

Social Polarisation 1971–1991: A Micro-geographical Analysis of Britain

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Abstract

This monograph reports the results of a research project investigating local social polarisation in Britain, 1971–1991, using the censuses of population. We look briefly at the different approaches which have been taken towards the study of social polarisation, highlighting the difficulties associated with, first, the reporting of complex findings to a media interested in a simple story, and second, the difficulties inherent in the statistical analysis of polarisation. After discussing our methods for the production of comparable census data and our methodology for producing the graphs and tables, we then go on to present our findings of the existence and extent (or otherwise) of social polarisation in Britain. We conclude with a discussion of our findings, and briefly suggest further areas for research using contrasting methodologies.

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CHAPTER 1

Introduction

This monograph summarises the findings of a research project examining local social polarisation in Britain, conducted in the Department of Geography, University of Newcastle upon Tyne. The research was funded by the Economic and Social Research Council under the Census Research Programme, the aims of which were to encourage innovative research and analysis using the 1991 census datasets and to show how the different census datasets could be used together to reveal new findings about Britain's population. The primary aim of the research was to identify levels of polarisation in Britain through the formation of distinctive spatial concentrations of social groups as they have developed over two decades, with the digital dataset allowing local comparisons made over time to be deposited in the ESRC Data Archive. The specific objectives of the research were: to link geographically the 1971, 1981 and 1991 censuses at ward level, facilitating spatial analysis of neighbourhood change over time; to discover the extent of social polarisation in Britain in the light of evidence at the local scale of social change over two decades; to show which local spatial divisions have become more apparent or have begun to disappear between which social groups; to identify which types of neighbourhoods have seen the greatest polarisation over the period and which have seen social concentrations reduced the most; and to make the digital datasets needed to facilitate and validate this research available to the general academic community.

During the course of the research it became apparent that questions of social polarisation and of widening disparities in opportunities between social groups were extremely complex. Although patterns of polarisation could be seen in some situations, patterns of geographical convergence could also be found. Furthermore, many of the variations shown over time seemed to either diverge from or contradict published accounts of social change which appeared during the period in which the research was undertaken. This paper starts by providing the context for the objectives of the research with a discussion of the various conceptual approaches taken towards the study of local social polarisation. We then discuss two recent examples of studies of this kind in order to highlight how the idea of polarisation in Britain has been dealt with in popular discussions by the media, and the difficulties of providing adequate statistics on polarisation. The methodology underpinning our research is examined by discussing the procedures developed for the harmonisation of census data, before discussing the methods used in this paper to analyse and assess the extent of social polarisation. We then go on to

present the results of this research by discussing the evidence for local social polarisation in Britain, illustrating our findings with figures and tables. Finally, we go on to present some further research which examined how social polarisation might be mapped using innovative visualisation techniques. We conclude with suggestions for further research on local social polarisation.

CHAPTER 2

Background: Various Approaches to Social Polarisation

In this section we review the various conceptual approaches which have been taken in more academically orientated studies of social polarisation. This review is not meant to be comprehensive by any means, and a fuller discussion of the literature on social polarisation is found elsewhere (Woodward, 1995). At its most basic, social and spatial polarisation can be broadly defined as the widening gap between groups of people in terms of their economic and social circumstances and opportunities. As we shall show in the following review, this definition can be added to by examining four basic ways in which social polarisation has been conceptualised.

First, there are those approaches which have been broadly empirical, and which have sought to demonstrate the nature and extent of social divisions in the U.K. A basic but useful approach has been to examine socio-economic polarisation between geographical regions. For example, Champion and Green have used a number of variables to compare the economic fortunes of areas and local labour markets over time, and note the salience of a 'north-south' divide in Britain (Champion and Green, 1985, 1987, 1988, 1990). The history of this divide has also been examined (Martin, 1988, 1993; Green, 1988). Alternatively, specific measures have been used with which to identify the existence or otherwise of inequalities in Britain. For example, the uneven distribution of poverty and wealth in the U.K. has attracted much attention, with the work of Peter Townsend (1979, 1991a, b; Townsend *et al.*, 1987; Gordon *et al.*, 1994) being probably the best known. The results of much of the Joseph Rowntree Foundation's Inquiry into Income and Wealth have been published, documenting inequalities in income distribution at a variety of scales (Jenkins, 1994; Green, 1994; Goodman and Webb, 1994; Meager *et al.*, 1994; Nobel *et al.* 1994). From this empirical approach, it is clear that polarisation is best understood as both a social and spatial phenomenon. Social polarisation refers to the gap between groups of people, spatial polarisation refers to the concentration of particular groups over space.

Second, social polarisation has been approached theoretically, as a process bound up with the emergence of the so-called global city. The global city has been identified by Sassen (1991) and others as a new and specific form of urbanisation developing as a consequence of new international divisions of labour and global economic restructuring.

Sassen argues that within such cities — places like London, New York, Los Angeles and Tokyo — there has been a polarisation of income distribution and occupational distribution amongst the population, with a higher incidence of jobs at the higher and lower paying ends of the scale, and a decline in the numbers of middle-income jobs associated with the downgrading of the manufacturing sector. Sassen's thesis has subsequently been criticised by Hamnett (1994a, b, c) who argues that in London a process of professionalisation rather than polarisation has occurred. Other urban theorists have preferred to think of the changes happening in major urban areas as processes producing a 'dual city', with consequent divisions of the population (Mollenkopf and Castells, 1991; Fainstein and Harloe, 1992). These writers, amongst others, have also expressed the need for caution in applying misleading notions of simple dualisms (Marcuse, 1989, 1993).

Whereas the 'global city' notion has proved popular with urban theorists in the U.S., it is with reference to Britain's smaller towns and cities that an alternative conceptualisation of social polarisation has been produced. Ray Pahl's conclusions based on his investigations of work on the Isle of Sheppey remain the starting point for most subsequent discussions and investigations of social polarisation in the U.K. (Pahl, 1984). For Pahl, a process of social polarisation could be identified, based on distinctive work practices, with those households engaged in work at one pole, and those households out of work and without the contacts from the world of formal paid employment at the other. This process of polarisation would be reinforced by other divisions or cleavages, for example, with regard to health and housing (Pahl, 1988). Studies of social polarisation have also been conducted at a local scale, for example, with Pinch's work on Southampton, where a number of processes are identified which might produce polarisation (Pinch and Storey, 1991). These include deindustrialisation and increasing unemployment; the bifurcation of the expanding service sector into high-paid and low-paid jobs; an increase in temporary and part-time work; changes in family structure, with more one-parent families, more lone elderly and more dual-income households; the social and economic marginalisation of ethnic minorities; and the residualisation of state welfare services. Lydia Morris has also investigated social polarisation with reference to employment status and prospects in the Hartlepool labour market (Morris, 1987). From these approaches to polarisation come another element: the importance of divisions around the employed, unemployed and other people not in work in both structuring social polarisation and shaping the geographical imprint of polarisation.

A fourth way of approaching social polarisation has been to view it as the process through which an 'underclass' is produced at one pole. The term was originally coined in order to describe a group of people outside employment (Myrdal, 1962). The term has since developed conceptually along two separate paths. On the other hand, some have attempted to conceptualise the underclass within the context of class divisions in general. On the other hand, the term has provided the basis for the development of culturally or behaviourally defined conceptualisations of the 'underclass', particularly (though not exclusively) in the U.S.A. The term has become popular with journalists and writers on

the state of the nation, perhaps because it stands as convenient shorthand for a highly complex problem — mass unemployment and the concurrent crisis of the welfare state — and is also highly emotive. There have been attempts by academics to recast the term (Robinson and Gregson, 1992).

There are, then, a number of ways in which the term ‘social polarisation’ can be used and conceptualised. What they all have in common is, first, the idea that society is dividing, that these divisions are somehow new or different in their current form, and that the processes causing this polarisation are themselves new. Second, an idea implicit in many of the approaches outlined above is that both time and space are important; polarisation happens to groups of people over space and through time. It’s a dynamic process and can produce quite clear geographical patterns to society. Third, they illustrate that it is easy to think in terms of binary divisions, when in fact the situation is usually far more complicated. Complex arguments and prescriptions are often lost in attempts to present an easily-comprehensible picture to an audience. A good example of a report which avoids this pitfall is that produced by the Policy Studies Institute entitled *Urban Trends 2* (Willmott, 1994), an assessment of conditions in Britain’s deprived urban areas, which collects together a mass of often contradictory evidence to paint a more subtle and complex picture of social and spatial polarisation in Britain today. The report uses census data at district level to assess change over the 1981–1991 decade. Much of the discussions of its findings are rooted in the context of changing urban policy over the decade, and the findings are consequently orientated towards that. Certain findings are particularly interesting. For example, in its analysis of social class, it notes that:

In general, the other deprived areas [outside London] do not have dramatically different occupational structures than the whole of Britain, and between 1981 and 1991 their average class structure became more like that of Britain in general (Willmott, 1994: p. 13).

In other words, in some instances, inequalities may be evening out. However, for certain groups in society, the picture is more complex. For example, the report points to the large increases in the proportions of under-fives living in deprived urban areas in comparison with other English districts. In terms of educational qualifications, the gap narrowed over the decade between deprived areas and other districts in terms of the proportions of people with educational qualifications. The proportion of households with cars rose more in deprived areas than it did nationally during the 1981–1991 period. Conversely, outside London, in terms of unemployment, many deprived areas began to improve their position relative to Britain as a whole.

The report’s conclusion emphasises the complexity and variety of changes in social and economic variables over time:

... while in some respects the populations of deprived areas became more like those of non-deprived areas between 1981 and 1991, in other respects they became even more unlike the generality (Willmott, 1994: p. 104).

We return to the issue of complexity later.

CHAPTER 3

Other Representations of Social Polarisation

A particularly enduring feature of much social commentary in the early 1990s has been the idea that the economic and social policies of four successive Conservative governments have resulted in social and spatial divisions in British society to a hitherto unprecedented extent, and the idea of Britain as a polarised nation has attracted scholarly, media and public attention. As Angela Dale and Claire Bamford note, the notion of social polarisation is “. . . one of the most intuitively persuasive observations to be made with reference to the changes in the British economy during the late 1970s and early 1980s” (Dale and Bamford, 1989: p. 481). Much research has now been conducted in order to establish the nature and scale of this ‘intuitively persuasive observation’. For example, in 1992 the Joseph Rowntree Foundation instigated its *Inquiry into Income and Wealth in the U.K.*, and a number of reports produced under this initiative have indicated an increase in income and wealth inequalities according to a number of measures and at various spatial and social scales. The report’s authors claim that gaps between rich and poor have widened and that the growing gap has multiple causes. They show, confirming government studies, that differences in income from work have grown rapidly, and claim that social security slowed the growth of inequality in the early 1980s, but has not since. They also suggest that the tax system did not slow inequality growth, resulting in particular groups and areas doing disproportionately badly. They do, however, suggest that wealth inequalities have stopped declining.

Clearly this is a complex issue. In the following two sections we continue our discussion of the background issues to this study by examining two recent reports on social polarisation. In the first, in order to see how the issue of social polarisation is popularly portrayed, we discuss how the conclusions are often presented to wider audiences through national newspapers. In the second, we look at the difficulties in finding appropriate statistical methods with which to measure social polarisation.

3.1. PEOPLE AND PLACES AND THE MEDIA’S SEARCH FOR CHANGE OVER TIME

We start by examining the media’s reaction to a report published by researchers at (what was then) Bristol University’s School for Advance Urban Studies (SAUS) in February 1995

entitled *People and Places 2* (Gordon and Forrest, 1995). The report presented the findings of analysis of the 1991 census data, specifically the 10% sample, in order to show some of the key social and economic divisions in contemporary England. The notion of polarisation employed by the report's authors conceptualises social polarisation as pattern, and as a static phenomenon, to be described as it existed at the time of the 1991 census. It is seen as having both spatial and social characteristics. On one hand the authors describe the spatial distribution of specific variables as being polarised:

Problems of unemployment, poverty and ill health are concentrated in the major cities, the depressed industrial north and in the forgotten corners of England. By contrast, areas of affluence and privilege are found in the extended suburban south east (Gordon and Forrest, 1995: p. 9).

On the other hand, polarisation can be more visible as a social phenomenon, where the spatial element is subsumed beneath the social:

In general, the poor and the rich do not often live in the same areas and the distribution of poverty and wealth tend to be inverse of each other. However, there are notable exceptions to this pattern. In some inner city areas (such as the Isle of Dogs in Tower Hamlets) and in a number of commuter villages, the poor and the rich live side by side. *These areas can be considered to be the most socially polarised in Britain* (Gordon and Forrest, 1995: p. 6, our emphasis).

The report does not present polarisation as a process happening over time, and does not compare the results from the 1991 census with those from the 1981 census. In contrast, media portrayal of the report focused on the idea that *People and Places 2* documented the decline of social equalities in Britain during the period of Conservative government. Why?

A clue is given by the concluding sentence to the report's introduction, which notes that "these patterns [of division in Britain] suggest a country divided, rather than at ease with itself" (Gordon and Forrest, 1995: p. 9). The sentence is a direct echo of the language used by the Prime Minister John Major when discussing his vision of Britain. The statement was taken at the time to signal a departure in policy terms away from the values of his predecessor's government. It has since passed into common usage. By using this phrase, the report's authors imply a contradiction to claims that social divisions are narrowing, another claim made by the present government. The report's authors provided journalists with an opportunity to hook up the former's findings (of a static position) with the latter's requirements for a story-line (widening polarisation over time) through refuting the Prime Minister's ideas by using his language.

The idea that the report showed a country dividing proved popular. Despite the focus in the report only on 1991 census data, commentators writing about the findings chose to portray the results in terms of a divide growing over time.

England has become a country starkly divided between the rich South and the poor North, according to a detailed study of 56 million households (*Independent* 1.2.95).

This is incorrect; the number of households enumerated and imputed by the census was 21,897,322. Obviously, the higher number has the greater impact. The newspaper report continued:

[The study] shows a shift in wealth and the middle classes that mirrors the decline of the manufacturing industries during the Eighties and the advance of information technologies (*Independent* 1.2.95)

In fact, the report does nothing of the sort. No shifts in wealth are shown because no comparisons are drawn over time. However, it suited the purpose of the journalist writing about the report to portray it as an exploration of increasing social divides. Similarly, the *Guardian* leapt to conclusions about widening social inequalities on the basis of the report's findings, and in attributing these inequalities to Conservative government policy:

Social and economic polarisation in England has been widened and exacerbated by Government policies over the last 15 years. It shows in the way we work, where we work and the work we do, just as much as in the varying range of health and welfare facilities to which we have access. We are a nation divided rather than — in John Major's words — a nation at ease with itself (*Guardian* 1.2.95).

Again, in the *Times*, the implication is that the report documents the growth of social divisions over the previous 15 years:

The class system in England is becoming more entrenched as society increasingly divides between rich and poor and north and south . . . (*Times* 1.2.95).

Even the *Daily Telegraph* was not immune to the idea that *People and Places 2* showed substantial social change:

The gap between England's rich and poor has widened in the 1990s, according to a report yesterday. Optimistic forecasts that the North/South divide phenomenon was reducing have proved unfounded. Britain is now more starkly divided (*Daily Telegraph* 1.2.95).

