

## Chapter Six:

### Spatial Divisions of Poverty and Wealth Danny Dorling and Dimitris Ballas

#### Overview

- Poverty/social exclusion cannot be understood out of the context of inequality and hence without an understanding of both the concept and distribution of wealth.
- Both a historical and geographical perspective is required to appreciate how we got to where we are now – how we achieved the spatial divisions we have - and then to appreciate the current meaning of the extent of inequalities, the depths of poverty and concentrations of wealth among people.
- This chapter concentrates on just one aspect of these requirements: an appreciation of the spatial divisions that are created through inequalities in the geographical distributions of both poverty and wealth.
- Three spatial scales are used to illustrate spatial divisions of poverty and wealth.
  - Firstly, we consider the very local scale – and what divisions are experienced on journeys into and out of a modern day rich world city, taking the archetypal example of Manchester (England) and showing how a journey into that city has changed since the early 1990s.
  - Secondly, we turn to the nation state and draw extensively on a report recently produced with the help of many colleagues on the changing geographies of poverty and place across all of Britain between 1968 and 2005.
  - Thirdly, we end with a consideration of changing world level inequalities in income and wealth and what they might imply for the future of a longer time period.

**Key concepts:** social and spatial inequalities; core poor; breadline poor; non-poor, non-wealthy; asset wealthy; exclusive wealthy; poverty / social exclusion (PSE)

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( <http://www.sasi.group.shef.ac.uk/research/transformation.htm>).

The world inequalities second draws on work with colleagues in the United States (Mark Newman) and Anna Barford at Sheffield as well as some already mentioned. This work can be found at [www.worldmapper.org](http://www.worldmapper.org). The authors would also like to thank Graham Allsop and Paul Coles for their help with the illustrations. Danny Dorling and Dimitris Ballas were funded by the British Academy (British Academy Research Leave Fellowship) and the Economic and Social Research Council (research fellowship grant number RES-163-27-1013) respectively, while writing this chapter.

## Introduction

In this chapter we describe how both locally, nationally in Britain and worldwide the bulk of the population are destined to live in “under-performing” regions, more are poor, and the rich are becoming ever more separate from the rest: the society is turning “pear-shaped”. Poverty and wealth are not two sides of the same coin. Many people are neither poor nor wealthy. There are thus more sides than two in how we are divided by our access to resources (income) and the uses we put those resources to (expenditure). The very poorest are poor no matter how counted, have low income, wealth, inadequate possessions and know they are poor and are unambiguously known as poor by others. With colleagues we have termed this group ‘Core Poor’ in Britain (see further reading).

In the United States the concept of core poor equates best to the eighth of the population living below their miserly poverty line (see box 6.1). Worldwide the concept equates best to the measure of those living on a couple of dollars a day. The Core Poor in Britain, those beneath the line in the United States, and those on less than \$2 a day in the poor world only just survive. Thus even attempts at absolute measures of poverty have to be relative to be meaningful across all of the world (even at the same point in time – here and now). Quantifying the very richest is more difficult. To a man (it is usually still a man) with access to \$1billion, a man with only \$1million appears a pauper. In between the extremes of core-poverty and unimaginable riches runs the gamut of inequity along which most of us are strung.

Being poor or wealthy are, however, qualitatively different experiences from being a little bit better or worse off along a continuum. Both involve social exclusion from the norms of society. Furthermore, neither could exist without the other, but they are better described as very different sized (and multi-faceted) facets on a many sided die rather than opposite side of the coin. Finally, in introduction, we hope to show in this chapter how it is useful to look at the geography to how people find themselves living at, and between, these extremes to get a clearer idea of how we are so divided. To do this in this chapter we start with a city, move then out to the country and end with the world.

## Manchester: so much to answer for

We start the analysis at the city level, focusing on Manchester, which is one of the largest and most well known cities in Northern England. Manchester was the first city in the world to be industrialized. It was the first city in which mass human labour was put to work in a way that so thoroughly de-humanised people. “Manchester so much to answer for” were originally the lyrics to a popular song that very few of its younger listeners realise concerned the killers of children known as the “Moors Murderers” (Suffer Little Children, The Smiths, 1984<sup>1</sup>). But, as the song implies, Manchester – or rather the way of treating human beings first seen in Manchester - has much more to answer for than that.

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<sup>1</sup> See <http://www.compsoc.man.ac.uk/~moz/lyrics/thesmith/sufferli.htm>

### Box 6.1: The Poverty Line and the wrong side of the tracks

There is on-going debate on where the poverty line should be set (see Rio Expert Group on Poverty Statistics, 2006). Countries such as the United States adopt an “absolute poverty” approach to setting the poverty line, which is much lower than the line set in the European Union which adopts a “relative poverty” approach to setting the line (e.g. all households below 60% of the national median household income are defined as poor; also see Gordon *et al.*, 2000). This approach is not directly based on the degree to which households are able to satisfy their physiological or other basic needs and recognises that the concept of poverty constantly evolves and that the subsistence approach to the definition of poverty is inadequate. As Gordon and Pantazis (1997) point out:

*The subsistence approach to the definition of poverty is an ‘absolute’ concept of poverty; it is dominated by the individual’s requirements for physiological efficiency. However, this is a very limited conception of human needs, especially when considering the roles men and women play in society. People are not just physical beings, they are social beings. They have obligations as workers, parents, neighbours, friends and citizens that they are expected to meet and which they themselves want to meet.*

(Gordon and Pantazis, 1997: 9)

It should be noted that the poverty line also has a spatial dimension, which is best described by the phrase “wrong side of the tracks”.



Source: <http://www.takeourword.com/TOW134/page2.html>

Some speculate that the etymology of this expression dates back to the time when railroads were first built and became a defining characteristic in towns and cities, sometimes dividing them between wealthy and poor areas (Words to the Wise on-line, 2001). According to this theory, the “wrong side of the tracks” referred to the side of the tracks that due to the wind would receive most of the locomotive’s black, sooty smoke. In addition, it has been suggested that at the time when railroad tracks were built and run through American towns, soot, smoke and prevailing winds resulted in poor or industrial areas being located on the downwind side of the tracks which may have also given rise to this phrase. Whatever the precise notion behind the wrong side of the tracks, it arose in the U.S., probably in the 19th century, though the OED’s first record of it is from 1929 (Words to the Wise on-line, 2001). Similar expressions used today include the “wrong side of town” or “the wrong side of the street” and they signify the importance of geography: where you live and where you grew up affects your life chances (also see Dorling, 2001). In today’s terms people living on the wrong side of the track typically receive disproportionately less income and have less wealth and fewer opportunities than those on the right side, when compared with those on the “right” side or right sides.

The University of Manchester has the date of its founding now inscribed in the logo of the new unified mega-university: "Manchester 1824". This is a date of university founding which is roughly a well-lived lifetime older (75 years) than that of the other provincial English cities. It is not by chance that the city boasts of being something special. Take a trip to the Manchester Museum of Science and Industry<sup>2</sup> and you are walking within a giant Warehouse established just a decade after the University. A couple of decades later and Friedrich Engel's Conditions of the working class is published (Engels, 1845). Later in the 1850s, the expectation of life's length from birth. In Manchester was just 32 years, it fell to 31 years in the 1860s (Szreter and Mooney, 1998, p., 88). In the central district of that city it was as low as 29 by then, exceeded - as worse - only by an all time life-expectancy low of 25 years in those same years in nearby Liverpool (*ibid*, page 90). Human life has rarely been valued lower outside of times of war, genocide or in the worse of famines.

