



Putting time, person and place together: the temporal, social and spatial accumulation of health inequality

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Introduction

It is now firmly established that there are social and spatial inequalities in health in Britain, and that these have been widening since the late 1970s/early 1980s. Since the publication of the hugely influential Black Report (DHSS, 1980) a growing body of research has documented the growth of health inequalities in Britain and many researchers have debated their cause. Our own research has drawn upon, and added to, this now substantial body of research. From this research we present data on the extent of health inequalities in Britain in both social and spatial terms.

In the first section of the paper we present evidence of the widening health gap over time in two ways. First of all we look at how the geography of health inequalities has changed from the early 1950s to the late 1990s. We then look at inequalities in health at different points across the life course, from the cradle to the grave. In the second section of the paper we turn our attention to the processes that have contributed to the social and spatial accumulation of health inequalities and how these interact with the clustering of socioeconomic advantages that accumulate over the life course. We show the role of migration in producing and exacerbating geographical inequalities in health, and how migration itself can be seen as a response to socioeconomic conditions and circumstances. Finally, we end by considering the implications of our findings for policies that aim to redress health inequalities.

The geography of health in Britain from the 1950s to the late 1990s

Administrative boundaries in Britain have been amended a number of times, so to look at the geographical health gap over time we employ data that use 'frozen' boundaries from the 1950s (see Dorling, 1997 for more details). This allows the same set of areas to be followed over time. The geographical units that we use are

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'old County Boroughs'. There were 292 of these areas in Britain and they consisted largely of London Boroughs, Metropolitan Boroughs, the urban districts of Counties, the rural remainders of Counties, Scottish Burghs, Islands and Scottish Counties. For each time period for which data are available, Britain is divided into 10 equal-sized groups of areas in terms of population (referred to as deciles). The age-sex standardized mortality ratio (SMR) for deaths under 65 is then calculated for each decile. SMRs that are greater than 100 indicate higher chances of mortality, and those less than 100 indicate lower chances of mortality, all relative to the national average, which is set at 100. Table 1 presents these SMRs for the 1950s through to the late 1990s.

The table shows that inequalities in health narrowed between the late 1950s/early 1960s and the early 1970s but that since the early 1980s they have been steadily widening. Before the early 1980s, the highest ratio recorded was around the 1961 Census—towards the end of 13 years of Conservative rule (1951–64). The ratio of inequality fell most rapidly during the latter half of the 1960s, when Wilson's Labour government, which stood explicitly for wealth redistribution, was in power (1964–70). Inequalities did not rise back to their 1961 levels under the Heath (Conservative) or Callaghan (Labour) administrations (1970–76 and 1976–79, respectively). It was only under the leadership of Thatcher (1979–90) that the ratio rose again, this time to over 1.8. By the end of the 1990s under John Major (Conservative 1990–97) this ratio stood at almost 2.0. Thus Tony Blair came to power at a time when the gap between the highest and lowest mortality deciles was such that those living in the highest mortality areas were over two times as likely

TABLE 1. Standardized mortality ratios for deaths under 65 in Britain by deciles of population (grouped by old County Borough and ordered by SMR), Britain 1950–1998

Decile	1950–53	1959–63	1969–73	1981–85	1986–89	1990–92	1993–95	1996–98
1	131	136	131	135	139	142	147	150
2	118	123	116	119	121	121	121	122
3	112	117	112	114	114	111	113	114
4	107	111	108	110	107	105	107	108
5	103	105	103	102	102	99	99	99
6	99	97	97	96	96	94	95	96
7	93	91	92	92	92	91	92	93
8	89	88	89	89	89	87	87	88
9	86	83	87	84	83	80	80	80
10	82	77	83	79	78	76	75	75
Ratio 10:1	1.60	1.75	1.58	1.70	1.78	1.87	1.98	2.01

to die before the age of 65 than those living in the lowest mortality areas. These relative mortality ratios have also risen for the second, third and fourth deciles, which illustrates that the polarization of life chances seen in Britain since the early 1980s has not only affected the most extreme group. This is clear evidence of increasing health inequalities in Britain in geographical terms and also indicates the connection of the polarization of life chances with broader socioeconomic circumstances and policies. In the period 1969–73 the proportion of households below half of the average income was less than 10%; by the 1990s this figure had risen to include a quarter of all households (Shaw *et al.*, 1999).

