Figure 2.1: The localities of cholera, Manchester, 1832

Source: Gaultier, 1833, frontispiece.
www.archive.org/stream/originandprogre00gaulgoog#page/n10/mode/2up

Figure 2.4: Cholera in Leeds in 1832 (section of map)

Source: http://www.bl.uk/learning/images/makeanimpact/publichealth/large12727.html

Figure 2.5: If pounds were pixels – one of many hundreds of images of dissent in 2012

Note: Image created by Duncan Rickelton
Source: http://zoom.it/yE58

Figure 2.7: Picture drawn in chalk by Joe Hill, Manchester Piccadilly

Source: BBC (2010): Temporary drawing made on the concourse floor. ‘United Utilities say that Mancunians flush away thousands of incorrect items, such as make-up wipes and ear buds, a year, causing sewers to block and toilets and drains to flood.’
http://news.bbc.co.uk/local/manchester/hi/people_and_places/newsid_9135000/9135707.stm
Figure 2.8: Two pages from Gaulter’s work on the 1832 Manchester cholera outbreak

Source: www.archive.org/stream/originandprogre00gaulgoog#page/n128/mode/2up

Figure 3.1: Detail of Charles Booth’s descriptive map of London poverty 1889

Note: Yellow indicates the highest social class, black the lowest.

Figure 3.3: London poverty (1896 and 1991) and mortality (1990s).

Booth-based Index of Poverty
- Low (richest)
- High (poorest)

Map 1

1991 Census based Poverty Index
- Low (richest)
- High (poorest)

Map 2

All Cause SMR (1990s)
- 29 - 90
- 90 - 105
- 105 - 112
- 112 - 120
- 120 - 146

Map 3

Figure 17.1: (a) 2010–11 reduction in main revenue grant allocations (%), local authorities, England. (b) 2009 proportion of employees in the public sector (%), local authorities, Britain. (c) Projection of unemployment rates given a 25% cut in public sector employment, local authorities, Britain. (d) 2007/08 inheritance tax-paying estates per 1,000 persons dying, local authorities, Britain.

(a) Reduction in main revenue grant allocations 2010–11 (%)
(b) % working in public admin., educ., and health
(c) Projected unemployment rate, 25% public sector cut
(d) Taxpaying estates per 1,000 deaths 2007/08

Source: Dorling and Thomas, 2011.

Figure 6.2: David Cameron and his Health Secretary, Andrew Lansley, meet nurses during a visit to the Royal Salford Hospital in Manchester on 6 January 2012.

Source: Photograph: John Giles/Press Association (2012)
Figure 17.3: (a) 2007/08 inheritance tax-paying estates, numbers, local authorities, Britain. (b) 2007 CO₂ emissions due to road transport (tonnes per person), local authorities, Britain. (c) Nations and regions. (d) Major towns and cities.

Figure 18.1: Vote shares in the 2008 London mayoral election

Source: Dorling and Thomas, 2011.

Figure 28.1: Global life expectancy slope index of inequality (in years)

Note: Black triangle shows estimated index in 2000-05 with impact of AIDS removed.


Figure 28.2: Life expectancy (in years) by continent 1950–2005, world

Source: Calculated for this paper from World Health Organisation routine data.

Figure 28.3: Average wealth per capita in dollars corrected for purchasing power parity (SPPP)

Note: Then: $1 = £0.6, €0.8
Figure 28.4: Slope index of inequality for global wealth in dollars corrected for purchasing power parity (SPPP)

Note: Then: $1 = £0.6, €0.8.

Figure 29.1: Mortality rate by age, men and women in 1850, 1900, 1950 and 2000, all affluent countries of the world at each point in time

Source: The Human Mortality Database and calculations by the author, see: www.mortality.org/

Figure 30.1: Sex ratio of mortality (male/female rate) for the richer countries of the world, 1850–2000

Source: The Human Mortality Database and calculations by the authors, see www.mortality.org/
Figure 30.2: First derivative of sex ratio of mortality, showing change in the ratio for the richer countries of the world, 1850–2000

Source: The Human Mortality Database and calculations by the authors, see www.mortality.org/

Figure 30.3: Male : female mortality ratio by age in the rich world by 10-year cohort, 1850–1990

Source: The Human Mortality Database and calculations by the author, see www.mortality.org/

Figure 30.4: Mortality rates in the ‘affluent world’, selected single years for ages 10 and 30, male and female, 1841–2000

Source: The Human Mortality Database and calculations by the authors, see www.mortality.org/
Figure 31.1: Physicians per head and child mortality (aged 1 to 4), countries of the world, 2002.