The urban experience of systemic poverty that can be wrought through capitalism began in Manchester. By the turn of twentieth century standards of living were not much better there than during the middle of the nineteenth. In fact the long hot summer of 1904 saw infants die in Manchester as near to the rates (1 in 4 before their first birthday) that they now still die in the poorest places on earth a century later (see world map of infant mortality, Worldmapper, 2007, map 261<sup>3</sup>). And it was in Manchester that it was first realised that those deaths were not an act of god, but due to the squalor that accompanies poverty – squalor that was quantified then in the numbers of flies found living around new-born infants:

*"By means of a number of beer-traps Dr Niven contrived to count the flies in some dozen houses in Manchester during the summer months of 1904, and from these data he concluded that the advent of the house-fly in numbers precedes by a short time the increase in the number of deaths from diarrhoea. In the fortnight ending August 13th, for instance, the number of flies caught in these traps was 37,521, the maximum in any fortnight, and in the fortnight following the maximum number of deaths from diarrhoea occurred – namely, 192. (Newman, 1906, pp.168-169)"*

In the century that followed the long hot summer of 1904, life in the city of Manchester changed for most, almost beyond recognition. However, Manchester the city is still the district of England with the lowest male life expectancy from birth<sup>4</sup>, and this is despite its centre now being one of the most dynamic business districts in the country. The city also now contains some extremely affluent enclaves. In Box 6.2 a journey you can take through Manchester and out into leafy Macclesfield district is described and in Figure 6.1 that same journey is shown on a map in which areas are shaded according to the average incomes of those who live there. How those areas were derived is also detailed in Box 6.2. Average incomes in the centre of the city are less than half the average in the rural hinterland of Manchester. Many of those (who can) tended to get out but still usually drive in for work. These are just the inequalities between averages, not extremes, and between a measure already greatly redistributed before it is counted (it is not earned income that is being shown). Nevertheless, this journey and the accompanying map reveal a great deal when you know more about this city (and most others of its kind).

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<sup>2</sup> See <http://www.msim.org.uk/Galleries.asp?menuid=885>

<sup>3</sup> [http://www.sasi.group.shef.ac.uk/worldmapper/textindex/text\\_death.html](http://www.sasi.group.shef.ac.uk/worldmapper/textindex/text_death.html)

<sup>4</sup> According to the most recent data available (ONS, 2007), men in Manchester can expect to live to 73 years old. This is the lowest local authority level male life expectancy in England and it is 10 years less than the respective number for Kensington and Chelsea, which has the highest male life expectancy in Britain. The life expectancy of women in Manchester is 78.6, which is about 9 years less than the age that women born in Kensington and Chelsea can expect to live to. This the fourth lowest female life expectancy in England, surpassed by Halton, Hartlepool and Liverpool where a woman can, on average, expect to live to 78.3 years, ten years less than the female life expectancy of Kensington and Chelsea (ONS, 2007).

**Box 6.2: a journey you can take through Manchester and out into leafy Macclesfield**

Next time you are driving round the north edge of Manchester why not turn in?

Start on the A664 at the M60 J20, north Manchester. Proceed south through Blackley. Turn Left onto the A6010. Turn Right onto the A636 into central Manchester. Join the A57 Mancunian Way. Leave on the A5103, pass the Universities and Moss Side. Turn left onto the A6010 through Fallowfield. Turn right onto the A34, pass through Didsbury. Join the M60 Westbound for one junction. Leave at J5, turning left onto the A510. Join the M56 at J3, and proceed south west. At J8, leave the M56 and turn left onto the A556, pass through Bucklow Hill. Pass straight over the M6, and turn left onto the A5033 into Knutsford. Leave Knutsford on the A537, and follow all the way to Macclesfield town centre. Leave Macclesfield on the A536 southbound, and proceed to Congleton, where the journey ends

See Figure 6.1 for where you've driven and the average income of who you drove past.

To draw figure 6.1 it was necessary to divide Manchester and its neighbouring district of Macclesfield up into a series of areas for which averages could be calculated this was done by first identifying two types of parliamentary constituencies: urban and rural. Urban constituencies have a high proportion of areas defined as urban (above 65%, usually more than 90% of the population), whereas rural constituencies have more rural areas, at least 35% of the population, usually 45-55%. Where rural constituencies were split by a local authority boundary we treated that boundary as a natural break. The rules we followed for allocating electoral wards to the pair of tracts formed from a constituency differed depending on how we classified the constituency. By far the majority were classified as urban constituencies, so they are described first, by a series of rules.

In many constituencies the rules are incompatible, i.e. they cannot all be satisfied, but they are listed in the order in which we attempted to apply them. For urban constituencies we grouped wards into larger neighbourhoods on the basis of various criteria which included the minimisation of the variance in estimated average income. For rural constituencies we used the population living in urban settlements within those constituencies to define their neighbourhoods. For each of the five years, every separate urban area (as defined by DoE in 1991) had at least one ward allocated to it (automatically using a GIS and then edited laboriously by hand). These wards would either be completely or partially located in an urban area. Wards that did not overlap with urban areas were designated as rural. This allowed an approximate calculation of the percentage of people living in rural or urban areas within constituencies. Most of the constituencies classified as rural constituencies contain around 50% of people living in each type of area, which makes them suitable for this method.

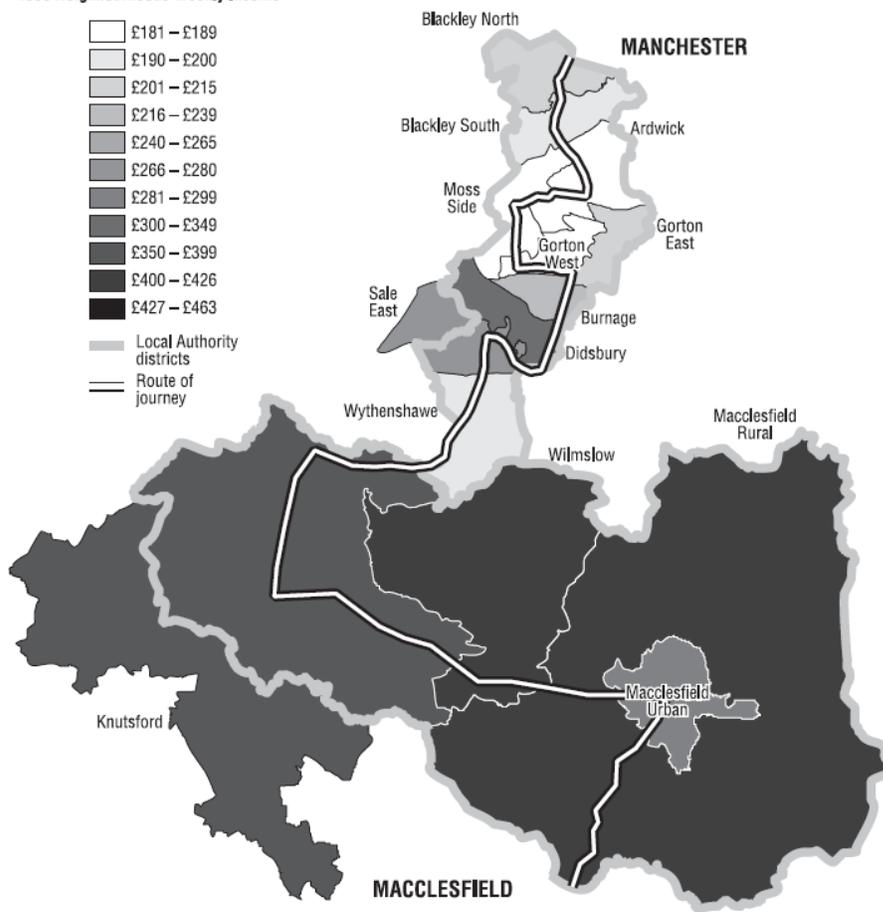
More information on the rules that were used to create the "neighbourhoods" and on the methodology may be found at:

[http://www.sasi.group.shef.ac.uk/tracts/Constructing\\_tracts.pdf](http://www.sasi.group.shef.ac.uk/tracts/Constructing_tracts.pdf)

The difference between incomes are much muted when averaged over many people and when calculated after redistribution in the form of taxes and benefits has occurred (but before housing costs are taken into account). Had we instead shown inequalities in wealth along this journey then the differences would be manifold higher. Had we taken a related measure, but of something very rare – the murder rate – the differences would not be possible to calculate as in places within the city the rate is amongst the highest in England whereas it is practically zero in parts of the outskirts. It is not just in the United States that such extremes occur. Almost all else in life changes along with the trend in inequalities in incomes as you take this journey through Manchester. First though, how do we know what the average incomes of folk along this route are?

The average incomes shown in Figure 6.1 are estimates which were produced by the Office for National Statistics<sup>5</sup>. They almost certainly underestimate the extent of income inequalities along the route, as they are the products of a statistical model based on relatively limited information. For instance, one of the variables upon these income estimates are based is the proportion of households in each geographical area who are classified as “Professionals and intermediate”, masking the considerable income variation within this group.

