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Urban Research Report

Urban Trends In England: Latest Evidence from the 1991 Census

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David Atkins, Tony Champion, Mike Coombes, Daniel Dorling and Rachel Woodward

Housing and Society Research Group
Department of Geography
University of Newcastle upon Tyne

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1 Urban Trends: An Overview

Introduction and Context

Background

1.1 The nature and direction of the economic and social trends affecting urban areas are of long-standing interest to policy-makers. These trends are also the subject of much current speculation. The Department of the Environment commissioned a research team based at the University of Newcastle upon Tyne to conduct an analysis of these trends as they have affected urban areas in England over the last decade and more. Drawing principally on the Census of Population, the research team examined six inter-related topics in detail: changing urban structures, area profiles, migration, travel to work areas and work patterns, ethnic minorities and multiple deprivation. The purpose of this section is to bring together the key findings from the analysis of these topics and to provide a synthesis of these within the context of current debates about the major trends affecting urban areas. The individual topic reports follow as chapters 2 to 7 of this report.

Key themes in the study of urban areas

1.2 There are a great many themes and ideas in circulation about the causes and consequences of urban change. These include:

- the importance of economic restructuring since the 1970s in determining the economic and social structure of urban areas;
- the specificity of London and its pre-eminence within Britain as a 'global city' and as Britain's first major post-industrial conurbation;
- the evidence that counterurbanisation and increased population mobility are shaping demographic structure within England;
- the emergence of social polarisation within England, and especially within certain areas;
- the development of new urban 'lifestyles'.

1.3 The findings from the research analyses are synthesised here around these five key themes. The above list is not exhaustive, but it covers the range of issues underpinning most current analyses and accounts of urban change in England. For example, the discussion of population trends and shifts in demographic structure can best be examined as possible evidence for patterns of counterurbanisation, rather than when treated in isolation as a purely statistical demographic issue. Furthermore, it could be argued that some social trends which this analysis touches upon, such as the rise of gentrification in inner urban areas or the growing appeal of country living for many former city-dwellers, can only by fully understood with reference to broad processes such as economic restructuring and the development of London as a 'global city'. The inter-relationships between these themes should

not be ignored, either. There are very strong theoretical and empirical links between, for example, the idea of social polarisation and the identification of polarisation within the 'global city'.

The scope of this analysis

1.4 The scope and nature of this analysis of urban trends were determined by the nature of the data used, and the requirements of the research brief provided by the Department of the Environment.

1.5 The analysis was undertaken mainly using data from the Census of Population. The advantages of the census for a study of this kind lie with its scope; once every ten years, every person resident in the United Kingdom one evening in April is, in theory, included in the sample, and the data provides a full snapshot picture of the demographic, economic and social structure of the UK. Another advantage of census data is that, because of its decennial basis, it provides a good means of charting long-term trends. Changes in household structure and broad changes in labour market patterns are particularly clear. Of course, there are also limits to the use of the census in a study of urban trends. Whilst trends over the longer term are readily visible, a detailed picture of year-on-year changes is not. The census is also limited because of the questions it contains and omits. For example, analyses of the levels of poverty and deprivation in the UK are rarely straightforward because of the absence of a census question on household income. Furthermore, the census is not always comparable from one decade to the next because of changes in the questions it asks and the ways in which the answers are coded (though, of course, many comparisons are possible and are presented in this report). The Census of Employment was also used in parts of this analysis. This is taken about every three years, and provides a count of jobs (rather than a count of people in work).

1.6 The research brief provided by the Department of the Environment provided the strategic direction for this enquiry. The Department required an analysis of the range of census datasets available, in order to provide commentaries on various topics relevant to urban and regeneration policy. The intention was not the evaluation of such policies (for this, see Robson, 1994). Analysis was focused instead on the experiences of urban areas, and so information on trends in rural areas is included only where it provides insights crucial to the interpretation of specific trends. Different types of urban areas were contrasted, but in general the analysis was not directed at individual cities. Therefore, for example, whilst London's situation is highlighted in this report, the analysis does not claim to cover trends within London in a comprehensive and systematic way.

1.7 The focus of this research, then, has been on broad trends across different types of urban area, and this analysis was undertaken at two scales. The first was undertaken at the level of the OPCS classification of districts, slightly modified to draw distinctions between large and small non-metropolitan cities. The second highlighted the differences between the inner and outer areas of twelve cities (London, Birmingham, Leeds, Liverpool, Manchester, Newcastle upon Tyne, Sheffield, Bristol, Coventry, Nottingham, Plymouth and Preston). The choice of these twelve was directed by the need to include different types of urban district, and a geographical spread across England.

Economic Restructuring

1.8 Many of the urban trends studied by this research can be traced directly back to processes of economic restructuring. We cannot consider the economic and social structure of England in the 1990s without taking into account, as a minimum, changes in the structuring of economic activity in the 1970s and 1980s. Furthermore, processes of economic restructuring will have different impacts and outcomes in different places, dependent on local conditions (see Massey 1995).

1.9 The term 'economic restructuring' encompasses numerous inter-related processes involved in the re-organisation of economic activity. These processes include changes in the organisation of production (such as changes in the size and composition of the workforce); the emergence of new divisions of labour (for example, gender divisions of labour, the different patterns and practices of work for men and women); de-industrialisation and the rise of some service sector activities (especially in financial and information services); and changing employment opportunities for different groups of people in different places.

The uneven distribution of employment

1.10 The ways in which economic activity is structured (the organisation of production) has a direct impact on levels of employment. The organisation of production is geographically uneven, and therefore some areas benefit from changes in it (for example, through attracting investment) and some do not. This in turn has a huge influence on the level and type of employment available to people living in any one particular place. Employment rates vary tremendously across England. One way of showing this degree of difference between places is to look at variations between district types of area in terms of labour force participation. This is the proportion of working age people who are offering their services on the labour market. This is also known as the economic activity rate. Between 1984 and 1991, labour force participation rose in the four most rural district types - Districts with New Towns, Resort, Port & Retirement districts, Urban & Mixed Urban-Rural districts and Remoter Mainly Rural districts - which all saw increases in their economic activity rates of above 6 per cent. Economic activity rates declined in all other district types.

1.11 The largest cities fared worst. There were 9 per cent fewer jobs in 1991 than in 1984 in (of the twelve selected cities) London, Liverpool, Newcastle and Plymouth, and significant increases in work only in Bristol and Leeds. Unemployment rates rose more quickly than the national rates over the 1980s in the inner and outer areas of cities, especially in Inner and Outer London boroughs, large non-metropolitan cities and the principal metropolitan cities.

1.12 Another way in which the uneven geography of employment can be explored is to look at ward-level data for the whole country. This confirms the trend noted above, with economic growth in the 1980s concentrated in the rural parts of England, and economic decline in the metropolitan areas and other cities, and in other industrial regions such as the North-East of England. A surprising feature of this aspect of the research has not been the revelation of a new geography of employment caused by economic restructuring, but rather than an emphasis on the clarity of the division between urban and rural areas in terms of employment growth and economic opportunity.

1.13 The economic impact of restructuring can also be assessed by examining the effect of changes in economic activity on people, at the level of the household. In this study, this has been done by looking at the numbers of earners in a household. The proportion of households with no-one in the labour market rose especially steeply in Principal Metropolitan Cities and Other Metropolitan Districts - places like Liverpool, Manchester, Oldham and Coventry. By 1991, in the Principal Metropolitan Cities, one household in three had no-one in the labour force. Over 40 per cent of households in Sheffield had no economically active member, and only 45 per cent of households in Newcastle had someone in work. These figures stand in stark contrast with the Urban & Mixed Urban-Rural district type, where 42 per cent of households had at least two people in work.

1.14 One facet of economic restructuring is the emergence of new forms of employment. It is sometimes argued that, with the decline of traditional employers in large urban areas, opportunities are opened up for alternative forms of work, such as self-employment. Indeed, national rates of self-employment have increased by nearly 3 per cent over the 1980s, and all district types showed an increase in this form of work. This increase was geographically uneven; none of the twelve inner areas saw self-employment rise by as much as for England as a whole. However, in the outer areas of London, Newcastle, Sheffield, Nottingham, Bristol and Plymouth, the trend either matched or exceeded the national increase.

The emergence of a new gender division of labour

1.15 Another process associated with economic restructuring is change in the gender division of labour. The term 'gender division of labour' is used to denote differences between men and women in terms of the work they do and the conditions under which they are employed. There have been quite dramatic changes in the relative social and economic circumstances of women and men over the past three decades. This study has revealed marked differences between men and women in terms of their access to the labour market. For example, over the 1981-91 period, national employment rates for men declined by just over 3 per cent, and rose for women by almost 7 per cent. These trends are likely to have persisted since the 1991 census, and the differences between male and female employment rates remain one of the most striking features of the labour market in the 1990s.

1.16 Moreover, the differences between men and women in employment rates varied markedly across England. The decline in economic activity rates for men between 1981 and 1991 was much more dramatic in Principal Metropolitan Districts and Other Metropolitan Districts than the national average, and much less in the Urban & Mixed Urban-Rural district type. All district types showed a decline in economic activity rates for men, whilst for women all districts showed an increase in rates, except the Inner London Boroughs, where it remained static. Increases were particularly high in the most rural district types.

1.18 There were also substantial differences between men and women in terms of their experiences in the inner and outer areas of the twelve cities studied. For none of the twelve cities in 1991 were male activity rates in inner areas greater than either the national average or the rates for outer areas. Only in London, Leeds and Birmingham were rates of economic activity higher in the outer areas than the

national average. For women the picture is more positive. In Bristol, female activity rates in the inner area were above the national average, as were rates in the outer areas of London, Leeds, Sheffield, Birmingham, Coventry, Bristol and Preston.

1.19 These findings indicate better trends and opportunities for women than men in the labour market, a trend which is particularly pronounced in certain areas. This finding is confirmed by a number of other studies which have assessed both the scale and nature of the gender division of labour and the consequences for gender relations of this shift. (For a useful summary of further research, see Wilkinson, 1994.)

Changes in the type of work available

1.20 Economic restructuring also involves changes in the types of jobs which people do. In general, in advanced capitalist economies such as Britain's, since the early 1970s there has been a decline in the proportions of people employed in production and in public services, and a rise in the proportion employed in private services. As we might expect, these changes have been geographically uneven across England. For example, the five smallest reductions in production, the five largest increases in private services and the three largest increases in public services were all in Districts with New Towns, Industrial Districts, Resort, Port & Retirement districts, Urban & Mixed Urban-Rural districts and Remoter Mainly Rural districts. Employment in private services grew in all areas except Inner London, with the biggest levels of growth in New Towns, followed by Urban & Mixed Urban-Rural districts.

1.21 These findings are confirmed by other studies of changes in the structure of the economy, which suggest that places currently receiving investment in new service industries and new technologies (for example, Cambridge and the M4 corridor) tend to be very different from places which have witnessed the collapse of their traditional productive industry bases (such as Liverpool and Sheffield) (see Massey, 1995).

Making the most of new opportunities: changes in travel to work

1.22 If economic restructuring increases employment opportunities in some places and reduces them in others, for different groups of people, the question is then raised as to the ability of different groups of people to make the most of these new opportunities. This can be addressed by looking at which types of workers from which residential areas work in which employment centres. These patterns show how local labour market areas function by distributing access to particular types of jobs.

1.23 An examination of commuting flows in specific cities, undertaken as part of this research, highlights the dependency of inner city residents on inner city job opportunities. The residents of inner urban areas face increased competition for jobs available in the inner city, at a time when the jobs there are declining in number and also shifting in nature away from the manual work on which inner city residents might previously have been able to depend.

1.24 Despite much speculation that new 'satellite' employment centres around the edges of major conurbations are offering new employment opportunities for residents of urban areas, there are persistent inflows of people from satellite areas to most cities. The low levels of 'reverse commuting' by city residents to satellite employment centres show that rural economic growth is not of much benefit to the urban workforce.

1.25 The distances which people are prepared to commute for work vary with the type of work they do. For example, part-time workers have relatively short commuting distances. Manual workers' average commuting distances are slightly shorter than average, while some professional workers make very long journeys to work. The lower wage levels of manual workers make long distance commuting less feasible; as a result, the many manual workers in inner urban areas are all the less able to benefit from new job opportunities in rural areas.

London as a global city

1.26 Processes of economic restructuring take different forms in different places. London is unique within Britain because of the type, scale and consequences of the processes of economic change impacting upon it. As such, it is worth singling out for consideration here (although the research was not about London per se; for more detailed statistical information, see London Research Centre, 1995; Government Office for London, 1995).

1.27 It could be argued that, in many respects, London has more in common with a city like New York than a city like Bradford. Because of this, a useful way of thinking about London is as a 'global city'. This means seeing London and other international metropolitan centres (like Paris, New York, Tokyo and Los Angeles) as representing new forms of urban area which are developing as a consequence of processes of global economic restructuring and new divisions of labour. These cities are important 'command points' in the organisation of the world economy. They are crucial locations for finance and specialised service firms and they function as global markets for the products and innovations originating in their wider economies. These cities often have very large ethnic minority and immigrant populations. These cities have also been expanding in recent years, contrary to the counterurbanisation trend (outlined below). A key point about such cities is the increasing polarisation of the population along income and occupational lines, with growing proportions of people and households at either end of the social and economic scale, and a decline in middle-income groups (see Sassen, 1991).

1.28 So does London fit the pattern of a global city? Certainly, London's population has ceased to decline, a reversal of a trend that started earlier this century. Inner London saw growth in its population in the 1980s. This growth was unevenly spread amongst different age groups. The numbers of 16-29 year olds remained high, but there was a high turnover of population in this age group. The most rapid decline was in people in the 30-44 age group and their children. There are also high levels of international migration to and from London. Although this is not directly measured by the census, there is other evidence that this has increased, again highlighting London's unique position within the urban hierarchy of Britain.

1.29 Global cities often have high proportions of their residents claiming membership of an ethnic minority. London certainly has a high proportion of residents claiming membership of an ethnic minority group, and there is non-census evidence for a decline in the numbers of people identifying themselves as White[1]. Black groups are concentrated predominantly in London, and people identifying themselves as Bangladeshi are concentrated in the London Borough of Tower Hamlets. London also has much higher proportions of people identifying themselves with the Chinese, Other Asian and Other Other ethnic groups than other cities and districts in England.

1.30 Global cities can also be defined on the basis of the large relative proportions of highly skilled professionals amongst their labour forces. London has a growing proportion of skilled professional people amongst its population. In 1991, Inner and Outer London both had large increases in the proportion of 30-44 year olds with higher level qualifications, and Inner London saw the largest increase in members of Social Classes I and II, relative to all other district types in England.

1.31 An important feature of 'global cities' is the marked divide between rich and poor households. For this reason, such cities are often called 'dual' or 'divided' cities. In terms of households with no member economically active, London, with its rate of 28.5 per cent, compared favourably with the national average of 30.4 per cent in 1991. This average masks two extremes, however; wards with the highest proportions of households with earners, nationally, were concentrated in the Greater London area and the City of London, whilst there were distinct concentrations of households without any earners in the eastern boroughs. Variations in household structure are also striking. Inner London boroughs had the highest proportions (of all district types) of lone parent households in 1991 (7.1 per cent compared with 4.1 per cent nationally) and the highest proportion of one person households in 1991 (38 per cent compared with 26 per cent nationally).

1.32 These divisions become particularly stark when indicators for multiple deprivation are examined. For example, two-thirds of all children in the London Borough of Tower Hamlets could be classed as having severe problems (including living in a households with no earner, being overcrowded, living without housing amenities). These children constitute one sixth of all Tower Hamlets residents, indicating deprivation localised in one area to quite a remarkable scale. Similar problems are experienced by children living in other London Boroughs, including Hackney, Southwark, Islington, Lambeth, Newham, Camden, Hammersmith & Fulham, Lewisham, the Cities of London and Westminster and Haringey. In some of the boroughs in eastern and south London, people of working age were also found to be likely to be affected by multiple deprivation, particularly in Hackney, Islington, Newham, Southwark and Lambeth. Multiple deprivation amongst the elderly was particularly noticeable in Tower Hamlets and Hackney. These findings confirm those of other studies of deprivation in London, such as Townsend *et al's* (1987) ranking of wards according to indices of deprivation and the Department of the Environment's Index of Local Conditions.

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[1] The 1991 census was the first to ask respondents which ethnic group they identified with. It is not possible, therefore, to assess changes over time in the proportions of different ethnic minority groups on the basis of census data.

1.33 London's size as a labour market area also singles it out in terms of English cities. By analysing travel-to-work patterns of people commuting in the wider London region, the size of the catchment area for London's workforce becomes clear. For example, a large 'commuting cluster' is centred on the West End, embracing all the Inner London boroughs west of the City, and also Hackney, Brent, Barnet and Waltham Forest. All the boroughs to the east of the City form a cluster extending out to Brentwood in Essex. Another cluster extends south from London Bridge to Bromley and Dartford in Kent, and there are also separate clusters extending into Surrey from Croydon, Kingston and Sutton respectively. A cluster also exists to the west of London, centring on Heathrow and its locality. It is the sheer size of London's commuting clusters that grant it unique status as a global city in the British urban hierarchy.

1.34 It is worth noting that the notion of London as a global city is sometimes contested. It has been argued that peculiarities in its employment and social structure make it sufficiently different from a city such as New York to require a different framework with which to understand its social and economic structure (Hamnett, 1994). However, whilst emphasising again that this research was not focused on London per se, it is worth re-iterating a central and rather basic finding of this research on English urban trends about the uniqueness and specificity of the capital and its urban problems and trends.

Counter-urbanisation

1.35 Whilst debate continues about London's future as a 'global city', there is more agreement about another trend of great significance to urban policy - counterurbanisation. The term is used here to refer to the trend of population deconcentration away from large urban settlements towards more rural areas[2]. This trend has slowed since the 1970s, but continues in 1990s Britain. Apart from the distinctive case of London, there remains a pretty close inverse relationship between rates of overall population growth and the level in England's urban hierarchy, together with a very widespread shift in population distribution from the inner to the outer areas of larger cities (see Champion, 1989; 1994).

1.36 Internal migration within Britain is the primary cause of the population decline of larger cities, and at a regional level it is the more rural areas which have seen the highest gains in population change through within-Britain migration. East Anglia and the South West had the highest rates of regional migration gain in 1991, and the North West region amongst the highest rates of net loss.

1.37 Between 1981 and 1991, the district types with the strongest population growth rates were the rural types - the Remoter Mainly Rural, Urban & Mixed Urban-Rural, Resort Port & Retirement districts and New Towns. The Principal Metropolitan Cities and Other Metropolitan District types showed the largest losses of population. In terms of gains from migration, the Remoter Mainly Rural districts gained the largest numbers of in-migrants, whilst the biggest losers were Principal Metropolitan Cities and Inner and Outer London.

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[2] Some analysts use a tighter definition of 'counterurbanisation' which is thus limited to population shifts between urban regions and down the urban hierarchy from large to small settlements; this definition then excludes 'metropolitan decentralisation' involving shifts within an urban region between inner and outer areas. This distinction has not been possible in this study, so both these trends are subsumed here within a broad definition of counterurbanisation.

1.38 Whilst this counterurbanisation trend looks to be persistent, it should be noted that the trend has slowed significantly since its height in the mid-1970s. Population change rates for many areas between 1981 and 1991 were much smaller than for the 1971-81 period, and the new towns in particular have seen a marked reduction from their high levels of growth in the 1970s. Migration data reveals the extent of this broad trend. Between 1990 and 1992, England's metropolitan areas recorded a net loss of 80,000 people per year through migration exchanges with other parts of Britain, a rate down 25 per cent on the average for the 1984-87 period, and a good two-fifths below the average rates for the mid-1970s.

1.39 At a more local scale, the 1980s saw a continued widespread shift in population within cities from their inner areas to their outer areas. Ten of the twelve cities selected for this study showed this trend, the exceptions being London (which showed inner area growth and outer area stability) and Nottingham (which showed inner area stability and outer area decline). In terms of net migration exchanges with the rest of Britain, the inner areas of all twelve cities lost at least 6 people per thousand, and these rates of loss were highest for Newcastle, Manchester and London. All the outer areas (with the exception of Preston) also lost population, but the losses were far less significant than those for inner areas. Coventry and Plymouth had the highest rates of losses for outer areas.

1.40 To conclude, it is clear from this research that the counterurbanisation trend is widespread and set to continue, despite slowing down in more recent years for most cities and going into reverse in Inner London as far as overall population change is concerned. It is likely that if current trends of economic restructuring continue, with the growth of employment opportunities primarily in smaller urban centres and more rural areas, they are likely to be accompanied by population movements along similar lines.

Social Polarisation

1.41 Social polarisation is an issue of major policy relevance, for two reasons. First, the issue has been accorded high priority in public debates and on political agendas over the past few years, making it a central concern in the study of urban trends. Second, the processes discussed above, of counterurbanisation, the pre-eminence of London and economic restructuring, have all impacted on levels of social and spatial polarisation in Britain over the past two decades, making it an important focus for discussion here.

1.42 Social polarisation can be defined in a variety of ways (see Woodward, 1995 for a review). In essence it indicates a widening of the gaps which exist between groups of people with regard to their economic and social opportunities and circumstances. This polarisation increasingly has a spatial dimension; people with a given set of circumstances are more likely to live near others with similar sets of circumstances.

1.43 Social polarisation is a simple term for a complex issue, because of the range of processes which cause it. This is one of the reasons why social polarisation is in fact quite difficult to assess or measure using census data; the lack of income data, and the under-enumeration problem in the census are also factors. Nevertheless, in very broad terms, this research has confirmed the extent of the divisions between rural and urban areas, between earners and non-earners and between inner and outer urban areas. These broad divisions mask the huge variety between places, of course, but certain salient features emerge.

1.44 There are now concentrations of households without earners in the inner areas of the twelve cities examined. Many of these households have children as well, or consist of elderly people living alone. In contrast, many households with more than one earner are concentrated in smaller urban centres and certain rural areas, which as this research has indicated, are places with greater employment opportunities. Furthermore, this concentration of types of households is likely to continue. Migration is a selective process that is more likely to remove from inner urban areas those households containing at least one earner. Households leaving inner urban areas are also more likely to be owner-occupiers and thus less reliant on local authority or housing association accommodation. Households living in the inner areas of some cities are also more likely to claim membership of an ethnic minority, and so to be affected by discrimination in employment and access to services. It is also apparent from studies of multiple deprivation that those individuals with combinations of problems tend to be concentrated in specific parts of inner areas.

1.45 The situation in these inner urban areas should be contrasted with the experience of households living in more rural areas. Many of these latter places have experienced growth in new service industries over the previous decade. They are home to households where the majority have at least one member in employment. Many more households are likely to be owner-occupiers. There may also be additional benefits to do with quality of life, which cannot be measured using census data. Of course, it is not the case that everyone living in England is subject to either a multitude of problems or no problems at all. It is the case, however, that the nature and scale of differences between groups of people at extreme ends of the social and economic scale were particularly marked in 1991. It is also not the case that everyone living in, for example, a rural area, or in the South-East of England outside Greater London, lives comfortably and without any of the problems experiences by people living in inner urban dwellers (see McCormick and Philo, 1995).

1.46 There is much debate about the nature, causes and consequences of this type of social polarisation, and it is notable that the findings from this research differ little from those of other studies of social polarisation (see Willmott, 1994; Joseph Rowntree Foundation, 1995; Boddy, 1995; Commission on Social Justice, 1994; Dorling, 1995; Gordon and Forrest, 1995; Philo, 1995). These studies all note a distinction between urban centres and more rural areas, and the marked divisions which exist between households with earners and households without. The significance of the research on urban trends, with regard to social polarisation, lies not with the novelty of this finding as much as with the clarity of the patterns of polarisation which this research has uncovered. It is less clear, however, whether social polarisation in the 1990s was much better or worse than in previous years or decades (see Willmott, 1994; Dorling and Woodward, 1996).

New urban trends and new urban lifestyles

1.47 In this overview of research findings, attention has been focused on very specific trends across urban areas. The trends highlighted here - economic restructuring, the pre-eminence of London, counterurbanisation and social polarisation - can all be readily quantified and assessed using census data. By way of conclusion, it is worth pointing to a number of other trends or issues emerging in urban areas over the past two decades, and which have as much significance to

policy-makers as counterurbanisation, for example, but which are not easily measured. These trends include the consequences of the increase in the proportion of women in the labour force, the difficulties associated with ensuring fair and equitable distribution of resources to ethnic minority groups, and certain cultural trends relating to people's lifestyles and ways of living.

1.48 The increase in the proportion of women in work is a first example. Whilst the changes in the proportions of women in different sectors of the labour market can be easily quantified and assessed, the social and cultural consequences (and causes) of such changes are less readily examined by census data. Yet the so-called feminisation of the labour market is having wide-ranging impacts on, for example, commuting patterns and the migration patterns of households, as well as requirements for greater flexibility in working hours and childcare from the workforce. Although such trends are less readily measured using census data, they constitute a range of issues shaping the labour force. Consequently, they need to be recognised by policy-makers as much as more 'visible' trends apparent in census data. Furthermore, the period since the 1970s has also seen dramatic changes in household structures in urban areas, with a rise in lone-parent households, one-person households and multi-adult households, and there is speculation that these changes are related to a number of factors, including the changing aspirations of women. In short, policy-makers need to recognise the variety within current urban trends, many of which require more sophisticated analysis than the quantitative techniques presented here allow.

1.49 A second example is the impact on urban trends (particularly area profiles) of the large proportions of people living in urban areas who identify with an ethnic minority group. The impact of these groups on, for example, the age profiles of urban areas can be readily assessed, as can the requirements for job opportunities and services. What is more difficult to address are the methods required to deliver services to these groups to ensure fair and equitable distribution of resources. One rationale behind the collection of ethnicity data in the census was to provide a monitoring function to assist in the equitable distribution of resources to all social groups, on the basis on need and demand. It should be recognised, however, that there are still limits to the use of the census in achieving this, particularly given the problems experienced in 1991 with under-enumeration of ethnic minority groups. For this reason, policy-makers need to be aware of the caution required in planning for the provision of resources to ethnic minority groups on the basis of census data alone.

1.50 A third example is the identification of socio-cultural trends and 'lifestyles', such as gentrification (in urban areas) and a fashion favouring country living (in rural areas). Although these trends are difficult to measure using census data, they are just two examples of a range of cultural trends affecting people's lives across England. Perhaps, like 'yuppies', 'dinkies' and the 'urban underclass', these labels are more powerful as ideas than as a means of identifying new social groups. Yet although such trends cannot be measured, they are important because of their power in shaping our perceptions and understandings of what it is like to live and work in urban areas in the 1990s. Policy-makers should be aware of that culturally-based ideas about urban areas have as much potency in shaping our perceptions of urban areas as census data.

2 Changing Urban Structure

Summary

Research Context

2.1 The purpose of this report is to examine the principal dimensions of population and employment change which affected urban areas in England between 1981 and 1991.

The context of urban change

2.2 The 1970s witnessed strong urban deconcentration in England as in many other Developed World countries and saw the beginnings of concerted action by numerous governments designed to combat the growing problems of 'inner city areas'. Since then this 'counterurbanisation' process has slowed down markedly in many countries, and in some cases a further reversal has occurred, with renewed growth of both population and employment in the larger cities.

2.3 International observers have related this development to the effects of economic restructuring, particularly the expansion of high-level services, and to the process of gentrification in inner city areas. However, the incidence of this new growth has been found to be patchy in terms of the proportion of larger cities which have been affected to any significant extent. It has also been noted that this growth has often impacted negatively on less well-off residents by exacerbating shortages of low-cost housing and failing to provide suitable replacements for the types of jobs which have been lost.

2.4 The analysis of population data for England suggests that this country has, to an extent, shared this experience. The rate of urban depopulation was lower in the 1980s than in the 1970s and Inner London even registered modest growth in numbers of residents whilst there were widespread increases between 1981 and 1991 in children staying on at school, numbers of cars and proportions of owner occupiers. On the other hand, most parts of urban England, including Inner London, experienced contractions during the 1980s in the amount of work available, along with 1981-91 increases in unemployment and the proportion of households with no member in the labour force.

Slower pace of urban depopulation

2.5 The rate of population decline in urban England was much lower in the 1980s than in the 1970s. Particularly impressive was the switch of Inner London's change rate from a loss of 18 per cent to a gain of 3 per cent between the two decades. Some recovery was also registered by all the five metropolitan and city categories recognised in the study (Outer London, Principal Metropolitan Cities and Other

Metropolitan Districts, and Large and Small Non-metropolitan Cities) and by ten of the eleven other cities studied, the exception being Sheffield. In the rest of England there was a sharp reduction in the growth rates of districts with New Towns and small reductions in the other district types (Remoter Mainly Rural, Urban & Mixed Urban-Rural, Industrial Areas), with only the Resort, Port & Retirement category recording accelerated growth. The result was a considerably smaller range in population change rates across the urban-rural dimension in 1981-91 than in the previous decade, a trend which appears to have continued into the 1990s.

2.6 Even so, the general picture in the 1981-91 period continued to be of a population shift from urban England to the rest of the country and, within individual cities, from their inner to their outer areas. Ten of the twelve cities studied recorded faster decline in their inner than outer areas between 1981-1991. The two exceptions were London, with its inner area growth and stable outer area population, and Nottingham, with stable inner area and declining outer area.

Contraction of work in urban England

2.7 There was a widespread reduction in employment in urban England in the 1980s, as measured by full-time equivalents (FTEs), in contrast to general increases in the rest of the country. The strongest employment growth between 1984 and 1991 took place in the four least urban district types, with the New Towns, Resort Port & Retirement, Urban & Mixed Urban-Rural and Remoter Mainly Rural categories all recording gains of 6 per cent or more. All six of the London, metropolitan and city categories saw reductions in work.

2.8 The inner areas of the larger cities fared worst. In 1991 there was at least 9 per cent less work than in 1984 in London, Liverpool, Newcastle and Plymouth. Significant increases occurred in only two of the twelve cities studied (Bristol and Leeds). As regards the outer areas, employment growth took place in eight of the twelve cases (Birmingham, Leeds, Manchester, Newcastle, Sheffield, Nottingham, Plymouth and Preston). In a clear majority of the cities, the rate of change was higher for the outer areas than for the inner, signifying a decentralisation of employment and a deterioration in work opportunities in five inner areas relative to the outer over the period.

2.9 The reduction in work in urban England over this period was very largely the result of changes affecting men. Measured in terms of FTEs, male employment fell by 14 per cent in Inner London between 1984 and 1991 and by at least 12 per cent in the inner areas of Birmingham, Liverpool, Manchester, Newcastle, Sheffield, Coventry and Plymouth amongst the other eleven cities studied. By contrast, female employment dropped in only two of the twelve inner areas (London and Liverpool) and rose by 15 per cent or more in Bristol, Coventry and Leeds. Similarly, in terms of the eleven district types, while male employment contracted in all but the New Towns and the Remoter Mainly Rural districts, work for women increased everywhere besides Inner London.

Impacts on the labour force

2.10 Unemployment rates rose steeply between 1981 and 1991 for the larger cities, notably Inner and Outer London, the Large Non-metropolitan Cites and the Principal Metropolitan Cities. The majority of both inner and outer areas in the sample of twelve cities saw increases in joblessness above the national trend. Rates generally rose faster for the inner areas, accentuating the relative disadvantage of the inner areas compared to their outer counterparts.

2.11 The level of labour force participation by people of working age appears to have been affected by these trends, with inner-area residents experiencing a deterioration relative to the trend for outer-area residents in all twelve cities and for both men and women. Male participation fell in all inner and outer areas, but in every case by more in the former. Female participation rose in all twelve outer areas except one (Manchester) but in only four of the inner areas (Bristol, Coventry, Leeds and Plymouth). In all cases, the inner-outer differential in participation rates thus widened for women, whilst for men it was clearly lower in inner areas than outer areas in 1991 everywhere, in contrast to the 1981 situation.

2.12 Partly as a result, the proportion of households with no-one in the labour force rose steeply in a number of places, notably in the Principal Metropolitan Cities and Other Metropolitan Districts and in the inner areas of Liverpool, Manchester and Newcastle. By 1991 over 40 per cent of households in inner Newcastle and Sheffield contained no economically active person, and the figure for the six Principal Metropolitan Cities on average was over one in three. Even more dramatically, only 45 per cent of households in inner Newcastle contained a person in work in 1991, with figures of under 50 per cent also found for the inner areas of Liverpool, Manchester and Sheffield. The overall figure with no-one in work contrasts vividly with the situation in Urban & Mixed Urban-Rural districts, where 42 per cent of households contained at least two people in employment.

The rise in one-person and lone-parent households

2.13 The economic position of households in urban England has been worsened by changes in household composition as well as by shortage of jobs. The largest cities recorded the largest increases in the proportion of one-person and lone-parent households over the decade, with particularly high levels of both in Inner London in 1991 - 38 per cent and 7 per cent respectively - compared to the England figures of 27 per cent and 4 per cent. The inner areas of all twelve cities studied recorded faster increases in their proportions of both types of household than England as a whole, widening further the differential which already existed in 1981. Moreover in every case the rise was more substantial than for the outer area.

Increase in professional and managerial workers

2.14 A different picture is found if attention is restricted to those who are in work or who have held a previous job on the basis of which a person's Social Class can be determined. Inner London's experience is particularly distinctive, with its proportion of classified households in Social Classes I and II rising from barely

30 per cent in 1981 to 46 per cent ten years later - a percentage point increase of twice the national average.

2.15 A majority of the twelve inner areas registered a larger increase than the country as a whole, and also above the rate of increase achieved by their outer area counterparts.

2.16 This, however, did little to overturn the pre-existing shortfalls, given that even by 1991 only one inner area (London) contained more than the national level of Social Classes I and II and in only two cases (London and Nottingham) was the inner area proportion higher than for the outer area. Moreover, it must be recognised that at least part of the increase in the proportions of Social Classes I and II must be due to the statistical effect of additional lower-status workers being left out of the calculation as a result of failing to obtain a job or leaving the labour force entirely.

Life-course development

2.17 Limiting long-term illness - a question included in the 1991 census for the first time - and 17 year-olds staying at school comprise two indicators of personal development. In relation to illness among 0-15 year olds, Inner London and the Principal Metropolitan Cities appear worst, with illness levels a quarter up on the national level, and above-average levels are found for all twelve inner areas. The proportion of 17 year olds in full-time education grew most in Inner and Outer London amongst the district types over the preceding decade, but the majority of both inner and outer areas in the study recorded a smaller increase than the national trend and thus saw a widening of their distance below the level for England as a whole.

Urban trends in England 1981-91

2.18 Urban England appears to be in the grip of strong and deep-seated forces. Though population redistribution to the rest of England occurred more slowly than in the 1970s, it was still significant and continued to be accompanied by decentralisation between inner and outer city areas. Economic restructuring has led to substantial job losses for most of the larger cities, though the occupational quality of the available jobs has generally increased. There are many signs of deteriorating conditions in England's larger cities and their inner areas and, where there have been improvements in absolute terms, these have often been at a slower pace than for the rest of England, hence a widening of differentials across the urban-rural spectrum.

Background to the study

2.19 The main data source was the Population Census, supplemented by the official population estimates and the Census of Employment. Urban trends are examined at two scales: an eleven-fold typology of local government districts, and the inner and outer areas of twelve cities (London, Birmingham, Leeds, Liverpool, Manchester, Newcastle, Sheffield, Bristol, Coventry, Nottingham, Plymouth and Preston).

Introduction

2.20 The purpose of this chapter is to examine the principal dimensions of population and employment change which affected urban areas in England during the period 1981-91, and to assess the significance of these trends in terms of what is known about longer term trends affecting urban structures in this country and elsewhere. It also provides background for the remaining chapters which investigate area profiles, migration, workplace and travel to work patterns, ethnic minorities and multiple deprivation.

2.21 The report begins by sketching out the context of the study, notably by reference to the emergence of counterurbanisation and rapid inner city decline in the 1970s, and by outlining the approach adopted for this study. It goes on to examine patterns of population change, concentrating on the 1981-91 decade but drawing comparisons with the previous decade and also updating from 1991 as far as data allow. Then, an examination is made of changes in the composition, characteristics and circumstances of the resident populations between 1981 and 1991, including demographic, social and labour-market variables. The last substantive section is devoted to an analysis of employment trends based on workplace counts of jobs. All stages of this study use the same two sets of geographical areas, as outlined later in the next section.

Context and approach

Context

2.22 The last twenty-five years have seen some major changes in the distribution of population and employment in the UK and most other countries of the Developed World, notably in North America but also in Europe. The 1970s witnessed both the international recognition of the 'counterurbanisation' phenomenon and the beginnings of concerted action by numerous governments designed to combat the growing problems of 'inner city areas'. Widely across the Developed World, the census evidence for the 1970s revealed unprecedented levels of net migration out of the larger cities and more heavily populated urban regions to smaller cities and towns. Alongside this occurred a switch from net loss to gain for many rural areas, a significant proportion of which were located in the more remote and peripheral parts of the countries and had a long history of depopulation. This process, to a large extent, was selective in terms of involving better-off people and was accompanied by a significant 'urban-rural shift' in the distribution of employment. As a result, the principal areas to lose out in this process - the inner areas of the larger cities - experienced significant increases in the proportion of less wealthy people in their populations as well as substantial contractions in the absolute numbers of both residents and jobs. (For a full review of the counterurbanisation phenomenon and a number of national case studies, see Champion, 1989).

2.23 Since the 1970s, it would appear that this deconcentration process has slowed down markedly in many countries, and that in some cases a further reversal has occurred, with renewed growth of the larger cities and core regions. International observers have related this development to the effects of economic restructuring, particularly the growth of high-level services, and to the process of gentrification in inner city areas, but the incidence of this new growth has been found to be patchy in terms of the proportion of larger cities which have been affected on any significant scale. It has also been noted that this growth has often impacted negatively on the less well-off residents of the larger cities and their inner areas by, for instance,

exacerbating shortages of low-cost housing and failing to provide suitable replacements for the types of jobs which have been lost. (These developments are documented very clearly for the USA by Frey (1993). For a commentary on the British experience, see Champion, 1994.)

Approach

2.24 In this context, this paper describes recent patterns of population and employment change for urban areas in England. It approaches this task at two levels. One involves looking across the whole country in order to detect broad differences in characteristics and trends according to the urban status and functional role of places. This uses a slightly modified version (see note, Table 2.1) of the classification of local authority districts used by OPCS for the presentation of population statistics, comprising a total of eleven district types. These, as shown in Table 2.1, range from the Inner London Boroughs grouping at one extreme of England's settlement hierarchy to the category of Remoter, Mainly Rural districts at the other end of the scale. The largest cities of the metropolitan counties - Birmingham, Leeds, Liverpool, Manchester, Newcastle upon Tyne and Sheffield - are identified as a separate category from the other districts in these counties. Districts in the non-metropolitan counties are divided into seven types, headed by large and small cities and moving through three differentiated smaller-town categories (industrial districts, new towns, and resort/retirement areas) to the two least urbanised types. The constituent districts of each type are listed in Appendix A.

2.25 The other approach focuses on the separate trends experienced by the inner and outer areas of a selection of cities. Twelve cities have been selected in consultation with the Department of the Environment, comprising London and all six principal cities of the metropolitan counties (Birmingham, Leeds, Liverpool, Manchester, Newcastle and Sheffield) together with five others, representatives of the Other Metropolitan District type (Coventry), Large Non-metropolitan City district types (Bristol, Plymouth and Nottingham) and Small Non-metropolitan City district types (Preston). For eleven of the cities (excluding London), each of which is a single local authority district, the inner areas have been based on the 1981 wards as defined for Urban Programme purposes during that decade. Details are provided in Appendix B. As regards the definition of London's inner area, the conventional Borough-level split into Inner and Outer London is used, as in the district typology of Table 2.1, rather than a definition based on Urban Programme criteria.

2.26 It is important to note that the inner/outer divide used for the analysis of London could potentially mask more detailed trends taking place within and between individual boroughs. For example, the inclusion of diverse places such as the borough of Kensington & Chelsea along with Tower Hamlets within the definition of Inner London may obscure trends at a local level. Nevertheless, for the purposes of this analysis and given the focus of this report on changing urban structures across England, it was considered necessary to consider London's inner and outer areas as discrete entities. This approach allows straightforward comparisons to be made between London and the other eleven cities chosen for examination. For a more detailed discussion of urban trends as they affect just London, please refer to

the first chapter in this report. For further statistical information on London, see reports by the London Research Centre (1995) and the Government Office for London (1995).

Table 2.1 The typology of local authority districts

	District type
	Greater London
	Inner London Boroughs
	Outer London Boroughs
	Metropolitan Districts
	Principal Metropolitan Cities
	Other Metropolitan Districts
	Non-Metropolitan Districts
	Large Non-metropolitan Cities
	Small Non-metropolitan Cities
	Industrial Districts
	New Towns
	Resort, Port & Retirement Districts
	Urban & Mixed Urban-Rural Districts
	Remoter Mainly Rural Districts

Note: This is a modified version of the classification of local authority districts used by OPCS. Non-metropolitan Cities are separated into Large and Small, and Rushmoor (Hants) is treated here as an 'Urban & Mixed Urban-rural District' rather than a 'Remoter Mainly Rural District'.

Data sources

2.27 As regards data sources, the analyses reported in this paper are based largely on the Small Area Statistics of the Census of Population. Particular attention is given to the changes indicated by comparison of the results of the 1981 and 1991 Censuses and to the situation which these changes have produced for the places studied by 1991. Changes between these two Censuses in the definitions and coverage mean that caution must be exercised in the interpretation of these analyses. Attention is drawn in this report to findings which may be significantly affected by this problem.

2.28 For district-level population changes, however, advantage is taken of the existence of the official population estimates for 1981 and 1991 (as adjusted in the light of the Censuses and other evidence) to provide a check on the Census-based analyses of overall population change rates. This series of annual estimates is also used to update population trends for district types to 1993, the latest available year at the time of writing.

2.29 In addition, population data from the 1971 Census are used to calculate rates of population change for 1971-81 for both district types and inner/outer urban areas. The aim here is to assess the extent to which the 1981-91 trends represent a continuation of the trends of the previous decade or are a departure from them.

2.30 Census of Employment data are also used to examine trends in numbers of jobs and in broad sectoral structure for the same sets of areas. This source has two notable advantages over Population Census data for the purposes of this analysis. First, it is a count of the number of jobs rather than of the number of people with jobs. Second, the count is undertaken on the basis of workplace rather than of the residence of the employed person. Though this source excludes self-employed persons (we cover this aspect from the Census of Population), given changes over time in levels of commuting and people having more than one job, it provides a more satisfactory measure of the changing economic strength of places. Moreover, in this study we are able to take advantage of this source's more frequent incidence (every two or three years) to compare the situation in 1991 with that in 1984, thus comparing two years which were at broadly the same stage of the national economic cycle.

Population change

Trends for district types

2.31 Overall change in numbers of residents constitutes the most basic measure of urban trends. The primary aim of this section is to examine the extent to which England's larger cities and their inner areas participated in the demographic recovery of the 1980s observed in many other countries, as outlined above. The Population Census is the main data source used for this analysis, because this is the only way of examining patterns of population change for inner and outer areas within districts, and also copes with changes in district boundaries. The problems of coverage and changes in the definition of population between Censuses do not undermine the general conclusions observed, according to comparisons which have been made with the official population estimates, and the latter are also used to update district-level trends to 1993.

2.32 Between 1981 and 1991 the strongest population growth in both absolute and relative terms took place in the four least urban district types. According to these Census-based calculations (Table 2.2), the number of residents in the Urban & Mixed Urban-Rural Districts grew by over half a million, an increase of around 6 per cent over the decade. This growth rate was exceeded by those for Resorts Ports and Retirement Districts, Districts with New Towns and Remoter Mainly Rural Districts, all with increases of at least 8 per cent. Population decreases were more common in the most urban district types, with the largest losses in both relative and absolute terms being for Principal Metropolitan Cities and Other Metropolitan Districts. The population of the Outer London Boroughs, however, was virtually stable and that of the Inner London Boroughs grew by 3 per cent.

2.33 These patterns are broadly the same as the picture for the 1980s which is presented by the OPCS mid-year estimates. The latter are reckoned to provide a more reliable measure of population numbers, since they have been adjusted in the light of Census enumerations and other evidence, but it must be remembered that they use a different definition of residents, notably counting students at their term-time rather than parental address. As is clear from comparing the two sets of 1981-91 change rates in Tables 2.2 and 2.3, there is a close correlation in rates between the two sources. (Figure 2.1 presents this information diagramatically.) In particular, there are only two differences in the change-rate rankings of the eleven

district types; in the mid-year estimates the New Town districts emerge as the fastest growing category ahead of the Remoter Mainly Rural districts, and the Industrial Districts come out ahead of the Small Non-metropolitan Cities. Reasonable confidence can therefore be placed in the Census-based analyses below, particularly where the emphasis is on the relative position of the various places on a change-rate ranking.

Table 2.2 Change in resident population, 1971-1991, by district type

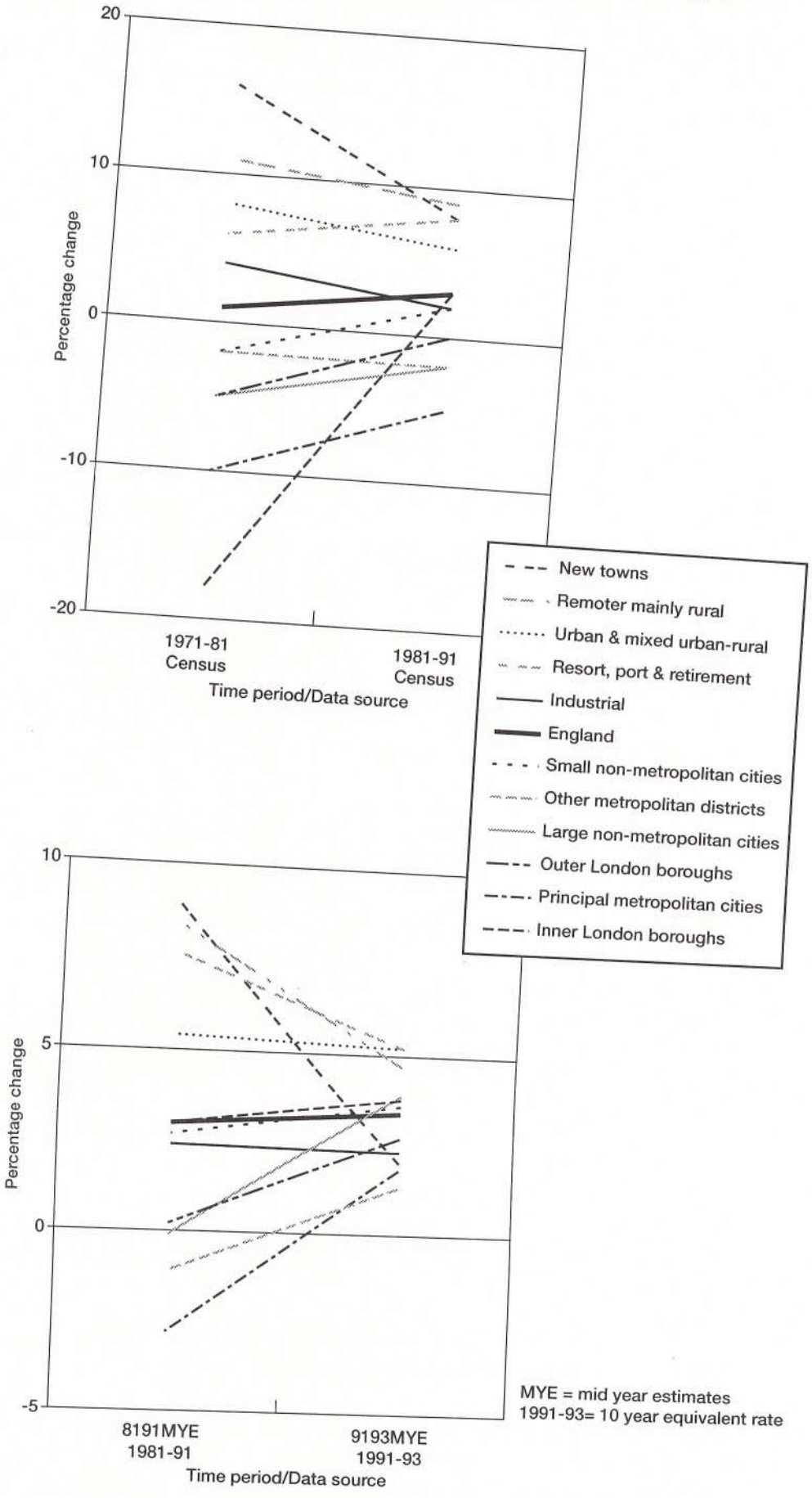
District type	1981 000s	1991 000s	1981-91 000s	1981-91 %	1971-81 Shift* %	1971-81 Shift* % point
Inner London Borough	2425.6	2500.0	74.4	3.1	-18.3	21.4
Outer London Borough	4183.0	4174.1	-8.9	-0.2	-4.9	4.6
Principal Metropolitan City	3438.2	3257.5	-180.7	-5.3	-10.0	4.7
Other Metropolitan District	7717.9	7564.3	-153.6	-2.0	-2.1	0.1
Large Non-Metropolitan City	2278.4	2240.9	-37.5	-1.7	-4.7	3.1
Small Non-metropolitan City	1521.9	1545.8	23.9	1.6	-2.1	3.6
Industrial District	5456.5	5580.8	124.3	2.3	3.8	-1.6
New Town	2018.3	2187.1	168.8	8.4	16.0	-7.7
Resort, Port & Retirement District	3123.9	3370.1	254.2	8.1	6.0	2.1
Urban & Mixed Urban-rural District	9201.5	9769.3	567.8	6.2	8.5	-2.3
Remoter Mainly Rural District	4406.6	4825.0	418.4	9.5	11.4	-1.9
England	45772.0	47022.8	1250.8	2.7	0.9	1.9

* 'Shift' refers to the percentage points difference between the 1971-81 rate and the 1981-91 rate. Figures may not sum exactly because of rounding. 1981-91 rates are calculated on the basis of residents as defined at the two censuses; 1971-81 rates are calculated for present residents. It is not possible to show actual change rates between 1971 and 1991; the 1971-81 and 1981-91 change rates are based on different definitions of the population, and so calculating a reliable 1971-91 change rate is not statistically possible.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

2.34 The Census-based change rates for 1981-91 are compared in Table 2.2 with those of the 1971-81 period in order to gauge where the 1980s represented a strengthening or weakening of the demographic trends. It can be seen that the Inner London Boroughs experienced the most remarkable change in rate, with an upward shift of 21 percentage points from an 18 per cent decline in the earlier decade to their 3 per cent increase in the 1980s. Smaller but significant upward shifts are also found for Outer London Boroughs and the Principal Metropolitan Cities, followed by both the Large and Small Non-metropolitan Cities. At the other extreme, New Town districts registered the largest downward shift in growth rate between the

Figure 2.1 Population change, 1971-93, by district type



two decades, with reductions in the rate of growth (contrary to the overall trend for England) also occurring for Urban & Mixed Urban-Rural districts, Remoter Mainly Rural districts and Industrial Districts. The key feature of the 1980s compared with the 1970s, therefore, is a convergence towards the national rate, with a reduction in growth rates for the less urban types of district and something of a recovery for many cities.

2.35 Reference to OPCS mid-year estimates for 1991-93 suggests that this general tendency has continued into the 1990s. Calculations based on only two years of change (grossed up to their ten-year equivalents in Table 2.3) need to be treated with caution, but the general pattern compared to the 1980s is one of further reductions in the rate of growth of the less urban district types. Upward shifts in change rates between 1981-91 and 1991-93 are found for the five most urban district types, though in the case of the Inner London Boroughs this is little more than the national shift. In 1991-93 all eleven district types gained population and there was a remarkably small difference between the fastest and slowest growing categories by comparison with the gulf between urban decline and rural growth which was to be seen in the 1980s and 1970s.

Table 2.3 Change in resident population, 1991-93, and shift since 1981-91, by district type

District type	1991-93 %	10 year equivalent	1981-91 %	Shift* % point
Inner London Borough	0.8	3.8	3.0	0.8
Outer London Borough	0.5	2.7	0.2	2.5
Principal Metropolitan City	0.4	1.8	-2.8	4.6
Other Metropolitan District	0.3	1.3	-1.1	2.4
Large Non-metropolitan City	0.8	3.9	-0.1	4.0
Small Non-metropolitan City	0.7	3.6	2.7	0.9
Industrial District	0.5	2.3	2.4	-0.1
New Town	0.4	2.0	8.9	-6.9
Resort, Port & Retirement District	1.0	5.2	7.6	-2.4
Urban & Mixed Urban-Rural District	1.0	5.2	5.4	-0.2
Remoter Mainly Rural District	0.9	4.7	8.4	-3.7
England	0.7	3.4	3.0	0.4

* Shift' refers to the percentage point difference between the 1981-91 rate and the 1991-93 rate grossed up to its ten-year equivalent. Figures may not sum exactly because of rounding.

Source: Calculated from OPCS mid-year estimates

Inner and outer area contrasts

2.36 The 1981-91 population trends for the inner areas of the twelve selected cities are shown in Figure 2.2. Inner London was the only one of this sample to exhibit significant growth, while the situation in Nottingham and Plymouth was almost stable according to the Census data used here. The highest rates of loss

occurred in the inner areas of Sheffield, Liverpool, Manchester and Newcastle, with numbers down by between 1 in 7 and 1 in 11. For most places, however, this experience represented a recovery from the 1971-81 trend. In that decade all twelve inner areas lost at least 8 per cent of their population, with five losing at least 18 per cent (London, Liverpool, Manchester, Newcastle and Nottingham). Between the two decades all but Sheffield saw a marked upward shift in change rate. The recovery for the Inner London Boroughs was exceeded by Nottingham's inner area, while another six areas also recorded upward shifts of at least 8 percentage points between 1971-81 and 1981-91.

2.37 Figure 2.2 also shows trends for the outer areas of these cities. The majority of these were also losing population during the 1980s, as they had been during the previous decade. The shift between the two decades for these outer areas, however, appears to have been more mixed than for the inner areas. While the 1981-91 experience represented an upward shift from the previous decade in some cases, notably Manchester, some downward movements in change rates are evident, with a particularly large cutback in rate occurring for Plymouth's outer area.

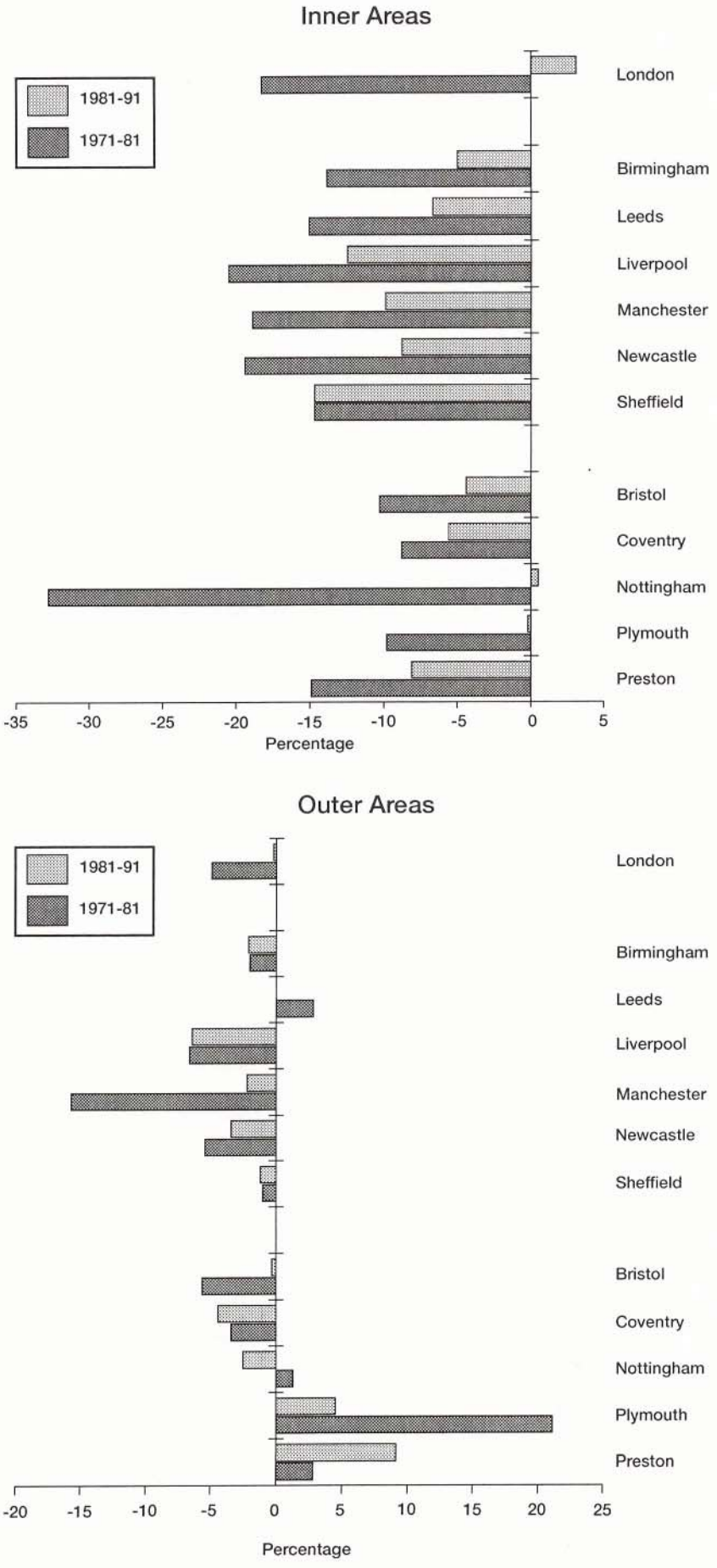
2.38 Figure 2.2 can also be used to gauge whether these cities were centralising or decentralising, as defined according to whether the change rates for inner areas were, respectively, higher or lower than for the outer areas. For 1981-91 decentralisation was dominant, with ten of the twelve cities recording faster decline in their inner areas. The two exceptions are London, with its positive rate of inner area growth and stable outer area population, and Nottingham, with stable inner area and outer area decline. Even so, this is a less clear-cut picture than that for the 1970s, when all twelve cities were characterised by decentralisation and with much higher inner-outer differentials in most cases.

2.39 This analysis of population changes since 1971 therefore indicates that England has, to a large extent, shared the experience of other Developed World countries. In the case of London, in particular, there was indeed a reversal in the direction of overall population change between the 1970s and the 1980s. In general, the picture is one of a slower rate of urban depopulation and a reduction in the scale of population decentralisation between the inner and outer areas of England's larger cities. Centrifugal forces clearly continue to predominate, leading to strong growth in the less urbanised areas of the country, but the latest data suggests that urban-rural differentials tended to narrow further after 1991.

Demographic structure

2.40 This section looks at four selected measures: the proportion of residents of pensionable age; the proportion of residents aged 0-15; the proportion of households comprising one person only; and the proportion of households defined by the Census as 'lone parent households'. (Note that ethnic composition is addressed in Report 5.) Initially, these four variables are examined across urban England using the district-type classification, and then attention is focused on the inner and outer areas of the twelve selected cities. The immediate aim is to discover the extent and nature of variation between places in 1991 and to identify whether the trends of the previous ten years served to accentuate such differences or to dampen them.

Figure 2.2 Population change for inner and outer areas, 1971-91



Variations between district types

2.41 Table 2.4 provides details of selected demographic characteristics for the eleven district types. In terms of age structure, the Resort Port & Retirement category emerges, not surprisingly, as having the oldest population, with over a quarter of its population being of pensionable age in 1991 and with the lowest proportion of 0-15 years olds of all the district types. The Remoter Mainly Rural districts come next on both counts, reflecting their role as a popular reception area for retirement migrants as well as their tradition of net out-migration of young adults before they start families. At the other extreme, Inner London and the New Towns contained the lowest proportions of elderly people in 1991, and the New Towns the highest proportion of children. These patterns broadly correspond with the proportions of households containing only pensioners, which range from 1 in 3 for the Resort, Port & Retirement districts to only 1 in 5 for Inner London.

Table 2.4 Age structure and household composition, 1981-91, by district type

	PA+*		0-15†		one-person‡ households		lone-parent‡ households	
	1991	1981-91	1991	1981-91	1991	1981-91	1991	1981-91
Inner London Borough	15.6	-2.2	19.2	0.4	38.1	6.3	7.1	3.5
Outer London Borough	17.5	-0.4	19.8	-0.9	27.8	5.5	4.2	2.1
Principal Metropolitan City	19.1	0.7	21.0	-0.9	31.0	5.8	6.0	3.4
Other Metropolitan District	18.2	1.7	21.0	-2.4	26.2	4.8	4.7	2.4
Large Non-metropolitan City	19.0	0.8	20.7	-1.2	29.0	5.2	5.2	2.7
Small Non-metropolitan City	19.2	0.4	19.4	-1.7	30.5	5.6	4.5	2.2
Industrial District	17.5	1.5	20.8	-2.6	24.2	4.6	3.8	1.9
New Town	15.7	2.1	22.0	-2.8	23.6	5.4	4.6	2.1
Resort, Port & Retirement District	26.3	-0.4	17.7	-1.3	29.2	3.8	3.3	1.5
Urban & Mixed Urban-rural district	17.4	1.6	19.9	-3.1	23.0	4.9	2.8	1.1
Remoter Mainly Rural District	21.6	1.6	18.9	-3.0	24.3	4.2	2.7	1.2
England	18.7	1.0	20.1	-2.1	26.7	4.9	4.1	2.0

* 'PA+' refers to the proportion of residents that are of pensionable age (65+ for men, 60+ for women).

† '0-15' refers to the proportion of residents aged 0-15 years.

‡ 'One-person households' and 'lone-parent households' are given as a proportion of all households. Figures for 1991 show percentages, figures for 1981-91 show percentage point change

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

2.42 Trends over the previous decade have had only relatively little part to play in producing the 1991 differentials, according to the evidence in Table 2.4. The clearest exception to this generalisation is the impressive fall in Inner London's proportion of elderly people in distinct contrast to the national trend and from an already below-average level in 1981. Inner London was also the only district type to see an increase in its proportion of 0-15 year olds, these two changes together marking a distinct rejuvenation of its population compared with England as a whole. Outer London also followed this trend, but to a more limited extent. Other notable features of the 1981-91 changes, however, represent a move away from the extremes. For example, the Resort, Port & Retirement districts, in aggregate, became younger over the decade compared with the national trend, with a fall in their proportion of elderly and a below-average reduction in the proportion of children, while the New Towns moved in the opposite direction, clearly maturing in their age structure.

2.43 In relation to the two measures of household composition in Table 2.4, there is a strong urban-rural dimension to the differences between district types, and the changes since 1981 have generally contributed to these patterns. One-person households comprised 38 per cent of all households in Inner London in 1991, substantially more than in Outer London. The Principal Metropolitan Cities come next, considerably higher than for the neighbouring (Other Metropolitan Districts) districts, while the proportions are well below average for all the non-city district types outside metropolitan England apart from the Resort, Port & Retirement category with its large number of one-person households. The distribution of lone-parent households in 1991 appears very similar to this and clearly reflects the recent changes, with the largest percentage point increases taking place in Inner London and the Principal Metropolitan Cities and with the smallest increases being at the more rural end of the district scale.

