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Unequal health: why a scandal, and why now?



Inequalities in the health status of social groups have been observable for *at least* two millennia. For example, during the Roman occupation of Britain, variations in diet between the Romans and those they ruled resulted in the skeletons of poorer groups being stunted. And it was not just that the poor ate less well – the amount of labour demanded of different social groups varied, which contributed to the skeletons of those deemed to be inferior being further stunted.

Living under the tyranny of an occupation not only reduces the number of both necessities and luxuries people have in life, it also damages self-resolve and self-respect, although these are hard to measure, especially in archaeological records. Poorer people, for example, could be identified as those with fewer grave furnishings. And examination of dental remains has revealed that those with fewer possessions at the time of death suffered more from disease during life (Griffin et al, 2011). From this you may conclude that great health inequality has always been with us, but that is simply not true – the extent of inequalities has varied greatly over time.

The archaeological remains discussed here came from a Roman cemetery discovered in 1925 in Baldock, Hertfordshire (in Roman times Baldock was a settlement on the Icknield Way). Today Baldock is a tiny market town, sandwiched between the Great North Road and the A1 motorway. Among its claims to fame is

that from 1936 onwards, the writer George Orwell lived nearby. Orwell wrote widely on issues that often touched on self-resolve and self-respect. He lived in Baldock because the rent was cheap; it was cheap because of the state of the housing there at the time – Orwell regularly had to fix a leaking cesspit. But just a decade ago the very home that Orwell had rented (with the cesspit long gone) was on the market for £395,000, and many young locals have recently had to leave the area because house prices have become so high (Clark, 2003).

During the 1930s, before moving to Baldock, Orwell travelled through northern England. He collected stories that were subsequently published in his 1937 book, *The road to Wigan Pier*, stories about the scandal of the inequalities he saw, of how dire the situation in many northern towns was and how bleak appeared the outlook. We later learned that during the years Orwell was travelling, inequalities in health across Britain had been falling through to the late 1930s and then through the 1950s, all the way to the 1970s. Orwell may well have had a less bleak outlook had he known what was to come, but he might not have written so well had he been more complacent and not so shocked by what he was living through.

During the 1970s, when falls in inequalities in health between different areas of Britain came to an end, it was possibly a sign that complacency had risen.¹ In hindsight we can see that it was partly because of what people like Orwell wrote in the 1930s and 1940s that the outlook had brightened, with acts of great selfishness more often curtailed between the 1930s and late 1970s than before or after. Lessons from the past are often lost, however, and it is when warnings are forgotten that inequalities are allowed to rise again, often in very similar form in similar places. Some features of British society today remain eerily reminiscent of Orwell's descriptions of the 1930s:

Nevertheless, in spite of the frightful extent of unemployment, it is a fact that poverty – extreme poverty – is less in evidence in the industrial North than it is in London. Everything is poorer and shabbier, there are fewer motor-cars and fewer well-dressed people; but also there are fewer people who are obviously destitute. Even in a town the size of Liverpool or Manchester you are struck by the fewness of the beggars. London is a sort of whirlpool which draws derelict people towards it, and it is so vast that life there is solitary and anonymous. (Orwell, 1937 [1986], p 73)

Today, as cars are now much more a necessity than a luxury, there are many times more of them, even in the poorest of areas of the North, although outside of London lack of access to a car still differentiates the very worst-off places from those just badly off. In contrast, to be 'well-dressed' has for centuries been a necessity to securing basic respect and self-esteem.

¹ See Table 10.2 in Chapter 10, which shows the trend in geographical inequalities in premature mortality falling from around 1921 to 1950, falling again from around 1963 to 1973, and then rising.