The task of providing evidence for growth or change in social divisions over time fell to one of the report's authors, David Gordon:

The divisions of wealth between rich and poor seem to be getting more marked . . . We didn't find this kind of pattern in the 1981 census and from what we can see the trend seems to be accelerating (quoted in the *Times* 1.2.95).

The success of this approach to analysing census data at one point in time, and making assumptions about change over time, has been so great that it has now been adopted by the Government Office for Population Censuses and Surveys. In their recently published new area classifications, various districts are labelled as 'Growth Corridors' or 'Heritage Coast' despite the classification being based solely on static 1991 census data. The labelling required the imagination and qualitative knowledge of the census office (Denham, 1995).

In this section we have shown how the findings of one piece of research into social and spatial divisions in Britain at one point in time have been used to imply the development of far deeper divisions over a longer time-scale. In the course of this representation, quite complex patterns of variations in social and spatial polarisation are simplified. This leads us to suggest that a notable feature of discussions of polarisation is that complex social patterns and processes are rendered simple, and that research such as ours is implicit in this act. If we know that society is deeply divided, if we think that the government is

accepting of these divisions and if we feel that we remember a time when these divisions were not so great, it is an easy step towards saying that things have become much worse.

3.2. THE COMMISSION ON SOCIAL JUSTICE AND THE PROBLEM WITH STATISTICS

The Commission on Social Justice was set up in 1992 by the former Leader of the Labour Party, the late John Smith MP under the auspices of the Institute for Public Policy Research to investigate strategies for social and economic reform for Britain into the 21st century. Its report, published in 1994, generated wide interest, not least because it offered the Labour Party a strategy for reform of the Welfare State. In the course of its enquiries and in the presentation of its recommendations, the Commission amassed a considerable amount of data which it then used as evidence for the scale and nature of social divides in Britain in the early 1990s.

The Commission on Social Justice report is interesting for our purposes because of the way in which the findings on social inequalities which it presents are sometimes at odds with the picture of social polarisation we can construct using census data. The example we offer here is of the Commission's reports on the scale of unemployment in Britain. In its discussion of the concentration of employment amongst the 'work-rich' (i.e. the tendency for a diminishing amount of employment to become concentrated amongst fewer people who must work harder), the Commission noted that:

Unemployment has also become more concentrated — by family and by geography (for example in particular wards within cities) (Commission on Social Justice, 1994: p. 153).

Unemployment rose during the 1970s and early 1980s, and specific groups within the labour market were adversely affected, particularly unskilled and semi-skilled male manual workers. The population polarised into groups living in wards in which they were either more or less likely to be out of work and to be unemployed. However, as we show later, the recent rises in unemployment affecting other groups in the labour market — professionals and managers, for example — have led to important changes, with an evening-out of unemployment over space in the 1980s. There has been a substantial rise in the proportion of the unemployed population living in wards where unemployment used to be virtually unknown, whilst in many inner city wards, high unemployment rates have not risen greatly, because they could not have risen much further. A consequence of this, contrary to the findings of the Commission, is to make the distribution of people's chances of being out of work more even than in previous decades, as we show in Chapter 6. Far from becoming more concentrated by family and geography, unemployment has become more evenly spread across the population. Here, we are using people's own definitions of whether they are unemployed, taken from the censuses.

Of course, it suits the political aims of the Commission to be able to summarise briefly and succinctly these findings. The popular idea of unemployment is that it has become the

course of specific groups in specific areas. But it is also important to note that this line of reasoning terminates with the identification of a spatially located and socially discrete underclass, an idea that perhaps many on the Commission's panel would be at pains to distance themselves from. By ignoring evidence to the contrary, the Commission's arguments may lose some of their power. Again, discussions of polarisation seem to be obscured by simplifying.

3.3. THE DEPARTMENT OF THE ENVIRONMENT AND ITS INDEX

Finally, we should mention government sponsored research on social polarisation which, if adequate, would negate the need for academic publications such as 'people and places' or the political work of the Commission on Social Justice. Perhaps the best known recent work has been the creation of a 1991 Deprivation Index sponsored by the Department of the Environment (following an initial study by Coombes *et al.*, 1995). The index was created to update that produced by the Department from 1981 census data. It measured the incidence of deprivation using 1991 census indicators and related information drawn from around that date. The use of independent researchers and the willingness to explore new techniques was welcomed when the index was released. But, because the new index was constructed in a different way to that produced from the 1981 statistics, it could not be used to assess whether the incidence of deprivation, by these measures, was becoming more or less polarised over time. Also, because it used indicators which were first measured in 1991, the index could not be calculated for earlier dates using earlier data. However, in the report on the index some comparisons have been made by considering four census variables which can be measured over time (Robson *et al.*, 1995, p. 124). These were unemployment, access to cars, overcrowding and access to amenities, measured both in 1981 and 1991.

The comparisons made on behalf of the Department of the Environment showed that there had been a relative widening of the spread of deprivation across England, indicated by an aggregate of the four indicators used. The report's authors noted that this concealed a relative improvement in the equity of the distribution of the unemployed as it had spread across the country, in contradiction to the findings of the Commission on Social Justice quoted above. In defence of the Commission, had the researchers considered what proportion of working age people were not working, rather than the unemployment rate, they would have come to a different conclusion about the changing spatial patterns of access to work (see Section 6.11). On the spatial extent and intensity of deprivation, the researchers found that "Overall, it seems clear that deprivation was less concentrated in 1991 than was the case ten years earlier" (Robson *et al.*, 1995, p. 127). They concluded this because fewer districts had more than a quarter of their wards featuring in a list of the 10% 'most deprived' in 1991 as compared with 1981. Again, this finding may have been driven by changes in the proportion of people unemployed, rather than by changes in how many were out of work (which includes those on 'training' schemes, the

permanently sick and people who have 'retired' early). The report did find evidence of an increase in the extent of deprivation in London, where people who lose their jobs are more likely to claim unemployment benefit and where there has been a clear deterioration in economic prosperity in the 1980s as compared with the 1970s.

Although these official findings are important and redress the myth that the south of England (in particular, London) fared well from the social changes which occurred in the 1980s, it is important to realise the limitations of such conclusions. Changes in the rates of unemployment and car ownership were the most important factors in determining the findings. The choice of both these measures, and the choice to look at only one period of change (1981–1991), makes the changes within London appear particularly dire. This is because London was saturated with cars by 1981 and hence change in car ownership is no longer particularly useful indicator there (see Section 6.10). Similarly, largely because of the age structure of the capital's population, when people lose their job there, they tend to remain in the workforce and claim unemployment benefit (the evidence for these assertions can be found in Dorling, 1995a). Had other statistics, other methods, other time periods or other areas been used in the study, the results would have been quite different. These official results also appear to have based on the early releases of 1991 census data in which errors in the geographical referencing of some 4707 1991 enumeration districts were sufficient to place them in the wrong 1981 ward for the change analysis, which may have effected the findings (see Dorling and Atkins, 1995; Appendix A).

In short, there is a great deal more research to be done, even just using the censuses, to produce a rounded picture of the extent to which English society has or has not become more geographically polarised over recent years. The official government report on deprivation discussed above dedicated only 13 of its 163 pages to this issue. Here, we build on these foundations. We next consider how data from the last three censuses can be harmonised for all of Britain to be used in a detailed analysis (in Chapter 4); then we ask what methodologies will provide the most robust analysis (in Chapter 5); and then we show how a wide variety of indicators can be studied to uncover different aspects to the general pattern of social polarisation in Britain (in Chapter 6). Finally, in Chapter 7, we describe the current distribution of surrogates for the five great evils identified over half a century ago by William Beveridge, on behalf of the government. Perhaps today's government, should have another look at the ideals of those times and should ask itself whether, with all the resources available today, they cannot produce something more informative than a static index of deprivation.

CHAPTER 4

Data Harmonisation

In this section we discuss how an awareness of the difficulties outlined previously influenced our choice of method, and look at the techniques developed for the harmonisation of census data.

The remit of this research project was to use data from the 1971, 1981 and 1991 censuses of population to investigate polarisation in Britain. The censuses provide data about people living in thousands of small areas, and so are useful for analysing different groups of people living in different areas, rather than differences across the population as a whole. They are also useful in that individuals are asked to describe their own situations, instead of relying on information such as the official claimant count of unemployment.

Unfortunately, each of the last three censuses produced data for very different small areas and although there are methods which can, to an extent, deal with this statistically, by far the simplest solution is to reaggregate the data to a common set of areal units. This has the advantage of allowing the calculation of relatively simple statistics. The characteristics of the group of people who lived in a single area in 1971, 1981 and in 1991 can be compared without the additional complexity involved with the consideration of boundary changes.

For this study we chose to use 1981 census wards as a common areal unit for the comparison of data from all three censuses. Ward-level data was chosen in view of the difficulties associated with the construction of statistics for areas smaller than wards. Wards also tend to contain very similar numbers of people, because they are created for local electoral purposes. Furthermore, these areas are being used increasingly in both academic and commercially-directed research by bodies such as building societies for their data analysis. The 1981 units were chosen because this is the mid-point in the series and because these were the most recent areas for which digital boundaries were available at the start of this research. There were 10,444 census wards in Britain in 1981. In Scotland these areas were parts of postcode sectors rather than local government wards.

Aggregating data for the 1971 census to 1981 census wards was a relatively simple process due to the succinct geographical information which was available in digital form for 1971 and due to the very high quality of that data. The smallest areas for which census statistics were released for 1971 were enumeration districts, of which there were just over 125,000 in Britain. These are the areas for which enumerators were employed to

collect the census forms. The digital record of the 1971 census contained the grid reference for each of these enumeration districts in the same files that held all the census data. Each 1971 enumeration district was linked to a 1981 enumeration district which nest into 1981 wards, and hence we had an assignment of 1971 enumeration districts to 1981 wards through this process. An alternative method would have been to locate each 1971 enumeration district within the boundaries of the relevant 1981 ward. Experimentation showed that it made little difference which method was used and the former method was actually found to be more reliable because in some parts of the country 1981 enumeration district centroids provided a more accurate description of the census geography than the 1981 ward boundaries.

Having allocated each 1971 enumeration district to a 1981 ward and checked to ensure that no ward remained without allocated data, the counts given in the 1971 census tables were aggregated for the ward areas. A further check was then made for those wards which appeared to have experienced the greatest population rise or fall, and none of these remained unexplained when compared with other information. Some of the variables in the 1971 census data were not counts but ratios and were therefore transformed into counts before aggregation. The resulting dataset contained four tables. The first amalgamated the 1971 census Tables 1–14 into a single file in containing 471 variables for each of the 10,444 wards from the 100% census of population. The second table contained 451 variables for each of the wards from the 100% household census (Tables 15–21). The third table contained 368 variables for each of the wards taken from the 10% population census of 1971 (Tables 22–23). The fourth table contained 275 variables from the 10% household census of 1971 (Tables 24–28). Unfortunately, none of this information could be deposited for general use by the academic community due to ambiguities over the licensing agreement between OPCS and the ESRC concerning the 1971 census.

Amassing the data required for the 1981 census was an even easier process because it had already been amalgamated to the ward units by OPCS. More importantly, the amalgamated ward data for 1981 was more reliable than the enumeration district data for 1981 which suffered disproportionately from the effects of Barnardisation. (Barnardisation was the name used at that time for the process of randomly adding or subtracting 1 from counts in the census tables to ensure confidentiality.) A single table was produced for the 1981 census which contained 5518 variables for each ward. The first 5517 variables correspond exactly to the cell numbers given in the 1981 Small Area Statistics documentation and hence some variables only have values for particular countries within Britain. Variable number 5518 was the count of the number of hectares included within each ward in England and Wales. We calculated the hectarage of each 1981 census unit in Scotland as a separate exercise. There was of course no need to calculate land area for the wards in 1971 or 1991 as the wards which we are using did not change their areas.

As outlined above, the process of making data comparable between 1971 and 1981 was relatively simple because of the quality of the geographical referencing in 1971. Extensive investigation by OPCS and independent researchers found only a dozen 1971 enumeration

districts to have been incorrectly grid referenced (and of course we have used these corrected grid references). However, when the 1991 census data was first released many thousands of enumeration districts were found to be incorrectly grid referenced. This was because OPCS anticipated the release of digital boundary data for enumeration districts and hence less emphasis was placed on the accuracy of centroids. There had also been extensive cost-cutting between 1971 and 1991. Unfortunately, the release of 1991 digital boundary data to the academic community was extensively delayed and so we were forced to rely on the centroid information. However, new data analysis products had also become available, in particular a postcode to enumeration district file which allowed many cross-checks to be made.

The assignment of 1991 enumeration districts to 1981 wards was conducted using the following method. Given access to geographical information systems and fast work stations with large storage facilities, four independent allocations to a 1981 ward could be made for each 1991 enumeration district (and output area in Scotland) (Atkins *et al.*, 1993). The first possible allocation was the ward of the 1981 enumeration district which the 1991 enumeration district corresponded to most closely. The second allocation was the 1981 ward within the boundary of which the 1991 enumeration district centroid lay. The third allocation was the 1981 ward which a minority of 1991 enumeration districts were assigned to in the 1991 area master file (these assignments were made by OPCS for enumeration districts which had not been altered since 1981). The fourth possible allocation was the 1981 ward within the boundary of which a population-weighted centroid of the 1991 enumeration district lay. These population-weighted centroids were calculated from the centroids of the postcodes which were entered on the census form in each enumeration district and hence were independent of the OPCS enumeration district centroids (which were assigned by hand).

The four alternative ward allocations were then compared for each enumeration district. In the vast majority of cases they were identical. Unfortunately with roughly 150,000 enumeration districts and output areas, even a small proportion of dubious references are difficult to correct. A total of 4707 enumeration district locations were checked and corrected manually using a Geographical Information System (see Atkins *et al.*, 1993, for a preliminary report). A series of checks were then made of the final allocation. Enumeration districts which were in a particular local authority district in 1991 and which were assigned to 1981 wards in a different local authority district were each individually checked. Each one corresponded with a district boundary change which was listed in Appendix A of the relevant 1991 census Country Report. Similar exercises were carried out for changes of parliamentary constituency boundaries (which only occurred around Milton Keynes between 1981 and 1991) and the Functional Region Zones devised and used by the Centre for Urban and Regional Development Studies (CURDS) at Newcastle University. Finally, a check was made that for those districts which had not undergone ward boundary changes during the 1980s, no boundary changes were implied by the allocations of enumeration districts. We consider the final result to be as robust as the allocation made for the 1971 and 1981 censuses, albeit involving a great deal more effort.

The final dataset in SAS-PAC format and containing all of the variables in the 1991 Small Area Statistics for 1981 census wards in Britain has been deposited with the ESRC Data Archive at the University of Essex.