Inner and outer area patterns

2.44 The situation of the inner and outer areas of the twelve selected cities is summarised in Table 2.5 for both 1991 and change since 1981, comparing each of these 24 areas with the England figure and also comparing the experience of the inner and outer parts of each separate city. (The full list of cities are given in the tables in Appendix C.) The overall picture is that the inner cities contained relatively young populations in 1991, and that this had partly come into being as a result of changes over the previous decade. In a national context, seven out of twelve inner city areas had above-average proportions of 0-15 years olds and only three contained above-average proportions of people of pensionable age. By contrast, all but two of the outer areas contained a proportion of elderly people higher than the national figure, and, for a clear majority of cities, the elderly made up a higher proportion of the outer area populations than for the inner area.

2.45 Over the previous decade, inner areas experienced a clear rejuvenation relative to the national trend, with all but one (Nottingham) recording a smaller decline in their 0-15 year-old proportion than England as a whole and with Inner London's actual rise in proportion against the national trend being followed by another four inner areas (Manchester, Birmingham, Newcastle and Liverpool). The majority of outer urban areas also saw their proportion of 0-15 year olds rise faster than the national trend, but not as strongly as for the inner areas in all but two cases. At the same time, a clear majority of outer areas also saw a more substantial increase in

their elderly proportion than the national trend, and in only one of the twelve cases (Manchester) did the inner area experience a stronger growth in elderly percentage than in the outer part of the city.

2.46 The patterns presented in Table 2.5 by the two measures of household composition for inner and outer areas are even more clear-cut. Inner areas in 1991 contained a higher than average proportion of both one-person and lone-parent households in all twelve cases, and the increase in these proportions between 1981 and 1991 was in all cases greater than the national trend. At least half of the outer areas also exhibited proportions of both types of households which were higher than the national figure in 1991, but in all twelve cities the proportions of both were higher for their inner areas than for their outer. Similarly, though the majority of outer areas experienced a more rapid increase than England as a whole in their proportions of both one-person and lone-parent households, in virtually all cases this increase was less marked than for their inner area counterparts. The only exception is that outer Birmingham recorded a marginally higher rise in proportion of one-person households than the inner area there. Otherwise, there is a very clear distinction between inner and outer areas on these two variables, and it can be seen that the 1981-91 trends contributed substantially to the differences found for 1991.

Table 2.5 Age structure and household composition patterns for the inner and outer areas of twelve cities, 1981-91

Variable	1991			1981-91		
	IA>AV*	OA>AV†	IA>OA‡	IA>AV*	OA>AV†	IA>OA‡
0-15	7	5	9	11	8	10
PA+	3	10	2	1	9	1
One-person households	12	8	12	12	8	11
Lone-parent households	12	6	12	12	7	12

For a full list of city names in each category, see Appendix C.

Figures indicate the number of cities satisfying the specified criterion, as follows:

* IA>AV: the inner areas' proportion (1991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

† OA>AV: ditto, for each city's outer area compared to England as a whole.

‡ IA>OA: the inner area's proportion (1991) is above its outer area counterpart, or its percentage point change (1981-91) is more positive than for the respective outer area.

'PA+' refers to the proportion of residents that are of pensionable age (65+ for men, 60+ for women).
'0-15' refers to the proportion of residents aged 0-15 years.
'One-person households' and 'lone-parent households' are given as a proportion of all households.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

2.47 Before concluding this section, a cautionary word is appropriate in relation to the quality of data in the Census. The under-enumeration problem in 1991 is believed to have been most serious in the inner areas of the larger cities and amongst people aged 16-29. By concentrating the age analysis on two other age groups, the results outlined above will be affected only indirectly, in that some omission of young adults will artificially swell the proportions of people in other groups in

1991. The effects on household composition are less easy to gauge and thus to avoid. As it is believed that a proportion of young adults missing from the 1991 Census were omitted from Census forms that were returned, the number of one-person households and lone-parent households is likely to appear larger than it really was. Nevertheless, the sheer size of the increases described above for the larger cities make it unlikely that they are totally or even largely due to this statistical factor.

2.48 In sum, therefore, it can be concluded that while there are substantial differences between places in demographic structure, these were well established before 1981. The trends towards smaller proportions of children and larger proportions of the elderly, one-person households and lone-parent households were recorded very widely across England during the subsequent decade. In urban England the clearest features were the faster than average increases in the proportions of one-person and lone-parent households in the inner city areas of the larger cities, accentuating their deviation from the national average. The other notable feature of the 1980s was the slower than average decline in the proportion of children in the populations of the inner areas, in most cases by a margin larger than is likely to have been caused by the underenumeration of other age groups in 1991. In nearly half the cases studied this involved an increase in the proportion, against the national trend.

Housing and cars

2.49 This section deals with two aspects relating to people's material well-being, ones on which there are substantial differences between the various types of urban areas and between the inner and outer parts of cities. Given that the proportions of households that are overcrowded or lack basic amenities are now very small, the variables examined here are dwelling type and housing tenure, together with car availability. Note that the 1981 Census did not collect information about dwelling type in England, unlike in Scotland, so no change calculations are possible for this variable. A subset of the district-type data is provided in Table 2.6, and an analysis for the inner and outer areas of the twelve selected cities can be found in Table 2.7. (A full list of the cities in each category is found in Appendix C.)

Type of dwelling

2.50 As regards dwelling type in 1991, a major contrast exists between the most urban and most rural parts of England. As Table 2.6 shows, half of England's stock is composed of detached and semi-detached houses, but Inner London's proportion is less than one-tenth of this. Even Outer London's figure of 1 in 3 houses is only half the level found in the Remoter Mainly Rural category, while the level is also well below average in the other main city categories of Principal Metropolitan Cities, Large Non-metropolitan Cities and Small Non-Metropolitan Cities. The proportion is particularly low for the inner areas of cities, but are also less than the national average for the outer areas of eight of the twelve cities (Table 2.7). The full dataset reveals that Inner London is particularly distinct in having almost half of its stock (47 per cent) in the form of purpose-built flats, a level rivalled among the other eleven cities only by Newcastle's inner area (44 per cent) with the next highest being inner Sheffield (29 per cent).

Table 2.6 Housing and car availability, 1981-91, by district type

District type	Detached and semi-detached	Owner occupied		Rented from LA/NT*		No car		2+ cars
	1991	1991	1981-91	1991	1981-91	1991	1981-91	1981-91
Inner London Borough	4.3	38.6	11.3	33.8	-9.0	53.9	-4.7	2.6
Outer London Borough	33.0	69.5	7.5	16.5	-6.7	32.0	-4.1	6.1
Principal Metropolitan City	38.7	55.4	8.8	30.2	-9.5	48.1	-5.3	4.8
Other Metropolitan District	51.8	65.8	9.9	25.2	-9.5	39.3	-6.5	6.8
Large Non-Metropolitan District	37.4	60.8	9.8	25.1	-9.9	40.7	-6.9	6.1
Small Non-Metropolitan District	40.4	63.2	7.8	21.6	-8.1	37.6	-6.3	6.0
Industrial District	56.2	71.9	10.4	18.9	-9.9	31.7	-7.0	8.7
New Town	47.6	65.7	16.8	26.4	-17.9	29.0	-5.7	9.5
Resort, Port & Retirement District	54.4	76.8	7.0	10.1	-5.4	29.7	-7.4	8.2
Urban & Mixed Urban-Rural District	63.4	75.4	9.1	13.5	-8.1	20.1	-5.1	10.8
Remoter Mainly Rural	67.3	72.5	9.8	14.4	-7.9	22.0	-5.7	9.3
England	45.7	67.6	9.8	19.9	-9.0	32.4	-6.2	8.0

* LA/NT refers to 'local authority and new town'.
All 1991 data are percentages of total households. All 1981-91 data are percentage point changes.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Housing tenure

2.51 Cities and their inner areas are even more distinctive in relation to tenure. By 1991, even the New Towns had joined the other non-metropolitan district types (apart from the two cities categories) with levels of owner occupation of at least 65 per cent, and there were similar levels across Outer London and the Other Metropolitan Districts (Table 2.6). None of the twelve inner urban areas had this high a proportion, though those of Coventry (64 per cent) and Bristol (56 per cent) came closest to it, but seven of the twelve outer areas had proportions in excess of the national figure (London, Leeds, Sheffield, Coventry, Bristol, Plymouth and Preston). Unsurprisingly, in all twelve cases the outer area proportion was higher than for that city's inner area (Table 2.7).

2.52 The pattern for the public-rented sector in 1991 broadly mirrors this picture, with the largest proportions in Inner London and the Principal Metropolitan Cities and with only one of the twelve inner areas (Coventry's) having less than a quarter of its stock in this sector (21 per cent). Above-average proportions in 1991 are also

found for the Other Metropolitan Districts, both categories of non-metropolitan cities and the New Towns (Table 2.6).

Table 2.7 Housing and car availability patterns for the inner and outer areas of twelve cities, 1981-91

Variable	1991			1981-91		
	IA>AV*	OA>AV†	IA>OA‡	IA>AV*	OA>AV†	IA>OA‡
Detached and semi-detached	0	4	0	n/a	n/a	n/a
Owner occupied	0	7	0	3	4	3
Rented from LA/NT	12	7	11	5	9	4
No car	12	6	12	7	10	4
2+ cars	0	4	0	0	2	0

A full list of city names in each category is given in Appendix C.

Figures indicate the number of cities satisfying the specified criterion, as follows:

* A>AV: the inner areas' proportion (1991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

† OA>AV: ditto, for each city's outer area compared to England as a whole.

‡ IA>OA: the inner area's proportion (1991) is above its outer area counterpart, or its percentage point change (1981-91) is more positive than for the respective outer area.

'LA/NT' refers to 'local authority and new town'. 'N/A' indicates that calculations were not possible because data were not collected by the 1981 census.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright .

2.53 These patterns clearly represent a marked change from the 1981 situation, notably as a result of the transfer of public-sector housing into owner occupation through the 'Right to Buy'. Generally, the reduction in the proportion of public-sector housing has taken place relatively uniformly across the district types, at around 8-10 per cent of total dwellings, though this represents varying proportions of the original public-sector stock. The main exceptions are the Resort, Port & Retirement category, where the proportion of public-sector stock was already by far the lowest in 1981, and the New Towns, where the proportion of stock in public-sector hands fell by twice the national amount over the decade (Table 2.6).

Car availability

2.54 Inner London and the Principal Metropolitan Cities are also characterised by the lowest levels of car availability, with around half their households having no car and under 5 per cent with 2 or more cars. Next are the Other Metropolitan Districts and the two non-metropolitan city categories, with 38-40 per cent of no-car households and 6-7 per cent with 2 or more. None of the twelve inner areas has a smaller proportion of no-car households than this, with inner Newcastle's level being as high as 74 per cent, but four of the outer areas have above-average proportions of households with at least 2 cars - Bristol at 17 per cent, followed by Coventry, Plymouth and London (Tables 2.6 and 2.7).

2.55 The increasing availability of cars since 1981 appears to have been a remarkably uniform process across the district types, though clearly least for both Inner and Outer London. Similarly, all the inner and outer urban areas saw the level of carlessness fall, but in the majority of cases the decline was less than the national trend. Comparing the inner and outer areas for each city, the majority of cases saw their inner areas' level of carlessness fall less substantially than those of their outer areas, and in every case the proportion of households with at least 2 cars rose more steeply in the outer areas (Tables 2.6 and 2.7).

2.56 Therefore, as with demographic structure, housing characteristics and car availability in 1991 varied considerably between the various types of districts and between the inner and outer areas of the twelve cities. As with demographic structure, too, the changes over the preceding decade were relatively uniform across these places, so that to a large extent the differences already existing in 1981 were maintained. Where the trends in urban England did depart from the national pattern, however, they tended to increase the distinctiveness of places, as in the cases of the below-average levels of car availability for Inner London and a majority of the other inner areas studied, and the below-averages of owner occupation for the Principal Metropolitan Cities and all the inner areas bar London, Liverpool and Sheffield.

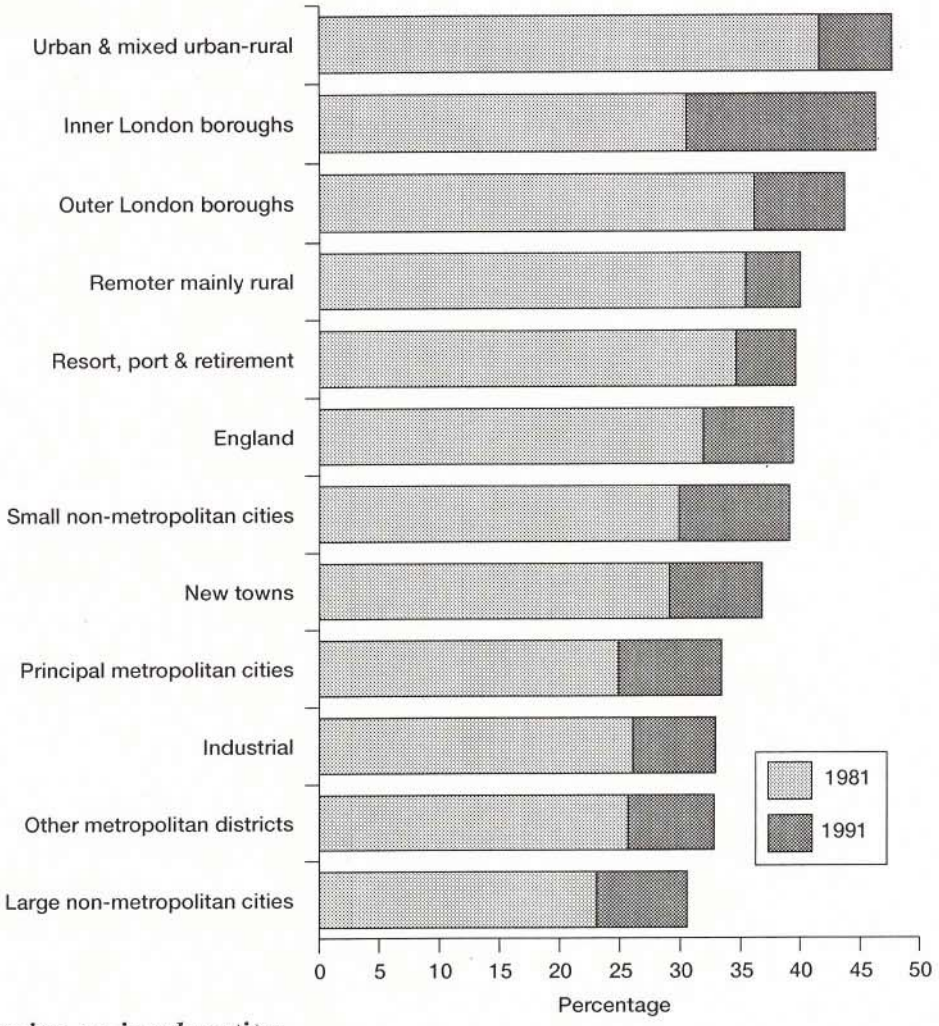
Social characteristics

2.57 This section focuses on a number of measures of life-course development and achievement that relate to people's position in society. Four variables have been selected for this purpose - suffering from a limiting long-term illness, staying on in education after reaching the end of compulsory schooling, achieving qualifications of at least diploma level, and attaining certain occupational levels as measured by Social Class. Data on the first of these four are available only for 1991, but change between 1981 and 1991 can be calculated for the other three. Selected results for the district types are provided in Table 2.8 and Figure 2.3, while an analysis of inner and outer area performance for the twelve selected cities is summarised in Table 2.9. (A full list of city names in each category is given in Appendix C.)

Illness

2.58 The proportion of all residents suffering from a limiting long-term illness in 1991 ranges across the district types from 10.2 per cent for the Urban & Mixed Urban-Rural districts to 15.3 per cent for the Principal Metropolitan Cities and Resort, Port & Retirement category. These rates are, however, partly a product of differences in age structure, so in Table 2.8 details are given for illness amongst 0-15 year olds only to give an indication of development problems at this early stage in the life course. On this basis, Inner London and the Principal Metropolitan Cities appear worst, with illness levels a quarter up on the national level, whereas the levels for the two most rural district types are nearly a quarter below it. The below-average performance of the larger cities is also evident in Table 2.9, where all twelve of the inner areas have illness levels above the national average for 0-15 year olds and only Inner London is below the average on the all-residents measure that does not allow for age differentials. For all twelve cities, the inner areas have more severe illness problems than their respective outer areas, but it is also notable that a majority of outer areas also have more illness than England as a whole.

Figure 2.3 Percentage of household heads in Social Class I or II, 1981-91, by district type



Staying on in education

2.59 The proportion of 17 year olds continuing with their studies does not show such a clear urban-rural dimension, but there is a marked contrast between inner and outer areas. In terms of the 1991 situation across the district types (Table 2.8), the leading areas exhibit a strong regional component, with staying-on rates of at least 55 per cent in both Inner and Outer London and for the Urban & Mixed Urban-Rural districts (which are particularly concentrated in and around the South East of England). This pattern, together with the low performances of the Large Non-metropolitan Cities, Industrial Districts, Principal Metropolitan Cities and Other Metropolitan Districts, ties in very closely with the Social Class composition of these types (shown in Figure 2.3 and outlined below in more detail). The 1981-91 changes generally tend to have contributed to these 1991 differentials, but given that all district types have experienced considerable increases in staying-on rates over this period, it appears that the major elements of these differentials were already in place before the 1980s. For the twelve cities (Table 2.9), only one of the inner areas (London) and a minority of outer areas had an above-average rate in 1991, but in every case the inner area performance was lower than that for the outer area. Between 1981 and 1991 the majority of both inner and outer areas saw a fall in their position relative to the national trend, but the twelve cities are split evenly on whether the inner-outer contrast widened or narrowed over the decade.

Higher-level qualifications

2.60 Variation between places in the proportion of people with higher-level qualifications is more likely to be affected by migration than are measures of school and pre-school experience, with such labour migration normally tending to favour the largest cities and their high-class dormitories and to work against more rural areas. This picture is only partly borne out by the evidence on 30-44 year olds shown in Table 2.8. Admittedly, both parts of London (but particularly Inner London) and the Urban & Mixed Urban-Rural districts emerge with significantly above-average levels, and the Remoter Mainly Rural districts category scores relatively poorly by comparison. The Principal Metropolitan Cities and Large Non-metropolitan Cities, however, lay well below the national level in 1991 and had not managed to narrow the gap over the previous decade. This was also the case for the Other Metropolitan Districts, Industrial Districts and New Towns, in contrast to the marked increase in qualified people recorded by the Small Non-metropolitan Cities over the decade. In terms of the twelve cities (Table 2.9), the majority of outer areas were more qualified than the national level in 1991 and only two (those of London and Nottingham) were outperformed by their inner areas, but between 1981 and 1991 there was a very mixed pattern, with the twelve being evenly split on all three analyses.

Social Class

2.61 As mentioned above, these patterns are often closely related to Social Class patterns, as defined in terms of the occupations of economically active heads of households. Figure 2.3 demonstrates the clear pecking order for district types already identified for staying-on rates, with the Urban & Mixed Urban-Rural districts and London grouping together with their above-average proportions of Social Classes I and II (professional and managerial) and contrasting markedly with the Large Non-metropolitan Cities, Other Metropolitan Districts, Principal Metropolitan Cities and Industrial Districts at the other end of the spectrum in 1991. Nevertheless, this pattern is considerably different from that found for 1981 - most notably in terms of the strong upward social mobility of Inner London but also with the strong growth in the Principal Metropolitan Cities over the decade and the above-average increase registered by the Small Non-metropolitan Cities. The patterns and trends for Social Classes IV and V (Table 2.8) are very largely a mirror image of these, particularly the massive reduction that gave Inner London a below-average proportion by 1991, but also the substantial contraction of this group in the Principal Metropolitan Cities.

2.62 For the twelve inner and outer areas, too, the picture is one of clear contrasts in 1991 despite considerable change over the previous decade. As indicated in Table 2.9, in 1991 only one inner area (London) contained an above-average proportion of Social Class I and II compared to nine of the outer areas, with the result that all but two of the outer areas had larger proportions than their associated inner areas, the exceptions being for London and Nottingham. The picture is even more clear-cut for Social Classes IV and V, with all twelve inner areas having larger proportions of this group than their respective outer areas. Over the previous decade, however, a majority of both inner and outer areas for these cities saw their proportion of Social Classes I and II rise faster than the national trend, with the

inner area's proportion increasing faster than the outer area's in eight out of twelve cases. Similarly, all but one of the inner areas recorded a faster contraction in their proportions of Social Classes IV and V than England as a whole (the exception again being London), and in all but one case the scale of this reduction was greater than for the respective outer area (the exception here being Newcastle). In general, therefore, the inner areas have experienced a more rapid occupational upgrading of their workforce than the outer areas over the decade, but in most cases have moved only a small way to narrowing the inner-outer differential that was inherited in 1981.

Table 2.8 Social characteristics, 1981-91, by district type

District type	0-15 ill*	17 in education†		30-44 with qual.‡		Social class IV & V#	
	1991	1991	1981-91	1991	1981-91	1991	1981-91
Inner London Borough	3.0	55.2	16.4	27.6	10.0	18.5	-7.3
Outer London Borough	2.2	56.8	14.3	22.5	6.7	14.1	-2.7
Principal Metropolitan City	3.0	43.9	12.3	17.2	5.0	22.9	-4.3
Other Metropolitan District	2.6	44.0	12.5	15.2	3.3	21.3	-3.2
Large Non-Metropolitan City	2.7	39.5	11.9	14.8	4.5	23.9	-2.5
Small Non-Metropolitan City	2.5	45.4	12.8	23.4	7.3	20.7	-2.8
Industrial District	2.3	43.1	13.0	15.2	3.3	21.3	-2.2
New Town	2.3	44.7	12.0	16.7	4.0	20.0	-2.5
Resort, Port & Retirement District	2.2	51.7	11.8	17.5	3.9	18.5	-1.1
Urban & Mixed Urban-Rural District	1.8	57.1	13.5	24.0	5.2	14.6	-1.7
Remoter Mainly Rural District	1.9	52.4	13.8	19.1	4.9	19.7	-1.6
England	2.3	49.6	13.4	19.5	5.0	18.8	-2.8

* '0-15 ill' refers to the proportion of 0-15 year olds with limiting long-term illness.

† '17 in education' refers to the proportions of 17 year olds staying on in full-time education.

‡ '30-44 with qual.' refers to the proportion of 30-44 year olds with a degree or diploma.

'Social Class IV & V' refers to the proportion of classified households headed by a person in Social Classes IV or V.

Figures for 1991 show percentages, and figures for 1981-1991 show percentage point changes.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Table 2.9 Social patterns for the inner and outer areas of twelve cities, 1981-91

Variable	1991			1981-91		
	IA>AV*	OA>AV†	IA>OA‡	IA>AV*	OA>AV†	IA>OA‡
Residents ill	11	7	12	n/a	n/a	n/a
0-15 ill	12	7	12	n/a	n/a	n/a
17 in education	1	5	0	4	4	6
30-44 with qualifications	3	10	2	6	7	6
Social class I & II	1	9	2	8	7	8
Social class IV & V	11	4	12	1	8	1

A full list of city names in each category is given in Appendix C.

Figures indicate the number of cities satisfying the specified criterion, as follows:

* IA>AV: the inner areas' proportion (1991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

† OA>AV: ditto, for each city's outer area compared to England as a whole.

‡ IA>OA: the inner area's proportion (1991) is above its outer area counterpart, or its percentage point change (1981-91) is more positive than for the respective outer area.

'0-15 ill' refers to the proportion of 0-15 year olds with limiting long-term illness. '17 in education' refers to the proportions of 17 year olds staying on in full-time education. '30-44 with qual.' refers to the proportion of 30-44 year olds with a degree or diploma. 'Social Class IV & V' refers to the proportion of classified households headed by a person in Social Classes IV or V.

'n/a' indicates that calculations were not possible because comparable data were not collected by the 1981 census.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

2.63 In terms of these social characteristics, therefore, London's experience in the 1980s seems rather distinctive, particularly Inner London's. The strong increase in Social Classes I and II observed for Inner London needs to be interpreted with some caution, because this calculation omits people who cannot be classified as a direct or indirect effect of lack of work, but the information relating to staying-on rates and qualifications for the whole relevant population does confirm a marked social upgrading of Inner London over this decade. The picture is not nearly as positive as this for the rest of urban England, with the Principal Metropolitan Cities, Other Metropolitan Districts and the Large Non-metropolitan Cities generally recording below-average increases in staying-on rates and qualifications and thus ending up in 1991 in a more disadvantaged position relative to the national level than in 1981. Similarly, a clear majority of the inner areas displayed below-average levels on both these indicators in 1981 and most of these saw this differential widen over the ensuing decade. The information available on illness in 1991 provides further confirmation of the weakness of the larger cities and their inner areas, with London being no exception in this particular respect.

Labour market position

2.64 This section covers a range of variables concerning the level of participation in the workforce and the position of those who are economically active in this way, looking at levels of self-employment and unemployment rates. It also examines the household dimension to the labour market in terms of the proportion of households that contain no economically active person and the composition of households by number of members in paid work. As in previous sections, the focus is again on the resident population, in contrast to the next section which deals with jobs counted at the workplace. A selection of the variables is presented in Table 2.10 and Figures 2.4 and 2.5 for district types, and a summary of the inner-outer analysis for the twelve cities is provided in Table 2.11 (A full list of city names in each category is given in Appendix C.)

Table 2.10 Labour market position, 1981-1991, by district type

	Male EAR		Female EAR		Self-employed		Females unempl		Hhlds with no-one EA	
	1991	1981-91	1991	1981-91	1991	1981-91	1991	1981-91	1991	1981-91
Inner London Borough	84.7	-4.3	67.3	0.0	13.6	2.7	13.9	5.1	28.5	2.8
Outer London	88.2	-3.0	69.0	4.7	13.3	3.0	7.8	2.4	27.4	3.6
Principal Metropolitan City	83.8	-5.3	65.3	2.0	9.8	2.7	11.5	1.8	4.5	6.0
Other Metropolitan District	85.0	-5.4	66.6	4.7	10.4	2.7	9.2	0.5	32.5	6.1
Large Non-Metropolitan City	86.3	-3.9	66.9	4.7	9.9	2.7	9.6	1.2	32.5	4.7
Small Non-Metropolitan City	85.9	-3.2	69.2	5.7	11.1	2.5	7.6	0.9	31.6	3.8
Industrial District	87.1	-4.0	67.8	7.8	11.1	2.8	7.6	0.2	29.8	4.8
New Town	88.2	-3.4	69.0	7.8	10.3	2.6	7.4	-0.1	27.4	5.6
Resort Port & Retirement District	86.5	-2.6	67.9	9.1	17.5	2.1	6.5	-0.2	38.0	1.2
Urban & Mixed Urban-Rural District	89.4	-1.8	70.0	10.3	13.9	2.9	5.1	0.4	25.9	3.5
Remoter Mainly Rural District	88.0	-2.9	67.3	11.9	19.0	2.3	6.0	-0.3	31.9	3.4
England	87.0	-3.5	68.0	6.9	13.1	2.9	7.8	0.8	30.4	4.2

'EAR' refers to the proportion of residents of working age (16-64 for males, 16-59 for females) that are economically active (i.e. in the labour force).
'Self-employed' refers to the proportion of economically active residents that are self-employed.
'Females unempl.' refers to the proportion of economically active females that are unemployed or on a Government Scheme.
'Hhlds with no-one EA' refers to the proportion of households with no member in the labour force. Figures for 1991 give percentages, figures for 1981-91 give percentage point changes.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Labour force participation

2.64 Labour force participation varies relatively little at the level of generalisation constituted by the district types, once the retirement age groups are removed from the equation, and the patterns for males and females are remarkably similar. For males, the range in economic activity rates in 1991 was from 89 per cent for Urban & Mixed Urban-Rural districts to 84 per cent for the Principal Metropolitan Cities. For females, the highest and lowest district types are the same, and the range is from 70 to 65 per cent.

2.66 Trends in activity rates between 1981 and 1991, however, exhibit a wider range, at least relative to the scale of the national figures, as shown in Table 2.10. While over the decade male rates fell nationally from 90.5 to 87.0, a percentage point fall of 3.5, they declined by considerably more than this for the two metropolitan-county categories and by only 1.8 points for the Urban & Mixed Urban-Rural districts in aggregate. For females, at one extreme Inner London saw no change between 1981 and 1991 and the Principal Metropolitan Cities experienced relatively little movement by comparison with the national rise of around 7 per cent, while the proportion of women involved in the workforce grew by at least 10 percentage points at the more rural end of the scale, where traditionally they had been below average. By and large, therefore, recent trends have served to widen the disparities between different types of districts for men but reduce them for women.

2.67 In all twelve cities, labour force participation rates for both males and females were lower in the inner than in the outer areas in 1991 and had moved less favourably for the inner areas over the previous ten years, with larger falls in male rates than in the outer areas and smaller increases (and indeed some decreases) in female rates (Table 2.11). In no case was the inner area rate for males above the England level in 1991, and in only one case (Bristol) was the female rate above it. Similarly, in terms of change over the decade, in only one case did an inner area see a smaller than average fall in male rate (Bristol again) and in no cases did the female rate rise by more than the average. For the outer areas, however, the picture was considerably more positive, with a mixture of performance around the averages, hence the relative deterioration faced by inner area residents compared with their outer area neighbours.

Self-employment

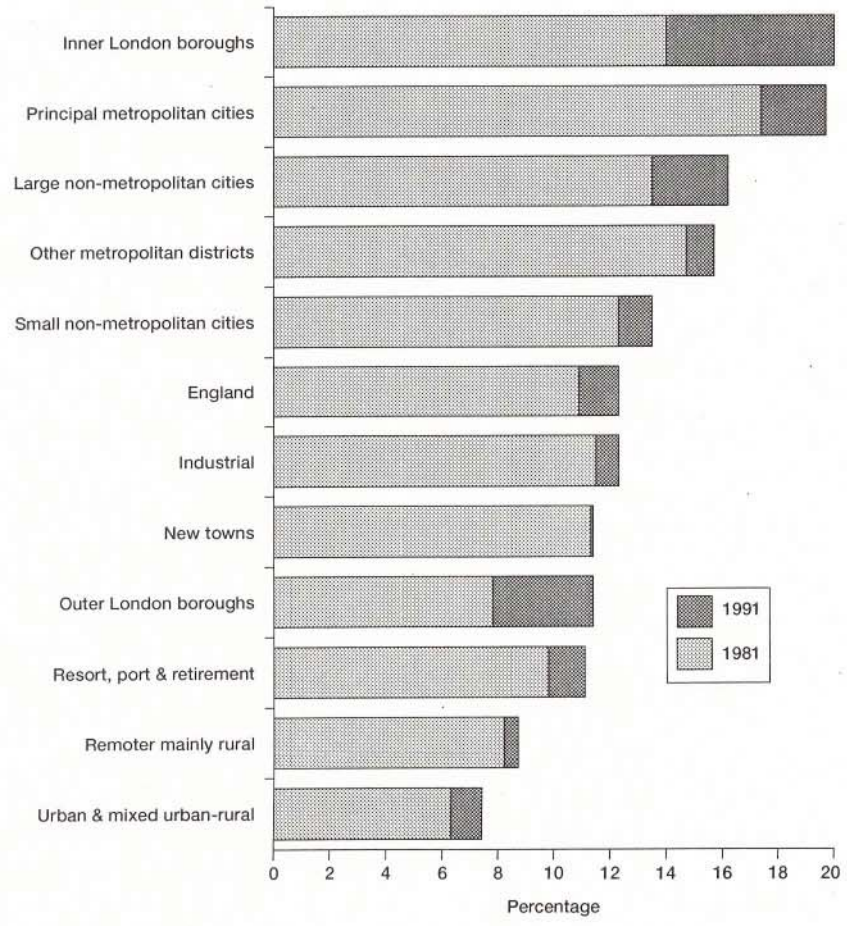
2.68 Roughly 1 in 8 of the total workforce in England were self-employed in 1991, an increase of over a quarter on the 1981 level. This increase of 2.9 percentage points was distributed remarkably uniformly across the district types, so that the 1981 pattern of differentials was little altered. In 1991 the Remoter Mainly Rural and Resort Port & Retirement categories still contained the highest proportions,with London and the Urban & Mixed Urban-Rural districts also being above the national figure, while the Principal Metropolitan Cities and Large Non-metropolitan Cities contained the fewest (Table 2.10). The picture is more unbalanced at the intra-urban level. None of the twelve inner areas saw its level of self-employment rise by as much as the national amount over the decade, and partly as a result of this in 1991 none besides Inner London were above the national level. Amongst outer

areas, once again only London's was above the national level in 1991, though in half of the cases the increase over the decade had matched or exceeded the national increase (Table 2.11).

Unemployment

2.69 Almost as large a proportion of the workforce in 1991 were unemployed or on a Government scheme; 1 in 8 men and 1 in 13 women. This is a variable on which there is one of the greatest differences between district types and between inner and outer areas, both as of 1991 and in terms of changes over the previous ten years. This point is illustrated starkly by Figure 2.4, revealing a very strong urban-rural dimension. One in 5 males were unemployed in Inner London and the Principal Metropolitan Cities in 1991, almost three times the level found in the Urban & Mixed Urban-Rural districts, and the biggest increases in this proportion had occurred in the largest cities (both Inner and Outer London, the Principal Metropolitan Cities and the Large Non-metropolitan Cities). For females (see Table 2.10), the position is not quite so dramatic in terms of the rates involved, but this can be partly explained by the greater tendency of women to leave the workforce on losing jobs rather than to consider themselves as unemployed. The patterns are certainly very similar, with the highest rates in 1991 being for Inner London and the Principal Metropolitan Cities and with the largest increases since 1981 being for Inner and Outer London, the Principal Metropolitan Cities and the Large Non-metropolitan Cities.

Figure 2.4 Percentage of males unemployed, 1981-91, by district type



2.70 At the intra-urban scale, the picture is again very clear-cut and virtually the same for males and females (Table 2.11). All twelve inner areas and half the outer areas had unemployment rates above the national level in 1991, and in every city the rate was higher in the inner area. The majority of both inner and outer areas had seen increases above the national trend between 1981 and 1991, and in only one of the twelve cities (Preston) had the outer area rate increased more rapidly than the inner area one. A strong polarisation effect is thus apparent.

Household circumstances

2.71 This distinct geography of economic opportunity, which the patterns of unemployment indicate, feeds through into indicators of households' involvement in the labour market. One of these - the proportion of households with no member in the workforce - is shown for the district types in Table 2.10. Particularly notable in labour market terms is the increase of 6 percentage points in both the Principal Metropolitan Cities and the Other Metropolitan Districts, and the one of nearly 5 points for the Large Non-metropolitan Cities, taking their overall proportion of households with no one economically active to one in every three. (Note that the high 1991 rate for Remoter Mainly Rural districts can be explained largely in terms of their large proportion of retired people, while the substantial increase for the New Towns reflects the maturing of their population, noted in Section 4.) There is also a clear inner-outer urban area contrast in proportions of households with no one in the workforce, for though the majority of both inner and outer areas have above-average levels, in all twelve cities the inner area level was the higher in 1991 - a pattern, however, which appears to have been largely in place by 1981 (Table 2.11).

2.72 Perhaps the clearest manifestation of these trends can be seen in the composition of households by employment; specifically, by how many members of any household were in work at the time of the 1991 Census. This is shown for the district types in Figure 2.5. It is found that there were more households with no one working in the Principal Metropolitan Cities than even in the Resort Port & Retirement category, despite the latter's heavy concentration of retired people. There is a particularly clear contrast between the Principal Metropolitan Cities - with 43 per cent of households with no one working and barely 30 per cent with two or more working - and the Urban & Mixed Urban-Rural districts, with almost the reverse profile (42 per cent of households with two or more workers and only 28 per cent with none). The Large Non-metropolitan Cities, Other Metropolitan Districts and Inner London also score badly on no-worker households. There is, not surprisingly in view of the above account, also a strong intra-urban dimension to this aspect of household structure, with all twelve inner areas having more no-worker and fewer multi-worker households than the national proportion and also having higher no-worker proportions than their outer areas, even though a majority of the latter also have above-average levels (Table 2.11).

2.73 All in all, the 1991 census paints a depressing picture of the labour market circumstances of the residents of urban England, particularly for people living in the inner areas of the large cities. Over the preceding decade, self employment had grown more weakly than average in all twelve inner areas and all six metropolitan and city district types except Outer London. Unemployment rates for both men

and women in 1991 were higher than average in all the urban England district types except Outer London (for men) and Small Non-metropolitan Cities (for women) and were above-average in all twelve inner areas bar none, and in the majority of cases the increase over the previous decade had been above the national average. For all six metropolitan and city types and all twelve inner areas, labour force participation rates for women had not increased as much since 1981 as for England as a whole, and in virtually all these cases the rates for men had fallen more quickly than average, further depressing the disparities between these areas and the rest of the country. These trends combined to produce a devastating impact on household circumstances in 1991 when all twelve inner areas had above-average proportions of households with no-one in work and all but one (London's) had above-average proportions of households containing no economically active person. In terms of district types, it was in the metropolitan counties, particularly their principal cities, that the most severe effects on households were evident.

Figure 2.5 Employment pattern of households, 1991, by district type

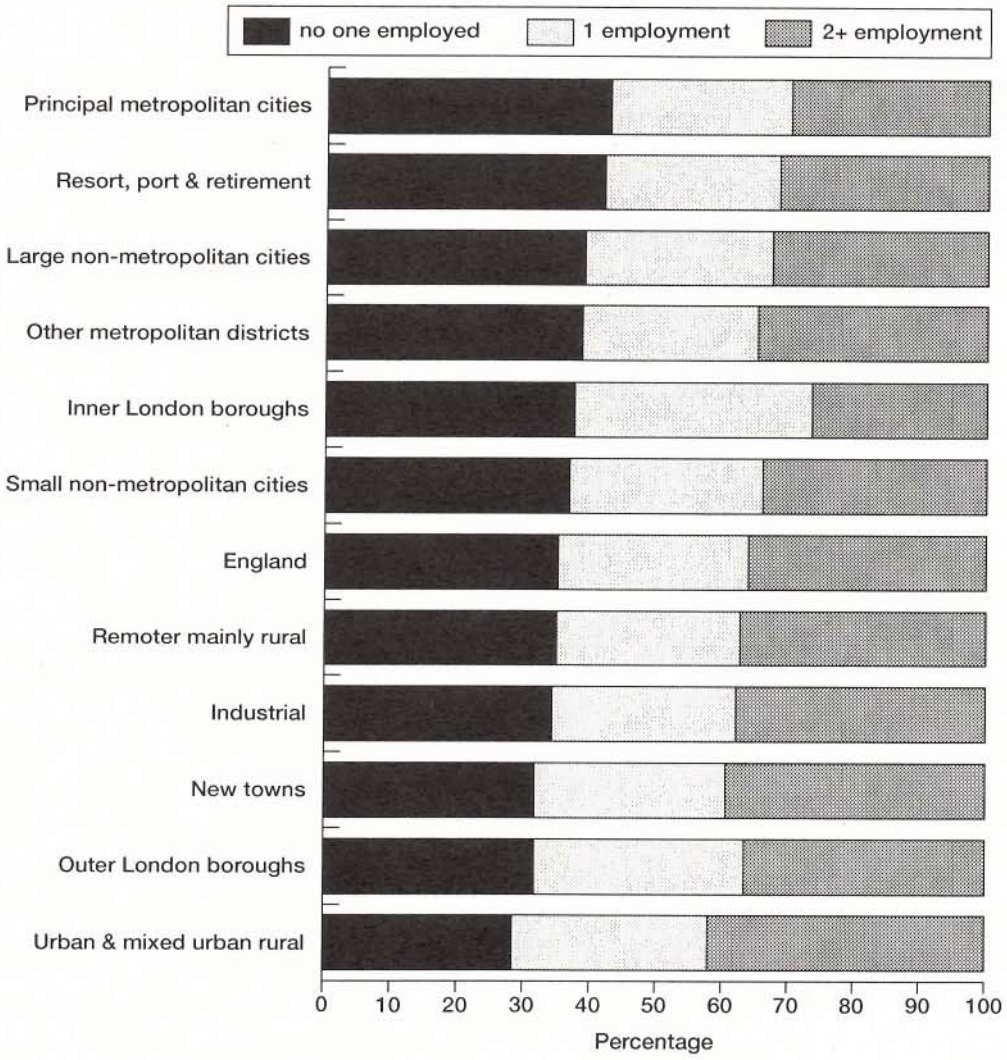


Table 2.11 Labour market patterns for the inner and outer areas of twelve cities, 1981-91

Variable	1991			1981-91		
	IA>AV*	OA>AV†	IA>OA‡	IA>AV*	OA>AV†	IA>OA‡
Male activity rate	0	3	0	1	5	0
Female activity rate	1	7	0	0	4	0
Self-employment	1	1	2	0	6	3
Male unemployment	12	6	12	9	8	11
Female unemployment	12	6	12	9	6	11
Hhlds with no-one econ. active	11	9	12	6	9	6
Hhlds with no-one in work	12	7	12	n/a	n/a	n/a
Hhlds with 2+ in work	0	7	0	n/a	n/a	n/a

A full list of city names in each category is given in Appendix C.

Figures indicate the number of cities satisfying the specified criterion, as follows:

* IA>AV: the inner areas' proportion (1991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

† OA>AV: ditto, for each city's outer area compared to England as a whole.

‡ A>OA: the inner area's proportion (1991) is above its outer area counterpart, or its percentage point change (1981-91) is more positive than for the respective outer area.

'n/a' indicates that calculations were not possible because comparable data were not collected by the 1981 census.

'EAR' refers to the proportion of residents of working age (16-64 for males, 16-59 for females) that are economically active (i.e. in the labour force).
'Self-employed' refers to the proportion of economically active residents that are self-employed.
'Females unempl.' refers to the proportion of economically active females that are unemployed or on a Government Scheme.
'Hhlds with no-one EA' refers to the proportion of households with no member in the labour force.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Trends in employment

2.74 Differences between places and over time in unemployment and labour force participation arise chiefly as a result of patterns and trends in the availability of employment. The final substantive section of this report therefore focuses on the changing geography of jobs, using data not from the Population Census but from the Census of Employment. This latter source provides counts of jobs at the workplace rather than measuring employed people at their place of residence; also, it can automatically handle the phenomenon of people holding more than one job, so it also provides a good indicator of the changing state of a local economy. The analysis uses the same geography as in previous sections, namely the eleven district types and the inner and outer areas of the twelve selected cities.

Definitions

2.75 The results of the analysis for the district types are presented in Table 2.12 and those for inner and outer areas in Table 2.13. It should be noted that the Census of Employment takes place more frequently than the Population Census, and advantage has been taken of this feature to focus on the period 1984-91 rather than the full decade 1981-91. This is partly because employment change calculations are much more affected by short-term fluctuations in the economy than is the socio-demographic structure of the population, with 1984 providing a more comparable economic position to 1991. It should also be noted that most of the analyses reported in the two tables are based on full-time equivalents (FTEs) rather than the actual count of jobs. This is because, with the rapid increase in part-time working over recent years, calculations based on the job count alone can give a false impression of the change in the amount of work going on. It is conventional to consider the average part-time worker as doing half the work of the average full-time worker, so this is the weighting used here to produce the FTE measure.

Changes in number of jobs

2.76 The first data column in Table 2.12 shows change in the number of jobs between 1984 and 1991 for the eleven district types. (This information is also shown diagramatically in Figure 2.6.) Particularly strong growth occurred in the Remoter Mainly Rural Districts, the New Towns, the Resort Port & Retirement Districts and the Urban & Mixed Urban-Rural Districts. At the other extreme, Inner London experienced a severe contraction in numbers of jobs, with one job fewer in 1991 for every eleven jobs that it had in 1984. Less severe reductions in jobs took place in Outer London and the Principal Metropolitan Cities, and there was limited expansion in numbers of jobs in the Other Metropolitan Districts and both Large and Small Non-metropolitan Cities.

Amount of work

2.77 The change in the overall amount of work, as measured by FTEs, presents a more gloomy picture than for jobs, because of the widespread shift from full-time to part-time jobs over this period. The FTE change rates, shown in the second data column of Table 2.12, are lower than for jobs (i.e. slower growth or faster decline) for all eleven district types, though only barely so for Inner London. As a result, in terms of the total amount of work being done in 1981 compared to 1984, there were employment decreases for all six of the metropolitan and city categories, with a particularly large cutback for Inner London and substantial contractions also for Outer London and the Principal Metropolitan Cities. The four less urbanised/ industrialised types of districts making up the bottom four rows of Table 2.12 appear in a more modest light than on the job-change measures, with increases of 6-10 per cent in the amount of work available.

2.78 The breakdown of FTE change by sex reveals that almost all types of district have had to rely on females for their employment growth. Only in the New Towns and the Remoter Mainly Rural districts did the amount of work undertaken by men increase over the period, and even there only marginally. Work by women increased

Table 2.12 Employment change, 1984-91 by district type, as a percentage

District	Total jobs	Total FTEs	Male FTEs	Female FTEs	Production FTEs	Public Services FTEs	Private Services FTEs
Inner London Borough	-9.0	-8.9	-14.4	-0.5	-33.4	-11.1	-0.3
Outer London Borough	-2.0	-4.0	-10.4	5.9	-30.4	-0.8	12.2
Principal Metropolitan City	-1.6	-2.9	-9.4	6.8	-20.7	2.8	8.4
Other Metropolitan District	1.7	-0.7	-6.9	9.2	-14.3	6.2	14.7
Large Non-metropolitan City	0.3	-2.4	-9.5	8.6	-20.9	6.2	12.2
Small Non-metropolitan City	1.7	-0.1	-8.4	11.4	-22.3	3.8	11.6
Industrial District	4.5	1.9	-4.9	13.6	-10.6	3.1	21.7
New Town	11.4	9.8	1.8	23.5	-11.7	11.0	37.8
Resort, Port & Retirement District	9.8	6.5	-2.6	19.4	-10.5	7.9	18.0
Urban & Mixed Urban-rural district	8.6	6.1	-1.0	17.1	-11.5	2.7	26.1
Remoter Mainly Rural District	11.7	8.4	0.5	21.7	-2.8	12.3	19.4

'FTEs' refers to 'full time equivalents' (see text).

Source: Calculated from Census of Employment via NOMIS (National On-line Manpower Information Service).

Table 2.13 Employment change for the inner and outer areas of twelve cities, 1984-91 as a percentage

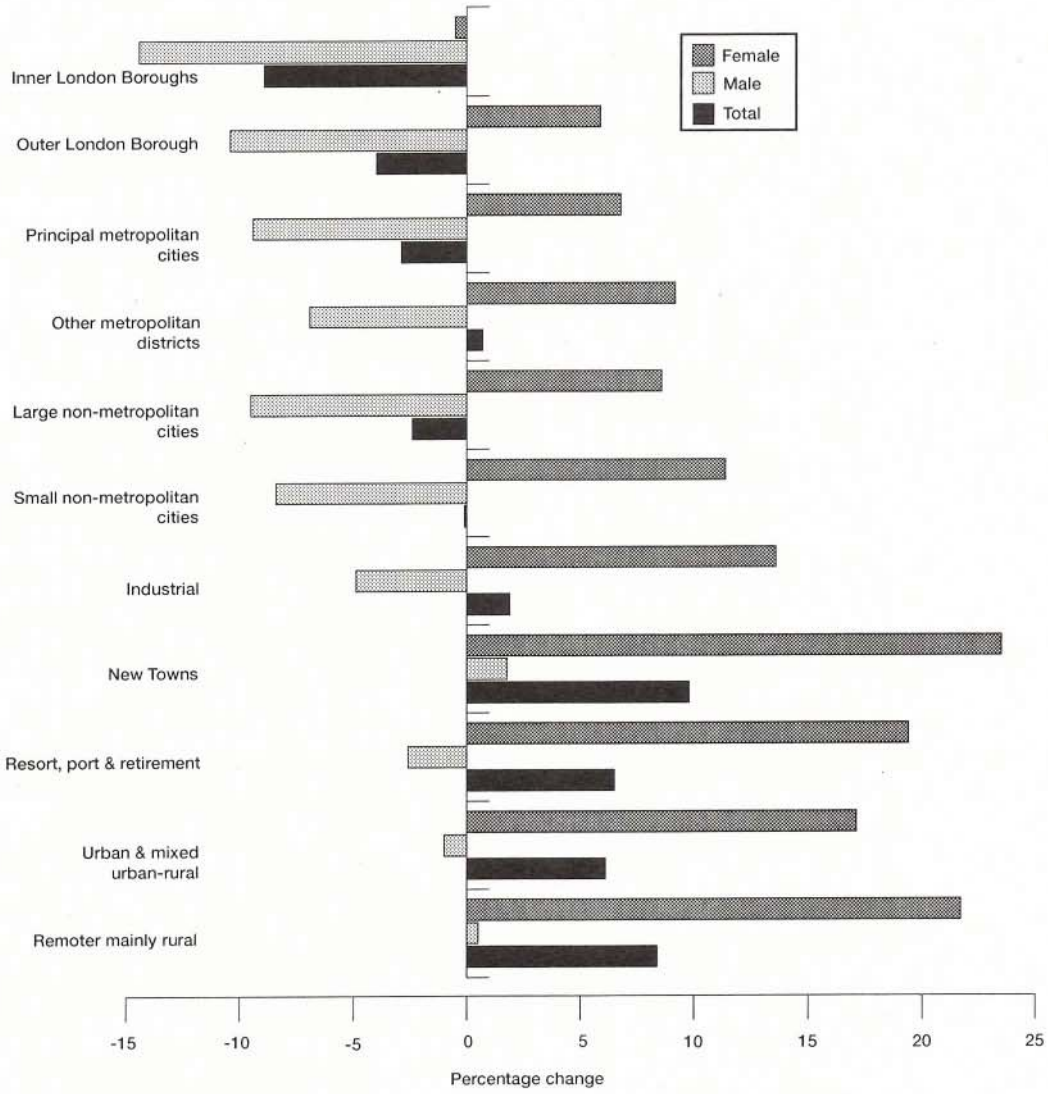
City	Total jobs		Total FTEs		Male FTEs		Female FTEs	
	IA	OA	IA	OA	IA	OA	IA	OA
London	-9.0	-2.0	-8.9	-4.0	-14.4	-10.4	-0.5	5.9
Birmingham	-7.1	9.5	-7.6	7.5	-14.2	2.3	4.5	14.6
Leeds	5.8	7.5	4.6	3.1	-2.4	-4.9	15.3	17.7
Liverpool	-11.9	-9.0	-12.1	-12.3	-16.8	-21.3	-6.3	1.3
Manchester	-5.8	40.7	-6.8	35.9	-12.5	25.4	1.1	53.5
Newcastle	-6.9	8.9	-9.8	6.3	-19.0	-0.8	3.8	14.2
Sheffield	-5.6	1.0	-6.6	2.0	-13.6	-2.1	4.4	8.0
Bristol	6.3	1.5	5.4	-1.5	-4.7	-9.5	20.3	15.7
Coventry	5.8	-4.4	1.2	-3.8	-13.4	-5.6	28.1	-0.5
Nottingham	2.3	4.2	0.4	3.2	-5.3	4.3	7.9	1.8
Plymouth	-7.4	29.7	-10.8	25.7	-20.8	24.4	7.9	27.1
Preston	-8.5	13.6	-6.7	7.7	-6.9	-3.6	-6.4	24.3

'FTEs refer to full-time equivalents (see text); 'IA' refer to inner areas, 'OA' refers to outer area

Source: Calculated from Census of Employment via NOMIS

significantly in all types of districts except Inner London. In general, however, men and women have played an equal role in producing the differences between district types in overall FTE change. There is a close correlation in change-rate rankings, with the New Towns and Remoter Mainly Rural districts exhibiting the highest rates of both male and female employment growth and with Inner and Outer London showing the weakest performances for both (Table 2.12).

Figure 2.6 Employment change, 1984-91, by district type (full-time equivalents)



Sectoral shifts

2.79 Similarly, there are clear general differences in change rate between the three broad sectors shown in Table 2.12, with production being the least dynamic and with the strongest growth being for private services. Nevertheless, it can be seen that all three sectors have contributed to the overall strength of the five non-metropolitan and non-city categories, since these registered the five smallest reductions in production employment, the five largest increases in private services work and the three largest increases in public sector activity. Equally, Inner London registers the weakest performance of the district types on all three sectors, with

Outer London next worst on two. There appear, however, to be some anomalies, particularly in relation to public services employment; for instance, the Large Non-metropolitan Cities and Other Metropolitan Districts seem to have fared better on this over the period compared to the change in their other two sectors, while Industrial and Urban & Mixed Urban-Rural districts have fared worse.

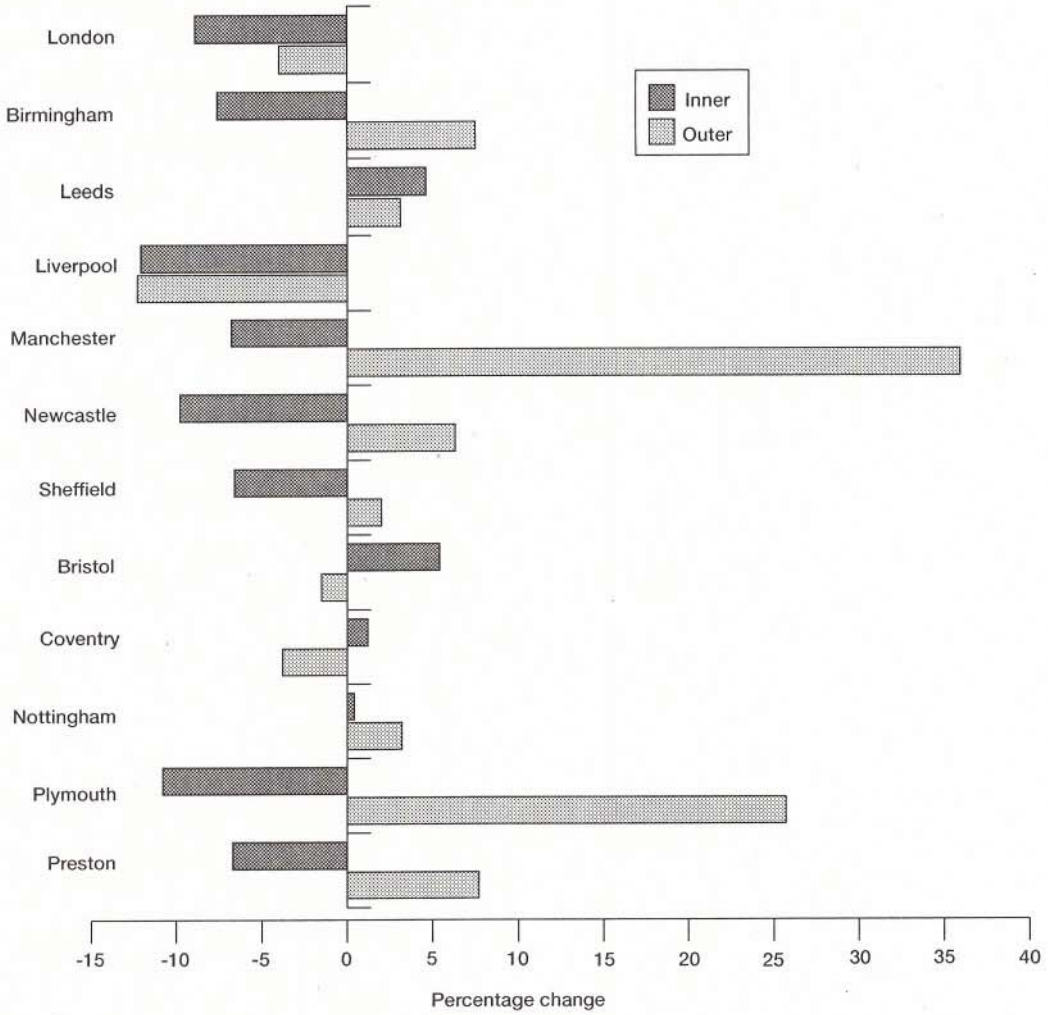
2.80 In general, there is a very close correspondence between these changes in the amount of work available in these district types over this period and the overall rates of population change for 1981-91 documented in Section 3 and shown in Table 2.3. The principal exception is Inner London, where the 9 per cent fall in employment contrasts vividly with its 3 per cent increase in population - helping to account for its huge increase in unemployment rate between 1981 and 1991. Similar, but less marked, departures from this relationship are for Outer London, the Large Non-metropolitan Cities and the Small Non-metropolitan Cities. Changes in commuting patterns are part of the balancing process when an area's job base changes in a way which is not matched by the numbers looking for jobs locally, as discussed in more detail in Report 4 in this series on Urban Trends, on Travel-to-Work areas and Workplace patterns.

Inner and outer area trends

2.81 As regards inner-outer area distinctions, some pretty clear patterns can be identified from Table 2.13. (This information is also shown diagramatically in Figure 2.7). Inner area employment fell between 1984 and 1991 in eight of the twelve cities, whether using the jobs or the FTE measure. By contrast, employment rose in eight of the outer areas on the FTE measure, and in nine on the jobs measure. There are two cities in which employment contracted in both inner and outer areas (London and Liverpool), and two cities in which it rose in both (Leeds and Nottingham, the latter only marginally). Furthermore, in eight cases the level of inner-area employment growth was below that of the outer area, and in another (Liverpool) there was no significant difference. The exceptions were Leeds (where male workers helped to produce stronger growth for the inner area) and Bristol and Coventry (where both male and female employment rose more, or declined less, in their inner areas).

2.82 Changes in the availability of employment, measured in this section in terms of full time job equivalents at the workplace, clearly underpin much of the absolute or relative deterioration in the labour market circumstances of the people and households living in the larger cities and their inner areas. In brief, all six of the London, metropolitan and city categories of urban England saw an overall reduction in work between 1984 and 1991, in contrast to the strong employment growth achieved by the four least urbanised district types. Amongst the twelve cities studied, employment contracted in two-thirds of the inner areas while expanding in two-thirds of the outer areas, these two together producing a significant decentralisation of job opportunities away from inner city residents in the majority of cases.

Figure 2.7 Employment change, 1984-91, for inner and outer city areas (full-time equivalents)



Concluding overview

Urban England's experience in context

2.83 This report has examined the principal dimensions of recent population and employment change in England, concentrating primarily on the decade 1981-91, and has assessed the contribution which these trends have made to differences between places in their demographic, social and labour market characteristics in 1991. It appears that, in the context of the international experiences reviewed in Section 2, this country has not seen the full-scale reversal of 1970s counterurbanisation trends in the way documented for a number of other countries. While Inner London has indeed registered a very impressive recovery from its major population losses of the 1970s, its rate of population growth since 1981 has barely matched the national average. Generally, what has occurred across the district types, as well as for the majority of the twelve cities examined in this report, is a weakening in the scale of population redistribution, with a convergence of change rates towards the national average rather than any significant recasting of the patterns of growth and decline.

2.84 This observation of continuing urban decline is reinforced by the evidence presented in this report on social trends and employment change. Although between 1981 and 1991 Inner London experienced a significant 'gentrification' of its labour force as measured in terms of trends in school staying-on rates, qualifications and Social Class, it also saw the biggest fall in jobs and the largest rise in unemployment rates of all the district types, and was amongst the weakest performers in labour force participation rates. Other large cities, notably the Principal Metropolitan Cities, as well as the majority of inner urban areas examined in this report, also recorded substantial increases in unemployment and below-average trends in labour force participation, whereas the less urban district types generally appeared in a very favourable light by comparison.

Variations between district types

2.85 A summary of the evidence for the district types is presented in Table 2.14, where the eleven types are ranked from 1 to 11 on a selection of key variables, where 1 indicates the most favourable situation in 1991 or the most favourable trend over the previous decade. This highlights the strong performance of the four least urban categories (New Towns, Resort Port & Retirement Districts, Urban & Mixed Urban-Rural Districts and Remoter Mainly Rural Districts) in terms of both population and employment growth, together with their high ranking (in the top six) on a majority of the social and labour market measures. The main exceptions are the new towns' relatively low ranking on social trends, the latter resulting partly from their already high social status in 1981. At the other extreme, Inner London Boroughs and the Principal Metropolitan Cities lie at the bottom end of the rankings (mainly 10 and 11) on the measures of employment change, unemployment, lone parents and car availability.

Inner and outer area contrasts

2.86 Summaries of the pattern and trends for the inner and outer areas of the twelve cities have been provided in previous sections of the report, drawing attention to the continued dominance of decentralisation for both population and employment, the weakening of the labour market position of inner areas generally, but noting that a majority recorded above-average falls in their proportion of public-rented housing as well as some degree of rejuvenation of age structure and of upward movement in Social Class profiles relative to the national trend. In Table 2.15, the twelve inner areas are ranked on the same basis as the district types on Table 2.14, with rank 1 indicating the area which is most favourably placed on the indicators of 1991 situation and 1981-91 trend. By comparison with other inner areas, Inner London appears in a relatively strong position, with the strongest population growth, least illness, highest rankings on social achievement indicators and fewest households without anyone economically active or employed in 1991, though in most cases it is not ranked as high on the indicators of 1981-91 change. At the other extreme, Newcastle upon Tyne, Liverpool, Sheffield and Manchester (in that order) have the largest number of the bottom rankings, these being spread rather evenly across the range of variables for both 1981-91 trends and state in 1991. As for the other Principal Metropolitan Cities, Leeds is generally more favourably placed than Birmingham. As far as the inner areas of the five other cities are

concerned, that for Bristol appears most regularly in ranks 1-4, followed by Plymouth's, with those of Preston and Nottingham scoring the fewest top rankings.

Table 2.14 Ranking of district types on selected variables

Variable	London		Metropolitan				Non-metropolitan				
	Inner	Outer	Principal cities	Other districts	Large cities	Small cities	Indust-rial	New Towns	RPR*	UMUR*	RMR*
Population 1981-91 (MYE)	5	8	11	10	9	6	7	1	3	4	2
Employment 1984-91 (FTE)	11	10	9	7	8	6	5	1	3	4	2
Lone parent (-) Hhld 1991	11	5	10	8	9	6	4	5	3	2	1
Lone parent (-) Hhld 1981-91	11	=6	10	8	9	7	4	=6	3	1	2
Hhld with no car 1991 (-)	11	6	10	8	9	7	5	3	4	1	2
Hhld with no car 1981-91 (-)	10	11	8	4	3	5	2	6	1	9	7
0-15 ill, (-) 1991	11	4	10	8	9	7	6	5	3	1	2
17 in educ. 1991	3	2	9	8	11	6	10	7	5	1	4
17 in educ. 1981-91	1	2	9	7	10	6	5	8	11	4	3
30-44 qual. 1991	1	4	7	9	11	3	10	8	6	2	5
30-44 qual. 1981-91	1	3	5	10	7	2	11	8	9	4	6
Soc. Cls. I & II 1991	2	3	8	10	11	6	9	7	5	1	4
Soc. Cls. I & II 1981-91	1	5	3	7	6	2	8	4	10	9	11
Males EA 1991	10	3	11	9	7	8	5	2	6	1	4
Males EA 1981-91	9	4	10	11	7	5	8	6	2	1	3
Males unempl. 1991 (-)	11	4	10	8	9	7	6	5	3	1	2
Males unempl. 1981-91 (-)	11	9	10	7	8	6	5	4	3	2	1
Hhlds with none EA, 1991 (-)	4	3	10	8	9	6	5	2	11	1	7
Hhlds with none EA, 1981-91 (-)	2	5	10	11	7	6	8	9	1	4	3
Hhlds with none empl., 1991 (-)	7	2	11	8	9	6	4	2	10	1	5
Hhlds with 2+ empl., 1991	11	5	10	6	8	7	3	2	9	1	4

See previous tables for variable specifications. Places are ranked from most to least favourable situation; (-) indicates variables ranked from low to high, where lowest value denotes most favourable. Change variables are italicised. * RPR = Resort, Port & Retirement districts; UMUR = Urban & Mixed Urban-rural Districts; RMR = Remoter Mainly Rural Districts.