Inequalities in health across the life course

In order to look more closely at how these geographical differences in premature mortality relate to other factors we have chosen to use an alternative geographical unit to that used in Table 1—that of parliamentary constituencies. These allow us to consider particular areas in a more meaningful way than we can with the old County Boroughs as constituencies tend to be of similar population size, with an average of 75 000 people under the age of 65. As electoral units they are also areas with which people can identify, and which an individual Member of Parliament represents in Westminster. We use the boundaries for the 1997 parliamentary constituencies, of which there were 641.

For the period 1991–95 we compare the constituencies containing one million people with the ‘best’ and ‘worst’ health using SMRs under 65 as an indicator of population health. These data were first presented in Shaw *et al.* (1999). More recent data show that spatial inequalities in premature mortality continued to widen in Britain in the late 1990s (see Davey Smith *et al.*, 2000; Mitchell *et al.*, 2000; Dorling *et al.*, 2001). However, owing to issues of compatibility with other sources of data, many of which rely on the 1991 Census, we refer here to the 1991–95 time period.

Figure 1 maps the constituencies that constitute the ‘best’ and ‘worst’ health areas of Britain. The clustering of the ‘worst health’ areas of Britain in Glasgow, the northern conurbations and in the centre of London is made starkly clear. In these areas mortality ratios are very high, ranging from 2.3 times the average at their worst in Glasgow, to 1.6 times the average in Southwark and Bermondsey. The fact that Sheffield Hallam constituency has low mortality and Southwark and Bermondsey high mortality illustrates that this is not simply a north–south divide but rather a rich–poor divide. Having considered premature mortality we look in more detail at these ‘best’ and ‘worst’ health places in terms of a number of health and socio-economic indicators at different stages of the life course.

Infant and child mortality

We start our journey through the life course by considering infant mortality in the ‘best’ and ‘worst’ health areas. For infant mortality—deaths under 1 year of age—