Seeing past scandals in the present

The writer Stephen Armstrong recently retraced Orwell's steps on the 75th anniversary of his journey north. He set out from London, aware that within London the 'sort of whirlpool' still exists, although many living in the richest parts of the capital are still often almost oblivious to it.² The affluent today, as in the 1930s, are similarly far too often unaware of how many people have had no work for many years, but unlike in the 1930s, it is now the young who are being hit the hardest:

August 2011 figures from the Office for National Statistics showed more than 20 per cent of 16–24 year olds were unemployed and 100,000 had been on the dole for two years or more. Earlier in the year, the first full comparison of numbers from local authorities showed that men and women in Manchester, Liverpool and Blackburn die ten years younger than men and women living in Kensington and Chelsea. (Armstrong, 2012, pp 9–10)

Inequalities in income both create inequalities in wealth and reduce the overall level of health and the quality of life of the population as a whole. Figure 1.1(a) and (b) demonstrate this using the latest data for every country for which comparable figures on the income share of the top 1 per cent have been published. Each circle in the graph represents a country, with the circle area drawn in proportion to the country's population.

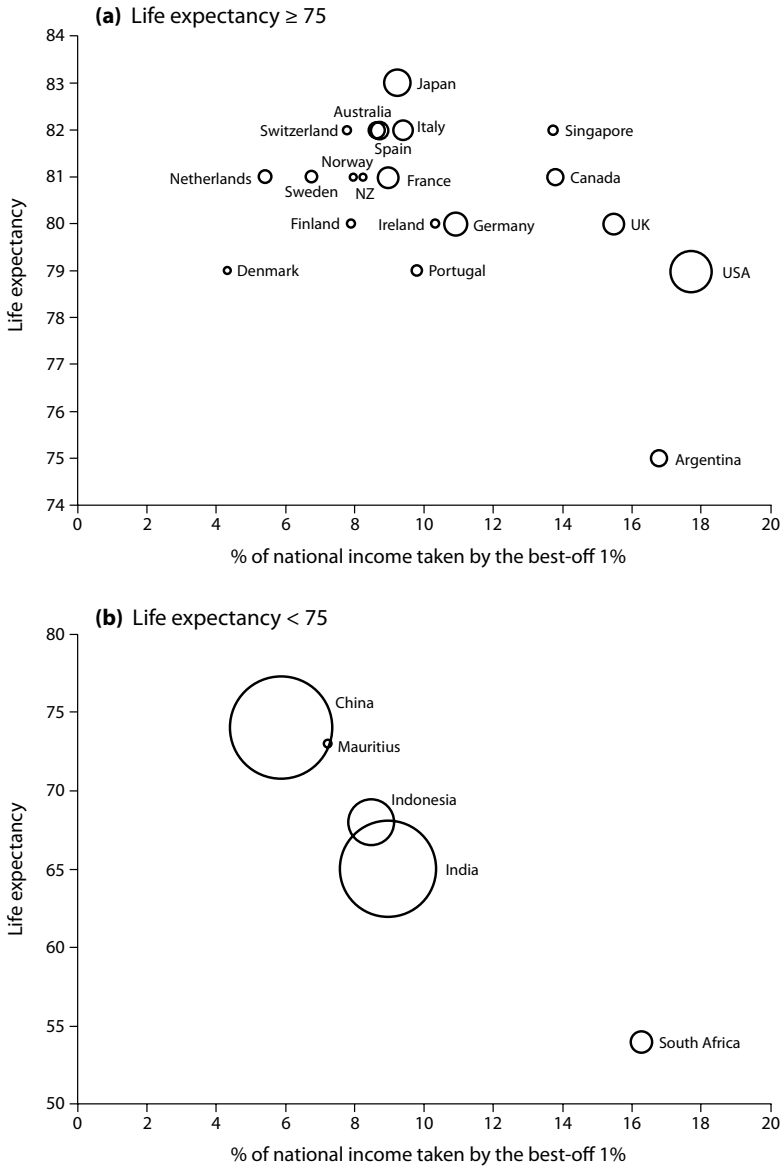
Any population that has suffered more insults, both physical and mental, will record poorer health and, ultimately, more premature mortality. And living in a regime of great income inequality is just one of many factors contributing to such insults that can reduce life expectancy. The more the richest 1 per cent take as their share of total income, the less there is for the rest. However, many insults contribute to national life expectancy averages, not simply the adverse effects of income inequality. One of the simplest to measure the effects now of is smoking.