Table 2.15 Ranking of twelve inner urban areas on selected variables

Variable	London	Principal Metropolitan Cities						Other Cities				
		Birm.	Leeds	Livpl.	Manch.	Newcl.	Sheff.	Brist.	Cov.	Nott.	Plym.	Prest.
Population 1981-91	1	5	7	11	10	9	12	4	6	3	2	8
Employment 1984-91 (FTE)	9	8	2	12	7	11	5	1	3	4	10	6
Lone parent (-) Hhld 1991	6	8	7	11	12	10	4	1	5	9	2	3
Lone parent (-) Hhld 1981-91	4	7	6	11	12	10	7	1	5	8	2	3
Hhld with no car 1991 (-)	5	10	8	12	10	9	11	1	3	7	2	6
Hhld with no car 1981-91 (-)	7	4	4	8	11	12	6	5	9	2	3	1
0-15 ill, (-) 1991	3	7	5	8	10	11	12	6	1	9	4	2
17 in educ. 1991	1	2	10	5	8	11	12	6	3	9	4	7
17 in educ. 1981-91	2	4	=9	3	12	5	8	6	=9	11	1	7
30-44 qual. 1991	1	11	5	10	4	12	6	3	9	2	7	8
30-44 qual. 1981-91	1	12	4	10	5	12	6	3	9	2	8	7
Soc. Cls. I & II 1991	1	11	5	9	4	12	10	3	6	2	7	8
Soc. Cls. I & II 1981-91	1	10	5	8	4	11	7	3	9	2	12	6
Males EA 1991	4	5	6	11	12	10	7	1	3	9	2	8
Males EA 1981-91	3	6	4	12	8	11	9	1	5	7	2	10
Males unempl. 1991 (-)	2	7	5	11	8	12	9	1	3	10	4	6
Males unempl. 1981-91 (-)	7	5	3	9	6	11	12	4	1	10	8	2
Hhlds with none EA, 1991 (-)	1	4	7	9	10	11	12	2	5	3	6	8
Hhlds with none EA, 1981-91 (-)	3	7	5	12	11	10	8	4	9	2	1	6
Hhlds with none empl., 1991 (-)	1	6	5	10	9	12	11	2	3	7	4	8
Hhlds with 2+ empl., 1991	6	4	5	11	10	12	8	1	2	9	3	7

See previous tables for variable specifications. Places are ranked from most to least favourable situation; (-) indicates variables ranked from low to high, where lowest value denotes most favourable. Change variables are italicised.

3 Area Profiles

Summary

Research Context

3.1 The research on area profiles had three objectives:

- to look at socio-economic change in different types of areas between 1971, 1981 and 1991, using a method which would allow all wards in England to be classified and compared;
- to see whether there was evidence for social polarisation within or between areas in the 1990s; and
- to look at the experiences of particular types of areas over the 1970s and the 1980s in order to assess how processes of social, economic and demographic change might have affected different types of places in different ways.

Main findings

3.2 The main findings were:

- overall, there were marked differences across England in the proportion of households who had at least one member earning (mostly in the South East, in rural areas and around major conurbations), and areas containing large proportions of households where no member was earning (concentrated in inner urban areas, and especially in metropolitan and non-metropolitan cities);
- the cycles of economic growth and decline which have caused these patterns to emerge have impacted unevenly across England and have combined with particular types of household structure to produce marked disparities between places in terms of living standards and life chances. A rural-urban divide is particularly noticeable;
- the importance of these findings lies less with their novelty than with the persistence and clarity of the trends identified. There is currently much public debate about the existence and persistence of patterns of social polarisation in England. This research confirms these trends towards polarisation.

England in 1991: a polarised society?

3.3 On the basis of this analysis, it seems that polarisation was evident between places in terms of the structure of households there. All 8,614 wards in England were classified according to the proportions of different types of households in them. These types of households were: those with children and no earners, those with no children and no earners, and those with earners. Whilst this may not in itself seem remarkable to those following current debates on social polarisation in England, what did appear interesting was just how vivid this polarisation appeared to be when mapped.

The geography of polarisation

3.4 There are variations between different parts of the country:

- wards where the proportion of households with at least one earner is above the national average were concentrated in the South East of England around London, and in belts of affluence around major cities;
- wards with above the national average proportion of households with no earners were particularly prevalent in Inner London and in the inner areas of other metropolitan centres;
- wards in which more than the average proportion of households had no children and no earners were concentrated in the coastal areas of Britain and around the edges of the metropolitan counties; (This type of household is most typical of retired people.)
- wards with below-average proportions of households with children and no earners appear dotted around the more rural parts of England.

Different patterns in different cities

3.5 The differences between twelve major cities in England were also examined, using the same method of classifying households. These cities were London, Birmingham, Leeds, Liverpool, Manchester, Newcastle, Sheffield, Bristol, Nottingham, Plymouth, Preston and Coventry, and all showed differences in terms of household structure.

- the inner areas of all cities except London had above-average proportions of both households with children and no earners and households with no children and no earners. They had below-average proportions of households with earners.
- Inner London had above-average proportions of households with no children and no earners, and below-average proportions of households with no children and no earners and households with earners.
- a very high proportion of households in Newcastle had either no children and no earners or children and no earners. Bristol, in contrast, had much smaller proportions of both. Birmingham was different again, with high

proportions of households with children and no earners but a lower proportion of households with no children and no earners.

A new rural-urban divide?

3.6 The top twenty wards with the highest proportions of households in each of the three categories used were ranked, with the outcome suggesting a rural-urban divide in terms of household structure in different types of district and confirming the patterns of polarisation outlined above.

- wards with the highest proportions of households with children and no earners were spread across metropolitan and non-metropolitan city districts. None of the top twenty wards were located in any type of rural district.
- sixteen of the twenty wards with the highest proportions of households with no children and no earners were located in a belt along the southern coast of England, in resort, port or retirement districts.
- the top twenty wards with the highest proportion of households with earners were grouped around Greater London or in the City of London. None of the top twenty were in metropolitan or non-metropolitan city districts.

3.7 It appears that in 1991 at least, when taking all wards in England into account, that there were remarkable differences between areas and types of areas, confirming much current speculation about social polarisation in England. Areas with many households with earners tended to be concentrated in more rural areas, whereas households with children and no earners tended to be concentrated in the more urban types of area.

The geography of changing opportunities in the labour market

3.8 Using a method which counted the proportions of people of working age who actually had jobs, for each ward, for the 1971, 1981 and 1991 censuses, some clear patterns were revealed showing the areas of economic growth and decline in England across the 1970s and 1980s. Again, these geographical patterns are of interest not so much for the novelty of the findings as for the clarity of the picture they paint of economic change in England, and its consequences.

- there were below-average increases in the proportions of people in the workforce in the 1970s and 1980s in particular areas, including the eastern part of London, central Birmingham, parts of the North East, Manchester and Leeds.
- there were above-average increases in the proportion of people in the workforce in the 1970s and 1980s in and around London, the south coast of England, on the edges of the major metropolitan areas, and in some rural areas.
- places which saw the greatest increase in the proportion of their population in work were predominantly rural areas around the edges of the major conurbations.

- the effects of the economic slump in the early 1980s and early 1990s are apparent in the small increases of people in work in inner London, Liverpool, Manchester, parts of the West Midlands and parts of the North East of England.

Workforce activity rates in different cities

3.9 The twelve cities examined with reference to changes in their household structure were also looked at for evidence of growth and decline in the proportion of their population able to find work. Of the cities studied, only one fared well over the two decades in terms of employment available for its workforce:

- in the inner areas of five cities (Sheffield, Birmingham, Coventry, Nottingham and Preston) the level of participation of people of working age in the workforce rose at a rate below the national average in the 1970s and the 1980s;
- in the inner areas of six cities (London, Liverpool, Manchester, Newcastle, Leeds and Plymouth), the level of workforce participation rose at rates more quickly than the national average in the 1970s, but not in the 1980s;
- only in Bristol did rates of participation in the workforce rise more quickly than the national average in both decades.

Further evidence for a rural-urban divide?

3.10 Again, wards were ranked according to the proportion of people in the workforce and, specifically, changes in this rate over the 1971-1991 period. The top twenty wards in each of four categories were ranked. The results seem to confirm the rural-urban divide apparent in the examination of household structure:

- wards with the greatest increase in people of working age in the workforce between 1981 and 1991 were concentrated in more rural districts. None of the top-twenty wards were in Greater London or any other metropolitan or non-metropolitan city district;
- wards with the greatest decrease in labour force participation rate between 1981 and 1991 were concentrated in the metropolitan and non-metropolitan city districts, including parts of eastern London and the North East of England;
- wards with the greatest increase in people in the workforce in the 1971-91 period were concentrated in London, smaller non-metropolitan cities and rural areas. Only one was in a metropolitan area (Knowsley);
- wards with the greatest decrease in people of working age in the workforce between 1971 and 1991 were found in industrial areas, new towns and the more rural areas, but not in metropolitan and non-metropolitan city districts. Because wards tend to contain fewer people in rural areas, these places are often found to experience the most extreme changes.

3.11 This simple exercise in ranking the top twenty wards, though not methodologically rigorous, does appear to present a pattern to the proportion of adults in employment in different types of area. Most growth in employment rates appears to have occurred around major conurbations and in more rural areas, whereas the older industrial areas show least growth.

3.12 What also appears from this research is that the patterns set by economic change in the 1970s and 1980s are shown in the picture of polarisation in 1991. For example, many of the wards ranked as having the greatest decrease in the work available in the 1980s were also ranked as having the highest proportions of households without earners in 1991 - including several wards in Knowsley, Middlesbrough and the Wirral.

Profiles of selected areas

3.13 A final part of this research involved comparing selected areas (parliamentary constituencies) in terms of their socio-economic and demographic experiences. This type of exercise is methodologically difficult: what should the criteria be for the choice of wards for comparison? What should a 'typical' area be typical of? Should objective or subjective methods be used?

3.14 This exercise was undertaken using a combination of methods for the choice of 'typical' areas, including those devised for the examination of changes in household structure and employment opportunities outlined above, and subjective choices made by the Department. Eleven different types of area were profiled. These types were then matched with constituencies that could be seen as representative of that type of area. These places all had different combinations of different types of households, and different experiences of economic growth and decline. Between them, these constituencies show the diversity of experiences of socio-economic change in different places over the past decade. They also show how local conditions in specific places can be as crucial as national trends in determining the quality of life for the residents of such areas.

- *Croydon North West* is typical of places which experienced an above-average increase in workforce participation in the 1970s but not the 1980s. It still has above-average numbers of households with at least one earner, as well as households with children and no earner, and 100 per cent of households live in wards where this type of household is over represented. Nationally, 3 per cent of people live in places like this - Brent East and Hendon South could also have been chosen as 'typical' of this kind of place.
- *Norwood* lies close to Croydon but shows a different picture. Although Norwood, too, experienced economic growth only in the 1970s, it is dominated by households with children and no earners: 61 per cent of the population live in wards with above average proportions of this type of household. A third of the population live in local authority housing, and one quarter of households live in private rented or housing association accommodation. Unemployment is high and the unemployment rate for women rose unusually quickly here in the 1980s. Vauxhall and Islington North are also typical of places like this.

- *South Shields* is one of thirty-two constituencies in which most people live in wards where the proportion of households with no earners is above the national average. Such places experienced an increase in workforce participation only in the 1970s. Twelve per cent of the population, nationally, live in places like this, in constituencies like Liverpool West Derby, Birmingham Erdington, Manchester Blackley and Southwark & Bermondsey.
- *Richmond-upon-Thames & Barnes* is in many ways the direct opposite of constituencies like South Shields. Although it too experienced economic growth only in the 1970s, there are still very high proportions of households with earners in the 1990s. This reflects the different economic base of wealthy areas such as this, with their reliance on higher-order service industries for the employment of their population, rather than on heavy industry as was the case in South Shields.
- *Mid Bedfordshire* is representative of places which, like Richmond, have high proportions of earners, but unlike Richmond experienced strong economic growth in the 1980s. Twenty six other constituencies share this type of area profile, located mostly in the Home Counties around London. These are areas which benefited most from the economic boom of the 1980s, and areas like this are home to about 15 per cent of the population. The contrast with places like Jarrow and Liverpool West Derby is striking and illustrates both the rural-urban contrast and the North-South divide.
- *Slough* is representative of places where the proportion of adults in the workforce rose at a rate below the national average in both the 1970s and the 1980s. Below average proportions of households have neither children nor earners (27 per cent). Three per cent of people in England live in places like this.
- *Birmingham Ladywood* represents places with below-average increases in workforce participation in the 1970s and 1980s, like Slough, but in contrast has above-average proportions of households with children and no earners. Four per cent of the population live in places like this. It is the constituency with the smallest number of people identifying themselves as belonging to a white ethnic group at the 1991 census, and almost a quarter of its 75,800 population identified themselves as Indian at the census.
- In *Jarrow* 71 per cent of the population live in wards with a higher than average proportion of households with no earners. Nationally, 13 per cent of the national population live in areas like this. Barnsley East, and Birmingham Hodge Hill are all also typical of this kind of place, where there have been below-average increases in workforce participation in the 1970s and 1980s. Nationally, 50 constituencies share this area profile.
- *Littleborough & Saddleworth* is typical of places where, nationally, 3 per cent of the population live, with below-average increases in workforce participation in the 1970s and 1980s. In contrast to Slough and Jarrow, this area has above-average proportions of households with earners. Owner-occupation rates are also above the national average here.

- *Worthing*, and a number of other similar places along the South Coast, is typical of places which have seen economic growth in both the 1970s and 1980s, but which also have a high proportion of households with no children and no earners in the 1990s. These are places which are home to an ageing population, as well as a migrant population of older people, and 7 per cent of the population live in places like this.
- *East Surrey*, on the other hand, as well as experiencing an increase in the proportion of adults in work (like Worthing) also has very high proportions of households with earners (like Mid Bedfordshire and Richmond). Similar places include Croydon South, Altringham & Sale, Guildford and Surbiton, and places like this are home to 11 per cent of the population.

Introduction and Context

3.15 This chapter continues some of the analysis presented in the first chapter on Changing Urban Structure, which indicated that one of the more dramatic results of changes occurring in the socio-economic composition of certain cities in England was the very high proportion of households in particular areas in which no member had any paid employment.

3.16 There were three objectives to this research on area profiles. The first was to look at socio-economic change in different types of areas between 1971, 1981 and 1991, using a method which would allow all wards in England to be classified and compared. The second objective was to see whether there was evidence for social polarisation within or between areas in the 1990s. The third objective was to look at the experiences of particular types of areas over the 1970s and the 1980s in order to assess how processes of social, economic and demographic change might have affected different types of places in different ways.

3.17 This research took place within the context of increasing discussion and public debate about social polarisation and growing disparities between areas as measured by various socio-economic indicators[1]. In the main, this debate has revolved around questions concerning the identification, meaning and measurement of social polarisation. The findings from this research should be seen in the context of this debate. In particular, it is worth emphasising here that many of the findings presented in this report provide no startling new evidence about the profiles of different types of areas in Britain. Rather, on the basis of evidence presented here, many of the truisms and common-place assumptions about the changing socio-economic structure of England are confirmed and emphasised. More specifically, in using the Census of Population as the data source for an analysis of this kind, this research is able to provide a complete and national picture of polarisation between different types of area.

3.18 This chapter is structured as follows. In paras. 3.20 - 3.26, the approach taken towards the examination of area profiles is outlined. Readers should be aware that much of the detail about the methodology is contained in an appendix. Paras. 3.27 - 3.41 present an analysis of the profiles of wards and selected cities for 1991. The analysis makes clear the extent of polarisation between types of areas across Britain at the beginning of the 1990s. In paras. 3.42 - 3.52 , changes in the area profiles for wards and selected cities in Britain are examined for the period 1971-1991. The analysis concludes that many of the patterns presented in these sections for 1991 find their origins in the changes in rates of economic growth and decline across Britain in the 1970s and 1980s. Paras. 3.53 - 3.67 present the results of an exercise aimed at the production of a typology of the profiles of areas across Britain. This section draws on the methods used in the previous two sections. The report then continues with a discussion of the profiles of the 'typical' places selected, drawing on data from the census. This discussion illustrates the diversity of experiences of different places in England in the 1990s and links these findings back to the processes of economic growth in the 1970s and 1980s. A concluding section draws together the main findings of the chapter.

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[1] Willmott P. *Urban Trends 2: A decade in Britain's deprived urban areas*. PSI, London, 1994; Commission on Social Justice *Social Justice: Strategies for National Renewal*, Vintage, London, 1994; Joseph Rowntree Foundation, *Inquiry into income and wealth*, JRF, York, (various reports), 1995; Gordon R and Forrest R *People and Places 2: Social and economic distinctions in England*. SAUS, Bristol University, 1995. For an overview, see also Woodward R 'Approaches towards the study of social polarisation in the UK' *Progress in Human Geography* 19, 75-89, 1995.

Approach

3.19 This section outlines the basic approach taken to the analysis and examination of area profiles in England. The approach taken towards this analysis was dictated by a requirement to show both a static picture and a picture of change over time in the areas profiled. Simplicity in the presentation of results was also a consideration. Much of the detail concerning the research methodology is contained in the appendix, but given that this report presents the findings of methodologically-driven research, some information about the techniques used is necessary in the body of the text.

3.20 The first approach chosen profiled areas according to the mix of three different household types in each area:

- households with children but no earners;
- households with no children and no earners; and
- households with earners.

3.21 The choice of the three household types was directed by two main considerations. First, the division of households between earners and non-earners was thought to be significant in structuring the socio-economic profiles of areas.[2] Second, the position of children in different types of households was thought to be crucial to the analysis of socio-economic profiles of different areas. The differences between these three groups should be emphasised. The first group, households with children but no earners, includes almost all lone parent households and other households who have in common the relative lack of resources available for the children within this group (itself an important indicator of the opportunities available to these children). The second group, households with no children and no earners, is formed mainly of pensioner households, but also includes others such as student households and other adult households largely dependent on unearned income. The third group, households with earners, is the largest.

3.22 The second approach taken profiled areas according the rates of economic growth and decline across the 1970s and 1980s. Areas were profiled according to whether they had:

- employment growth above national averages in the 1970s and the 1980s; or
- employment growth below national averages in the 1970s but above national averages in the 1980s; or
- employment growth above national averages in the 1970s but below national averages in the 1980s; or
- employment growth below the national averages in the 1970s and the 1980s.

This approach was chosen in order to examine the experiences of economic changes across the whole of Britain, and not just for selected parts of England.

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[2] Atkins D, Champion AG, Coombes M, Dorling and Woodward R, *Changing Urban Structure*. Report to the Department of the Environment, June 1995. Dorling and Woodward R *Polarisation in Britain: a micro-geographical approach*. Department of Geography Seminar Paper No. 65, University of Newcastle, May 1995.

3.23 The analysis using variables for household type and economic growth forms the basis of this examination of area profiles. 'Static', 'change' and 'combined' classifications were produced, and a full discussion of the methodological details is contained in Appendix D.

3.24 Throughout this analysis a set of areas based on 1981 census wards was used (even for the static 1991 analysis). The 1981 wards were chosen to represent the mid-point in the time series with which this analysis is concerned. There were 10,444 census wards in Britain in 1981. Further details of the methods of data harmonisation are to be found in Atkins *et al* (1993)[3].

3.25 Some of the data from the analysis are represented visually using population cartograms. Please refer to Appendix E for a discussion of the use of cartograms, and a key map for their interpretation.

Profiles of wards and selected cities for 1991

3.26 In this section, area profiles are examined with reference to the distribution in 1991 of the three types of households - households with children and no earners, households with no children and no earners and households with earners. The distribution of these groups is examined, first, across Britain, and second, for selected cities within England. Third, the top twenty wards in England with the greatest proportions of each of the three groups are ranked. The classification of wards produced is referred to as a 'static' classification because it concerns data for only 1991. Please refer to Appendix D for details on the production of the static classification.

3.27 The three groups of households are defined as follows, and are of very different sizes.

Group A	Households with children and no earners	5 per cent
Group B	Households with no children and no earners	31 per cent
Group C	Households with earners	64 per cent

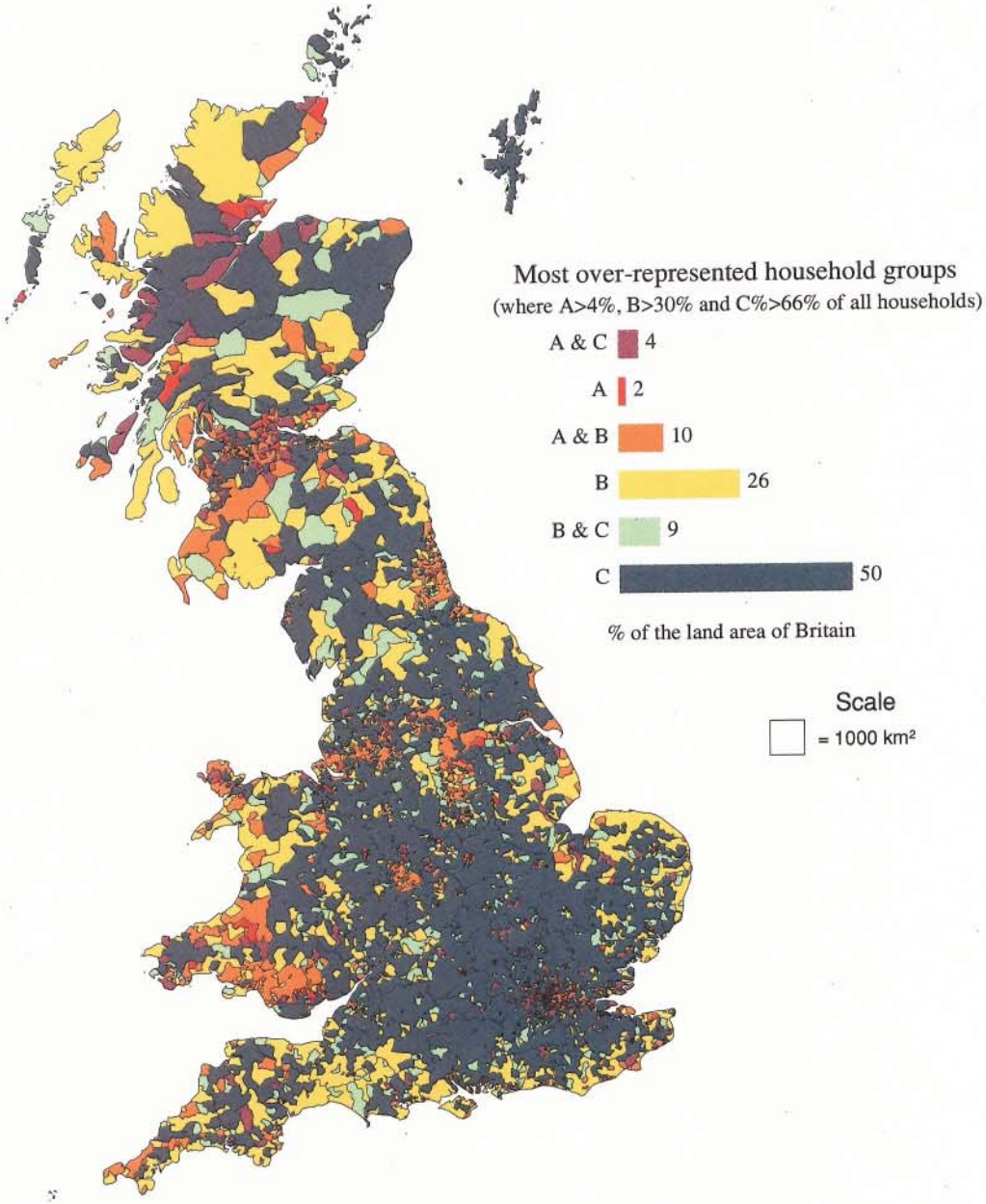
3.28 The national distribution of these three groups is mapped in Figure 3.1, which shows all the wards in Britain coloured according to the proportion of different combinations of types of household in that ward. Please refer to the methodological appendix for further information on the scales used in the map.

3.29 As the map shows, although there may be only slight differences between wards in terms of the proportions of types of household in each one, a clear spatial pattern is visible. The structure behind the data is strong enough to show through the relatively crude indicators used. The map shows that 50 per cent of the land area of Britain is covered by wards where more than two-thirds of all households in those wards contained at least one person who was earning, shaded dark blue. Both other groups of households were consequently under-represented in these wards. The second largest group by land area are wards where the most over-represented group were households with no earners and no children. Such wards cover just

[3] Atkins D, Charlton M, Dorling D and Wymer C, *Connecting the 1981 and 1991 Censuses*, NE.RRL Research Report 93/9, University of Newcastle, 1993.

over a quarter of the land area of Britain, much of which is on the coast in retirement areas. These areas are coloured yellow on the map. The third largest area is where the group of households with earners is under-represented and the other two groups (A and B) are over-represented, coloured light red on the map. These wards cover large parts of the Welsh coalfield and Scotland, as well as many inner urban areas, although these are not as easily seen on a conventional map.

Figure 3.1 Map showing household type, 1991, by wards



3.30 Figure 3.2 shows a cartogram displaying the same information and using the same shading scheme as Figure 3.1. The cartogram shows a more fine-grained picture of the spatial distribution of the different types of household across Britain. The key to the cartogram indicates the differences between these groups in terms of population size. Appendix E gives a key for the detailed reading of the cartogram.

3.31 Wards classified as having an over-representation of group C, households with earners, cover under a third (31 per cent) of the population of Britain. Rather than appearing to be spread across the whole country, as indicated in the map in Figure 3.1, these wards, shaded dark blue, can be seen to be heavily concentrated in the South-East around London and also in the more affluent parts of other areas around major cities. The second largest category by population (rather than land area) is that where groups A and B together are over-represented, i.e. households with children and no earners, and households with no children and no earners. This group comprises 29 per cent of the population, and is coloured light red. The distribution of this group in parts of Inner London and in the inner areas of other major metropolitan centres can be clearly seen (in contrast to their appearance on the conventional land-area map). Wards where households with no children and no earners dominate (19 per cent of households), coloured yellow on the cartogram can seen in the coastal areas of Britain and around the edges of many metropolitan counties. The smallest group of wards are those with below-average proportions of group A, households with children and no earners, shaded green on the cartogram. This group is dotted around the rural parts of England.

3.32 A clear spatial division is visible, then, between areas containing households who have access to the labour market and who are earning, and those areas containing high numbers of households where no member is earning. We can conclude that, certainly in1991, classified by wards 1991, a degree of polarisation existed in Britain between different types of area, on the basis of whether a large number of people in that area lived in households where someone was working, or not.

3.33 The second part of this analysis of area profiles looks at the position of selected cities within England. The proportions of each of the three groups of households has been calculated for twelve selected cities. These cities, selected in consultation with the Department and using the OPCS classification of districts, comprise London, all six principal metropolitan cities (Birmingham, Leeds, Liverpool, Manchester, Newcastle and Sheffield), three Large Non-metropolitan Cities (Bristol, Nottingham and Plymouth), one Small Non-metropolitan City (Preston) and one Other Metropolitan District (Coventry).

3.34 Figure 3.3 shows in graph form the relative positions of each of the selected inner urban areas according to their proportions of the three types of household. With the exception of Inner London, all of the inner areas of the twelve selected cities had above-average proportions of households with children and no earners, and households with no children and no earners. They all had below-average proportions of households with earners. In contrast, inner London had above-average proportions just of households with children and no earners and below-average proportions of households with no children and no earners and households with earners. There are also significant differences between these cities in terms of their proportions of households within each group. Newcastle, for example, had high proportions of both households with no children and no earners and households with children and no earners. Bristol, on the other hand, had much smaller proportions of both, whereas Birmingham had a higher proportion of households with children and no earners, but a lower proportion of households with no children and no earners.

3.35 A final part of this analysis had involved ranking the wards in England with the greatest proportions of each of three groups of households. The top twenty wards for each household type are given in Tables 3.1, 3.2 and 3.3, together with the name of the district in which they sit. The geographical spread of places showing broadly similar socio-economic profiles is immediately apparent.

Figure 3.2 Cartogram showing household type, 1991, classified by wards

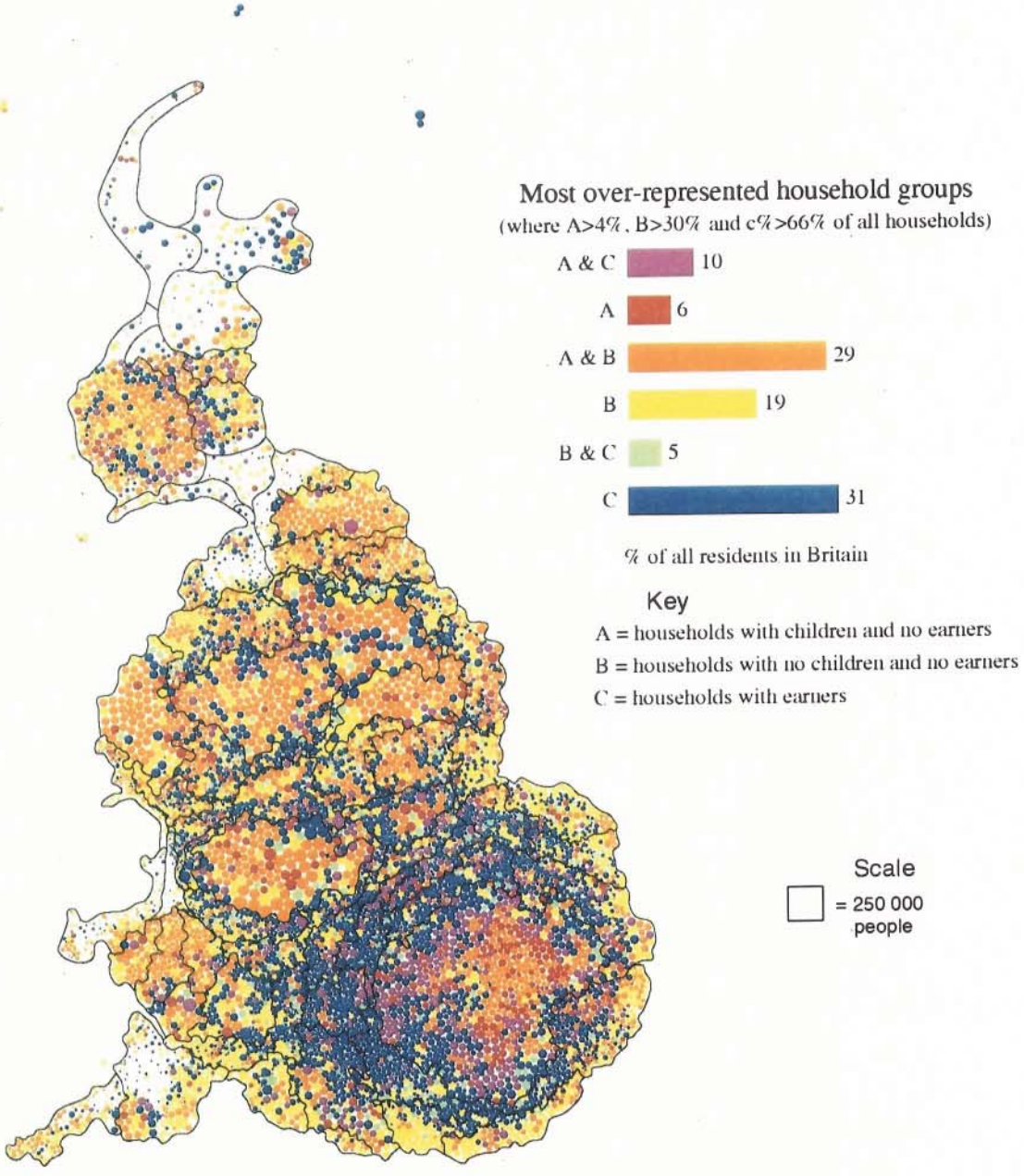


Figure 3.3 Graph showing household structure in selected inner urban areas in 1991

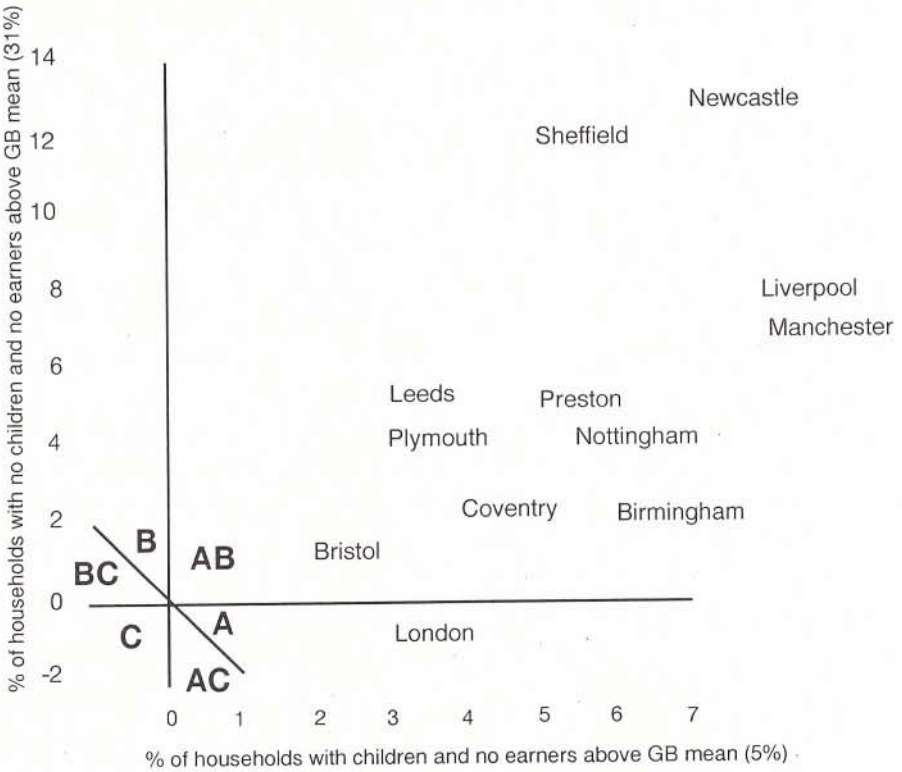


Table 3.1 Wards which contain the most Group A households (households with children and no earners)

% of households in Group A	Ward name	District name
26.5	No. 8	Knowsley
25.8	Grangetown	Langbaurgh
25.2	No. 1	Knowsley
24.8	Bidston	Wirral
23.3	Brookhouse	Blackburn
22.8	Thorntree	Middlesbrough
22.6	Hardwick	Stockton-on-Tees
22.5	Over Two	Vale Royal
22.4	Higher Croft	Blackburn
21.1	Mirehouse West	Copeland
20.9	South Bank	Langbaurgh
20.8	Beckton	Newham
20.5	Beechwood	Middlesbrough
20.4	Low Hill	Wolverhampton
20.4	Eaton	Milton Keynes
20.4	Miles Platting	Manchester
20.2	Moss Side	Manchester
20.0	No. 5	Knowsley
19.9	Liddle	Southwark

3.36 The top twenty wards with the highest proportion of households in Group A, i.e. households with children and no earners, show a marked geographical range across England, and include places which one might almost expect to see in such a ranking. Certainly, the names Beckton and Moss Side will certainly be recognisable to people familiar with the socio-economic structure of parts of east London and inner Manchester. The wards included in this list range from the districts of Langbaurgh, Middlesbrough and Stockton-on-Tees in the North-East of England, to the Wirral, Knowsley, Blackburn, Manchester, Vale Royal (in Cheshire) and Copeland (in Cumbria) in the NorthWest of England, to wards in Wolverhampton and Milton Keynes in the Midlands, and down to wards in the Inner London Boroughs of Newham and Southwark. The districts listed represent a range of types of areas, including metropolitan city districts (Knowsley, Wirral, Wolverhampton, Manchester); industrial districts (Langbaurgh-on-Tees, Blackburn, Stockton-on-Tees, Copeland); wards in districts in the small non-metropolitan cities (Middlesbrough); and wards in districts in New Towns (Milton Keynes). Ward Over Two in Vale Royal District in Cheshire is the only one from what the OPCS classify as an Urban & Mixed Urban-Rural District, and no other rural type of districts are listed.

Table 3.2 Wards which contain the most Group B households (households with no children and no earners).

% of households in Group B	Ward name	District name
72.7	Sidmouth Town	East Devon
68.4	No. 6	East Lindsey
67.9	St. Bartholomews	Tendring
67.6	Haven	Tendring
67.2	Portsoken	City of London
66.1	Nea	Christchurch
66.0	Meads	Eastbourne
64.0	No. 12	Waveney
63.1	Frinton	Tendring
62.8	No. 20	Rother
62.7	Buddleigh Salterton	East Devon
62.0	No. 21	Arun
61.8	Barton	New Forest
61.5	Walton	Tendring
61.2	Golf Green	Tendring
61.0	Chewton	Christchurch
60.6	Milton	New Forest
60.4	No. 22	Rother
59.7	Branksome Park, Canford	Poole
59.4	Birchington West	Thanet

3.37 The top twenty wards with the highest proportion of Group B households, i.e. households with no children and no earners, show a greater confinement to the south of England in terms of their geographical spread. None of the districts listed are north of the City of London. These, of course, are wards containing large numbers of retired people. It is therefore unsurprising that these households are concentrated

in wards along the south coast of England, from Devon to Kent, in traditional retirement settlements such as Sidmouth, Budleigh Salterton, Christchurch and Eastbourne. In fact, of the twenty wards listed, only four are not in districts termed Resort, Port & Retirement Districts by the OPCS; East Lindsey (which includes Skegness) and Waveney are both Remoter Mainly Rural districts, Arun is a district which does in fact include a resort (its major settlement is Bognor Regis), while the City of London is in Inner London. The City of London's appearance on this list highlights the diversity of experience of different households in the capital. (Although it should be remembered that many wards in the City of London have tiny populations, the ward in question here, Portsoken, contained 184 enumerated households in 1991, hardly an insignificant figure.)

Table 3.3 Wards which contain the most Group C households (households with earners)

% of households in Group C	Ward name	District name
100	Langbourn	City of London
97.9	Tower	City of London
93.3	Farringdon Within	City of London
93.3	Hipswell	Richmondshire
92.2	Queens	Rushmoor
91.7	Scotton	Richmondshire
91.6	Ardley	Cherwell
91.4	Iceni	Forest Heath
90.7	Stoke Gifford South	Northavon
90.2	Tresco	Isles of Scilly
89.6	Yateley West	Hart
89.0	Barkham	Wokingham
88.9	Bryher	Isles of Scilly
88.4	Heatherside	Surrey Heath
88.4	Leeming	Hambleton
88.3	The Homesteads	Thurrock
88.1	Didington North	Northavon
88.0	Owlsmoor	Bracknell
87.9	The Moors	Spelthorne
87.8	Ingleby Barwick	Stockton-on-Tees

3.38 The top twenty wards containing the highest proportion of households in Group C, i.e. those households with earners, show a very great geographical range across England. This is unsurprising, given that over half of the population of England live in households containing at least one earner. The districts including the wards range from Stockton-on-Tees in the North East and Richmondshire in Yorkshire, down to the Isles of Scilly. There appears to be a spread around the outskirts of Greater London, taking in places such as Spelthorne and Surrey to the south west of London, and Thurrock to the east. The top three wards in this list are in the City of London, which again underscores the point about the diversity of types of households living in the capital (although this point is somewhat diluted by the small population of the first two wards). Of the districts listed, eleven could be classified as Urban & Mixed Urban-Rural districts. The remainder are Inner

London (City of London), rural districts (Isles of Scilly, Hambleton), industrial districts (Stockton-on-Tees, Thurrock) and a new town (Bracknell). There are no districts in this list from the metropolitan areas, or even from non-metropolitan cities.

3.39 In conclusion, whilst the dangers of concentrating on ward-level rankings should be noted (because this concentrates on extremes, rather than on the true picture across the country), the three tables do emphasise one key point. This is that, in terms of area profiles, those wards containing high proportions of households with children but no earners tend to be concentrated in the more urban districts, whereas those households with earners tend to live in more rural types of district. This pattern confirms the idea that households experiencing different types of economic conditions, such as having an earner or not, are not spread evenly across the country, but rather are polarised in particular places. Furthermore, the places where particular types of households live are themselves distinctive types of districts with similarities in terms of their urban or rural status and function.

3.40 It is worth emphasising here that the importance of these findings lies not with their novelty. The picture outlined above, of a geography of social polarisation with disparities between inner and outer urban areas, urban and rural areas, and the north and south of England, will already be familiar to many readers interested in the socio-economic structure of the country. Rather, it is the clarity of this picture, particular when using visualisation techniques such as cartograms, which constitutes the most important research finding here. Whether mapped, graphed or ranked, by looking at socio-economic circumstances of different types of households across the country, marked differences between areas are clear.

Changes in area profiles for wards and selected cities, 1971 -1991

3.41 This section presents the results of an analysis of changes in the area profiles of wards and selected cities between 1971 and 1991. In order to do this, a slightly different method was used. In brief, this 'change' classification is based on measurements of the levels of participation of adults of working age in the workforce, using the same denominator but for different dates.

- People of working age in the workforce in 1971
- People of working age in the workforce in 1981
- People of working age in the workforce in 1991

These variables have been calculated for each ward in Britain, from the 1971, 1981 and 1991 Censuses of Population. Please refer to the Appendix D for further details.

3.42 The map in Figure 3.4 shows changes in the spatial distribution of these groups across Britain. All the wards in Britain were classified by the relative rates of change in the proportion of people of working age in the workforce. These rates are relative to specific averages of +12 per cent for the 1971-81 period and +1 per cent for the 1981-91 period. The 'change' classification used in this part of the analysis only uses information on change. The information used is the percentage point change in the proportions of people of working age who are in work in each ward in the periods 1971-1981 and 1981-1991 (i.e. in the inter-censal period). Over both of these periods, wards can either see their rate of change rise above that of the national average (+12 per cent in 1971-81 and +1 per cent in 1981-91) or fall below

these averages. Therefore, each ward can be classified as being of one of four types, these being:

- ward populations experiencing increases in participation in the labour force below the national average in 1971-1981 and 1981-91; or
- ward populations experiencing increases in participation in the labour force below the national average only in 1971-81; or
- ward populations experiencing increases in participation in the labour force below the national average only in 1981-91; or
- ward populations experiencing increases in participation in the labour force above the national average in 1971-81 and 1981-91.

3.43 The map shows that on 38 per cent of the land area of Britain, rates of participation in the labour force rose above the specific averages in both decades. These places are coloured dark red. Certain areas in Sussex, the North West of England and Scotland stand out. At the other extreme, 8 per cent of the land area of Britain contained wards where rates of participation in the labour force rose below the specific averages in both decades. These areas are coloured black. The coalfields of the North East and Wales, and the industrial areas of Manchester, Leeds, Sheffield and the inner parts of London stand out. The largest group of wards by land area are those where participation rates rose only between 1981 and 1991 (42 per cent of Britain). These areas, shaded light red, are scattered across England, particularly in rural areas. Only 11 per cent of the land area of Britain was covered by wards which saw increases in participation in the 1970s but increases below the specific average in the 1980s. These areas are shaded grey, and include concentrations in Inner London, which are just discernible.

3.44 The cartogram in Figure 3.5 presents the same information as the map in Figure 3.4, using the same colour scheme. Fine-grained differences are apparent immediately. For example, changes in urban areas, particularly inner London, are immediately much clearer. The four types of ward can be seen to consist of very similar numbers of people, ranging from 23 to 27 per cent of the national population. The spatial distribution of these groups is marked. Wards where the proportion of people in the workforce rose below the average in both the 1970s and 1980s, coloured black, can be seen concentrated in the eastern part of the London, the centre of Birmingham, the coalfields of South Wales, parts of Tyne and Wear, Durham and Cleveland in the North-East of England, the western parts of Manchester, and Leeds. These places may be contrasted with wards with an above-average increase in the proportion of people in the workforce, shaded dark red in the cartogram. These wards are concentrated to the south of London and along the south coast, on the edges of some of the major conurbations, and in some of the rural areas of England. The areas shaded light red show places where the proportion of people in the workforce rose above the average only in the 1980s. These areas, again, are concentrated in the rural parts of England and on the edges of the major conurbations. Those areas where the proportions active in the workforce rose below the average in the 1980s are shaded grey. Much of Inner London, Liverpool, Manchester, the eastern parts of the West Midlands and the North East of England are in this group.

Figure 3.4 Map showing change in workforce participation, 1971 - 1981 - 1991, by ward populations

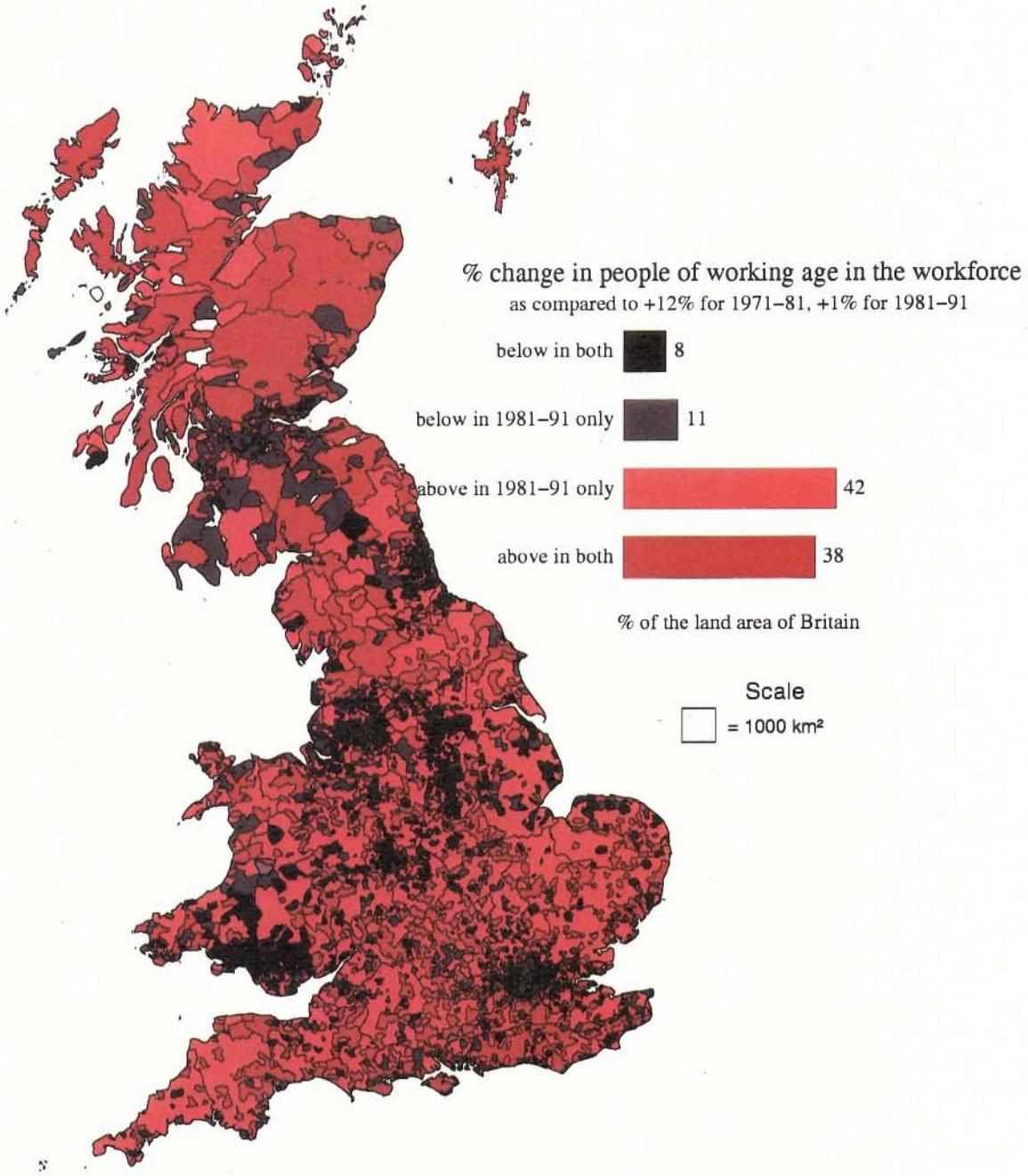
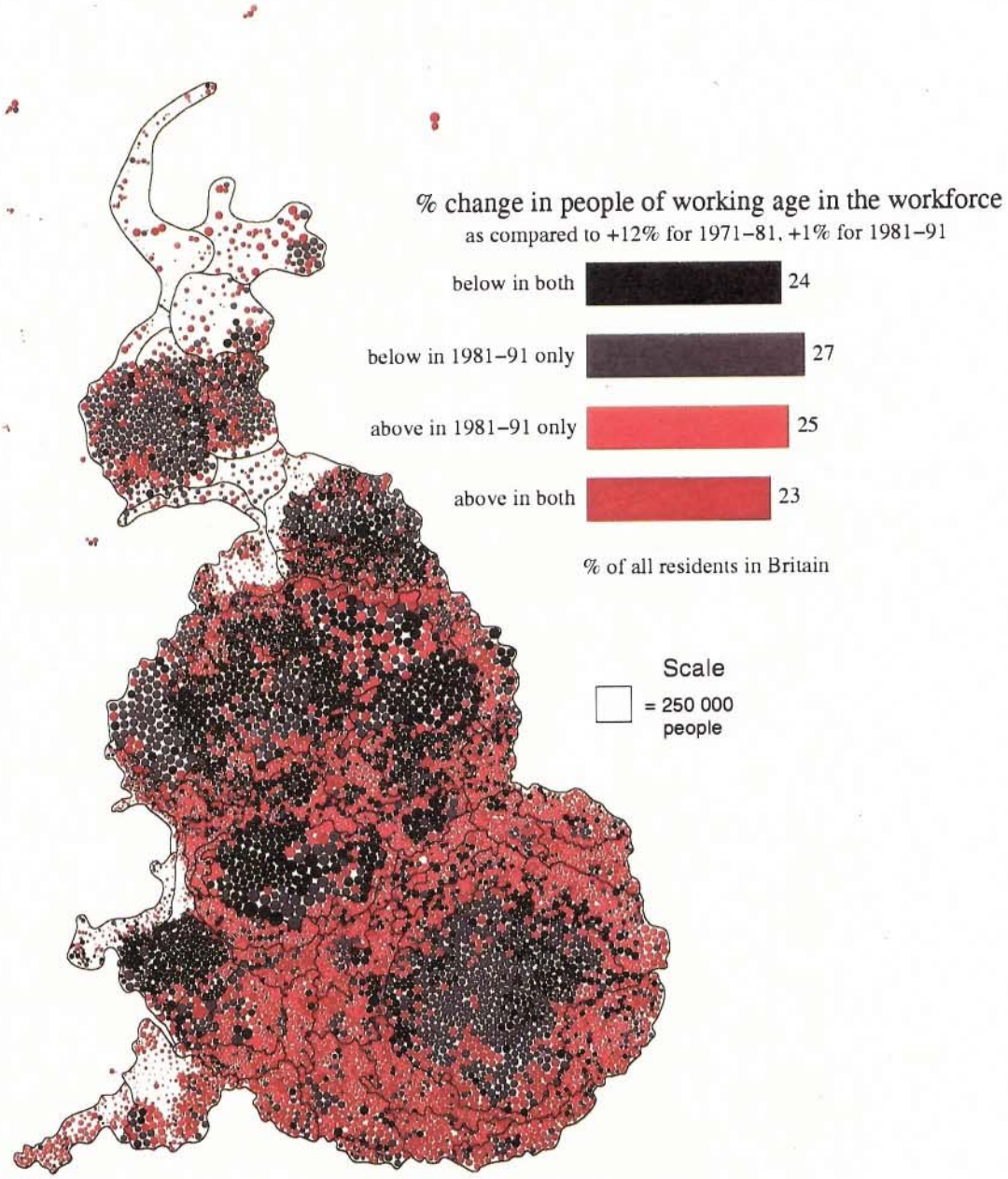
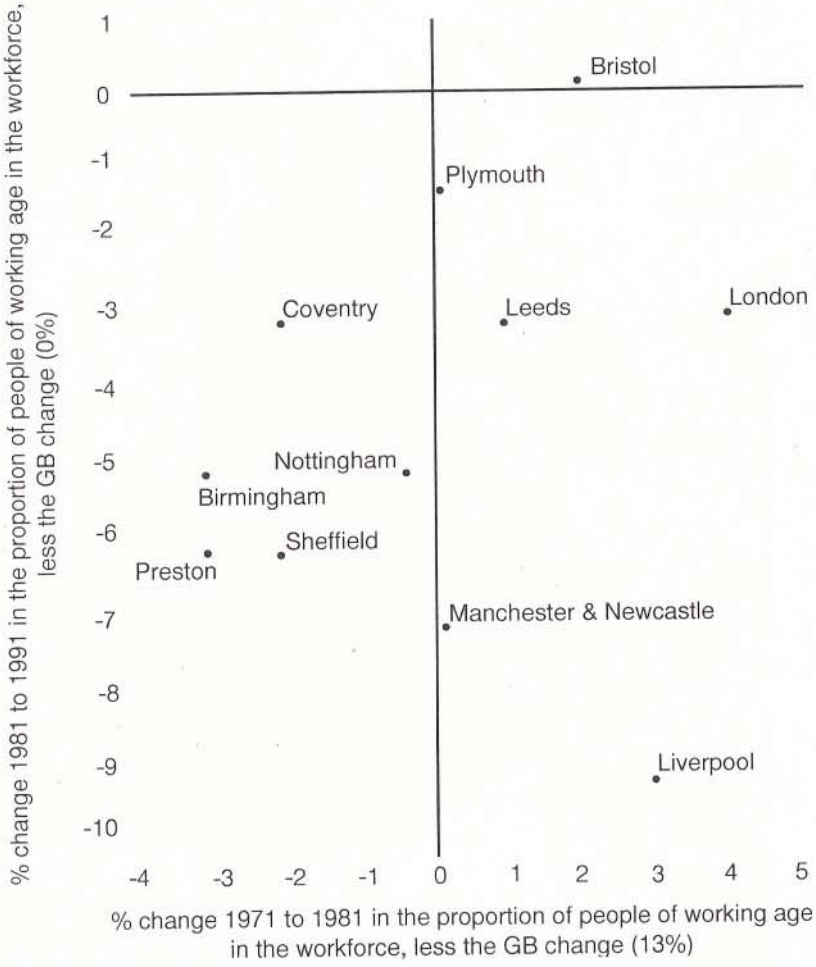


Figure 3.5 Cartogram showing change in workforce participation, 1971 - 1981 - 1991, by ward populations



3.45 As in paras. 3.27-3.41 above, the profiles of selected cities have also been examined as part of this analysis. Again, the same twelve cities have been chosen, and the changes in the proportions of economically active people in both decades are shown in Figure 3.6. Five inner cities saw the levels of participation of their workforces in the labour market rise more slowly than the national average change over both decades. These were Sheffield, Birmingham, Coventry, Nottingham and Preston. A further six inner cities saw faster rises in workforce participation rates than the national average in the 1970s but not in 1980s. These were London, Liverpool, Manchester, Newcastle, Leeds and Plymouth. Only the inner city area of Bristol saw participation rates rise above the national average in both decades. Again, as in the previous section, the diversity of experiences of these different cities should be noted.

Figure 3.6 Graph showing employment structure in selected inner urban areas, 1971 - 1981 - 1991



3.46 A final exercise in this part of the analysis of area profiles has been to rank the wards experiencing the most acute changes in the proportions of adults in each of the four categories used in the map and cartogram. The names of these wards are given in Tables 3.4 - 3.7, together with the districts in which they belong, in order to illustrate the diversity of places experiencing the different types of changes.

Table 3.4 Top twenty wards showing the greatest increase in people of working age in the workforce, 1981-91

% increase, 1981-91	Ward name	District name
30.5	Barby	Daventry
19.9	Almondsbury	Northavon
19.8	Millon Without	Copeland
18.4	Lydford	West Devon
18.3	Billington	Ribble Valley
17.2	Winwick	Warrington
16.2	Bryher	Isles of Scilly
15.7	Nayland	Bambergh
15.4	The Littletons	Wychavon
14.9	Coven	South Staffordshire
14.7	No. 12	Arun
14.5	Dawlish North East	Teignbridge
14.1	Darenth	Dartford
14.0	Nedge	Mendip
12.8	Chatton	Berwick-upon-Tweed
12.5	No. 13	Rother
12.5	Roundway	Kennet
12.4	Skelton	Eden
12.2	Clanfield & Shilton	West Oxfordshire
12.1	St. Martins	Isles of Scilly

3.47 Table 3.4 shows the twenty wards in England experiencing the greatest increases in the proportions of their working-age populations in employment in the 1981-91 period. The geographical spread of districts included in this list is immediately apparent, from Berwick-upon-Tweed on the Scottish border, down through the Midlands to Devon and beyond (although the Isles of Scilly wards have rather small populations for too much weight to be placed on them here). The greatest increases appear to have been in rural wards; all the districts listed in the table could be classified as rural (Remoter Mainly Rural or Urban & Mixed Urban-Rural) by the OPCS classification, with the exception of Copeland and Dartford, which are industrial areas (many Sellafield workers live in Copeland), plus Arun and Warrington. None of the top twenty wards are in Greater London or any other major metropolitan or non-metropolitan city.

3.48 Table 3.5 shows the top twenty wards with the highest percentage decreases in the proportions of their working-age populations in the workforce, for the period 1981-91. The contrasts, in terms of types of places listed, between Table 3.5 and Table 3.4 should be immediately apparent. There is, again, a geographical spread of areas, but this is the only similarity. The areas experiencing great decline range from Inner London, through the conurbation of Greater Manchester and up to the coalfields of the North East of England. These are areas dominated in previous decades by heavy and manufacturing industry for their employment, and with industrial decline has come increasing unemployment. The districts listed include districts in metropolitan areas (Oldham, Wirral, Knowsley, Manchester, Liverpool),

districts in non-metropolitan cities that are themselves markedly different in terms of their socio-economic structure (*viz.* Oxford and Middlesbrough), three wards in the London Borough of Tower Hamlets, and districts in industrial areas (Burnley, Blackburn, Hyndburn). The appearance of Castle Morpeth and Easington districts on this lists points to the devastation caused by the closure of the coal pits in both these areas. Also of interest is the comparison which can be made between this table and Table 3.1; a number of districts and wards appear on both lists (No. 1, Knowsley; Pallister, Middlesbrough; Bidston, Wirral), indicating that it is likely to be the decline of employment in many areas during the 1980s that has led to the profiles of particular areas in the 1990s.

Table 3.5 Top twenty wards showing the greatest decrease in people of working age in the workforce, 1981-91

% decrease,1981-91	Ward name	District name
-27.0	Stamfordham	Castle Morpeth
-18.6	Spitalfields	Tower Hamlets
-16.9	Central	Oxford
-16.1	Vauxhall	Liverpool
-15.7	Langbourn	City of London
-15.3	Miles Platting	Manchester
-14.6	Ardwick	Manchester
-12.7	Daneshouse	Burnley
-12.7	Harpurhey	Manchester
-12.3	St. Dunstan's	Tower Hamlets
-12.3	Calder	Burnley
-12.2	Horden North	Easington
-12.2	No. 1	Knowsley
-12.1	Green Bank	Blackburn
-12.0	Central	Hyndburn
-11.9	St. Mary's	Tower Hamlets
-11.9	Pallister	Middlesbrough
-11.9	No. 7	Knowsley
-11.8	Bidston	Wirral
-11.6	Coldhurst	Oldham

3.49 Table 3.6 shows the top twenty wards and districts showing the greatest percentage increases in the working-age population in workforce, for the period 1971-91. The table presented above shows that over a twenty year period, the wards with the highest proportional increase of population in work are concentrated in London (in comparison with Table 3.4 above, which shows comparable data for the period 1981-91 only). Nine of the wards are in Inner London; three in the City of London (with the caveat that one ward, Castle Baynard, had only 8 enumerated households in 1991), two in Camden, two in Westminster, two in Kensington & Chelsea. Other types of district represented here are diverse, and include districts in smaller non-metropolitan cities (Cambridge, Oxford, Exeter, Reading), five districts in more rural areas (Ribble Valley, South Kesteven, Canterbury, Oadby & Wigston, Hertsmere and Selby), and one metropolitan district, Knowsley, which

figured so prominently in Table 3.5 showing decreases in employment in the 1980s. The pre-eminence of parts of London as an area of economic growth over the 1970s and 1980s can be explained by the diversity of its economic base, and particularly its role as an international financial centre. The success of smaller cities and areas over the two decades may also be explained by the diversity of their economies over a period which saw, nationally, structural changes in the economy, the decline of heavy industry and the increasing importance of higher-order service industries.

Table 3.6 Top twenty wards showing the greatest increase in people of working age in the workforce, 1971-91

% increase, 1971-91	Ward name	District name
74.6	Castle Baynard	City of London
65.4	Aldersgate	City of London
48.9	Market	Cambridge
47.3	No. 7	Knowsley
45.8	Brunswick	Camden
45.5	Heslington	Selby
41.5	Farringdon Without	City of London
39.7	Shenley	Hertsmere
38.0	North	Oxford
38.0	Grange	Oadby & Wigston
37.2	Blean Forest	Canterbury
36.9	Holborn	Camden
36.6	Baker Street	City of Westminster
36.2	Cavendish	City of Westminster
36.0	Belmont	South Kesteven
35.9	Pennsylvania	Exeter
35.6	Earl's Court	Kensington & Chelsea
35.5	Redlands	Reading
35.5	Brompton	Kensington & Chelsea
35.2	Aighton, Baily, Chaigley	Ribble Valley

3.50 Table 3.7 shows the top twenty wards with the greatest decrease in the proportions of working-age people in the workforce, for the period 1971-91. Once again, there is a clear geographical spread across England in these top twenty districts, from Teesdale in the North East, through the Midlands to the West Country and central London. The types of district represented here are also diverse. Two of the wards are in the City of London, three in are industrial districts (Blackburn, Bassetlaw and Copeland), and two are in districts including a resort or a New Town (Arun and West Lancashire respectively). The remaining thirteen wards are in districts which under the OPCS classification of district types would be classed as being more rural. None of the top twenty wards are in metropolitan or non-metropolitan cities outside London, which is perhaps surprising, given the scale of economic decline in many areas during the 1980s.

Table 3.7 Top twenty wards showing the greatest decrease in people of working age in the workforce, 1971-91

% decrease, 1971-91	Ward name	District name
-21.0	Barby	Daventry
-10.1	Dowgate	City of London
-8.6	No. 4	Teesdale
-6.1	Brookhouse	Blackburn
-4.6	Shotley	Bambergh
-4.3	No. 25	Suffolk Coastal
-4.1	Birch Green	West Lancashire
-3.9	Coleman Street	City of London
-3.8	Bryher	Isles of Scilly
-3.5	The Littletons	Wychavon
-3.4	Studlands Park	Forest Heath
-2.6	No. 12	Arun
-2.0	Elkesley	Bassetlaw
-1.7	Coastal	Boston
-1.6	Coven	South Staffordshire
-1.4	Bourne Vale	Lichfield
-1.1	Tardebigge	Bromsgrove
-0.6	Millom Without	Copeland
-0.5	No. 13	North Dorset
-0.1	Williton	West Somerset

3.51 In conclusion, on the basis of both the cartograms and the rankings presented here, it appears that the pattern of change in the proportions of adults in work shows a very clear spatial distribution. This distribution is simple, with the areas showing the most marked growth in employment rates around the major conurbations and in the more rural areas of England. Conversely, the older industrial areas have shown least growth. Furthermore, it should be remembered that it is the changes shown in this section which underpin the spatial distributions outlined for households in 1991 in the previous section. The pattern of clear divergence and polarisation between areas is clear in both. Again, the importance of these findings lies less in their novelty as in their clarity in confirming patterns of opportunity and decline across the country.