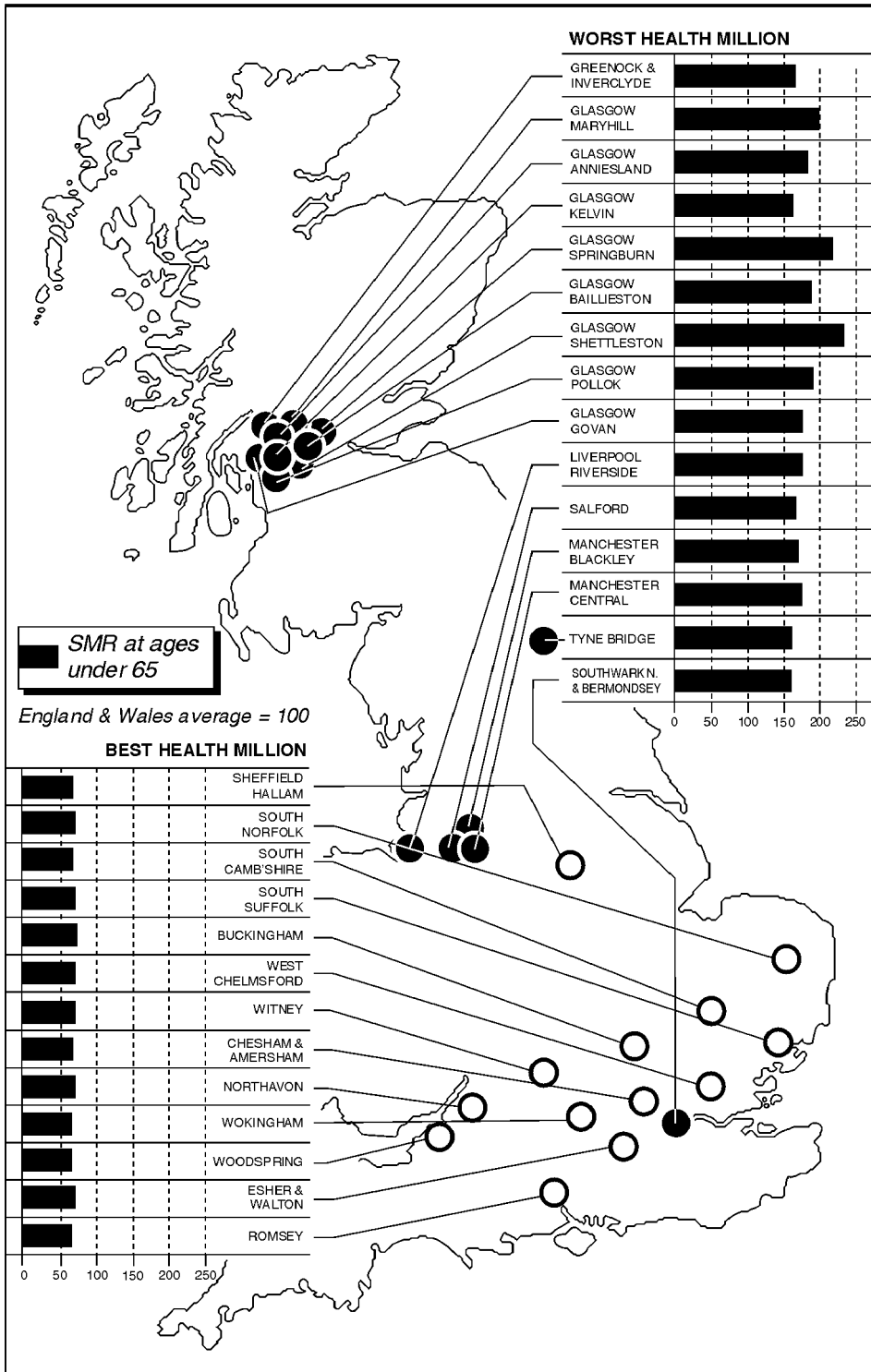


FIGURE 1. Premature deaths in the extreme areas of Britain, 1991-95.

there are clear differences in life chances. Comparing the extreme areas, in the ‘worst health’ areas infant mortality rates are 2.0 times higher than in the ‘best health’ areas. Comparing individual constituencies this ratio is as high as 4. We can also see this pattern for mortality later in childhood. For mortality among children aged between 5 and 14, death rates are 1.8 times higher in the ‘worst health’ compared with the ‘best health’ areas. Even in the very early years of life, health inequalities are clearly apparent. If we look at these areas in terms of a range of socioeconomic indicators the reasons for these health differences begin to emerge.

Households with children living in poverty

Using the Breadline Britain indicator of poverty, we can consider these ‘best’ and ‘worst’ health areas in terms of this key socioeconomic measure. The Breadline Britain surveys include nationally representative samples and are a measure of ‘consensual’ or ‘perceived’ poverty—what people themselves understand and experience as the minimum acceptable standard of living in contemporary Britain (see Gordon & Loughran, 1997; Gordon *et al.*, 2000). This minimum covers not only the basic essentials for survival, such as food and shelter, but also factors that enable people to participate in their social roles in society. The survey thus measures what possessions and activities the public perceives as necessities of life. The 1990 Breadline Britain survey found that there were approximately 2.5 million children who were forced to go without at least one of the things they need (such as three meals a day, toys or out-of-school activities), because their parents could not afford these things. The Breadline Britain measure is a validated indicator of deprivation (Gordon, 1995). Here we use a modified version of the index, based on lack of basic amenities and car access, unskilled and semi-skilled manual occupations, unemployment, non-owner-occupier households and lone-parent households.

Using this measure, in 1991, 27% of households with children were living in poverty in Britain as a whole. If we look at the ‘best health’ areas the rate is 13%, for the ‘worst health’ areas it is 53%—more than a fourfold difference. There are far more children growing up in poverty in the areas where infant and child mortality are also relatively high. The connection between poverty and health observed by the likes of Farr, Chadwick and Engels in the nineteenth century was still apparent at the end of the twentieth century (see Davey Smith *et al.*, 2001).

While there is a clear geographical concentration of households with children living in poverty in certain areas, we should also note that even in the healthiest and most affluent areas of Britain there are still more than one in 10 children living in households in poverty. These children—poor children living in areas that are classified as wealthy—will not benefit from area-based policies that seek to assist only those living in the most deprived areas. Universal policies, however, such as Child Benefit, will reach children wherever they live in Britain.

Education and qualifications

A crucial stage in the life course, not least because of the opportunities it affords in later life, is educational achievement. We considered the ‘best’ and ‘worst’ health areas in terms of their rates of ‘underachievement’ in educational outcomes at the age of 16. In this last year of compulsory education students take exams in a range of subjects in order to qualify for General Certificates in Secondary Education (GCSEs). Five GCSEs at grades A–C are considered the basic requirement for entering many jobs, and so not achieving this is termed here as ‘underachievement’. In the ‘best health’ areas GCSE underachievement rates are 44%, compared with 66% in the ‘worst health’ areas (they are 57% nationally). This gap in educational achievement is not as stark as the health or poverty gaps. This is partly because not all children are included in these statistics—we are not able to analyse the exam results of private fee-paying schools and more children from the ‘best health’ areas will be attending such schools. But the fact that this gap is less extreme than the health gap can perhaps be interpreted as evidence of the (albeit limited) levelling effect of the provision of universal services. If we consider post-school qualifications we again see differences between the ‘best’ and ‘worst’ health areas: 101 people per thousand have degrees in the ‘best health’ areas compared with 49 people per thousand in the ‘worst health’ areas. This is partially a reflection of the differential achievements at secondary level, but is also related to the ability of individuals and families to pay for higher education.