Even in quite equitable countries, if, for example, people smoked more than average in the past, such as in Denmark, life expectancy today would be lower. As smoking rates among younger Danes are much lower, we should expect to see life expectancy rise there more rapidly than in places where a different kind of redistribution than simply less smoking is required. Other harder to quantify insults, such as the physiological harms that come from suffering racism, are similarly known to have independent adverse effects on health. Although all these separate insults matter, in affluent countries one appears to matter the most – inequality in income, which often correlates highly with the other insults. For example, the poor smoke more, and poorer members of minority ethnic groups are easier targets for racists.

² Chapter 39 records the whirlpool effect of migration in and out of London; this is the damping of mortality figures there among the poor, as so many are spun out before dying early elsewhere, although even poorer Londoners tend to be healthier due to migration selection.

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Figure 1.1: Life expectancy (2009) of all people versus income share of the best-off 1% (latest year), all countries with recent 'top income' data



Note: Circle area is proportional to the population in 2010.
 The inequality data used is from the Paris School's World Top Income database: <http://g-mond.parisschoolofeconomics.eu/topincomes/> (excluding Tanzania, where only data to 1970 were included).

Source: Life expectancy and population figures from WHO data: <http://apps.who.int/ghodata?vid=710#income> (Australian statisticians dispute the WHO figure for life expectancy shown here).

Figure 1.1 is split into two halves, differentiating richer and poorer countries. In richer countries today life expectancy is above 75 years, while it is generally below that in poorer nations. However, where income inequalities are very high, individual income is reduced further for the great majority (99 per cent) of the population. During the 1930s the countries in the top half of Figure 1.1(a) experienced life expectancy rates more like those in the bottom half of Figure 1.1(b) because, in general, the populations were poorer, and also because fewer treatments for disease existed, particularly for its prevention through vaccination.

One great change between the 1930s and the 2010s is that while people today in an affluent area such as Kensington and Chelsea mostly live long lives and rarely experience poverty, they should now find it harder to avoid learning that they are part of the problem of inequality, as far more information on inequality and its harms is now available. During the 1930s many still believed that premature mortality, especially of infants, was an act of god rather than a tragedy that was almost entirely preventable, although others had begun to think differently. Now in rich countries we most often count the costs of health inequalities in terms of years lost at the end of life rather than lives lost at their very start.

Later on in his revision of Orwell's *The road to Wigan Pier*, Armstrong quotes figures from Michael Marmot's 2010 official independent review of health inequalities (Marmot, 2010), which claimed: '*... if everyone in England had the same death rates as the most advantaged, people who are currently dying young thanks to health inequalities would, in total, have enjoyed between 1.3 and 2.5 million extra years of life. They would, in addition, have had a further 2.8 million years free of limiting illness or disability*' (Armstrong, 2012, p 214).

Within Britain the scandal of our times is not that inequalities in health are now wider than they were in the 1920s or 1930s³; it is that we allowed them to become this wide knowing all we know today that was not known in the 1930s. Today almost everyone lives longer, on average, but the gaps between the expected length of life, according to where you live and your access to wealth, have grown to be the greatest recorded for a century, and the quality of life of those living shorter lives is now deteriorating as living standards fall in both absolute and relative terms. Meanwhile, income and wealth inequalities are continuing to rise, again uniquely today, given the depth of the 2008 economic crash this is found no matter whether they are measured in absolute or relative terms.