Source: www.worldmapper.org

Note: Territories of the world drawn as circles with area in proportion to births. Both axes are drawn with a log scale here.

Figure 31.2: Territories of the world drawn with area in proportion to deaths at ages 1–4, 2002

Note: This image is of the world as shaped when drawn in proportion to the more than 3 million children who die each year aged between 1 and 4 (inclusive) almost all from superficially easily preventable causes. In most cases their death is not simply due to the lack of intervention of a trained physician. However: 'There are more nurses from Malawi in Manchester than in Malawi and more Ethiopian doctors in Chicago than Ethiopian', G. Kinnock, 4 April 2006, Strasbourg: http://www.welshlabourmeps.org.uk/gk/gk_press/healthbudget04.04.06.htm.

Source: www.worldmapper.org

Figure 31.3: Territories of the world drawn with area in proportion to physicians, 2002

Note: There are more than two working physicians for every child that dies aged 1 to 4 worldwide each year. A traditional map in which territories are shaded according to the ratio of the population to physicians gives the reader little real impression of just how geographically concentrated physicians are: most into just a few territories worldwide.


Source: www.worldmapper.org

Figure 31.4: Territories of the world drawn with area in proportion to population, 2002.

Note: Some 200 territories of the world are ranked according to their populations' weighted average score on the United Nations Development Programme’s Human Development Index for 2002. That ranking is then used to determine the original colours used in these maps, from the poorest in red, through the rainbow shades, to the country with the highest index, Japan, in violet. 2002 is also the year from which the world population is drawn that is used to scale each territory according to its area.

Source: www.worldmapper.org

Figure 31.5: Territories of the world drawn with area in proportion to land area

Note: This equal area projection appears very similar to that reproduced by Arno Peters and adopted by many parts of the United Nations as a more equitable projection than traditional world maps. However, this and Peter’s projection, give most prominence to where there is most land – not most people: ‘Africa’s population density of 249 people per 1,000 hectares is well below the world average of 442. However, a great deal of the total destruction of the natural environment is occurring in the region. Poverty is a major cause and consequence. The area of Africa on the population cartogram is roughly half what the continent is on the equal land area map as a result of population density across Africa being almost half the world average.’ (United Nations Population Fund, The State of the World Population 2001; Chapter 2: Environmental Trends: http://www.unfpa.org/swp/2001/english/ch02.html).

Source: www.worldmapper.org
Figure 31.6: Territories of the world drawn with area in proportion to physicians, 2002.

Note: On this graph the area of each territory is proportional to the number of physicians who work there, as also in Figure 31.3 above, but here information on geographical location is lost so that territories can be ordered by rates. The area to the left of the line is thus proportional to absolute numbers. This image is another example of an anamorphosis where area is drawn in proportion to a count, in this case numbers of physicians.

Source: www.worldmapper.org

Figure 31.7: Territories of the world drawn with rectangular area on this graph in proportion to deaths at ages 1–4, 2002

Note: All territories of the world are shown in this image and thus there is a minute space to the left of the line to represent the death of each child aged 1 to 4 that occurred in this one year. Worldwide 3,200,000 are estimated to have died, give or take well over 100,000 as recording is so poor. Some dozen territories that are home to over half the world’s population have been labelled as, unlike on a map, it is far from obvious where places are on a graph.

Source: www.worldmapper.org

Figure 31.8: Anamorphosis in medicine and politics, from anatomy to subterfuge

Note: Ambassadors engage in diplomacy in the interest of their country but, not necessarily, in the interest of others.

Sources: (a) Dissecting the cortex: taken from Vesalius’ De humani corporis fabrica, 1543 [On the Fabric of the Human Body] now published online: http://vesalius.northwestern.edu/. This image sourced from: http://pages.slc.edu/~ebj/iminds01/notes/L1-Descartes-bats/sl-vesalius.html
(b) Homunculus, taken from http://wwwppeda.free.fr/progressions/3/homunc_sens_grand.jpg
(c) Detail of skull, transformed with photo software and derived from Holbein’s ‘The Ambassadors’
(d) From http://www.dodedans.com/Eholbein.htm (accessed 26 October 2006)

Figure 31.9: Physicians per head and child mortality (aged 1 to 4), countries of the world, 2002.