Towards a typology of the profiles of selected areas

3.52 The previous two sections have discussed the profiles of broad areas of England with reference to one or two variables. In this section, a typology is developed for the analysis of the profiles of selected areas, using a larger number of variables drawn from the Population Census. This kind of exercise is methodologically complex. What should the criteria be for the choice of areas for comparison? What should a 'typical' area be typical of? Should objective or subjective methods be used?

3.53 The methodology behind the choice of 'typical' places involved a combination of the 'static' and 'change' classifications used in the previous two sections. Full details are given in the methodological appendix. In brief, the combined classification gives twenty-four different types of area, according to the proportions of types of households in each ward, and the amount and duration of economic growth or decline over the 1971-1991 period. All wards in Britain can potentially be allocated to one of these 24 types. The groups of wards vary significantly in size.

3.54 Table 3.8 lists the 24 types of area and also presents some of the most basic census data, converted into percentages, for each area type. (The raw data from which this table is drawn is given in the methodological appendix.) The aim of the table is to illustrate which types of area (numbered 1-24) are most important in terms of population and household size, and assets such a living space and cars. For ease of reading, the table is ranked not according to ward type but according to the census variables. Note that Household Type A refers to households with children and no earners in 1991; Household Type B refers to households with no children and no earners in 1991; and Household Type C refers to households with earners in 1991. As Table 3.8 shows, just over half of the population of Britain lives in wards of types 18, 3, 9, and 24.

3.55 In theory, all twenty-four types of area could be matched to a real place which could then be described as representative of that type of area. In fact, some types of area have not been profiled here because they do not reach the 50 per cent threshold of households in that area which could be defined as living in wards of the type chosen. This is the case for area types 4, 5, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21 and 23. In these cases, the particular combinations of static household structure and changing economic structure have not been experienced by a substantial number of people. For example, in no constituency does a majority of people live in wards where there has been below-average economic growth in both the 1971-81 and 1981-91 periods, and where there is now a high proportion of households with no earners and no children, labelled as type 4 in this schema

3.56 Eleven different types of area had above the 50 per cent threshold of households in that area which could be defined as living in the type of place chosen as 'typical'. These eleven were area types 1, 2, 3, 6, 7, 8, 9, 10, 12, 13, 16, 18, 22 and 24. Three-quarters of Britain's population live in wards which could be defined as belonging to one of these area types. The eleven types then had to be matched to existing places, in this case parliamentary constituencies. These have been chosen because they provide areas with roughly equal numbers of people (around 60-70,000); because they bring together within their boundaries places of common interest or community in its broadest geographical sense; and because they provide readily identifiable place names. For many area types, a number of constituencies were available for closer examination as representative of that type of area..

Table 3.8 Basic census characteristics of area types

Area type	Econ. growth*	Hhld types†	Residents %	Households %	Cars %	Rooms %	Children %
18	(1980s)	C	15	14	19	15	15
3	(none)	A & B	13	13	9	13	14
9	(1970s)	A & B	12	12	8	11	11
24	(both)	C	11	10	13	11	11
22	(both)	B	7	7	8	7	6
10	(1970s)	B	5	5	5	5	4
16	(1980s)	B	4	4	5	5	4
12	(1970s)	C	4	4	4	4	4
2	(none)	A	4	3	3	3	5
13	(1980s)	A & C	3	3	3	3	3
1	(none)	A & C	3	3	3	3	3
7	(1970s)	A & C	3	3	2	3	3
6	(none)	C	3	2	3	3	3
8	(1970s)	A	2	2	2	2	3
15	(1980s)	A & B	2	2	2	2	2
23	(both)	B & C	2	2	3	2	2
4	(none)	B	2	2	2	2	2
17	(1980s)	B & C	2	2	2	2	2
19	(both)	A & C	2	1	1	1	2
21	(both)	A & B	1	1	1	1	1
11	(1970s)	B & C	1	1	1	1	1
14	(1980s)	A	0	0	0	0	1
5	(none)	B & C	0	0	0	0	0
20	(both)	A	0	0	0	0	0
Total			100	100	100	100	100

* Economic growth:
'None' refers to below average increase in proportion of adults in the workforce in the 1970s and 1980s.
'1970s' refers to above average increase in proportion of adults in the workforce in the 1970s only.
'1980s' refers to above average increase in proportion of adults in the workforce in the 1980s only.
'Both' refers to above average increases in proportion of adults in the workforce in both the 1970s and the 1980s.

† Household types:
A refers to above average proportion of households with children and no earners in 1991
B refers to above average proportion of households with no children and no earners in 1991
C refers to above average proportion of households with earners in 1991

Table 3.9 presents an edited list of these possible constituencies, and a fuller list showing all possible constituencies is available as Table D.3 in Appendix D. Constituencies are included in the table if, as a minimum, 50 per cent of households in that area could be defined as living in wards of the type chosen. The percentage

given is the percentage of households living in wards of the type under consideration. These vary from the threshold of 50 per cent, up to the highest possible 100 per cent. (Please refer also to the methodological appendix.)

Table 3.9 Constituencies which typify particular types of ward in England

Type	Constituency	Percentage of Households in wards of each type
1	Slough	73.47
	Enfield North	70.73
	Feltham & Heston	60.10
(Constituencies with below average increases in workforce participation in the 1970s and 1980s; above-average proportions of household types A (households with children and no earners in 1991) and C (households with earners in 1991)*.)		
2	Birmingham Ladywood	67.93
(Constituencies with below average increases in workforce participation in the 1970s and 1980s; above-average proportions of household type A (households with children and no earners in 1991).)		
3	Barnsley East	100.00
	Birmingham Hodge Hill	100.00
	Birmingham Northfield	100.00
	Jarrow	71.00
	(nb. there are many others with between 50% and 99%)	
(Constituencies with below average increases in workforce participation in the 1970s and 1980s; above-average proportions of household types A (households with children and no earners in 1991) and B (households with no children and no earners in 1991).)		
6	Littleborough & Saddleworth	63.51
(Constituencies with below average increases in workforce participation in the 1970s and 1980s; above-average proportions of household type C (households with earners in 1991.)		
7	Croydon North West	100.00
	Brent East	70.65
(Constituencies with above average increase in workforce participation in the 1970s only; above-average proportions of household type C (households with earners in 1991).)		
8	Norwood	61.09
(Constituencies with above average increase in workforce participation in the 1970s only; above-average proportions of household type A (households with children and no earners in 1991).)		
9	Liverpool West Derby	100.00
	Birmingham Erdington	100.00
	Manchester Blackley	100.00
	South Shields	81.00
	(nb. there are many others with between 50% and 99%)	
(Constituencies with above average increase in workforce participation in the 1970s only; above-average proportions of household types A (households with children and no earners in 1991) and B (households with no children and no earners in 1991).)		

12	Richmond-upon-Thames & Barnes	77.25
	Chelsea	65.57
	Brentford & Isleworth	61.28
	Hendon North	60.38

(Constituencies with above average increase in workforce participation in the 1970s only; above-average proportions of household type C (households with earners in 1991).)

18	Mid Bedfordshire	79.66
	Elmet	78.18
	Bosworth	75.52
	North Wiltshire	72.44
	Northavon	68.47
	Blaby	66.73
	Cheadle	66.57
	South East Cambridgeshire	63.42
	Billericay	63.07
	Dudley West	62.51
	Daventry	61.31

(Constituencies with above average increase in workforce participation in the 1980s only; above-average proportions of household type C (households with earners in 1991).)

22	Worthing	83.60
	Hove	74.04
	Eastbourne	64.08
	Arundel	60.57

(Constituencies with above average increases in workforce participation in both the 1970s and the 1980s; above average proportions of household type B (households with no children and no earners in 1991).)

24	East Surrey	78.05
	Croydon South	73.40
	Reigate	68.90

(Constituencies with above average increases in workforce participation in both the 1970s and the 1980s; above average proportions of household type C (households with earners in 1991).)

*Household types:
A refers to households with children and no earners in 1991
B refers to households with no children and no earners in 1991
C refers to households with earners in 1991

For a full list of constituencies, refer to Table D.3 in Appendix D.

3.57 By comparing and contrasting the situation and experiences of different constituencies, chosen as representative of different types of area, it is possible to build up a picture of how processes of social, economic and demographic change over the 1971-91 period affected different types of area in different ways. As the findings from paras. 3.27-3.52 indicated, many of the broad patterns to area profiles across Britain are well known to those familiar with the contours of socio-economic change. To recap, there appear to be marked and very clear differences between areas where an unusually high proportion of households have no earners and children, which tend to be located in inner urban areas, and the more affluent and

often more rural areas where there are higher proportions of people in work and higher proportions of households with at least one earner.

3.58 By focusing in on particular places and comparing them directly with others, it is possible to build up a finer-grained picture of the processes behind, and consequences of, these changes. This is done here with reference to specific constituencies. Census data were derived from the Small Area Statistics to illustrate particular sets of socio-economic circumstances in these areas. The following account of area profiles demonstrates, first, the diversity of experiences of socio-economic change across England over the past decade and, second, how local conditions in specific places can be just as crucial in determining living standards for residents as national trends.

3.59 This discussion begins with considering the type of area where most people live. This is area type 18, which represents the type of places that 15 per cent of the population, nationally, live in. Areas like type 18 also have 14 per cent of the households, 15 per cent of the rooms and 15 per cent of the children, nationally. These are places like Mid Bedfordshire, where there was an above-average increase in the levels of people in the workforce during the 1980s (though not in the 1970s), and where, in the 1990s, there are still above-average proportions of households with at least one earner. In short, places like Mid Bedfordshire, Huntingdon, Mid Kent and North Wiltshire have fared well during the economic boom of the 1980s. Two national trends closely identified with that decade are apparent in Mid Bedfordshire. The first relates to the increasing proportion of women in the workforce. This area saw the largest fall (of all the constituencies discussed here) in female unemployment in the 1980s. The second concerns the expansion of car ownership and the growth of the two-car household; 37 per cent of all households in Mid Bedfordshire have access to two cars. Places like this have very low proportions of lone-parent families and low proportions of men suffering from long-term illness. In general, these are more rural types of area with a population able to benefit from the expansion of the service sector in the 1980s.

3.60 Contrast type 18 areas like Mid Bedfordshire with type 3 places like Jarrow, Birmingham Hodge Hill and Barnsley East. Nationally, 13 per cent of the population live in places like this. These are areas which are characterised by low levels of economic growth in the 1970s and the 1980s (as measured by the proportion of people in work), and by high proportions low-income and elderly households. For example, in Jarrow 71 per cent of the population live in wards where above-average proportions of households have either children and no earners or no children and no earners. Places like this have 14 per cent of the children but 9 per cent of the cars, nationally. These are places located in the older industrial areas associated with the major conurbations (see Table D.3), places like Sheffield Central, Rochdale, Middlesbrough and Sedgefield. They are characterised by a lack of employment opportunities for their residents caused by the decline of traditional heavy industry and coalmining, and a lack of new investment in industry. The people living in such areas tend to have lower levels of qualifications. Of the constituencies profiled, Barnsley East had one of the highest levels of male unemployment and one of the lowest levels of educational qualifications amongst the population. The contrast between places like Jarrow and Mid Bedfordshire is stark.

3.61 Another parallel which can be drawn is between areas with similar types of households structures but rather different experiences of economic growth and decline. Type 9 areas are characterised by their above-average levels of economic growth in the 1970s, even though they experienced decline in the 1980s. These are predominantly areas located in the inner areas of major conurbations, constituencies in the centres of Birmingham, Manchester, Liverpool, London and Tyneside. Twelve per cent of the population of Britain live in places like this, as do 11 per cent of the children. Places like this have 8 per cent of the cars. Liverpool West Derby is a typical constituency, and some of its socio-economic indicators indicate a history of economic growth followed by decline. The variables for housing tenure indicate that council housing sales were quite high after the expansion of the Right to Buy in 1980. In 1971 three-quarters of households lived in council housing, but this proportion had declined to under a half in 1991. Clearly, the population was affluent enough to buy some council housing during the 1980s, but in 1991 male unemployment had risen to 32 per cent. Liverpool West Derby is typical of places which have been home to high proportions of skilled working class people; this constituency had the lowest proportion (of all those profiled) of members of the professional and managerial socio-economic groups. It is the residents of inner urban areas like this who have suffered disproportionately from the decline of manufacturing employment, traditionally a large employer of people in areas such as this. These areas now lack further investment.

3.62 The next type of area to be profiled here provides, again, a stark contrast. Liverpool West Derby and constituencies such as East Surrey are geographically, demographically, economically, socially and culturally worlds apart. Type 24 areas, such as East Surrey, are characterised by their above-average increases in the workforce in both the 1970s and the 1980s, and by the very high proportions of households with at least one earner. These are the most affluent of the types of areas profiled here. Nationally, this type of area is home to 11 per cent of the population, 11 per cent of the children, 10 per cent of the households and 13 per cent of the cars. Other such constituencies of this type include Croydon South, Altringham & Sale, Guildford and Surbiton. Again, key socio-economic indicators for the economic growth of the 1980s indicate the prosperity of such places. In East Surrey, for example, there was a male unemployment rate of 6 per cent and a female unemployment rate of 4 per cent in 1991. This should be compared with the male unemployment rate of 32 per cent for Liverpool West Derby. Forty-three per cent of all households have two or more cars in 1991, and East Surrey also had amongst the highest proportions of car ownership in the 1980s and 1970s. The population of places like this tend to have professional and managerial occupations, particularly in higher order service industries, including the financial sector.

3.63 We can also compare East Surrey, and very affluent places like it, with type 22 areas which have experienced economic growth in both the 1970s and 1980s, but which are now characterised by the large proportions of people in them who are now retired (households with no children and no earners). Seven per cent of the people, 7 per cent of the households and 6 per cent of the children in Britain live in places like this, typified by places such as Worthing, Eastbourne, Brighton and Hove. In Worthing, 40 per cent of the population are pensioners. These are also quite wealthy areas; in Worthing only 7 per cent of households live in council accommodation, and male and female unemployment are, respectively, 3 and 4 per cent below the national average.

3.64 Type 12 areas saw growth in their economies in the 1970s but not the 1980s, yet still have a high proportion of households with earners. Four per cent of the population, nationally live in places like this, characterised by the constituency of Richmond upon Thames & Barnes and other wealthy areas around London. In this constituency, a large proportion of the population are employed in professional occupations, and in Richmond in 1991, 46 per cent of adults had a higher diploma or degree. Residents of such areas are able to take advantage of employment opportunities outside the area, particularly in central London.

3.65 Area types 2, 1 and 6 can be compared together in order to show the contrasts between places which all shared the experience of below-average economic growth in both the 1970s and the 1980s. Typical constituencies are Birmingham Ladywood, Slough and Littleborough & Saddleworth, respectively, which all have contrasting types of households forming the dominant type in most wards in that constituency. For example, in Birmingham Ladywood a high proportion are households with no earner and children. Although this type of area is home to 4 per cent of the population nationally, 5 per cent of British children live in places like this. Slough has high proportions of both households with children and no earners and households with at least one earner, whilst Littleborough & Saddleworth has high proportions of households with earners. So although these three types of area all share histories of economic decline, this is where similarities end. Birmingham Ladywood, for example, is in many ways quite unusual: it is the constituency with the smallest number of people identifying themselves as belonging to a white ethnic group at the 1991 census, and almost a quarter of its 75,800 population identify themselves as Indian in that census. Littleborough & Saddleworth may have seen its local economy decline (as measured by employment rates) but it still maintains rates of owner occupation of housing above the national average. Slough is different again, having slightly higher proportions of children and lower proportions of elderly people than the national average. It is difficult to discuss in detail the factors which distinguish these three constituencies, a reflection of the limits to the use of census data.

3.66 The last two area types to be profiled are types 7 and 8, which both saw economic growth only in the 1970s. Two neighbouring constituencies can be used to draw the comparison; Croydon North West is typical of area type 7, and Norwood is typical of area type 8. Croydon North West has a high proportion of both households with children and earners and households with earners. It has one of the most diverse ethnic profiles of any of the areas examined, having a very high proportion of people labelled as 'Other Other' in the census tables. Norwood also has an ethnically mixed population, with high proportions of its residents being classified as Black Other and Black African in the census ethnicity tables. A third of the property in the constituency is council housing, and quarter of households in this area live in private rented or housing association accommodation. It also has a high proportion of lone-parent families and high proportions of households with children and no earners.

Concluding comments

3.67 This research confirms the contention that polarisation can be identified between social groups across space. The analysis used two complementary methods to assess the nature and extent of social polarisation. It looked at two ways in which this might happen. The first used variables for household structure for a single point in time (1991) to see whether there were significant differences between

areas in terms of the types of household structure dominant there. The second used variables for economic activity amongst adults of working age over a twenty year period (1971-1991) to see whether there were significant variations between areas in terms of growth and decline of economic activity. The results of these two stages of analysis were then combined in order to construct a typology of area profiles using methods devised specifically for this research. Using this typology it was possible to see quite clearly the differences between areas in terms of a number of socio-economic variables. The patterns of polarisation and difference which emerged were complex and detailed. Nevertheless, the broad theme of polarisation has found numerous echoes here.

- places in the South East, in the prosperous parts of London, in areas around some of the major conurbations, and in many more rural areas, were more likely to have higher proportions of households containing earners, and more likely to have experienced a certain amount of economic growth at some point in the 1970s and 1980s.
- in contrast, the inner areas of major conurbations, areas formerly dominated by heavy industry, and places affected by economic decline in the 1970s and 1980s were more likely to have higher proportions of households without earners, whether these households also had dependent children or not.
- in certain places, patterns of polarisation of different types of households, which were apparent for 1991, could be traced back to changes in rates of economic growth and decline in the preceding two decades.

3.68 In many respects, this conclusion is not startling. This research was conducted within the context of wider policy, popular and academic debates about the existence and measurement of social polarisation in Britain. Much of the most recent research into these issues confirms these patterns of spatial polarisation between rural and urban areas, and social polarisation between households with earners and households without [4]. Indeed, the methods underpinning this research could be open to suspicion if the research findings had been at any great variance with those from other studies using similar variables and data sources. What is remarkable about the results of this research is the clarity of patterns of polarisation which are discernible. Using methods (such as the combined classification) and visualisation techniques (such as maps and cartograms) the variation and difference between areas in Britain stands out clearly.

3.69 Finally, it is worth emphasising that any evaluation of this research should take into account the advantages and disadvantages of the Census of Population for a study of this kind. The advantages of the census are, first, its inclusivity (under-enumeration notwithstanding); data is collected on everybody living in Britain on one night in April. The size of the sample makes it particularly suitable for a nation-wide study of area profiles. Second, the census is taken only once in every ten years, which means that although short-term social changes are missed,

[4] Willmott P. *Urban Trends: A decade in Britain's deprived urban areas*. PSI, London. 1994; Commission on *Social Justice: Strategies for National Renewal*, Vintage, London, 1994; Joseph Rowntree Foundation, *Inquiry into income and wealth*, JRF, York, (various reports), 1995; Gorden R and Forrest R *People and Places 2: Social and economic distinctions in England*. SAUS, Bristol University, 1995. For an overview, see also Woodward R 'Approaches towards the study of social polarisation in the UK' *Progress in Human Geography* **19**, 75-89, 1995.

longer-term trends are particularly easy to detect. Changes in family structure and the social circumstances of large social groups are particularly suitable for study using the census, because these things change slowly and because the census collects data on them regularly. There are also disadvantages of the census for a study of this kind. Some variables are simply not comparable between censuses because of changes in the census form and census output. For example, a straightforward division of households into those with earners and those without was not possible for the 1971 and 1981 census data, because this distinction was not made in the Small Area Statistics. The census is also limited in a study of this kind because of the range of the questions it does and does not ask. For example, a question on household income would be extremely useful in studying the nature and extent of socio-economic differences between areas, but the census does not ask about income. Finally, there are also limits to the inferences which it is possible to make using census data. Whilst study of the census might be useful in assessing the results of socio-economic change, it is very difficult (and often unwise) to use census data to infer the causes of such changes. For this, we should turn to other data sources.

4 Migration

Summary

Research Context

4.1 This summary presents the results of an analysis of migration patterns in urban areas. The research brief was:

- to document the scale and pattern of residential movements within Great Britain in the twelve months leading up to the Census and their impact on the number of people and households living in various types of areas in England; and
- to examine the characteristics of migration in and out of larger cities and their inner areas in order to see whether the net population losses have involved some types of people more than others.

The importance of migration

4.2 Migration is the major component of population change at regional and urban levels in England as in all Developed World countries. Indeed, it has become relatively more important as birth rates have fallen and as rates of natural population increase have become lower and less variable between areas. As shown in Table 4.1, net inflows from the rest of the British Isles and overseas contributed almost two-fifths of England's population growth between 1981 and 1991.

Table 4.1 Population change and its components, 1981-91, by region

Region	1991 population 000s	1981-1991 change 000s	1981-1991 change %	Natural change %	Net migration and other changes, %
North	3092	-25.7	-0.82	0.58	-1.41
Yorkshire & Humberside	4983	64.4	1.31	1.32	-0.01
East Midlands	4035	182.8	4.74	1.98	2.76
East Anglia	2082	187.2	9.88	1.54	8.34
South East	17637	626.2	3.68	2.65	1.03
South West	4718	336.4	7.68	-0.14	7.82
West Midlands	5266	78.9	1.52	2.67	1.15
North West	6396	-63.1	-0.98	1.36	-2.33
England	48208	1387.2	2.96	1.84	1.13

Source: Calculated from Revised Final Mid-Year Estimates for 1991 and Population Estimates for 1981. Adjusted for boundary changes.

Moreover, migration accounted for more of the regional variation in population change rates over this decade than did natural change. Regional rates for natural change ranged from -0.1 per cent to 2.7 per cent, a percentage point difference of 2.8, whereas the range for migration was 10.6 percentage points between the highest (East Anglia) and the lowest (the North West).

4.3 The range of net migration rates across the urban-rural dimension is nearly twice as large as between regions, and it is well known that internal migration has been the primary cause of the population decline experienced by England's larger cities since the 1960s. It is also the case that migration is a very volatile process that can vary enormously in volume and net pattern over relatively short time periods. Moreover, migration can have markedly greater impact on local population profiles than may be suggested by its role in overall population change, given that some people are much more migratory than others and that those moving into a city may be quite different in their complexion from those moving out of it.

Migrants in England 1990-91

4.4 On average, roughly one in ten people in England change address each year. The 1991 Census counted almost 4.6 million 'migrant residents', people whose usual address was in England on Census night but was different from their address a year before in April 1990. This figure represents 9.8 per cent of all residents in England enumerated by the Census. This level suggests great potential for population redistribution between places, but in fact most of the movements took place over relatively short distances:

- over half (52 per cent) of all migrant residents remained in the same local authority district;
- 56 per cent of all people moving within Great Britain went to an address less than 5 km from their old one;
- 75 per cent of those moving within England did not cross a county boundary.

Trends in migration

4.5 The volume and net pattern of migration within Britain varies a great deal over time. While the number of migrants recorded by the 1991 Census was not far different from that of 1980-81, other data sources indicate that these two one-year periods were rather unusual, coming as they both did in the midst of severe economic recessions. According to data derived from the NHS Central Register (NHSCR), inter-regional migration within England and Wales reached a low of 700,000 in 1981 and was almost as low as this in 1990, but had been 28 per cent above this in 1987.

4.6 The pattern of net migration in England is normally from north to south and from metropolitan to non-metropolitan areas, but the level of net flow varies over time, as can the direction of redistribution:

- in 1989 there was a net outflow of migrants from the southern half of England (defined as the South East, the South West, East Anglia and the East Midlands) to the rest of England and Wales;
- the metropolitan exodus is much more substantial and persistent, but in 1990-92 it was running at 80,000 a year, 25 per cent down on its average level in 1984-87 and nearly two-fifths below the level recorded by the NHSCR data for the mid 1970s.

4.7 It should be noted that migration trends are closely related to cycles in the national economy and housing market, which may explain some of the fluctuations to basic trends found.

Migration between types of districts, 1990-91

4.8 When the 366 local Government districts of England are classified into eleven types on the basis of their metropolitan/urban status and functional role (as undertaken by OPCS), the overall pattern of net migration revealed by the 1991 Census is clearly from more urban to more rural:

- the six metropolitan city categories all lost out as a result of this migration (Inner and Outer London, the Principal Cities and Other Districts of the six metropolitan counties, and the Large and Small Non-metropolitan Cities);
- the other five categories of district, including towns and rural settlements, were all net gainers of population at this time.

4.9 An urban status dimension is also evident within these two broad groupings of district types:

- Inner London was the largest loser in both absolute and relative terms, followed by the Principal Metropolitan Cities and Outer London;
- the Remoter Mainly Rural category was the largest gainer in both respects, followed by the Urban & Mixed Urban-Rural and the Resort, Port & Retirement categories.

4.10 These patterns of net migration are generally similar to the overall pattern of 1981-91 population change indicated by the official mid-year estimates, but the range of rates across the district types is wider for migration:

- Inner London's net migration losses to other parts of England were outweighed more than for most other district types by the effects of natural increase and immigration from overseas;
- the strong net migration gains for the Remoter Mainly Rural and Resort, Port & Retirement categories took place in the context of a surplus of deaths over births.

Migration for the inner and outer areas of twelve cities

4.11 Over the year leading up to the 1991 Census, the inner areas of twelve selected cities all experienced population losses as a result of migration exchanges with the rest of Britain. The rates of net loss were in excess of 6 per thousand people not only for London and the six Principal Metropolitan Cities (Birmingham, Leeds, Liverpool, Manchester, Newcastle upon Tyne and Sheffield) but also for the five other cities studied (Bristol, Coventry, Nottingham, Plymouth and Preston). The highest rates of loss were for Nottingham, Newcastle, Manchester and London.

4.12 All the outer areas of the twelve cities bar one (Preston) were also net losers of migrants, the highest rates of loss being for Coventry and Plymouth. In all twelve cases, the rate of net loss experienced by the outer areas was less than for their respective inner areas, with the widest percentage point differentials being for Nottingham and Preston and the narrowest for Birmingham and Coventry.

4.13 As a result, migration in 1990-91 was producing a relative shift of population from inner to outer areas of these cities, as the inner areas lost residents more rapidly than the outer. Moreover, within each city, there was a net flow of migrants from inner to outer areas in all twelve cases. The strongest loss was recorded by Nottingham at 13 per thousand of its inner area residents, followed by London and Newcastle. The lowest rates of loss were in Plymouth and Bristol. Note, however, that the precise rates for these inner and outer areas are very sensitive to where the boundaries of both the inner area and the whole city are drawn.

Inflows and outflows for Inner London and four other cities

4.14 Net migration figures, as discussed above, are merely the balance between inflows and outflows and are usually quite small by comparison. For instance, Inner London's net loss of 31,000 residents to elsewhere in Britain in 1990-91 was in fact the balance between an exodus of some 102,000 people and an inflow of just over 71,000. Just over 4 per cent of Inner London's residents moved out during that year, while newcomers comprised 2.8 per cent of the area's population on Census night. Similarly high levels of turnover were observed for three other case-study cities (Bristol, Manchester and Nottingham), but somewhat lower levels were found for a fourth (Middlesborough). Clearly, even places which are big net losers of migrants normally receive substantial numbers of newcomers each year.

4.15 Migration rates varied markedly between different types of people, as the case of Inner London shows. Young adults were much more mobile than average, followed by 30-44 year olds. Particularly marked at the other extreme are the low levels of migration into Inner London by the under 16 year olds and people aged 45 and over. People suffering from limiting long-term illness also moved less than average, along with people from Black and South Asian ethnic groups. In terms of net exchanges between Inner London and the rest of Britain, it was the 30-44 year olds and children whose numbers shrank most during this one-year period of migration. The net out-migration rate for whites was higher than average, while those for the Black and Other ethnic groups were well below average.

4.16 The experience of the other four case-study cities was similar to that of Inner London both in the variations between different types of people in the likelihood of migration in 1990-91, and in the picture of net migration loss for virtually all the population subgroups examined. The only significant differences were those of degree. For instance, Bristol, Manchester, Middlesbrough and Nottingham all registered lower rates of net out-migration than Inner London for 0-15 year olds and all ages of 30 and over, while only Bristol shared inner London's very low rate of net loss of 16-29 year olds, the latter being particularly high for Manchester. Bristol appears to share with Inner London the 'suburbanization' pattern of higher net losses of 30-44 year olds and children than of 16-29 year olds, but the other three cities register lower net losses of children than of 30-44 year olds. The rate of gross inflow of elderly people into the other four cities was significantly higher than for Inner London, and the gross outflow rate was lower for Bristol, Nottingham and notably Middlesbrough, suggesting that these smaller cities are less unattractive to the elderly than are the larger cities. In terms of ethnic group, the only significant departures from the general pattern are Middlesbrough's net gain of the 'Other' category and Nottingham's net gain of the Black group.

Impacts of 1990-91 migration on urban England

4.17 The most conspicuous impact of within-Britain migration, as recorded by the 1991 Census, is the reduction in the numbers of people living in urban England, and particularly the number living in its larger cities. This pattern is accompanied by net transfers of population from the inner to the outer areas of individual cities. The combined effect of natural increases and international migration only partially offsets these losses in most cases, the principal exception being Inner London.

4.18 With migration turnover being much greater than net migration, there is scope for considerable alteration in population composition. In terms of age structure, the main direct effect of migration exchanges has been to reduce the proportion of younger people in urban England, with general net losses of 30-44 year olds as well as substantial net losses of the under 16s by London and of 16-29 year olds by northern cities.

4.19 In relation to ethnic grouping, the overall impact of migration was to increase the proportion of non-whites in both urban England and elsewhere. On the one hand, Whites were more than proportionately represented in the net outflows from the metropolitan areas and other cities. On the other, the proportion of non-whites in the net in-migration flows to other parts of England was higher than in their existing populations.

4.20 There was also considerable selectivity in terms of the labour market position of migrants and the housing tenure of wholly-moving households, but the net impacts are impossible to calculate because these characteristics are prone to change at the same time as a migration and the Census does not provide any information on people's circumstances before they move. What is clear, however, is that households moving into most parts of urban England during 1990-91 contained a smaller proportion of owner occupiers than was the case for households migrating away from them. Similarly, the main urban areas generally lost more people who were employed or retired at the time of the census than they received from elsewhere, with a much more mixed picture for the unemployed and students.

4.21 In general terms, therefore, migration exchanges with the rest of Britain were serving to reduce the numerical importance of urban England compared to smaller towns and more rural areas. Moreover, as far as can be gauged from the limited socio-demographic data provided by the Special Migration Statistics, these population movements also appear to have weakened urban England qualitatively, given the generally higher than average rates of net loss for younger people, the healthy and Whites and the very substantial participation of owner occupiers and employed persons in migration away from cities. The fact that these patterns are evident even during a period of severe economic recession and housing market difficulty starkly underlines the deep-seated nature of the challenges facing England's urban policy makers.

Introduction

4.22 This chapter's purpose is to examine patterns of migration affecting urban areas as indicated by the 1991 Census Special Migration Statistics (SMS). It documents the impact of migration within Great Britain in the twelve months leading up to the Census on the numbers of persons and households living in various types of areas in England. A key question which it addresses is the extent to which this movement in and out of the larger cities and their inner areas is a selective process, using the information available in the SMS on migrants' characteristics on census night.

4.23 The chapter begins by sketching out the context of the study, notably with reference to the literature on the role of migration in affecting the size and composition of the population of urban areas and to the nature of the recent demographic, economic and social changes occurring in English cities. It then outlines the approach used in the present study, indicating the nature, strengths and limitations of the 1991 Census SMS data.

4.24 The results of the analysis are presented in three sections. First, the net changes produced by within-Britain migration are described for a classification of local authority districts. Second, the patterns of in-migration, out-migration and net migration are examined for a sample of five cities selected by the Department to represent a variety of situations ranging from the inner part of England's largest city to a free-standing provincial city. Both these sections make use of the information available in the district-level SMS Set 2 data on sex, age, ethnic group, illness, employment status and housing tenure. The last substantive section explores the patterns of residential movement affecting twelve inner and outer urban areas, using the ward-level SMS Set 1 data on sex and broad age group of persons.

Context

The importance of studying migration

4.25 The importance of studying migration is described by Champion and Fielding (1992) and Champion (1993). Firstly, migration is the major component of overall population change in the regional and urban systems of all Developed World countries like England. Indeed, it has become relatively more important as birth rates have fallen and so rates of natural increase have become lower. As shown in Table 4.1, net inflows from the rest of the British Isles and overseas contributed almost two-fifths of England's population growth between 1981 and 1991. It is also clear that migration accounted for more of the regional variation in population change rates over this decade than did natural change. Regional rates for the latter ranged from -0.1 per cent to 2.7 per cent, a percentage point difference of 2.8, whereas the range for migration was 10.6 percentage points between the highest (8.3) and lowest (-2.3). Other studies show that the range of net migration rates across the urban-rural dimension is nearly twice as large as this (see, for instance, Champion, 1994 and forthcoming).

4.26 Secondly, it is important to note that migration can have a markedly greater impact on the population profiles of places than may be suggested by its role in overall population change. One reason is that some types of people are much more likely to migrate than others. Another is that net migration changes are normally relatively small compared with the total inflows and outflows of migrants for any particular area; in the jargon of demography, migration is normally very 'inefficient'

in redistributing population in modern societies with good communications and relatively similar living conditions across national space. Even if there is zero net migration to or from an area, the inflows and outflows can be of great significance for population composition if the types of people and households moving into an area are different in their complexion from those moving out of it. Examples of the selectivity of migration, and of the contrasts in the characteristics of in- and out-migrants, can be found in Owen and Green (1992) and Stillwell *et al* (1992).

4.27 A third consideration is that migration is a very volatile process that can vary enormously in volume and net pattern over relatively short time periods. Whereas natural increase has been known to rise and fall substantially, its trends are fairly gradual and are normally nation-wide in incidence, and so may not significantly affect regional and local differentials over the period of a decade or two. By contrast, migration has shown itself capable of undergoing major shifts within a matter of two or three years, as shown below.

Migration in England, 1990-91

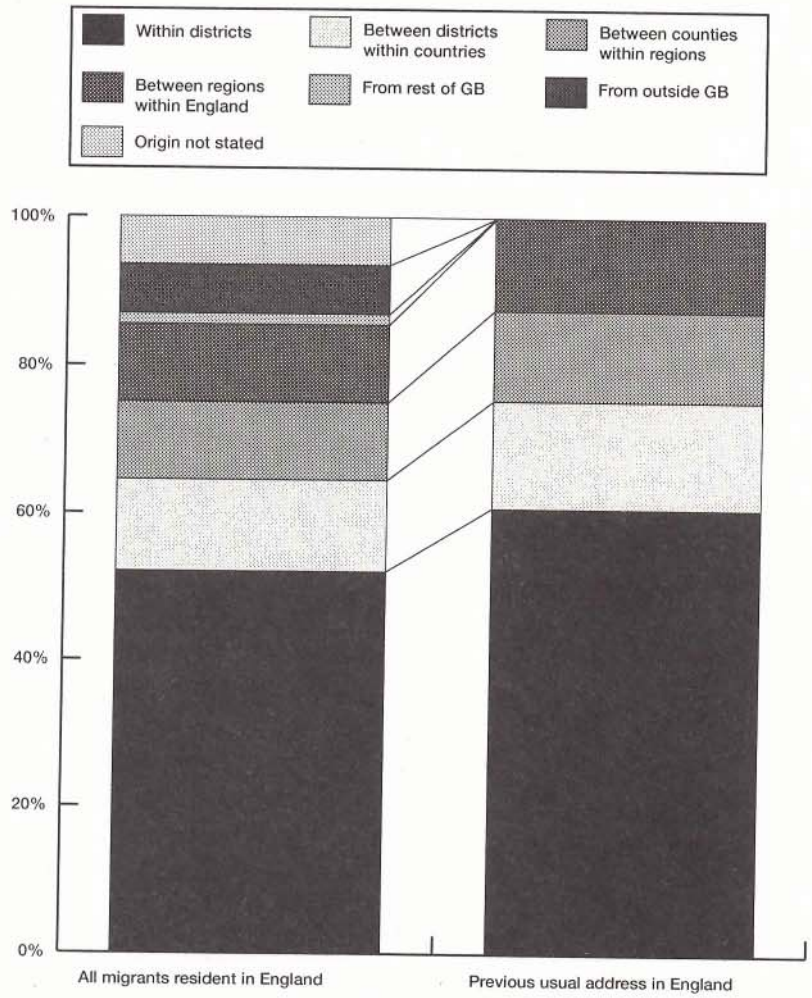
4.28 On average, roughly one in ten people in England change address each year. The 1991 Census counted almost 4.6 million 'migrant residents', people whose usual address was in England on Census night but was different from their address a year before in April 1990. This figure represents 9.8 per cent of all residents in England enumerated by the Census.

4.29 This level of residential mobility suggests great potential for population redistribution between places, but in fact most of the movements took places over relatively short distances. Over half (52 per cent) of all migrant residents remained in the same local authority district, 56 per cent of all people moving within Great Britain went to an address less than 5 km from their old one, and 75 per cent of those moving within England did not cross a county boundary (Figure 4.1).

4.30 The volume and net pattern of migration within Britain does, however, alter markedly over time. While the number of migrants recorded by the 1991 Census was not far different from that of 1980-81, other data sources indicate that these two one-year periods were rather unusual, coming as they both did in the midst of severe economic recessions. According to data derived from the National Health Service Central Register (NHSCR), inter-regional migration within England and Wales reached a low of 700,000 in 1981 and was almost as low as this in 1990, but it had been 28 per cent above this in 1987 (Figure 4.2).

4.31 The regional pattern of net migration is normally from north to south, but the level of net flow varies over time and so can even the direction of redistribution (Stillwell *et al*, 1992, pp. 30-33). During the first half of the 1980s the southern half of England (defined as the South East, the South West, East Anglia and the East Midlands) gained an average of 40-50,000 people a year through its migration exchange with the rest of England and Wales, but this balance contracted markedly over the next two or three years. The year 1989 saw a net outflow of migrants from south to north and, though the southward drift has resumed since then, this was still relatively weak by the time of the 1991 census (Figure 4.3).

Figure 4.1 Migrant residents in England by type of move

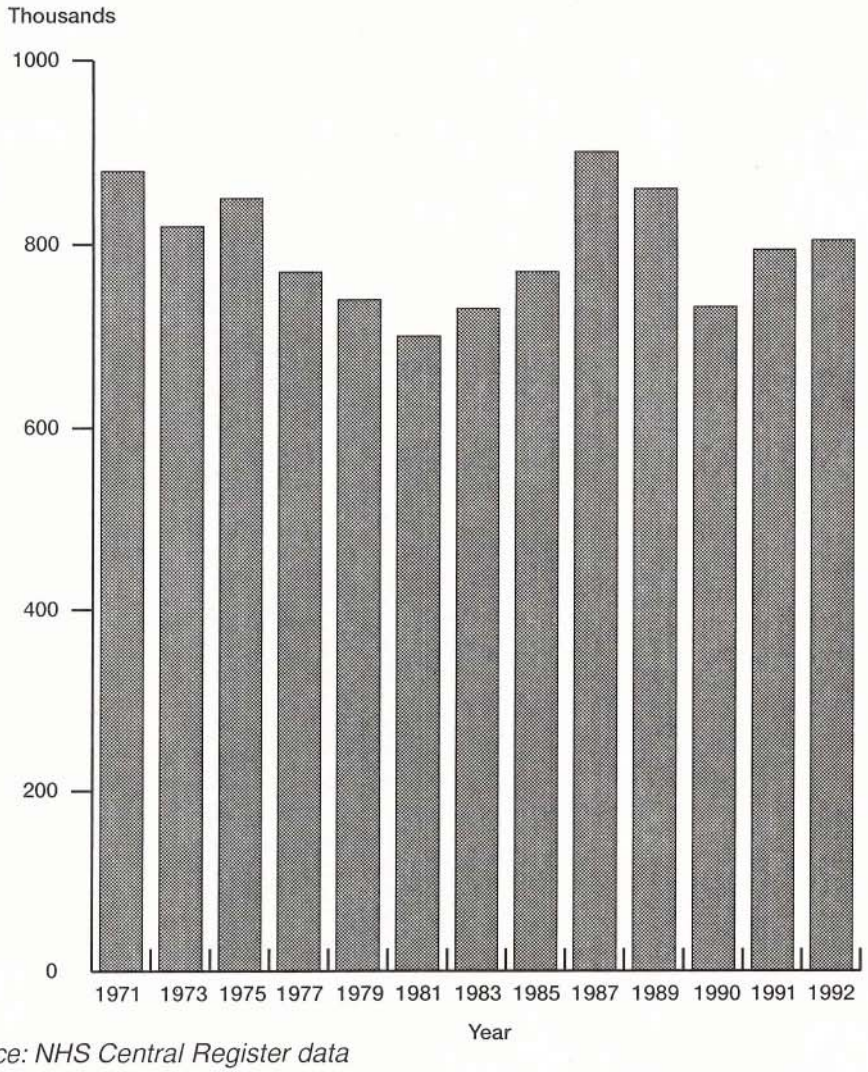


Source: 1991 Census

4.32 In terms of urban trends, it is well known that internal migration has been the primary cause of the population decline experienced by England's larger cities since the 1960s, though the nation-wide decline in birth rates between the mid 1960s and the late 1970s was also a significant contributory factor in undermining the demographic dynamism of cities at that time. It is even more the case that migration has been the controlling influence upon the year-to-year trends in population change rate in metropolitan areas. In particular, net out-migration was running at a historically high rate for London and most other large cities in the early 1970s, but this exodus subsequently slowed down amid talk of urban revival and gentrification (Figure 4.4). During the 1980s the rate of migration losses from metropolitan to non-metropolitan areas rose again, reaching a peak in 1987-88 according to the record provided by the NHSCR but fell back again by the time of the 1991 Census (Champion, 1994). International migration exchanges also fluctuated markedly during the 1980s, peaking in the middle of the decade and having an especially significant impact on London (Champion and Congdon, 1992; Champion, forthcoming).

4.33 It is against this background that the results of the present study should be interpreted.

Figure 4.2 Number of moves between regions of England and Wales



Source: NHS Central Register data

Approach

4.34 The approach adopted for this examination of migration patterns in the context of urban trends in England was dictated by two considerations. The first concerns the aims of the research commissioned by the Department and the need to be able to relate the results of the migration analysis to the patterns of urban change described in the other reports in this series, notably that on changing urban structures. The second revolves around the nature of the 1991 census Special Migration Statistics, which allows certain types of analysis to be performed but not others.

Geographical frameworks

4.35 The analyses reported here adopt two separate geographical frameworks. The first is a typology of local authority districts which is based on the urban status and functional role of places. This typology comprises a slightly modified version of the district classification used by OPCS for the presentation of population statistics. (The non-metropolitan cities are split into Large and Small categories and Rushmoor in Hampshire is place in the Urban & Mixed Urban-Rural rather than Remoter Mainly Rural category.) Altogether, eleven district types are recognised, ranging from the Inner London Boroughs at one extreme of England's

settlement hierarchy to the category of Remoter Mainly Rural Districts at the other end of the scale. The eleven types are shown in Table 4.2 and the constituent districts of each type are listed in Appendix A.

Table 4.2 The typology of local authority districts

District type
Greater London
Inner London Boroughs
Outer London Boroughs
Metropolitan Districts
Principal Metropolitan Cities
Other Metropolitan Districts
Non-Metropolitan Districts
Large Non-metropolitan Cities
Small Non-metropolitan Cities
Industrial Districts
New Towns
Resort, Port & Retirement Districts
Urban & Mixed Urban-Rural Districts
Remoter Mainly Rural Districts

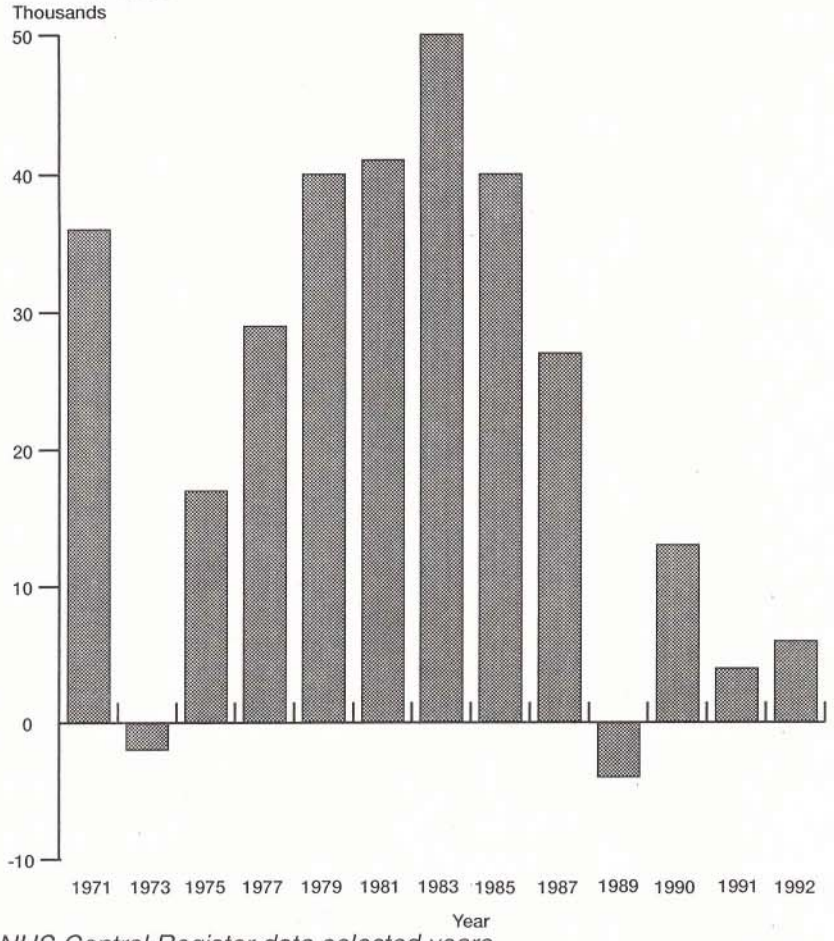
4.36 The other geographical framework involves focusing in on the inner areas of twelve cities selected in consultation with the Department of the Environment. They comprise London and all six principal cities of the metropolitan counties (Birmingham, Leeds, Liverpool, Manchester, Newcastle upon Tyne and Sheffield), together with five representatives drawn from the Other Metropolitan Districts and Large and Small Non-metropolitan City categories of the district typology (namely Bristol, Coventry, Nottingham, Plymouth and Preston). As regards the definition of London's inner area, the conventional Borough-level split into Inner and Outer London is used, as in the district typology of Table 4.2. For the other eleven cities, each of which is a single local authority district, the inner areas have been based on the 1981 wards as defined for Urban Programme purposes during that decade. Details are provided in Appendix B.

4.37 In addition, the present study has a third element to it - an examination of the migration flows of five separate cities. These have been chosen in consultation with the Department of the Environment to represent a variety of 'inner city' situations across England that could be represented reasonably well by district-level data. These five places are Inner London, Bristol, Manchester, Middlesbrough and Nottingham. This step has been taken because the range of data available in the SMS for districts is wider than for the wards used to define the inner areas for most cities.

The Special Migration Statistics (SMS)

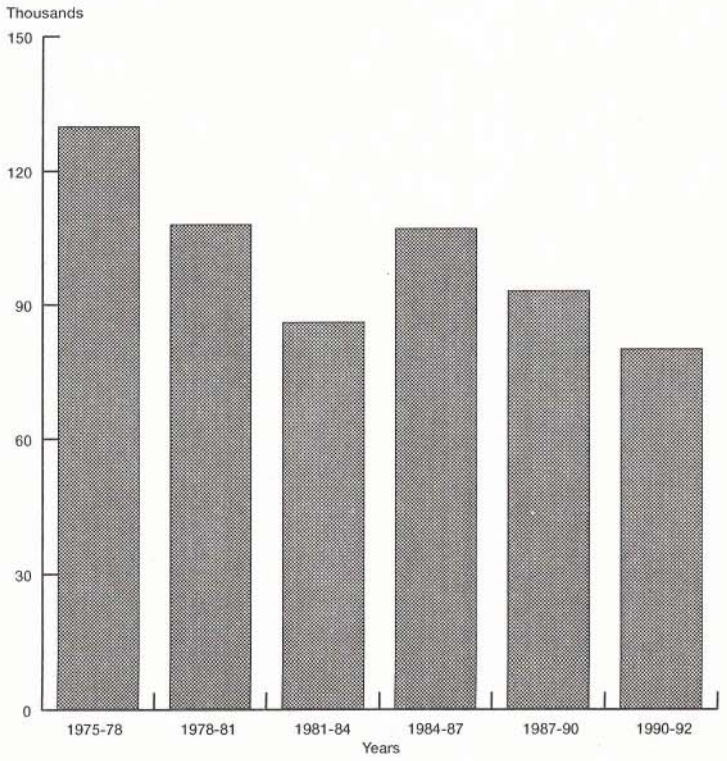
4.38 This study is based almost entirely on the Special Migration Statistics (SMS) of the 1991 census. The supreme advantage of the SMS over the information on migrant residents available from the standard census output (County Reports, Local Base Statistics and Small Area Statistics) is that they provide details of place of usual residents twelve months before the census and thus make it possible to measure

Figure 4.3 Net migration to south from the rest of England and Wales



Source: NHS Central Register data selected years

Figure 4.4 Net migration from metropolitan England to the rest of UK



Source: Calculated from NHS Central Register data by J. Stillwell

out-migration from a place and, by reference to comparable in-migration data, to calculate the net migration balance between any place and the rest of Great Britain.

4.39 At the same time, it is important to be aware that the SMS suffer from certain limitations that affect their usefulness in the present context. Besides the usual census problems relating to underenumeration and data quality, the most important is the absence of information on people leaving for overseas and on migrants' characteristics and circumstances before their move. Restrictions are also imposed by the very limited range of variables and crosstabulations contained in the SMS and by the extensive data suppression designed to preserve confidentiality.

4.40 Further details of the content and structure of the SMS can be found in Appendix F, along with a fuller account of the limitations imposed by the nature of the dataset. Attention is drawn to their implications, where appropriate, in the main text.

Net migration for types of districts

4.41 Table 4.3 and Figure 4.5 document the overall net impact of within-Britain migration on England and its eleven district types for the 1990-91 period. England as a whole was a net loser of people and households to the rest of Great Britain during the year leading up to the census in April 1991, according to the SMS. Within England a clear distinction can be drawn between the six metropolitan and city categories, which all lost out as a result of this migration, and the five categories of non-metropolitan districts without cities, which were all net gainers from migration at this time.

4.42 Inner London is the largest loser from this process in both absolute and relative terms. Its 31,000 net loss of people to the rest of Britain in 1990-91 represented 1.2 per cent of its 1991 population. Similarly, 12,200 more households left than arrived - the equivalent of a 1.1 per cent reduction in the number of households in London. In terms of persons, both Outer London and the Principal Metropolitan Cities lost over 20,000 (representing a rather higher rate of loss for the latter) but in terms of households it was Outer London that was clearly the greater loser of these two district types. Next come both the Large and Small Non-metropolitan Cities, with relatively higher rates of net loss compared to the Other Metropolitan Districts.

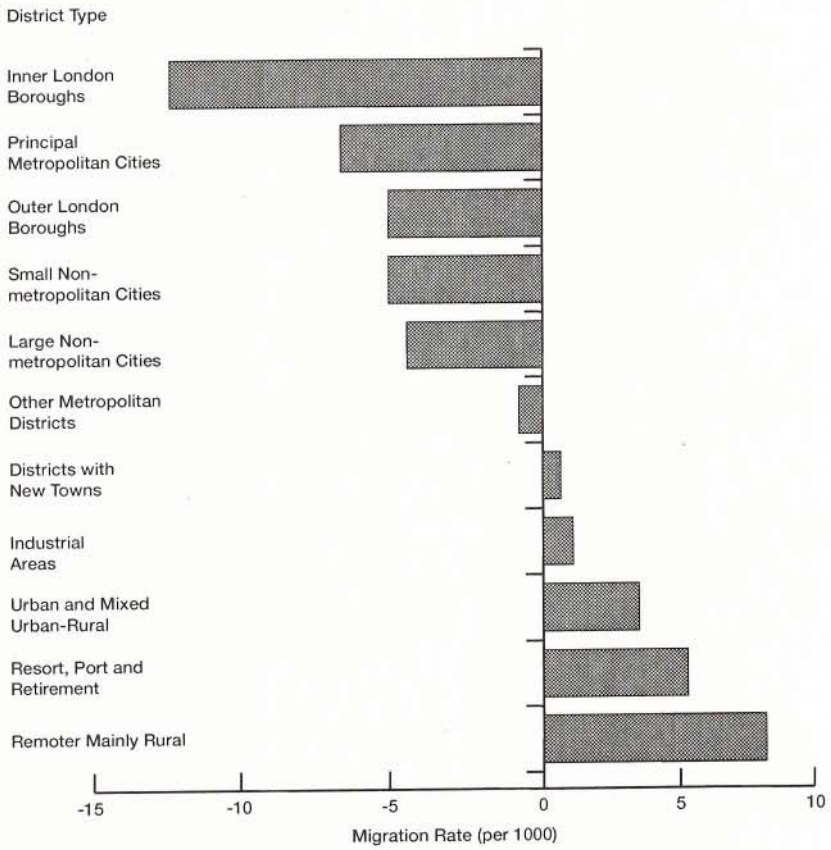
4.43 Between them, the other five categories gained around 90,000 people as a result of migration exchanges with the other English district categories and the rest of Great Britain. The principal gainer in both absolute and relative terms was the Remoter Mainly Rural category, up by more than 35,000 people and 12,500 households over the year. In absolute terms, the second largest gainer was the Urban & Mixed Urban-Rural category, but in terms of percentage contribution to growth the Resort, Port & Retirement category came in second place on all three measures shown here. Meanwhile, the Industrial and New Towns categories saw comparatively modest gains in population and household numbers as a result of this one year of movement (Table 4.5).

Table 4.3 Changes in numbers of people and households arising from within-Britain migration, 1990-91, by district type

District type	Persons 000s	Persons %	H'hlds 000s	H'hlds %	Persons in h'hlds 000s	Persons in h'hlds %	1981-91 population change %
Inner London Boroughs	-31009	-1.24	-12239	-1.12	-31663	-1.29	3.0
Outer London Boroughs	-21159	-0.51	-11876	-0.71	-26075	-0.63	0.2
Principal Metropolitan Cities	-21945	-0.67	-4448	-0.33	-12910	-0.40	-2.8
Other Metropolitan Districts	-6049	-0.08	-1420	-0.05	-3559	-0.05	-1.1
Large Non-Metropolitan Cities	-10015	-0.45	-1919	-0.21	-8756	-0.40	-0.1
Small Non-Metropolitan Cities	-8053	-0.51	-723	-0.11	-4288	-0.28	2.7
Districts with Industrial Areas	5458	0.10	1969	0.09	3422	0.06	2.4
Districts with New Towns	1313	0.06	366	0.04	491	0.02	8.9
Resort, Port & Retirement	16253	0.48	6615	0.47	14990	0.46	7.6
Urban & Mixed Urban Rural	31355	0.32	6916	0.18	24854	0.26	5.4
Remoter Mainly Rural	35538	0.74	12500	0.65	33563	0.71	8.4
England	-8313	-0.02	-4259	-0.02	-9931	-0.02	3.0

Note: 'H'hlds' or 'Households' refers to 'wholly-moving households'. The data on 1981-91 population change are calculated from mid-year estimates. '%' refers to percentage of 1991 counts, except in case of 1981-91 change where it is percentage of the 1981 population.

Figure 4.5 Net within-Britain migration, 1990-91, by type of district in England



4.44 In sum, despite this period of observation being characterised by a much lower volume of residential mobility than the main part of the previous ten years, the SMS reveal that migration within Britain at this time was continuing to produce the clear urban-to-rural shift in population that was described in Report 1 in this series (on Changing Urban Structures) for the full decade of the 1980s. In fact, this geographical dimension emerges more strongly from these data on net internal migration than was shown by analysing overall population change. Reference to the patterns of the latter, shown in the last column of Table 4.5, reveals clear differences at the two extremes of the settlement hierarchy. Inner London's population appears much more dynamic in terms of overall population change, primarily because its heavy losses from net migration exchanges were offset by strong natural increase and large gains through international migration over the decade. The net internal migration balance for the Remoter Mainly Rural category is stronger than its overall population growth rate performance, especially in relation to the New Towns, because of the strong natural increase in the latter and the well-established pattern of natural decline in more rural parts of Britain.

4.45 The age effects of migration are shown in Table 4.2. Generally, for each district type the direction of net flow for all the five broad age groups shown here is the same as for the direction of overall flow, but there are some exceptions. This is even the case for England as a whole, where the general pattern of net migration loss is broken by the net inflow of 16-29 year olds, no doubt connected to moves to first jobs. This is perhaps also affected by movements of students to places of higher education (even though students were requested to give parental rather than term-time address as their usual residence on Census Night). In this connection, it is noteworthy that Outer London has a net gain of this age group, and that Inner London's net loss of this age group is at a much lower rate than for the other four age groups. It would appear that the Principal Metropolitan Cities and Small Non-metropolitan Cities do not share this attractiveness, though this conclusion must be tempered by the possible distortion caused by high levels of census underenumeration (for instance, it is estimated that one in five of all men aged 20-29 were missed in the Principal Metropolitan Cities).

4.46 At the other extreme of the settlement hierarchy, the Remoter Mainly Rural category has a much smaller gain of 16-29 year olds than for the others, while the Resort, Port & Retirement category recorded a net loss of this group. The substantial gains of 16-29 year olds made by the Industrial Districts, New Towns and Urban & Mixed Urban-Rural category indicate strong demographic dynamism in these areas. This is reinforced by the low levels of net in-migration by older people to these three district types, a feature that is particularly impressive for the Urban & Mixed Urban-Rural category where the rates for the two 45+ age groups are much below those of the other three age groups. This partly reflects the high cost of living in the outer metropolitan areas which form a significant proportion of this type of district (Table 4.4).

4.47 Table 4.4 also shows the rates of net migratory redistribution according to limiting long-term illness in the population. If it is assumed that 'long-term illness' can be interpreted literally and that those affected had already been ill a year before the census, then the figures show the change in the size of the long-term ill population produced by within-Britain migration. For each of the eleven district types, the direction of net movement of the ill is the same as for those who are not suffering

from such illness, so in no case is one substituting for the other. It is basically a matter of degree with, in general, a more substantial redistribution of those not suffering from limiting long-term illness. Thus, over this one year at least, London recorded a lower net loss of the ill than of those not ill, leading to an increase in the proportion of ill in its population, all other things being equal. So too did all the other district types experiencing overall net migratory loss, apart from Outer London which lost more of its ill population. Amongst the district types which gained migrants overall, the Urban & Mixed Urban-Rural category exhibits considerable selectivity in favour of those not affected by limiting long-term illness, as also to a lesser extent do the Industrial Districts. For the other gaining areas, the composition of the net gain was very similar to that of their total populations.

Table 4.4 Percentage change in the sizes of age groups and illness categories arising from within-Britain migration, 1990- 91, by district type

District type	Age					Illness	
	1-15	16-29	30-44	45-PA	PA +	Ill	Not ill
Inner London Boroughs	-1.69	-0.25	-2.32	-0.86	-1.20	-1.12	-1.26
Outer London Boroughs	-0.57	0.22	-0.83	-0.69	-0.76	-0.72	-0.48
Principal Metropolitan Cities	-0.43	-1.24	-0.66	-0.39	-0.58	-0.54	-0.70
Other Metropolitan Districts	-0.07	-0.10	-0.06	-0.12	-0.05	-0.01	-0.09
Large Non-Metropolitan Cities	-0.55	-0.32	-0.73	-0.30	-0.32	-0.24	-0.48
Small Non-Metropolitan Cities	-0.33	-1.07	-0.49	-0.31	-0.24	-0.3	-0.54
Districts with Industrial Areas	0.00	0.38	0.06	0.01	0.03	0.04	0.11
Districts with New Towns	-0.04	0.44	-0.08	-0.10	0.08	0.06	0.06
Resort, Port & Retirement	0.57	-0.02	0.65	0.71	0.47	0.48	0.48
Urban & Mixed Urban-Rural	0.38	0.44	0.58	-0.04	0.21	0.21	0.34
Remoter Mainly Rural	0.84	0.26	1.03	0.86	0.64	0.75	0.73
England	-0.02	0.02	-0.04	-0.03	-0.02	-0.03	-0.02

Note: PA refers to pensionable age (65 for men, 60 for women). Illness refers to limiting long-term illness as defined by the 1991 census. Percentages are calculated with respect to the 1991 population.

4.48 As with illness, so with ethnicity; the effects of migration are basically those of degree rather than any clear 'trade' in types of people between places. As outlined in Appendix F, the SMS allow an ethnic breakdown into just four groups; White, Black, South Asian, and Other (which includes Chinese). Table 4.5 shows that the direction of net flow for each of the three minority groups is generally the same as for the majority white group. Thus, all five of the overall net gaining district types recorded net increases of all four ethnic groups, and the majority of the six net losers saw losses of all four groups. Outer London was the major exception, with net gains for all three minority groups (totalling just over 4000) alongside a net loss of over 25,000 whites. The only other exception was the small net gain of the 'Other' group by the Other Metropolitan Districts, contrasting with their net losses of Whites, Blacks and South Asians.

4.49 However, two important further generalisations can be made. For the district types which are net losers of migrants overall, the reduction of the white population

through migration to the rest of Britain was proceeding at a faster rate than the reduction in the population of the three minority groups. The only exceptions were faster than average rates of loss of South Asians from the Large Non-metropolitan Cities and of the 'Other' group from the Small Non-metropolitan Cities. For the five gaining district types, the effect is almost entirely the reverse of this, with migration leading to a faster percentage growth of the three minority populations than for the Whites. This is due very largely to the very limited presence of the former groups, i.e. growth taking place on very small bases. The exceptions here are the slower than average growth of the Black and 'Other' groups in the Remoter Mainly Rural districts and of the 'Other' group in the Resort, Port & Retirement category (Table 4.5).

Table 4.5 Changes in the sizes of ethnic groupings arising from within-Britain migration, 1990-91, by district type

District type	White No.	White %	Black No.	Black %	South Asian No.	South Asian %	Other No.	Other %	All groups No.	All groups %
Inner London Boroughs	-25617	-1.39	-2242	-0.68	-1913	-1.12	-1237	-0.96	31009	-1.24
Outer London Borough	-25303	-0.74	2021	1.04	1181	0.35	942	0.61	-21159	-0.51
Principal Metropolitan Cities	-20985	-0.73	-91	-0.09	-639	-0.34	-230	-0.43	-21945	-0.67
Other Metropolitan Districts	-6028	-0.09	-54	-0.08	-44	-0.02	77	0.16	-6049	-0.08
Large Non-metropolitan Cities	-9295	-0.46	-75	-0.20	-564	-0.53	-81	-0.33	-10015	-0.45
Small Non-metropolitan Cities	-7595	-0.51	-83	-0.48	-131	-0.41	-244	-1.30	-8053	-0.51
Districts with Industrial Areas	4906	0.09	94	0.30	303	0.26	155	0.53	5458	0.10
Districts with New Towns	829	0.04	99	0.60	333	0.99	52	0.26	1313	0.06
Resort, Port & Retirement	15940	0.48	100	1.39	173	1.70	40	0.22	16253	0.48
Urban & Mixed Urban Rural	29262	0.31	324	0.67	1040	0.99	729	0.96	31355	0.32
Remoter Mainly Rural Districts	35297	0.74	25	0.27	151	2.28	65	0.42	35538	0.74
England	-8589	-0.02	118	0.01	-110	-0.01	268	0.05	-8313	-0.02

Note: '%' refers to percentage of 1991 counts.