Matching geography is, of course, only the first problem to be overcome in making comparisons of census data over time; there are other difficulties too. The most serious of these is the different rates of response by the public to the census. Very little is accurately known about the response rates of the 1971 and 1981 censuses. Most importantly, in 1971 people were only counted where they were found to be present on census night. This was particularly important for holiday resorts which saw their populations boosted. In 1981 people were enumerated on the basis of where they were usually resident although no attempt was made to locate the occupants of households when nobody was found to be at home on census night. In 1991 quite sophisticated attempts were made to provide the first reliable enumeration of the entire population including a process whereby the occupants of wholly missing households and many other missing data items could be imputed (i.e. made up from similar records in the dataset). As is well known by now, some members of the public went to quite extraordinary lengths to avoid being enumerated in 1991. In total, over 1 million people in Britain were not included in the 1991 census statistics. The last time there had been a national campaign to avoid enumeration was by the suffragettes in 1911 (Simpson, 1995). We have made no attempt to allow for these problems in the analyses which follow. This is because to do so would constitute enough work for a completely new project (Simpson and Dorling, 1994). We mention the problem here to illustrate the general level of uncertainty when dealing with census statistics. In the 'average ward' in Britain, 100 people were not enumerated in 1991; any other errors introduced by data processing or blurring pale into insignificance due to the effects of underenumeration.

There are, however, at least two other considerations which may have had as great an impact on our findings as could underenumeration. The first concerns our choice of variables to compare over time; finding directly comparable variables between 1971 and 1991 is often problematic. For example, in 1971 3.15 million women said they were retired. In 1981 only 1.79 million women claimed to be retired, and by 1991 4.77 million women stated they were retired. Both the changing aspirations of women and the changing wording of the census questionnaire have resulted in a fairly meaningless time-series of statistics in this case (available for each of the 10,444 wards and of little analytical use). Second, even presuming that the census statistics are reasonably reliable and comparable, the methodologies underpinning our analyses of data will have more effect on what we might find than any of the problems discussed so far. Therefore we now consider our empirical methodology in detail.

CHAPTER 5

Methodology

The methodology we have chosen to adopt is determined by three considerations. The first concerns what the data available for analysis will allow us to do. The second consideration concerns the kinds of findings we wish to derive, which in turn is conditioned by our conceptual understanding of polarisation, outlined in the preceding sections. A third consideration is to attempt to produce findings which are as simple as possible from a methodology which satisfies the first two points. Together this has resulted in us developing a new quantitative technique to analyse linked census data for evidence of spatial polarisation. Given the size of the dataset, we intend only to illustrate the possibilities provided by our methodology, rather than provide an exhaustive analysis.

The technique is a numerical and visual means of showing how the spread of certain groups of people has become more or less concentrated across small areas over time. It is designed to be appropriate for analysing relatively simple classifications of the population which have been made consistently across a large set of areas for a few dates. It is also designed to work independently of the nature of the group being studied, in that useful results can be produced regardless of whether the group tends to be very evenly or very unevenly spread over space and regardless of whether they make up a large or small proportion of the population as a whole. The advantage of adopting this approach is that it provides a consistent method for the comparison of the experiences of different groups in the population over time, in order to identify which groups appear to have polarised in particular directions and to different degrees. The method does not produce single statistics but rather creates tables of results which can be presented in graph form to show the shape of the distributions and the nature of any changes within those distributions. This has the advantage of keeping the results closely tied to the original data so that they can be interpreted in terms of how the census forms were filled in, something which is not often possible with conventional classical statistics.

For example, suppose that we are interested in population sub-group X as a proportion of population group Y , such as people out of work as a proportion of people available for work. First, the national mean level of X as a proportion of Y is calculated. Second, for each ward the ratio of the level of X as a proportion of Y within that ward to the national mean is calculated. For example, if the national unemployment rate is 10%, and within a particular ward 20% of the workforce are unemployed, that ward is given a ratio of 2. Across all wards these ratios tend to follow a normal distribution under a logarithmic

transformation irrespective of the statistic under consideration. We have chosen to tabulate the relevant population living in wards categorised according to these ratios using intuitive classifications. For instance, how many people lived in wards in 1991 where the proportion of the workforce unemployed was between two and three times the national average? Having constructed a table for one census, other tables can be produced using identical classifications for the other censuses, where the statistics are available. Through standardising by the national mean level, we avoid problems created by censuses being taken at very different times. For instance, without doing this, a comparison of unemployment between 1971 and 1991 would simply show that the population living in almost every ward had seen unemployment rise. By standardising we can see how the spread of unemployment has changed across space over time. This is a similar approach to that adopted in epidemiological studies which employ standardised mortality ratios to study inequality.

For the tables of results to be presentable it is helpful if they use relatively broad classifications. This allows a few pertinent summary statistics to be derived from them. Often even experienced social researchers will not know whether very simple distributions such as those for unemployment have become more or less concentrated across space over time, let alone the degree to which these changes have occurred. To be able to study these changes in greater detail we have chosen to produce graphs rather than to calculate statistics as there may be a great variety to the ways in which these distributions have changed. Our graphs are based on the common standard of dividing wards between a hundred equally spaced (on a logarithmic scale) groups of ratios. Because the statistics for the 10,444 wards do not result in uniform distributions, it is useful to smooth these graphs slightly to make visual comparison easier. (Simple one step binomial smoothing is used here.) Smoothing also reduces the possibility of aberrant statistics unduly influencing what we see. Having drawn a graph showing the distribution of a particular variable at each of the three census years, the graphs can be subtracted from each other to highlight the nature of the changes.

Obviously, more sophisticated approaches could be adopted. Already however we may have lost the interest of the majority of social scientists by adopting even this relatively simple approach. This is the main reason why we have not attempted a more complex analysis. Another reason is that this data is relatively new and so we are fairly unsure as to what we will find, so it would seem sensible to use this relatively straightforward method for the first investigation of the patterns within it. A final reason is that it is questionable whether the same approach should be used for analysing changes in the spatial distribution of people who are out of work, to that which is used to see how the proportion of children in different areas is changing. Going in and out of work involves entirely different processes from those which create children.

CHAPTER 6

Some Evidence for Social Polarisation in Britain, 1971–1991

In this section we present some of the findings from our analysis of social polarisation in Britain, using the methods outlined previously and in the context of the discussion in Chapters 2 and 3. It is worth re-iterating here what we mean by the term “polarisation”. Our method enables us to measure the relative deconcentration or concentration of one group of people within another, across small areas of the country. For example, if a country were to introduce universities for all people aged 18–21 and provide student accommodation for all these people, there would be a sudden polarisation of this age-group within the population as a whole. This is because after the introduction of universities, the proportion of young people found in small areas of this country would tend to either be higher or lower than it was before, as young people clustered into student accommodation around universities and left the homes which many of them would otherwise have remained in. This is, of course, a very restrictive and geographically specific definition of polarisation but it is at least one which we can operationalise.

6.1. THE POPULATION HAS BECOME LESS POLARISED OVER THE LAND

The most basic geographical distribution of people is their relationship to the land, most simply expressed through population density. In Britain in 1971 the mean population density was 231 people per km². As the population increased this rose to 233 and 238 in 1981 and 1991, respectively. These densities, however, have little meaning from the point of view of people. Relatively few people lived in areas with a population density as low as this. The median population density of the population (calculated for 1981 ward areas) was 1987 in 1971 per km² and this fell to 1794 and 1775 in 1981 and 1991, respectively. As the population increased it has also spread more evenly over the land and so these two measures of average density moved in different directions. All these figures can be found in Table 1 which also shows in more detail how the distribution of population by population density has altered between the three censuses.

The last column in the table shows the distribution of population density in 1991 in relation to the national mean population density at that time. It shows that 1% of the

TABLE 1. Resident population density 1971, 1981 and 1991: residents per km²

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	7	6	1	231	233	238
Median	-212	-19	-193	1987	1794	1775
<i>Distribution of population by ward around the mean population density (per cent)</i>						
Up to 1%	-0	-0	-0	0	0	0
1-2%	0	0	0	0	0	0
2-2.5%	-0	-0	0	0	0	0
2.5-3.33%	-0	0	-0	0	0	0
3.33-5%	-0	-0	0	0	0	0
5-10%	-0	-0	-0	1	1	1
10% to 1x	1	0	0	13	13	14
1x to 10x	4	1	3	34	37	38
10x to 20x	4	1	3	25	28	29
20x to 30x	-4	-2	-2	15	13	11
30x to 40x	-2	-1	-1	5	4	3
40x to 50x	-2	-0	-2	3	2	1
50x to 100x	-2	-0	-2	3	1	1
100x and above	-0	0	-0	0	0	0

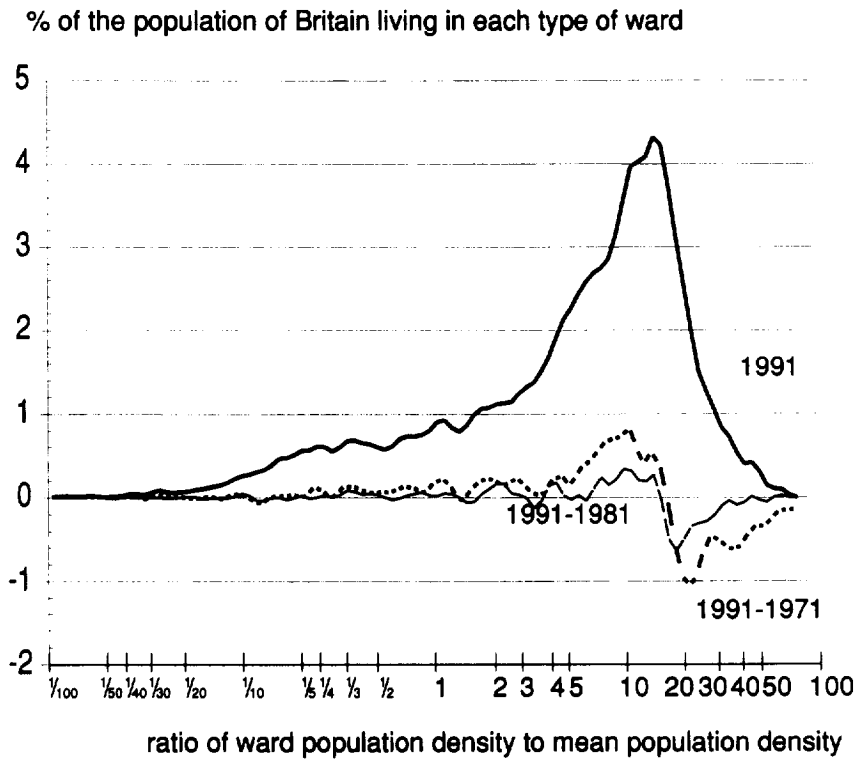


FIG. 1. Resident population density in Britain, 1971, 1981 and 1991.

population lived in wards where the density of population was between 20 and 10 times lower than the national mean, hence in very rural areas. Fourteen per cent of the population lived in wards where the population density was between a tenth of the national mean and the national mean, and so on. By calculating these proportions in relation to the national mean at the time of each census we are able to concentrate on the changing geographical pattern of this statistic rather than on the overall national changes which have occurred over this period. The two columns next to the 1991 column show the distribution of population by population density in 1971 and 1981 and the three columns at the left of the table show the changes between the census years in terms of percentage point shifts. The first column shows the 20 year change.

There has been an aggregate 9% increase in the share of the population living in wards which have a population density which is close to the national average (between a tenth and 20 times the national average). There has been an equivalent decrease in the population living in very dense wards (between 20 and 100 times the national average population density). None of this should be surprising to anyone familiar with the changing human geography in Britain. We have spelt this out here to illustrate how these types of statistics portray changes such as counter-urbanisation. Figure 1 shows these changes in graphical form, illustrating three points: first, the shape of the distribution of population density in 1991; second, the changes which resulted in that shape which occurred over the 20 years from 1971; and third, the share of those changes which could be attributed to population movements in the 1980s. If Table 1 and Fig. 1 are studied in detail it is evident that the bulk of the decline of the very high density areas occurred in the 1970s and the 1980s saw a much reduced continuation of trends from the 1970s. In essence people in Britain have become more evenly spread over the land — that is, people have become less polarised in terms of space when everybody is considered as a single group.

6.2. WITHIN THE POPULATION, CHILDREN HAVE BECOME LESS POLARISED

Having accepted that the population of Britain has become more evenly spread over the land, what is then of interest is how different groups within the population have changed in their concentrations irrespective of the overall movement of the population. One of the simplest groups of people to study are children, here defined as residents aged under 16 years. Nationally, the proportion of children in the population has fallen from one quarter to one fifth between 1971 and 1991. Children tend to be very evenly distributed among the population for rather obvious reasons: almost all children are brought up in households by adults and most adults tend to have children sometime in their lives. Table 2 shows the same statistics for the distribution of children within the population as Table 1 showed for the distribution of people over the land. The one difference between the two tables is that a very different range of proportions is shown. Whereas people over

TABLE 2. Children 1971, 1981 and 1991: proportion of residents aged 0-15

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	-5	-2	-3	25	22	20
Median	-5	-2	-3	25	22	20
<i>Distribution of population by ward around the mean proportion of children (per cent)</i>						
Up to 50%	-1	-0	-0	1	1	1
50-67%	-0	0	-0	3	2	2
67-71%	-0	0	-0	2	1	1
71-77%	-0	0	-0	3	3	3
77-83%	-1	-0	-0	6	6	6
83-91%	0	1	-0	14	13	14
91-1x	3	1	1	22	24	25
1x to 1.1x	1	-1	1	23	24	23
1.1x to 1.2x	-0	-1	1	13	14	13
1.2x to 1.3x	-1	-0	-1	7	6	6
1.3 to 1.4x	-0	0	-0	3	3	3
1.4x to 1.5x	-0	-0	-0	2	1	1
1.5x to 2x	-0	0	-0	1	1	1
2x and above	0	0	-0	0	0	0

the land do live at densities ranging from 100th of the national average population density to 100 times the national average population density, the proportion of children making up the population of each ward in Britain hardly ever falls below half the national

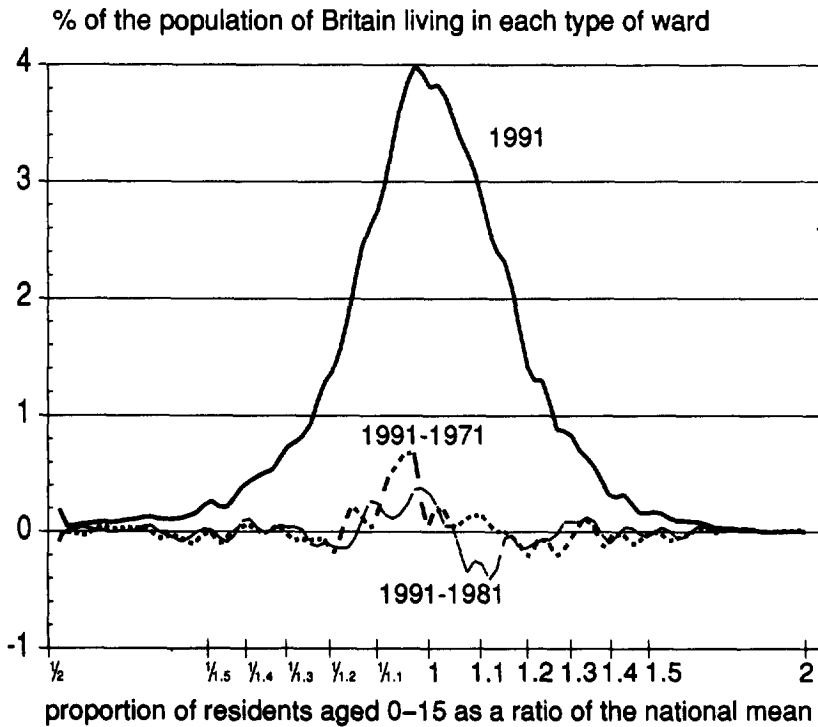


FIG. 2. Residents aged under 16 in Britain, 1971, 1981 and 1991.

average proportion of children or is above twice the national average proportion of children. Indeed, the table shows that 90% of children live in wards where the proportion of children was within 30% of the national average proportion in 1991. In 1971 this proportion was 88% of all children. Hence, ever so gradually, children have become less polarised within the population in Britain. Fewer children live in wards with very few or very many other children. Figure 2 shows this graphically, illustrating how slight the changes have been but also how they have been consistent over both decades. It is therefore difficult to find evidence for any thesis which suggests that Britain is dividing spatially into areas with children and areas which are childless at the ward level. This contrasts with the findings of the *People and Places* report which used data drawn from district statistics (see Chapter 3).