**FIGURE 6.1**  
1998 Neighbourhoods Weekly Income



<sup>5</sup> For more details on the source of this data see:  
[http://neighbourhood.statistics.gov.uk/HTMLDocs/downloads/Model-Based\\_Income\\_Estimates\(V2\).pdf](http://neighbourhood.statistics.gov.uk/HTMLDocs/downloads/Model-Based_Income_Estimates(V2).pdf)

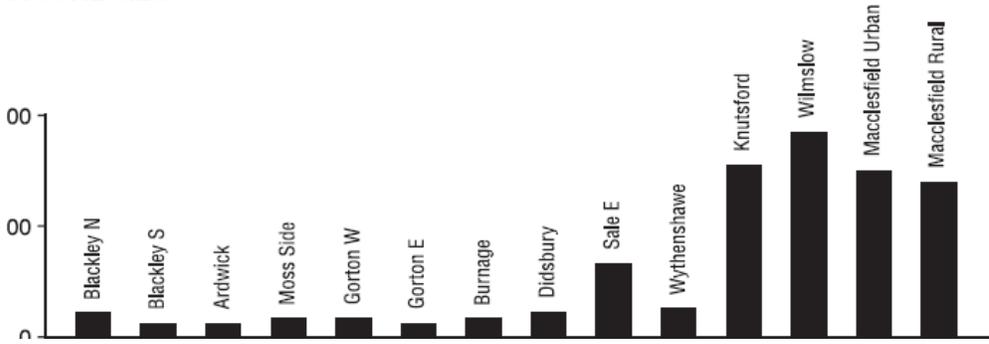
From the above discussion it becomes obvious that in order to properly analyse socio-economic inequalities and their spatial manifestations it is necessary to have good quality small area data on income and wealth. Nevertheless and despite the very strong arguments to measure small area incomes, the UK government decided not to include such a question in the 2001 Census questionnaire, on the grounds that it could negatively affect the Census response rates, as a lot of the respondents would object to being asked this question or find it hard to complete. However, it should be noted that almost all government social surveys in Britain ask this question and it is also asked in other national censuses successfully worldwide. Another argument against the inclusion of an income question in the Census is that it would breach confidentiality rules making it possible to identify individual respondents. Yet, it should be noted that individual's answers to census questions, unlike other government surveys, are confidential and cannot be released from ONS for 100 years under the census legislation (Rees *et al.*, 2002). It can be argued that there are no good statistical or social scientific reasons for not measuring income via the Census and that there are possibly other, perhaps political, reasons for keeping people in Britain in the dark over where the rich and poor live: it seems that the government does not want to know too much about the rich and what an income question tells us most about is the rich, as government ministers seem to be more interested in "inclusion" rather than "inequality" (Levitas, 1998). However, if one is interested in how to ameliorate social and spatial inequalities and promote equality it is essential to know about both the richest and the poorest: how many they are and where they live (Dorling, 1999).

Given the lack of reliable good quality geographical income data that would allow a thorough investigation of the spatial distribution of poverty and wealth, there have been considerable efforts within the social sciences to estimate income for geographical areas that are smaller than the levels at which published data exist. In addition, there have been considerable efforts by economists to develop data fusion and related methodologies that aim at combining different sources of data – typically adding "income" as a variable to data where this information is not present (for instance, see Bramley and Smart, 1996; Noble and Smith, 1996; Davies *et al.*, 1997; Heady *et al.*, 2003; Ballas, 2004; Ballas *et al.*, 2005).

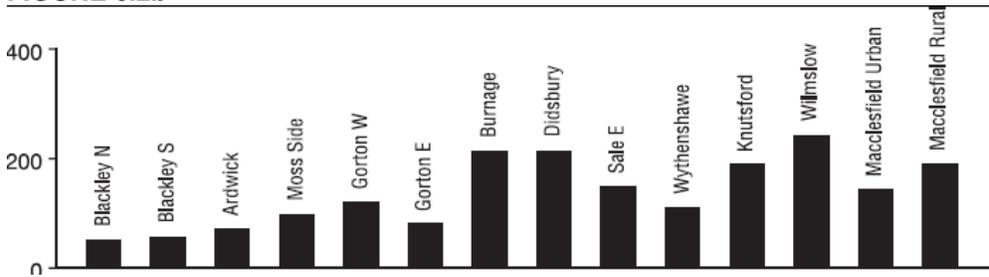
Similar issues arise when analysing social and spatial inequalities in wealth, as this is also something not asked in the census. Social scientists deal with this lack of wealth data by combining information from a wide range of sources including the Census of population (number of households and socio-economic characteristics), Building Societies and Land Registry (house price data). A recent study in Britain published for the housing charity Shelter used such methods, revealing the emergence of an unprecedented housing wealth gap (Thomas and Dorling, 2004). In addition, a more recent study (Dorling *et al.*, 2007) extended such methodologies further and applied them in order to estimate the size and geographical distribution of households that can be considered to be "asset wealthy" and "exclusive wealthy" (see glossary).

Just as it is possible to produce a profile of the changing income distribution along a journey once area data has been estimated, so too can many other aspects of life related to poverty and wealth be measured and depicted. Figure 6.2 shows three different transects of our journey from north Manchester through to the rural southern hinterland of that to illustrate this.

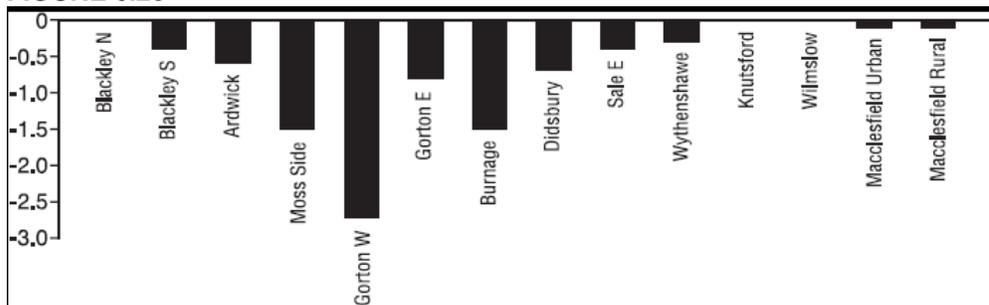
**FIGURE 6.2a**



**FIGURE 6.2b**



**FIGURE 6.2c**



Firstly figure 6.2a shows how despite their rarity in the city centre, detached property is so much higher valued in the suburbs and rural parts of the route. Figure 6.2b shows that this property increased in estimated value much more in recent years as compared to that in the city centre. Figure 6.2c shows how the decline in a particular migrant group – those born in Ireland – occurs in rough tandem with these trends in income and wealth distributions and redistributions. The centre of Manchester is an area that has been typified by immigration since the first industrial buildings were raised. Figure 6.2c shows the decline due to death in old age and out-migration of a group who came in large numbers both in the 1840s and 1960s (and often in between) – but no longer. New groups from countries further than Ireland now arrive in Manchester in greater numbers – but almost always in greatest proportions where the living is hardest and the incomes and wealth least.

Manchester was the first model in the world for how income, poverty, wealth and inequality tends to be distributed around a city when much of the market in housing, transportation and wages is left to be free. The current day local authority district of the city of Manchester stretches long and thin from north to south and so it is possible to chart a route – a journey - that covers most of it and does not look too contrived. Journeys have long been a way in which geographical inequalities in Britain were studied (see Box 6.3).

## Spatial Divisions in Britain

The journey into Manchester and out into rural Macclesfield is a journey between extremes, although it is one of very many possible such journeys and is certainly not the most extreme that could be taken: Figures 6.3 and 6.4 show that journey drawn with three small arrows upon two maps of all of Britain. These are population cartogram maps and each hexagon is a parliamentary constituency. Population cartograms differ from conventional maps of places which show areas as they might appear from space. Looking at a country or a city from space is not the best way to see its economic and social geography. Population cartograms show each area of the country drawn roughly in proportion to the size of its population and it therefore gives the people of the country a “fairer” representation<sup>6</sup> (Dorling, 2005). Here we use such cartograms to study the economic geography of Britain. The first of those maps (Figure 6.3) shows the proportion of the population that make up the “core poor” in each small part of the country (see glossary) and the second map shows how many of those in each place were “exclusive wealthy” (see glossary) by the year 2000. Without seeing both maps you cannot appreciate that in taking the journey we just have, we have been through some of the areas containing the highest proportions of “core poor” folk – and then into places that contain some of the highest proportions of exclusively wealth household to live in the north of England. Indeed, as Figure 6.4 shows, the British “exclusive wealthy” almost exclusively live in a ring of areas to the west of London in the south of England. In this section we discuss how figures 6.3 and 6.4 were drawn and what their implications are.