4.50 Apart from these few exceptions, the overall effect of this one year of net migration is to produce general increases in the proportions of the population made up by three ethnic minority groups. This conclusion, of course, takes no account of other factors leading to changes in the size of the ethnic groups, notably natural increase and international migration balance. For further details, see chapter 6, on Ethnic Minorities.

4.51 The two other characteristics covered by this SMS-based report - housing tenure and economic position - need much greater care in interpretation, because

there is no guarantee that migrant households and persons were the same in these respects before the move as they were afterwards (i.e. when they were enumerated by the census). Indeed, first-time buyers and people moving into jobs from education or unemployment form a not insignificant proportion of all movers. For this reason it is not appropriate to relate net migration to the 1991 base in percentage form.

4.52 The information on housing tenure is presented in Table 4.6. It can be seen that, according to the SMS, during the year before the 1991 census 10,220 more households left Inner London for owner-occupied accommodation elsewhere than entered owner-occupation there from somewhere else in Great Britain. Some 1400 more households moved out of Inner London into 'other rented' accommodation (i.e. rented from private landlord or housing association) than moved into other rented housing in this area from the rest of the country. Lastly, some 600 more households moved out of Inner London into public-sector housing (defined as rented from local authorities, new towns and Scottish Homes) than moved into Inner London's local authority stock over this period. The overall picture for Outer London is very similar in numerical terms.

4.53 Looking at the other nine district types in terms of owner occupation (Table 4.6), it is found that there are four others where more households were moving away into this tenure than were moving into these areas from elsewhere in Britain to live as owner occupiers. These are the Principal Metropolitan Cities, the Other Metropolitan Districts and both the Large and Small Non-metropolitan Cities, in effect, all the remaining district types which recorded an overall net loss of households. At the other extreme, the Remoter Mainly Rural category saw nearly 12,000 more households arriving in its owner-occupied sector than were leaving these districts to move into owner occupation elsewhere in Britain. In a similar situation are the Urban & Mixed Urban-Rural and the Resort, Port & Retirement categories, along with the Industrial districts and New Towns, in that order in numerical terms.

4.54 For the other two housing tenures shown in Table 4.6, there is no such clear division between the six metropolitan/city district types and the rest. As regards the public sector, there were many more households leaving the Resort, Port & Retirement districts for public-sector accommodation elsewhere than were arriving from other parts of Britain and taking up local authority housing there. This is also the case for the Urban & Mixed Urban-Rural and the Remoter Mainly Rural categories to a lesser extent, and so also to a much more limited degree for the Industrial Districts and Small Non-metropolitan Cities. For other renting, the district types with the greater number of households moving away, apart from London, were the Other Metropolitan Districts, Industrial and New Towns.

Table 4.6 Net within-Britain migration of households, 1990-91, by district type and housing tenure in 1991

District type	Net migration by 1991 tenure				% tenure of all households		
	Owner Occupied	Public Rented	Other Rented	All H'hlds	Owner Occupied	Public Rented	Other Rented
Inner London Boroughs	-10220	-612	-1407	-12239	38.6	33.8	27.7
Outer London Boroughs	-10248	-524	-1104	-11876	69.5	16.5	14.0
Principal Metropolitan Cities	-5374	261	665	-4448	55.4	30.2	14.4
Other Metropolitan Districts	-1304	1075	-1191	-1420	65.8	25.2	9.0
Large Non-Metropolitan Cities	-3479	2	1558	-1919	60.8	25.1	14.1
Small Non-Metropolitan Cities	-1513	-17	807	-723	63.2	21.6	10.2
Districts with Industrial Areas	3071	-97	-1005	1969	71.9	18.9	9.2
Districts with New Towns	655	671	-960	366	65.7	26.4	7.9
Resort, Port & Retirement	5901	-719	1433	6615	76.8	10.1	13.1
Urban & Mixed Urban-Rural	7256	-379	39	6916	75.4	13.5	11.1
Remoter Mainly Rural	11758	-345	1087	12500	72.5	14.4	13.1
England	-3497	-684	-78	-4259	67.6	19.9	12.5
Wales	1756	-122	-42	1592	70.8	19.1	10.1
Scotland	1741	806	120	2667	52.1	38.0	9.9
Great Britain	0	0	0	0	66.3	21.5	12.2

Note: Net migration is calculated with respect to the tenure of households in 1991. The last three columns provide a tenure breakdown of all households recorded by the 1991 census. 'Public-rented' refers to renting from local authority, New Town or Scottish Homes, 'other rented' includes housing associations.

4.55 These patterns are primarily a function of two factors. The first is the overall net movement of households between areas, shown in the fourth data column of Table 4.6. The second relates to the composition of the housing stock in each type of district, compared to the other areas with which migrant households are exchanged, as shown in the last three columns of the Table. For instance, the chances of moving into owner occupation are much smaller for households moving into Inner London than they are for households moving away from it, given the sector's below-average share of Inner London's housing stock. Similarly, the chances of moving into local authority housing in the Resort, Port & Retirement category are much lower than for those moving away from this type of area, as they are too for the Urban & Mixed Urban-Rural and Remoter Mainly Rural categories. At the margins, the patterns are also affected by the exchanges between England and the rest of Great Britain, with Scotland receiving more households in all three sectors

than it sent into these sectors in England, and with Wales in this situation only for owner-occupation (Table 4.6).

4.56 The patterns for economic position, using the six mutually exclusive categories of people aged 16 and over reported in the SMS, are shown in Table 4.7. Overall, it can be seen that, in terms of people's position at the time of the census, England gained 2845 employed persons from the rest of Great Britain but was a net loser in terms of the self-employed, the unemployed, the retired, economically inactive students and other people not in the labour force. Within England, a line can be drawn in terms of net migration of all people aged 16 and over during this pre-census year between the losses sustained by the six metropolitan/city district types and the net gains of the other five. This pattern applies exactly to two of the six economic positions identified here, namely the employed and the retired, and is also found for the self-employed and other inactive groups (except for the New Towns).

4.57 A much more varied pattern, however, is found for those who were unemployed at the time of the census and those who were students not in the labour force then (Table 4.7). Contrary to the overall trend, both the Other Metropolitan Districts and the Large Non-metropolitan Cities received during the pre-census year more migrants who were unemployed at the time of the census than they dispatched to other parts of Britain. These two district types, together with Outer London, also took in more migrants who were students at the time of the census than they lost. Meanwhile, the Urban & Mixed Urban-Rural category and, to a much lesser extent, the New Towns lost more migrants who were unemployed wherever they ended up at time of the census than they gained from other parts of Britain, and these two district types together with the Resort, Port & Retirement category also contained fewer in-migrants who were students on census night than they had lost to other places over the previous year.

4.58 As with housing tenure, it is not possible to use the data in Table 4.7 to gauge the impact of this one year of migration on the population profiles of the district types, because of the absence of information on the migrants' economic position before their move. For instance, it is likely that some of the migrants who were in retirement on census night had been in employment before their move, though it is also likely that many of these would have retired from their jobs even if they had not moved to another area. More problematic still, it must be presumed that some of those who moved between district types and were employed at the time of the census had been unemployed before their move and that probably most of these might not have obtained a job if they had remained where they had been.

Table 4.7 Net within-Britain migration of persons aged 16 and over, 1990-91, by district type and economic position of migrants in 1991

District type	Self-employed	Employed	Un-employed	Retired	Student	Other inactive	Total persons 16+
Inner London Boroughs	-2897	-7328	-2645	-4445	-222	-5343	-22880
Outer London Boroughs	-2041	-2630	-1903	-5752	130	-4285	-16481
Principal Metropolitan Cities	-1296	-12324	-161	-3240	-106	-1899	-19026
Other Metropolitan Districts	-493	-4774	1588	-802	260	-691	-4912
Large Non-Metropolitan Cities	-901	-5636	547	-1309	815	-969	-7453
Small Non-Metropolitan Cities	-769	-3815	-733	-497	-310	-928	-7052
Districts with Industrial Areas	383	3533	1193	240	48	104	5501
Districts with New Towns	-267	2255	-113	97	-229	-229	1514
Resort, Port & Retirement	1494	2370	1669	4579	-312	3083	12883
Urban & Mixed Urban Rural	1378	22703	-3452	2017	-738	2035	23943
Remoter Mainly Rural	3815	8491	1642	7096	145	6681	27870
England	-1594	2845	-2368	-2016	-519	-2441	-6093

Note: Net migration is calculated with respect to economic position in 1991. 'Employed' refers to employees in employment; 'student' refers to economically inactive students, i.e. students who are not part of the labour force.

4.59 If, however, it could be assumed that the majority of people did not change their economic position as a result of their move or at least that their position would have changed in the same way whether or not they moved, then it could be concluded that this one year of migration produced a significant redistribution of the employed, self-employed, retired and other inactive (besides students) away from the six metropolitan/city district types, most notably from London and the Principal Metropolitan Cities, to the rest of England, and particularly to the Remoter Mainly Rural, the Urban & Mixed Urban-Rural, and the Resort, Port & Retirement categories. The non-metropolitan/city categories, in aggregate, registered only a relatively small gain in unemployed persons, and experienced a net loss of people who were students at the time of the census, these going in net terms both to the more urban district types of England and to Wales or Scotland.

Patterns of migration for five cities

4.60 This section examines patterns of migration between five English urban areas and the rest of Great Britain. It aims to go into more detail about migration flows in two ways; first, by exploring the gross inflows and outflows that lie behind the net balances described in the previous section and, second, by focusing in on a small selection of individual cities. The SMS Set 2 data are again used, so that the full range of SMS variables can be studied. This restricts the analysis to local authority

districts, or groups of these, with the examination of inner/outer area contrasts within cities being left to the next section.

4.61 The five urban areas selected by the Department of the Environment for this stage of the study represent a variety of geographical situations within the context of urban England. Inner London, as defined in the previous section in terms of the thirteen Inner London Boroughs and the City of London, forms England's most important inner urban area and constitutes the most significant focus of migration flows in Britain. Manchester is one of the six Principal Metropolitan Cities and forms the heart of one of England's two largest conurbations outside London. Bristol, Nottingham and Middlesbrough are used as examples of relatively free-standing cities in southern, midland and northern England respectively. Because of its size and importance, the case of Inner London is taken first and described in some detail, and is then compared with the patterns for the other four cities.

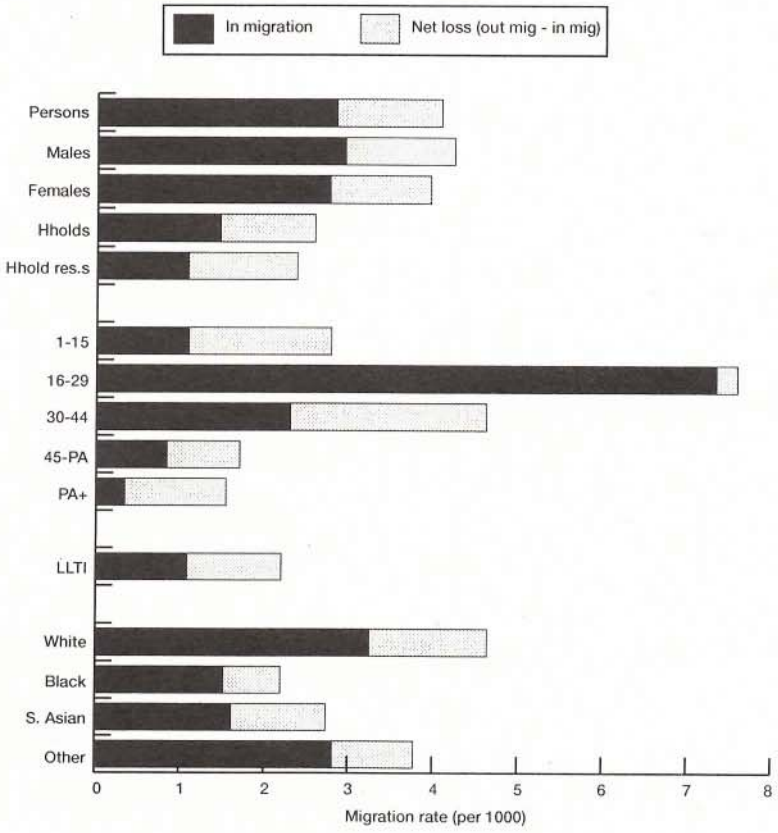
4.62 In Table 4.8 the gross and net migration flows for Inner London for the pre-census year are presented in absolute terms, disaggregated by gender, broad age group, limiting long-term illness and ethnic grouping. Their composition within each of these four variables is also shown alongside the profile of Inner London's total 1991 population. It can now be seen that the 31,009 net loss of residents, originally shown in Table 4.5, is in fact the balance between an inflow of just over 71,000 persons from the rest of Great Britain and an exodus of some 102,000 people. As shown in Figure 4.6, the newcomers made up some 2.8 per cent of Inner London's 1991 population, while the out-migrants constituted around 4 per cent of the population, producing a net population loss of about 1.2 per cent.

Table 4.8 Migration between Inner London and the rest of Great Britain, 1990-91, by gender, age, illness and ethnic grouping

	Absolute flows (000s)			Composition by characteristics (%)			
Characteristic	In-migration	Out-migration	Net migration	In-migration	Out-migration	Net Migration	1991 Population
Persons	71.2	102.2	-31.0	100.0	100.0	100.0	100.0
Males	35.1	50.5	-15.4	49.3	49.4	49.6	47.7
Females	36.1	51.7	-15.6	50.7	50.6	50.4	52.3
1-15	5.2	13.3	-8.1	7.4	13.1	26.2	19.2
16-29	48.2	49.8	-1.6	67.7	48.8	5.2	26.2
30-44	12.9	25.9	-13.0	18.1	25.4	42.0	22.4
45-PA	3.5	7.1	-3.6	4.9	6.9	11.5	16.6
PA +	1.3	6.0	-4.7	1.9	5.9	15.1	15.6
With LLTI	3.4	7.0	-3.6	4.8	6.8	11.5	12.7
Without LLTI	67.8	95.3	-27.4	95.2	93.2	88.5	87.3
White	59.8	85.5	-25.6	84.0	83.6	82.6	74.5
Black	5.0	7.2	-2.2	7.0	7.1	7.2	13.3
South Asian	2.8	4.7	-1.9	3.9	4.6	6.2	6.9
Other	3.6	4.9	-1.2	5.1	4.8	4.0	5.2

Note: 'PA' denotes pensionable age. 'LLTI' denotes limiting long-term illness.

Figure 4.6 Rates of migration for Inner London, 1990-91, for selected characteristics



4.63 The flows in both directions are very closely matched in terms of gender, with women being only slightly more numerous than men (but not by as many as might be expected from Inner London's overall population profile). This feature can largely be attributable to the younger than average age of the migrants, with 16-29 year olds accounting for fully two-thirds of the in-migrants and almost half of the out-migrants but barely a quarter of the total population, allied with the fact that it is only in the older age groups (around 45 and over) that women tend to outnumber men. The net flows, however, can be seen to be heavily concentrated in the 30-44 and 0-15 age groups, which together comprise two-thirds of the overall loss of people in this one-year period, but only just over two in five of Inner London's total population. The elderly are particularly weakly represented among the in-migrants to Inner London (under 2 per cent), but because they are three times more strongly represented than this amongst those leaving Inner London, they constitute some one in seven of the area's net loss of people, close to their share of the total population. As a corollary, Inner London was more successful in maintaining its numbers of people of older working age, as well as of the 16-29 group, with both their shares of the net outflow being markedly lower than for the total population. This latter pattern is reflected in the below-average rates of net out-migration shown for these two age groups in Figure 4.6.

4.64 The net loss of both people with limiting long-term illness and people without this has been noted in Table 4.6, but the extra information on gross flows in

Table 4.8 and Figure 4.6 indicates that those suffering from illness are significantly less mobile than the majority. This is probably partly related to the effects of illness as well as to the fact that it is the less mobile older groups that are most prone to such illness. This can also be held responsible for the fact that the in-migrants to Inner London are somewhat more healthy than the out-migrants. This imbalance helps to explain why the composition of the net migration balance, with 11.5 per cent ill, is quite close to the proportion of long-term ill in Inner London's total population.

4.65 Similarly, the information in Table 4.8 and Figure 4.6 on ethnic grouping presents a clear distinction between the majority White group and the three minority groupings. While all four groups recorded net out-migration from Inner London to the rest of Great Britain, it can be seen that the three minority groupings exhibited lower rates of migration than Whites and were less well represented in the flows, whether in-, out- or net, than in the population at large. By comparison with their proportion in the whole population, the Black group was particularly weakly represented amongst both inward and outward movement, and inflows of South Asians were also considerably below the 'expected' level.

4.66 The information on housing tenure and economic position needs to be treated rather differently, because of the way in which these can change during the year of the move. The relevant data are shown in Table 4.9, with brackets around the statistics that need to be interpreted with caution. As regards housing tenure, the net loss of 12,239 households produced by Inner London's migration with the rest of Britain in 1990-91 represented the difference between an inflow of nearly 16,000 households and an outflow of just over 28,000. The breakdown of these gross flows by tenure shows that a clear majority (58 per cent) of the households arriving in Inner London were living in the 'other rented' sector at the time of the census, a category which comprises mainly private-rented or housing association accommodation, despite the fact that this sector accounted for only 27.6 per cent of Inner London's total stock of households in 1991. The proportion moving into owner occupation,at 29 per cent, was only half that going into 'other rented', despite comprising nearly two out of five of all households in the area, while the 13 per cent of in-migrants living in council housing contrasts with the third of all households in this sector. These differences are reflected in the proportions of all occupied household spaces in each sector which contained households which had moved into Inner London over the previous year: 3.1 per cent of all spaces in the 'other rented' sector, but only 1.1 per cent of owner-occupied spaces and 0.6 per cent of council housing.

4.67 Table 4.9 also gives details of households moving out of Inner London to the rest of Britain, but it must be remembered that the tenure data relates to the housing into which they moved on their departure from Inner London or, more accurately, the housing which they were occupying by the time of the census. Thus, of the 28,189 households recorded as leaving Inner London in this pre-census year, just over half (52.6 per cent) were owner occupiers in their destination area at the time of the census, nearly two in five were living in 'other rented' accommodation, and only one in ten were renting property owned by councils, New Towns or perhaps (for those moving away to Scotland) Scottish Homes. As for in-migrants to London, these proportions for out-migrants can be compared with Inner London's overall tenure split. This shows that the proportion living in owner occupation after

departure from Inner London was considerably higher than the proportion of all Inner London's households in this sector in 1991, as was also the case for the 'other rented' sector, but the proportion moving out into the public sector was very much smaller than that sector's presence in Inner London. If these households had all been living in the same sector before their move as afterwards, these movements would have freed up 3.5 per cent of both the owner-occupied and the 'other rented' household spaces for other households, but only 0.7 per cent of council housing. But there is no guarantee that tenure change did not take place as a result of the move, and indeed there is a fair likelihood that it did, so no such conclusion can be drawn. This is the reason why these figures appear in parentheses in Table 4.9 and why no attempt is made here to assess the net impact of in- and out-migration on tenure.

Table 4.9 Migration between Inner London and the rest of Great Britain, 1990-91, by housing tenure and economic position in 1991

	Absolute flows (000s)			Composition (%)		Proportion of 1991		
Characteristic	In-migration	Out-migration	Difference	In-migration	Out-migration	1991 population	In-Migration	Out-Migration
All households	15950	28189	-12239	100.0	100.0	100.0	1.5	2.6
Owner occupied	4658	14878	-10220	29.1	52.6	38.6	1.1	(3.5)
Public rented	2077	2689	-612	13.0	9.5	33.8	0.6	(0.7)
Other rented	9301	10708	-1407	58.0	37.9	27.6	3.1	(3.5)
All aged 16+	65996	88896	-22880	100.0	100.0	100.0	3.3	4.4
Self-employed	3456	6353	-2897	5.2	7.2	7.1	2.4	(4.4)
Employed	44078	51406	-7328	66.8	57.8	45.3	4.8	(5.6)
Unemployed	7042	9687	-2645	10.7	10.9	10.9	3.2	(4.4)
Retired	1060	5505	-4445	1.6	6.2	15.9	0.3	(1.7)
Student	5833	6055	-222	8.8	6.8	5.5	5.2	(5.4)
Other inactive	4527	9870	-5343	6.9	11.1	15.2	1.5	(3.2)

Note: Households and people are classified on the basis of their characteristics at the 1991 census. The data in parentheses are not true ratios, in the sense that they are based on characteristics of out-migrants at their destination.

4.68 A similar cautionary note needs to be made in relation to the statistics in Table 4.9 relating to economic position. The 'difference' figures are as presented in Table 4.7. It can now be seen that the net migratory loss of 22,880 people aged 16 and over from Inner London in 1990-91 was the balance between around 66,000 newcomers from elsewhere in Britain and an exodus of nearly 89,000, representing rates of 3.3 and 4.4 per cent respectively if applied to the total 16-and-over population resident in Inner London on census night. It can also be seen that the in-migration stream was, in comparison with Inner London's total population, much more heavily skewed towards people who were employed or economically inactive students on census night. The retired were particularly under-represented, accounting for under 2 per cent of the newcomers as opposed to 16 per cent in Inner London's total population aged 16 and over, as also were the 'other inactive', 7 as opposed to 15 per cent. Meanwhile, the self-employed were somewhat fewer amongst the in-migrants, and the proportion of in-migrants unemployed at the time of the census was almost identical to the overall figure for

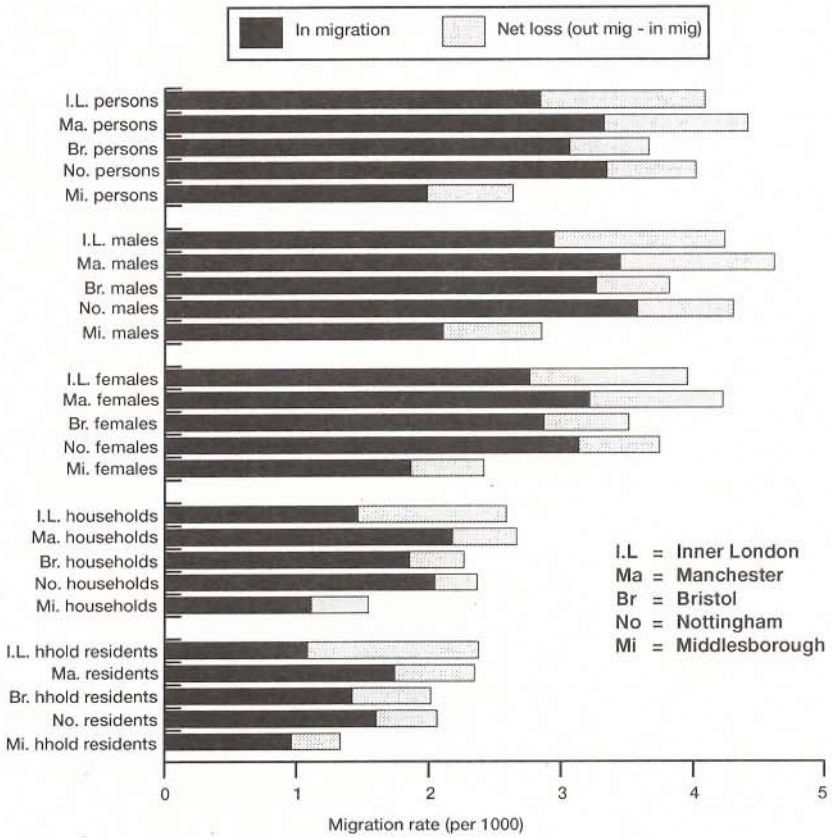
Inner London. These patterns are reflected in the proportions of Inner London's economic groups accounted for by the newcomers; highest for students at 5.2 per cent and for the employed at 4.8 per cent, but only 0.3 per cent of its retired population at the other extreme.

4.69 In relation to out-migrants from Inner London and the economic position in which they found themselves on census night wherever in Britain that they had moved to, Table 4.9 shows that the employed made up a clear majority and constituted a significantly higher proportion than in Inner London's total population of 16 and over, though the proportion is smaller than amongst the in-migrants. Likewise, the proportion of students, at 6.8 per cent of the outflow, is larger than that for Inner London as a whole but smaller than amongst the inflow. The proportions of the self-employed and unemployed in the outflow closely matched Inner London's profile, but the retired and 'other inactive' groups were markedly under-represented in the out-migration stream. The figures in brackets in the final column indicate the percentage out-migration rate for each economic group if the out-migrants had been in the same position before their move as on census night, indicating an above-average 'loss' of the employed and students and greater retention of the retired and 'other inactive'. Similarly, again if it is assumed that migrants did not change their economic position during the pre-census year, then some idea of the net effects of this migration between Inner London and the rest of Britain can be gauged by comparing the bracketed figures on out-migrant 'rates' with those in the adjacent column on in-migrants. On this hypothetical basis, the largest impact would appear to be on the self-employed, with a 2.0 percent point reduction in numbers as a result of this migration (2.4 minus 4.4), followed by the 'other inactive' (-1.7) and retired (-1.4). The group least affected by the overall net exodus from Inner London would appear to be the students, but this cannot be stated with confidence because this group is especially prone to change in economic position during migration, with the strong tradition in Britain of receiving higher education away from the home area. Also, a term-time-only move for studying purposes is not meant to be recorded as a migration by the census.

4.70 The case of Inner London has been examined in some detail. This is partly because of its importance but also to provide a full indication of the types of patterns which can be observed from the SMS and of the areas where the results need to be interpreted with caution. We now turn to the other four selected cities and contrast their migration experiences in the year before the census with those of Inner London. The absolute flows in and out of these cities cannot be compared meaningfully because of the difference in population size between the cities, notably between Inner London and the others. We therefore concentrate on the rates of inflow, outflow and net flow because these are standardised to the base (1991) populations and also readily show the relative importance of the gross flows and the net impact on the cities. The relevant data for persons by gender, age, illness and ethnic grouping are shown in Figures 4.7 - 4.9.

4.71 As regards the overall net change in the number of persons produced by this one year of within-Britain migration, it can be seen from Figure 4.7 that Manchester would seem to fall into the same situation as Inner London, with a net loss equivalent to over 1.0 per cent of 1991 population. Bristol, Nottingham and Middlesbrough also recorded net losses, but at a lower rate, with all three being around the same level of 0.6 - 0.7 per cent. The rates of gross inflow were highest for Manchester

Figure 4.7 Rates of migration for five cities, 1990-91, for selected characteristics



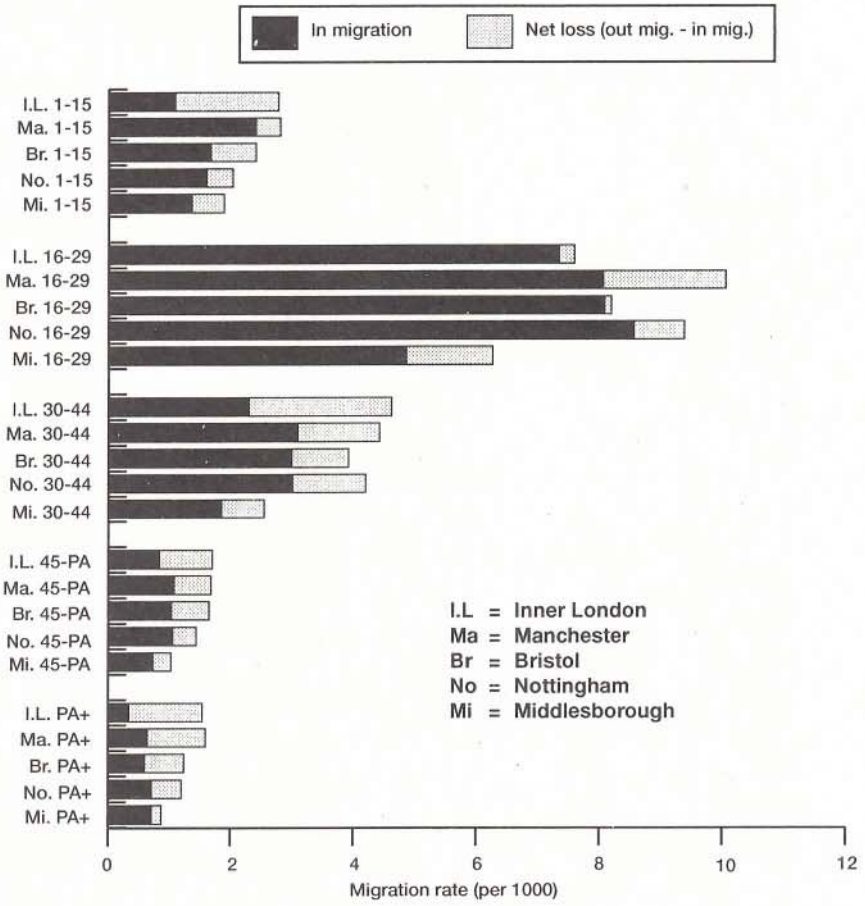
and Nottingham, with newcomers making up 3.3 per cent of the u 1991 population in both cases, and lowest for Middlesbrough, with the proportion being only 2.0 per cent. Gross outflow rates were highest for Manchester, followed by Inner London and Nottingham and with Middlesbrough again the lowest. Clearly, Middlesbrough was characterised by lower turnover than the others, with Manchester and Nottingham having the highest turnover of the five at this time.

4.72 To complicate matters, a somewhat different picture emerges if migration is defined only in terms of wholly-moving households or of residents in such households (Figure 4.7). Generally, the net loss of households is at a considerably smaller rate than for population. In part, this reflects the fact that the migrating households tend to be smaller on average than households that have not moved. It also arises through the general tendency for households moving away from cities to contain more people than those moving into them, which is the case for four of the five cities here (the exception being Middlesbrough), as well as from the fact that migrant flows to larger cities normally contain more people not in a wholly-moving household than the outward flows.

4.73 In terms of gender, Figure 4.7 indicates a greater rate of net loss for the male population of all but one of the five cities, the exception being Bristol. With respect to age, the most conspicuous feature of Figure 4.8 is the high turnover of the 16-29 age group and the very low rates for those of pensionable age, but these patterns are both highly regular and expected. Of more significance here are the net rates and the fact that all five cities were net losers of people from all the five broad groupings shown. For 0-15 year olds, it was London that recorded the largest

proportional loss, as it was for all the other age groups except the 16-29 year olds for whom Manchester saw the biggest drop, followed by Middlesbrough and Nottingham. Another point is that Bristol appears to share with Inner London the 'suburbanization' pattern of higher net losses of 30-44 year olds and children than of 16-29 year olds, while Manchester and Nottingham appear to have experienced relatively large net loss of 30-44 year olds compared to their loss of children. Also noteworthy is the very limited gross inflow of elderly people into Inner London compared with the other cities, with the highest rates being for Nottingham and Middlesbrough. These two places also exhibit the lowest rates of gross out-migration for the elderly, suggesting that these smaller cities are less unattractive to the elderly than the other three larger or more dynamic ones.

Figure 4.8 Rates of migration and loss for five cities, 1990-91, for selected age groups

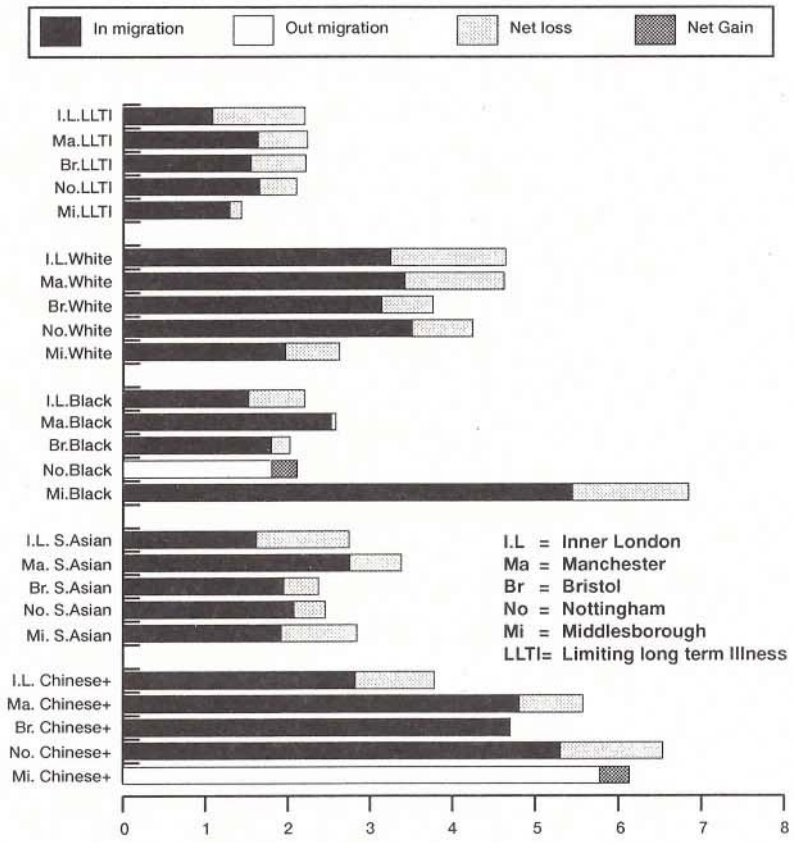


4.74 The net migration losses of people with limiting long-term illness were generally smaller in relative terms than for the population as a whole (Figure 4.9). This was much more the case for Middlesbrough and Manchester than for Nottingham and Inner London, but for these four cities the effect of this migration will have been to raise the proportion of the ill in their populations. Bristol is the exception, with a somewhat faster net loss of its ill than of its population as a whole, though here, as elsewhere, the gross rate of population turnover for those not ill was considerably higher than for the ill, as would be expected (see above).

4.75 Turning to the information on ethnic group in Figure 4.9, the experience of the four other cities is generally consistent with that seen already for Inner London. The picture in net terms is one of extensive losses to all four ethnic groupings, with

the only exceptions being Middlesbrough's net gain of the 'Other' category and Nottingham's net gain of the Black group. The levels of net loss tend to be lower for the three ethnic minority groups than for Whites, except for the 'Other' group in Nottingham and for Black and South Asian groups in Middlesbrough. In general, therefore, the migration exchanges with the rest of Britain over this particular year were leading to an increase in the proportion of the ethnic minority groups in these cities.

Figure 4.9 Rates of migration for five cities, 1990-91, for selected ethnic groups



4.76 Finally, as far as housing tenure and economic position are concerned, it is not wise to talk in net terms because of the changes in circumstances that can take place during the year of the move, as explained previously. Table 4.10 presents the data that are probably most satisfactory for comparing the five cities, namely the composition of the migration flows in and out of the five cities in terms of the categories available for these two variables. For housing tenure, the Inner London situation is generally replicated by the other four cities. Considerably fewer of the households moving into each city went into owner occupation than was the case for the households moving away, though the margin is relatively small for Middlesbrough. This area is also the only exception to the rule that considerably more of the households moving into the cities went into the 'other rented' sector than did the outward movers. Meanwhile, the proportion of households moving into council housing varied considerably between the five cities, being highest for Middlesbrough and lowest for Bristol, but only in the latter case did the proportion of departing households going into public-sector housing exceed the proportion of in-migrant households that were found in council housing at the census.

Migration for the inner and outer areas of twelve cities

4.77 The composition of migrant flows in terms of the economic position on census night is shown in the second panel of Table 4.10. In this case, there are some significant differences from the Inner London pattern. In particular, Bristol is the only city to emulate Inner London in that the proportion of its in-migrants aged 16 and over who were employed in 1991 was higher than it was among its out-migrants. For Manchester, Nottingham and particularly Middlesbrough, over 60 per cent of their out-migrants were employed at the time of the census, this being 5-10 percentage points more than the proportion employed amongst their in-migrants. As a corollary, for these three cities too, the proportion of in-migrants that were classified as 'other inactive' in 1991 was higher than the proportion of out-migrants in this category, unlike the situation for Bristol and Inner London. The excess of people unemployed in 1991 amongst in-migrants is also much larger for these three cities than for Bristol and contrasts with the Inner London case where it is the out-migrants that are slightly more likely to be unemployed in 1991. There are, however, some points of greater similarity across the five cities, in particular with in-migrants more likely than out-migrants to be students after their move in all five cases and with out-migration streams containing the higher proportions of retired people (except in the case of Middlesbrough). In all cases, too, people who considered themselves as self-employed at the time of the census were more numerous amongst the out-migrant streams.

Table 4.10 Migration into and out of five cities, 1990-91, by housing tenure and economic position in 1991

Characteristics	Inner London		Manchester		Bristol		Nottingham		Middlesbrough	
	In	Out	In	Out	In	Out	In	Out	In	Out
All	15950	28129	3668	4501	2902	3544	2228	2586	608	844
households	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Owner occupied	29.1	52.6	24.2	48.5	43.6	59.6	38.6	55.5	46.9	50.5
Public rented	13.0	9.5	18.4	15.0	5.0	5.8	13.2	8.3	17.3	11.8
Other rented	58.0	37.9	57.4	36.5	51.4	34.6	48.2	36.2	35.9	37.7
All aged	65996	88876	11242	15273	10291	11990	7754	9287	2327	3061
16+	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Self employed	5.2	7.2	4.2	5.4	5.0	5.6	3.9	5.0	2.6	4.3
Employed	66.8	57.8	51.6	56.3	64.0	61.7	57.0	62.4	50.2	60.1
Unemployed	10.7	10.9	15.2	11.0	9.5	8.3	14.2	9.5	15.3	10.9
Retired	1.6	6.2	3.4	6.9	3.2	7.0	4.0	5.8	6.4	5.5
Students	8.8	6.8	11.5	9.5	9.4	7.3	10.9	8.1	11.7	6.8
Other inactive	6.9	11.1	14.1	10.9	8.9	10.1	10.0	9.0	13.7	12.4

4.78 A central aim of this work on migration, as for the other reports in this series, is to examine the trends affecting the inner areas of England's cities and to investigate their relationships with their outer areas. As explained in paras. 4.40-4.45, this is not possible with the SMS in anything like the same detail as with the 1991 and 1981-91 analyses using the Small Area Statistics that were documented in Report 1 in the Urban Trends series, on Changing Urban Structure. In the previous section we have made use of the range of variables in the SMS Set 2 data for migration within and between local authority districts, but the latter do not provide a very accurate delineation of cities' inner areas, except in the case of London and also, to a reasonable extent, the case of Manchester. Turning to the inner areas as strictly

defined for this study and outlined in Appendix B, we are restricted to a much more limited range of variables, notably total persons and broad age groups.

4.79 The overall picture of the population changes resulting from within-Britain migration in the year leading up to census night is shown for the twelve selected cities in Table 4.11 and Figure 4.10. Looking first at the net migration balances for the inner areas (the middle of the five pairs of data columns), it can be seen that all twelve of the inner areas experienced a net loss of people through migration to the rest of Britain over this twelve-month period. The biggest percentage losses amongst the twelve were sustained by Nottingham (-2.6 per cent), Newcastle upon Tyne, Manchester and London, and the smallest by Birmingham (-0.6 per cent), followed by Coventry, Plymouth and Liverpool.

Table 4.11 Net within-Britain migration of total persons, 1990-91, for the inner and outer areas of twelve cities

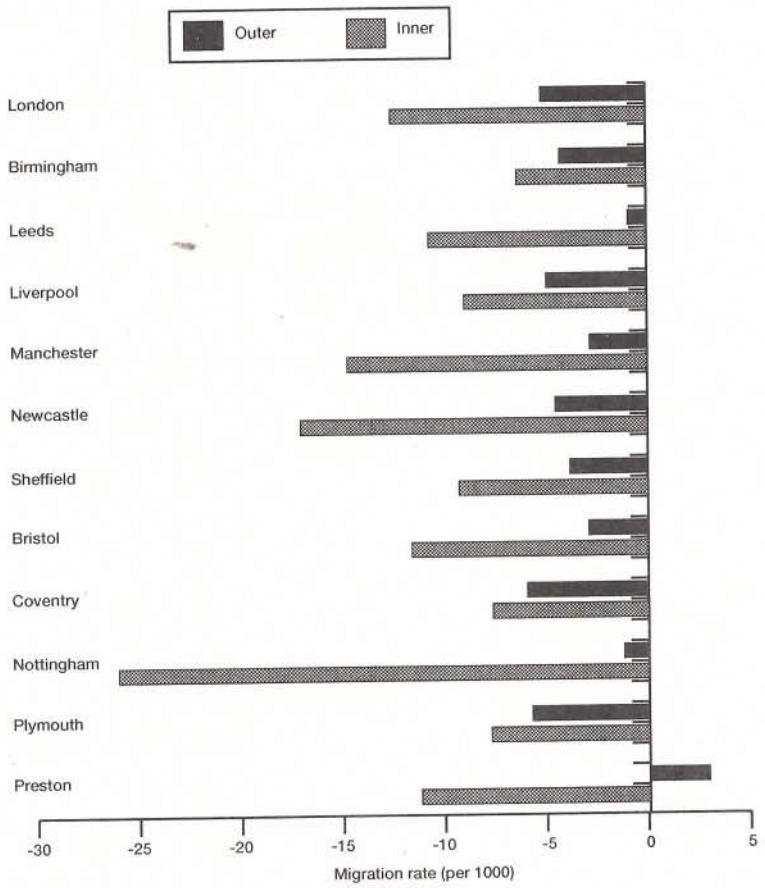
City	Inner Area									
	Re: Outer Area		Re: Other GB		Total		Outer Area		Whole City	
	No.	%	No.	%	No.	%	No.	%	No.	%
London	-17442	-0.70	-13567	-0.54	-31009	-1.24	-21159	-0.51	-52168	-0.78
Birmingham	-961	-0.19	-2158	-0.44	-3119	-0.63	-1934	-0.42	-5053	-0.53
Leeds	-998	-0.43	-1453	-0.63	-2451	-1.06	-396	-0.09	-2847	-0.42
Liverpool	-584	-0.21	-1902	-0.68	-2486	-0.89	-847	-0.49	-3333	-0.74
Manchester	-644	-0.23	-3415	-1.23	-4059	-1.46	-359	-0.28	-4418	-1.09
Newcastle	-421	-0.59	-792	-1.10	-1213	-1.69	-841	-0.45	-2054	-0.79
Sheffield	-553	-0.37	-816	-0.55	-1369	-0.92	-1323	-0.38	-2692	-0.54
Bristol	-257	-0.13	-1926	-1.01	-2183	-1.15	-540	-0.29	-2723	-0.73
Coventry	-348	-0.21	-942	-0.56	-1290	-0.76	-740	-0.59	-2030	-0.69
Nottingham	-786	-1.32	-747	-1.26	-1533	-2.58	-249	-0.12	-1782	-0.68
Plymouth	-95	-0.07	-901	-0.70	-996	-0.77	-656	-0.57	-1652	-0.68
Preston	-261	-0.51	-313	-0.61	-574	-1.11	+213	+0.29	-361	-0.29

Note: % refers to net migration as a percentage of the 1991 population of the reference area.

4.80 Table 4.11 and Figure 4.10 also allow an insight into the relative performance of the cities' inner and outer areas. It can be seen from the fourth pair of data columns that the outer areas themselves also generally registered net migration losses to the rest of the country in 1990-91, there being only one exception among the twelve (Preston). In all twelve cases, however, the rate of net loss experienced by the outer areas was less than that for the inner areas, signifying relative decentralisation of population as a result of this migration even though within the context of overall migratory losses for the cities as a whole (as shown in the final pair of data columns). The table also shows that, among the twelve outer areas, Coventry and Plymouth recorded the highest rates of net loss, while the widest percentage point differentials between inner and outer area rates of net migratory change occurred in Nottingham and Preston, and the narrowest margin was for Coventry and Birmingham. All these remarks must be qualified, however, by the fact that the geographical extent of these outer areas depends on the position of the

districts' administrative boundaries, meaning that for some cities the outer area includes only part of the remainder of the built-up area or conurbation (as for Manchester, for instance), while in other cases (like Leeds) the outer area is very generously defined.

Figure 4.10 Net migration rates, 1990-91, for twelve cities



4.81 Table 4.11 also shows the extent to which the net migratory losses sustained by the twelve inner areas can be attributed to shifts of people to their respective outer areas rather than further afield, though admittedly the bounding problem over the outer areas affects the confidence which can be placed in these results too. Nevertheless, taking the data at face value, it can be seen that for all twelve cities the direction of net movement was from inner to outer area (shown in the first pair of data columns). The rates of net loss sustained by the inner areas in this process were highest for Nottingham, London and Newcastle upon Tyne, and lowest for Plymouth, Bristol and Birmingham. Comparing the rates of inner-area net loss to the outer areas and to the rest of the country, it appears that only in the cases of London and Nottingham were the outer areas the more important destination for net out-migration from the inner areas (as shown by comparing the first two pairs of data columns). Finally, in terms of the levels of net loss going beyond the outer areas, the inner areas experiencing the largest percentage losses at this time were Nottingham, Manchester, Newcastle upon Tyne and Bristol, all with rates of loss of at least 1.0 per cent.

4.82 Table 4.12 presents the breakdown of the net flows for inner and outer areas for the five age groups distinguished in the SMS Set 1 data, expressed as a percentage of the relevant 1991 population bases. Looking first at the figures for the inner areas, the first point to note is that in virtually all cases the direction of net flow was negative, i.e. net outward movement from the inner areas to the rest of Great Britain. There are only two exceptions, with net gains being registered by the 16-29 age groups of Bristol and Plymouth. As regards the individual age groups, the net outward movement was most consistently strong for the 0-15 year olds. For these, the rate of net loss was highest for Nottingham (-4.1 per cent), followed by Plymouth, London and Bristol, with the rate not falling below -0.7 per cent (Manchester). For 16-29 year olds, Newcastle upon Tyne, Manchester and Nottingham recorded the largest rates of loss, while for 30-44 year olds Nottingham again featured as the highest loser, for 45-pensionable age it was Preston, and for the elderly it was Bristol.

Table 4.12 Net within-Britain migration, 1990-91, for the inner and outer areas of twelve cities, by age group

City	IA/OA	1-15	16-29	30-44	45-PA	PA+	Total persons
London	IA	-1.69	-0.25	-2.32	-0.86	-1.20	-1.24
	OA	-0.57	+0.22	-0.83	-0.69	-0.76	-0.51
Birmingham	IA	-0.87	-0.67	-0.17	-0.48	-0.86	-0.63
	OA	-0.08	-0.96	-0.80	+0.10	-0.28	-0.42
Leeds	IA	-0.97	-1.49	-1.12	-0.52	-0.98	-1.06
	OA	+0.25	-0.40	-0.08	-0.21	-0.19	-0.09
Liverpool	IA	-1.03	-0.94	+0.82	-0.49	-1.16	-0.89
	OA	+0.19	-2.17	-0.02	-0.20	-0.29	-0.49
Manchester	IA	-0.71	-2.78	-1.56	-0.75	-1.24	-1.46
	OA	+0.30	-0.25	-0.91	-0.30	-0.29	-0.28
Newcastle	IA	-1.31	-3.82	-1.58	-0.40	-0.92	-1.69
	OA	-0.08	-1.09	-0.63	-0.15	-0.20	-0.45
Sheffield	IA	-0.86	-0.97	-0.70	-1.13	-0.94	-0.92
	OA	+0.08	-1.64	-0.18	+0.07	-0.15	-0.38
Bristol	IA	-1.34	+0.16	-1.99	-1.12	-1.70	-1.15
	OA	-0.11	-0.41	+0.21	-0.10	-1.03	-0.29
Coventry	IA	-0.77	-1.09	-0.92	-0.34	-0.55	-0.76
	OA	+0.38	-2.93	-0.02	-0.22	+0.04	-0.59
Nottingham	IA	-4.09	-2.65	-3.53	-0.92	-0.97	-2.58
	OA	+0.54	-0.09	-0.49	-0.27	-0.36	-0.12
Plymouth	IA	-3.37	+0.53	-0.74	-0.17	-0.39	-0.77
	OA	-1.19	-1.62	-0.52	+0.02	+0.60	-0.57
Preston	IA	-1.17	-1.52	-0.95	-1.34	-0.41	-1.11
	OA	+0.39	+0.72	+0.05	+0.22	+0.04	+0.29

Note: All data are percentages of the relevant 1991 population count. IA denotes inner area, OA denotes outer area.

4.83 By contrast, the outer areas generally experienced lower rates of loss than this. In relation to the outer areas, the first point evident from Table 4.12 is the larger number of cases of increases resulting from migration exchanges with the rest of the country (including the inner areas of their own cities). Preston's outer area recorded net gains in all five age groups. Elsewhere, there were increases in

0-15 year olds for six of the remaining eleven cases, as well as increases of 16-29 year olds for Outer London, of 30-44 year olds for Bristol and Leeds, of 45-pensionable age for Birmingham, Sheffield and Plymouth, and of the elderly for Plymouth and Coventry.

4.84 Indeed, overall, there are only a handful of instances where the rate shown in Table 4.12 for the inner area is more positive, or less negative, than for the respective outer area. Six of these seven cases relate to the 16-29 age group. The inner areas of Plymouth and Bristol recording net gains, while their outer areas sustained net losses, indicating absolute centralisation of this age group. For Birmingham, Liverpool, Sheffield and Coventry, there was relative centralisation of 16-29 year olds at this time, because though both inner and outer areas recorded net losses, the rate of loss was lower for the former. Relative centralisation was also the situation in the only other case, namely for 30-44 year olds in Birmingham, where the level of loss from the outer area was considerably in excess of that for the inner area.

4.85 Finally, as the net flows of age groups shown in Table 4.12 include exchanges with the whole of Britain, a look is taken specifically at the net balance of flows between just the inner and outer area for each city. The results, shown in Table 6.3, are just as clear as those found already. Nearly all the net flows were from inner to outer areas, i.e. over the pre-census year more inner-area residents moved to the outer area of the same city than outer-area residents moved to the inner area. There are just six exceptions amongst the sixty cases (five age groups for each of twelve cities). These all concern the 16-29 age group, and are - in descending order of net gain rate - Sheffield, Plymouth, Liverpool, Bristol, Coventry and Leeds. At the other extreme, the biggest net loss of any age group from inner to outer area was that for 0-15 year olds at Nottingham, down by 3.0 per cent over the year. Other large inner-to-outer switches include 30-44 year olds in Nottingham, London and Newcastle upon Tyne; 16-29 year olds in London and Nottingham; and 0-15 year olds in Newcastle upon Tyne.

Conclusions

4.86 This chapter has examined patterns of migration affecting urban areas in England using the 1991 census Special Migration Statistics (SMS). This dataset provides information about persons and households who were resident on census night at an address which was different from their usual address twelve months previously. The SMS is of particular value because it allows the identification not only of people moving into an area but also of those moving out (though only to other parts of Britain covered by the census) and thus permits the calculation of the net pattern of this migration and its impact on the population composition of areas.

4.87 The overwhelming impression provided by the analyses of the previous sections is of net migration loss from urban England, as defined as London, the metropolitan counties and main cities of the Shire counties. Some places appear to have been affected more greatly than others, with particularly high rates of net loss being registered by Inner London and a number of other inner city areas. Certain types of people and households have been affected more than others, particularly children, 30-44 year olds, Whites, owner occupiers, the employed, the retired and people not suffering from a limiting long-term illness, but - as far as can be judged from the available data for 1990-91 - migration exchanges with the rest of Britain resulted in net losses of virtually all types of people for most parts of urban England.

Table 4.13 Net migration 1990-91, between inner and outer areas of twelve cities, by age group

City	Abs/%	1-15	16-29	30-44	45-PA	PA+	Total Persons
London	Abs	-3383	-6060	-5490	-1232	-1277	-17442
	%	-0.71	-0.93	-0.98	-0.30	-0.33	-0.70
Birmingham	Abs	-315	-55	-312	-151	-128	-961
	%	-0.25	-0.05	-0.35	-0.18	-0.15	-0.19
Leeds	Abs	-329	+1	-318	-133	-219	-998
	%	-0.66	0.00	-0.73	-0.35	-0.53	-0.43
Liverpool	Abs	-277	+155	-211	-75	-176	-584
	%	-0.45	+0.25	-0.39	-0.15	-0.35	-0.21
Manchester	Abs	-185	-299	-71	-35	-54	-644
	%	-0.29	-0.45	-0.14	-0.08	-0.11	-0.23
Newcastle	Abs	-136	-108	-111	-50	-16	-421
	%	-0.87	-0.68	-0.08	-0.41	-0.11	-0.59
Sheffield	Abs	-209	+150	-146	-140	-208	-553
	%	-0.72	+0.44	-0.56	-0.52	-0.65	-0.37
Bristol	Abs	-35	+105	-166	-48	-113	-257
	%	-0.09	+0.23	-0.42	-0.15	-0.32	-0.13
Coventry	Abs	-153	+53	-146	-27	-75	-348
	%	-0.39	+0.13	-0.45	-0.09	-0.26	-0.21
Nottingham	Abs	-359	-162	-176	-55	-34	-786
	%	-3.02	-0.87	-1.62	-0.61	-0.38	-1.32
Plymouth	Abs	-25	+114	-34	-47	-1.3	-95
	%	-0.10	+0.36	-0.14	-0.22	-0.41	-0.07
Preston	Abs	-88	-27	-65	-57	-24	-261
	%	-0.73	-0.21	-0.69	-0.68	-0.27	-0.51

Note: 'Abs' refers to net migration to inner area from outer area (minus sign indicates net loss by inner area); % refers to percentage of the relevant 1991 population count for the inner area.

4.88 In more detail, the analysis based on the eleven-fold typology of districts showed that a clear distinction could be drawn between the six metropolitan and city categories of the district typology and the other five categories, with the former all being net losers and the latter all net gainers. A clear urban status distinction is also evident within these two broad groupings, with Inner London being the largest loser in both absolute and relative terms, followed by the Principal Metropolitan Cities and Outer London, and with the Remoter Mainly Rural category being the largest gainer in both respects, followed by the Urban & Mixed Urban-Rural and the Resort, Port & Retirement categories.

4.89 The district-type analysis also revealed that, while most types of people and households contributed to the net exodus from urban areas, some played a larger part than others. In terms of age group, children and 30-44 year olds were particularly strongly represented, whereas patterns were more varied for 16-29 year olds. Outer London registered a net gain of the latter, in contrast to its losses of other age groups, and this age group was the weakest growing for Remoter Mainly Rural districts and the Resort, Port & Retirement category. Those suffering from limiting long-term illness generally moved less between district types than did the healthy. The main exception was Outer London which recorded a greater percentage loss of ill people than healthy.

4.90 The direction of net flow for all four ethnic groupings recognised by the SMS was generally the same as for all persons across the eleven district types. The principal exception was Outer London which recorded net gains of the three minority groupings alongside substantial net losses of whites. The net out-migration district types tended to lose whites faster than non-whites, while the net in-migration types recorded larger relative gains of non-whites, indicating that this year of migration was raising the proportion of non-white groups in both net gaining and net losing areas.

4.91 The observations on housing tenure and economic position need careful interpretation, because these characteristics tend to change on migration and the census merely records the circumstances of people on census night, i.e. after their move. What the analyses have shown, however, is that a lower proportion of the households migrating into Inner London moved into owner-occupied accommodation than was the case for those migrating out of Inner London. The same pattern applied to the other five metropolitan and city district types, while the opposite was the case for the five net gaining types. As regards economic position, the metropolitan and city district types all dispatched more people who were employed or retired at the time of the census than they received from elsewhere, with the opposite being the case of the other five types. The picture was nearly as clear-cut for the self-employed and 'other inactive' groups, but much more mixed for the unemployed and students.

4.92 These findings were largely echoed by the more detailed analyses presented in paras. 4.60 - 4.87. It is, however, important to emphasise the point that net migration figures, as presented above, are merely the balance between much larger gross inflows and outflows, so that the net figures may point a more gloomy picture than is really the case. Even places that are big net losers of migrants usually receive substantial numbers of newcomers each year.

4.93 Whether expressed in terms of gross flows or as net balances, it is clear from this analysis of SMS data that migration is a major force behind urban change in England. Not only is it producing a sizeable redistribution of population away from urban areas, notably Inner London and the larger provincial cities, but it is altering the population profiles of both these cities and the net receiving areas. This has important consequences for both government policy making and private-sector decision-making, particularly if these trends continue over a substantial period of time - as the results of previous studies indicate that they do.

4.94 In this connection, it must be remembered that the year 1990-91 covered by the SMS data was a very quiet one in terms of the overall levels of migration flows in Britain, particularly in comparison with the latter part of the 1980s, and that the extent of movement has picked up again somewhat since then, according to the NHS Central Register data. The available evidence indicates that urban England had experienced significantly larger migration losses during most of the 1980s than during the one-year 'change of address' periods covered by both the 1981 and the 1991 Censuses, so that results presented in this report are likely to understate the scale of changes normally taking place. This needs to be borne in mind by those attempting to predict migration into the future and assess its likely impacts, and raises important questions about the adequacy of the methods currently available for monitoring migration between censuses.

5 Workplace and Travel to Work Patterns

Summary

Research Context

5.1 This chapter presents the findings of an analysis of the workplace and travel to work patterns in urban areas in England. The aims of the research included:

- to portray the main commuting flows in and around major cities;
- to determine where inner city residents work;
- to determine the characteristics of groups who compete with inner city residents for inner city jobs.

5.2 The investigation of commuting patterns is essential to understanding the way a city works and its role within its region. The details of these patterns - that is, which types of workers from which residential areas work in which employment centres - are very visible evidence of the way a local labour market area is functioning. A high level of in-commuting to an inner city area, say, indicates an 'open' labour market in which inner city residents will face strong competition for the available jobs, especially if there are insufficient suitable and accessible jobs for both local residents and in-commuters.

Commuting distances

5.3 For as many decades as there has been data to observe trends, there has been a gradual lengthening of average commuting distances. However, the length of the 'typical' journey to work varies between different groups in the workforce according to to a pattern which is familiar to personnel managers (and others who try to match the type of jobs available with the local workforce):

- the better paid a group is then the longer their average commuting distance; and
- the better paid the group then the more likely they are to use a car for commuting.

5.4 A high proportion of commuting trips are still of under 5 kms - but there is a notable contrast between men and women in terms of distances of commuting trips:

- women who have part-time jobs are particularly liable to work near to home;

- over one in four men commute to a workplace over 10 kms away, and many make very substantial daily journeys to work.

5.5 The pattern of commuting is also made more complex by the numbers of people whose journeys-to-work are not of a traditional form:

- nearly one in ten men are 'mobile' workers in the sense that they do not have a fixed workplace (for example, travelling salesmen);
- at least one in twenty of all workers, and of both women and men separately, work at home while, on the other hand, 1 in 300 British men work offshore (e.g. overseas or on oil rigs).

Commuting 'clusters'

5.6 Many of the larger commuting flows in Britain converge on the larger cities' centres. In most cities, these flows are a mix of localised commuting - bringing inner city residents to the city centre to work - and longer-distance commuters from the outer suburbs and the surrounding areas beyond. Even so, it is relevant to ask whether some cities do have fairly distinct inner city labour markets, within which local residents can expect to gain the majority of local jobs.

5.7 Through an analysis of commuting flows, a number of commuting 'clusters' have been defined to examine the detailed pattern of worktrips within the major conurbations. This analysis is based on the method used to defined the Travel-to-Work Areas of the Department for Education and Employment - but adjusted to highlight more localised patterns. The boundaries of these commuting clusters were mapped and described for ten major cities (London, Birmingham, Manchester, Liverpool, Leeds, Newcastle, Sheffield, Bristol, Nottingham and Portsmouth).

Commuting in London

5.8 A recurring feature of the commuting clusters is that they extend from city and town centres out to suburbs and, in most cases, rural hinterlands. Even though this analysis was designed to split out any localised clusters which exist entirely within conurbations, the only cluster which comes near to being made up of exclusively inner city areas is the one which is centred on London's West End (but which still extends to include numerous Outer London suburbs).

5.9 The central commuting cluster in London does not embrace all the capital's central business district. The eastern part of the City of London is the focus for a wedge-shaped area extending through the East End to Brentwood (in Essex). South of the river, the London Bridge area is similarly the focus of a cluster which reaches Dartford (in Kent). These clusters are clearly shaped by the capital's rail networks - both above and below ground - because the areas reflect the location of major railway termini and the areas which they serve. The clusters to the north and south of central London are also recognisably shaped by transport corridors but, to the west, Heathrow is such a large employment centre its commuting cluster embraces several suburbs with which it has rather modest public transport links.

5.10 London's inner city areas is larger than any other British city's, but this fact alone is not enough to explain the distinctiveness of its commuting flows. The sheer number of jobs in the City and West End will be the main reason why:

- over 85% of inner London's residents work within the inner city, yet
- over 55% of inner London's jobs are held by residents of other areas.

5.11 Apart from the Heathrow 'magnet' there are few large concentrations of jobs in the suburbs, although less than a third of Outer London residents work in the inner city. Adjacent towns such as Slough are far from being mere dormitories, but again the jobs are dispersed rather than concentrated, so commuting flows round the M25 are not easily identified with particular Home County employment centres. In terms of major 'arteries' of commuting flows, London itself continues to dominate a wide region.

Major cities

5.12 In no other city is rail transport used for commuting to anywhere near the extent found in the capital. Tyne & Wear's Metro system has reinforced the dominant commuting patterns on Tyneside in general, but its link across the river has not prevented Gateshead remaining a separate commuter cluster from Newcastle (despite the two centres being less than a mile apart). Other notable findings are:

- Leeds and Sheffield are relatively distinct from neighbours Bradford and Rotherham respectively;
- Manchester and Liverpool do embrace some nearby towns, such as Stockport and Bootle;
- Nottingham and Birmingham have strong flows from towns in adjacent counties (Ilkeston in Derbyshire and Tamworth in Staffordshire respectively);
- Bristol and Bath remain centres of separate commuting clusters, as do Portsmouth and nearby Gosport and Fareham.

5.13 The commuter clusters group together inner and outer city areas in almost all cases. Of course, it is still possible to distinguish the inner city in order to study the flows within, to and from each city's inner and outer areas. The more distinctive features of each city and its past development can then often be seen to shape the current patterns of flows. For example, the chronic decline in job opportunities in central Liverpool is identifiable as the main reason for its relatively low levels of commuting inflows from adjacent areas. Even so, a number of common features tend to emerge across the ten cities:

- high dependence of inner city residents upon inner city job opportunities;
- low levels of 'reverse commuting' by outer city residents to satellite employment centres ;
- persistent inflows from satellite areas to most cities; but also
- only a minority of notable outer city employment centres (of which by far the largest is Heathrow) attracting large flows from outlying areas.

5.14 Among the distinctive features revealed in individual cities were:

- Wolverhampton is far more closely linked to Birmingham than is Coventry;
- Manchester's city centre attracts fewer commuters from a mill town like Bolton;
- Leeds and Sheffield now gain more commuters from the former coalfield areas nearby such as Wakefield and Barnsley; while
- Nottingham, Bristol and Portsmouth attract only modest flows from their surroundings, whether viewed as simple numbers or as percentages.

The commuting patterns of particular groups

5.15 The analysis of commuting flows can also be narrowed down so that it considers only a particular group of workers. By contrasting the commuting patterns of three distinctive sub-groups of the labour market, this research confirms that:

- part-time workers' tendency to have relatively short commuting distances is to be found in all areas;
- manual workers' average commuting distance is slightly shorter than that of the workforce as a whole, but is increasingly being determined by the relative scarcity of job opportunities in the traditional industries which provided most manual employment in the past; and
- by way of contrast, professional workers have a particularly long average commuting distance, yet in many cases the detailed pattern to their flows is a larger scale 'echo' of the flow pattern of other groups.