6.3. WITHIN CHILDREN AS A GROUP, THOSE LIVING WITHIN MARRIED COUPLE HOUSEHOLDS HAVE POLARISED

The method of polarisation which we have developed allows for the changing spatial distribution of any group within any other group to be analysed. To do this, however, comparable statistics must exist across the censuses and, as we are more specific in our interests, the likelihood of such statistics existing decreases. For example, one of the few statistics about children which can be measured from each of the last three censuses is the proportion in each ward living in married couple families. A married couple family is a group of people who are related to each other, two through marriage and the others through birth or adoption. Because of the complexity of identifying family relationships from census forms, these key statistics were only calculated for a tenth of the population at each census. Nevertheless, figures are produced which appear to be robust, as the following results illustrate. The main reason for looking at this group of children is that children not living in married couple families may well have less access to resources than other children: if they are becoming spatially separated from their counterparts in married couple families, then social polarisation of some consequence may have occurred.

In 1971, 92% of all children were growing up in married couple families. By 1981 this proportion had fallen to 87% and by 1991 it had fallen to 76%. This means that in 1991 almost a quarter of all children were in family groups with only one adult or with two adults who were not married in the household in which they were enumerated as usually resident on census night. Again, there is not a huge variation within children (by area) of the proportion in married couple families, but it is significant. It is, however, rarely less than half the national average and rarely more than 20% above the national average (as to be this high means that almost 100% of children in a ward must be living in married couple families). In 1971, 94% of all children lived in wards where the proportion living in married couple families was within 10% of the national mean. By 1981 this proportion had fallen to 80% and by 1991 it had fallen to 45%. By 1991 the majority of children were either living in wards where childhood inside married couple families was highly

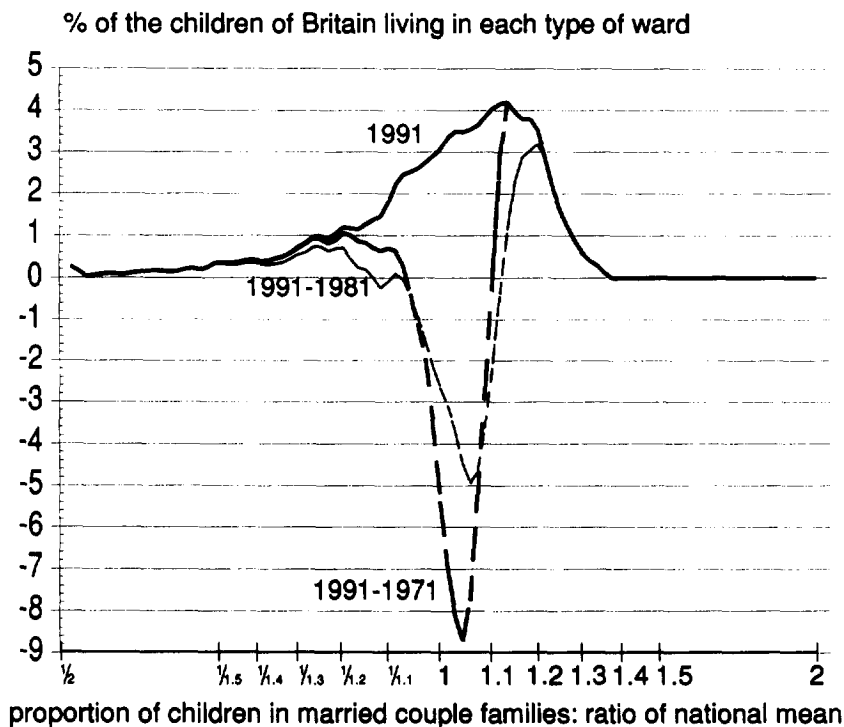
TABLE 3. Children in married couple families 1971, 1981, 1991: proportion of dependent children

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	-16	-11	-5	92	87	76
Median	-16	-11	-5	92	87	76

Distribution of children by ward around the mean proportion in married couple families (per cent)

Up to 50%	1	1	0	0	0	1
50-67%	3	3	0	0	0	3
67-71%	2	2	0	0	0	2
71-77%	3	2	1	0	1	3
77-83%	6	4	2	1	2	6
83-91%	4	0	4	5	9	10
91% to 1x	-19	-10	-8	38	30	19
1x to 1.1x	-30	-24	-6	56	50	26
1.1x to 1.2x	23	16	7	0	7	23
1.2x to 1.3x	6	6	0	0	0	6
1.3x to 1.4x	0	0	0	0	0	0
1.4x to 1.5x	0	0	0	0	0	0
1.5x to 2x	0	0	0	0	0	0
2x and above	0	0	0	0	0	0

likely, or where it was relatively unlikely (although still, just, the norm). This is a dramatic change over quite a short period. It has been made possible mainly because the group of children not living in married couple families was so low in 1971 that any

**FIG. 3. Children in married couple families in Britain, 1971, 1981 and 1991.**

increase was likely to lead to polarisation, although this has not occurred with another rising group — the proportion with access to two or more cars (see below). More speculatively, children were likely to be living outside married couple families in 1971 due to the death of one of their parents which was a fairly random event spread quite evenly over the country. In contrast, children are likely to be living outside married couple families in 1991 because their parents had chosen not to marry and the distribution of where people would choose not to marry is very geographically uneven. Marriage has become unfashionable most rapidly in London but is still an almost universal norm in many villages and small rural towns. Figure 3 illustrates graphically just how dramatic this change has been and how changes in behaviour in the 1980s can be attributed for most of it.

6.4. PENSIONERS HAVE BECOME LESS POLARISED IN THE 1980s

As with children, another simple group to define within the population by age are pensioners — residents aged 60 and over for women or 65 and over for men. The proportion of pensioners within the population has risen from 16% to 18% and then 19% at each of the last three censuses. As Table 4 shows, the spatial distribution of pensioners has become less polarised over the last 20 years. There has been an increase of 6% in the elderly population living in wards where the proportion of people who are elderly has been within 10% of the national average. This spatial equalisation of the elderly population occurred both in the 1970s and the 1980s. Figure 4 shows this very clearly.

TABLE 4. Pensioners 1971, 1981 and 1991: proportion of residents aged 60/65+

Per cent change	1991–1971	1991–1981	1981–1971	1971	1981	1991
Mean	2	1	1	16	18	19
Median	2	1	1	15	17	18
<i>Distribution of population by ward around the mean proportion of pensioners (per cent)</i>						
Up to 50%	0	-0	0	0	0	0
50–67%	-0	-0	-0	0	0	0
67–71%	-0	-0	-0	0	0	0
71–77%	-1	-1	-0	1	1	0
77–83%	-2	-1	-1	4	3	2
83–91%	-2	-1	-1	8	8	7
91% to 1x	6	4	2	38	41	44
1x to 1.1x	0	-1	1	41	42	42
1.1x to 1.2x	-1	-0	-1	5	4	4
1.2x to 1.3x	-1	-0	-0	2	1	1
1.3x to 1.4x	-0	-0	-0	0	0	0
1.4x to 1.5x	0	0	0	0	0	0
1.5x to 2x	0	0	0	0	0	0
2x and above	0	0	0	0	0	0

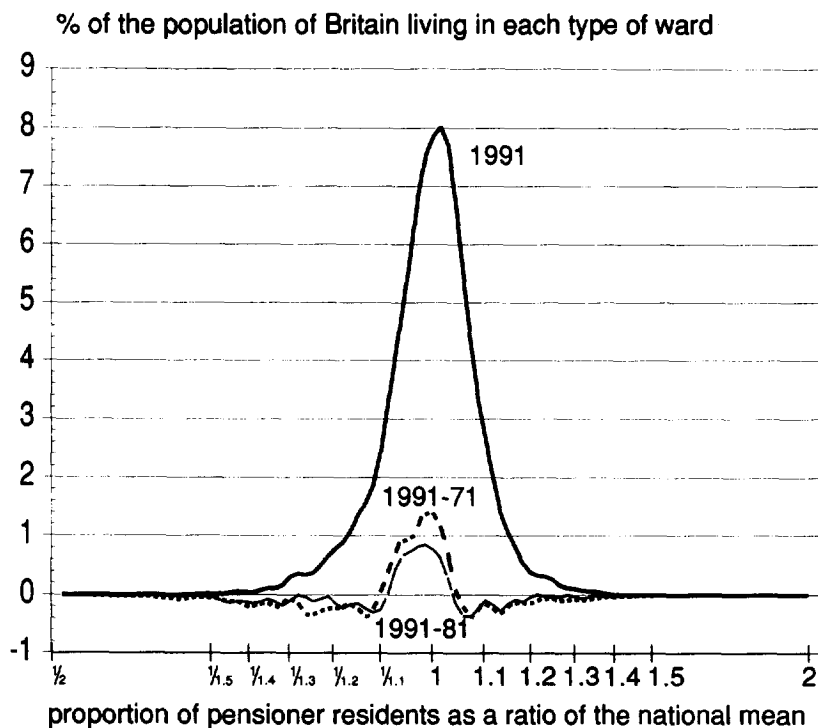


FIG. 4. Residents aged over 59/64 in Britain, 1971, 1981 and 1991.

Other possible reasons for this change are that as the group of pensionable age residents has become larger and the health of younger pensioners has improved, the differences between pensioners and other residents have become less clear. Similarly, as early retirement has increased, the number of people of working age who may be living similar lives to pensioners has also increased. Thus, it is not surprising to find that pensioners are less spatially differentiated from the population as a whole than they used to be. If pensionable age had risen over the last 20 years in line with the ageing of the population as a whole, then this equalisation may not have been so apparent. Just as with children, people of pensionable age appear at the ward level to be more integrated within the population at large than they used to be, albeit only slightly more integrated. The vision of people of pensionable age increasingly being segregated from the population at large is not borne out by the available statistics. Partly this may be of older people's choosing. In recent years, for instance, migration of the elderly to traditional resort, port and retirement districts has slowed down. Unfortunately, unlike children, it is difficult to find from the censuses breakdowns of pensioners by characteristics which would show other social changes of interest.

6.5. WITHIN THE POPULATION, WORKERS HAVE POLARISED IN THE 1980s, BUT NOT IN THE 1970s

After children and pensioners, the remaining population of Britain can be described as people of working age. Because the former two groups have not polarised, this latter group cannot have polarised. The reasons for this are the same reasons which explain why, if there is segregation of Black people within the United States, and all other people are classified as White, then there must be segregation of the white population also, by definition.

An alternative way of grouping people other than by age is by whether they are working or seeking work, here termed "in the workforce". This is an important measure because it is through membership of the workforce that the vast majority of income is earned and it is differences in income which have concentrated the debate on polarisation nationally. As Table 5 shows, the proportion of the population of Britain who were in the workforce has risen from 46% to 47% and then to 49% at each census respectively. In 1971 75% of residents lived in wards where the proportion who were within the workforce was within 10% of the national average. By 1981 this proportion had risen to 80%. More and more people were living in areas which had a share of workers similar to the national average. Indirectly, wages and salaries (in numbers if not in value) were becoming more equally spread across the population by area. However, by 1991 the proportion of the population living in wards with this near to average share of workers had fallen by over a tenth to 69%. The number of people living in areas with above average numbers of workers rose by roughly a half and *the number of people living in areas with 83% of the average or fewer workers increased three-fold*. All these figures can be calculated from Table 5. Hence

TABLE 5. Residents in the workforce 1971, 1981 and 1991: proportion of residents

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	2	1	1	46	47	49
Median	3	1	1	46	47	48
<i>Distribution of population by ward around the mean proportion in the workforce (per cent)</i>						
Up to 50%	-0	-0	-0	0	0	0
50-67%	-0	0	-0	0	0	0
67-71%	0	0	0	0	0	1
71-77%	1	1	-0	1	0	1
77-83%	2	3	-1	2	2	4
83-91%	1	3	-1	10	9	11
91%to 1x	-7	-7	0	37	37	30
1x to 1.1x	0	-5	5	38	43	39
1.1x to 1.2x	3	5	-2	9	8	12
1.2x to 1.3x	0	1	-1	1	1	2
1.3x to 1.4x	-0	-0	-0	0	0	0
1.4x to 1.5x	-0	-0	-0	0	0	0
1.5x to 2x	-0	-0	0	0	0	0
2x and above	0	0	-0	0	0	0

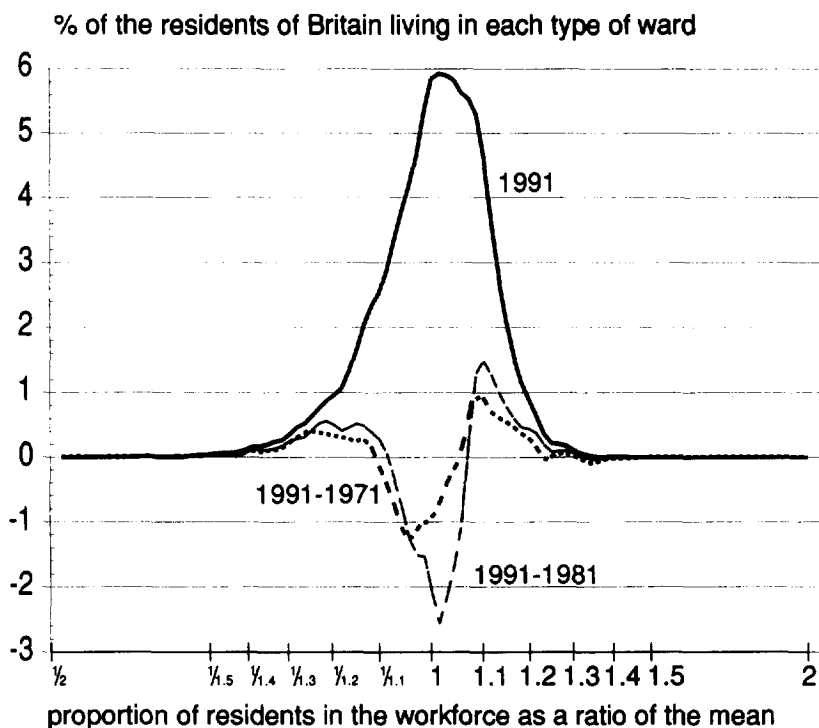


FIG. 5. Residents in the workforce in Britain, 1971, 1981 and 1991.

the 1980s saw a reversal of the spatial equalisation of workers which was taking place a decade earlier. Figure 5 illustrates this graphically.

The workforce within Britain is now becoming more spatially polarised. What is more, we know from the results above that this is not due to a spatial concentration of people of working age, because children and pensioners are becoming more evenly spread across the population. Therefore, it must be that within the population of Britain who are of working age spatial social divisions are growing. These are examined below.