### Box 6.3: Travelogues and other spatial journeys

To illustrate social polarisation one typical approach is to take a short journey from affluent suburbs to inner city estates. It can be argued that these approaches may have been inspired by travelogues such as that of George Orwell who travelled and spent time living among the poor in mining towns in northern England and wrote an account of his experiences.

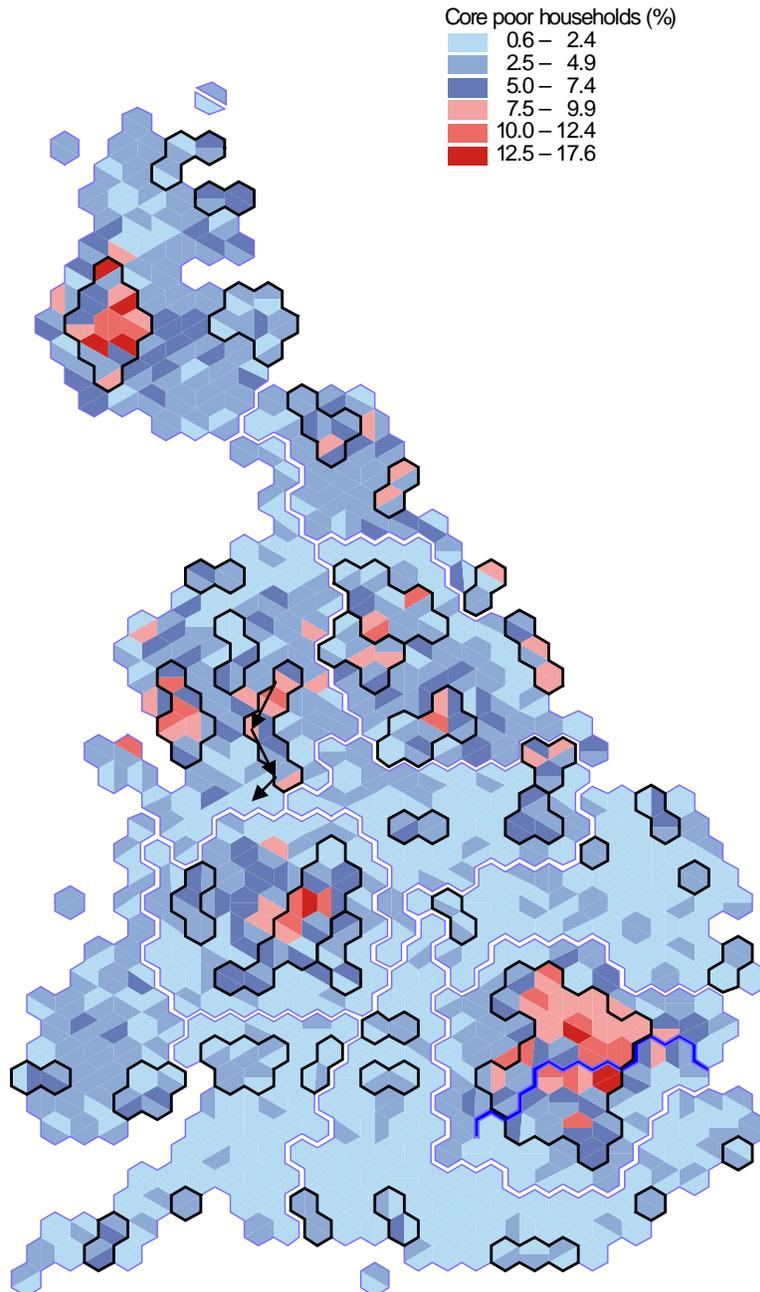
“In a Lancashire cotton-town you could probably go for months on end without once hearing an ‘educated’ accent, whereas there can hardly be a town in the South of England where you could throw a brick without hitting the niece of a bishop.”

(George Orwell, *The Road to Wigan Pier*, 1937)

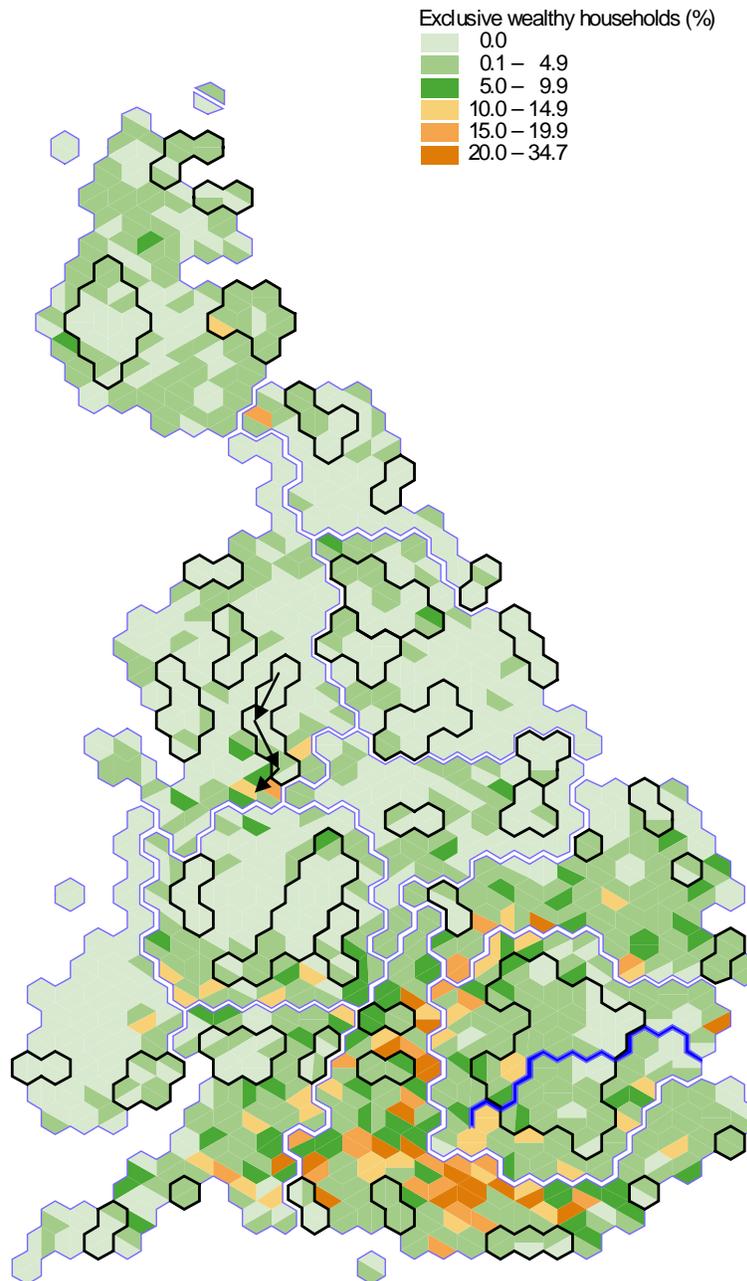
A more recent example of this kind of approach is a documentary by Andrew Dilnot in 2001. In *Dilnot*, the (then) Director of the UK Institute for Fiscal Studies (see electronic resources) cycled up and down a hill in Leeds populated by families of varying socio-economic backgrounds, exploring the geographical and socio-economic dimensions of income and wealth inequalities. He spoke to four families, starting with a single parent at the bottom of the hill and the income distribution, and ending at the top with a millionaire. In between were a bus driver and his family one third of the way up the income scale, and a council employee and mobile phone company employee two thirds of the way up. Similar approaches to studying socio-economic polarisation are adopted by lecturers in geography taking fieldtrips of students on coaches from one part of a city to another. Apart from being intrusive, these approaches to studying social polarisation would be very expensive to implement for the whole of a country. So, Census data and Geographical Information Systems (GIS) technologies can be used to measure and map local social polarisation nationally to gauge the extent to which it is a long run phenomenon that social policy makers need to take into account when, for instance, setting targets or designing policy.

<sup>6</sup> For more information on population cartograms see: Dorling (2005); Thomas and Dorling (2007).

**Figure 6.3:** The geography to where the poorest of the poor lived in Britain in 2000. Source: Thomas and Dorling, 2007: p. 290.