5.16 Despite these generalised differences from group to group, there are also several recurring features. For example, the low level of outward commuting by city residents to job opportunities elsewhere - which can be observed in the commuting pattern of the workforce as a whole - is almost as true for professional workers as it is for the much less mobile groups. Finally, a key policy concern is that job losses in the inner cities have in some areas reduced the rate of increase of, but have not staunched, the inflow of commuters from outlying areas. The result is that inner city residents face mounting competition for the jobs available in the inner city, at a time when those jobs may not only be declining in number but are also certainly shifting in nature away from their earlier emphasis upon the manual work in the manufacturing industries which used to provide the majority of job opportunities in many inner cities.

Introduction

5.17 This chapter examines commuting patterns[1] in and around the largest English cities. The analyses here are designed to reveal the extent to which each city is embedded into a pattern of movements within its region. The importance of this fact becomes clear when considering the availability of employment opportunities. Overall, cities' share of all the jobs in the national economy has been in decline for some time. Yet a city's unemployment level does not necessarily rise or fall as a direct result of the trend in local job numbers, not least because the local population cannot be isolated from those nearby who are also seeking job opportunities. Thus the pattern of commuting in an area is one of the major labour market processes which determines who gets which jobs, and where unemployment is concentrated.

5.18 As in previous decades, the period between the 1981 and 1991 Censuses witnessed lengthening average commuting distances. A number of factors contributed to this trend, including:

- loss of traditional industrial jobs, which were often staffed locally;
- continuing dispersal of population;
- changes in the pattern of public transport provision;
- increasing affluence of the population; and
- further growth in car usage.

Of course, there were also some countervailing pressures, most notably the strong growth in part-time workers and the general increases in the female workforce - both categories of workers who tend to have shorter than average commuting distances. The suburbanisation of some types of job could have reduced commuting distances too, although experience in the USA suggests that the trend is not towards newly localised suburban labour market but to very complex inter-suburban commuting patterns (as, perhaps, have been emerging around London since the opening of the M25).

5.19 Clearly, these broad generalisations disguise some variations between areas. Similarly, all sub-groups of the workforce seem to have lengthening average commuting distances, but this change may be much more marked for some sub-groups than for others. For example, less than half (44 per cent) of men in 1991 commuted no more than 5 kms, whereas the values for women were 53 per cent for those with full-time jobs and 70 per cent for women with part-time work. Yet this substantial contrast in 1991 follows a period when key underlying differences between the genders were reducing. In particular, the gap in car usage for commuting has narrowed from 1981 when 59 per cent of men but only 37 per cent of women used cars, to 1991 when the equivalent values were 67 per cent of men and 52 per cent of women. The other side of the coin has been a steep decline in commuting by bus, a mode which has always been strongly associated with working near to home.

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[1] It should be noted that this report uses the Special Workplace Statistics which are based on a 10 % sample of the population who are in employment. The values quoted (eg in Tables 5.3 to 5.12) are calculated directly from the published data: to relate to other information from the Census it is sufficient to multiply the values in this report by 10 to provide a reasonable estimate of the absolute numbers of workers who are involved in any quoted commuting flow.

5.20 The recent National Travel Survey (Department of Transport, 1993) classified commuters according to the type of area in which they worked. Nearly 60% of the workers in central London commuted by rail (whether British Rail or Underground), while only 18% travelled by car. Yet in Outer London these proportions were almost reversed (15% by rail and 55% by car). Car use was slightly higher still for workers in the centres of other conurbations, rising even further to around 2 in 3 workers throughout the rest of the metropolitan counties and also the 'shire' areas. Rail use was just 7% among workers in these other conurbation centres, and 1% in all other areas. Thus it can be seen that by the start of the 1990s the car had become overwhelmingly dominant as the mode for commuting everywhere except in inner London - and rail was scarcely a significant factor except for workers in the capital. The rest of this paper considers only data from the last Census (April 1991), with Table 5.1 providing a brief overview of commuting distances.

5.21 Table 5.1 reports a number of rather unfamiliar facts, such as the finding that nearly 1 in 10 working men has no fixed workplace, and that over 1 in 20 of both women and men work at home. The information on part-time working women reveals that more than half of them work either at home or less than 2kms away. Just 7.5% regularly commute at least 10kms, compared to 17.6% of women in general and 28.8% of men. This marked variation in the prevalence of longer distance commuting is also observable across different occupation groups: the better paid a group is then the higher the proportion who will commute longer distances, and the higher the proportion who will commute by car. Table 5.1 certainly provides data which conforms to this pattern, because it is still true that on average men earn more than women and, of course, that full-time workers earn more than part-timers in general.

Table 5.1 Commuting distances in 1991

% of group who:	Total workforce	Men	Women	Women working up to15 hours per week
work outside GB	0.2	0.3	0.1	0.0
have no fixed workplace	6.5	9.4	2.8	5.0
commute 30(+) kms	5.5	7.5	3.0	1.6
commute 10-29 kms	18.4	21.3	14.6	5.9
commute 5-9 kms	18.4	18.6	18.1	11.5
commute 2-4 kms	22.3	20.1	25.0	22.1
commute less than 2 kms	23.3	17.7	31.2	45.8
work at home	5.1	5.0	5.2	8.0

5.22 The next section of this report begins to document urban commuting patterns across the country as a whole, and presents a summary analysis which identifies the main clusters of commuting flows. The following section focuses on ten major cities and examines the principal commuting flows in and around them. The penultimate section repeats these tabulations for distinctive sub-groups of the workforce, before some points of conclusion are drawn together.

Overview of 1991 commuting patterns

5.23 The ward-level Census commuting data provides a very detailed portrayal of journey to work patterns across the country. This section presents a summary picture of this complexity. The most direct way of simplifying is to highlight the larger flows between pairs of wards. There are several limitations to this approach, but a reasonably coherent summary picture does emerge in most areas. Figure 5.1 presents the pattern of flows of 25[2] or more people, overlain upon county boundaries. Considerable complexity remains in this pattern, although some features are identifiable:

- commuting flows are not deterred from crossing county boundaries;
- several flows often converge on the larger city centres; and
- rural areas show relatively few large scale flows between individual pairs of wards (although rural wards do tend to be small)

To demarcate the main clusters of flows in both urban and rural areas it is necessary to carry out a 'regionalisation' analysis. This is the form of analysis which is used to identify the Department for Education and Employment's Travel to Work Areas (TTWAs).

5.24 The technical challenge can be seen from the fact that the analysis has to process a matrix of commuting flows between over 11,000 wards across the whole of Britain. Since the data is a 10 per cent sample, less than two million flows are spread across this matrix of over 100 million cells! Very sophisticated data storage, retrieval and manipulation software is needed so that each run of the analysis is soon completed and reported. Given the constraints, it can be understood that the realistic objective becomes one of identifying the single 'least worst' solution. The basic algorithm and software development for the TTWA definitions was devised by the Newcastle team when creating the current set of TTWAs in 1983 (Department of Employment, 1984).

5.25 The TTWA process defines labour market areas by building up groupings of wards through a series of steps. First, all the wards in the country are considered so as to identify all plausible candidate 'foci' of commuting flows. Then the remaining areas are grouped into the emerging labour market areas by a series of steps which gradually focus on smaller and smaller flows between wards. When all wards have been included, the last step is to re-allocate those wards which were grouped into labour market areas which are found to fail the statistical criteria set for TTWAs (e.g. they do not reach the required minimum size).

5.26 Success in producing acceptable boundaries across the highly contrasting geographical circumstances of Britain is partly the result of the fact that the groupings of areas are not constrained by contiguity - that is, they need not be adjacent to each other. In fact, very few areas are grouped non-contiguously, such is the power of distance deterrence (i.e. most people's reluctance to commute longer distances than are essential). The advantages of the TTWA method were proved recently when it was revealed as the only available method which could produce commuting area boundaries which were seen to be valid in several different European Union countries (Coombes, 1992).

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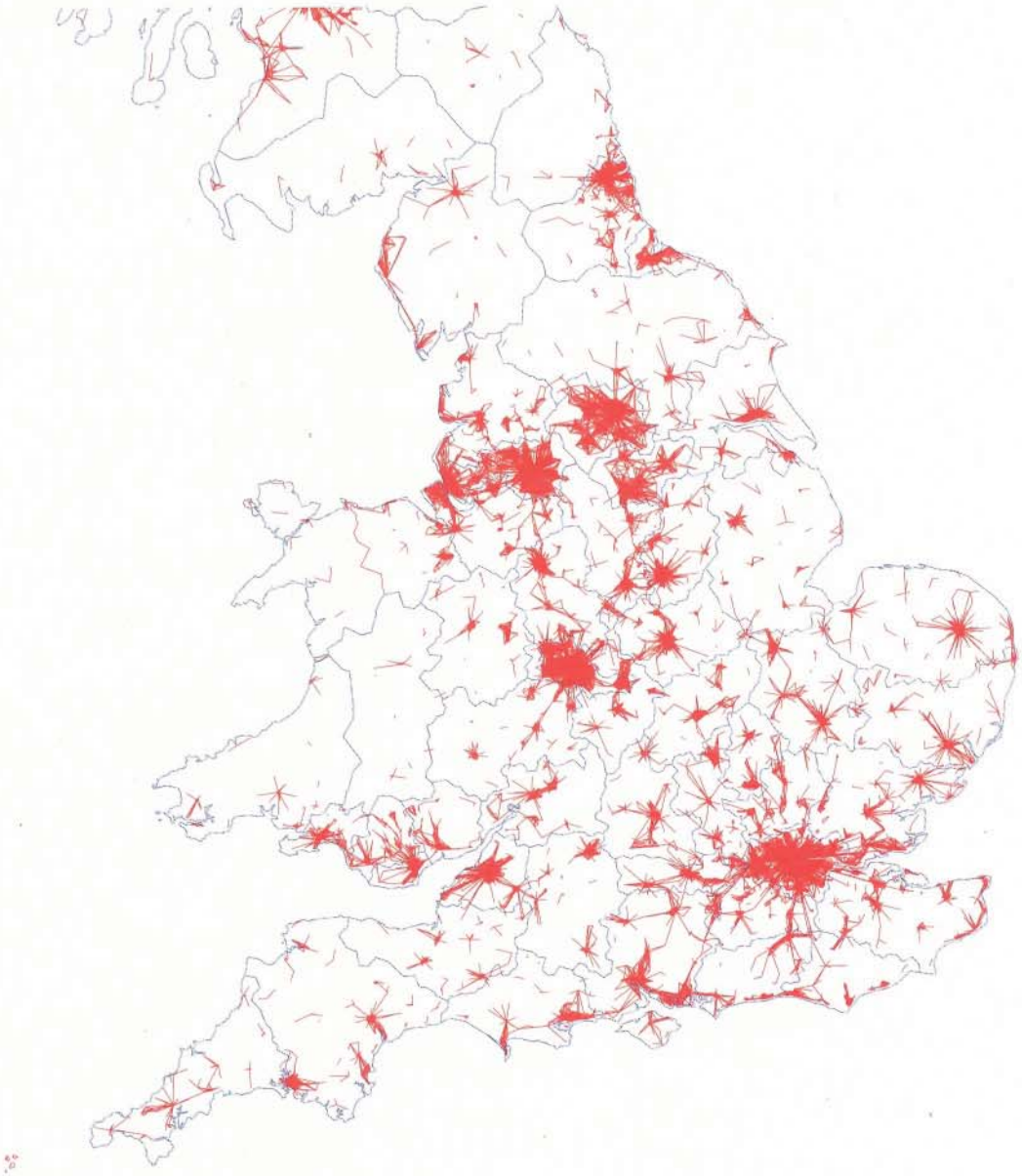
[2] The 1991 Census commuting data is from 10 per cent sample; the raw values are stated throughtout here, so the real values will be approximatelty 10 times higher.

Figure 5.1 The pattern of flows overlain upon county boundaries



5.27 The standard objectives set for TTWAs produce areas which would be too large to provide much information of value here - for example, a single TTWA embraces not only much of Greater London but also many adjacent Home Counties areas. However, the TTWA method was designed to allow it to be customised for different applications, so an adjusted set of criteria were adopted here for this illustrative analysis. In short, a group of wards is deemed to be a 'commuting cluster' when more than half of its commuting flows do not cross its boundaries, whereas this percentage (known as 'self-containment') is set higher in the TTWA statistical criteria[3]. Figure 5.2 shows the distribution of these local commuting clusters (shown in red) set against the background of county boundaries (shown in blue).

[3] The only changes from the TTWA criteria were that the Target Value for areas' size was raised to 15,000 jobs (counted at the workplace) and the self-containment Minimum Value was lowered to 50 per cent (see Dep. of Environment (1984) for a detailed explanation of the method).

Figure 5.2 The commuting clusters overlain upon county boundaries

5.28 Taking the major cities in turn from the north, it is notable that Newcastle is joined with North Tyneside but not with Gateshead (which has formed a separate grouping including Derwentside). Leeds is a cluster which comes close to matching its district boundary, as is Sheffield (which thereby excludes near neighbour Rotherham at this detailed level). These two Yorkshire cities are quite generously bounded as local authority areas, in that their boundaries include substantial rural tracts in addition to the main built-up areas. By way of contrast, Manchester and Liverpool are 'under-bounded' in that their city borders do not even include the whole built-up area around their city centres; hence it is not so surprising that they have absorbed significant parts of adjacent areas into their commuting clusters. Manchester has embraced Stockport plus most of Trafford and Macclesfield, whilst Liverpool is grouped with Knowsley, Sefton (except Southport) and much of West Lancashire district. Nottingham is a similarly under-bounded city and so groups with Gedling, Rushcliffe and Broxtowe, as well as much of Erewash (Derbyshire). In contrast, Birmingham remains largely separate from its neighbouring metropolitan districts (notably Sandwell and Solihull), yet does absorb the satellite town of Tamworth (Staffordshire). Bristol is the centre of a commuting cluster which embraces all of Avon except for Bath and Weston-super-Mare and their neighbourhoods. A final provincial city to be discussed here is Portsmouth whose cluster includes Havant and the rural area to the north - there are separate clusters for Chichester to the east, Gosport and Fareham to the west, and of course the Isle of Wight to the south.

5.29 Most attention is likely to be given to the results in London and its environs. Figure 5.3 provides a more detailed view of the commuting clusters here, with district boundaries shown to provide orientation. The most populous cluster is centred on the West End - it embraces all the Inner London boroughs west of the City (plus Hackney) as well as most of Brent, Barnet and Waltham Forest (from Outer London). All the East End boroughs are in a cluster which extends from the City out to Brentwood (Essex). An equivalent cluster to the south of the Thames extends from London Bridge to Bromley and Dartford (Kent). To the south, there are three separate clusters extending into Surrey from Croydon, from Sutton and from Kingston respectively. Much of west London is embraced by a cluster which undoubtedly focuses on the many jobs in Heathrow and its locality. The remaining parts of Greater London are in the north, with Harrow joining Watford and adjacent districts, while Enfield and Haringey are joined by some suburban areas from beyond the Greater London boundary.

5.30 Table 5.2 presents the full matrix of flows within and between these nine commuting clusters centred in and around London[4]. The central cluster - which includes the West End - is a net importer of labour from all the other eight areas. All of these other areas send more commuters to jobs in the central cluster than to any other. Heathrow and Croydon are the only other areas to receive flows of over a thousand from more than one non-central cluster. Of course, the reason why the flows between clusters may appear to be quite modest is that the areas have been well-defined so that most commuting takes place *within* these boundaries. The major flows which do straddle the boundaries of separate commuter clusters are those from outer areas into the central cluster, even though the latter has already been defined generously enough to extend from Wandsworth to Barnet and beyond.

[4] The clusters have been given names which have been chosen solely to suggest their main employment centre or, for the three clusters which include parts of London's 'core' area, which part of that inner area they include.

Figure 5.3 The commuting clusters of London overlain upon district boundaries

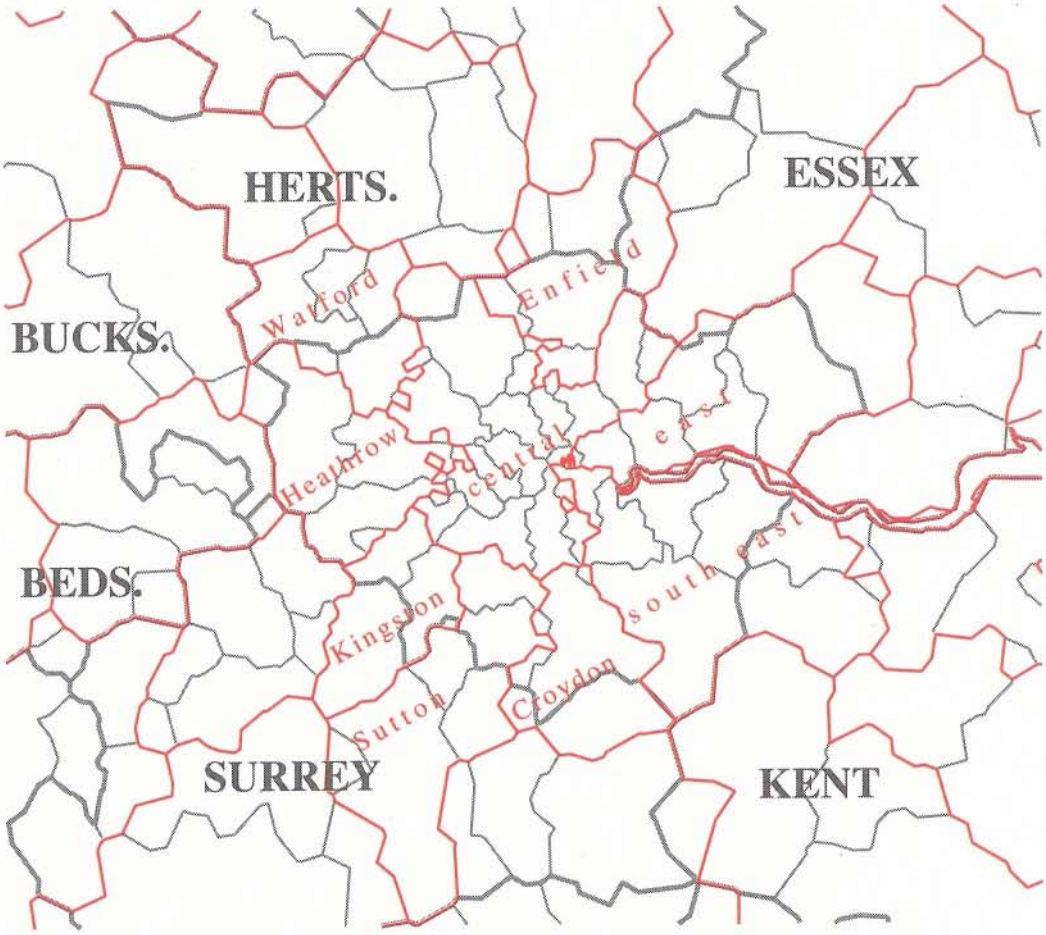


Table 5.2 Commuting flows between London's commuting clusters

to from	central	east	south east	Heathrow	Kingston	Sutton	Croydon	Enfield	Watford	elsewhere
central	76756	5333	3128	3755	734	1052	657	2392	1174	3015
east	8844	25053	911	210	38	49	61	402	43	1903
southeast	12595	2794	28652	272	105	327	1256	120	49	1650
Heathrow	6093	345	215	19638	979	136	44	73	928	2014
Kingston	3317	313	210	1203	7795	960	123	9	34	1359
Sutton	5293	500	504	386	1334	11899	1305	22	28	1302
Croydon	3689	461	1208	141	134	1164	9266	19	16	844
Enfield	7163	871	262	240	30	29	22	12013	128	1446
Watford	4660	296	129	1668	39	35	13	134	9378	1291
elsewhere	25063	9975	5270	8176	2092	1994	1624	2309	2506	1882112

5.31 In all this detail, then, there is remarkably little evidence of separate inner city labour market areas. The commuting clusters in Figures 5.2 and 5.3 mostly extend from urban centres out to the suburbs and, in many cases, beyond into the nearby more rural commuter areas. This is scarcely surprising as a general reflection of the main commuting flows in and around cities, but a small number of purely inner city labour market areas might have been expected in London and one or two of the largest provincial conurbations.

5.32 For the purposes of the present paper, then, the boundaries of these local commuter clusters have highlighted the strength of the flows between inner and outer areas. They have provided some notable initial evidence of distinctive local patterns, such as the strength of the links between Manchester and Trafford, say, when compared to those between Manchester and its ring of textile towns from Bolton to Tameside. However, one of the interests here is in the flows in and around inner city areas, so these boundaries are not suitable for that analysis, which will be provided in the following section of this report.

Flows to and from inner and outer city areas

5.33 The purpose of the tabulations set out below is to systematically reveal the structure of commuting flows in and around each of ten major English cities (*viz.* London and the six principal metropolitan centres, plus Bristol, Nottingham and Portsmouth). In each case, the city itself is split into its inner and outer areas - using the same basis as in Chapter 1 (on Changing Urban Structures) - but including in the 'city' definition any adjacent district whose inner area is a physical extension of the main city's (as detailed in Appendix G). Thus in the following discussion, Birmingham is 'short-hand' for Birmingham & Sandwell (whether the description is of the whole area or of just the inner or outer parts). Similarly, Manchester also embraces Trafford and Salford while Liverpool extends to cover Knowsley and Sefton - and Newcastle is grouped with Gateshead (despite them having been centres of separate commuting clusters in Figure 5.2).

5.34 Each central city has had its adjacent areas identified and grouped, where appropriate (in many cases, to reflect the commuter clusters in Figures 5.2 and 5.3). These zones have been defined to highlight the major patterns and contrasts in the cities' commuting links with their surroundings (these zones too are defined in Appendix H). In the following tables (as in Table 5.3), the last 'zone' in each case covers the remainder of Britain - so the totals include the whole of Britain in every table.

5.35 The tabulation of commuting flows in the major cities starts here with Greater London (Table 5.3). The size of the inner city definition in London influences these results, especially when they are compared with those for other cities. Over six out of seven (86.9 per cent) of London's inner city residents[5] work within this area, a higher proportion than for the inner area residents of any of the other nine cities studied here. Although London's large inner area means that, on average, an inner city resident in the capital would have to commute further to reach a job in the outer areas, it is well known that such commuting distances do not deter the many in-commuters to inner London - with the result that over half of inner city jobs (55.1 per cent) are held by residents of other areas. It is also clear from Table 5.3 that relatively few inner or outer London residents hold jobs outside the

[5] Throughout this report, the term 'residents' refers only to persons in employment who are in the 10 per cent sample Census commuting data and live in the area under discussion.

conurbation. Given that 'reverse commuting' can be quicker and easier than the traditional inward flow, either there is an overwhelming incentive to move home from the capital on obtaining a job beyond its boundaries, or Londoners are not responding to or benefiting from the growth of job opportunities in many Home County areas.

5.36 A rather different point thrown up by Table 5.3 is the continuing importance of London as an employment centre for the Home Counties (as grouped into the zones shown in figure G.1). The renowned level of rush hour traffic on the M25 must mainly be the result of commuting within the five large 'satellite' zones here (defined in Appendix G), because the largest flow *between* zones of this type in Table 5.3 is the 1901 from the Thames Corridor zone of Chatham to the adjacent Gatwick zone (which includes Maidstone). There is also little evidence of flows to London being counter-balanced by the attraction of other centres in the South East region, with the exception of the 4887 flow from the Slough zone to 'the rest of Britain' (a flow which is largely to the adjacent Reading area). To summarise, the common emphasis on recent shifts of employment away from the capital seems to be over-stated. London continues to be hugely important as a workplace for commuters from many adjacent areas - and remains overwhelmingly the source of jobs for its own residents. The strongest evidence for 'suburbanisation' of jobs is to be seen in the importance of outer London as a workplace, although this is substantially attributable to Heathrow (as shown by the one Home Counties zone which sends more commuters to outer rather than inner London being Slough, which is adjacent to Heathrow). Finally, the fact that less than a third of outer London residents (32.5 per cent) commute to jobs in inner London will surprise anyone who still thinks of these suburban areas as being little more than 'dormitories' for workers in the city centre.

Table 5.3 Commuting flows around London

to from\	inner	outer	Chatham	Gatwick	Slough	Harlow	Southend	elsewhere	Sum
inner	78682	9270	105	448	538	557	158	779	90537
outer	58449	109106	678	3111	3001	3141	666	1613	179765
Chatham	3206	1771	15210	1901	63	53	105	621	22930
Gatwick	6336	5972	1216	39070	1298	115	68	1935	56010
Slough	4576	7329	21	1669	51994	621	9	4887	71106
Harlow	9253	6893	49	109	650	46285	1212	2934	67385
Southend	4343	1824	57	47	26	1213	18528	224	26262
elsewhere	10262	4913	618	4349	5983	5475	279	1703727	1735606
Sum	175107	147078	17954	50704	63553	57460	21025	1716720	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

5.37 Birmingham and Manchester (see figures G.2 and G.3) are the two largest provincial English cities and provide the nearest comparators to the capital. The inner areas in each city provide the jobs held by around half of the residents of the whole districts - a very similar figure to the proportion of Greater London residents who worked in the inner areas of the capital. There are a number of other similarities between the two cities' overall flow patterns (Tables 5.4 and 5.5) and those which were identified in London (Table 5.3):

- a very high dependence of inner city residents upon inner city jobs;
- low 'reverse commuting' by outer city residents to satellite job centres (such as the car factories in Solihull or Coventry);
- continuing strong flows from satellite areas to the inner city; and
- only one or two localised strong flows (as in the Heathrow case) from satellite zones to outer city areas, most notably from the zone near Birmingham which centres on Redditch, which will largely be to the Longbridge car factory which is near the boundary of that city.

5.38 Finally, the provincial conurbations are rather less dominant in their regions than is London in the south east. The result is that there are some relatively strong counter-attractions to the main centres, which curtail in-commuting to the main cities to a greater extent than, say, Reading acts as a counter-attraction to London for the areas which lie to the west of London (i.e. the Slough zone). In the case of Birmingham, Table 5.4 shows that it attracts just 2.5 per cent of Coventry's residents. The nearest equivalent in Manchester's hinterland is provided by the Bolton zone (in Table 5.5), from where just over one in nine (11.3 per cent) of residents commute to the conurbation centre.

Table 5.4 Commuting flows around Birmingham

to from\	inner	outer	Wolv'ton	Solihull	Coventry	Redditch	Tamworth	elsewhere	Sum
inner	17804	2436	1766	1104	139	179	174	355	23957
outer	8986	9597	865	741	137	444	297	458	21525
Wolverhampton	5321	1328	23649	154	72	218	436	1527	32705
Solihull	3218	771	126	3944	297	310	161	266	9093
Coventry	328	81	52	213	13204	663	302	1475	16318
Redditch	1368	1273	295	472	850	12726	47	1192	18223
Tamworth	1679	600	1268	275	469	82	8107	1392	13872
elsewhere	2225	785	3737	340	1465	1374	1236	2102746	2113908
Sum	40929	16871	31758	7243	16633	15996	10760	2109411	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

5.39 The next two conurbations in size are Liverpool and Newcastle (see Figures G.3 and G.4 and Tables 5.5 and 5.6 respectively). Here, job losses have been a long-term trend, and the commuting patterns reflect this distinctly. Whereas in the cities described previously there was just one nearby zone which did not have strong flows to the central city, for Liverpool there are few adjacent zones which do strongly depend on the conurbation centre. This is also true for Liverpool's outer city, and well over three out of every four jobs in the inner and outer zones together are taken by the city's own residents. Inner Liverpool attracts just over 10 per cent of residents from the Wirral zone, while Liverpool as a whole provides work for just over an eighth of the residents of the zone to the east (Warrington). Barely 1 in 200 residents of the nearby prime commuting area of Chester work in Liverpool. The picture for Newcastle, however, is one in which the city has declined less rapidly than its surroundings. The result is that it is still the location for the jobs of at least 15 per cent of residents in each of the immediately

adjacent zones (Table 5.7), and also over 10 per cent from the slightly further removed Sunderland, which was once a strong counter-attraction in its own right. The flow from the Shields zone (*viz.* N. & S. Tyneside) is particularly strong, partly assisted by the local Metro rail system.

5.40 The remaining two metropolitan centres are Leeds and Sheffield (Figures H.6 and H.7 and Tables 5.8 and 5.9 respectively). Although there has been more vigorous growth in Leeds than in Sheffield - or, indeed, most large provincial cities - the commuting flows around the two Yorkshire conurbations still show some similar patterns. In particular, it is adjacent former coal mining areas which are most heavily dependant on the central cities. Thus among the West Yorkshire boroughs, it is only from the mining area of Wakefield that over 10 per cent commute to Leeds (inner or outer). Similarly in the Sheffield case, 15.8 per cent commute in from the Rotherham zone and 12.2 per cent from Chesterfield in Derbyshire. In fact, Sheffield musters few in-flows from anywhere else: the other mining area is Doncaster but this is a little more distant. The nearer prime commuting area of Derbyshire Dales (Matlock) houses less than 100 central Sheffield workers. The relative strength of Leeds can be seen from the larger flows it attracts, both from the textile towns such as Bradford and Huddersfield in its metropolitan county, and also from its more rural hinterland extending to York and Harrogate (in North Yorkshire).

Table 5.5 Commuting flows around Manchester

to from\	inner	outer	Rochdale	Stockport	Bolton	Mac'field	elsewhere	Sum
inner	7832	1568	254	748	89	116	303	10910
outer	6286	9260	304	961	531	242	877	18461
Rochdale	2837	633	12614	1039	570	35	990	18718
Stockport	5620	1533	736	20730	145	980	822	30566
Bolton	1482	1104	661	196	16305	48	3055	22851
Macclesfield	1131	411	33	1381	39	7090	844	10929
elsewhere	2393	1238	802	851	1824	1393	2128665	2137166
Sum	27581	15747	15404	25906	19503	9904	2135556	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

Table 5.6 Commuting flows around Liverpool

to from\	inner	outer	War'ton	Birk'head	Skel'dale	Chester	elsewhere	Sum
inner	10430	1877	390	259	99	24	350	13429
outer	6305	7102	542	226	397	29	734	15335
Warrington	1286	845	14379	172	164	342	2282	19470
Birkenhead	2207	190	264	13435	10	1452	1139	18697
Skelmersdale	586	423	162	21	2654	6	634	4486
Chester	167	59	701	871	1	6515	1509	9823
elsewhere	880	285	2438	1279	609	1333	2161537	2168361
Sum	21861	10781	18876	16263	3934	9701	2168185	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

Table 5.7 Commuting flows around Newcastle

to from\	inner	outer	Shields	Sun'land	Ashington	Hexham	Durham	elsewhere	Sum
inner	2374	1414	416	166	29	33	68	117	4617
outer	3267	6492	751	350	133	334	285	333	11945
Shields	1549	1843	7735	625	239	124	78	383	12576
Sunderland	587	547	492	7312	16	29	377	604	9964
Ashington	380	666	651	43	3078	588	14	129	5549
Hexham	318	616	156	34	248	2717	44	227	4360
Durham	636	771	162	593	22	67	5750	788	8789
elsewhere	299	304	178	643	73	200	866	2189238	2191801
Sum	9410	12653	10541	9766	3838	4092	7482	2191819	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

Table 5.8 Commuting flows around Leeds

to from\	inner	outer	Bradford	Hud'field	Wakefield	York	Harrogate	elsewhere	Sum
inner	5879	1528	184	118	104	39	42	143	8037
outer	7919	9195	1059	374	711	217	286	502	20263
Bradford	722	836	14613	683	100	12	44	523	17533
Huddersfield	834	613	1402	19081	534	28	9	1037	23538
Wakefield	989	574	105	488	9361	422	14	668	12621
York	361	325	37	21	242	6197	128	911	8222
Harrogate	344	363	108	23	25	195	5022	317	6397
elsewhere	906	487	738	748	991	2283	364	2146473	2152990
Sum	17954	13921	18246	21536	12068	9393	5909	2150574	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

Table 5.9 Commuting flows around Sheffield

to from\	inner	outer	Rotherham	Doncaster	Ch'field	Matlock	elsewhere	Sum
inner	2994	1169	210	29	74	7	103	4586
outer	6595	6575	833	160	453	40	589	15245
Rotherham	1372	1437	12626	789	123	7	1442	17796
Doncaster	230	122	748	12045	89	6	1318	14558
Chesterfield	801	533	196	249	7463	278	1411	10931
Matlock	86	47	8	0	125	2135	676	3077
elsewhere	344	213	715	1068	661	586	2179821	2183408
Sum	12422	10096	15336	14340	8988	3059	2185360	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

5.41 The remaining three cities examined here (Figures H8 to H.10 and Tables 5.10 to 5.12) provide some contrasts from among non-metropolitan areas. All three cases - Bristol, Nottingham and Portsmouth - are somewhat complicated by the under-bounding of their central cities. Thus there are major two-way flows between in Table 5.10 between Bristol and the zone including the Filton aerospace complex, and in Table 5.11 between Nottingham and the Bridgford and Ilkeston zones (the former including Nottinghamshire County Hall and the latter the Boots factory). Portsmouth shows a more dramatic picture, because the *only* substantial flows are with the other areas of the Portsmouth conurbation, Havant and Gosport (with Fareham). Less than 5 per cent of residents in the adjacent rural areas commute into Portsmouth, and the fact that the city attracts the largest single flow from the Isle of Wight needs to be tempered by realising that this is a flow of less than 50 commuters. Nottingham does not muster many more in-commuters from its surroundings, although over 5 per cent of residents in the mining areas around Mansfield do work in the city. In contrast, the more vigorous centre of Bristol employs a higher proportion (6.7 per cent) of the residents of the equally prosperous city of Bath, and well over 15 per cent of the residents of the other two districts of Avon (the Keynsham and Weston zones).

Table 5.10 Commuting flows around Bristol

to from\	inner	outer	Filton	Bath	Keynsham	Weston	Stroud	elsewhere	Sum
inner	4703	1261	893	73	172	51	29	187	7369
outer	3350	3082	976	86	168	125	24	195	8006
Filton	2754	1001	5836	198	119	151	126	382	10567
Bath	149	67	71	2522	13	137	82	206	3247
Keynsham	1397	536	358	26	4576	43	15	419	7370
Weston	435	194	131	624	60	1807	18	316	3585
Stroud	162	66	281	191	10	28	6446	2364	9548
elsewhere	822	333	472	590	366	303	1249	2195774	2199909
Sum	13772	6540	9018	4310	5484	2645	7989	2199843	2249601

Table 5.11 Commuting flows around Nottingham

to from\	inner	outer	Ilkeston	Mansfield	W.B'ford	Gran'm	L'boro	elsewhere	Sum
inner	941	444	103	20	186	23	3	105	1825
outer	2268	3512	501	73	779	74	16	288	7511
Ilkeston	1444	1544	12219	495	588	314	29	2640	19273
Mansfield	293	175	809	5578	280	24	56	812	8027
West Bridgford	2283	1743	473	226	3903	273	74	475	9450
Grantham	77	49	89	12	89	6833	76	2985	10210
Loughborough	67	42	18	72	95	140	4714	1464	6612
elsewhere	435	288	1881	627	248	1908	797	2180509	2186693
Sum	7808	7797	16093	7103	6168	9589	5765	2189278	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G.

Table 5.12 Commuting flows around Portsmouth

to from\	inner	outer	Havant	Gosport	I.o. Wight	Winch'r	Chich'r	elsewhere	Sum
inner	1214	610	172	94	1	53	34	189	2367
outer	1023	2502	361	230	3	114	55	274	4562
Havant	418	911	2597	148	2	331	219	324	4950
Gosport	473	760	200	4466	11	287	26	994	7217
I.o.Wight	36	10	7	3	4330	6	0	128	4520
Winchester	137	291	313	171	2	5519	125	2367	8925
Chicester	34	94	144	14	2	114	3027	799	4228
elsewhere	141	261	142	652	27	2142	842	2208625	2212832
Sum	3476	5439	3936	5778	4378	8566	4328	2213700	2249601

NB: For a full list giving definitions of zones, please refer to Appendix G..

Commuting by distinct sub-groups

5.42 This analysis so far has aimed to draw attention to the broad similarities between cities' patterns of commuting flows, while noting some key distinctive features of individual cities where those arose in the discussion. All of this evidence, however, has been derived from the pattern of aggregate flows, in that it has used the full 10 per cent sample Census data - which takes together all groups within the labour force. Yet it is known that different groups can have very different patterns of commuting behaviour, so it is appropriate to focus attention on a small number of particularly interesting groups. The groups examine here - part-time workers, all manual workers, and professionals - have been selected to draw attention to a number of clear contrasts, as well as to some recurring patterns. The groups are neither mutually exclusive nor exhaustive, in that part-time workers may well be among the manual or professional workforce, and there are many full-time, non-professional non-manual workers who are not included in any of the three groups chosen for illustrative purposes here.

5.43 The commuting patterns of part-time workers tend to be localised, primarily due to their lower earnings not warranting the cost of longer-distance travelling, but in some cases because part-time working has been chosen specifically to allow easy access between work and home or the location of other local commitments such as the schools of the workers' children. The result can be seen in the first two columns of Table 5.13 (in which certain key statistics are tabulated for all cities). The vast majority of part-time working inner city residents work within the same city, and very largely within the inner city itself. The lowest values in column 1 are explicable by local circumstances: the under-bounding of Nottingham has already been mentioned and is the reason for more of its inner city residents working outside the city itself than elsewhere, and the importance of outer Newcastle as a job location for inner city residents is due to the location of some very major employers in the suburbs (most notably the huge DSS complex at Longbenton). Nonetheless, there may be important disadvantages for inner city residents of Newcastle, Nottingham and, to a lesser extent, Bristol due to needing to search further from home to find work.

Table 5.13 Part-time workers' commuting patterns

	Residents [n] of inner city areas (zone 1) % who work in:			Residents [n] of outer city areas (zone 2) % who work in:			Residents of other areas as a % of workers in:	
City	zone 1		zone 2	zone 1		zone 2	zone 1	zone 2
London	90.7	[17146]	7.8	16.8	[36427]	79.2	10.2	10.1
Birmingham	79.0	[4968]	10.1	30.2	[5059]	61.5	24.3	17.1
Manchester	81.2	[2589]	11.3	27.2	[4304]	64.3	34.1	15.2
Liverpool	82.5	[3323]	14.1	32.6	[3915]	60.5	12.2	9.1
Newcastle	59.0	[1191]	34.2	21.2	[2925]	69.0	25.0	25.2
Leeds	79.8	[1887]	16.1	33.7	[5071]	57.5	10.7	11.2
Sheffield	73.3	[1206]	23.3	38.1	[3798]	55.3	14.0	14.0
Bristol	73.9	[1706]	14.0	40.3	[1972]	47.8	30.7	21.0
Nottingham	61.6	[365]	22.5	29.1	[1828]	55.5	48.1	36.4
Portsmouth	69.1	[554]	21.1	23.7	[1134]	66.8	21.9	26.2

5.44 Public transport provision in the inner cities does tend to be more intensive, which is in keeping with the needs of part-time workers because they are particularly dependent on public transport to get to work. Hence the 90 per cent of inner London part-time workers who work within that area may have relatively good accessibility to those jobs, even though their actual commuting distances may be quite long due to the size of the inner London area. The scale of the London areas is also the likely reason why so few outer London residents hold part-time jobs in the inner city (column 3 of Table 5.13). Elsewhere there is a fairly consistent pattern of just one in ten part-time working outer city residents 'reverse commuting' to outlying areas (i.e. other than zone 1 or 2). Within this pattern, the exceptions already noted show up again, with Nottingham having most part-timers commuting outwards, and Newcastle most dependent on jobs in the suburbs of the city itself (zone 2).

5.45 By far the greatest variation between cities shown in Table 5.13 is in terms of the shares of inner/outer city part-time jobs which are taken by people not living in the city (columns 5 and 6 respectively). Again it is Nottingham which is the most remarkable case, because the outflow of the city's residents to jobs elsewhere (340 part-time workers) is more than balanced by a strong inflow (1386 part-timers who live in surrounding areas). The fact that this is substantially an artefact of the under-bounding of the city is witnessed by Bristol and Portsmouth also having high values. Both inner and outer city jobs in Newcastle are strongly competed for by residents of outlying areas, with only Birmingham and Manchester seeing similar proportions of in-commuters taking part-time jobs. It is interesting that in these cities, as well as Bristol and Nottingham, residents of outlying areas take a larger share of the part-time jobs in the inner city than of the outer cities, even though working in the latter areas might mean lower average commuting distances.

5.46 Because of the way the data is made available, it is necessary to take part-time and full-time workers together once again when splitting down the commuting data by any different categorisation (except for gender, and the fact that the vast majority of part-time workers are women would make a male/female split

uninformative here). Less well qualified people are known to be over-represented among the unemployed and manual workers, so the latter category is taken in Table 5.14 as a group of particular interest. In general, there is a very close correspondence between the pattern of commuting for this group and that seen among part-time workers (in Table 5.13). Manual workers have a rather longer commuting range, and this can be observed by comparing corresponding values in the two tables. For example, column 1 shows the proportion of inner city residents who work within the same area: the manual workers' willingness to commute further is shown by each city having a lower value in this column (Table 5.14) than it had for part-timers (Table 5.13). The second column shows that most of these 'extra' non-local workers are travelling beyond the city altogether, because the proportions working in zone 2 have risen only marginally. Remarkably, less than 10 per cent of Birmingham's inner city manual workers hold outer city jobs, suggesting that they do not seem to be getting their 'share' of jobs in locations such as Longbridge. Newcastle again shows high levels of outward commuting, although less than the exceptional level of part-time workers (who were very highly dependent on the outer city service sector jobs).

Table 5.14 Manual workers' commuting patterns

	Residents [n] of inner city areas (zone 1) % who work in:			Residents [n] of outer city areas (zone 2) % who work in:			Residents of other areas as a % of workers in:	
City	zone 1		zone 2	zone 1		zone 2	zone 1	zone 2
London	86.5	[29215]	11.7	20.4	[58540]	73.8	11.4	13.9
Birmingham	75.6	[13869]	9.7	38.6	[8665]	49.8	24.5	21.9
Manchester	72.3	[5536]	14.9	27.8	[7241]	59.1	34.2	22.7
Liverpool	76.4	[6990]	14.9	30.4	[5487]	57.2	2.3	14.1
Newcastle	54.2	[2653]	28.4	26.3	[4769]	56.5	32.3	27.7
Leeds	73.2	[4187]	20.5	33.0	[7833]	54.7	14.3	19.9
Sheffield	66.9	[2666]	24.9	39.4	[6255]	48.1	15.0	21.5
Bristol	60.3	[3030]	20.8	32.2	[3109]	47.4	28.2	26.7
Nottingham	52.3	[814]	28.4	26.3	[4002]	51.8	44.1	37.2
Portsmouth	54.3	[936]	27.1	17.9	[2159]	60.0	24.5	32.0

5.47 Outer city residents with manual jobs are also commuting more widely than their part-time working neighbours (as shown by the lower values in column 4 of Table 5.14 when compared to Table 5.3). However, the decline in the inner cities of the sorts of industries which employ many manual workers is shown by the modest values in column 3 (Table 5.14). The inner cities of Birmingham and Sheffield still offer substantial numbers of manual jobs for outer city residents, but this is far less true for several other cities. The overall picture in every city is that manual workers living in the outer areas are more likely than part-time workers to be commuting out of the city to find work. This finding may partly reflect the statistics shown in the last column, which indicate the level of competition from outside the city for jobs located in outer city areas. All cities show that outer city manualjobs (Table 5.14) are more likely to be taken by in-commuters from outside the city than are nearby part-time jobs (Table 5.13). Thus the proportion of manual

jobs provided in areas near to peripheral city housing estates which could be expected to go to commuters from outside the city can vary from one in seven for London and Liverpool (where the values in Table 5.14 are around 14 per cent) to over one in four in Newcastle and Bristol and even higher levels in Nottingham and Portsmouth.

5.48 Finally, Table 5.15 'benchmarks' these values by providing the equivalent statistics for the most mobile occupation group, professionals. Looking at the right-hand column again, it can be seen that over two-thirds of professional jobs in outer Nottingham are taken by in-commuters from outside the city. As expected, all cities show higher levels of in-commuting to both inner and outer areas for professionals than for either of the other two less well paid groups discussed previously (tables 5.13 and 5.14). However, when attention turns to the first four columns - which examine the commuting patterns of the cities' own residents - the difference between professionals and the other groups narrows markedly. Admittedly, professionals are more likely to be working for employers who are located in the city centres than are manual workers - as is shown by the generally higher values in Table 5.15 than Table 5.14 for outer city residents commuting to inner city areas (column 3). Yet it does seem to be the case that those among this mobile group who do live in the cities are not very much more inclined to 'reverse commute' than are their neighbours with notably less well paid types of job.

Table 5.15 Professional workers' commuting patterns

	Residents [n] of inner city areas (zone 1) % who work in:			Residents [n] of outer city areas (zone 2) % who work in:			Residents of other areas as a % of workers in:	
City	zone 1		zone 2	zone 1		zone 2	zone 1	zone 2
London	84.7	[23469]	10.1	42.0	[44419]	47.5	30.1	32.3
Birmingham	67.5	[2753]	10.1	42.7	[4572]	35.9	54.2	42.9
Manchester	66.2	[1681]	11.7	35.2	[3879]	39.3	63.1	48.1
Liverpool	74.1	[1408]	11.2	44.6	[3266]	35.4	40.7	23.2
Newcastle	43.4	[463]	28.7	25.6	[2340]	48.0	52.7	46.4
Leeds	70.8	[1141]	15.0	38.8	[4486]	37.3	37.4	33.4
Sheffield	60.2	[530]	24.5	42.9	[3200]	36.7	33.1	30.1
Bristol	60.4	[1423]	12.7	42.3	[1610]	32.1	53.0	49.1
Nottingham	53.2	[357]	14.6	30.4	[1085]	39.3	72.1	67.0
Portsmouth	46.7	[488]	20.3	20.4	[773]	48.4	49.3	60.6

Conclusions

5.49 It is argued that the analysis of commuting patterns helps to detail the major features of cities' spatial structure and their linkages with the regional context in which they are embedded. In this way, distinctive features of each of the ten cities examined here have been documented (e.g. the fact that less than 1 in 3 of all outer London residents works in inner London).

5.50 A number of common factors have emerged:

- most inner city residents, from all groups, work locally;
- few city residents 'reverse commute' to surrounding areas;
- most cities are still major centres of in-commuting for their regions;
- workers in less well paid groups commute shorter distances, but in similar directions, to other groups; and
- local industrial history can often be traced in an area's pattern of commuting flows.

5.51 The major flows which are identified reveal whether a city's residents, in its inner and outer areas separately, face particularly strong competition from in-commuters for local job opportunities. The two major factors working to protect city residents from the steady growth in competition from elsewhere for job opportunities in the city are the growth in job prospects in more rural areas - which will be a counter-attraction for those areas' residents - and the 'distance deterrence' which continues to restrain most people's commuting distance. Unfortunately, this deterrence has been declining gradually for a very long time, so it is likely that there will be a continuing increase in the competition for local jobs amongst inner city residents from increasingly mobile residents of other areas. Moreover, if there is a slowing of the growth in job opportunities in the outlying areas - a situation which has prevailed in the Newcastle region for some time - then the residents of those outlying areas will be all the more likely to compete for the jobs in the cities.

6 Ethnic Minorities

Summary

Research Context

6.1 This research into ethnic minorities had the following objectives:

- to provide an overview of the geographical distribution of ethnic minorities;
- to produce basic demographic, economic and social data on those ethnic minorities;
- to examine the segregation, migration and dispersal of ethnic minorities.

6.2 The 1991 census was the first to ask a direct question on ethnicity. In fact, the issue of defining ethnicity is highly problematic, such definitions being based on a mixture of factors including ancestry, skin colour, culture, religion and country of birth. The 1991 census asked the people of Britain to indicate the ethnic group to which they felt they identified and gave them nine different options to describe their ethnicity, these being White, Black Caribbean, Black African, Black Other, Indian, Pakistani, Bangladeshi, Chinese and Any Other Ethnic Group. Most research using the 1991 census ethnicity data uses all the above groups, with the division of the last category into 'Other Asian' and 'Other Other' (which includes people who described themselves as, for example, Arab or Asian-White). This analysis also considers the characteristics of people born in the Republic of Ireland.

The geographical distribution of ethnic minorities

6.3 Ethnic minority groups are highly unevenly distributed across Britain. About 3 million people (5.5 per cent) of the population of Britain described themselves as belonging to an ethnic minority group in 1991. Roughly 6.2 per cent of those living in England, 1.5 per cent in Wales and 1.3 per cent in Scotland. About 40 per cent of the population of Britain live in wards where less than 1 per cent of the population belong to an ethnic minority group. As is well known, the different ethnic minority groups have very different distributions across Britain:

- Black groups are concentrated mainly in the Greater London area;
- people describing themselves as Indian are concentrated in metropolitan southern England, the Home Counties and in the more affluent parts of West London;
- the majority of people describing themselves as of Pakistani origin live in the metropolitan areas of West and South Yorkshire, the North West and the West Midlands regions;

- people describing themselves as of Bangladeshi origin are concentrated particularly in the London Borough of Tower Hamlets;
- the Chinese, Other Asian and Other Other groups are concentrated in London, although the former is also spread quite evenly across the rest of the country.

The socio-economic characteristics of ethnic minorities

Age-sex profiles

6.4 There is great variation between the different ethnic minority groups in terms of their age-sex profiles. These different profiles underpin many other socio-economic differences between groups, for example, with regard to employment profiles. White and Irish-born groups have greater numbers of older people, reflecting an ageing population. The age profiles of the Black Caribbean and Black African groups reflect post-war immigration patterns.

Household structure

6.5 There is also much variety between ethnic groups in terms of household structure. Again, these variations reflect the different age profiles of ethnic groups as well as cultural and social differences. For example:

- for the White group, one third live in one-person households and one third live in households consisting of two adults and no children. This reflects the older age structure of this group;
- a majority of households identifying with the South Asian group live in households with two adults and children, reflecting the younger age structure of this group;
- households identifying with the Black Caribbean and Other Other ethnic minority groups show patterns of household structure similar to the White group, but with a much larger proportion of households with one adult and children.

Young people in further and higher education

6.6 The proportions of young people (16 years old and above) in further and higher education are a useful indication of the socio-economic circumstances and aspirations of a group of people. Different proportions of young people from the various ethnic minority groups attend higher and further education in Britain:

- 13 per cent of all male students identify with an ethnic minority group. The largest proportion of ethnic minority students describe themselves as Indian, Pakistani or Black African;
- 10 per cent of all female students identify with an ethnic minority group. These women are most likely to identify with the Indian, Pakistani, Black Caribbean and Black African ethnic minority groups.

Housing tenure

6.7 This research found that there is a wider variation in distribution of housing tenure types among ethnic minority groups than there is among social groups. For example, five out of ten more people identifying with the Indian group are owner occupiers than there are owner occupiers amongst people identifying themselves as Black Africans. In contrast, for social groups, four out of ten more Professionals are owner occupiers compared with Unskilled workers. The differences between ethnic groups in terms of housing tenure do, however, reflect differences between types of urban and rural district. For example:

- people describing themselves as Indian, Pakistani and White are most likely to own their homes;
- people describing themselves as Black African, Black Other and Bangladeshi are least likely to own their homes;
- people describing themselves as Pakistani or Indian are least likely to rent their homes.

Economic activity

6.8 This research also investigated differences between groups in terms of economic activity rates. Again, differences in the age structure of different groups underpin many of the variations between groups with regard to economic activity. Some of the more striking findings are that:

- men identifying with the Black Other group are most likely to be either in work or seeking employment;
- women describing themselves as Bangladeshi are least likely to be economically active;
- a higher proportion of women identifying with the Black Caribbean group are in employment than women in the White or Irish-born groups. This is partly a reflection of the differences in age structure between the groups.

The segregation and migration of ethnic minority groups

6.9 The segregation of different ethnic groups has never occurred in Britain to the same degree as in the USA. However, the identification of different neighbourhoods in cities with different ethnic groups is a notable feature of the social geography of Britain's urban centres, as outlined above. This research found that, unsurprisingly, some groups were more segregated than others. For example:

- people identifying with the Bangladeshi group were the most segregated. Three-quarters of this group would have to move (and many to a specific set of places) in order for this group to have the geographical distribution identical to the population as a whole. The second most segregated group are people identifying themselves as Pakistani,

- the least segregated groups are the Chinese, Other Other (e.g. Arab, Asian-White), Black Other and Other Asian ethnic minority groups. This reflects the fact that many people identifying with these groups have a white parent.

6.10 Through an examination of migration data, it is also (in theory) possible to assess how levels of segregation are likely to change over time. In fact, this is extremely difficult to do with any accuracy, given the nature of the census output on ethnicity and migration (where the only groups described are White, Black, South Asian and Other), given the restrictions on migration data to the 1990-91 period, and given the anomalous nature of migration trends in England over that period (due to the housing slump). In general, the population in Britain is tending to move away from metropolitan centres towards smaller urban centres and more rural areas. There are notable differences between groups:

- people in the White group are more likely to move away from urban districts towards more rural places (districts such as the Cotswolds and East Hampshire);
- people identifying with the Black group are more likely to move to the outskirts of London and to parts of Essex from Inner London (places such as Haringey, Lambeth and Hackney);
- people identifying with the South Asian group are more likely to move away from areas of settlement in parts of Birmingham, Leicester and Bradford, and parts of London such as Brent, Ealing and Newham, towards districts outside London, such as Luton, Milton Keynes and Maidenhead. However, it is highly likely that there will be marked differences between the groups analysed together under the label 'South Asian', but the census output makes no further breakdown of groups.

6.11 It could be argued that, if current migration trends continue, increasing segregation of ethnic groups may occur. However, it is not possible to predict this with any accuracy using census data.

6.12 There is some evidence that the geographical spread and concentration of ethnic groups in Britain is substantially the same in 1991 as it was in 1981, although this is, of course, very difficult to assess with any accuracy given the absence of a direct question on ethnicity in the 1981 census. However, these is also some evidence for a greater degree of concentration of ethnic groups in metropolitan areas in 1991 than 1981. This may have occurred for a number of reasons, including the tendency for members of the White group to move away from urban areas, the relatively higher proportions of people from ethnic minority groups having children, the growth in new households amongst ethnic minority groups near existing ethnic minority households, and within-Britain migration of members of ethnic minorities to new areas of economic opportunity.

Introduction

6.13 The purpose of this chapter on ethnic minorities is to provide an overview of the geographical distribution of ethnic minorities in England, and to produce key demographic, economic and social information about ethnic minorities within the context of the population as a whole.

6.14 The chapter begins with an overview of the distribution of ethnic minorities in Britain. (The research considers figures for Britain rather than just England, because migration flows are examined, which are difficult to conceptualise outside the national context given the high rates of migration between England, Wales and Scotland.) Key demographic, economic and social information on ethnic groups is presented and a tentative examination of the data on segregation and dispersal of ethnic groups, and of migration patterns is provided, insofar as reasonable projections can be made on the basis of one year's data. The chapter then goes on to summarise the results of a large amount of research which has examined the ethnicity variables from the 1991 census, including attempts which have been made to link 1991 ethnicity data to 1981 country of birth data to determine whether ethnic minorities were more or less geographically concentrated in 1991 than in 1981. The chapter concludes with a brief discussion of the issue of under-enumeration in the 1991 census. Whilst this issue raises questions pertinent to the other reports on urban trends in this series, under-enumeration is dealt with in greater depth here because of its particular significance for the enumeration of ethnic minority groups in Britain.

An overview of the distribution of ethnic minorities in Britain

6.15 In this section, an overview of the distribution of ethnic minority groups in Britain is presented, concentrating on the simple district-level distribution of each of the nine identified ethnic groups and of the Irish-born population (which is used as a surrogate ethnic group). The detailed geographical distribution of ethnic minority groups in Britain has been analysed extensively by many other researchers and this work is summarised in Paras. 6.46 - 6.63. Paras. 6.32 - 6.45 look at the level of geographical segregation of each group and how that is changing.

6.16 The 1991 census provided the people of Britain with their first opportunity to describe what they felt their ethnicity to be, on a uniform and consistent basis. Before 1991, assumptions had been made on the basis of small surveys, and inferences had been made from data on the birthplace of immigrants. Neither of these approaches was particularly accurate and over time they were increasingly seen as inadequate. The difficulties of asking and obtaining responses to an accurate question on ethnicity should not be underestimated. This is because there is no consensus over the definition of the term 'ethnicity', let alone any uniform conception of the ethnicity of the people of Britain. For our purposes, we define ethnicity in terms of the answers given to the highly structured question on the census form. This question asked people what they felt their ethnic '*ancestry*' to be. Because the form only offered nine tick-boxes, the results were of course heavily dependent on the options offered. For example, respondents were not encouraged to describe themselves as Irish, Celtic or Jewish. Nevertheless, if considered within these constraints, the answers which people chose to give to this question have produced extremely interesting results.

6.17 Nationally, just over 3 million people ticked something other than 'White' - 5.5 per cent of the population in Britain (6.2 per cent of the population in England, 1.5 per cent of the population of Wales and 1.3 per cent of the population of Scotland).

The spatial distribution of this group is highly uneven; 40 per cent of people in Britain live in wards where less than 1 per cent of the population belong to an ethnic group. Greater London, the remainder of the South-East, the East Midlands, and the West Yorkshire, West Midlands and Greater Manchester metropolitan counties contain the vast majority of people in ethnic minority groups.

6.18 The ten ethnic minority groups used in this report are Black Caribbean, Black African, and Black Other (which are also combined later in this report as 'Black' groups); Indian, Pakistani and Bangladeshi (which are also combined as 'South Asian' groups); Chinese, Other Asian and Other (which are combined later as 'Other' groups), and the Irish-born living in Britain. A full definition of these groups can be found in OPCS 1992[1]. The definition of most of these groups is self-explanatory, being based on a mixture of skin colour, country of origin and religion. The three which may not be clear are Black Other, which includes people who wrote on their census forms Black British, Black/White or similar; Other Asian, which includes some people who filled in none of the specific Black categories and also wrote Black Asian, East African, or included a nationality elsewhere in Asia; and Other, which includes Arab, Asian White and numerous other possibilities.

6.19 Figure 6.1 shows, using ten cartograms, the spatial distribution at district level of each of these ten groups. A key to the cartograms is given in Figure 6.2. The key allows any individual district shown in the cartograms to be identified. If cartograms were not used, we would not be able to see the ethnic minority population clearly on maps, because most ethnic minority residents tend to live in the most densely-populated parts of cities. The cartograms have all used the same scale so that the relative sizes of each ethnic group in different parts of the country can be compared.

6.20 The three Black groups can be seen to be located predominantly within the boroughs of Greater London although a high proportion of the Black Other group can also be seen in districts such as Forest Heath and Ipswich in Suffolk. A significant number of American servicemen living in Britain in 1991 fall into this group (there are a number of USA airbases in Suffolk).

6.21 The three South Asian groups show very different district-level geographies. The Indian group can be seen to be largely concentrated in metropolitan areas of the south of England, and also in the Home Counties and in the more affluent parts of the west of London. In contrast, residents who identified themselves with Pakistan are largely located in the cities of Yorkshire and the North West or the West Midlands. Different again is the distribution of Bangladeshi residents. This is, of course, one of the smaller ethnic minority groups. The cartogram shows that this group exceeds 5 per cent of the resident population only in the London Borough of Tower Hamlets.

6.22 The last three ethnic minority groups, Chinese, Other Asian and Other Other, despite the wide diversity of their origins, are all similarly concentrated within London. The final group, those people living in Britain who were born in Ireland, can be seen to be far more diffusely spread across the country, although still with higher concentrations in London. Note in particular the high proportions of Irish-born people living along the South Coast of England. This geography is largely a reflection of the age distribution of this group, which is discussed later.

[1] OPCS *1991 Census Definitions, London*, HMSO, 1992.