Work and unemployment

Moving to later in the life course, the next step from education for many is into the world of work. The ‘best’ and ‘worst’ health areas can be compared using the traditional socioeconomic indicator based on occupational class: the Registrar General’s classification scheme. We use this to compare the occupational composition of areas. In this comparison we see some clear differences between the ‘best’ and ‘worst’ health areas, such that in the ‘best health’ areas 43% of people in employment over the age of 16 are in social classes I and II whereas in the ‘worst health’ areas only 27% of working people are employed in occupations in these classes. This same figure for Britain is 33%. Looking at social classes IV and V, 26% of people in employment are in these classes in the ‘worst health’ areas compared with 15% in the ‘best health’ areas and 21% nationally.

This analysis, however, is based on occupational data collected in the Census, and in this data set the majority of people do not have a social class assigned to them. If we consider the social class structure of British society more completely—in reality nobody lives outside the class system—then we see even more marked differences between these high and low mortality areas. People not in work are crucial to shaping the socioeconomic map of Britain. For example, if we consider the number of people not working, which includes those who have not worked in the past 10 years, other unemployed people, students and the permanently sick,

then a clear difference between the comparison areas is visible. In the 'worst health' areas this group amounts to a total of over 220 000 people or 61% of all people working, whereas in the 'best health' areas this figure is less than 93 000 or 17% of all people working (it is 27% for Britain). When there are fewer people working, or able to work, either because of illness or because of the lack of availability of work, this will have an effect on the living standards of families, and this in turn will have a knock-on effect on the living standards and life chances of children. Between 1981 and 1996 the number of jobs in Britain increased by over one million, yet despite this overall growth in employment the large cities of Britain lost over half a million jobs. The jobs gap between the large cities and towns and rural areas is continuing to grow (Turok, 1999). Over this time period households also became increasingly 'work rich', where more than one person is in paid employment, or 'work poor', where there is no household member in paid employment (Shaw *et al.*, 1999).

Inequalities in wealth—houses and cars

Much attention in social science is paid to considering poverty and deprivation: how to define and measure these phenomena and tracing their consequences. We pay less attention, perhaps because of the difficulties related to reliable data collection, to looking at the other end of the socioeconomic spectrum: wealth. There has been much less effort made by both government and academics in measuring wealth in Britain compared with measuring poverty (Gordon, 2000). The current official wealth statistics are based on a methodology that is essentially unchanged since the Edwardian era (Chiozza-Money, 1905; Wedgwood, 1929; Good, 1990). In taking a life-course perspective it is important to consider wealth, as it is something that is accumulated over time and, indeed, over generations. In the Census there are two indicators that can be taken as indicators of wealth (in the absence of more direct measures) and these relate to housing and cars. The number of cars per household indicates the differences in material resources of these areas. In the 'best health' areas the total number of cars is almost three times higher than in the 'worst health' areas, and there are 9.1 times as many households with three or more cars. These statistics refer to the number of cars, not to their age or value, and it is likely that the cars in the 'best health' areas are newer and more expensive. Thus the true extent of the difference between the areas is almost certainly understated.

The situation is similar for housing—the Census tells us about the number of rooms, but not their value or size, or whether they are damp or adequately heated. From these limited data, though, stark differences between areas are apparent. In the 'best health' areas there are 6.5 times as many households with seven or more rooms, and 1.3 times as many rooms in total as in the 'worst health' areas.

Later life—limiting long-term illness

As people get older it is more likely that they will suffer from wear and tear, and that illness will play an increasingly prominent part in their lives. The most direct precursor of premature mortality is illness—and mapping the standardized rates of limiting long-term illness (LLTI) from the 1991 Census allows us to see that these two measures have a very similar geography. For Britain as a whole, the rate of LLTI for the under-65s is 7.4%, but in our ‘worst health’ areas it is 12.3%, whereas in the ‘best health’ areas it is only 4.5%.

Illness is also important, as it is not only an indicator of what life has thrown at someone but can also be a factor in determining where people are located socially and spatially. People who are ill will have more problems gaining work, and therefore they will find it more difficult to obtain mortgages. This means in turn that it will be more difficult to acquire a home in a desirable area near good schools. Conversely, people with long-term health problems are more likely to qualify for social housing. The spatial process of migration acts as a filter by which healthier people come to be living in the most affluent areas, and less healthy people are more likely to be living in the worst-off areas.