**Figure 6.4:** The geography to where the exclusively wealthy lived most in Britain in 2000



**Source:** Thomas and Dorling, 2007: p. 290.

Research into the extent and trends in poverty in Britain has generally not produced measures for relatively small areas that can be compared over time. To overcome this problem with colleagues we extended the "Breadline Britain" methodology (Dorling et al., 2007) to produce estimates for small areas across the country around the time of the 1971, 1981, 1991 and 2001 censuses of population (see Box 6.4). Because we mix this data with that from surveys usually taken a few years earlier (1968, 1983, 1990 and 1999) we will use the dates 1970, 1980, 1990 and 2000 from here on. We also used information of housing prices and consumption by affluent individuals to produce estimates for the same areas of the numbers of households that were asset wealthy and exclusively wealthy living in each small area (see glossary for definitions).

#### **Box 6.4 – The Breadline Britain Method**

The Breadline Britain method (Pantazis et al., 2006), measures relative poverty based on a lack of the perceived necessities of life. This has been widely accepted as a good measure of relative poverty. In Britain, there have been four nationally representative scientific surveys of poverty in the past 50 years, listed below:

- Poverty in the United Kingdom: a Survey of Household Resources and Standards of Living, 1967-1969, 2,052 households (Townsend, 1979)
- Living in Britain, 1983, 1,174 households, published as Poor Britain (Mack and Lansley, 1985)
- Breadline Britain, 1990, 1,831 households (Gordon and Pantazis, 1997)
- Poverty and Social Exclusion survey, 1,534 households (Gordon et al., 2000)

These surveys showed that: *"in 1983 14% of households lacked three or more necessities because they could not afford them. That proportion had increased to 21% in 1990 and to over 24% by 1999. (Items defined as necessities are those that more than 50% of the population believes 'all adults should be able to afford and which they should not have to do without')"* (Gordon et al. 2000).

Despite the restricted sample sizes, the above surveys reflect a broadly comparable relative approach to the definition and measurement of poverty. By adopting a synthetic modelling approach, it is therefore technically possible to examine the spatial distribution of area poverty over time based upon four discrete time slices: 1967-9 (1971 Census); 1983 (1981 Census); 1990 (1991 Census), and; 1999 (2001 Census) using a comparable methodology.

In essence, such a method uses the information from a detailed poverty survey, carried out on a sample of one or two thousand households, to classify each household in the survey as 'poor' or 'not poor'. The survey also includes information comparable to that collected by the census, such as household composition, tenure, car ownership and social class. The survey data can then be analysed to assess the relationship between these census-type variables and the poor/not poor classification of households in the survey.

When estimating poverty and wealth a critical decision that needs to be made is the unit of analysis – the choice is usually whether to analyse households or people. In the examples presented here the unit of analysis is the household and the reason for this is largely pragmatic. In combining the census and the surveys, the most appropriate unit is the household, since that is the sampling unit (for the surveys). It is also the appropriate level for information such as tenure or car ownership. Household size and composition tends to vary with socio-economic status, but potential bias is controlled in the breadline method by adjusting household income for these factors. Likewise, given that wealth analysis relies on housing equity, the household is again the most appropriate unit.

It should also be noted that using the household as the unit of analysis is consistent with conventional practices of economists who assume that the welfare of any one individual in a household will depend not only upon their own income, but also on that of other household members.

Our definition of exclusive wealth is the theoretical opposite of what is normally seen as the definition of poverty as relative deprivation. Peter Townsend's standard definition of poverty is that the poor lack the opportunities to enjoy a standard of living commensurate with societal norms, and are thus deprived from participating as full citizens of their society (see chapter 3). Exclusive wealth in contrast confers privilege through being able to secure benefits by dint of wealth not generally available to the public at large (and certainly not to the poor).

The 'exclusive wealthy' can thus be defined as those living above a high wealth line. This has to be a line so high that people are able, living above it, to exclude themselves from participating in the norms of society (if they so wish). To operationalise this definition of a wealth line data from the Family Expenditure Survey (FES) was used in combination with the Households Below Average Income (HBAI) adjustments to the incomes of the very 'rich' (Dorling et al., 2007). The HBAI adjustments are made to account for household size and type when considering household income, and were the same as those used in the Breadline Britain methodology. The adjusted FES data was then used to define the average level of income at which the following exclusive activities tend to occur: children go to independent schools, people use private health care, have second homes, boats, pay private club membership fees, etc. To estimate the geographical distribution of exclusively wealthy households, housing data were used to estimate the equivalent asset wealth accompanying this exclusive behaviour.

The group that is the mirror image of the exclusively wealthy in theoretical terms are thus living below the relative poverty line: the breadline poor. However, at any one time, just as for every person who is rich there is a subset who are extremely rich; for all who experience poverty, there is a subset who are extremely poor. The group termed the core-poor here are those who are suffering from a combination of all of normative, felt, and comparative poverty. That is, respectively, people who are simultaneously income poor (normative), subjectively poor (felt) and necessities/deprivation poor (comparatively poor). This is a subset of those who are comparatively poor but not necessarily felt nor normatively poor: the breadline poor. Finally there are those who are neither poor nor wealthy of any variety. Table 6.1 shows what proportion of household in Britain we estimate to be in each group at the start of each decade.

**Table 6.1:** Poverty and wealth measures for Great Britain, 1970 to 2000.

Year	% core poor*	% breadline poor	% non-poor, non-wealthy	% asset wealthy	% exclusive wealthy*
1970	14.4	23.1	n/a**	n/a**	7.4
1980	9.8	17.1	66.1	16.8	6.9
1990	14.3	21.3	55.7	23.0	3.5
2000	11.2	27.0	50.4	22.6	5.6

\* Note that 'core poor' and 'exclusive wealthy' are subsets of 'breadline poor' and 'asset wealthy' respectively); see main report for estimates of variability around the exclusive wealth estimates.

\*\* Housing wealth data were unavailable for 1970; since asset wealth could not be calculated, neither could the proportion of non-poor, non-wealthy at this time.

**Source:** Dorling et al., et al., 2007

Table 6.1 shows that we estimate that currently only half of all households are neither poor nor wealthy (50.4%) – however two thirds are generally included in the norms of society. That two thirds is the non-poor non-wealthy plus the asset wealthy less the exclusive wealth (50.4+22.6-5.6=67.4%). Note that the middle three columns of table 6.1 sum to one hundred and that the proportion who are excluded from the norms of society either by dint of their breadline poverty or their exclusive wealth can be calculated by summing the second and fifth column of data in the

table. Over thirty years the socially excluded (rich and poor) have grown from 30.5% (23.1%+7.4%) to 32.6% (27.0%+5.6%) and were only a quarter of households in 1980 (when the poor were at a minima) and 1990 (when recession in the south hit the wealth of the rich). Note also that we have no estimate of the asset wealthy in 1970 and so can derive no estimate of those households that are non-poor and non-wealthy in that year also. Finally it should be noted that there were fewer core-poor in 2000 as compared to 1990 – almost certainly due to social innovations such as the introduction of a minimum wage and tax credits for families in lower paid work. However, it should also be noted that the definition of “core poor” used here is perhaps a very strict one. For instance, Wolf and de-Shalit (2007) argue that a good definition of who is poor should be based on at least two of the three measures that we used and not necessarily all three of them.

A very robust definition of poverty would be that someone is poor if they can tick any two of the following three boxes: 1) they think they are poor; 2) they have a low income; 3) they have low wealth. The low wealth criteria might be that they are breadline poor, or simply that they have almost no savings. The precise definitions of poverty lines become less important when a 2 out of 3 criteria is used. Most folk understand that someone is poor if they have low income and low wealth - whether they think of themselves as poor or not. Most people are happy that someone with savings who does not think of themselves as poor is not poor, even if they have a low income - and so on. This two out of three criteria was originally proposed by Bradshaw and Finch (2003). We do not use it further here but it is well worth considering for future use - and for measuring much other than poverty. For instance is someone ticks two out of three boxes on thinking they are rich; having a high income; and high wealth - might that be a good way to estimate whether they are rich?

Having determined the national proportions of households that can be categorized as asset wealthy, exclusive wealthy, breadline poor and core poor, or none of the above, we next need to estimate how many in each geographical area there are so as to be able to determine the extent of spatial divides in poverty and wealth. Box 6.6 provides a brief description of the methods used (and references to further reading) to produce Figure 6.3 and 6.4 which allow the extent of spatial divides to be estimated.