Figure 6.1 Ethnic Minority groups in 1991, proportion of district populations

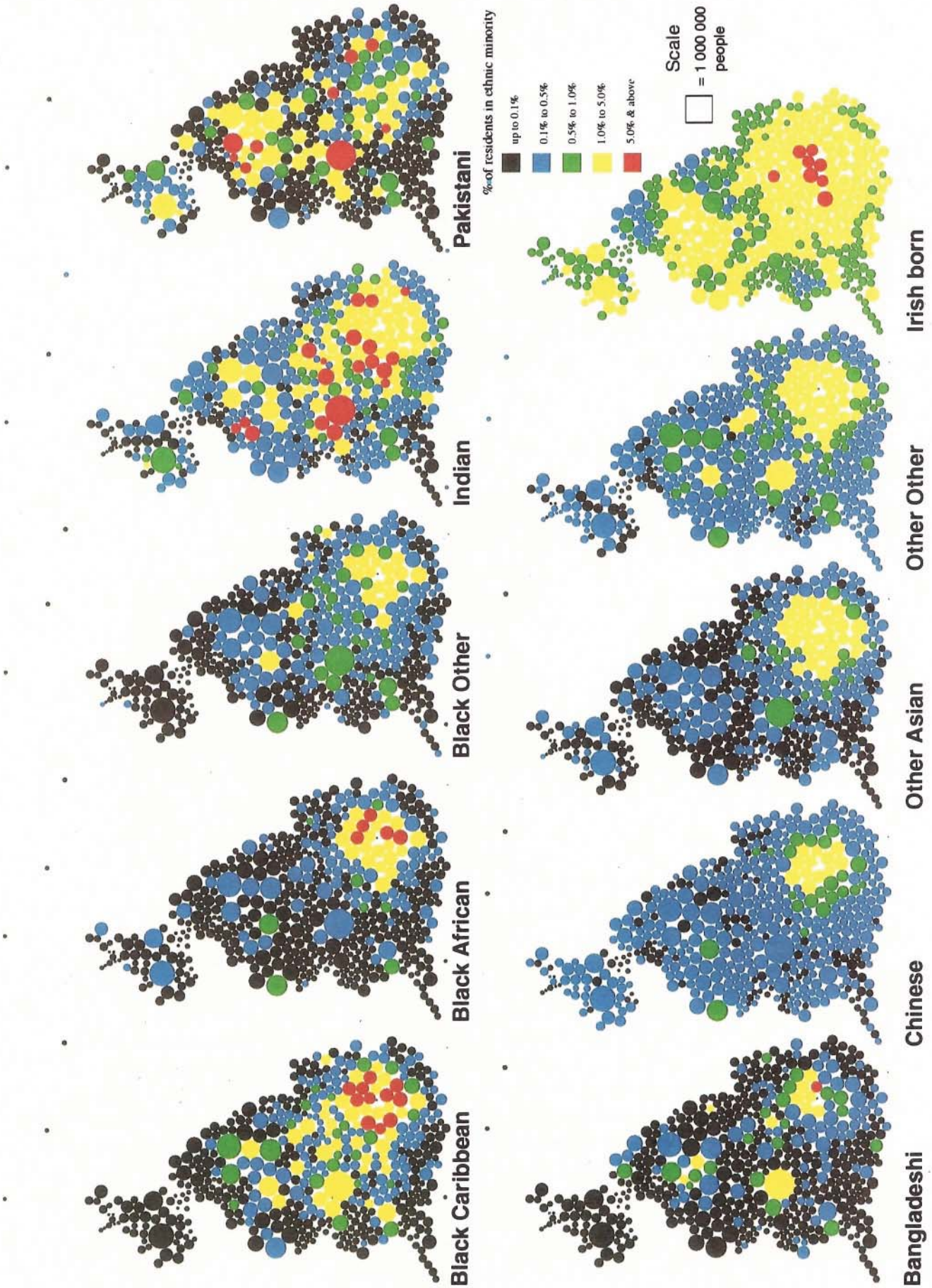
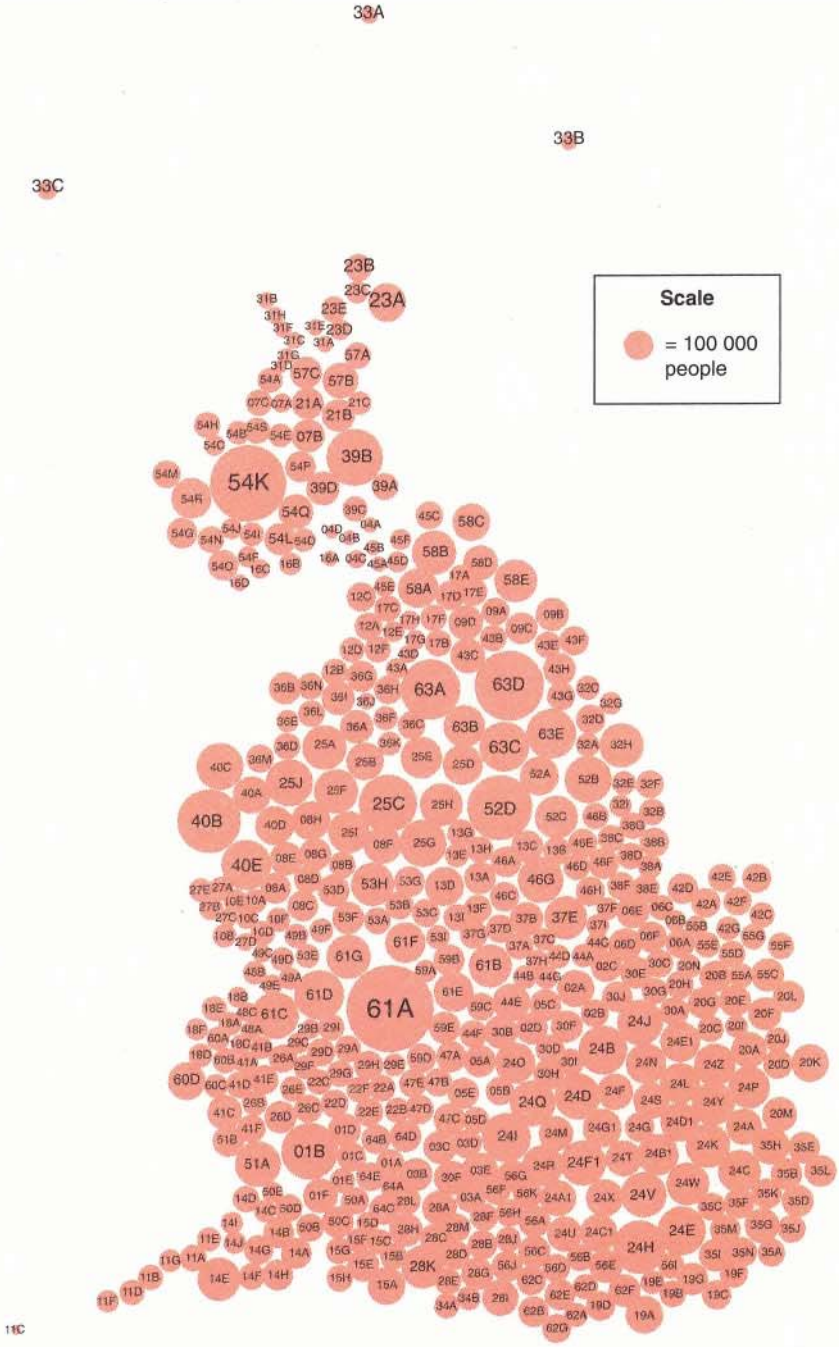


Figure 6.2 Key to the interpretation of district -level cartograms



6.23 It is important to recognise that the geographical distribution of ethnic groups does to some extent reflect age and social structure, as well as the geographical patterns of immigration from the former colonies of Britain. It is also important to recognise that this is not a complete picture of ethnic diversity in this country. A large proportion of people in these groups are now thought to have not completed a 1991 census questionnaire (see paras. 6.64 - 6.70). Most importantly, the majority of people in Britain were, through the design of the census form, encouraged not to provide information on what they felt their ethnic origins to be - they were encouraged to tick the default 'White' box. We have only been able here to provide the briefest sketch of the geography of ethnic minority groups in Britain. The references given in paras. provide sources which give much greater detail.

Key demographic, economic and social information

6.24 In this section we describe some of the basic ways in which the population of Britain who identified themselves as belonging to an ethnic minority group differ from the population as a whole in terms of their age distribution, the jobs they do, the structure of the households they live in, and so on. Again, the references in paras. 6.46 - 6.63. point to more extensive studies of many of the demographic, economic and social issues raised here.

6.25 Figure 6.3 shows the age and sex distribution in 1991 for each of the ten ethnic minority groups and for the white population. A series of population pyramids are used to show this information. Each pyramid uses the same vertical and horizontal scale so that each group can be compared irrespective of its overall size. The White group shows the classic demographic distribution typical of European countries, complete with the Baby Boom, a bulge showing in the numbers of 20-30 year olds. The other distributions are very different to this. The Irish-born in Britain are predominantly middle aged and elderly. Conversely, the Chinese tend to be much younger. The Black Caribbean and Black African groups show an age structure which reflects periods of post-war immigration. The Black Other ethnic group has the youngest age distribution. This may be because many members of this group were born in Britain and describe themselves as Black British, in comparison with their parents who tend to describe their ethnicity in terms of their place of origin. The Other Other group (which includes a variety of people, including those describing themselves as Arab and Asian-White) also has a similar profile. The South Asian groups' age structures also reflect patterns of immigration. In particular, the relatively high number of elderly Bangladeshi male residents is the product of differential rates of in- and out-migration to Britain, while the youthfulness of the Bangladeshi group is due to recent immigration of younger people who may also have larger families.

6.26 Figure 6.4 shows how members of different ethnic minority groups tend to live in households of varying composition. It is important to remember that household composition is partly determined by age and sex structure, so that, for example, ethnic groups with many elderly people will tend to also contain many people living on their own. This is reflected in the household composition of the Irish-born in Britain, one-third of whom live on their own as single people and another third of whom consist of households of two adults with no children. The white population as a whole is similar, although not quite so extreme. Next, as the figure shows, the Black Caribbean and Other Other ethnic groups have a profile of household composition most similar to the White group, apart from the higher proportion of households with one adult and children. Conversely, the Chinese have a smaller proportion of households with one adult and children. The three South Asian ethnic groups differ most from the white population in their household composition. The majority of people in these groups live in households with children and often with more than two adults.

6.27 One reason for the Black Other and Black African ethnic minority groups containing high numbers of adults living alone, at a relatively young age, is because these groups contain a large number of (American) servicemen and students. Figure 6.5 shows the proportion of male and female students who identified with each of the ten ethnic minority groups in 1991. 13.2 per cent of male students were identified with these groups, the largest proportions being Indian, Pakistani and Black African. Black Other, Irish-born and Bangladeshi ethnic groups accounted

for the smallest proportions of male students. The distribution is different for female students, where women identifying with the Indian, Pakistani, Black Caribbean and Black African ethnic groups were more likely to attend university or to go on to Further Education.

6.28 There is also great variation in housing tenure between people identifying with different ethnic minority groups. Figure 6.6 shows the composition of tenure of each ethnic minority group and also of selected socio-economic groups for comparison. Tenure to a large extent reflects wealth. The ownership of property was identified by the 1991 census, and it is on this basis that the figure is sorted. The groups least likely to own property are the Black African, Black Other and Bangladeshi ethnic minorities. Those most likely to be owner-occupiers are the Indian, Pakistani and White groups. The Pakistani and Indian groups were also the least likely to be renting their home from the local authority or housing association. The graphs show that the variation between ethnic groups is greater than that found between social groups. One possible reason for this is the over-representation of ethnic minority groups in metropolitan cities where owner-occupation rates are relatively low. As the graphs show, there is a wider variation in the distribution of tenures among ethnic minority groups than among social groups. At the extreme, for ethnic groups, five out of ten more people in the Indian group are owner occupiers than people identifying themselves as Black Africans. For social groups, four out of ten more Professionals are owner occupiers as compared to Unskilled workers.

6.29 One of the most important differences between members of different ethnic minorities is in the economic activity profile of each group. Figure 6.7 shows for each of the ten ethnic groups the proportion of adults in each of eight categories of economic position, for men and women separately. These categories are: full-time employment, part-time employment, self-employment, people on a government scheme, people unemployed, students, those who are permanently sick, those who are retired and the residual group (which consists largely of women engaged in unpaid work within the home). The ethnic groups are arranged according to the proportion in each group by sex who are economically active. Men in the Black Other group are most likely to be in work or seeking work, whereas Bangladeshi women are least likely to be economically active outside the home. Many more Black Caribbean women are in work than Irish or White women, reflecting the different age structures of these three groups. Irish-born and White women have an older age profile and are more likely to be retired.

Figure 6.3 The age -sex distributions of ethnic groups in Britain, 1991

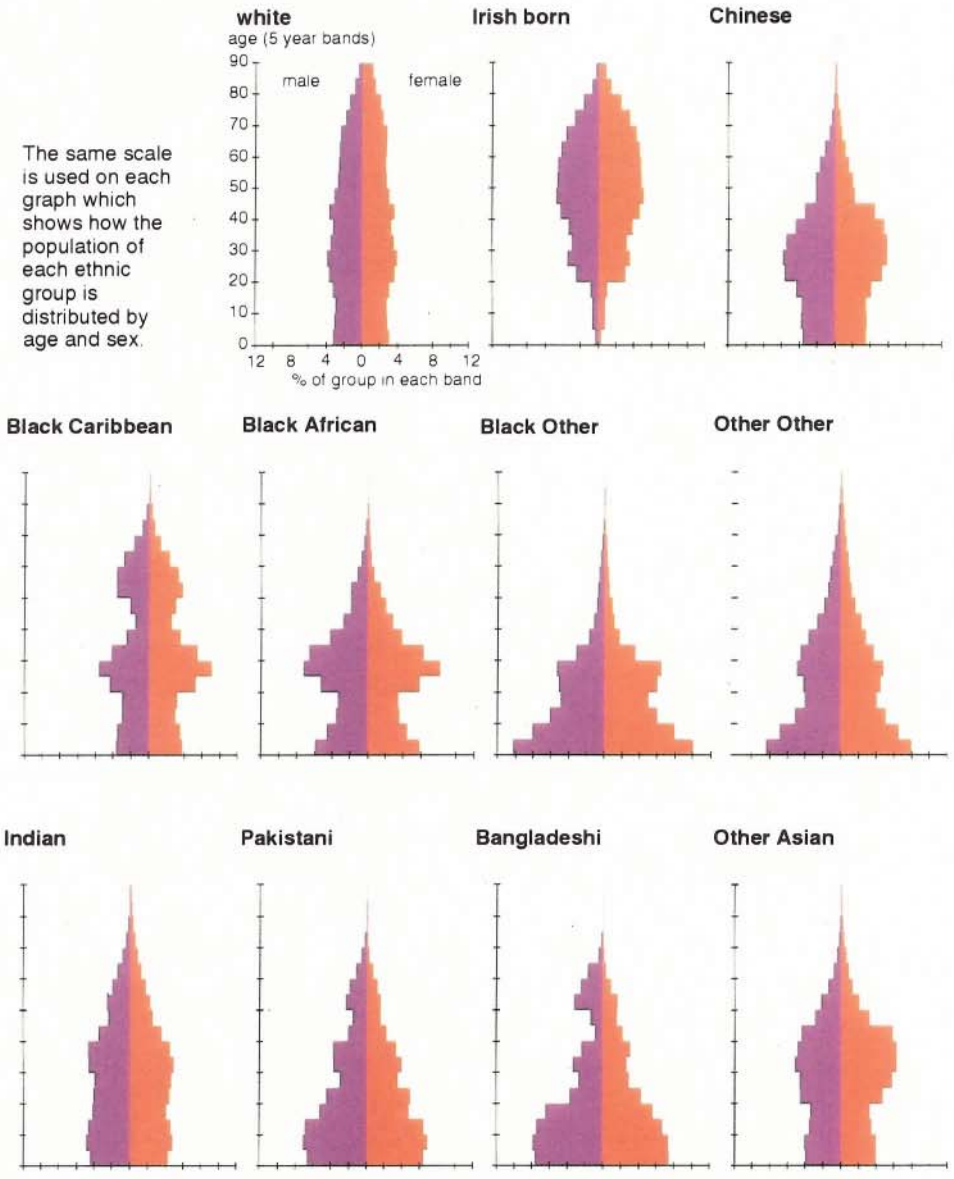
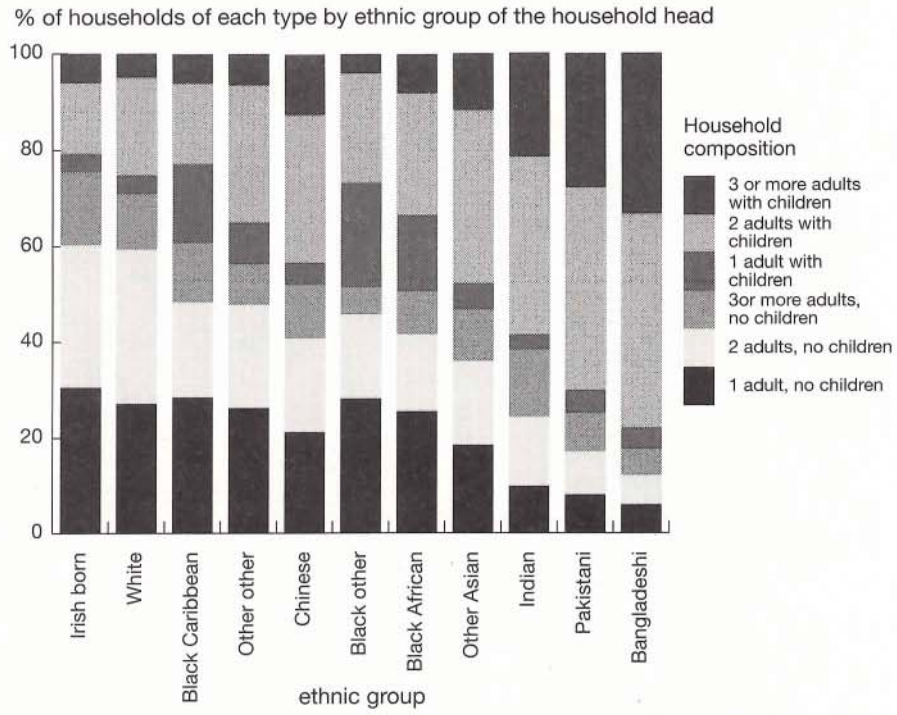


Figure 6.4 Houshold composition by ethnic group in Britain in 1991



Note: categories refer to dependent children

6.30 The variation between groups in terms of unemployment rates is perhaps one of the more important differences shown in Figure 6.7. This variation is partly due to the differing age profiles of each group. Figure 6.8 shows the unemployment rate for men and women in each ethnic group only for those people aged between 16 and 24. As the first chart in this figure illustrates, this is the age group amongst whom unemployment is most likely. In the figure we have differentiated the unemployed from those working on a government scheme. The ethnic groups are ordered by the overall unemployment rate of both sexes. This is lowest amongst the White group and highest amongst the Black African ethnic minority. However, there are also significant variations by sex, the most obvious being the very high rate of unemployment amongst young Bangladeshi women. Almost all people on government schemes in Britain are aged under 25, so it is reasonable to assume that this is true also for each ethnic minority group (for which figures are only given for all ages). Because the census provides counts of people by ethnic group aged under 25 who are unemployed, it is possible to estimate the number of people in the 16-24 age group who were looking for work but unable to find it in 1991, for each ethnic group, by sex. The figures are given in Table 6.1 and have been used to produce Figure 6.8. They show that, at one extreme 25 per cent of young white men and 17 per cent of young white women who are available for work are unable to find paid employment. At the other extreme, 67 per cent of young Black African men in Britain and 58 per cent of young Black African women could not find work. The other groups in which a majority of young people looking for work could not find it are Black Caribbean men, Other Asian men and Bangladeshi women. In each of these groups, 51 per cent of economically active young people were either unemployed or on a government scheme.

Table 6.1 Table showing unemployment by age, sex and ethnic group in Britain, 1991

Ethnic Minority Group	Men (16-24) on schemes (%)	Men (16-24) unemployed (%)	Women (16-24) on schemes (%)	Women (16-24) unemployed (%)
White	8	17	6	11
Black Caribbean	13	38	13	24
Black African	25	42	22	36
Black Other	12	35	10	26
Indian	11	23	10	19
Pakistani	11	36	11	35
Bangladeshi	7	20	15	36
Chinese	11	15	11	14
Other Asian	22	29	22	22
Other Other	14	29	11	22
Irish-born	9	18	5	11

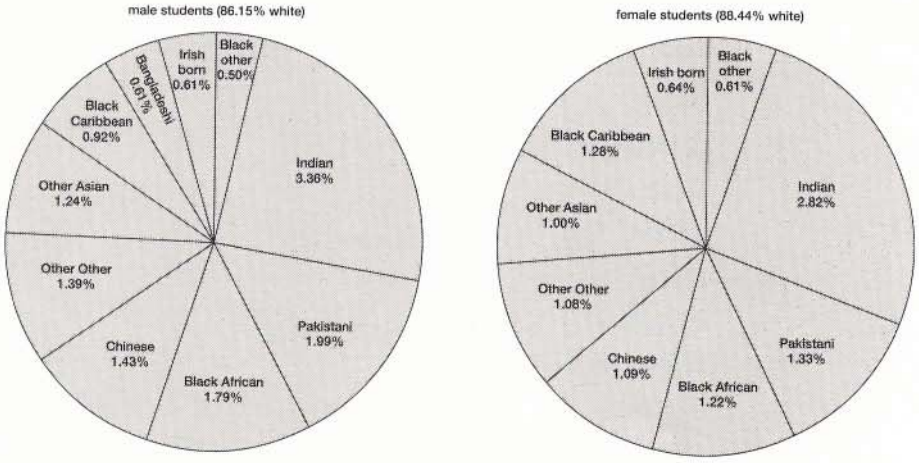
6.31 The preceding paragraphs have provided a brief overview of some of the information which the 1991 census provides on the demographic and socio-economic position of people identifying with ethnic minorities in Britain. Many of these profiles reflect the distinctive age structures of each group and also their predominant geographical locations. For example, groups largely located in areas of high unemployment with a young age structure will tend to experience high levels of unemployment. However, much of the detailed analysis which has been carried out on this information has shown that most of this variation cannot be fully accounted for by intervening factors such as location and age. The people who did not tick the 'White' box on the census form often experience very different life-chances and outcomes to their 'White' counterparts. A good example of this is the experiences members of each group have with regard to housing tenure.[2]

Segregation and migration

6.32 One area of interest to policy-makers arises from the changing geographical distribution of people identifying with different ethnic minority groups. The primary research question concerns the extent to which these groups are geographically segregated from the majority of the population, and the ways in which this is changing. The second part of this question is particularly difficult to answer, because people in Britain have been asked only at the one census what they consider their ethnic origins to be. We do not know the distribution of ethnic minority groups in 1981. However, we do know part of the distribution of these groups in 1990 because everybody who answered the 1991 census form was asked where they were living one year earlier. In this section we use the migration matrices which were constructed from the answers to this question to try to cast some light on the question of how the geographical position of each group has changed over time.

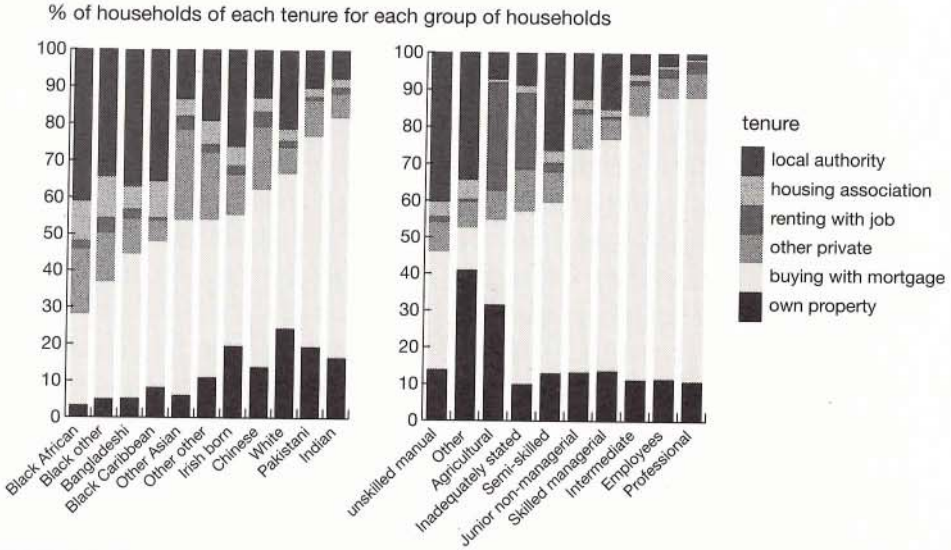
[2] Dorling D *Regional and local differences in the housing characteristics of ethnic minorities.* In Karn V (Ed.) *Analysis of ethnic minority population, 1991 Census Data: Employment, education and housing among ethnic minorities in Britain.* Volume 3, OPCS, London, 1995. Mullins D and Howes E *Ethnic minority tenants.* In Karn V (Ed.) *Analysis of ethnic minority population, 1991 Census Data: Employment, education and housing among ethnic minorities in Britain.* Volume 3, OPCS, London, 1995.

Figure 6.5 The distribution of male and female students in Britain by ethnic group, 1991



6.33 First, we consider the level of segregation of each ethnic group in 1991. Table 6.2 gives the dissimilarity and segregation indices for each ethnic group and for a variety of other groups of people living in Britain.[3] These indices were calculated at the ward level and show, first, the proportion of each group which would have to change their ward of usual residence for that group to match the overall population distribution (the dissimilarity index); and second, the extent to which that group is segregated, as measured independently of the size of each group (the segregation index). Both indices are presented here because the first is easily interpretable and the second is statistically more justifiable[4] Both indices were developed originally to study racial segregation within cities in the USA.

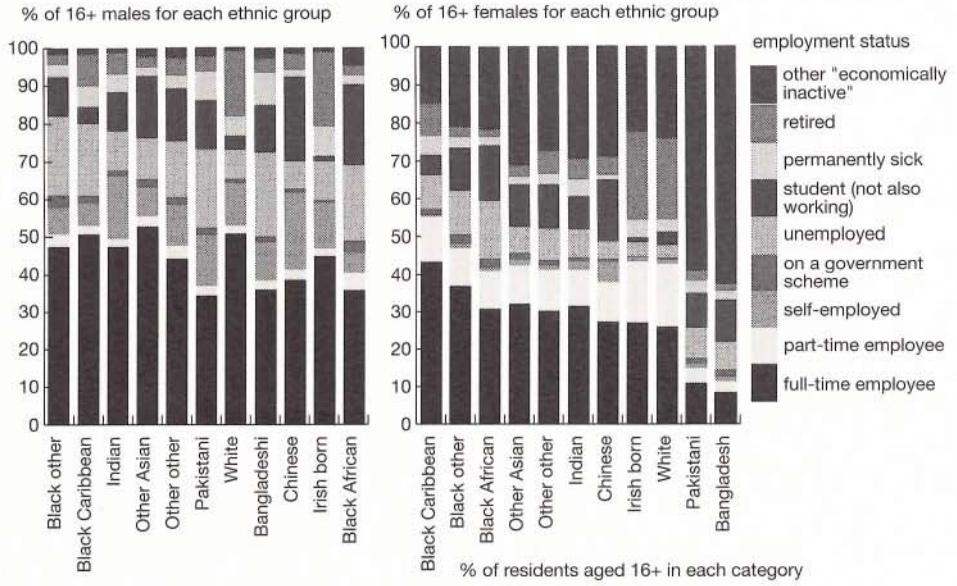
Figure 6.6 Ethnic and socio-economic group by tenure in Britain, 1991



[3] The index of dissimilarity is an index of the extent to which two spatial distributions differ. It is calculated from data giving for both spatial distributions the percentage of the total present in each areal sub-unit. The value of the index may range from 0.0 (complete similarity) to 100 (complete segregation). The index may range from 0.0 (complete similarity) to 100 (compete segregation). The index of segregation is a measure computed between a sub-group within a wider population. The value of the index can range from 0.0 (complete mixing) to 100 (complete segregation).

[4] Johnston R J, Gregory D and Smith D M, (Eds.), *The Directory of Human Geography,* Blackwell, Oxford, 1986. p.218

Figure 6.7 Employment status of residents aged 16 and over by ethnic group and sex in Britain, 1991



6.34 Table 6.2 shows that Bangladeshis are the most segregated ethnic group. Three-quarters of the Bangladeshi population of Britain would have to move between wards, and relocate according to a precise geographical pattern, for this group to have an identical geographical distribution to the population as a whole. The second most highly segregated group is that identifying with Pakistan. The least segregated group of people living in Britain are those identifying with the Chinese ethnic minority, followed by the Other Other (e.g. Arab, Asian-White), Black Other (e.g. Black British) and Other Asian groups. It should be noted that the last three ethnic minority groups include many people who have a white parent. The next least segregated group are White, with a segregation index of 61.83, but a dissimilarity index of only 3.39. Only 3 per cent of Whites would have to move home and ward and move into particular localities for their distribution to become as even as that of the population as a whole. After Whites, the most similar group in terms of likely higher rates of segregation are the Indian ethnic minority.

Figure 6.8 Unemployment by age, sex and ethnic group in Britain, 1991

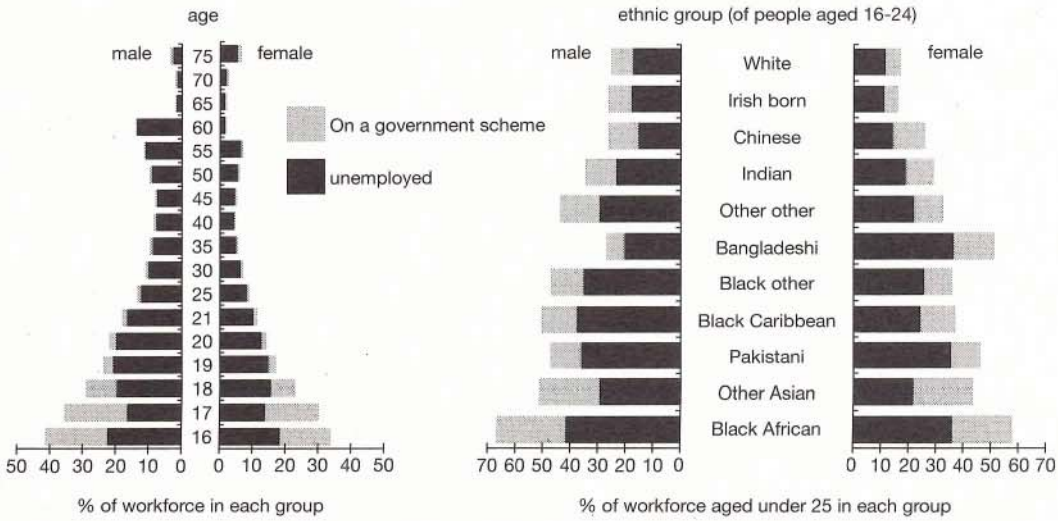


Table 6.2 Indices of dissimilarity and segregation for different groups

Group	Dissimilarity	Segregation
Chinese	42.01	42.13
Other Other	44.02	44.25
Black Other	54.96	55.14
Other Asian	57.67	57.87
White	3.39	61.83
Indian	65.09	66.10
Black Caribbean	69.80	70.44
Black African	71.15	71.43
Pakistani	73.74	74.38
Bangladeshi	74.58	74.80
Irish born 1981	29.87	30.37
Irish born 1991	31.36	31.85
Irish born 1971	32.10	32.70
English born	13.51	61.71
Welsh born	74.95	78.90
Scottish born	76.40	84.42
Children (aged 1 and 2)	9.89	10.16
Pensioners	10.37	12.75
Married (aged 25-66)	4.86	19.04
Unemployed 1971	19.23	19.60
Unemployed or GTS* 1991	19.28	20.33
Unemployed 1981	20.88	21.79
Owner occupier 1991	10.87	31.99
Private rented housing 1991	29.39	32.29
Private rented housing 1981	31.67	35.50
Owner occupier 1971	19.31	36.40
Owner occupier 1981	16.33	36.83
Term-time students	37.78	38.52
Local authority housing 1991	32.29	41.08
Housing association 1991	42.56	43.93
Local authority housing 1981	31.01	45.04
Local authority housing 1971	32.62	46.45
Housing association 1981	50.49	51.52

* Government Training Scheme
For the index of dissimilarity, a lower score denotes greater similarity.
For the index of segregation, a higher score denotes greater segregation.

6.35 In order to appreciate what these numbers imply, it is worth comparing the segregation indices for ethnic minorities with those for other groups of society. Table 6.2 also shows the level of geographical segregation of people born in Ireland and in each of the three constituent countries of Britain. Of this group, people born in Scotland are the most segregated. This is because the majority still live in Scotland. More than three-quarters of this group of people would have to move home and ward for their geographical distribution to match that of the entire population. Scots are in fact more segregated than any of the ethnic minority groups. Conversely, the Irish-born in Britain in 1991 are the least segregated of any of the groups discussed so far. The distribution of Irish-born migrants has been one of the longest-running concerns of the British census. In reflection of this we have been able to calculate the segregation and dissimilarity index for the Irish-born in both 1981 and 1971 to compare with the present-day distribution. The Irish-born living in Britain in 1971 were slightly more segregated than they are today. This level of segregation fell during the 1970s but rose again in the 1980s. The overall rate of change has however been very slow.

6.36 The final set of groups considered in Table 6.2 include children, pensioners, married people, people who are out of work, students, and people living in different housing tenures. Of all of these, the most segregated are people living in housing association property when it was first enumerated in 1981. The least segregated are children aged one and two years old. Of all tenure groups, owner-occupiers by 1991 were the least segregated group, perhaps as a result of the introduction of the Right to Buy legislation. Segregation has also reduced amongst local authority tenants and for those living in private rented accommodation. Overall, these indices show that although a few of the smaller ethnic minority groups are not particularly segregated, the five main groups (Bangladeshi, Pakistani, Black African, Black Caribbean and Indian) are segregated to an extent comparable with the segregation of the English, Welsh and Scots living in the separate countries of Britain.

6.37 The preceding paragraphs have illustrated the extent to which different ethnic minority groups are segregated in Britain. In the case of the Irish-born, they have also shown how these levels of segregation are changing. Here we turn to studying changes for the other ethnic groups. The Special Migration Statistics of the 1991 census only distinguish between the four major ethnic groups: White, Black, South Asian and Other groups. Thus we only consider these aggregates from here on. The 1991 census could also, obviously, only ask people who were still living in Britain in 1991 where they were living twelve months before. Thus we do not know how many people of any ethnic groups left the country from each area. Because of this we cannot analyse the impact of immigration into Britain of each ethnic group on the geographical distribution of each group. All we can then do is to consider the pattern of internal migration within Britain and how that pattern is changing the overall distribution of each group. There is one further caveat to add; that to preserve confidentiality, any flows of less than 10 people between any two districts in the migration matrices are suppressed. To deal with this we have created a fifth ethnic group entitled 'Ethnicity Unknown'.[5]

[5] It should be noted that the 1990-91 period was not a particularly suitable one for the study of migration trends. This is because it was in many ways exceptional, with a stagnant housing market and economic recession, which in turn acted to depress and distort migration rates.

6.38 Table 6.3 shows the largest gains and the largest losses of people due to internal migration in Britain by district, by ethnic group, between 1990 and 1991. At one extreme, Wealden made a net gain of 1,562 people in this period, 1,547 of whom were White. This was the largest gain of any district. At the other extreme, Birmingham lost 6,059 people due to internal migration in this period. Although Birmingham also saw the largest loss of the White ethnic group, it similarly featured highly amongst the districts where the largest numbers of people in the South Asian group were leaving. In general, people were migrating away from large provincial cities and some London boroughs and towards small rural towns and villages. To understand the table more fully, it is useful to consider each ethnic group in turn.

6.39 The White ethnic groups have a pattern of internal migration almost identical to that of all migrants in Britain. This is because they represent such a large proportion of all migrants in Britain. The slight differences between the orderings of the districts for all groups and for Whites illustrates some of the peculiarities of this group. For example, disproportionately more Whites are moving to Perth and Kinross in Scotland (many of whom are leaving districts in England). Whites are also more likely to be moving to areas such as the Cotswolds, East Hampshire and Tendring than the population as a whole. Conversely, Whites are more likely to be leaving Liverpool, Leeds and Sheffield than the population as a whole.

6.40 The three Black ethnic groups (i.e. Black Caribbean, Black African and Black Other) have one of the most distinctive migration patterns for the 1990-91 period. The fifteen most popular districts for net positive migration by this group are in outer London and Essex. At the other extreme, the table shows that people identifying with these ethnic groups are leaving districts like Haringey, Lambeth and Hackney in large numbers. Thus, in general, there is a great deal of migration within and on the borders of London, amongst this group. The table also shows other cities such as Oxford and Cambridge to be gaining people in these groups. This may be partly the result of differential student enumeration - eighteen-year-olds arriving at university may perhaps be more willing to complete census forms than 21 year olds who have just left. We know that enumeration rates fall over these ages (see paras. 6.65 - 6.71 on under-enumeration).

6.41 The three South Asian groups (i.e. Indian, Pakistani and Bangladeshi) show a different pattern again in the 1990-1991 period, which is much more diverse. In general people identifying with these groups are migrating away from the areas of initial immigration to Britain. Thus Brent, Ealing, Newham, parts of Birmingham, parts of Leicester and Bradford are losing this population slowly, whereas they are increasing in districts such as Harrow, Luton, Milton Keynes and Windsor & Maidenhead which are gaining this group. It is unfortunate that we cannot differentiate the three South-Asian sub-groups as their differing experiences of internal migration in Britain may well vary greatly from this general aggregate.

6.42 Finally, the last column of the table describes the 1990-91 internal migration of people identifying with the Other ethnic minority groups (i.e. the Chinese, Other Asian and Other Other (e.g. Arab) ethnic groups). These migrants exhibit a mixture of the last few patterns described. They are, in general, leaving particular inner London boroughs and old cities such as Glasgow, Manchester and Newcastle. They are also moving in aggregate to outer London boroughs and districts in the Home Counties.

Table 6.3 The net effect of 1990-91 migration: extreme population changes by district

	All groups		White groups		Black groups		South Asian groups		Other groups	
1	1562	Wealden	1547	Wealden	475	Enfield	679	Harrow	245	Harrow
2	1556	Suffolk Coastal	1478	Perth & Kinross	381	Lewisham	552	Redbridge	128	Redbridge
3	1543	Hunting'shre	1468	Suffolk Coastal	288	Croydon	334	Hillingdon	126	Barnet
4	1520	Northavon	1461	Northavon	195	Redbridge	175	Solihull	114	Kingston u. T.
5	1476	Perth & Kinross	1452	Hunting'shire	194	Harrow	166	Hounslow	102	Enfield
6	1436	North Norfolk	1427	North Norfolk	170	Ealing	152	Luton	83	Stockport
7	1392	Arun	1400	South Kesteven	148	Merton	147	Slough	79	Bromley
8	1389	South Kesteven	1343	Arun	147	Barnet	138	Oadby/Wigstn	76	West Wiltshire
9	1360	Kincardine & D	1341	Kincardine & D	138	Greenwich	118	Stockport	72	Hillingdon
10	1325	East Devon	1304	East Devon	115	Barking & Dag.	114	Bexley	71	Hove
11	1318	Cherwell	1262	Cherwell	102	Bromley	110	Milton Keynes	59	Sutton
12	1282	Milton Keynes	1255	Gordon	97	Forest Heath	103	Sandwell	52	Wokingham
13	1255	Gordon	1171	East Hampshire	95	Hillingdon	98	Enfield	52	Merton
14	1206	Eastleigh	1169	Tendring	77	Kingston u. T.	97	Eastwood	52	Warwick
15	1199	Tendring	1153	Cotswold	72	Waltham Forest	92	Barnet	48	Bracknell Forest
16	1192	East Hampshire	1146	Eastleigh	67	Suffolk Coastal	87	Charnwood	46	Hounslow
17	1187	Horsham	1141	Horsham	65	Islington	86	Trafford	45	Warrington
18	1162	Cotswold	1133	Milton Keynes	65	Sutton	85	S'th Derbyshire	43	Forest Heath
19	1129	Fenland	1121	Fenland	48	Hunting'shire	83	Windsor & M.	43	Chelmsford
20	1114	Poole	1081	Poole	42	Trafford	78	Kingston u. T.	41	Three Rivers
20	-2192	Camden	-2114	Camden	-32	Cambridge	-67	Hammersth & F	-55	Waverley
19	-2208	Waltham Forest	-2153	Oxford	-32	Kirklees	-71	Kensington & C	-55	Cambridge
18	-2241	Bristol	-2187	Ealing	-37	Wolvera'ton	-71	Derby	-57	Brighton
17	-2243	Croydon	-219	Bristol	-38	Newham	-102	Greenwich	-59	Tower Hamlets
16	-2255	Leicester	-2237	Waltham Forest	-45	Ipswich	-115	Blackburn	-62	Cardiff
15	-2289	Oxford	-2273	Hackney	-46	Glasgow City	-127	Kirklees	-63	Swansea
14	-2353	Greenwich	-2287	Hounslow	-46	Sheffield	-133	Manchester	-67	Newcastle u. T.
13	-2512	Ealing	-2369	Greenwich	-46	Oxford	-152	Wolverh'pton	-68	Leeds
12	-2863	Sheffield	-2500	Southwark	-48	Tower Hamlets	-166	Westminster	-70	Hart
11	-2950	Southwark	-2606	Croydon	-49	Kensington & C	-205	Lambeth	-75	Southwark
10	-3026	Leeds	-2740	Brent	-55	Breckland	-228	Tower Hamlets	-78	Manchester
9	-3386	Hackney	-2817	Sheffield	-82	Camden	-236	Glasgow City	-83	Oxford
8	-3447	Liverpool	-2924	Leeds	-135	Westminster	-267	Hackney	-141	Brent
7	-3692	Brent	-3228	Haringey	-186	Hammers'th & F.	-317	Haringey	-142	Wandsworth
6	-3889	Newham	-3265	Newham	-283	Wandsworth	-350	Bradford	-145	Newham
5	-4081	Haringey	-3366	Liverpool	-305	Brent	-351	Leicester	-159	Glasgow City
4	-4366	Glasgow City	-3751	Lambeth	-355	Southwark	-394	Birmingham	-168	Hackney
3	-4401	Manchester	-3925	Glasgow City	-365	Haringey	-441	Newham	-171	Haringey
2	-4660	Lambeth	-4178	Manchester	-462	Lambeth	-488	Ealing	-228	Kensington &C.
1	-6059	Birmingham	-5631	Birmingham	-678	Hackney	-506	Brent	-242	Lambeth

6.43 To illustrate the overall extent of this pattern of migration, in the longer term, we have projected the migration matrix forward ten years from 1990 to show the distribution of the four ethnic minority groups in the year 2000. This is contingent upon a continuation of the rates and patterns of internal migration experienced in 1990-91. For example if, between 1990 and 1991, 1 per cent of the Black groups' population of Hackney migrated to Enfield, we assume that an identical percentage migrate again for each of the successive nine years. The results of projecting this migration forward are shown in Table 6.4. The pattern in the table is quite similar to that shown for net migration between 1990 and 1991 but there are subtle differences.

6.44 To conclude, we have calculated how the segregation indices at district level will alter if the 1990-91 pattern of migration within Britain continues unabated for ten years. (Table H.1 in Appendix H shows the dissimilarity index for each ethnic group at each year.) For whites, this index falls between 1990 and 1991, indicating that in the year prior to the census, the White population became slightly less segregated. If current migration patterns were to continue this population would become gradually more segregated. However, this may largely be an artefact of the method as the continuation of almost any totally fixed pattern of migration will eventually lead towards segregation. The experience of the Black group in Britain is very different. Between 1990 and 1991 their index of dissimilarity rose and if the present pattern of migration continues so will Black group segregation within Britain. Conversely, the experience of the South Asian ethnic group is of slightly decreasing segregation in the first year, followed by slight rises in segregation thereafter. The other ethnic groups also saw segregation predicted to rise slowly over this period if the present pattern of migration is continued.[6]

6.45 To summarise, people identifying with ethnic minority groups in Britain are segregated geographically to an extent which at its most extreme is similar to the segregation of the Scottish and Welsh living in Britain. The only group whose segregation level can be calculated with confidence over time is the Irish-born, who have experienced gradual and fluctuating changes in their degree of geographical concentration over the last two decades. Projecting current trends forward is fraught with problems. This is because of the poor quality of information on emigration by area from Britain, because ethnicity was only asked in 1991, because the address one year ago was only asked of each resident for 1990, because a significant proportion of migrants did not give a clear origin address, because migrants are particularly likely to be underenumerated, because members of ethnic minority groups are particularly likely to be underenumerated and because the census authorities chose to suppress small flows of migrants. Our attempts here have shown that we can only be confident about the changes which took place between 1990 and 1991, and it should be borne in mind that this was a peculiar year for migration (because of the housing market crash). The changes in that year suggest that the most distinctive pattern is a slight concentration of the Black ethnic groups within London. We have projected these changes forward to the year 2000, but we are wary of the results, given the caveats above.

An overview of research on the 1991 census ethnicity questions

6.46 The purpose of this section is to provide an overview of the major findings derived from other analyses of the 1991 census ethnicity data. Most of this research is contained within the volumes to be published by the Office of Population Censuses and Surveys (OPCS) towards the end of 1995. The research findings, plus an indication of the scope of inquiry contained in the OPCS volumes, are given here in order to indicate to readers within the Department the extent of information and analysis on the ethnicity questions available to the interested reader. Full bibliographic details are provided to enable the interested reader to consult the relevant chapters. The findings presented in this report sketch out the main contours of the distribution and socio-economic circumstances of Britain's ethnic minority population; those findings in the OPCS volumes offer a broader analysis of many

[6] See Champion A G, *Current analysis of the internal migration of the ethnic minority populations, in Ratcliffe P (Ed.), Analysis of ethnic minority populations, 1991 Census Data: Geographical spread, spatial concentration and internal migration*, volume 2, OPCS, London, 1995.

of these topics, and at a greater level of detail than can be contained in this short report. It should also be noted that the findings from this analysis of ethnic minorities differ little from those in the OPCS volumes; in no case were two sets of results at variance with each other. What *is* apparent, and as this brief summary indicates, is the amount of information available at a far greater level of detail than can be provided here on specific issues. A further purpose for this summary, then, is to indicate where these details can be found. To assist the reader, this summary presents the findings in the order in which they appear in the volumes, rather than in the order in which they appear in this report.

6.47 The four volumes are organised thematically, and bring together analysis of data about ethnic minorities on, first, basic demographic characteristics families and households; second, geographical spread, spatial concentration and internal migration; third, education, employment and housing; and fourth, information on each ethnic group.

6.48 Volume 1 addresses questions concerning the general demographic characteristics of ethnic minority populations.[7] It opens with a discussion of the emergence of the ethnic question in the British census, and its effectiveness in identifying the main ethnic groups in Britain. It places the origins of the ethnicity question within the context of political concerns in the late 1960s and early 1970s concerning the immigration of people of West Indian, South Asian and African origin and the politics of migration control, and, in the 1980s, issues of discrimination against ethnic minorities with regard to housing and education. The chapter raises the issue of the ethnicity question's inability to base ethnic identification on 'objective' information, and the increasing tendency to ask instead which group people see themselves as belonging to.[8] The issue of the definition and meaning of the term 'ethnicity' is explored further by Ballard.[9]

6.49 The age structure change in ethnic groups in Britain is examined by looking at changes in the age structure of overseas-born groups in recent decades, by examining some of the relationships between ethnic identities and birth places, and by exploring the methodology for projecting ethnic group age structures. The paper highlights the point that the unpredictability of migration rates makes the projection of the size and age structures of ethnic minority groups difficult. It also raises the issue that over time, comparisons of ethnic minority group size will be affected by changes in self-description amongst people in different ethnic minority groups. Some provisional projections for the period 1991 to 2011 are also given.[10] For example, amongst the Caribbean group, there will be an increase in the elderly population and some increase in the numbers of children. There will be an increase by 2001 particularly in the 30-44 age group. For the Indian group, the mean age of the population will increase between 1991 and 2011, and there will be a reduction in the over-representation of children in this group. For the Pakistani and Bangladeshi groups, the under-representation of the 45 plus age group will continue to 2011.

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[7] Salt J and Coleman D, (Eds.) *General demographic characteristics of the ethnic minority populations, Analysis of ethnic populations, 1991 Census Data* Volume 1, OPCS, London, 1995.

[8] Bulmer M, *The ethnic question in the 1991 census of population,* in Salt J and Coleman D (Eds.) *op. cit.*

[9] Ballard R, *What should we mean by ethnicity?,* in Salt J and Coleman D, (Eds.) *op. cit.*

[10] Warnes T, *Age structure change in ethnic groups.* in Salt J and Coleman D, (Eds.) *op. cit.*

6.50 Marriage patterns and inter-ethnic marriage are explored, with an analysis which indicates, unsurprisingly, that there are large differences between ethnic groups in Britain in patterns of marriage formation and dissolution.[11] For example, people identifying with the South Asian ethnic group show patterns of early and near universal marriage, with age at marriage being lowest among Pakistani and Bangladeshi men and women, and later for men and women of Indian origin. Age at marriage is high among Black Caribbean and Black Other groups, divorce is common among the White and Black groups and, in contrast, the number of Asian men and women currently divorced is very small. Marital dissolution among the Asian populations tends to be most likely through the death of a spouse.

6.51 The structures of households and families among ethnic minority groups is also considered, and the analysis shows that there are substantial differences between household and family patterns of different ethnic minority groups in Britain.[12] These are generally more marked than those found for most other sub-groups within the population. For example, South Asian groups are found to have larger household sizes on average than the Black or White groups, and much of this difference is due to the presence of children and the younger age structures of ethnic minority groups. Even after allowing for family structure, it appears that Black households are below-average in size and households for other ethnic minority groups above-average in household size.

6.52 Volume 2 of the OPCS volumes on research on the 1991 ethnicity question brings together analyses of the geographical spread, spatial concentration and internal migration of ethnic minority groups in Britain.[13] A detailed analysis of the national geographical spread of ethnic minority populations is presented by Rees.[14] In this chapter, an attempt is also made to reconstruct the likely evolution of ethnic group populations over the 1981-91 decade, so as to detect any changes to the pattern of ethnic concentration, using an estimation method devised to link the two. The chapter concludes that there is a marked contrast between the almost static White population of Great Britain, which grew by less than one per cent between 1981 and 1991, and the ethnic minority populations which grew by between 24 and 95 per cent, depending on the groups. However, the geographical spread of each ethnic minority group in 1991 remained substantially the same at it had in 1981. The directions of these modest shifts were consistent across all ethnic minorities, with a greater degree of metropolitan concentration in 1991 for ethnic minorities than in 1981, and an increased share of the group population in its core areas. This increased concentration is understood as the consequence of several processes, including the movement of people in majority White groups away from areas of ethnic minority concentration; the growth of ethnic minority families with the addition of children; the formation of new households in each ethnic minority community, located close to existing households; the arrival from abroad of new members in each ethnic minority community, and their location close to existing ethnic minority households; and the migration within Britain of ethnic minority group migrants to new areas of greater opportunity and away from older industrial areas.

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[11] Berrington A, *Marriage patterns and inter-ethnic marriage.* in Salt J and Coleman D, (Eds.) *op. cit.*

[12] Murphy M, *Household and family structure among ethnic minority groups in Britain.* in Salt J and Coleman D, (Eds.) *op. cit.*

[13] Ratcliffe P (Ed.), *Analysis of ethnic minority populations, 1991 Census Data: Geographical spread, spatial concentration and internal migration,* Volume 2, OPCS, London, 1995.

[14] Rees, P *Geographical spread: the national picture.* in Ratcliffe P (Ed.), *op. cit.*

6.53 The volume also contains the results of analyses of the level and nature of spatial concentration and segregation of ethnic minority groups.[15] This analysis counters fears that Britain may be following the African American model of inner city segregation, and argues that this is not the case. For example, it appears that in London, despite an unfavourable economic position and substantial evidence for continuing discrimination, the segregation trend for the Black Caribbean population is slightly downwards. Furthermore, levels of segregation of Black groups are generally less marked than those of the South Asian groups.

6.54 The implications for urban policy of the concentration and segregation of ethnic minority groups are also addressed.[16] This paper concludes that ethnic segregation and concentration and urban policy become intertwined, first, in the degree to which urban policy measures have been targeted at areas which contain significant numbers of people from minority ethnic groups, and second, insofar as urban policy perceives the concentration of ethnic minority groups to be a problem. The authors emphasise the point that ethnic minority groups may only benefit directly from urban policy measures if these groups happen to live in areas targeted by those measures. They also emphasise that the selection of areas to be targeted by urban policy has been directed in the past by the presence of ethnic minority groups, and that the significance of this means of targeting is likely to decline.

6.55 The issue of the internal migration within Britain of ethnic minority groups is analysed in detail.[17] The main findings of this analysis are that, on average, ethnic minority group members move house less frequently than members of the White group. They also tend to move over shorter distances than Whites, although there are substantial variations between groups, with the proportion of Chinese and Black African movers being twice as high as for Indians, Black Caribbeans and Pakistanis. The Chinese tended to move over longer distances than Whites, whereas a much higher than average proportion of Blacks and Bangladeshis moved only short distances. In absolute terms the biggest net impacts of ethnic minority migration in 1990-91 were felt in South-East England and in the more urbanised areas elsewhere. The largest net gains occurred in a belt of counties stretching from Dorset to Suffolk, while the largest losses were registered by Greater London, West Yorkshire, West Midlands, Lancashire and Strathclyde. The over-all effect of internal migration in Britain may be towards increasing the proportion of ethnic minority members in areas where it is already high.

6.56 The specific case of London is considered in detail.[18] The size and diversity of the capital's ethnic minority population, as well as its distribution and characteristics, including information on health, housing, employment and social class, are all considered. The ethnic minority groups in the Midlands[19] and in a cluster of Pennine cities[20] are similarly considered.

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[15] Peach C and Rossiter D, *The level and nature of spatial concentration and segregation.* in Ratcliffe P (Ed.), *op. cit.*

[16] Burton P and Stewart M, *Concentration and segregation; the implications for urban policy.* in Ratcliffe P (Ed.), *op. cit.*

[17] Champion A G, *Census analysis of the internal of the ethnic minority populations.* in Ratcliffe P (Ed.), *op. cit.*

[18] Storkey M and Lewis R, *London: A true cosmopolis.* in Ratcliffe P (Ed.), *op. cit.*

[19] Owen D and Johnson MRD, *Ethnic minorities in the Midlands.* in Ratcliffe P (Ed.), *op. cit.*

[20] Rees P and Phillips D , *Geographical patterns in a cluster of Pennine cities.* in Ratcliffe P (Ed.), *op. cit.*

6.57 Volume 3 brings together research into the employment, education and housing experiences of Britain's ethnic minority groups.[21] The volume starts with a paper presenting data on higher education qualifications collected in the 1991 census in relation to ethnic groups.[22] Particular patterns emergé from the analysis. For example, males are better qualified than females and people born outside the UK are better qualified than those born within the UK. It appears that Black African, Chinese, Other Asian and Other Other groups are consistently amongst the best qualified groups, whereas Black Caribbean, Black Other, Pakistani and Bangladeshi groups are consistently amongst the worst qualified groups. It also appears that Black Caribbean women are more likely to be better qualified than their male counterparts, whether born in the UK or abroad.

6.58 The differences between 16-19 year olds identifying with different ethnic minority groups in their rates of educational participation are next examined.[23] This chapter concludes that the participation rates of ethnic minority groups for the post-16 group in education is higher compared with the White group. The authors explain this finding as a reflection of a number of factors, including a cultural acceptance and greater commitment to education amongst young people and their families from ethnic minority backgrounds than the White group, and a desire amongst people from ethnic minority groups to gain educational qualifications to ensure success in the labour market. A further chapter considers the links between education and occupational attainments and the impact of ethnic origins on these indicators.[24]

6.59 The characteristics of the working population are then assessed.[25] This chapter includes analyses of employment by broad sector, by occupation, hours of work and travel to work. The chapter concludes that there is no evidence for workers from ethnic minorities being concentrated in 'declining' industries. It does appear, however, that some groups seem vulnerable in the face of forecast labour market trends, for example, South Asian women in craft and related and plant and machine operative occupations in 'declining' manufacturing industries. It seems also that there are significant differences in the industrial and occupational profiles of employment between ethnic minority groups and between men and women.

6.60 The housing experiences of Britain's ethnic minority groups are considered in detail, the main conclusion being that people identifying with different ethnic minority groups are dramatically over - and under-represented in different types of housing.[26] However, it should be noted that much of the disparity in the tenure patterns of ethnic groups, can be explained by household type and structure and by class than by any inherent differences between groups in terms of propensity to enter a particular tenure category. Although the picture of tenure differences is extremely complex, certain features stand out. For example, Black Caribbean households are more heavily represented in rented property than White, Indians

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[21] Karn V, (Ed) *Analysis of ethnic minority population, 1991 Census Data: Employment, education and housing among ethnic minorities in Britain.* Volume 3, OPCS, London, 1995.

[22] Owen C, Mortimer P and Phoenix A, *Higher Education Qualifications: results from the 1991 census.* in Karn V, (Ed.) *op. cit.*

[23] Drew D, Gray J and Sporten D, *Ethnic differences in the educational participation of 16-19 year olds.* in Karn V, (Ed) *op. cit.*

[24] Heath A and McMahon D, *Education and occupational attainments: the impact of ethnic origins.* in Karn V, (Ed) *op. cit.*

[25] Green A, *The working population.* in Karn V, (Ed) *op. cit.*

[26] Ratcliffe P, *Race, ethnicity and housing differentials in Britain.* in Karn V, (Ed) *op. cit.*

and Pakistanis, especially in the public sector. Indian households have a housing profile more akin to that of the majority White group than any other minority group. Pakistani owners are more likely to occupy terraced housing than members of the Indian group, and, with the exception of the Bangladeshis, suffer the worst overcrowding levels.

6.61 The geography of these differentials is examined in a chapter which highlights the importance of geography over socio-economic position in understanding why members of different ethnic minority groups are over- and under-represented in different tenures.[27] For example, when considering owner occupation rates for ethnic minorities such as the Black Caribbean group, it is important to recognise that their relatively low rates may be explained as much by the concentration of this group in Inner London (where owner occupation rates tend to be much lower) as by the socio-economic status of this group. This third volume in the OPCS series also examines separately the positions of owner occupiers[28] and ethnic minority tenants[29] and concludes with chapters discussing ethnic differences in attainment in lifestyle,[30] monitoring equal employment opportunity[31] and monitoring local housing needs.[32]

6.62 The fourth and final volume in the OPCS series considers the different ethnic minority groups (i.e. Black Caribbean, Black African, Black Other, Indian, Pakistani, Bangladeshi, Chinese, Other Asian, Other Other and Irish-born groups.[33] This chapters all contain much more detailed information on the different groups, including data on changing group size (including counts using non-census data for previous years and decades), and discussions of the history of settlement in Britain for each group. The information contained in this volume is too extensive to be summarised here, and interested readers are referred to the original sources.

6.63 In conclusion, the OPCS volumes offer a broad range of research findings on the position of ethnic minority populations as measured by the census. They offer a useful source of information for consultation in relation to issues of policy which affect these groups and provide a considerable quantity of detailed factual information on ethnic minority group than can be presented in this short report.

Under-enumeration and ethnic minority groups

6.64 In this section we summarise some of the key features surrounding the issue of under-enumeration in the 1991 census. The low level of response to the 1991 census amongst some sections of the population has been a cause for concern amongst many analysts of that data. Whilst many of the consequences of under-enumeration are as applicable to the analyses conducted in the other five reports in this series on Urban Trends, the issue of under-enumeration is particularly pertinent with reference to ethnic minority groups.

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27 Dorling D, *Regional and local differences in the housing tenure of ethnic minorities.* in Karn V, (Ed) *op. cit.*

28 Phillips D, *Owner occupation.* in Karn V, (Ed) *op. cit.*

29 Howes, E and Mullins D, *Ethnic Minority Tenants,* in Karn V, (Ed) *op. cit.*

30 Blackburn R, Dale A, *Ethnic differences in attainment in education, occupation and lifestyle.* in Karn V, (Ed) *op. cit.*

31 Coombes M, *Monitoring equal employment opportunity.* in Karn V, (Ed) *op. cit.*

32 Steele A and Smith E, Using the 1991 census of population to identify the housing needs of the ethnic minorities, in Karn V, (Ed) op. cit.

33 Peach C (Ed) Analysisof ethnic population, 1991 Census data: Ethnic minority groups. Volume 4, OPCS, London 1995.

6.65 The overall level of response to the census in 1991 was relatively high, at 97.8 per cent. However, response was significantly lower among very young children (i.e. they were not included by their parents when filling out their census forms), very elderly people and young adults, particularly men aged 20-34 in city districts. This pattern implies a greater under-count for sub-populations concentrated within these age groups and areas, including all the black and Asian ethnic groups classified by the 1991 census.[34]

6.66 The most comprehensive attempt to investigate the level (and consequences) under-enumeration amongst ethnic minority groups is Stephen Simpson's research comparing the census count of children according to mother's country of birth with the number of births registered in the years before the census according to mother's country of birth.[35] For all ethnic groups, 3 per cent of infants aged under one were missed from census forms, and this varied by area. Almost every non-UK origin category has more children missed by the census than UK-origin mothers. Coverage falls below 90 per cent for children born to New Commonwealth-born mothers. Simpson argues that these differences are larger than those which can be explained purely by geographical location, and he argues that this suggests that children of new Commonwealth-born mothers (and therefore generally Black and Asian families) were more difficult to enumerate in the 1991 census than their neighbours. The simple geographical effects of under-enumeration result in 5 per cent of the Black African and Black Other groups being missed and compared with 4 per cent for most other ethnic minority groups and 2 per cent for the White group. However, the comparison with birth records suggests that 17 per cent of children aged under ten born to New Commonwealth-born mothers were missed from the census. Hence since most ethnic minority group parents were born in the New Commonwealth the proportion of ethnic minority children missed from the census may be just as high. It is, of course, likely to also vary significantly by area.[36]

6.67 Other studies, such as those conducted by OPCS on non-registration on the electoral register, also suggest that under-enumeration amongst ethnic minority groups is particularly high.

6.68 The under-enumeration of ethnic minorities is of particular significance. It can be assumed that, within any local area (i.e. ward) each ethnic group was enumerated with the same success by the 1991 census. The Black and Asian ethnic groups are, nevertheless, relatively poorly enumerated in Britain as a whole, purely because of their demographic concentration within low-coverage areas of Britain. This effect is greatest for the Black African and Black Other groups, for whom on this basis 5 per cent of their population overall are estimated to have been missed. compared to 4 per cent for most other ethnic minority groups and 2 per cent for the White group. However, the assumption of local homogeneity of coverage is unlikely to have been true in practice. It has been estimated that 17 per cent of children

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[34] Bulmer M, *The ethnic question in the 1991 census of population, in Salt J and Coleman D, (Eds.) General demographic characteristics of the ethnic minority populations, Analysis of ethnic minority populations, 1991 Census Data* Volume 1, OPCS, London, 1995. See also Simson S *Appendix: Non-response to the 1991 census: ethnic groups.* in Salt J and Coleman D, (Eds.) *op. cit.*

[35] Simpson S, *Under-enumeration of children in the census: its relation to country of birth of mother.* SARs Newsletter No. 5, June 1995.

[36] Simpson S, Appendix: *Non-response to the 1991 census: ethnic groups* . in Salt J and Coleman D, (Eds.) *op. cit.*

under 10 born to New Commonwealth-born mothers were missed from the census. Given that most ethnic minority group parents were born in the New Commonwealth, the proportion of ethnic minority children missed may also be as high as 15-20 per cent. Caution should be used with this figure, however, as there is some uncertainty in the estimating procedure. Nevertheless, much analysis does suggest that the numbers of ethnic minority children have been under-estimated.

6.69 The issue of under-enumeration of ethnic minority groups in the census begs two further questions. The first concerns the extent to which this might affect the validity of the analysis and conclusions presented in research reports such as this (or the OPCS volumes discussed in paras. 6.46 - 6.63). There is obviously the danger that the extent of under-enumeration will distort findings. For example, basic counts of members of ethnic minorities in particular housing tenures in inner urban areas may be under-estimates of the true picture. In fact, given that the extent of the under-count and the recognition of the groups most likely to be under-enumerated, most analyses of census data (including this one) take account of under-enumeration either at the analysis stage or through highlighting this problem in the reporting of research findings. It is unfortunate, of course, that presentations of the results of census analysis often have to be include caveats in this way, and it is to be hoped that those conducting the 2001 census will have been able to learn from the lessons of the 1991 under-enumeration. For example, better training of enumerators may well produce greater accuracy of results and avoid missing another million from the census statistics.

6.70 The second question raised by the issue of under-enumeration concerns the consequences of this for urban policy. The distribution of many resources and services by local authorities and statutory bodies is in part determined on the basis of census data. It is therefore unfortunate, to say the least, that many of those most in need of such resources and services, such as members of ethnic minority groups, may be denied these by default, because of the under-count. A number of attempts have been made, using increasingly sophisticated analytical tools, to determine the precise level of under-enumeration of particular groups in order to ensure the more equitable distribution of resources and services.[37] However, the onus still appears to lie with policy-makers to ensure that under-enumeration is taken into consideration. Again, there is little that this report can recommend beyond adding to the call for greater awareness of the problem, and for the lessons of the 1991 census to be learnt in time for 2001.

Concluding comments

6.71 This chapter has brought together a range of findings from the analysis of census data on ethnic minorities in Britain. These findings paint a picture of geographical and socio-economic variation between groups on the basis of ethnicity, using data for one year - 1991. The first point to make in conclusion is that the picture we have of ethnic minorities in Britain is still rather crude. This can be explained by looking at the way in which the data was collected and collated by OPCS. The 1991 census was the first to include any questions on ethnicity. After a great deal of consideration and testing, the format of the question was devised so that people were asked to describe what they thought their ethnicity to be. This approach was taken because it is now increasingly irrelevant to one's ethnicity

[37] Simpson S and Dorling D, *Those missing millions: implications for social statistics of non-response to the 1991 census.* Journal of Social Policy **23** pp.543-567.

where one is born; today, the majority of Britain's ethnic minority population are born in Britain. The problem with the ethnicity question for 1991, however, was its lack of flexibility. Although people describing themselves as 'Black Other' and 'Any Other Ethnic Group' were encouraged to describe in their own words what they thought their ethnicity to be, the range of possible options contained in the census small area output remains at eleven. These eleven categories cannot begin to describe the full range of ethnic identities of nearly 60 million people, particularly of the 'white' majority. It is to be hoped that with the development of new technologies for the collation of raw census data, more sophisticated techniques will be developed to give a fuller picture of the ethnic diversity of Britain. It will certainly be a more accurate one.