Note: Cuba is the most easterly circle, Sierra Leone the most northerly, and the most prominent circle to the south west extreme of the distribution is Malaysia. Here the territories of the world drawn as circles with area in proportion to births. Both axes draw with a linear scale.

Source: www.worldmapper.org
UNEQUAL HEALTH

Figure 32.1: Association of income inequality and affluence with mortality in the 30 countries of the OECD, around the year 2000.

Note: Income inequality measured as the Gini coefficient, and affluence as the log of gross domestic product (GDP) per capita adjusted to ensure purchasing power parity. A higher regression coefficient indicates a closer correlation with mortality rates of either log GDP or Gini at those particular ages. Only data for 30 affluent countries are used here and GDP alone only comes to have a significantly greater effect than inequality after age 40. A higher correlation implies that the possible link is stronger, and that the influence of the factor is greater at those ages.


Figure 32.2: Association of income inequality and affluence with mortality in all countries worldwide, around the year 2000.

Note: Income inequality measured as the Gini coefficient, and affluence as the log of gross domestic product (GDP) per capita adjusted to ensure purchasing power parity. A higher regression coefficient indicates a closer correlation with mortality rates of either log GDP or Gini at those particular ages. Data for almost 200 countries are used here and GDP is seen to matter more at younger and older ages, but even with so many poor countries included inequality has a clear influence between ages 15 and 30.


Figure 32.3: The world's countries drawn with area in proportion to the number of people living on ≤$10 a day, 2002.

Note: In 2002, some 3.5 billion people, then more than half the world population, survived on the equivalent, or less, of what $10 in the United States of America would buy a day.


Figure 32.4: The world's countries drawn with area in proportion to the gross domestic product per capita of people adjusted for purchasing power parity, 2002

Note: In 2002 roughly $550 trillion was 'earned' a year worldwide, $7800 per person, or $21 on average a day, as measured in dollars, given what a dollar then bought in the United States of America.


Figure 32.5: The world's countries drawn with area in proportion to the deaths of adults aged 25-29 years inclusive, 2001

( Editorial Note: Some 1.5 million adults of these ages die every year. The original version of this figure had shown the map for children aged 1 to 4, but that map was shown earlier in this book as Figure 31.2 on p x of Chapter 31, so an older age group is shown here.)


Figure 35.1: Map of the world with countries resized according to the total amount of US treasury securities that were held in each place, July 2011.

Source: Figures published by the US Treasury. Map created by Ben Hennig. See text for why some parts are dotted and some shaded with a criss-cross pattern.
UNEQUAL HEALTH

Figure 37.1: Public Health Spending: Worldmapper Poster 213.

Note: The figure shows a cartogram in which territories are drawn with their area in proportion to the values being mapped. Territories are shaded identically on all cartograms here to aid comparison with the world cartograms shown in Figures 32.2 to 32.6 which employ identical shading. For detail on shading see http://www.worldmapper.org.


Figure 37.2: Private Health Spending: Worldmapper Poster 214.


Figure 37.3: People dying over age 100: Worldmapper Map.

Note: The map shows the number of all 100-year-olds who died in 2001. The estimates come from the World Health Organization’s Burden of Disease Estimates, published in 2006. For further information on these mortality estimates (first made for 1999), see http://whqlibdoc.who.int/hq/2001/a78629.pdf


Figure 37.4: Early Neonatal Mortality: Worldmapper Poster 260.

Source of data used to create map: World Health Organization, 2005, World Health Report, Basic data.

Figure 37.5: HIV/AIDS Prevalence: Worldmapper Poster 227.


Figure 37.6: Malaria Cases: Worldmapper Poster 229.

Figure 41.1: The survivors and deceased lists by social class, RMS Titanic, 1912, viewed in Singapore in 2012.

Source: Image included in *The Guardian* newspaper, 11 April 2012, of people at an exhibition in Singapore (the world’s most unequal rich country) looking at the RMS Titanic survivor lists.