#### **Box 6.6: The method of estimating “Breadline Poor” households by area and the Index of Dissimilarity**

In essence, the method uses the information from a detailed poverty survey, carried out on a sample of one or two thousand households, to classify each household in the survey as ‘poor’ or ‘not poor’. The survey also includes information comparable to that collected by the census, such as household composition, tenure, car ownership and social class. The survey data can then be analysed to assess the relationship between these census-type variables and the poor/not poor classification of households in the survey. These relationships are applied to census data to estimate the number of poor households in each area for which census data is available. For more details and illustrative examples see Dorling et al., 2007.

#### **The Index of Dissimilarity**

The Index of Dissimilarity is a summary measure of the relative segregation (or integration) of two population groups across geographical areas. It compares the distribution of the two groups, and calculates what proportion of one group would have to move (geographically) to result in an even distribution of both groups across all areas. While this type of index has frequently been used to study racial/ethnic segregation, it has been used here to compare the distribution of each group of households against all other households (for example asset wealthy households versus all non-asset wealthy households).

The ‘symmetrical’ version of the index was calculated here, for example comparing the number of breadline poor households to the number of all other households. An index of 30% would indicate that 30% of poor households would need to move to create an even distribution of poor households across all areas. The more segregated and spatially concentrated a group is, the higher the dissimilarity index.

The index of dissimilarity defined in Box 6.6 is simply the minimum proportion of households that would have to move between areas if each area were to have an even proportion of households of a given type. The areas that we are interested in households moving between are those defined in Box 6.2 (above) for all of Britain. Table 6.2 gives the result and shows that most recently a majority (59.7%) of the exclusive wealthy would have to move out of their neighborhood to somewhere less exclusive were they to no longer be so extremely clustered (as shown in Figure 6.4). That proportion is much as it was in 1990, but much higher than it was in 1980.

**Table 6.2.** The Index of Dissimilarity for each of the five measures

	1970	1980	1990	2000
Core Poor	12.3%	15.6%	15.3%	14.1%
Breadline Poor	14.7%	16.7%	17.1%	18.3%
Non-poor, non-wealthy	*	15.4%	16.7%	19.8%
Asset Wealthy	*	34.9%	34.5%	40.1%
Exclusive Wealthy	*	43.6%	60.6%	59.7%

\*Small-area estimates of asset and exclusive wealthy households were not available for 1970, meaning that non-poor, non-wealthy households could also not be estimated at this time.

Of all the five groups shown in Table 6.2 only the core-poor are slightly less spatially concentrated by the year 2000 as compared to 1990. Those living beneath the breadline have never been as physically separated from the rest of society by their geography at any other time that a breadline measure has been made as they are most recently. Similarly those who are 'normal' are less likely by the year 2000 to be mixing with folk who are poor or wealthy, and the asset wealthy are more spatially segregated now in Britain than they were in either 1980 or 1990.

The extent of the spatial divides change slowly. However, those divides are deep and in general they are deepening in this country. What then of the rest of the world?

## Spatial Divisions Worldwide

So far in this chapter, we have considered the spatial distribution of poverty and wealth at the local and national scale, showing that there are significant social and spatial inequalities within and between areas at all these levels, or, to use the expression discussed in box 6.1, there are now more and more tracks to live the wrong side of. In countries like Britain, both poor and wealthy households have become more and more geographically segregated from the rest of society over the last three decades. Here we turn our attention to the spatial manifestation of poverty and wealth at the global scale and we critically discuss the ways in which global institutions such as the World Bank, that are meant to deal with global poverty, approach these issues (also see chapter 5).

Similar trends of geographical polarisation such as those described at the national and local level above are observed at the global scale but it is important to remember that when discussing global poverty and wealth we should bear in mind that, as it is also discussed in more detail in chapter 5, different societies have different concepts of wealth. What people want and what people need changes over time and that the concept of poverty constantly evolves and therefore (as also discussed in box 6.1) the subsistence approach to the definition of poverty is inadequate.

*“By necessities, I understand not only the commodities which are indispensably necessary for the support of life, but whatever the customs of the country renders it indecent for creditable people, even of the lower order, to be without. A creditable day labourer would be ashamed to appear in public without a linen shirt.”*

*(Smith, 1759: 383)*

As the commodities that the customs of modern countries render indecent for creditable people, wealthy and poor, to be without are constantly changing<sup>7</sup> it can be argued that it is respect that matters the most in people's lives and that we show our respect through the access to resources we allow each other – through income and wealth. Some truths appear harder and take a little longer to grasp than others. In Britain economists have known for over two centuries that a shoe is not merely an aid for walking to work and in social policy for over one hundred years that a postage stamp is not just a necessity for paying bills (Smith 1759, Rowntree, 2000). Adam Smith in the eighteenth century and Seebohm Rowntree at the end of the nineteenth explain how a little luxury is also a necessity of life. However, in the pits of the more dismal side of the science of economics this has yet to be grasped, see for instance the World Bank myths that nearly everything that matters is improving (as an example, see Kenney 2005). We end this chapter questioning those myths. By defining “nearly everything that matters” as what is taken absolutely for granted in the rich world (or “donor countries” in World Bank speak) Charles Kenney suggests that living standards worldwide are converging (Kenney, 2005) and hence societal inequalities are decreasing. There are many simple mistakes in this work but what matters most is the error in Kenney's (and by implication the Bank's) central tenet which is this:

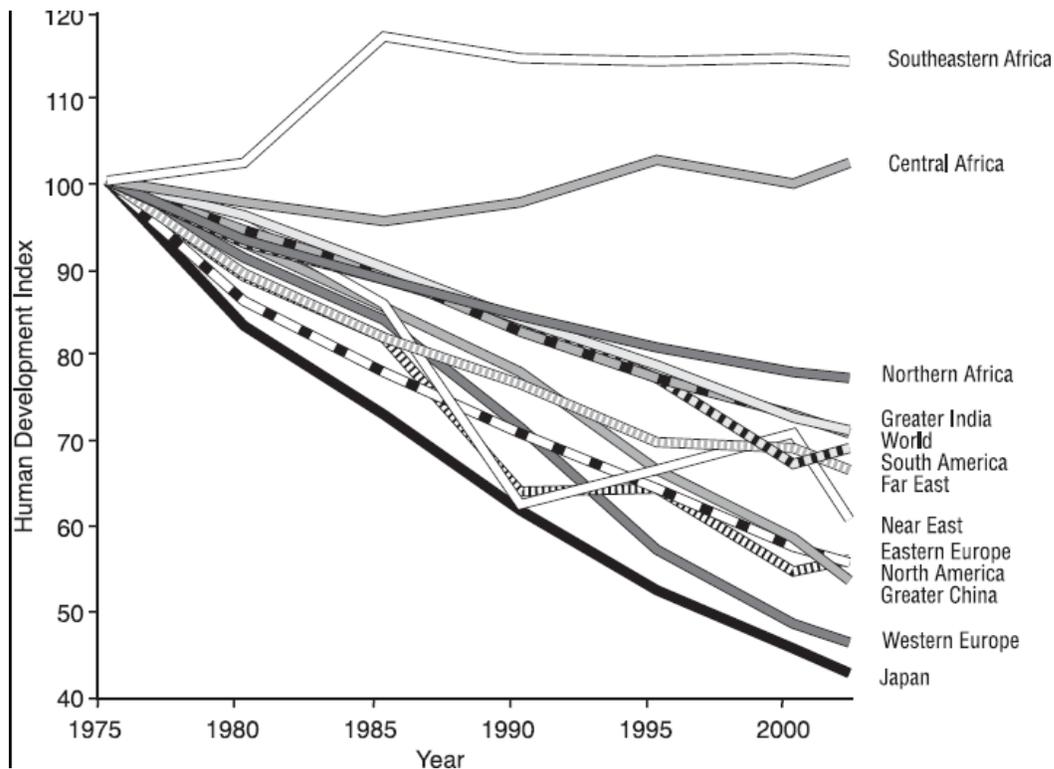
To paraphrase Kenney (2005), if people in the poorest countries of the world begin to receive a little more of what the richest came to expect to receive generations earlier then the world is becoming fairer. Or, in other words – if more of the world's poor can now afford a cheap pair of shoes (rather than no shoes) and live on nearer 2 dollars a day than 1 dollar – then the world has become a fairer place irrespective of the growing incomes of the richest countries or the number and types of shoes worn there, or the fact that people no longer need to walk miles to get water in the rich world.