6.6. WITHIN WORKERS, THE UNEMPLOYED HAVE POLARISED IN THE 1970s, BUT NOT IN THE 1980s

The most obvious candidate for an explanation of spatial polarisation across people of working age is the huge rise in unemployment which has occurred over the last 20 years. In 1971, 4% of the workforce were unemployed. This rose to 9% in 1981 and 11% in 1991 (including people on government schemes). The distribution of the unemployed within the workforce is more uneven than that of any other spatial distributions analysed so far (other than population density) so Table 6 employs a range which varies from

TABLE 6. Unemployment in the workforce 1971, 1981 and 1991: proportion of the workforce

Per cent change	1991–1971	1991–1981	1981–1971	1971	1981	1991
Mean	7	2	5	4	9	11
Median	5	1	4	3	7	8
<i>Distribution of the workforce by ward around the mean proportion who are unemployed (per cent)</i>						
Up to 10%	-0	-0	-0	0	0	0
10–20%	-0	-0	-0	0	0	0
20–25%	0	-0	0	0	0	0
25–33%	0	-1	1	1	2	1
33–50%	4	-1	5	8	13	12
50–67%	1	3	-2	19	18	21
67% to 1x	-6	1	-7	34	27	28
1x to 1.5x	-1	-2	1	24	24	23
1.5x to 2x	1	-1	2	8	10	9
2x to 3x	1	0	1	4	5	5
3x to 4x	0	0	0	1	1	1
4x to 5x	-0	0	-0	0	0	0
5x to 10x	-0	0	-0	0	0	0
10x and above	-0	0	-0	0	0	0

unemployment rates in wards being between a tenth of the national average and ten times the national average. What the table shows is that, in 1971, 85% of the workforce lived in wards where unemployment rates were more than half but less than twice the national average. By 1981 this proportion had fallen to 79%. Spatially, unemployment polarised as it rose at the end of the 1970s (and rose particularly dramatically in 1980 and 1981). The proportion of the workforce living in wards with above twice the national average rate of unemployment rose from 5% to 6% while the proportion living in wards with less than half the national average unemployment rate rose from 9% to 15%. By 1991 the latter proportion had fallen to 13% and the proportion of the workforce living in wards where the unemployment rate was between half and twice the national average had risen to 81%. More people were again living in more average areas, hence some of the spatial polarisation of the unemployed which took place in the 1970s was reversed in the 1980s.

This may appear to be a surprising result. The Commission on Social Justice report highlighted increased polarisation of the unemployed as a particularly strong indictment of the 1980s, but we cannot find evidence from the censuses of such increased polarisation. There are several reasons for this. Most importantly, the timing of the censuses is crucial. The 1981 census took place during a dramatic rise in unemployment rates and the 1991 census was taken just after unemployment rates had risen in the south of England for the first time significantly since the 1930s. Therefore our comparisons between 1981 and 1991 highlight the spread of unemployment to more affluent areas in the South. At the same time in many inner city wards where unemployment rates were already very high in 1981 they could not rise much higher by 1991 so it is difficult to see how, by our measures, increased polarisation of this statistic could have been found. In defence of our methodology, it should be remembered that the censuses provide the only widespread opportunity for people to define for themselves whether they are unemployed. People were more likely to define themselves as unemployed across Britain in 1991

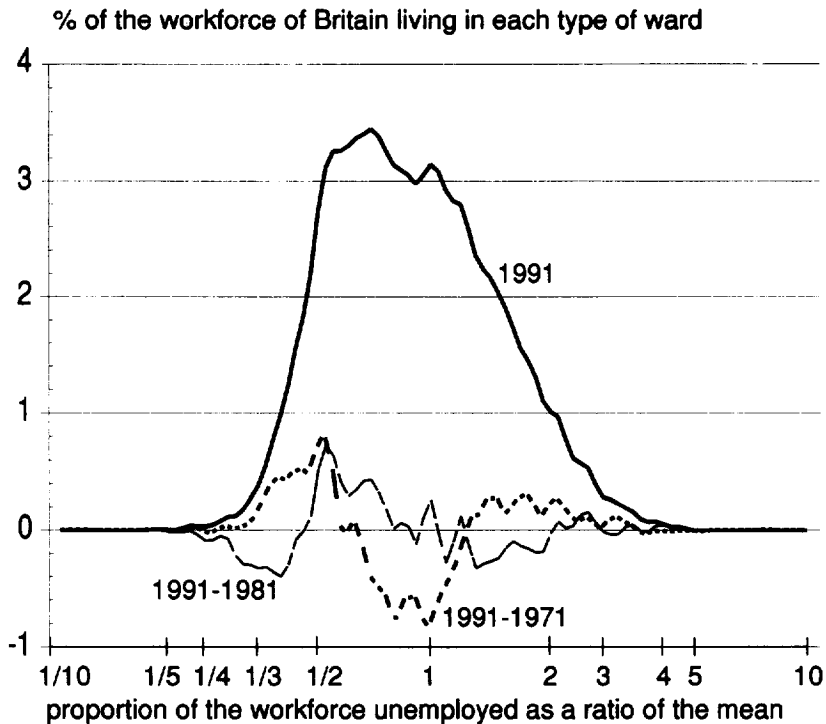


FIG. 6. Unemployment in the workforce in Britain, 1971, 1981 and 1991.

irrespective of where they lived, as opposed to 1981. Figure 6 shows graphically how the 1980s pattern of change differed from that for the 1971–1991 period as a whole. (See also Chapter 3 for a discussion of the calculations of the Commission for Social Justice on this issue.)

6.7. WITHIN WORKERS, MANAGERS AND PROFESSIONALS HAVE BECOME LESS POLARISED IN THE 1980s

A very different group of people in the workforce to the unemployed are those who have employment as managers or professionals. Each of the last three censuses have subdivided the 10% sample of workers according to their Socio-Economic Group (SEG) and these groups were sufficiently comparable to allow comparison over the last 20 years of the spatial distribution of managers and professionals. The definition used here is of people in SEGs 1 to 4 and 13. These are workers who we can assume enjoy some of the highest incomes in Britain because of the nature of the work they do. In 1971, 13% of the workforce were managers and professionals, this rose to 15% and then 19% in 1981 and 1991, respectively. The distribution of this social group is uneven to a similar degree

TABLE 7. Managers and professionals 1971, 1981 and 1991: proportion of workforce

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	6	4	2	13	15	19
Median	7	4	3	10	13	17
<i>Distribution of the workforce by ward around the mean proportion who are managers/professionals (per cent)</i>						
Up to 10%	-0	-0	-0	0	0	0
10-20%	-1	-1	-0	1	1	0
20-25%	-1	-1	-0	1	1	1
25-33%	-2	-2	-1	4	4	2
33-50%	-5	-3	-3	14	12	9
50-67%	-0	-0	-0	15	14	14
67% to 1x	6	5	2	23	25	29
1x to 1.5x	9	5	4	22	25	30
1.5x to 2x	0	-1	1	12	13	12
2x to 3x	-4	-2	-2	7	5	3
3x to 4x	-1	-0	-1	1	0	0
4x to 5x	-0	-0	-0	0	0	0
5x to 10x	-0	-0	-0	0	0	0
10x and above	0	0	0	0	0	0

as unemployment so Table 7 uses the range of areas with ten times less the national average proportion to areas with up to ten times above the national average proportion. In 1971 72% of the workforce lived in wards where the proportion of managers and professionals varied between a half and twice the national average. By 1981 this proportion had risen to 77% of the population living in these "typical" wards and by 1991 the proportion of workers living in these kinds of wards had risen to 85%. What these figures demonstrate is that this social group was becoming less exclusive geographically over the period. Most of this change occurred in the 1970s although the 1980s saw a continuation of the trend. Figure 7 shows this graphically. We know that the decrease in the polarisation of managers and professionals is not simply due to rising numbers, just as the proportion of children in families living in households without married couples rose, but has polarised spatially.

One reason why a more equitable distribution of this most affluent social group might have occurred is because job titles tended to be upwardly mobile over the period. A shop assistant, for example, became a sales manager, although what they did may not have changed (despite the census coding procedures aim to minimise this inflation). It is difficult, however, to explain such a persistent trend towards deconcentration for this reason alone and the fact that unemployment in the 1980s appears to have become less spatially concentrated suggests that, in general, the social differences between people in work are less and less expressed through their locations at the ward level. If, for example, gentrification in London had increased the proportions of managers and professionals living in wards where they were previously rare and, simultaneously, rising unemployment in Surrey meant that the children of more densely concentrated members of this group could not find employment at the end of the 1980s, then it would not be

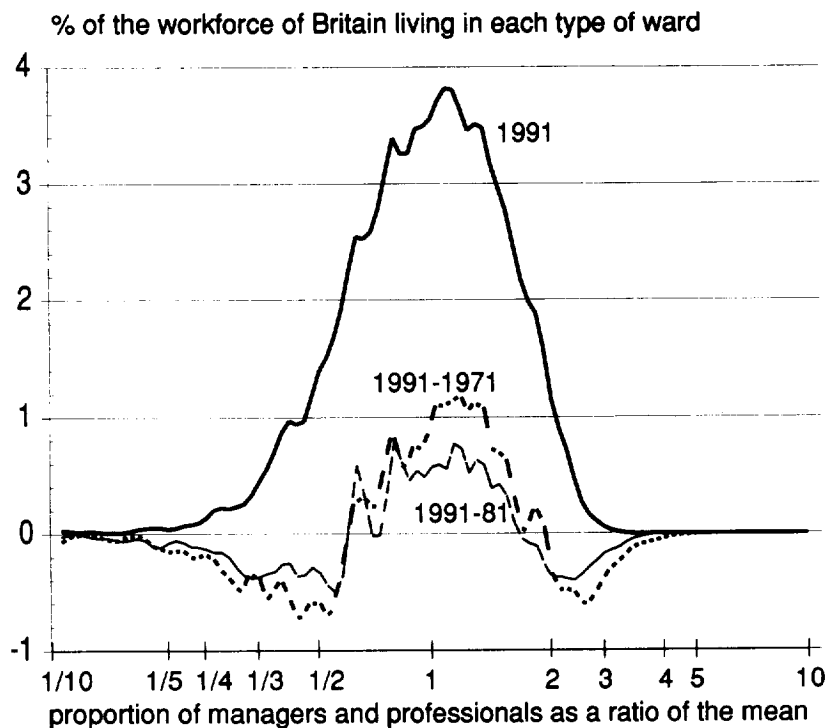


FIG. 7. Managers and professionals in Britain, 1971, 1981 and 1991.

surprising to find a spatial deconcentration. Spatial changes of course do not necessarily imply that social barriers are changing.

6.8. HOUSEHOLDS IN COUNCIL TENURE HAVE POLARISED SLIGHTLY IN THE 1980s

One group of people who are generally assumed to have become spatially polarised over the 1980s are local authority tenants. This is because it is known that the introduction of the Right to Buy legislation in the early 1980s resulted in the "better" council properties being privatised first. In 1971 30% of all households were living in council tenure and this proportion had actually risen by 1% by 1981. By 1991, however, the proportion had dropped to 21% and the distribution of council tenants was as uneven as that of the unemployed and of managers and professionals. Table 8 uses the same ranges as were used in Tables 6 and 7. The table shows that in 1971 only 53% of the population lived in areas where the proportion of households in council tenure was between a half and twice the national average. By 1981 this proportion had fallen to 46%. A (slight) majority of the population either lived in wards which were, in effect, council estates or in which there were hardly any council houses. By 1991 the proportion of

TABLE 8. Households in council tenure 1971, 1981 and 1991: proportion of households

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	-8	-10	1	30	31	21
Median	-6	-8	2	21	22	14
<i>Distribution of households by ward around the mean proportion in local authority tenure (per cent)</i>						
Up to 10%	-1	-0	-1	7	6	6
10-20%	0	1	-0	6	6	6
20-25%	0	0	-0	3	3	4
25-33%	0	1	-0	5	5	6
33-50%	0	0	0	11	11	12
50-67%	1	0	1	10	11	11
67% to 1x	-1	-1	0	17	18	16
1x to 1.5x	1	0	1	16	16	16
1.5x to 2x	0	-1	1	10	11	10
2x to 3x	-1	-2	1	11	12	10
3x to 4x	-0	2	-2	3	1	3
4x to 5x	0	0	0	0	0	0
5x to 10x	0	0	0	0	0	0
10x and above	0	0	0	0	0	0

households living in wards with between a half and twice the national average number of households in council tenure had risen again to 53%, the same level which it had held in 1971.

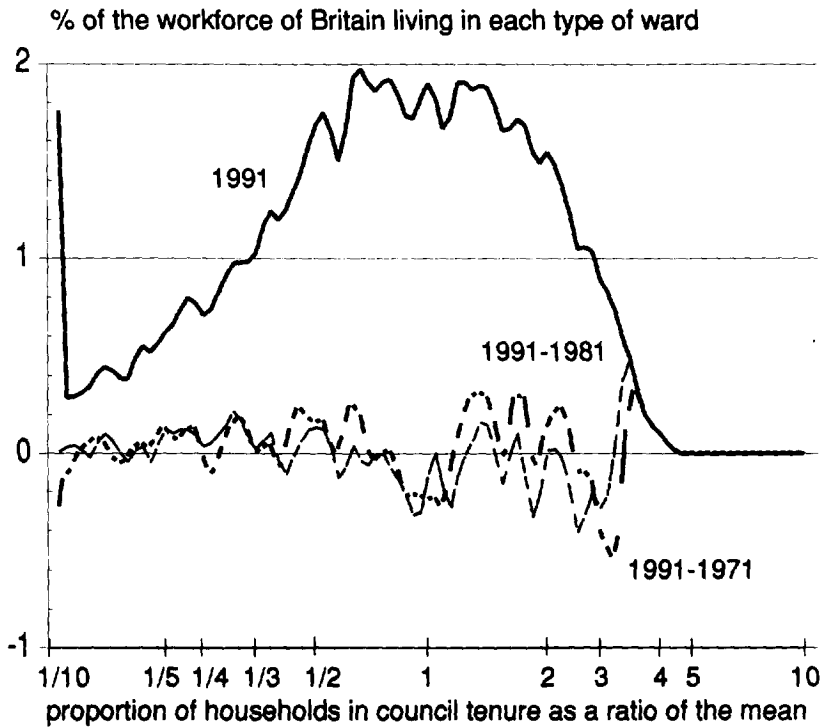


FIG. 8. Households in council tenure in Britain 1971, 1981 and 1991.

On reflection, these changes are not surprising. Council housing was still being built in the 1970s and in general was built as estates. This naturally led to increased spatial polarisation of council housing, which was augmented by the spatially clustered patterns to slum clearances and private building. Very few council houses were built in the 1980s and the transfer of houses through the Right to Buy legislation to owner occupation was a more uneven spatial process than that which built the estates in the first place. Hence it is to be expected that, in general, knowing where a person lives nowadays is less good an indicator of whether they are likely to be living in a council house than it used to be. This is another way in which our measure of polarisation can be viewed. Table 8 and Fig. 8 do show one interesting change at the extreme. In 1971 3% of all households lived in wards with more than three times the national average proportion of council houses. By 1981 this share had fallen to 1% of all households, but by 1991, as the national average proportion of council houses fell, this share rose again to 3%. An imaginative reader might interpret this as the beginnings of evidence for residualisation, but it is obviously far too little evidence to go on alone. Figure 8 shows graphically how unstructured the spatial change in tenure has been in the last 20 years when compared with the last seven figures which show population changes. Because tenure changes depend to a large extent on the building and demolition of housing stock and the formation of new households, which all take time, we can expect change over just two decades to appear erratic.