Widows in retirement

Lastly, we consider a form of inequality for those aged over 65 and in their retirement years, as the health gap for those dying before the age of 65 also affects people above that age. In the ‘worst health’ areas women aged 75–84 are 60% less likely to be married, simply because there will be more widows because the men in those areas die earlier. Table 2 indicates the sex ratios for older age groups for the ‘best’ and ‘worst’ health areas in the period 1991–95. In the ‘best health’ areas there were 84 men for every 100 women in the 65–74 age group and 62 men for every 100 women in the 75–84 age group. This compares with ratios of 77 men and 50 men per 100 women for the same respective age groups in the ‘worst health’ areas. Another way to look at this is to consider that only half of those in the ‘worst health’ areas will live long enough to qualify for their free television licences (which are given to those aged over 75 years), compared with over two-thirds of those in the ‘best health’ areas.

Health and the life course

We have taken a life-course approach to the presentation of our data, considering health inequalities from the cradle to the grave, to emphasize that the accumulation of advantage or disadvantage is crucial to our chances in life and our chances of death. Other recent research that has taken a life-course perspective shows that the social and biological beginnings of life are important for a child’s potential for adult health, and that health outcomes in later life are the product of the accumulation of

TABLE 2. Sex ratios: the number of men for every 100 women in the 'best' and 'worst' health areas of Britain

Name	Aged 65–74	Aged 75–84
Glasgow Shettleston	75	49
Glasgow Springburn	76	49
Glasgow Maryhill	73	49
Glasgow Pollok	69	47
Glasgow Anniesland	71	51
Glasgow Baillieston	82	58
Manchester Central	88	54
Glasgow Govan	71	41
Liverpool Riverside	81	50
Manchester Blackley	82	53
Greenock and Inverclyde	77	51
Salford	80	49
Tyne Bridge	82	49
Glasgow Kelvin	69	47
Southwark North and Bermondsey	83	57
<i>'Worse health' million</i>	77	50
Buckingham	84	65
Northavon	86	65
Esher and Walton	81	59
Witney	83	63
South Suffolk	84	66
West Chelmsford	83	57
South Norfolk	90	71
Chesham and Amersham	87	57
South Cambridgeshire	83	63
Sheffield Hallam	83	55
Romsey	83	63
Woodspring	83	60
Wokingham	84	57
<i>'Best health' million</i>	84	62
Britain	82	58

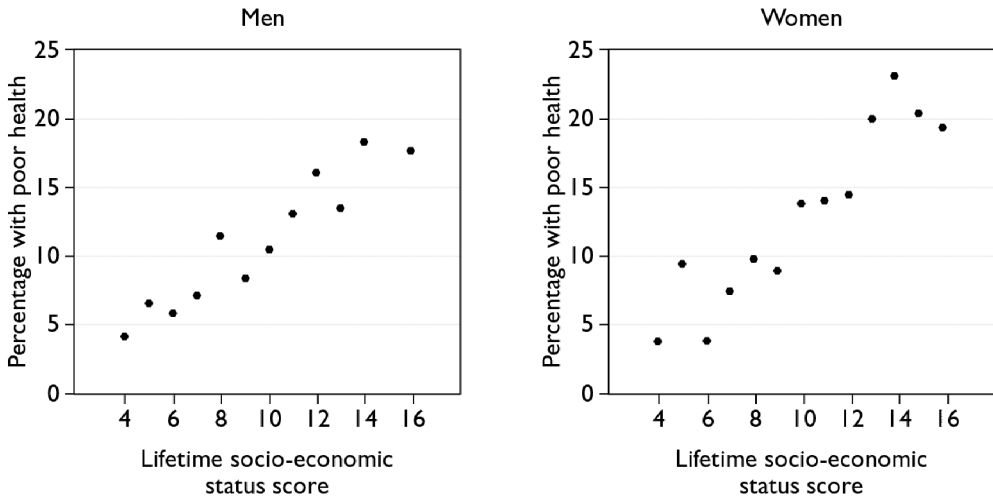


FIGURE 2. Poor health at age 33 and cumulative socioeconomic circumstances (birth to age 33), Britain (1958–91).

Note: 'Poor health' includes subjects who rated their health as 'fair'.