In his conclusion, Kenney implies that “donor nations” should not be at all concerned that they may be impoverishing poor nations through debt repayments as the world is set to get fairer anyway. It is possible of course that a world that follows his advice would quickly become a very unstable and violent place to live as – if it became clearer worldwide that this is how ‘donor nations’ think – and if it began to act more like the bank would like then the degree of callousness exhibited could well result in violence and a reordering of the world through violence, which almost always harms the poor first and most.

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<sup>7</sup> For instance, Adam Smith's “linen shirt” would perhaps be in today's terms (at least for men) a suit of descent style (i.e. not the cheapest suit on the shelf). There would also be differences between societies (also see box 1 in chapter 5).

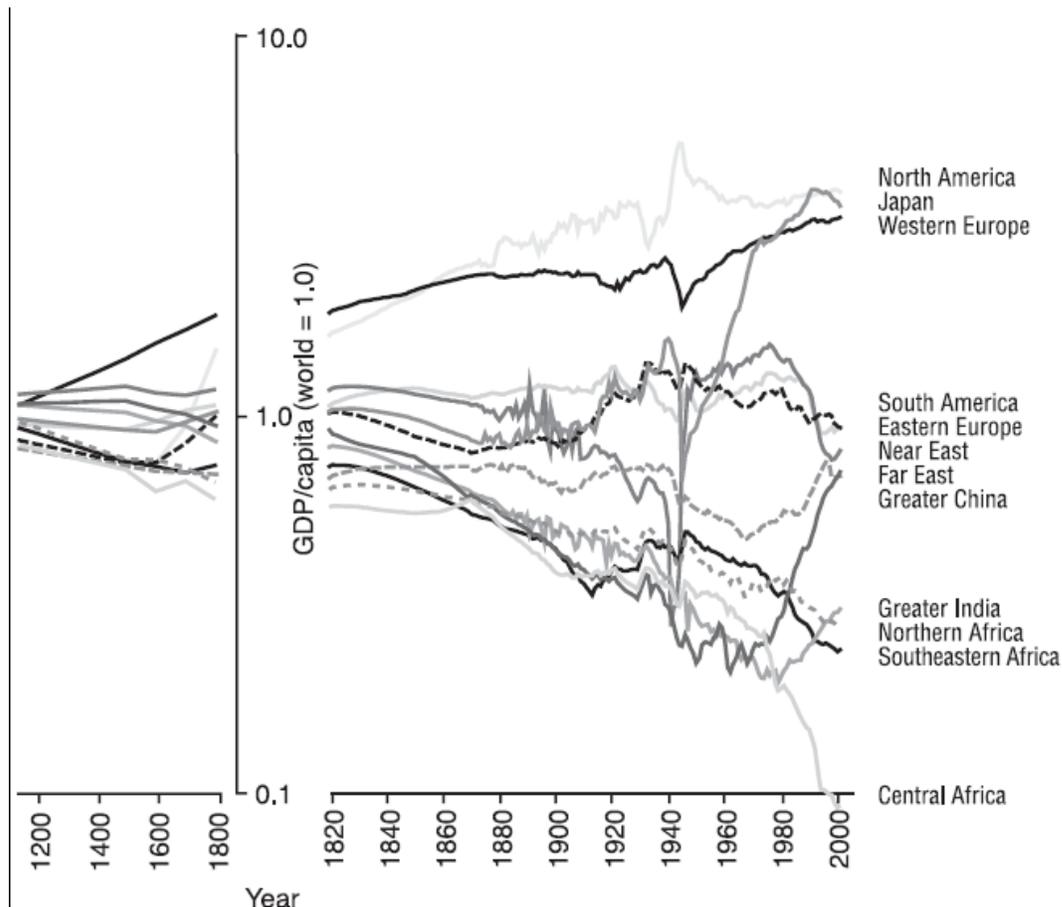
Figure 6a



Using the same data as Kenney, Figure 6.5a shows a somewhat different global trend, Figure 6.5a shows how much of the gap between full human development as defined by the United Nations Development Programme (UNDP) is still left to be achieved following progress or lack of progress since 1975. Figure 6.5a shows how close to achieving a simple measure of full human development each of 12 regions of the world is as compared to where they were in 1975. At the extremes, in Japan the majority of improvement towards UNDP 'utopia' has achieved in the last twenty-five years. Utopia here is defined as living to the age of 85, being educated to tertiary level and having an average income of \$40,000. Incidentally, Japan has the most equitable income distribution of the twelve regions. In contrast most of Africa is further from that utopia than it was in 1975. On average central and south-eastern Africa's combined life expectancy, educational enrolment and incomes are worse now in absolute terms than they were in 1975. In between these extremes the remainder of the world forms a diverging continuum. In general those who had most to begin with gained most and those which had least have furthest to go (and further now to go than they had in 1975).

China has achieved a tiny fraction more since 1975 than North America but other than that not only has there been overall divergence worldwide (in everything that matters most: health, wealth and learning) and there has been uniform divergence everywhere – the richer a set of countries were to begin with the better they have done. Once countries are grouped as in Figure 6.5a there are no exceptions. In figure 6.5a the twelve regions are comparable. In other words – even if you run things as well as China has done – or as badly as North America has done – you, as a world region, can hardly alter your end position which is determined by where you started in the “development race”. The extent of such divergence is also mirrored in the global distribution of income as seen in Figure 6.5b which shows the estimated World Income by region. Figure 6.5b is based on income estimates by Angus Maddison (see box 6.7) who developed a time series of historical statistics for the World Economy between 1-2003 AD (Maddison, 2007; also see electronic resources).

**Figure 6b**



It is in the short term interest of the bankers of the richest people in the richest (donor) nations to present a picture of world living standards converging, of a race where those who began miles behind the leaders are beginning to catch up. A fictional nanny gave good advice on the motivation of banking over four decades ago:

*"They must feel the thrill of totting up a balanced book  
A thousand ciphers neatly in a row  
When gazing at a graph that shows the profits up  
Their little cup of joy should overflow!"*  
Mary Poppins 1964

Another way of demonstrating how unequal the world has become is to redraw the map of the world in proportion to the distribution of poverty and wealth. Figure 6.6a shows a world map where area is drawn in proportion to who has an income of less than one US dollar a day. As can be seen, the areas of countries in Africa and Asia are by far the largest, whereas, it is very difficult to distinguish the shapes of countries in Europe and North America. Similarly, Figure 6.6b shows a world map where area is drawn in proportion to who has an income of over \$200 a day<sup>8</sup>. In contrast to Figure 6.6a, European and North American countries dominate this map, whereas the areas of Asian and African countries have shrunken. It is interesting to note that the world has become so unequal that the rich folk of Macclesfield described earlier (see Figure 6.1) which a

<sup>8</sup> See [www.worldmapper.org](http://www.worldmapper.org) for more details on how these maps have been drawn.

century ago was a remote rural settlement is now part of the map of world wealth – at least its more affluent environs and can even be seen on a world map where area is drawn in proportion to who has an income of over \$200 a day! (see Figure 6.6b)

Figure 6.1a

### **Box 6.7 – Angus Maddison**

Angus Maddison (born in 1926, Newcastle-on-Tyne, England) a British economist and economic historian is Emeritus Professor of Economic Sociology at the Faculty of Economics, University of Groningen, The Netherlands. He is a pioneer in the field of the quantification of economic growth in an international comparative and historical perspective.

Angus Maddison has also been a pioneer in the field of the construction of national accounts, where a country's accounts are calculated back in periods of several decades all the way to the year 0. To this end he combined modern research techniques with his own extensive knowledge of economic history and in particular countries' performances in the field of GDP per capita. His work resulted in a deep new understanding of the reasons why some countries have become rich whereas others have remained poor (or have succumbed to poverty). In this vital field, Maddison is regarded as the world's most prominent scholar.

During the past two decades, Maddison has mainly focussed on the construction of data and analysis further back in time. He has, for example, published an authoritative study on economic growth in China over the past twenty centuries. This study has strongly boosted the historical debate about the strengths and weaknesses of China and Europe as two of the world's leading economic forces. Furthermore, his estimates regarding the per capita income in the Roman Empire are regarded by many as a breakthrough in economic historiography.

On 27 October 2006 he was awarded the title of Commander in the Order of Orange-Nassau. The ceremony took place during a special symposium held on the occasion of his eightieth birthday.