The outbreaks of mass poverty in the 1920s and 1930s were not planned. Neither was the beginning of reparation particularly well planned. In the decades before the Second World War in the UK (and not until that war in the US) inequalities in income, wealth and health began to fall greatly. In contrast, since the late 1970s, inequalities in income, health and wealth have all been rising as measured between different parts of Britain, and these rises are no longer the shock reaction to recent economic turmoil. Between 1979 and 2010 not enough work was done in any year

³ See Chapter 25 and the text around Figure 48.2, in Chapter 48, for data, discussion and illustration of the effects of the recent trends that have led to inequalities becoming wider.

to curtail the rise of inequality. By 2012 the situation had become so dire that Liam Donaldson, former Chief Medical Officer for England, directly accused the new Coalition government of 2010 of showing disregard for people's lives in comparison with the New Labour government that had come before. In short, the Coalition government, in the decisions it took, may have '*... contributed to a rise in deaths in the year after the flu pandemic, according to the former chief medical officer Sir Liam Donaldson. In a new paper, Donaldson, who led the fight against the flu pandemic in 2009 but stepped down when the coalition took power in May 2010, says the change of government response was the key difference between the two years and criticizes the "laissez-faire" attitude of Andrew Lansley's Department of Health*' (Boseley, 2012).

The scandal of our times

During the two years from May 2010 to May 2012 it was often suggested that Andrew Lansley had become the most hated Secretary of State for Health that Britain had ever had. Even a normally Conservative-biased newspaper ran the following headline on Lansley's attempts to privatise the NHS: '*The firm that hijacked the NHS: MoS [Mail on Sunday] investigation reveals extraordinary extent of international management consultant's role in Lansley's health reforms*' (Mail on Sunday, 13 February 2012). David Cameron sacked him as Secretary of State in September 2012.

It is not impossible that we will soon be recording actual rises in mortality rates for particular groups in particular parts of Britain if the trends both to privatise healthcare and to allow inequality and poverty to rise continue (Pollock et al, 2012). The last time actual rises in mortality occurred was against the general background of social improvement experienced between the two world wars, at a time when unemployment rates were historically high and rising and in the aftermath of a global financial crash (Davey Smith and Marmot, 1991).

The position of the UK shown in Table 1.1 (the table of statistics that are plotted in Figure 1.1) is poor. The table is sorted by life expectancy and includes every country for which comparable income inequality data on the top 1 per cent are available. There are often reasons why the relationship between inequality and early mortality is not neater. In Denmark people live shorter lives because smoking rates in the 1980s were higher than in the UK, although those rates have since plummeted. In Singapore people live longer, on average, despite higher inequality, because of a system of deporting some of the poorest people and because some of those in the poorest groups of guest workers abort their babies to avoid the threat of deportation.⁴ If such reasons are accounted for, then the correlation between tolerating extreme inequality within a country and poorer overall health becomes even stronger.

As income and wealth inequalities rise, so too do health inequalities. By May 2010 it had become apparent that men and women had a combined average life expectancy of 74.3 years in Glasgow compared to 88.7 in the Royal Borough of Kensington and Chelsea (2007–09 data; see Figure 41.3 in Chapter 41). Therefore

⁴ See Chapter 36 for the estimates of the number of people directly and indirectly affected.

the gap between an affluent enclave of London and economically run-down Glasgow exceeded 14 years, a 19 per cent difference. It is necessary to go back to the recession of the 1880s to find a greater gap between areas. At that time life expectancy was 46 years in Bristol compared to 36 years in Liverpool, a 10-year absolute, and (then) 28 per cent relative difference between the two ports (Szreter and Mooney, 1998, table 1). By May 2012, as recorded later in this volume in Chapter 41, that gap between