Source: Power *et al.* (1999)

advantage or disadvantage (see, for example, Kuh & Ben-Shlomo, 1997; Holland *et al.*, 2000). Data from the 1958 British birth cohort, which allows researchers to assess the impact of socioeconomic circumstances through early life (at birth and ages 16, 23 and 33), show how they affect self-rated health outcomes at age 33 (see Figure 2). In that research a lifetime socioeconomic position score was derived from the social class of the respondent's father at birth and at age 16, and from his/her own social class at ages 23 and 33. For both men and women, there is a very strong relationship between cumulative socioeconomic position and poor health at age 33 (Power *et al.*, 1999). Analyses of these data show that social class in early life and in adulthood both make independent contributions to inequalities in poor health in later life. Similar findings with regard to risk of dying have also been reported (Davey Smith *et al.*, 1997), as have results showing that housing deprivation during childhood can have long-term health consequences in adult life (Marsh *et al.*, 2000).

As well as health outcomes in later life being the result of processes that occur and accumulate throughout the life course, life chances in a broader sense are also amassed over time. The area where the parents (or parent) of a new baby lives will depend on family and work ties, but also on the type of housing they are able to afford—social housing in a tower block, an inner-city terrace or detached house with a garden in a leafy suburb. That in turn will affect their immediate living environment and social networks. These things will in turn affect the educational opportunities available to the child, and educational outcomes and area of residence both strongly affect job opportunities. While individuals make choices, of course, such as which house to buy, which subjects to study and which jobs to apply for, those choices are constrained by a number of factors, and—crucially—some people's

choices are constrained far more than others. Those facing the broadest range of choices (the more money you have or are able to borrow the greater your choice in the housing market) tend to be those who have already enjoyed choices and opportunities earlier in life (which university to attend, which career to follow). Advantages also accumulate inter-generationally. Those who inherit money from parents or grandparents are more likely to be able to use that to pay for housing or perhaps to improve the condition of their home. All of these processes take place within the broader socioeconomic environment, affected by prevailing factors such as house prices (and their relation to wages), unemployment rates (affecting job opportunities), educational policies (for example, relating to grants, loans and fees) and taxation policies (regarding income, wealth and inheritance).

Processes of social and spatial accumulation

Having considered how socioeconomic factors accumulate through life and how the advantages or disadvantages these bring are in turn fundamental to health chances we now direct our attention to the spatial aspects of these patterns and processes. Life is marked by inequalities but people do not simply passively accept these. When faced with a situation that they would like to change or improve, people often do what they can to act. People often attempt to change the world in which they live, either in terms of their own immediate living environment or in a broader political sense. Occasionally people rebel—they may vote for a radical government or even force a revolution. More often, however, the aggregate actions of individuals and families serve to reinforce the status quo. People make individual decisions about their own lives and act to change their living environment but on aggregate these actions form a social and spatial pattern. This can be demonstrated geographically by looking at how the population who have the opportunity to move around the country have actually chosen to move around, in relation to the consequences of living in unfavourable areas.

Figure 3 shows the relationship between population change in Britain over the period 1971–91 and premature mortality (before the age of 65) in the 5 years following this period. The geographical units used here are parliamentary constituencies and the figure indicates for each constituency the change in its size of population between 1971 and 1991, and the difference between the SMR under 65 for men and women between 1981–85 and 1991–95. This allows us to look at the association between changing relative life chances and changing population size. Population change at that time in Britain between the parliamentary constituencies used here is mostly caused by migration (rather than by an excess of births or deaths). When more people leave an area than enter it, the total population falls. When people have the chance, they choose to leave areas that are poorer and where mortality is relatively high to begin with (Davey Smith *et al.*, 1998). Similarly, people choose to move into more affluent areas where mortality is low. These processes sustain the classic slow but relentless north-to-south shift in the population seen in Britain. Those who are able to will move out of a very poor area to a less poor area;