6.9. THE SPREAD OF HOUSEHOLDS WITHOUT WASHING FACILITIES HAS REMAINED CONSTANT

A traditional concern of British censuses has been to monitor the levels of amenities which the population in different areas has access to. We would also expect to see evidence in the spatial distribution of amenities if there has been substantial polarisation of certain groups within society. However, there has been a dramatic improvement in the physical standards of living in Britain over the last 20 years which means that it is difficult to study social change through the distribution of goods and facilities. For instance, a recent Rowntree study expressed concern over the unequal distribution of video recorders amongst families in Britain. We obviously could not compare the distribution in 1991 with that of 1971 given that there were no video recorders in 1971. A similar but opposite problem occurs with amenities as measured by the census. The measure which includes most people, and which can be taken for the last three censuses is the proportion of households without exclusive access to a bath/shower and an inside toilet. In 1971 9% of households did not have exclusive access. This fell to 2% in 1981 and was negligible by 1991. Nevertheless, one advantage of the technique we have developed is that it looks at the distribution having allowed for changes in the national mean, even changes as dramatic as have occurred in the provision of basic amenities.

Table 9 shows that in 1971 14% of households lived in wards where they were twice as likely as the national average not to have exclusive use of washing facilities in their

TABLE 9. Households without washing facilities 1971, 1981 and 1991: proportion of households

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	-8	-2	-7	9	2	0
Median	-4	-1	-3	4	1	0
<i>Distribution of households by ward around the mean proportion lacking exclusive facilities (per cent)</i>						
Up to 10%	-0	1	-1	14	14	14
10-20%	-1	-2	1	9	11	9
20-25%	0	0	-0	5	4	5
25-33%	2	1	1	6	6	7
33-50%	2	2	0	10	10	12
50-67%	-1	-1	0	8	9	8
67% to 1x	0	0	0	13	13	13
1x to 1.5x	-1	0	-1	13	12	12
1.5x to 2x	-0	-0	-0	7	7	7
2x to 3x	-1	-1	-0	8	8	7
3x to 4x	-0	-0	-0	3	3	3
4x to 5x	-0	0	-0	2	1	1
5x to 10x	1	0	1	1	2	2
10x and above	0	0	0	0	0	0

home. By 1981 this percentage had not changed and by 1991 it had fallen by one percentage point to 13%. In other words, the distribution of unequal access to washing facilities hardly altered over 20 years despite the dramatic overall improvement in access.

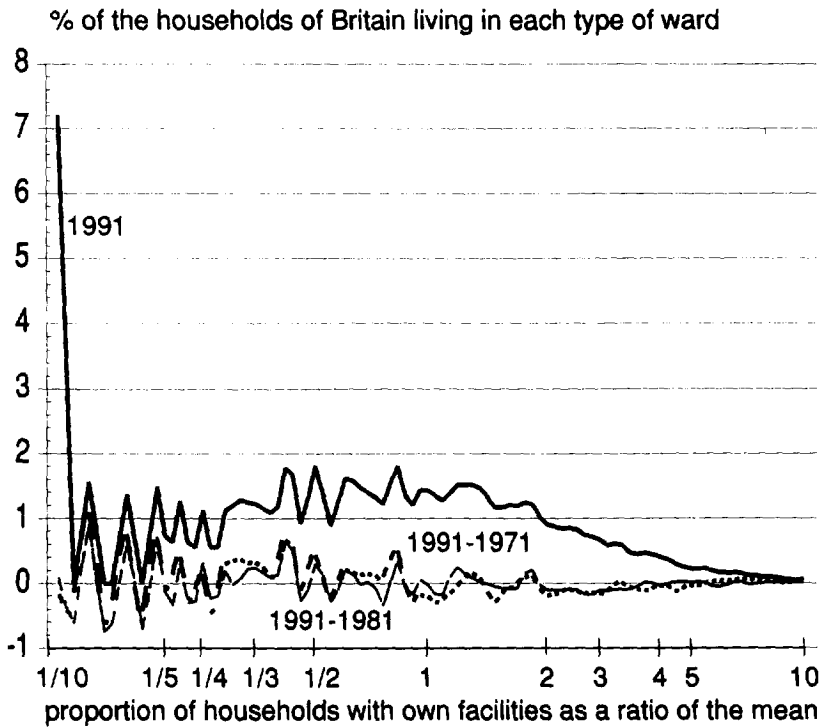


FIG. 9. Households without own bath/shower in Britain, 1971, 1981 and 1991.

Figure 9 shows the distribution in 1991 of households lacking exclusive access and the changes which took place over the last 20 years. The graph is very uneven because it is based on such low numbers of people. Note that 14% of households, at each of the last three censuses, lived in wards where virtually nobody lacked exclusive access to these facilities. What the graph shows is a reflection of the basic static pattern of inequality in Britain, a pattern which changes very slowly, despite dramatic technological advantages.

6.10. HOUSEHOLDS WITH TWO CARS HAVE BECOME LESS POLARISED

At the opposite extreme from lack of access to toilet facilities, is the availability of expensive goods such as cars. Each of the last three censuses measured how many households in each ward had use of two or more cars.

In 1971 only 9% of households were in this apparently wealthy group. By 1981 this proportion had risen to 15% and it rose even faster in the 1980s to stand at 23% of all households having access to two or more cars by 1991. Note that "having access" does not necessarily mean "own", and that we know nothing of the value of these cars. Nevertheless, the distribution of these households is one of the best indicators we have of the changing detailed geography of wealth in Britain.

Table 10 shows that in 1971 63% of all households lived in wards where the proportion of households with two or more cars varied between a half and twice the national average proportion. By 1981 this figure had risen to 67% and by 1991 it stood at 77%. More and more households were living in wards in which the proportion of households with access to two or more cars was becoming more and more like the national average. At the extreme in 1981, 9% of households lived in wards where the proportion with access to

TABLE 10. Households with two or more cars 1971, 1981 and 1991: proportion of households

Per cent change	1991-1971	1991-1981	1981-1971	1971	1981	1991
Mean	15	8	7	9	15	23
Median	13	7	6	6	12	19
<i>Distribution of households by ward around the mean proportion with access to two or more cars (per cent)</i>						
Up to 10%	-0	0	-0	1	1	1
10-20%	-1	-0	-1	3	2	2
20-25%	-1	-0	-1	3	2	2
25-33%	-2	-0	-1	6	5	4
33-50%	-4	-3	-1	14	13	10
50-67%	-1	-1	-0	14	13	13
67% to 1x	4	2	3	20	22	24
1x to 1.5x	7	4	3	19	22	26
1.5x to 2x	4	2	2	10	12	14
2x to 3x	-4	-3	-1	9	8	5
3x to 4x	-2	-1	-1	2	1	0
4x to 5x	-0	-0	-0	0	0	0
5x to 10x	-0	0	-0	0	0	0
10x and above	0	0	0	0	0	0

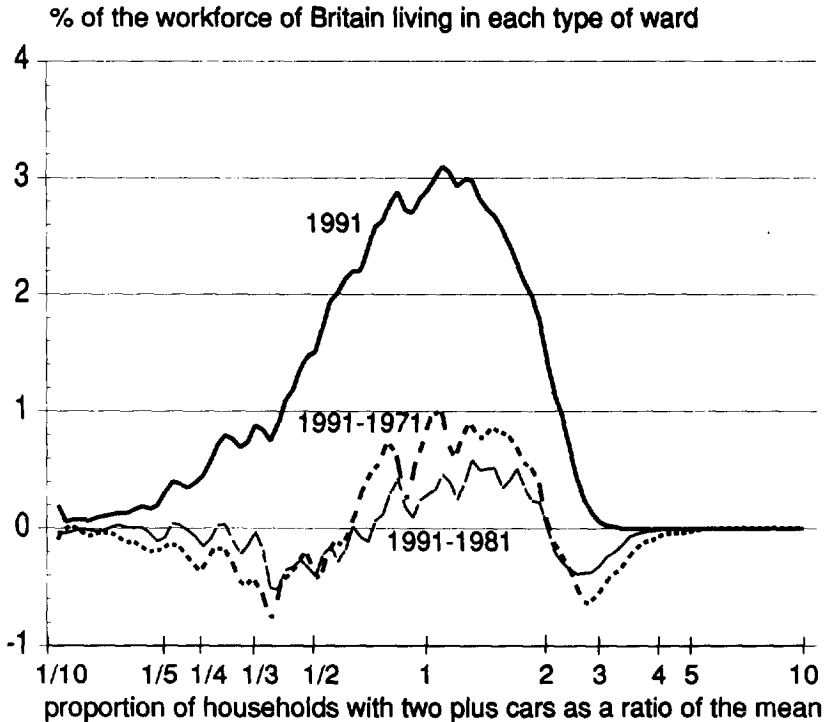


FIG. 10. Households with two or more cars in Britain, 1971, 1981 and 1991.

two or more cars was over twice the national average. This fell to 5% by 1991. Figure 10 shows graphically this process of equalisation in this basic form of wealth across Britain and it can be seen from the figure and the table that the 1980s accounted for the bulk of this change. What we are *not* saying here is that wealth in general became more widely distributed, although the Rowtree Foundation Income and Wealth Study found no evidence to suggest growing wealth inequality (see Chapter 3). What does appear to have happened is that cars, which 20 years ago were viewed as a luxury, are now seen as a necessity by many households, just as inside toilets before they have become more equitably distributed. It is likely that the apparent equalisation of wealth that has occurred through goods such as cars is at least negated by increasing inequality of wealth held in other forms such as stocks and shares. Unfortunately, the census does not ask direct questions above an individual's wealth and income.

6.11. PEOPLE OF WORKING AGE NOT IN WORK IN BRITAIN HAVE BECOME MORE POLARISED IN THE 1980s

The previous ten tables and figures, and the commentary accompanying them, have presented a cross-section of the spatial changes that have occurred to many of the

minority of characteristics and attributes which were consistently measured by each of the last three censuses. Perhaps the most interesting findings have concerned the plight of people who are not working and people of working age. It is not possible to count the number of residents of working age who are not working in Britain in the 1971 census, so here comparisons are only made between 1981 and 1991. Table 11 shows that in 1981 31% of working age residents were not working and this had risen to 32% by 1991. In 1981 43% of the working age population lived in wards where the proportion not working varied by less than 10% from the national average. This proportion had fallen to 30% by 1991 (illustrated graphically in Fig. 11). Nowadays you are likely to either live in a

TABLE 11. Residents of working age not in work 1981 and 1991: proportion of residents

Per cent change	1991-1981	1981	1991
Mean	0	31	32
Median	-1	30	29
<i>Distribution of working age residents by ward around the proportion not in work (per cent)</i>			
Up to 50%	0	0	0
50-67%	2	0	2
67-71%	3	1	3
71-77%	4	4	8
77-83%	3	10	13
83-91%	-2	19	17
91% to 1x	-7	24	17
1x to 1.1x	-6	19	13
1.1x to 1.2x	-2	11	9
1.2x to 1.3x	-1	6	5
1.3x to 1.4x	1	3	5
1.4x to 1.5x	1	2	3
1.5x to 2x	3	2	5
2x and above	0	0	0

ward where many other adults of working age do not work, or to live in a ward where the large majority of adults of working age work. *This is one of the most extreme patterns of spatial polarisation which we have been able to find and explains a large part of those other distributions which can be seen to have polarised.* For instance, the polarisation of children living within married couple families (Fig. 3) could well be due to the spatial polarisation of unmarried single mothers who are unlikely to be in work because they have these children to look after. Similarly, the proportion of the whole population who are in work was seen to polarise (Table 4) despite a spatial equalisation in the distribution of both children and pensioners. Thus it is the spatial concentration of working age adults without work, but who are also *not* unemployed (Fig. 5) which accounts for a great deal of the polarisation which has occurred in British society in the 1980s.

It is very difficult to take a study using this methodology much further. Purely statistical reasons include the fact that there are too few comparable census questions to allow us to break this group of people down to decide which sub-groups are polarising

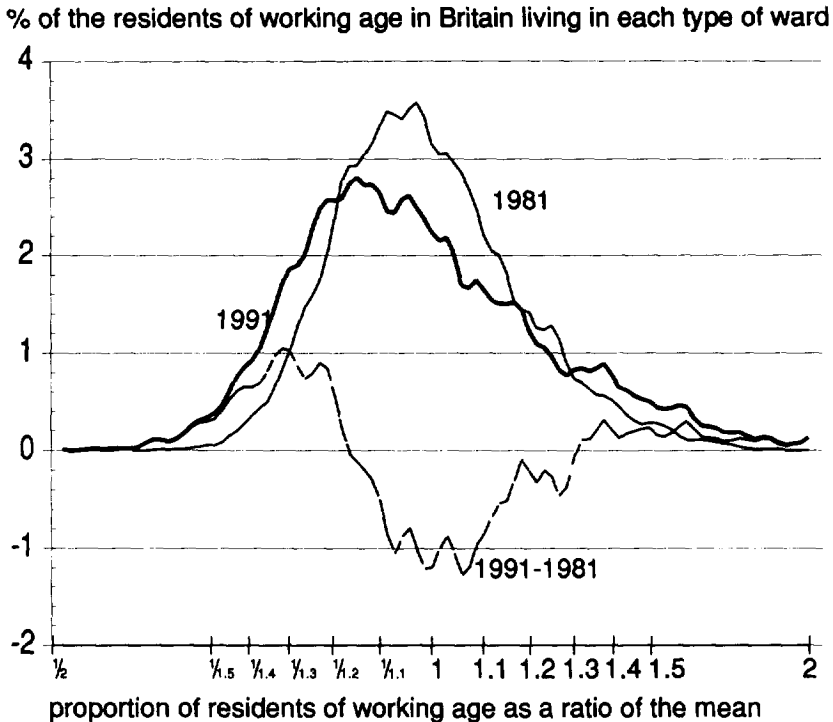


FIG. 11. Residents of working age not in work in Britain, 1981 and 1991.

accurately. For example, illness and early retirement amongst the population were not monitored consistently amongst the censuses and the economic position of women was very badly handled before 1991. Thus, to caricature the groups which may be involved, if it is the spatial concentration of lone mothers and men suffering from illness which is leading to these patterns, we cannot determine this with confidence from quantitative sources. More importantly, even if we could, we would not know why this was happening and we would not know what else was happening which might account for it.

Nevertheless, what we can say is that most aspects of people's lives in Britain have not resulted in a spatial polarisation of different groups over the last 10 years, in particular the distribution of people by age, of households by tenure and by wealth and of different groups of people in the workforce, which all show obvious signs of spatial equalisation. Where we do find polarisation it is between people of working age who have work and those (and their children) who do not. As work is explicitly linked to income it would be reasonable to assume that this polarisation would be reflected by a spatial polarisation in income distributions mirroring the social polarisation which has been researched in detail. Further, as increasingly it is the ill who do not work (or those who do not work become ill) we would expect polarisation of adults by workforce participation to be reflected by

polarisation in ill health and again this is what happens (standardised mortality rates are polarising across Britain). Hence what we find from the censuses appears to fit in with what we know from other studies, but also shows that, in general, social change in Britain proceeds at a sedate pace.