Figure 42.1: Major life themes by age in Britain (aged 15–97), frequency of reporting events in the last year concerning subject.

Source: British Household Panel Study questions asked between September 1992 and December 1992 on what happened of significance to all study members or to a member of their family.
UNEQUAL HEALTH

Figure 43.2: Childhood cases of diarrhoea in the world today.

Children suffering diarrhoea (today)

82 million aged 0-5


Figure 43.3: Deaths due to diarrhoea in the world today.

People dying with diarrhoea (now)

1,871,441 people, all ages each year

[Note: Area proportional to number of deaths. Source: The data used here are from the World Health Organisation’s (WHO) Global Burden of Disease (GBD) statistics on death and disability worldwide as measured in 2002. Diarrhoeal diseases, ICD U010, (causing 17% of deaths worldwide included in the category: Infectious and parasitic diseases).]

Figure 43.4: The life expectancy gap between the extreme districts of Britain

In Britain the inequality gap is now 12.4 years, despite having dealt with sewage by today

[Now = life expectancy between extreme districts by 2009... (was 12.45 in 2008)

Figure 43.5: Deaths in the world today due to road traffic collisions

People dying on the roads now

1,195,339 people a year and rising rapidly

[Source: World Health Organisation’s (WHO) Global Burden of Disease (GBD) statistics on death and disability worldwide in 2002. In 2002 road traffic accidents (now more commonly labelled ‘crashes’) caused 2.1% of all deaths worldwide in 2002, an average of 191 deaths per million people per year. This number is rising rapidly.]

Figure 43.6: Deaths in the world today with polio as underlying cause

It took 100 years to deal with sewage:
People dying with polio now

Only 831 people a year and falling rapidly

[Note: Area of each country proportional to numbers suffering (total area is equal to 82 million children aged under six).
Source: Office for National Statistics and General Registrar Office (Scotland) estimates of life expectancy by local authority, three-year moving averages.

Figure 43.7: Some early maps of social divisions which influenced public health

But still we have to explain:
“Why income inequality is of relevance to all Londoners, especially at a time when the capital is not only still recovering from the recession but also facing severe cuts in public sector spending”

[Source: Dorling, D. (2012) Far play: A Daniel Dorling reader on social justice, Bristol: The Policy Press, reproducing figures in turn produced under the direction of Charles Booth and Benjamin Sebohman Rowntree, but drafted by others with data collected by yet others that they employed.]
UNEQUAL HEALTH

Figure 43.9: Two world wars, the smoking cloud, emancipation and repeated recessions

Source: The data used here were drawn from the Human Mortality Database collated by John R. Wilmoth (Director, University of California, Berkeley) and Vladimir Shkolnikov (Co-Director, Max Planck Institute for Demographic Research). Access is free and may be found here: http://www.mortality.org/

Figure 43.10: Deaths of children aged 5 to 10 in Britain not attributed to disease (2006–07)


Figure 43.11: Underlying cause of deaths of children aged 11 to 16 in Britain (2006–07).


Figure 43.12: Deaths of children aged 11 to 16 in Britain not attributed to disease (2006–07)

Figure 43.13: Underlying cause of all deaths of people aged 17 to 19 in Britain (2006–07).

2006-07 all causes of death of 17 to 19 year olds, Britain


Figure 43.14: Deaths of people aged 17 to 19 in Britain not attributed to disease (2006–07)

2006-07 external causes of death of 17 to 19 year olds, Britain

Figure 43.15: Underlying cause of all deaths of people aged 20 to 24 in Britain (2006–07)


Figure 47.1: Population growth 1990–2015 – total change projected on a gridded cartogram.

Source: Map drawn by Ben Hennig, using SEDAC data, the GPWv3 gridded population of the world, from Columbia University.
Figure 48.1: Upper-class individuals are more likely to engage in unethical behaviour


Figure 48.2: Impact of the taxation and benefit changes, 2010 to 2014

Impact of changes taking effect by April 2014

Note: The original graph was produced by the IFS and ignores measures affecting mainly the very rich. These budget measures included changes to taxation law proposed in the budget to prevent very rich people pretending they are giving money to charity, but giving it to something they have set up to look like a charity, to avoid paying tax. That proposal was not implemented, the reason given being that it would apparently affect genuine large charitable donations.

Source: Joyce (2012, slide 12)