, No. 4, pp. 680–3.
- ³⁶ Whittlesey, D., Colby, C.C. and Hartshorne, R., *German Strategy of World Conquest*, New York: Farrar and Rinehart Inc., 1942.
- ³⁷ *Ibid.*, p. 13.
- ³⁸ Murphy, D. T., ‘Hitler’s Geostrategist? The Myth of Karl Haushofer and the “Institut für Geopolitik”’, *The Historian*, 2014, Volume 76, No. 1, pp. 1–25.
- ³⁹ Fahlbusch, ‘The Role and Impact of German Ethnopolitical Experts in the SS Reich Security Main Office’.
- ⁴⁰ Monmonier, M., ‘The rise of the national atlas’, *Cartographica*, 1994, Volume 31, No. 1, pp. 1–15.
- ⁴¹ There are (I think) at least two copies of the German copy of the atlas in the Library of Congress. I was shown these by fortuitous mistake as the library was struggling to find my request at the shelf mark and so brought them out in case they were of interest.
- ⁴² Monmonier, ‘The rise of the national atlas’.
- ⁴³ Short, J. R., *The Rise and Fall of the National Atlas in the Twentieth Century*, London: Anthem Press, 2022, p. 42.
- ⁴⁴ Naimark, N., ‘Genocide in Stalinist Russia and Ukraine, 1930–1938’, in Kiernan, B., Lower, W., Naimark, N. and Straus, S. (eds), *The Cambridge World History of Genocide*, Cambridge: Cambridge University Press, 2023, pp. 162–85.
- ⁴⁵ *Ibid.*

- ⁴⁶ I have refrained from offering a total number of deaths as it is uncertain but likely to run into the millions. The full horror of this specific aspect of Stalin's purges is set out in Naimark, 'Genocide in Stalinist Russia and Ukraine, 1930–1938'.
- ⁴⁷ Palsky, G., 'Maps Against Imperialism: Frank Horrabin and Alexander Radó's Atlases in the Interwar Period', in Kent, A. J., Vervust, S., Demhardt, I. J. and Millea, N. (eds), 'Mapping Empires: Colonial Cartographies of Land and Sea: 7th International Symposium of the ICA Commission on the History of Cartography 2018', Springer International Publishing AG, 2019.
- ⁴⁸ Hepple, L. W., 'Socialist Geography in England: J. F. Horrabin and a Workers' Economic and Political Geography', *Antipode*, 1999, Volume 31, No. 1, pp. 80–109.
- ⁴⁹ BBC Programme Index, at https://genome.ch.bbc.co.uk/schedules/service_bbc_television_service/1946-06-07
- ⁵⁰ Gander, L. M., 'Television Tricks Good and Not So Good', *Daily Telegraph*, 30 September 1946, p. 6.
- ⁵¹ Horrabin, J. F., *The Plebs Atlas*, London: NCLC Publishing Society Ltd, 1933, pp. 3–4.
- ⁵² Radó, A. and Rajchman, M., *Atlas of To-Day and To-Morrow*, London: Victor Gollancz, 1938, p. ix.
- ⁵³ Palsky, 'Maps Against Imperialism'.
- ⁵⁴ Radó and Rajchman, *Atlas of To-Day and To-Morrow*, p. 196.
- ⁵⁵ 'World Changes in Maps', *Financial Times*, 29 December 1938, p. 8.
- ⁵⁶ 'Books of the Day', *Illustrated London News*, 5 November 1938, p. 836.
- ⁵⁷ See footnote 37 in Heffernan, M., 'The interrogation of Sándor Radó: geography, communism and espionage between World War Two and the Cold War', *Journal of Historical Geography*, 2015, No. 47, pp. 74–88.
- ⁵⁸ Credit AGS Library.
- ⁵⁹ The other was Seager, J. and Olson, A., *Women in the World: An International Atlas*, London: Pluto Press, 1986.
- ⁶⁰ I'm grateful to Mike Heffernan for giving me advanced sight of a draft paper he and Benjamin Thorpe had written on Rajchman.
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¹¹⁶ These were very small maps that only the most fastidious recipients would have kept so it's hard to determine who was on Radó's circulation list. The Library of Congress only has one of his maps. The American Geographical Society has what must be an almost complete set that someone has carefully assembled into a scrapbook. Other copies appear at the University of Cambridge.

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8. HIROSHIMA

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9. A FRESH PERSPECTIVE

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10. THE OCEAN FLOOR

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As part of the introduction of a symposium in 1968, Bruce is quite clear it was Marie. ‘Marie Tharp’s discovery, more than fifteen years ago, of an essentially continuous tectonically active median rift valley in the Atlantic and Indian oceans (Heezen and Tharp, 1957, 1961, 1964, 1968), provided the key and the physiographic base upon which previously uncorrelated geophysical and geological evidence from land and sea was brought together to form the present unified global pattern now known as the World Rift System.’ See p. 269 of Heezen, B., ‘The World Rift System: An Introduction to the Symposium’, *Tectonophysics*, 1969, No. 8, pp. 269–79. Ewing also gives Tharp credit in some of the newspaper coverage. ‘She noticed that the deepest rifts in the mid-Atlantic formed the locus of an oceanic earthquake belt.’ See ‘World Is Cracking Up ... And Here’s the Proof’, *Atlanta Constitution*, 1 February 1957, p. 2.

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deformations in the floor. These deformations are not found ... In an attempt to overcome this dilemma I have recently suggested that the earth is neither shrinking nor remaining at the same size; rather, it is expanding. If the earth were expanding and the continents remained the same size, additional crust would have to be formed in the oceans. This is apparently just what is happening in the mid-ocean rift valleys.' Heezen, B., 'The Rift in the Ocean Floor', *Scientific American*, 1960, Volume 203, No. 4, pp. 98–114, at p. 108.

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11. MAPS GO DIGITAL

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AFTERWORD

- ¹ This is from a wonderful passage about map-making and how a young Durrell filled out his maps with animals and volcanoes that ‘belched such flames one feared they would set the paper continents alight’. Durrell, G., *My Family and Other Animals*, New York: Penguin Books, 1977, pp. 59–60.
- ² I did a quick search and discovered South Korea has a national map museum within its National Geographic Information Institute on the

ENDNOTES

outskirts of Seoul. There is also a National Museum of Old Maps and Books in Bucharest, which is ranked number 61 of the 412 things to do in Bucharest by Tripadvisor.

- ³ Not to be confused with ‘cartophilists’, who collect cigarette cards.
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CAPTIONS

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