CHAPTER 7

Britain as a Polarised Society

In this chapter we go beyond the accounts of social polarisation outlined above and suggest ways in which the study of social polarisation in Britain might be furthered. Whilst this task is not in the project's original remit, we felt that it is usefully included here because it illustrates the limitations of a study of social polarisation based on the census alone. This argument is based on three points. First, many of the statistics which might be more interesting to use for a study of social polarisation are not contained within the census. Whilst the census is useful for analyses over space and time, limitations of the questions asked impose limits on the variables which can be used to measure polarisation. Second, to understand adequately social change in Britain over the past two decades, we need to understand fully the meanings and values attached to particular variables and attributes, and these themselves change over time in ways which are not revealed or explained by quantitative methods. For example, cars change from being luxury goods to necessities, as corner shops disappear. In a sense this problem highlights the limits of such methodologies for the study of social polarisation. Third, using detailed quantitative analyses, there is often the danger that the complexities of a distribution become subsumed in the search for simple explanation, and minor and rather trivial points about an analysis become emphasised beyond their importance. The contortions of argument which are required in justifying the use of census variables as "indicators" of variables which we might wish to observe can obscure our findings.

For these reasons, we briefly examine the way polarisation can be studied by using methods other than census analysis (and by using variables only measured in the last census). We do this by mapping contemporary inequality in England and Wales, showing how poverty is clearly concentrated in some parts of the country, particularly in the old industrial regions, areas most badly affected by the de-industrialisation of the U.K. over recent years. Again, using census wards but now also using several different data sources, we have prepared a dataset allowing us to map at fine scale these regional differences (see Dorling and Tomaney, 1995).

We have chosen to base these maps on contemporary indicators of the "five great evils" of want, ignorance, idleness, squalor and disease, the eradication of which was seen as the task of the Welfare State on its establishment in the 1940s. We have examined the spatial variation in levels of poverty using variations between measures taken in local

government wards, and illustrated the results of the analysis by using ward level population cartograms (Dorling, 1995b).

Five different data sources were used to generate contemporary indicators for the “five great evils”. “Want” was estimated using data on children living in households without earners, using 1991 census data. “Ignorance” was estimated using the results of all GCSE examinations held in schools in 1993, using Department of Education and Welsh Office data. “Idleness” was gauged through the proportion of the workforce claiming benefits for over one year using 1991 data from the Department of Employment via NOMIS. “Squalor” was the most difficult “evil” to quantify, and we have substituted it with a

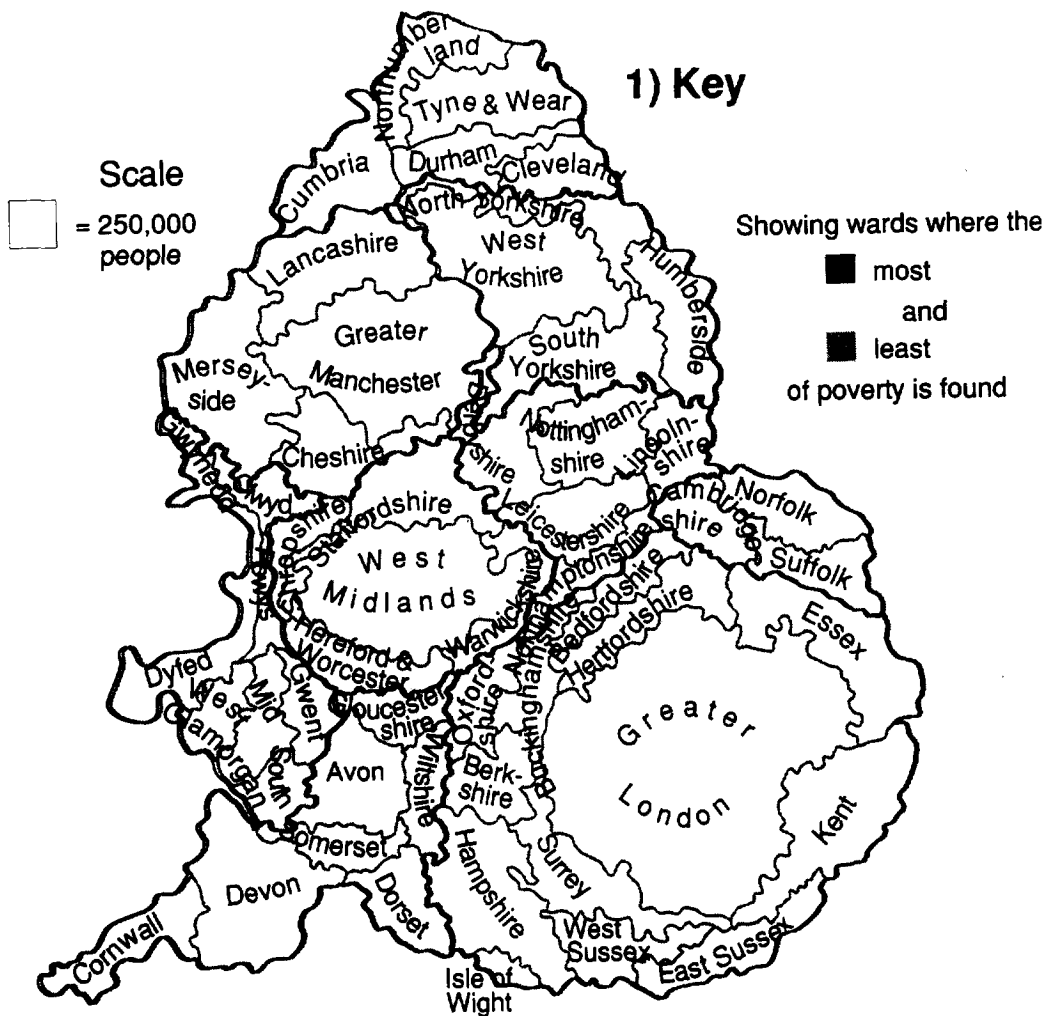


FIG. 12. Key to ward population cartogram.

measure of “housing wealth” using building society data supplied by the Nationwide Anglia. “Disease” was measured through the traditional technique of mortality rates, using information from the Department of Health, via the OPCS medical section.

Using this data, we have chosen to present our results via cartograms, and have done so by taking literally the metaphor of the one-third two-thirds society (cf. Hutton, 1995). The country has been divided in three equal parts by population. Wards are allocated to one of the three parts according to the value of the variable for that ward. Each ward is then drawn on the cartogram as a circle (with its size in proportion to its population) and shaded according to which “third of society” its population falls into, as represented by the variable being mapped. The result is a cartogram which shows a detailed geographical distribution resulting from a simple three-way division of the population. A key to the cartograms is given in Fig. 12.

7.1. WANT: THE UNEQUAL GEOGRAPHY OF FINANCIAL INDEPENDENCE

Here we have been concerned with developing a picture of how unequal access to financial resources affects children’s life chances. Ideally, a measure of the level of want to which children are exposed would include information on the numbers of children living in families eligible for income support. However, this information is not available in a format which would allow for a detailed examination of spatial inequalities of financial means, so we have used as a proxy the number of children living in households in which nobody is earning. This was measured for the first time in the census of 1991.

The six million households in England and Wales with dependent children can be divided into three types of ward. In the poorest third, between 10 and 42% of children live in households without an earner. In the most prosperous third, less than 5% of children live in households without earners. Figure 13 shows where these families are located, the darkly shaded areas representing the poorest third and the lightly shaded areas the prosperous third. The areas left blank illustrate the location of the middle third of families who live in wards where between 5 and 10% of children live in households without earners.

7.2. IGNORANCE: THE UNEQUAL GEOGRAPHY OF EDUCATIONAL ATTAINMENT

Educational achievement is an increasingly important factor in determining the life-chances of children. Typically, passing five or more GCSE exams at Grade C or above is the usual measure of whether a child has succeeded or failed at school, mainly because this level of educational attainment is stipulated as a minimum level of

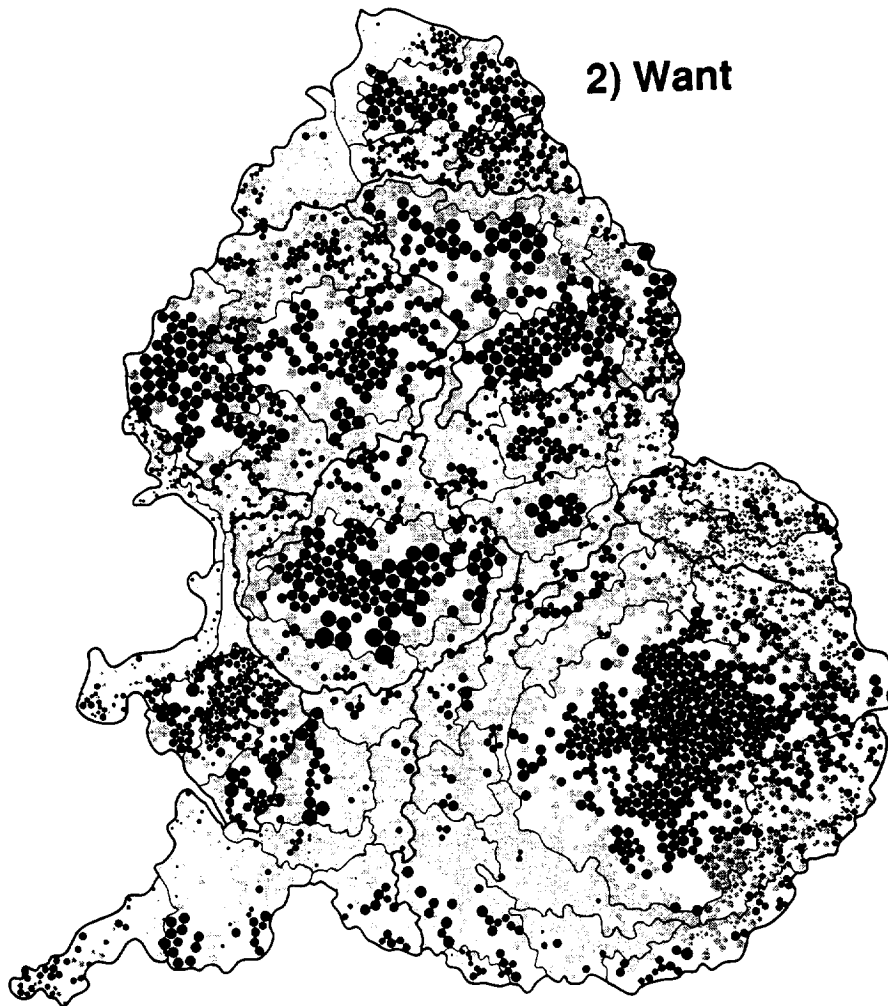


FIG. 13. The geography of Want.

qualification for many jobs. Only 41% of children in England and Wales achieved this in 1993.

Figure 14 shows a three-fold division of the country, this time on the basis of where less than 35% of school leavers passed five or more GCSE exams at Grade C or above (the darkly shaded areas) and where more than 48% achieved at least this level of qualification (the lightly shaded areas). A very similar pattern emerges to that which we saw for lack of financial independence, with particularly strong concentrations of wards with high levels of educational achievement in southern England, especially to the north and west of London.

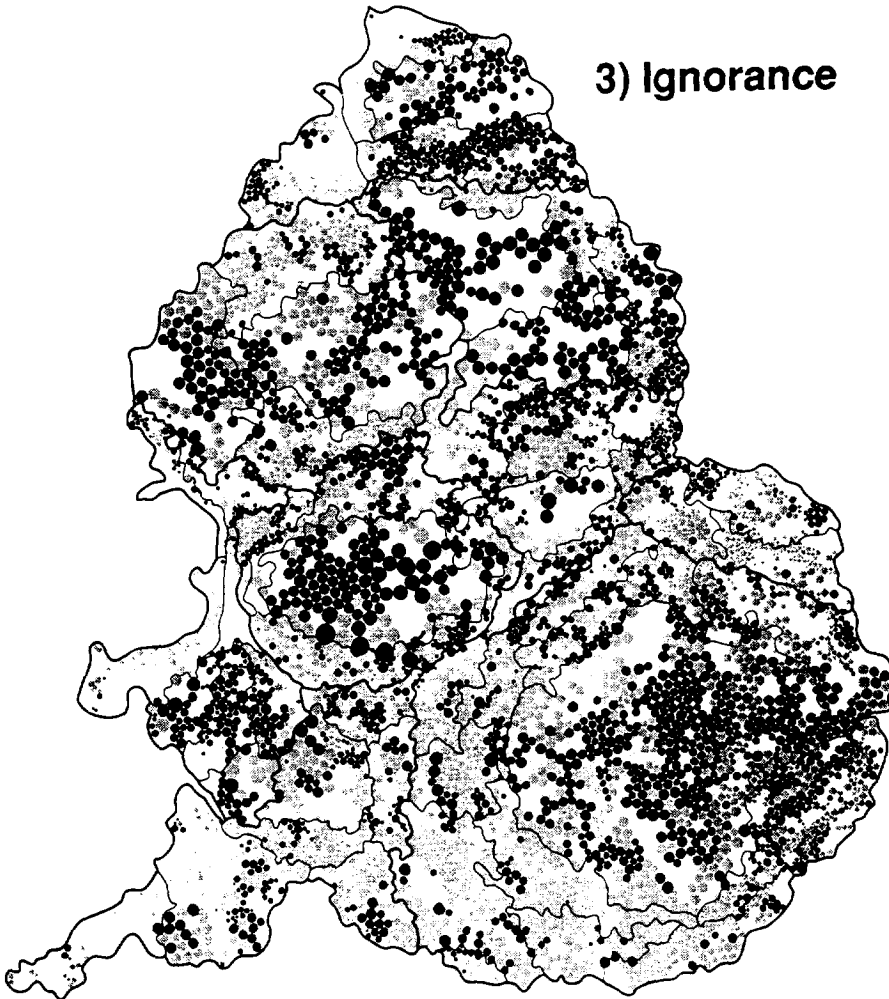


FIG. 14. The geography of Ignorance.

7.3. IDLENESS: THE UNEQUAL GEOGRAPHY OF AVAILABLE EMPLOYMENT

Employment levels are perhaps the chief indicator of the economic well-being of an area. In order to gauge the structural rather than the cyclical nature of the problems facing certain regions and localities, we have chosen to use the existence of long-term unemployment as our measure of "idleness". Long-term unemployment has a particularly corrosive effect on the social and material fabric of communities and the available data illustrates that there is a wide spatial variation in this indicator.

We have divided the working age population of the country into three groups on the

basis of the likelihood of each worker in each ward being out of work for twelve months or more in the period before April 1991. This exercise reveals that the most affluent third of the workforce had a nil to 0.6% chance of claiming benefit for twelve months or more. By contrast, in the poorest third of the country between 1.6% and 18.2% of all working age people available to work in those wards had been claiming benefit for over twelve months. This measure reveals a stark divide between different communities in Britain. Figure 15 shows the location of these two groups. Wards with a strong likelihood of high levels of long-term unemployment (represented by lightly shaded areas) are concentrated in the old industrial areas, with Greater London also strongly represented.