Table 1.1: Income inequality and life expectancy, all countries with data, 2009

Country	Year of latest available income inequality data	Top 1% richest people's share of all income (%)	Life expectancy in years 2009	Population estimate 2010 (millions)
Japan	2005	9.20	83	126.6
Switzerland	1995	7.76	82	7.6
Australia	2008	8.59	82	22.3
Spain	2008	8.61	82	46.1
Italy	2009	9.38	82	60.6
Singapore	2009	13.7	82	5.1
Netherlands	1999	5.38	81	16.6
Sweden	2009	6.72	81	9.4
Norway	2008	7.94	81	4.9
New Zealand	2009	8.22	81	4.4
France	2006	8.94	81	62.8
Canada	2007	13.78	81	34.0
Finland	2002	7.86	80	5.4
Ireland	2000	10.30	80	4.5
Germany	1998	10.88	80	82.3
United Kingdom	2007	15.45	80	62.0
Denmark	2005	4.29	79	5.6
Portugal	2005	9.77	79	10.7
United States	2008	17.67	79	310.4
Argentina	2004	16.75	75	40.4
China	2003	5.87	74	1348.9
Mauritius	2008	7.20	73	1.3
Indonesia	2004	8.46	68	239.9
India	1999	8.95	65	1224.6
South Africa	2007	16.25	54	50.1

Note: Table is sorted by life expectancy.

The inequality data used is from the Paris School's World Top Income database: <http://g-mond.parisschoolofeconomics.eu/topincomes/> (excluding Tanzania, where only data to 1970 were included).

Source: Life expectancy and population figures from WHO data: <http://apps.who.int/ghodata?vid=710#income> (Australian statisticians dispute the WHO figure for life expectancy shown here).

areas had widened yet again, but inequalities between social classes as measured by children's survival chances had suddenly narrowed.⁵

Sometimes it can feel as though the geography of inequality in Britain is stuck in a kind of rut, but we must remember just how much worse off in absolute terms people were when the great-great-grandparents of today's students were children. Szreter and Mooney show that in the registration district of Liverpool (as opposed to the whole city), life expectancy in the 1880s was only 29 years, some 19 years lower than the 48 years recorded then in the affluent Clifton district of Bristol. Similarly, in Glasgow in earlier years life expectancies as low as in Liverpool were recorded, only 27 years around 1840. Infant mortality was key to determining these low overall ages, dragging average life expectancies down as so many died in the first year of life. Manchester's life expectancy for 1801 to 1850 was possibly the lowest ever recorded in a large city that was not wiped out as a result; it was calculated at 25.3 years, which affected a population of 235,000 people in 1841.

Inequalities in health in Britain are the scandal of our times today because you have to travel back to these Victorian statistics to last find life expectancy gaps between places greater than today, even though the overall levels of health were then much worse. But what of the time before the Victorians?

The higher social status of groups in an area has not always been reflected in better health there. More than a century before Manchester first recorded such low life expectancies, in the decades running up to 1700, *'major and minor aristocracy experienced similar life expectancy and infant mortality to the overall population... As Johansson (1999) has suggested, it took knowledge to convert wealth into health'* (Davey Smith, 2007, p 221, relying in turn on Johansson, 1999). This apparent equality of health was hypothesised to be due to the higher number of people the wealthy came into contact with, and the fact that at that time they knew much less about the causes of ill health. The scandal then was not inequality but ignorance.

Why economic inequality harms health

The general explanation that living under conditions of high social inequality is detrimental to health (Wilkinson, 1999) is not yet easily supported by a simple biological model, but this does not make it a bad explanation, just a relatively new one. Critics of the theory that inequality 'of itself' is detrimental to health relied on older and hence possibly less reliable data than that used here (Davey Smith, 2007, figure 7, relying in turn on Lynch et al, 2001).

In 2012 a biological model was proposed for why rank inequality might have an effect on health in primates (Tung et al, 2012). However, within the same month

⁵ See Figure 41.3, Chapter 41, this volume, for trends by area, and Figure 44.1, Chapter 44, for trends by social class. Note that it is possible, in very recent years, just prior to publication of this book, geographical inequalities in health by area may have narrowed in a similar way to those seen by class in Figure 44.1. The 2011 Census reveals that there were fewer people living in Kensington and Chelsea than had been thought to live there, so life expectancy in this very affluent borough will not be as high as was believed to be the case prior to summer 2012.

a review was then published which suggested no evidence among primates that rank was adversely related to increased risk of coronary artery disease (Petticrew and Davey Smith, 2012). And then, at almost exactly the same time again, an article was published suggesting that stress caused by increased rank differentiation was the probable explanation for rising obesity in particular societies (Pickett and Wilkinson, 2012).