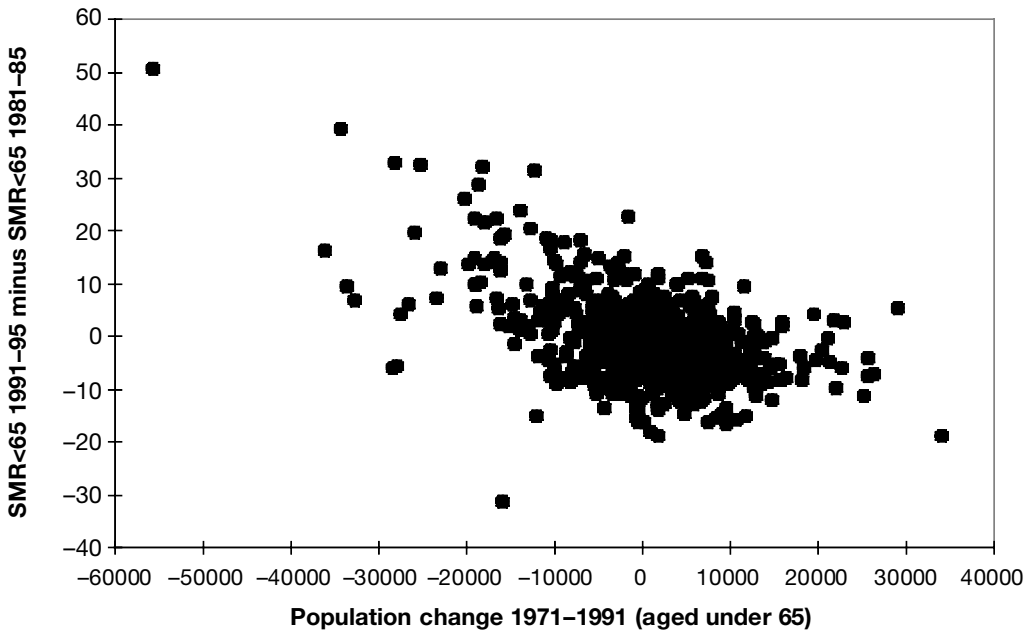


FIGURE 3. Population change (aged under 65) between 1971 and 1991 and absolute change in SMR for deaths under 65 (1991–95 minus 1981–85) for British constituencies.

Source: Davey Smith *et al.* (1998)

wealthy people who have accumulated more wealth or increased their incomes will very likely move to a more expensive home in a more affluent area. These movements reflect the aggregate life choices of millions of people. The result is that the worse-off areas, which also have the highest premature mortality rates, lose a greater proportion of their population. Conversely, affluent areas with low mortality grow in size.

Recent research into lifetime migration and mortality using the British Household Panel Study (Brimblecombe *et al.*, 1999, 2000) has found that not only do people choose to move in these directions but the people who have moved tend to exacerbate the inequalities in health found between areas through their migration. People moving to better-off areas tended to be better off themselves compared with those they left behind in terms of health, wealth and other life outcomes. Thus those people who move out of poorer areas are not only better off financially, they are also likely to be those with better health. This contributes to both the higher mortality rates seen in shrinking areas and the lower mortality rates seen in expanding areas. On the other hand, the BHPS analysis indicated that those people moving from better-off areas to worse-off areas tended to be those who fared very badly in life, to the detriment of the overall measure of health of the areas into which they moved.

It is perhaps easier to understand how this process operates if an even longer historical perspective is taken than the lifetime migration patterns referred to above. Figure 4 shows three maps of the centre of London, using electoral wards as the geographical unit. The first (i) maps how rich or poor areas were around 1896 when