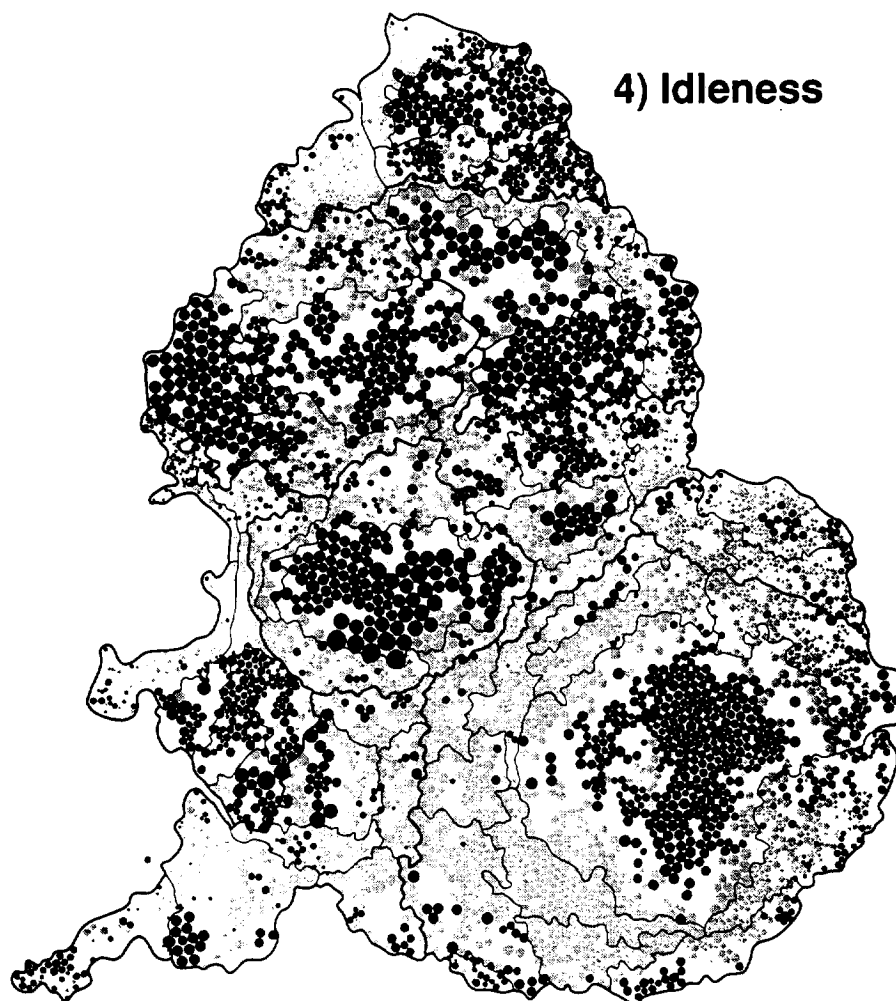


FIG. 15. The geography of Idleness.

7.4. SQUALOR: THE UNEQUAL GEOGRAPHY OF HOUSING WEALTH

“Squalor” is the most difficult of Beveridge’s five evils to estimate today. The term referred to poor housing conditions, and it is extremely difficult to locate sub-regional level data on housing conditions. Moreover, the kinds of “squalor” with which Beveridge was concerned have largely been eliminated through state intervention. However, poor housing conditions still exist. The 1991 English House Condition Survey estimated that 1.5 million dwellings in England were unfit to live in, but figures could only be produced at a standard region level. In order to map poor housing conditions we are

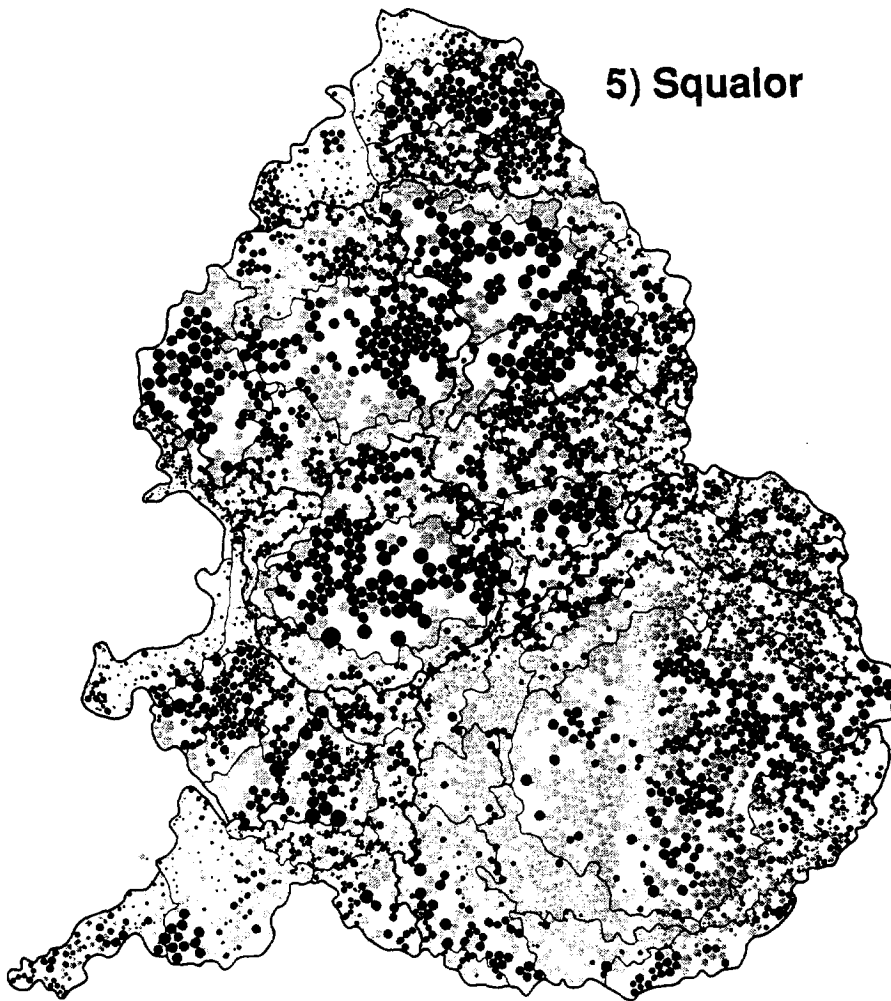


FIG. 16. The geography of Squalor.

forced to use a surrogate indicator. As the English House Condition Survey found, the key factor producing poor housing conditions are low levels of housing repair. The most important factor determining levels of housing repair are levels of housing wealth. This reflects the fact that, typically, the more a property is worth, the easier it is to raise the finance and do the work necessary to keep it in good condition. Housing wealth exists in the form of positive equity which we can measure using building society records. More generally, in an age when large amounts of personal wealth are tied up in housing equity, inequalities in the level of positive equity provide another indicator of the spatial distribution of poverty.

We have divided the mortgage-holding households (borrowers) of England and Wales into three equal sized groups on the basis of their estimated average levels of positive equity. The wealthiest third live in wards where the average positive equity is at least £28,450 per borrower (the lightly shaded areas). The poorest third live in wards where borrowers have £17,950 positive equity or less each on average (the lightly shaded areas). Figure 16 provides a map of housing-based wealth. Although such an indicator has obvious limitations, the figure shows that these wards are generally located in the same areas where other forms of poverty occur.

7.5. DISEASE: THE UNEQUAL GEOGRAPHY OF ILL-HEALTH

One of the oldest indicators of poverty is the incidence of ill-health or disease. An indicator of health inequality can be estimated by examining the likelihood of people dying from diseases in an area before they reach a certain age. Here we have used mortality records provided by the Department of Health for the period 1981–1989 to look at the relative likelihood of residents in a ward dying from disease before their 65th birthday. We have undertaken this exercise for each ward in England and Wales for all deaths excluding accidents, suicides and homicides for the period 1981–1989 using both the 1981 and 1991 censuses to estimate the population profile of wards from which standardised mortality ratios are calculated.

Figure 17 shows the geography of early deaths by disease in England and Wales, when society is divided into three equal sized groups of all residents according to standardised mortality rates. The lightly shaded areas represent wards where a person is relatively unlikely to die of disease before the age of 65 (15% or more less likely). The darkly shaded areas represent wards where a person has a greater than average likelihood of dying before the age of 65 (between 9% and 342% more likely). The data reveals that there can be up to a six-fold difference between the richest and poorest wards in the likelihood of dying young from disease. The results are all the more significant because they do not include homicides or suicides, the inclusion of which would probably further widen the division between localities.

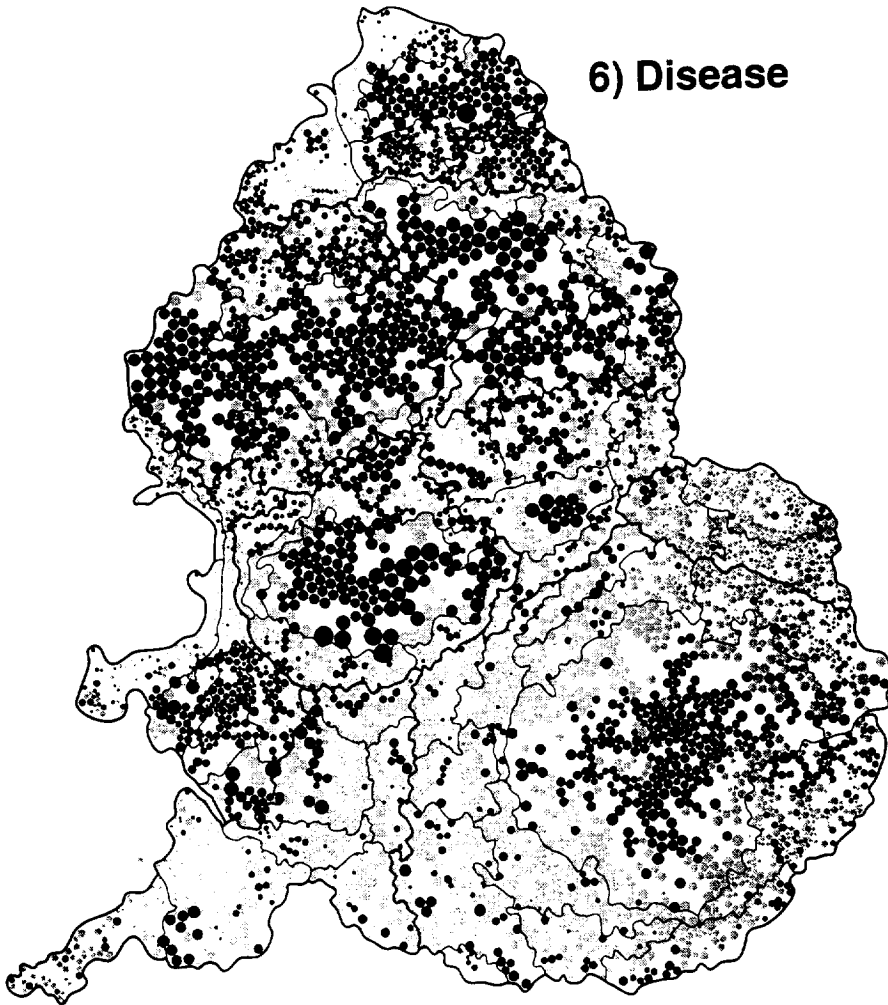


FIG. 17. The geography of Disease.

CHAPTER 8

Conclusions: Local Social Polarisation in Britain

In this paper we have attempted to shed some light on a question of great public and academic interest: are spatial inequalities in Britain rising? We have confined the evidence we use to the answers which were given to questions at each of the last three censuses and to inequalities which are expressed by the changing distribution of particular groups within society. We have produced a new data set, deposited at the ESRC Data Archive, which allows other researchers to study change across a constant set of small areas from the British Population Census and to confirm our results if desired. We have also illustrated the extent of polarisation in 1990s Britain using other data sources.

We began by looking at various approaches to the study of social polarisation, identifying the results of past research and of recent studies which have received wide publicity. In particular, the work of the Social Justice Commission, the Joseph Rowntree Foundation, the School for Advanced Urban Studies and the Policy Studies Institute have all been summarised and their media interpretations have been compared. We have then described, as briefly as possible, how we have harmonised the output of the last three censuses to allow the populations of a constant set of over 10,000 small areas to be compared, and how we have developed a methodology to make these comparisons. The dataset and method we have devised are novel and so should provide an interesting comparison to the work already in the public domain.

In brief, some surprising findings have resulted from this work. The old and young are not found to be spatially polarising across British society — contrary to popular perceptions of children becoming crowded into council estates and of the elderly fleeing the city. There has, however, been a marked spatial concentration to the fall in children growing up in married couple families and workers have become more polarised over space (despite the spatial equalisation of people by age). However, this polarisation cannot be accounted for by changes in unemployment, which was spread more equally across the population in the 1980s (again, contrary to the established wisdom). Similarly, well paid workers have become somewhat less selective in their location and indicators of wealth such as car ownership have suggested spatial equalisation. Changes in tenure and access to amenities have not been clearly reflecting the widening divisions thought to be cutting through British society, so in many ways people in Britain — according to the

characteristics of the populations where they live — became less easy to distinguish in the 1980s. In contrast to this general finding, however, one group of people are now increasingly spatially divided. Where people of working age live in Britain now depends more on whether they are in work than it used to. People of working age who are not unemployed, but who do not work, are becoming increasingly concentrated in particular parts of particular cities and regions, and this concentration explains many of the other changes in society and reflects both income and mortality polarisation. In Britain in the 1990s the kind of work a person does is becoming less important; what matters now is whether, if a person is of working age, they are able to work and find work.

We would like to conclude with some brief comments about the nature of the research which we have undertaken. There is a sense in which this research *had* to be done. The basic data existed and had been purchased by the ESRC and the project's remit lies in an area of key concern within the social sciences, attracting a vast amount of interest and research (Gordon *et al.*, 1994).

Having completed the research, however, we feel that it is important to emphasise that the results also highlight the limitations of the census in showing change over time. The findings confirm the importance of looking at the detail of the findings of other studies, particularly because the results of such studies are often extrapolated beyond their original remit. When we compared our findings to the original reports of other major research programmes, we found little to disagree with. However, our findings do suggest that the emphasis which has been placed on particular types of social change in Britain has not provided a balanced overall view. We would of course not claim to have done this either, given the funding limitations of this project (a single 12 month study) but one advantage of the limitations of census research means that we have looked at a wide range of social changes (because it is difficult to look at any particular aspects in anything other than spatial detail).

Finally, we would like to make suggestions as to further avenues for research into social polarisation. On the one hand, there are the possibilities offered by further quantitative studies, including examination of such data sets as the Longitudinal Study, other research using our data, and other data. Chapter 7 of the monograph has shown how quantitative data drawn from non-census sources shows clearer patterns of polarisation than can be found in census data and many researchers are now looking at the 1971, 1981 and 1991 longitudinal data which has only recently become available. On the other hand, we think that our findings suggest that some of the most fruitful directions for future research may well lie in research exploiting qualitative data, including using life histories and family histories, and research into people's understandings of the quality of life and polarisation. Obviously, there may also be room for an approach combining both quantitative and qualitative methodologies, but it is becoming more and more difficult to defend the use of quantitative sources alone.

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