More information and a list of his publications and electronic copies of data and papers may be found at: <http://www.ggd.net/maddison/>

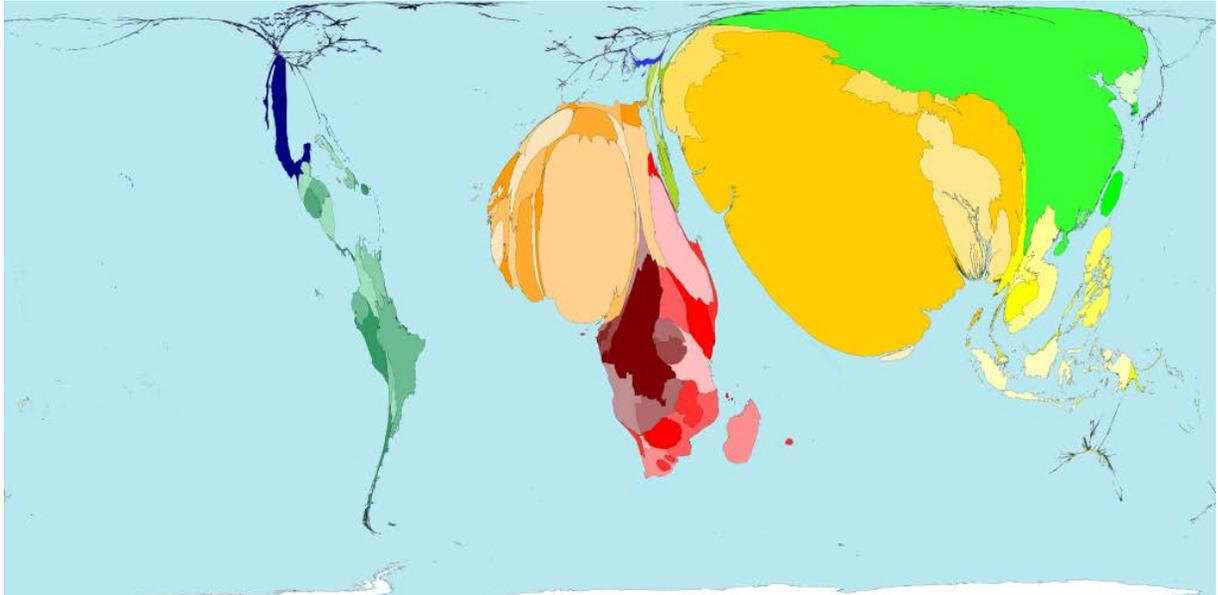
## **Conclusion**

There are leaps of imagination required to see the true extent of the spatial divisions of population and wealth in the world. Here we have tried to show how these can range from taking a journey across the city of Manchester – to looking down on a map of Britain that has been stretched and squeezed so that everyone can be seen equally and both poor and rich are fairly visible – to showing just how distorted a world we live in by distorting it in turn according to average incomes received in each territory. Both locally within Manchester, nationally across Britain, and worldwide the spatial divisions of poverty and wealth are deepening. Locally, this is normally hardest to see and occurs more slowly. At times the trends are reversed. Nationally it is more obvious, especially in countries like Britain where a “pear-shaped” picture of economic development is emerging (Dorling, 2006), where the bulk of the population were destined to live in an underperforming bulge of regions from which the ‘productive’ winners are moving further

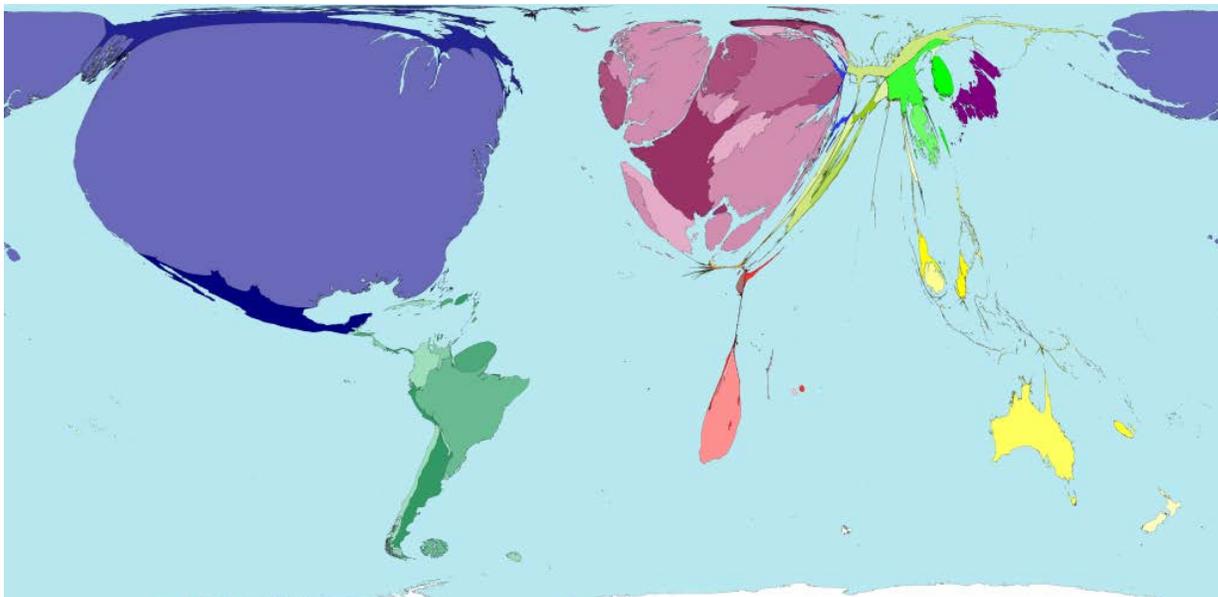
Dorling, D. and Ballas, D. (2008) Chapter 6: Spatial Divisions of Poverty and Wealth, in T. Ridge and S. Wright (Eds) Understanding Poverty, Wealth and Inequality: Policies and Prospects, Bristol: Policy Press. (pp.103-134).

and further away. Worldwide the spatial divisions of poverty and wealth have never been as deep and inequalities across the planet are accelerating.

**Figure 6.6a:** The world drawn in proportion to those living on \$1 a day or less. Source: Worldmapper map 179 ([www.worldmapper.org](http://www.worldmapper.org))



**Figure 6.6b:** The world drawn in proportion to those living on \$200 a day or more



Source: Worldmapper map 158 ([www.worldmapper.org](http://www.worldmapper.org))

### **Summary:**

- The distribution of poverty and wealth has a spatial dimension which can be studied by analysing at different geographical scales and combining information from secondary data sources
- Geographical methods can be used to map and analyse geographically social and economic polarisation and to quantify the degree and the progress of polarisation and segregation.
- Socio-economic and spatial polarisation has been recently increasing locally, nationally and globally.
- At the local level there is increasing evidence that local socio-economic polarisation is reaching unprecedented levels. People are becoming socially and spatially graded by large neighbourhoods in many ways more neatly than they were before.
- At the national level: areas already wealthy have tended to become disproportionately wealthier, and we are seeing some evidence of increasing polarisation where rich and poor now live further apart. In particular there are now areas in some of our cities where over half of all households are breadline poor.
- Globally: the spatial divisions of poverty and wealth have never been as deep and inequalities across the planet are accelerating.

### **Questions for discussion:**

- How would you go about constructing a story that suggests that divisions are narrowing?
- How would you define in today's terms a necessity such as Adam Smith's "linen shirt"?
- How would your definition differ between places and nations?
- How would you describe and explain geographical patterns of poverty and wealth within:  
a) the city or region you live; b) the country in which you live; c) the world.
- Are inequalities and divisions narrowing?

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### **Electronic Resources:**

#### **Warehouse for the world at the Museum of Science and Industry:**

[www.msimg.org.uk/Galleries.asp?menuid=885](http://www.msimg.org.uk/Galleries.asp?menuid=885)

#### **Inequalities in Britain – see:**

Social And Spatial Inequalities group: [www.sasi.group.shef.ac.uk/](http://www.sasi.group.shef.ac.uk/)

Where do you fit in? Institute for Fiscal Studies web-site: [www.ifs.org.uk/wheredoyoufitin/](http://www.ifs.org.uk/wheredoyoufitin/)

#### **World Inequalities:**

See the Worldmapper: [www.worldmapper.org](http://www.worldmapper.org)

Estimates of World Population, GDP and Per Capita GDP, 1-2003 AD:

<http://www.ggdnc.net/maddison/>

#### **World Institute for Development Economics Research:**

<http://www.wider.unu.edu/>

#### **United Nations Human Development Reports:**

<http://hdr.undp.org/>