A biological explanation for why income inequality harms health could be summarised as ‘stress causes raised steroid levels which cause weight gain’. A social explanation might be ‘in more unequal countries advertisers are less curtailed from advertising fatty foods’. The argument over precisely how high inequality causes poorer health will continue for some time. In relatively poorer areas people die earlier, and countries with higher inequality are home to more people who are relatively poor. But there is much more to why inequality ‘of itself’ is harmful to good health than simply increasing poverty.

One way in which high economic inequality harms health is that it pushes medical practitioners away from those most in need. Figure 1.2 shows a rough inverse relation between the proportion of the population who have health needs in different parts of the country and the proportion who are qualified working-age medical doctors but who are not working in medicine. Medical doctors are more likely to be found in areas of better health, not because it is there that they make more people better, but because it is there that more prefer to live and work. This is in preference to living and working where people’s health is worse and the areas are poorer. (Chapter 5 includes figures that show this is the case for all those doctors working in medicine.) The exceptions to the rule, Gwent, Carmarthenshire and Torfaen, are places where relatively high numbers of doctors moved to, working at something but not as practising medical doctors. Only 0.06 per cent of Torfaen’s population are qualified medical doctors working in medicine, which is less than the numbers of the working-age population who were qualified but not working as medical doctors in that district!

In more equitable countries there are fewer inequalities in health between areas, and doctors tend not to avoid serving areas with greater health problems simply because there are fewer such obviously needy areas. In more unequal countries physicians tend to live and work further away from those who are in need of their care.⁶ What may be less well appreciated is that more qualified physicians in more unequal countries may be choosing not to actually work as physicians. In more unequal countries do more young people choose to study medicine because of the high incomes doctors receive rather than because they actually want to help people get better?

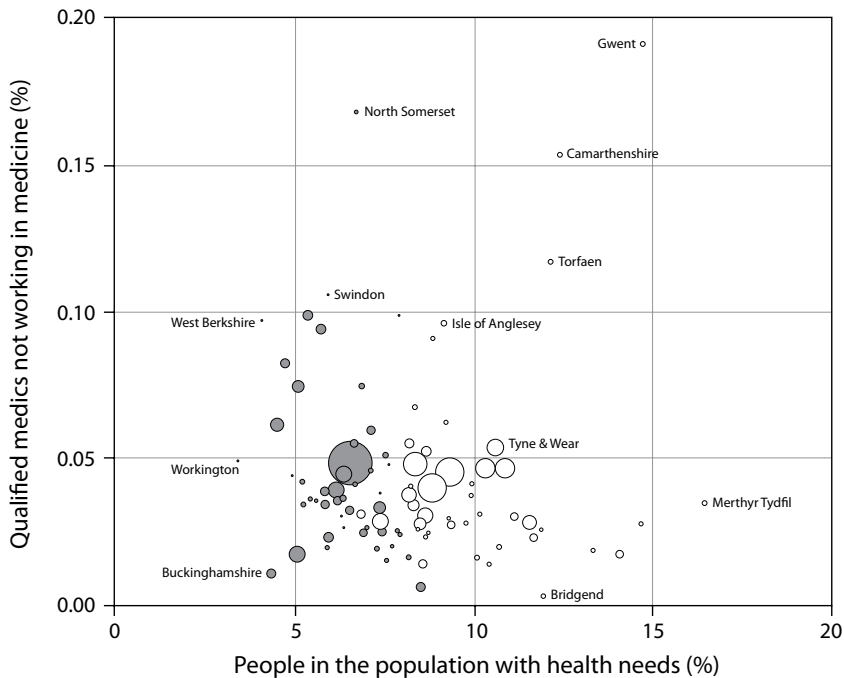
What Figure 1.2 shows is that the proportion of qualified medical practitioners who are in employment but who are not working as doctors is inversely related to the proportion of the population reporting health needs. In general the more people who are ill in a city or county within Britain, the smaller the proportion of doctors

⁶ Chapter 5, this volume, shows that qualified physicians working as practising physicians tend to be found in greatest numbers where people are least ill (see Figure 5.3).

who will be working there, but even smaller is the proportion of qualified doctors not working in medicine but still living and working there.