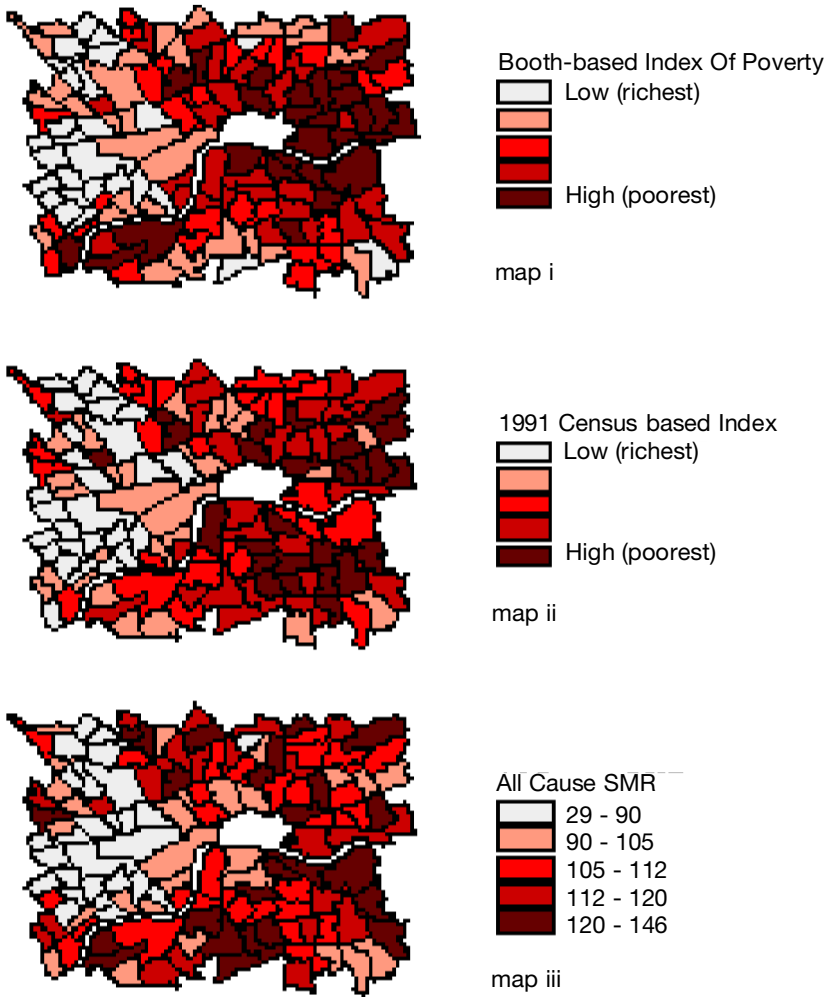


FIGURE 4. London poverty (1896 and 1991) and mortality (1990s).

Charles Booth surveyed the capital in detail—the darker areas are those with the higher rates of poverty. The second (ii) map uses the same socioeconomic indicator and shows its distribution in 1991 (see Dorling *et al.*, 2000 for more details). Note how similar these two distributions of poverty are, with the east and south doing badly at both times, even though the measures were made a century apart. The third map (iii) in the series gives standardized mortality ratios (for all causes of death, all ages, men and women) for these areas in the 1991–95 period. Remarkably, the mortality ratios in the 1990s are equally as correlated with the 1896 survey data as they are with the 1991 Census data. This is partly because the two maps of socioeconomic indicators are so similar, but also because of where they are different—knowing that an area used to be poor is very valuable when trying to predict its currently mortality rates.



FIGURE 5. Big wheel at Earl's Court (1896) and the London Eye (2000).

For our argument here, the most important point we have to make is that the first two maps of London can only be this similar as a result of millions of migratory moves occurring in aggregate terms. Poorer people who lived in poorer housing in poorer areas had to be replaced by people like them when they moved or died; similarly, with more affluent people—only affluent people can buy expensive houses, which tend to be sold by other affluent people. Furthermore, poor housing had to be replaced with relatively poor housing for areas to keep their ranking in the social structure. Obviously this did not happen everywhere at all times. Examples of gentrification and residualization can be found. But these were not the norm. The norm is for people's migratory moves and the replacement of housing to help reinforce, and often strengthen, inequalities in poverty in Britain, and these in turn reproduce inequalities in health.

Attempts are made to change the social geography of Britain. One recent and certainly notorious example is the 'Millennium Dome', which has been built at Greenwich. Often these attempts do not work as they swim against the tide that helps to maintain the social system in which we live. Projects that tend to replicate what has gone before are often far more 'successful', although (and perhaps because) they change little. At a far lower cost than the Dome, and to much critical acclaim, a 'Millennium Wheel' was built on the south bank of the Thames at the same time as the Dome. It was, however, only 100 feet higher than its predecessor built at Earl's Court just over a century before (see Figure 5).

Conclusion: what goes around comes around

Socioeconomic polarization in Britain over the past two decades has led to growing inequalities in health in social terms, interconnected with a spatial polarization whereby poor people, and poor areas, become poorer, whereas those with more advantages are able to accumulate even greater advantages. In this way socioeconomic inequalities have reproduced themselves, and reinforced inequalities in health. But does this continuity of inequality over the last century mean that we cannot change things? As Table 1 shows, the extent of the gap *can* be altered—widening inequalities in health are not inevitable and the gap can be narrowed, as was the case between the early 1960s and early 1970s.

Although this has been primarily a geographical analysis, the use of geographical policies to tackle inequalities in health should be treated with caution. Area-based policies will serve to change the relative ranking of only a handful of places. Universal policies, on the other hand, have the potential to reach the disadvantaged wherever they are located. However, given the way in which current inequalities are entrenched in social trends and processes, it is likely that the scope and magnitude of policies aimed at producing changes in these patterns will have to be far greater than is currently the case.

Note

This is an extensively modified version of a paper which was published in the proceedings of a one-day conference on *Inequalities in Health—The Current Debate* (18 July 2000) organized by the Academy of Learned Societies for the Social Sciences (Shaw, M., Dorling, D., Gordon, D. & Davey Smith, G. [2001] The widening gap: the social and spatial accumulation of health inequalities. In: Forbes, I. *Health Inequalities: Poverty and Policy* [London, Academy of Learned Societies for the Social Sciences]).

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