When health inequalities are high and there are large variations between areas, doctors appear not to want to live in areas with high health needs. This is even more the case for groups labelled ‘other health professionals’ (not including doctors, nurses and dentists). Most other health professionals, such as osteopaths and psychologists, work in private practice and so tend to gravitate to where people have more money and are less sick.

Figure 1.2: Qualified physicians not working in medicine versus health needs, 2001, Britain



Note: Each circle is an area of Britain, county or major city. Areas in the South of England are coloured darker and the area of each circle is drawn in proportion to its population. Selected circles are named.

Source: Same data as used in Shaw, M. and Dorling, D. (2004) ‘Who cares in England and Wales? The Positive Care Law: cross-sectional study’, *Journal of General Practice*, vol 54, pp 899-903

When it comes to keeping away from the sick, dentists tend to live even further away from those in greatest need. In fact, nurses are the only group of health professionals to be found in slightly higher numbers in areas where there are greater health needs (Shaw and Dorling, 2004). More dentists in poorer areas would not help prevent

many premature deaths, but they could relieve a great deal of suffering instead of, for example, carrying out cosmetic whitening in richer areas.

The chapters that follow in this first section concern, first, the more distant history of health inequalities by considering epidemics, pandemics and in particular, cholera (Chapter 2), then the persistence of the geography of poverty (Chapter 3); next is a chapter that considers how the greatest reductions in infant mortality have been achieved (Chapter 4). The section ends by considering the continued strength of the inverse care law in health (Chapter 5). These four chapters have been placed together to try to provide a general introduction to the subject of unequal health, but what we know is always changing. Despite the natural tendency of health researchers to concentrate on what is worse at any one time, there are always pointers to how things might be improved, and sometimes signs of hope.

Why cooperation helps us all

As the draft of this chapter was being finished a study was released that strengthened the case for greater equality improving performance and well-being. The study suggested that an argument could be made, even among people at the most highly paid end of the income structure, for how greater equality brings greater benefits (Buccioli and Piovesan, 2012). And this information reached me via a bank! The Economic Research Division of the Federal Reserve Bank of St Louis disseminated the paper through their support of the Research Papers in Economics website. The blog TrackBack (2012) has neatly summarised the findings of the paper, which was a study of footballers:

Pay dispersion has an overall negative impact on team performance ... doubling pay dispersion [as measured by the Theil index] decreases by 6% the probability of winning a match. This is a big effect. The authors estimate that if a team changes from everyone being paid the same wage of €600k pa (the average in their sample) to a superstar earning €1.5m pa and everyone else in the team getting €510k, the chances of the team winning a game falls by 20 percentage points. That's almost as big an effect as having to play every game away from home. This adverse effect comes because pay dispersion worsens individuals' performance....

This quote about Italian Series A football league clubs was then followed by page after page of further analysis, not by the authors, but by apparently statistically addicted football fans adding comments online.⁷ Fun though such musings are, and also potentially informative, the problems of most people are not how best to maximise the number of goals 11 very cosseted young men might score depending on how much they are paid. The problems of most people in Britain and similar

⁷ The authors of the paper were two Italians, one a Professor of Econometrics with a degree partly in statistics who works at the University of Verona, the other now an Economics Research Fellow at Harvard Business School in the US.

places are how to live healthily and happily in a society that is becoming more and more financially and socially divided with each year that passes, as our health service is increasingly privatised (see Figure 1.3) and our media are slow to appreciate what we are in great danger of returning to.

Figure 1.3: An example of airbrushing and what non-misleading advertising would look like



Source: <http://socialinvestigations.blogspot.co.uk/2012/03/conservative-lords-and-their-financial.html>

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