6.72 The second point to make in conclusion is to emphasise again the limits imposed on the use of census data by under-enumeration. Under-enumeration, as discussed in paras. 6.64 - 6.70, is now thought to have affected the count of ethnic minority groups particularly severely. There is a growing awareness of this problem amongst the users of such census data, but it is still necessary to highlight it. Policy-makers, therefore, have to be very aware of these difficulties when using census ethnicity data in the planning of resource distribution. There is an ever-present danger that many of the target populations for the allocation of increasingly scarce resources will be missed due to this flaw in the collection of census data.

6.73 The final point to make concerns the limits to the use of census data in examining the position of ethnic minority groups in Britain. Census data is limited in the uses to which it can be put. It is very useful for describing basic situations and issues which can be quantified - for example, the number of people who can be allocated to a particular group. It is less useful in directing explanations for the situations which it describes. For example, census data cannot tell us anything about the experience of belonging to an ethnic minority group. Nor can it tell us directly about discrimination or racism in the allocation of resources and access to services and employment opportunities. These issues can only be inferred from the results of census analysis of the distribution of resources. Those using census data should be aware of these limitations.

7 Multiple Deprivation

Summary

Research Context

7.1 This research is based on an innovative analysis of the Sample of Anonymised Records (SAR) from the 1991 Census of Population. The aims of the research were:

- to evaluate the SAR as a new data source, available for the first time in 1991; and
- to use this data source to investigate multiple deprivation, with a particular focus on the question of whether the existing measures of multiple deprivation, which are derived from standard census outputs, are contradicted or supported by the results of the SAR analysis.

7.2 The context for this research lies in current debates about the existence and measurement of multiple deprivation. Two specific issues provide the immediate methodological stimulus for the innovative approach taken in this report.

- in the search for more and more sophisticated techniques for the measurement of multiple deprivation, there is often the danger that the concept being tested will be narrowed in order to make the measurement process easier.
- in the measurement of multiple deprivation using standard census outputs, the 'ecological fallacy' is an abiding danger. For example, if an area shows similar patterns across two variables, such as unemployment and overcrowding, there is a tendency to conclude that the same people or households are affected by both those problems, purely because the two variables seem to conform to the same spatial pattern.

7.3 The analysis presented here shows that it is possible, using the SAR, to overcome both these problems.

7.4 This examination of multiple deprivation using the SAR involved examining the experiences of three groups of people. These were:

- children under 16 years of age;
- people of working age, aged 16-70, and;
- elderly people over 70 years of age.

Indicators specific to each were used, drawing upon the research which led to the Department of the Environment's Index of Local Conditions (ILC). The initial findings can be set out for each group separately.

Children aged 16 and under

7.5 Four problems were identified for children here: that their household was without an earner; overcrowded, without a car, or without at least one housing amenity (e.g. central heating). To focus the analysis further, three 'at risk' groups were identified: children living in a lone-parent household, those living in a household headed by someone of low skill, and those who are members of a non-white ethnic minority group. Only a *very small number of children* have all the above set of problems. In contrast, 60 per cent of all children have none at all of the problems identified by the analysis. However, the incidence of deprivation is notably higher for some of the 'at risk' groups.

The influence of household structure

7.6 The type of household in which a child lives has an impact on that child's likelihood of experiencing a range of problems:

- 44 per cent of all children of lone parents live in households with no earners and no car; and indeed
- 12 per cent of the children of lone parents live in households with no earners, no car and lacking amenity in some way.

7.7 A new finding from this research is that children in lone parent households are less likely to be in overcrowded households than other children. This finding may seem to contradict other Census-based analyses of the living conditions of children, which have been seen to associate lone parent households with overcrowding. This suggested association was due to an *ecological fallacy* which arises from the fact that the areas where overcrowding is a particular problem are also the areas where lone parent households are most likely to be found. The standard form of Census data is a set of tables which represents the overall results for an area: the fallacy arises from assuming that it is the same households which have one parent and are overcrowded. Analysing the SAR data, however, shows that very few households have both these features - but that the two types of household are often to be found in the same, rather disadvantaged, areas.

The importance of location

7.8 Across the country as a whole, 22 per cent of children live in households with no earners and also have at least two of the three problems of lacking amenity, being overcrowded and being without a car. However, these children are not spread uniformly around the country. The proportion of children experiencing these circumstances declines markedly as the focus shifts from inner urban areas to outer metropolitan areas, and then further to more rural districts.

7.9 The position of children in certain parts of London is particularly stark:

- nearly two thirds of all children in the London Borough of Tower Hamlets could be defined as having 'severe' problems (that is they live in households with no earners and have at least two of the above three problems), and these children make up *nearly one in six of all the residents in that area;* and
- many other Inner London boroughs also have similarly high rates, as do districts in most of the largest cities of the north of England and the Midlands.

7.10 There is also evidence to support the idea that that the risk of children experiencing severe problems arises from an interaction of a diverse set of risk factors and specific local circumstances and influences.

People of Working Age: the 16-70 Age Group

7.11 The findings from the analysis of this group, using the SAR, certainly emphasised the sheer variety to be found among people who are in and around the normal working ages. The four problems identified for the analysis of this group were being ill, unemployed, overcrowded, and being without a car. The three 'at risk' groups analysed were women, the low-skilled and members of non-white ethnic groups. Certain associations between these variables do stand out:

- households headed by a person in the lower skill social group are more likely to be without a car;
- the indicators for lower skill and no car ownership are also associated with the probability of being ill on a long-term basis; and
- there is a strong negative association between being a woman and being unemployed; that is, being a woman means that you are less likely to be seeking work unsuccessfully.

A range of experience

7.12 As would also be expected, the range of experiences among this group is vast, and may be seen in part to be evidence of a markedly polarised society:

- over two-thirds of the people in this group have none of the problems highlighted by this analysis; while
- 18 per cent of people could be defined as having severe problems (that is they are unemployed and experience at least two out of the three other problems).

The geography of polarisation

7.13 This group of people, being of working age, have been most acutely affected by the rapid run-down of particular industries. This is apparent from the ranking of areas in terms of the proportion of people from this group with particular problems. Traditional industrial areas such as South Tyneside and Sunderland are prominent, as well as a number of eastern boroughs in Inner London.

The Elderly

7.14 This is a smaller and more coherent group for analysis, and as a result the SAR analysis can be quite tightly specified. The forms of deprivation considered for this group were being ill, living alone, being without a car, and lacking at least one amenity. The one 'at risk' category which was considered was the elderly who do not own their homes outright.

The importance of home ownership

7.15 Home ownership proves to be a particularly significant indicator for this age group, in that there is a strong tendency for the groups of elderly people with the most problems not to own their homes outright:

- one in eight of the over 70s own their homes outright and have none of the problems identified in this analysis;
- one in four of the elderly have at least three of the problems used in this analysis (lacking amenity is the problem which is least common); and
- one in twenty of this group have all four problems identified by this analysis.

Geographical pattern

7.16 The intensity of deprivation among the over 70s is highest in Inner London, and decreases as the analysis is shifted to more rural areas. However, it should be noted that although the intensity is highest in Inner London, the actual counts of cases leads to a very different emphasis. The out-migration from cities of the recently retired was most common among the least deprived, which is why a high proportion of those elderly remaining in Inner London tend to be among the most deprived. Even so, any policy targeted at the most deprived elderly people needs to avoid simple targeting by area, because it will miss the fact that the absolute majority of those experiencing the most severe problems are not, and never were, living in the inner cities.

Evaluation of the SAR

7.17 A number of the advantages and disadvantages of the SAR have emerged as a result of this exploratory study.

Advantages of the SAR

- It is possible to target analyses to produce new forms of measurement which have not been feasible using standard census outputs.
- The SAR enables researchers to guard against the influence of the 'ecological fallacy' in the analysis of complex issues such as multiple deprivation.
- The SAR analysis highlights those groups for whom multiple deprivation is genuine, and also suggests some groups for whom it is just an artefact of the data sources used in earlier studies.
- The SAR makes it possible to calculate the proportion of an area's total population who are afflicted by those specific problems which can be defined as being of most relevance to their age group.

Disadvantages of the SAR

- It is not possible to analyse SAR data at the very local level and for most cities this limitation of the analysis to the scale of local authority districts or above prevents any investigation of inner/outer city differences.
- The heterogeneity of some groups means that a different approach needs to be devised before it will be possible to use the SAR to analyse multiple deprivation among the 16-24 age group, for example, given the diversity of circumstances of people in this group.

Overview of the Analysis

7.18 This study has aimed to ilustrate the potential value of the SAR as a source of new insights into the reality of multiple deprivation for individual people and households. Two alternative forms of overview have been attempted, one for a specific age group, and one across all ages together.

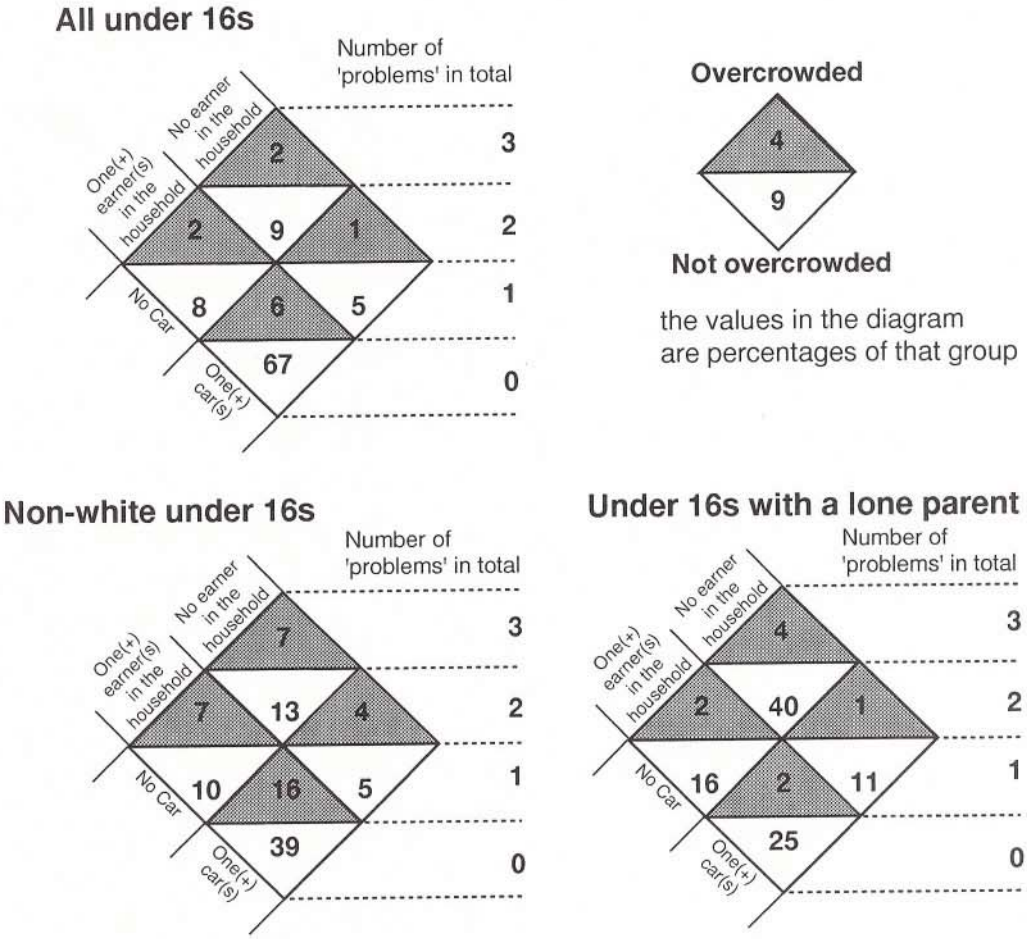
The example of children

7.19 There are many forms of deprivation which children can face, but for this example overview three can be highlighted: living in a household which is overcrowded, or has no earner, or has no car. Figure 7.1 shows how these three issues can be combined to categorise all children according to their household's circumstances. Looking first at children in general, the Figure's top diagram summarises the evidence of multiple deprivation among children by showing the proportion of under 16s who are in each of the eight types of household which are identified when they are classified according to whether or not they have each of the three problems, but 14 per cent live in households with two or three of them (i.e. the sum of all the types in the upper half of the top diagram).

7.20 Only the SAR data allows so explicit an analysis of multiple deprivation. It can then be pursued by separating certain 'at risk' groups. The lower parts of the diagram provide, firstly, the example of children from the non-white ethnic groups

and, secondly, those who have a lone parent. Taking the proportion who have either two or three problems as the measure of multiple deprivation, the rate of 14 per cent which was seen for all children rises here to 31 per cent for non-white children and 47 per cent for children of a lone parent.

Figure 7.1 Multiple deprivation among children: a summary



A summary analysis

7.21 Each of the age group SAR analyses has led to an illustrative definition of multiple deprivation which is specific to that age group. For each area, it is then possible to work out the proportion of all residents who are then deemed to be multiply deprived (that is, in the way which is relevant to their own age group). Much debate surrounds the question of just what should be considered 'severe problems' for any age group, of course, but this analysis has been pursued in order to show the sort of overview which can be derived from the SAR data. These illustrative results suggest:

- Tower Hamlets has the greatest intensity of multiple deprivation;
- areas with most deprived people are equally distributed between Inner London boroughs and northern cities;
- this form of analysis can be readily 'customised' to reflect different policy concerns.

Introduction

7.22 This chapter is concerned with multiple deprivation and, in particular, the potential for new measures of deprivation which use the Sample of Anonymised Records (SAR) from the 1991 Census of Population (Middleton, 1995). This section of the paper will set out the aims and limitations of this study; it is followed by a discussion of the detailed measurement of deprivation issues. Next there are three sections which look in turn at different age groups of the population, looking first at the elderly because this new analysis of deprivation is most readily explained for that age group. The final section of the paper offers a brief preliminary evaluation of the innovations which have provided the basis for this study, and summarises the major findings from this analysis with reference to different areas in England.

7.23 The concept of multiple deprivation continues to be actively debated, although the most widely respected interpretation is probably that of Townsend (1987) which stressed that, in modern society, deprivation is experienced as the lack of resources and opportunities which most people take for granted. However, even more debates are provoked by any attempt to interpret such a concept in the form of a statistical measurement. The dilemma which usually then arises is whether to accept a narrowing of the concept in order to focus exclusively on the one or two aspects of it which can be more robustly measured or to seek a multi-dimensional approach in which the final synthesis is hoped to be rather more robust than 'the sum of the parts' (when the measurement of some of those 'parts' are known to be far from ideal on their own narrow terms). When the Department faced this dilemma 20 years ago it tended towards the former option, producing over a dozen separate studies which often examined 'customised' analyses of distinct issues (e.g. Dept of Environment, 1976). For the 1981 Census data, the Department moved to a broader multi-variate approach, and this remained the preference in advance of the arrival of the 1991 data (Coombes *et al*, 1995). Over this period the same shift towards multi-variate approaches has been prevalent among many other Census users, and most especially in marketing with the growth of 'geodemographic' analyses. One result has been that research is now expected to draw upon a wide diversity of data sources (cf. Boddy *et al,* 1995), whether or not the study is required to synthesise these into a single analysis.

7.24 A critical issue for synthetic analyses arises from the fact that they almost always draw upon data sources which are pre-aggregated (most usually to tabulations by areas such as wards or districts). The problem is that 'ecological fallacy' can arise: that is, if two measures are found to have similar patterns of high and low values across the country, the 'natural' interpretation is that it is the same people or households who are exhibiting both of these characteristics. To give a clearly fallacious example, if the same areas tend to have high birth and death rates, it might have been suggested that giving birth is a highly risky behaviour! However, further study may reveal that the high death rate is mainly due to high levels of in-migration of very elderly men, and so is entirely unrelated to the birth rate pattern. In this example, the categories of people involved serve to resolve the question once and for all, but many deprivation-related issues cannot be easily clarified in this way. Is it the same people's behaviour which cause certain areas to have both high crime rates and high unemployment rates, for example?

7.25 A very early examination of these questions was provided by Holterman (1975), who was allowed special access to individual-level 1971 Census data. The individual data allows the 'coincidence' of different factors to be tested directly

(rather than relying on the 'co-location' of high rates in pre-aggregated tabulations covering whole areas and their populations). The results of the Holterman study have remained unreplicable for 20 years because no individual-level data from the 1981 Census was made available for research. In contrast, researchers in other countries were able to undertake multi-variate studies of individual-level datasets (see, for example, the analysis by Desplanques (1987) of the influence of the father's occupation on the relative success year-by-year of different young people's entry into the labour market).

7.26 The arrival of the SAR dataset has thus opened up new possibilities for the analysis of deprivation and related issues in the Britain of the 1990s. This is a timely boost for such research, given the recently increased interest in deprivation. More generally, several recent studies have suggested that different age groups have become less similar in their probability of becoming relatively deprived (Adkin, 1994). This emphasis upon age groups is appropriate for a SAR-based analysis, which has total flexibility in the way it can categorise people as part of the analysis. Thus the approach is to seek appropriate measures of deprivation for each broad age group, and then perhaps to seek a form of analysis which may combine these measures in ways which will not introduce the possibility of ecological fallacies or of 'double counting' people who are deprived.

7.27 The innovation which the SAR represents is the making available of Census data in the form of the 'raw' survey that is, neither aggregated up to areas such as wards nor tabulated into fixed format outputs. Within the confidentiality constraints which are strictly maintained, the SAR now makes it possible to analyse Census data in ways which were not previously possible. The one critical limitation which remains is that, as a rather severe means of preserving confidentiality, where people live is only identified by local authority district (or groups of small districts). Consequently, comparing the experiences of, say, inner and outer city residents is possible in London but nowhere else.

7.28 The key advantage of the SAR data which covers 2% of all individuals for the study of multiple deprivation is that it can be used to identify exactly how many people have any precise combinations of circumstances, problems or disadvantages. It thus becomes possible to create new analyses which reflect different policy concerns about different groups of the population. It may be appropriate for some purposes to focus only on, say, elderly women who have every one of five specified problems or characteristics (e.g. having no car and being a recent in-migrant, and living alone in rented accommodation without central heating). Another approach which is possible is to identify several relevant characteristics and then count the people in each area who have most, but not necessarily all, of these problems or risk factors or, indeed, whatever features have been deemed to be of interest.

7.29 The final advantage of the SAR data stems partly from the way that it encourages 'targeting' on whichever subgroup of the population is most relevant to that enquiry. In this exploratory analysis, the targeting is by broad age group, hence the discussions in the next section which emphasise that most measures of deprivation are in fact only coherently applied to one or other age group. The approach is illustrated here by a three-way split of the analysis, which is addressed in turn at the Over 70s, the Under 16s and all others. This ordering is adopted because the Over 70s have a readily identified set of problems to which they are at

risk, so their analysis provides a relatively straightforward introduction to the approach taken throughout this paper.

- Of all the age groups, the elderly are the most likely to have at least one of the four problems identified as relevant to them. They also have a very varied experience, in that there are significant numbers of elderly to be found with every possible permutation of (not) having these various problems. As a result, more generalised analyses will often be led into misleading conclusions, when these are based on the apparently straightforward results obtained from non-SAR Census data on the elderly.
- The analysis here next goes on to focus on the Under 16s who are living in households with no earners *and* two or more of three other problems (overcrowding, lacking amenity, lacking a car). This group has been chosen for analysis because children are permanently high on the policy agenda, not least because some forms of deprivation in these formative years can leave the child with disadvantages (such as reduced educational attainment) which may remain with them for long periods afterwards (Field, 1989).
- The last of the three broad age groups is admittedly something of a residual category, but its heterogeneity makes it rather interesting for this exploratory study. All the 16-70 age group are, at least potentially, in the labour market, so they do share the risk of some forms of deprivation, such as unemployment. It might have been interesting to target the analysis on the young adults age group, but this would in fact only emphasise the difficulty of analysing a heterogeneous group, as well as highlighting the data for an age group who were the most likely to have not been included in the census at all.

7.30 This paper, then, aims to provide some initial insights into the extent to which multiple deprivation is a reality for some people today. The objective is to move beyond the analysis of areas, in order to discover whether people tend to suffer individual problems, or combinations of problems (i.e. real multiple deprivation). However, the data used here and the form of analysis developed for it are still at the developmental stage so the results should be viewed as illustrative and experimental.

Measures of deprivation

7.31 The one point on which there is widespread agreement among the many researchers into deprivation and related issues is that the choice of measures also known as variables, indicators or perhaps statistics will deeply affect the results obtained. This statement may appear to be a truism, but it is particularly important for analyses which compare areas (e.g. by ranking them according to their values on a chosen measure). A major reason for the statistical sensitivity of such analyses is that the underlying variation in the area's social and demographic structures will usually influence the rankings obtained (Coombes *et al*, 1992). The ways in which the results are influenced in practice can often be largely due to somewhat obscure 'technical' issues in the way an indicator is calculated.

7.32 For example, the unemployment rate of areas is probably the single measure which is most often used for ranking analyses but since it is known that unemployment in almost all areas is highest among young men, the youthfulness of an area's population will notably affect its overall unemployment rate. Any analysis will thus rank two areas very differently if one contains a large proportion of young men. However, many such analyses are not greatly concerned with the experiences of young men, and for these studies it is more important to know that the unemployment rate for the majority of the workforce hardly differed between the two areas. Among the more technical issues which also need to be addressed in this example are whether to include the (predominantly young) people who are on Government Training Schemes (GTS) as part of the numerator 'the unemployed' and whether to include the increasing numbers of permanently sick or prematurely retired (or the decreasing numbers of 'housewives' and others not economically active in other ways) in the denominator 'the workforce' and, perhaps, also in the numerator! The measurement of unemployment thus poses a huge range of choices, all of which would raise or lower the relative values in different types of area due to the distinctive workforce structures of inner cities, coalfield towns, new towns, rural areas and so on.

7.33 The final point to make about this example is that these sensitivities are common across all types of measures, although they may be most familiar in relation to the measurement of unemployment. Even if the Census data only in fact provides one realistic way of measuring a particular issue, that measure is in reality just one of the options which *might* have been provided, and its selection will have an effect on the results obtained.

7.34 The starting point for this paper is the Robson *et al* (1995) set of indicators underlying the Department's Index of Local Conditions (ILC). The ILC variables which are *only included at local authority level* are all from non-Census sources and so are not relevant to the analysis of SAR data to be undertaken here. One indicator, which is included in the local authority ILC and also in the *ward level* ILC, is concerned only with 17 year olds, which is far too narrow a focus for the intention here to analyse broad age bands. The remaining six indicators in the ILC are all obtained from the Census and are included at every level of analysis. The following discussion briefly considers in turn each these other ILC indicators, assessing their applicability to this study, and adapting some for the present purpose. Bearing in mind that the strategy will be to consider separately one broad age group after another, the precise definition of the appropriate variable here on overcrowding, say, could be altered between its use to identify the elderly who live in overcrowded conditions, and its identification of which children are deemed to be living in overcrowded households.

Lacking amenity

7.35 The measure of housing amenities which is in the ILC was directly modelled on the 1981 approach, but this leads to very small numbers being included and hence greater statistical vulnerability. The approach here follows other work in broadening the analysis to include households lacking any central heating (a new variable in the 1991 Census). This helps to make the measure particularly relevant to both the elderly and children.

No earners

7.36 This ILC measure, as proposed by Coombes *et al* (1995), identifies children in households with no earners at all, or with a lone parent working part-time only. The individual data from the SAR cannot support the second part of this definition, so it has had to be simplified by dropping the reference to lone parents here.

Overcrowded

7.37 The analysis below aims to adopt the ILC measure's definition unchanged (*viz.* identifying households with more than one person per room).

Unemployed

7.38 The ILC measure excluded those on a Government Training Scheme (GTS) but, as in many other studies, they have been included here. More importantly, this study is based on the analysis of whole age groups, so the denominator embraces everyone in the broadly-defined economically active age range (*viz.* 16 to 70).

Without car

7.39 This measure (identifying those households without a car or van) is adopted directly from the definition used for the ILC (Robson *et al,* 1995).

Unsuitable housing

7.40 This ILC variable can produce paradoxical results in some areas, due to its assumption that all purpose-built flats are unsuitable for children. A more appropriate definition, which identifies housing without its own ground floor access, is unfortunately only available for Scottish data. A pilot analysis here considered housing which is temporary or not self-contained, but very few children (or elderly people) were found to live in these types of accommodation; students and other younger adults *do* live in such housing but they are not widely deemed to be deprived as a consequence it is not necessarily 'unsuitable' housing for them. Consequently, no variable of this kind was pursued here.

Risk factors

7.41 A secondary strand to this study is to consider the extent to which certain 'at risk' groups might in practice be suffering the various forms of deprivation which are to be measured. The ILC indicators followed the approach of Coombes *et al* (1995) in separating such risk factors from the measurement of deprivation 'outcomes' such as those listed above. Robson *et al* (1995) cited four 'vulnerable groups' and examined the statistical relationship of these risk factors to the ILC indicators. These four risk factors are now considered in turn.

Lone parent

7.42 This vulnerable group definition was adopted directly; it is important to note that it is applied to children (i.e. having a lone parent is deemed to be a risk factor), rather than to adults (i.e. this report is not concerned with *being* a lone parent).

Alone and elderly

7.43 This variable represents a 'vulnerable group' as defined by Robson *et al* (1995) (*viz.* elderly people who live on their own); the Robson et al definition can be applied directly to the Over 70s here because it is already related to the elderly age group.

Non-white

7.44 In principle, being in this vulnerable group is relevant to all age groups, but it identifies a statistically unreliably small proportion of the elderly and so is not used for that age group here.

Not owning

7.45 The other vulnerable group examined by Robson *et al* (1995) were local authority tenants, but it can be argued that their experience may be little different to those of other tenants or, with the recent emergence of the negative equity problem, some house purchasers. The one group who are least likely to be vulnerable to housing-related problems are thus those who own their own homes outright (i.e. without a mortgage). This group is concentrated among people aged over 50 so to apply it to either the 16-70s (or to their children) would introduce an implicit age bias to the analysis. Consequently it is used here only for the elderly.

Lower skill

7.46 One of the vulnerable groups for whom data was not analysed by Robson *et al* (1995) was the lower skill social classes. Many studies have shown that members of households which are headed by lower skilled manual workers have higher rates of illness and also a wide range of other forms of deprivation.

Female

7.47 As a rather extreme test of the risk factor analysis here, the SAR data can also be classified by gender to assess whether it is possible to measure outcomes of the disadvantages which women are widely understood to face. This analysis cannot be extended to the elderly, because the differential life expectancy of men and women would lead to an implicit age bias to the results (because the average age of the sampled women would be higher).

7.48 Suffering a long-term illness is one of the problems which is particularly likely to be affected by age so that its measurement would be vulnerable to any age bias in the analysis. There is valuable new data on people who are ill long-term in the 1991 Census but it is not among the ILC indicators. This study follows others in treating that as an anomaly and so includes this indicator among its principal deprivation measures (as summarised in Table 7.1 which also presents the national average values for each age group to which that measure is to be applied).

Table 7.1 Basic values for the indicators adopted

% of all that age group in England that is (living in) a...	Age group: Under 16	16-70	Over 70	problem or risk factor
person living Alone	n/a*	n/a*	42.4	problem
Female	n/a*	50.8	n/a*	risk factor
person Ill long-term	n/a*	10.4	44.5	problem
household Lacking amenity (at least 1 of 3)	14.9	n/a*	25.3	problem
household has a Lone parent	17.0	n/a*	n/a*	risk factor
household head in Lower skill social class	31.2	40.6	n/a*	risk factor
household includes No earners	17.4	n/a*	n/a*	problem
person in Non-white ethnic group	9.9	5.7	n/a*	risk factor
household Not owning home outright	n/a*	n/a*	49.1	risk factor
household Overcrowded	10.5	3.3	n/a*	problem
person Unemployed or on GTS	n/a*	7.3	n/a*	problem
household Without car	21.3	20.0	60.2	problem

* N/A = not available in the SAR or not applicable to this age group and so not adopted here.
Fuller definitions of the variables are in the text and, where appropriate, in Robson *et al* (1995) and/or Coombes et al (1995).

The Elderly

7.49 The elderly are the group for which the form of analysis used here can be most readily illustrated, and therefore this report presents the analysis of this age group first. The main reason is that there are rather fewer issues represented in the SAR which are strongly relevant to the elderly and their standard of living (as was shown in Table 7.1). For example, it is not particularly useful to look at economic activity among older people, because this may be higher both among some professional groups who choose to continue working after pensionable age, and also among groups whose only pension is the basic state provision and so feel the need to supplement it by earning some extra income. In the 1981 Census there was a classification of retired people's former occupation, which allowed dependency on state pensions to be estimated, but this was not included in the 1991 Census (and so is also not available in the SAR).

7.50 A number of the other 'standard' deprivation indicators are also of little relevance to the elderly. Scarcely any of the Over 70s live in 'unsuitable' housing: such an indicator might be more relevant to the elderly if the Census data for England,

like that in Scotland, identified households whose access is not at ground floor level. Similarly, virtually no elderly live in Overcrowded households in fact, more attention has been paid recently to the problem of the elderly having accommodation which is clearly too large for them. As a result, the only two ILC indicators of relevance to the elderly are Lacking amenities and Without car. This discussion clearly illustrates the parsimony of the ILC approach, so some of the other options considered earlier need to be reviewed here. The 1991 Census question on limiting long-term illness is clear of particular importance to the elderly, and to omit it here would be difficult to justify. Finally, elderly people who live on their own are widely considered to be disadvantaged (especially if they are also suffering from long-term illness). Thus this analysis takes as the four potential problems for the Over 70s being Ill, Alone, Lacking Amenities and Without a car (see Table 7.1).

7.51 The second strand to this study involves examining the risk factors which may be associated with the forms of deprivation which are analysed. It has already been stressed that the 1991 data does not allow the Over 70s to be analysed by social class. Ethnic group is potentially relevant, but only 2% of the Over 70s are non-white so ethnicity is not a numerically important factor for the elderly (although it will start to become significant among this age group within the next decade). Finally, it is probable that women have some particular disadvantages among the elderly; in particular, far fewer women learnt to drive in previous decades so for these age groups it is single women who are especially likely to be without a car. However, the very strong difference between the genders' life expectancies means that there are a far higher proportion of the very elderly among the group of women who are Over 70 than among their male counterparts. As a result, to include gender in the analysis here would introduce a strong bias, with women more likely to be displaying those problems which increase with the agedness of the cohort (notably being Ill or Alone).

7.52 The one risk factor which was identified in Table 7.1 as being especially relevant to the elderly is based on housing tenure. Rather than distinguish local authority tenants from other groups, it is likely that the major distinction is between those who own their home outright and all others. Owning outright is, unsurprisingly, concentrated among those nearing or over pensionable age. Any elderly people who still paying off a mortgage during the 1990s house price recession especially arguably have problems which are more similar to those who are renting than they are to those who now own their homes outright.

7.53 Table 7.2 begins the analysis by considering the statistical inter-relationships between each of the four 'problems' identified above for the Over 70s together with the 'risk factor' of Not owning outright. Of the ten relationships between pairs of variables (or 'pairwise relationship'), the only one which is not significant is the last shown (between being Ill and living in a dwelling Lacking at least one amenity). Moreover, for all the other nine the '+' shown in the right-hand column indicates that any person who has one of the problems is thereby also statistically more likely to have any of the others (or to have the risk factor of not owning their own home outright). The pairs of problems are ranked in terms of the strength of this association, as measured by the Chi Square value for the pairwise relationship between the two cross-tabulated variables. Chi Square values are calculated by comparing the actual cross-tabulation of two variables with an 'expected' dataset derived from each variable's total figures. In effect, the value is a test to see whether one variable is randomly distributed with respect to another: a high value provides

a robust measure of the association between two variables. Thus in Table 7.2 the strongest link can be seen to be between living Alone and being Without a car: the strong positive relationship between these two characteristics is borne out by the fact that only 15% of the Over 70s who live on their own have a car, whereas 58% of those who live with others are in a car-owning household. (Table 7.1 shows the proportion of Over 70s suffering from each of these characteristics.)

Table 7.2 Inter-relationship of problems and home owning for the Over 70s

Pairs of problems/home owning	Chi Square	+/-*
Alone/Without car	16423	+
Without car/Not owning	6016	+
Without car/Lacking amenity	2289	+
Ill/Without car	1192	+
Alone/Not owning	974	+
Ill/Not owning	760	+
Alone/Lacking amenity	240	+
Lacking amenity/Not owning	132	+
Ill/Alone	100	+
Ill/Lacking amenity	0	not significant

* '+'= the two problems tend to affect the same people
'-'= the two problems tend to affect differnt people

7.54 One of the main benefits of the SAR data is that it is relatively straightforward to generate these sorts of analyses. In this way, it is possible to check for associations between variables which may not be cross-tabulated in that way in any of the standard Census outputs. This becomes particularly valuable when numerous different dimensions are built into the analysis. The analyses here have already used the spatial dimension of the SAR to filter out cases in Wales and Scotland, and also use the age of the respondent so that Table 7.2 looks exclusively at the elderly. The only limit to the additional filtering or cross-tabulating that can be carried out is that individual cases must not be identifiable (Middleton, 1995).

7.55 One strong finding from Table 7.2 is that being Without a car is clearly the strongest single indicator variable for the range of problems among the Over 70s which are examined here. The associations between the Without car variable and each of the other four variables are shown very pronouncedly to be the four strongest of all the ten pairwise associations between variables. The particularly strong association with being Alone is likely to be somewhat linked to solitary Over 70s more often being female and very elderly, whereas the association with Not owning and Lacking amenity will reflect the experience of the less affluent (e.g. those dependent solely on state pensions). The problems which are most distinctive in their influence that is, which are least strongly associated with any of the others, are being Ill and Lacking amenity. In other words, a fairly thorough analysis of problems faced by the Over 70s would need to consider both of these concerns separately, because they are not 'proxied' by any of the others, as well as analysing the Without car indicator or a couple of the issues with which it is most strongly associated (e.g. being Alone and Not owning).

7.56 Table 7.3 provides the core information on the problems of the Over 70s which can be derived from the SAR and no other source. Each person in the sample is allocated to just one of the 32 cells produced by analysing the intersection of five variables (each of which is a binary measure, that is, a two-way partion such as that between those who are Ill and those who are not). The largest single group is the one which possesses none of the five forms of disadvantage measured here but not quite one in eight of the Over 70s is in this fortunate position of Owning outright and also having none of the four problems discussed here. At the other end of the scale, one in twenty of the elderly have all four problems; more than a quarter of all the Over 70s have at least three of the problems and so appear in Table 7.3 in one of the lowest five lines. About half of all these multiply deprived old people are not only Ill but also Alone and Without a car, although not also lacking any amenity. Similarly, among the groups with two problems, the most numerous categories are those Without a car and either Ill *or* Alone (whether or not they are Owning outright).

Table 7.3 Prevalence of the four Over 70s problems and of home owning outright

% of all Over 70s in private households*		Owning outright	Not owning outright
NONE of the problems		12.2	5.0
1 problem only:	Ill	6.8	3.9
	Alone	2.9	0.8
	Without car	3.3	4.7
	Lacking amenity	1.8	1.5
(any)		(14.8)	(10.9)
2 problems:	Ill & Alone	1.1	0.5
	Ill & Without car	3.1	5.2
	Ill & Lacking amenity	1.2	1.0
	Alone & Without car	5.3	7.2
	Alone & Lacking amenity	0.4	0.3
	Without car & Lacking amenity	1.9	2.3
(any)		(13.0)	(16.5)
3 problems:	ALL (except not Ill)	2.7	3.1
	ALL (except not Alone)	1.6	2.1
	ALL (except Without car)	0.2	0.2
	ALL (except not Lacking amenity)	4.1	8.6
(any)		(8.6)	(14.0)
ALL 4 problems:		2.3	2.8
Total		50.9	49.1

* Each person counted once only (e.g. the counts of people with '2 problems' exclude those with 3 or 4 problems).

7.57 Taking the evidence of Table 7.3 in general, there is a strong variety in the experience of the Over 70s with regard to the problems measured here. Almost all the possible permutations of the variables examined in Table 7.7 include a small but significant 'share' of the elderly population. The conclusion must surely be that the Over 70s are a very heterogeneous group, for whom any generalisation is

likely to be ignoring, or contradicting, the experience of several numerous sub-groups of the elderly. It is even less plausible, of course, for the customary SAS-based broad analyses of an area's *total* population to represent the experience of many more than a handful of the elderly, whose varied and distinctive circumstances have been so vividly illustrated here.

7.58 The two separate columns in Table 7.3 show the breakdown, by whether they own their own home outright, of the groups with different combinations of problems (and of those having no problem). There is a tendency for the groups with more problems to be Not owning their houses outright. Table 7.4 follows up this observation by considering the geographical distribution of the Over 70s, distinguishing between those who do, and those who do not, own their homes. This analysis also distinguishes the elderly people in the SAR in England who are both Ill and Alone (regardless of their other problems, or lack of them). This group's vulnerability has often been of concern to policy-makers and others.

7.59 It will be remembered that the single major drawback of the SAR is that it is not possible to look at spatial breakdowns below the level of large District areas. Clearly, it would have been valuable, for this examination of the variation in the elderly's welfare, to have classified the elderly according to whether they live in neighbourhoods which have been identified as 'areas of multiple deprivation' (by the ILC). Table 7.4 provides a substantial simplification of such an analysis by grouping Districts in descending order of their probability of embracing the most deprived areas in the country. The proportions of these areas' Over 70s who are Not owning (as well as being Ill and Alone) are shown as the percentage values in the table's first data column. These values decline steadily as the types of area move from Inner London (whose residents are most likely to be living in a deprived neighbourhood) towards the non-metropolitan parts of the country. This is the familiar 'ecological' pattern of values for areas which, this analysis suggests, does reflect a genuine contrast in the distribution of Over 70s who do indeed suffer an explicit form of multiple deprivation.

Table 7.4 Distribution of Over 70s by type of area

(Number in the SAR)	Ill and Alone		All others*	
% in that area	Not owning	Owning	Not owning	Owning
Inner London	(783)	(131)	(704)	(2104)
	21.0	3.5	18.9	56.5
Principal Metropolitan Cities	(1036)	(377)	(878)	(3934)
	16.6	6.1	14.1	63.2
Other Metropolitan Districts	(2091)	(987)	(1661)	(8411)
	15.9	7.5	12.6	64.0
Outer London	(851)	(658)	(867)	(5346)
	11.0	8.5	11.2	69.2
rest of England	(5774)	(4560)	(5811)	(40437)
	10.2	8.1	10.3	71.5
England	(10535)	(6713)	(9921)	(60232)
	12.1	7.7	11.4	68.9

* All Over 70s who are not both Ill *and* Alone.

7.60 A final word of caution is still required at this point. The percentage values in Table 7.4 do indeed show that the intensity of deprivation among the Over 70s varies by area in a way which could have been broadly predictable from SAS-based analyses. Yet even though the intensity may indeed be highest in Inner London (or parts thereof), the actual counts of cases in Table 7.4 leads to a very different emphasis. The whole of Inner London houses fewer than one in ten of all the Over 70s in the first column (that is, those who are most vulnerable). These are areas from which many of the less deprived groups have tended to migrate as they approach retirement age. As a result, the more deprived groups make up a higher proportion of the elderly still living there, but the Over 70s overall are a low proportion of the area's total population. Most tellingly of all, any policy aimed at the most deprived elderly groups will need to avoid any simple form of targeting by area, otherwise it will miss altogether the majority of those who are Ill and Alone and Not Owning because, as Table 7.4 shows, they live outside the metropolitan areas altogether.

7.61 The final strand in the analysis here is to identify parts of England where the Over 70s are most likely to be Ill & Alone (Table 7.5 lists the 'top 20' SAR areas on this measure). Not surprisingly (given the data in Table 7.4), there are seven Inner London areas among the list although the highest intensity of problems is found in Middlesbrough, a non-metropolitan area. The 'top 20' in fact includes no Principal Metropolitan Cities at all, but this group has a higher average value than that of the Other Metropolitan Districts which have nine representatives in Table 7.5 (including all three such Tyneside boroughs). This superficial paradox is a result of these areas being counterbalanced by quite low values in some nearby Outer Metropolitan Districts (e.g. Stockport and Sefton, in both of which less than 20% of the Over 70s are Ill & Alone). The right hand column in Table 7.5 serves as a reminder that, however important a problem it is for elderly people to be Ill & Alone, this group tends to be a small subset of any area's total population. South coast resorts, where retirement migration has led to areas in which the elderly form a high proportion of the population, are notably absent from this list of areas where many of the aged have multiple problems. On this evidence, it would seem that retirement migration tends not to re-distribute many of the more deprived elderly from the cities to places such as the Cotswolds or the Kent coast.

Children

7.62 This chapter first examined the SAR data on the elderly in order to establish the methods of analysis which are being applied here. There were relatively few variables available in the SAR which were relevant to the elderly, so the presentation of the results could be more straightforward than for a highly multi-dimensional analysis. The paper now turns to focus on the Under 16s, for whom rather more relevant data is available.

7.63 Of the four problems for the elderly which were analysed above, Lacking amenity and being Without a car are both at least as relevant for families with children, but the Under 16s are not living Alone to any significant extent. The other problem examined for the elderly was being Ill, but only 2% of Under 16s are identified as having a limiting long-term illness in the 1991 data. Moreover, the Ill tend to be very widely scattered across those with or without the other problems and risk factors relevant to the Under 16s (e.g. there is no pairwise relationship, between one of the other variables and the Ill variable, which has a Chi Square

value as high as 750). In other words, the distribution of long-term illness among the Under 16s is uncommon and so the data is potentially less robust; it is also effectively random in relation to the other issues measured here.

Table 7.5 The 20 SAR areas with the highest proportion of Ill & Alone Over 70s

SAR area	Ill & Alone % of all Over 70s	Over 70s as % of all in SAR
Middlesbrough	30.3	2.0
Hackney	29.5	2.2
Hyndburn (Accrington) & Rossendale	29.3	2.2
Easington & Sedgefield	29.1	2.4
Tower Hamlets	28.2	2.1
Rotherham	28.0	2.4
Bolton	27.4	2.4
Gateshead	27.3	2.6
Salford	27.1	2.5
Haringey	26.8	1.7
Barnsley	26.6	2.4
Kingston-upon-Hull	26.4	2.3
North Tyneside	26.3	2.7
Wigan	26.2	2.0
Hammersmith & Fulham	25.9	2.1
Camden	25.8	2.8
Rochdale	25.6	2.1
Islington	25.5	2.0
South Tyneside	25.4	2.4
Lambeth	25.2	2.1

7.64 More surprisingly, the measure of unsuitable housing, as discussed earlier, finds only 0.5% of the Under 16s in this type of accommodation. The housing variable which does relate to the experience of substantial numbers of children is Overcrowding, along with Lacking amenity, which has already been mentioned as a common concern to both children and the elderly. The fourth problem for the Under 16s which can be analysed using the SAR data is living in a household Without earners. In addition, there are three risk factors which can be linked to the 'life chances' of children, belonging to a Non-white ethnic group, living in a household which has a Lone parent, or one which is headed by a person from a Lower skill social group (see Table 7.1).

7.65 Table 7.6 presents the Chi Square values of statistical association between pairs of these four problems and three risk factors (NB. for an explanation of the Chi Square value, please see paragraph 7.53). Several of the Chi Square values are much stronger than any which were seen in Table 7.2 (to a degree which cannot be explained by the Under 16s being a rather more numerous group than the Over 70s). The six highest pairwise associations make up a complete set: this suggests

that there is a multi-variate syndrome such that numerous children may be in households with combinations of having No earners, a Lower skill household head, a Lone parent and being Without a car. In other words, these are issues which often reinforce each other (c.f. Williamson, 1994). At the other extreme, being Non-white seems to be a relatively 'weak' risk factor, in that it has rather modest Chi Square values for its relationships with most problems (the exception is the higher risk of Non-white children living in Overcrowded households).

Table 7.6 Inter-relationship of problems and risk factors for the Under 16s

Pairs of problems or risk factors	**Chi Square**	**+/-***
No earners/Without car	44269	+
No earners/Lone parent	40666	+
Without car/ Lone parent	36672	+
Without car/Lower skill	25654	+
No earners/Lower skill	23649	+
Lone parent/Lower skill	13798	+
Overcrowded/Non-white	11073	+
Without car/Lacking amenity	7153	+
Lacking amenity/Lower skill	4066	+
No earners/Lacking amenity	3720	+
Overcrowded/Lower skill	3553	+
Overcrowded/Without car	3351	+
Overcrowded/Lacking amenity	2830	+
Without car/Non-white	2786	+
No earners/Overcrowded	2322	+
No earners/Non-white	1867	+
Lacking amenity/Lone parent	1798	+
Lower skill/Non-white	1699	+
Lone parent/Non-white	369	+
Overcrowded/Lone parent	305	-
Lacking amenity/Non-white	299	+

* '+' = the two problems tend to affect the same people. '-' = the two problems tend to affect different people

7.66 The second weakest, but still significant, relationship is noticeable for being negative. It is probably not surprising that Lone parent households are less likely to be Overcrowded because a second parent would *not* have needed much more space (as in the 'bedroom standard' method of calculating housing needs) but of course *would* have increased the possibility of the household crossing the statistical threshold into the Overcrowded category. It is worth stressing this finding briefly. In the correlation analysis of Robson *et al* (1995), a strong positive association was found between the distributions of the Overcrowding and the Lone parent variables. In that study, the measurement of Overcrowding was applied across all households (indeed, their SAS-based analysis could not have targeted this variable at Lone parents even if it had been considered preferable). Many people might have made

the ecological inference that Lone parent households are prominent among those which are Overcrowded in the areas which show high values on both variables. Yet the SAR data has shown that this is unlikely to be the case, because children living in Lone parent households are in fact rather less likely to be living in Overcrowded households than are other children. This is a clear example of the SAR data revealing a potential ecological fallacy arising from SAS-based studies.

7.67 Table 7.7 moves on to consider the prevalence among the Under 16s of suffering multiple problems, and also of possessing risk factors. The problems identified for this age group are generally less common than were those for the elderly (e.g. Table 7.1 showed that the *most* widespread problem among the Under 16s is being Without a car, which affects 21% of children, whereas the least common problem for the elderly is the 25% Lacking amenity). As a result, the fact that 60% of Under 16s have none of the four problems might have been expected. The effect of the relationship between variables discussed above can be seen (further down the emboldened column in Table 7.7) in the notable proportion of children living in households with No earners and Lacking a car, which Table 7.6 had shown to be the two problems with the strongest inter-relationship. Very few children appear to be suffering all or even all but one of the four problems simultaneously.

Table 7.7 Prevalence of the four Under 16s problems

% of all Under 16s in private households*		All the Under 16s	Those with risk factors: Lone parent	Lower skill	Non-white
% of those Under 16s with that risk factor					
NONE of the problems		60.8	21.4	44.8	35.1
1 problem only:	No earners	4.0	9.4	4.0	4.5
	Overcrowded	4.2	1.2	5.3	12.1
	Without car	6.0	11.7	11.6	7.7
	Lacking amenity	6.3	3.4	8.1	3.7
2 problems:	No earners & Overcrowded	0.8	0.5	1.0	2.6
	No earners & Without car	6.7	29.6	8.0	9.7
	No earners & Lacking amenity	1.0	2.1	1.2	0.9
	Overcrowded & Without car	1.3	1.0	2.4	4.3
	Overcrowded & Lacking amenity	1.3	0.4	1.9	3.6
	Without car & Lacking amenity	2.2	4.1	4.5	2.4
3 problems:	ALL (except No earners)	0.7	0.5	1.3	2.4
	ALL (except Overcrowded)	2.5	10.7	3.2	3.0
	ALL (except Without car)	0.3	0.2	0.4	1.1
	ALL (except Lacking amenity)	1.3	2.6	1.5	4.8
ALL 4 problems		0.6	1.3	0.8	2.1

* Each person is counted once only (e.g. the counts of people with two problems exclude those with three or four problems.

7.68 The three other columns in Table 7.7 present the same type of analysis, but looking in turn at only those children who have a particular risk factor. The overall impact of each risk factor can be roughly estimated from the decline in the proportion of children who have no problem at all (i.e. from the value of over 60% for all Under 16s). The most dramatic results are those for the children of Lone parents

and in particular the 'peak' of nearly 30% of such children whose households have No earners and are Without a car (but do *not* have either of the other two problems). A further 12% of Under 16s with Lone Parents not only have these two problems but are also Lacking amenity (*viz.* those with three problems ('not Overcrowded'), plus those with all four problems). The risk factor of having a household head in a Lower skill social class has a far less distinctive impact on the problems experienced by children, whereas the Under 16s in a Non-white ethnic group are most likely to be in Overcrowded households (in fact nearly a third of all in this group have this problem, whether or not they have other problems too).

7.69 The next step is to identify a category of problems which are deemed to be particularly severe. Living in a household with No Earners is arguably the most pervasive of the four problems which are identifiable with the SAR data, but as a category on its own it may encompass a wide range of circumstances which are not all severe in their impacts on the 'life chances' of children. The SAR data is especially valuable at this point because it allows complex 'filtering' rules to select those cases of most interest. The analysis for Table 7.8 selected only those Under 16s who live in a household which has No earners but which also has at least two of the other three problems (Lacking amenity, being Overcrowded and Without a car). The summary value at the foot of the emboldened column in Table 7.8 shows that over 22% of children in England have this severe set of problems. The other rows in the table contrast the experience of the five major types of area. (It should be recalled here that the SAR areas make it impossible to make fine distinctions between high and low status neighbourhoods, for example.)

Table 7.8 Distribution of Under 16s with severe problems or risk factors

% of all Under 16s in the area	with severe* problems	with risk† factor: Lone parent	Lower skill	Non-white
Inner London	**44.5**	32.5	44.8	40.1
Principal Metropolitan Cities	**39.9**	26.0	42.7	18.6
Other Metropolitan Districts	**28.7**	18.7	35.2	9.7
Outer London	**21.3**	17.1	25.5	24.4
Rest of England	**17.7**	14.2	28.4	4.6
England	**22.8**	17.0	31.2	9.9

* Living in a household with no earners and at least two other problems (from Overcrowded, Without car, Lacking amenity).

† Whether or not they have problems in practice. (NB Individuals with more than one risk factor are included in more than one column.)

7.70 The sequence of area types is in descending order of their frequency of designation as 'deprived areas' in most other studies a sequence which also steps through from the inner areas of the largest conurbation (London) to the more rural England of the 'shire' areas. The values in the **emboldened** column show that, for all the innovation of the SAR analyses, the proportion of each area type's children who have severe problems duly does decline steadily from metropolitan to rural areas in the same way as the findings of most earlier SAS-based analyses. The values in the other three columns of the table are simply the proportions of *all* the Under 16s in each area which have the respective risk factor. It can be seen that

none of these columns shows quite the same steady decline in values from Inner London to the non-metropolitan areas. This result provides indirect evidence that the risk of children experiencing severe problems mostly arises from the interaction of a diverse set of risk factors and local influences. If one of the risk factors had been the sole 'critical factor' in determining children's life chances, then it would have been likely that the values in that column would have had a very similar profile to those in the emboldened column (i.e. it would have been clear that there was a single strong association between 'cause' and 'effect'). On the contrary, the evidence in Table 7.9 is that there are several factors which can play a major role in shaping children's life-chances.

7.71 Finally, the proportion of Under 16s with severe problems can be calculated for each SAR area separately: Table 7.9 lists the 'top 20' values. Nearly two-thirds of all the Under 16s in Tower Hamlets have the set of problems deemed here to be 'severe' and these children make up *nearly one in six of all the residents* in that area (as shown in the right hand column of Table 7.9). Even allowing for this one area's value being a statistical outlier, it is unlikely that many people would have predicted that there are so many areas with over a third of all their children in this 'severe problems' category. Almost all Inner London areas have these high rates, as do most of largest cities of the north of England and the Midlands. In areas such as Knowsley and Middlesbrough, the scale of problems may partly be traced to the towns' rapid growth and strong in-migration around 25 years ago, with the subsequent economic decline then impacting particularly harshly on the generation who have been born during the years of subsequent decline.

Table 7.9 The 20 SAR areas with the highest proportion of Under 16s having severe problems

SAR Area	Under 16s with severe* problems as % of all Under 16s	as % of all in SAR
Tower Hamlets	64.0	16.3
Knowsley	52.1	12.8
Hackney	51.2	12.1
Liverpool	51.0	11.5
Southwark	49.3	10.2
Manchester	47.3	11.0
Islington	46.6	9.4
Lambeth	46.2	8.6
Newham	44.7	11.5
Birmingham	44.4	10.1
Camden	42.6	7.0
Kingston-upon-Hull	42.5	9.2
Hammersmith & Fulham	42.1	6.3
Cities of London & Westminster	41.2	5.9
Lewisham	41.0	8.1
Bradford	40.8	9.6
Nottingham	40.4	8.1
Middlesbrough	39.9	9.8
Blackburn	38.0	9.9
Haringey	38.0	7.9

* Living in a household with no earners and at least two other problems (from Overcrowded, Without car, Lacking amenity).

The working age group

7.72 Much of the benefit of analysing SAR data derives from being able to target the study at specific age groups for whom a coherent and distinctive set of issues can be identified. Clearly, the residual category of the 16-70s has been defined here purely by exclusion from the older and younger groups and so is not a single homogenous group. There may be some noteworthy subsets which could be analysed separately, although the most obvious candidate (young adults) is in fact a highly heterogeneous group itself, and the least well represented group in terms of census data coverage. In any case, given this paper's exploratory tone it is valuable methodologically to see how well the approach developed here copes with such a disparate grouping as all those aged 16-70 taken together.

7.73 The risk factors relevant to the Under 16s are largely also relevant for their parents, and also for many others in this older grouping, except that the Lone parent question is of course dropped here. It is replaced by an exploration of the effect of gender on 'life chances', with being Female taken to be the potential risk factor. Among the problems identified, Lacking car becomes the only issue examined for all three age groups (as was shown in Table 7.1). The problem of being long-term Ill is re-introduced here because it is far less uncommon than it was for the Under 16s (though of course not so common as among the Over 70s). Table 7.1 indicates that being in an Overcrowded household is as important a problem for the 16-70s as it was for the younger group, whereas the Under 16 problem of being in a No Earner household is replaced here with the direct question of whether that person is Unemployed (or on a Government Training Scheme).

Table 7.10 Inter-relationship of problems and risk factors for the 16-70s

Pairs of problems or risk factor	Chi Square	+/-*
Without car/Lower skill	74593	+
Overcrowded/Non-white	26309	+
Ill/Without car	15119	+
Unemployed/Without car	13208	+
Ill/Lower skill	12027	+
Unemployed/Female	7350	-
Unemployed/Lower skill	6917	+
Without car/Non-white	4299	+
Unemployed/Overcrowded	3018	+
Unemployed/Non-white	2445	+
Lower skill/Non-white	2395	+
Overcrowded/Without car	2319	+
Without car/Female	2229	+
Overcrowded/Lower skill	1084	+
Ill/Unemployed	237	-
Lower skill/Female	157	+
Ill/Female	141	-
Ill/Overcrowded	92	-
Ill/Non-white	8	not significant
Overcrowded/Female	3	not significant
Female/Non-white	1	not significant

* '+' = the two problems tend to affect the same people, '-' = the two problems tend to affect different people

7.74 Table 7.10 starts the analysis by reporting the inter-relationships between the problems and risk factors identified for this age grouping. The heterogeneity of this age grouping may explain why the Chi Square values in Table 7.10 are relatively modest, especially when it is remembered that this grouping is more than twice as numerous as the other two groups in combination. The one very strong association is an unsurprising echo of the common-sense finding for Under 16s that households whose head is in the Lower skill social group are more likely to be Without a car. One of the more interesting lesser findings is that both these indicators are associated with the probability of being Ill long-term among this pre-elderly age grouping. Another notable point is that including Female as a risk factor has unearthed a strong negative association. In fact, it is well-known that British women are less likely to be unemployed than men but the fact that this appears to be an 'anomaly' in the context of Table 7.10 is all the more intriguing in the light of the fact that in all other European countries the unemployment rate for women is higher than it is for men.

7.75 Table 7.11 presents the prevalence statistics for the problems of the 16-70s (in exactly the same way as Table 7.7 did for the Under 16s). This set of results is rather less dramatic than those from many of the earlier analyses, with over two-thirds of all 16-70s having none of the four problems. An intriguing point is that of the two risk factors in common with the Under 16 analysis, those in the Lower skill social classes have become vulnerable to little other than being Without a car, whereas the Non-white group are liable to be Overcrowded to much the same extent as was seen for the Under 16s (partly because there are fewer single adults living alone from ethnic minorities in general). The distinctive experience of the Female half of the sample leads to a very 'typical' *overall* chance of having none of the four problems due to the balancing out of women's lower risk of being Unemployed and Ill (for those who are not elderly) and of their higher likelihood of being Without a car.

Table 7.11 Prevalence of the four 16-70s problems

% of all 16-70s in private households*			Those with risk factors		
% of those 16-70s with that risk factor		All the 16-70s	Lower skill	Non-white	Female
NONE of the problems		**67.7**	59.0	46.0	67.4
1 problem only:	Ill	**6.0**	5.4	4.0	5.6
	Unemployed	**3.8**	4.3	5.1	2.5
	Overcrowded	**1.8**	2.3	8.8	1.9
	Without car	**12.7**	18.7	18.3	15.7
2 problems:	Ill & Unemployed	**0.3**	0.4	0.4	0.2
	Ill & Overcrowded	**0.1**	0.1	1.0	0.1
	Ill & Without car	**3.5**	3.7	3.2	3.8
	Unemployed & Overcrowded	**0.3**	0.3	1.5	0.2
	Unemployed & Without car	**2.4**	3.7	4.7	1.5
	Overcrowded & Without car	**0.7**	1.0	4.3	0.9
3 problems:	ALL (except Ill)	**0.2**	0.3	1.4	0.1
	ALL (except Unemployed)	**0.1**	0.1	0.7	0.1
	ALL (except Overcrowded)	**0.3**	0.4	0.5	0.2
	ALL (except Without car)	**0.0**	0.0	0.2	0.0
ALL 4 problems		**0.0**	0.0	0.1	0.0

* A person is counted once only in any column to which they belong (e.g. the counts of people with '2 problems' exclude those with 3 or 4 problems)

7.76 The heterogeneous nature of this age grouping makes a single definition of 'severe problems' hard to resolve. For example, many of those at the older end of the age range will be retired so for them, as for those who continue to be housewives or for others who are not economically active, being Unemployed will not be such an issue. The definition of 'severe problems' adopted for Table 7.12 combines all those who are Unemployed and/or those who are Ill together with any others who are living in households which are both Overcrowded and Lacking a car. Table 7.12 shows that 17.6% of 16-70s in England meet this definition of having severe problems. The urban-rural 'gradient' to these values is much less steep than it had been for the Under 16s (Table 7.8) but, as for the Under 16s group, there is no simple explanation to be found in the proportion of the 16-70s in each area type who have a specific risk factor (as shown in the right hand columns of Table 7.12).

Table 7.12 Distribution of 16-70s with severe problems or risk factors

% of all 16-70s in the area	with severe* problems	with risk† factor:		
		Lower skill	non white	female
Inner London	**25.3**	60.1	24.0	51.7
Principal Meropolitan Cities	**23.8**	46.6	9.6	51.1
Other Metropolitan Districts	**21.7**	41.8	4.8	50.4
Outer London	**16.0**	40.1	16.6	51.1
rest of England	**15.5**	37.8	2.5	50.6
England	**17.6**	40.6	5.7	50.8

* Ill &/or Unemployment &/or **both** overcrowded and Without car.

† Whether or not they have problems in practice. (Individuals with more than one risk factor are included in more than one column.)

7.77 The final analysis from the SAR data is the presentation in Table 7.13 of the 'top 20' areas in terms of the proportion of their 16-70s grouping who have the severe problems as defined above. As Table 7.12 also showed, there is a much less dramatic variation for this age group between parts of the country than there was for the Under 16s, although it is remarkable that the area names which appear include many which are familiar from the parallel tables for the other age groups (Tables 3.4 and 4.4). It is this working age group which most acutely affected by rapid rundown of traditional industries such as shipbuilding and coal mining. The 'ranking' of S. Tyneside and Sunderland, alongside the familiar list of eastern Inner London boroughs such as Newham and Lambeth, bears witness to the impact of such major job losses when they are concentrated in relatively localised areas. The last point to note is that, as a result of this being by far the most 'populous' of the three age groupings, the right-hand column in Table 7.13 shows substantial proportions of the areas' *total* populations being among the 16-70s who have the problems which are deemed here to be 'severe' for this age grouping.

Evaluation

7.78 The results presented here have provided some initial impressions of the ways in which multiple deprivation is a genuine phenomenon, as opposed to an artefact of previous SAS-based analyses. For example, it is the elderly who live alone who are particularly prone to not having a car and/or to be ill, and this is all the more true for those who do not own their homes outright. Children in households without an earner are also likely to be without access to a car, but this particular

combination of problems is hugely more common for children living with a single parent (whereas non-white children's problem is much more likely to be overcrowding). Finally, the heterogeneity of the 16-70 age group prevents any such broad generalisations capturing very much of the variation in circumstances among those of working age.

Table 7.13 The 20 SAR areas with the highest proportion of 16-70s having severe problems

SAR area	16-70s with severe* problems as % of all 16-70s	as % of all in SAR
Tower Hamlets	34.8	23.0
Hackney	32.7	22.4
Knowsley	31.7	21.6
Liverpool	30.5	20.6
Islington	28.4	20.2
Southwark	28.4	19.8
Manchester	28.3	19.0
Middlesbrough	28.1	19.1
Newham	27.9	18.8
S. Tyneside	27.6	18.9
Easington & Sedgefield	27.2	19.0
Sunderland	27.0	18.8
Lambeth	26.3	19.1
Barnsley	25.9	18.3
Haringey	25.4	18.3
Salford	25.3	17.5
Hartlepool & Stockton	25.2	17.4
Halton (Widnes and Runcorn)	25.0	17.1
Gateshead	24.7	17.5
Langbaurgh-on-Tees	24.6	17.3

* Ill &/or Unemployed &/or both Overcrowded and Without car

7.79 Despite its many innovative advantages, the SAR dataset remains crucially limited by the crudeness of its geographical coding. As a result, it is simply not possible to focus in on neighbourhoods defined as wards or 'outer estates' or whatever to then re-assess measurements of area deprivation such as those which are produced at this level by the Index of Local Conditions and similar analyses of standard Census datasets. Once the results from the SAR-based analyses have been tabulated by area (as in such Tables as 7.5 and 7.9), however, the lists of 'top' problem areas assume a high degree of similarity to the rankings of local authorities by the proportion of their population who live in 'deprived areas' (cf. Gordon and Forrest, 1995).

7.80 Regardless of these similarities, there are some important methodological advantages to the SAR-based approach. First, it is not necessary to make arbitrary decisions on 'cut-offs' (such as to only consider the population who live in the

most deprived 10% of wards). More obviously, it is possible to target the analyses and so to produce forms of measurement which are simply not feasible with the standard pre-tabulated Census dataset. The exemplar measures of the different age groups' distinctive 'severe problems' here are only obtainable from the SAR dataset. Further, the nature of the SAR data guards against ecological fallacies arising in the interpretation of the results. The clear example given here was that children living in Lone parent households are *not* prone to be also living in Overcrowded households, even though SAS-based analyses suggested that these two issues had strongly similar spatial distributions.

7.81 Finally, a SAR-based analysis need not go through the statistical 'black box' of normalising or transforming each of the indicators in order to combine them. Further, in the approach taken here, each age group is self-contained and so there can be no 'double counting' involved in combining into a single summary analysis a set of variables computed for each separately. Pursuing this paper's exemplar measurements, then, it is possible to calculate the proportion of an area's total population who are afflicted by the severe problems which have been defined as those of most relevance to that age group. This summary indicator is, in effect, the sum of each area's values in the right-hand columns of Tables 7.5 and 7.9 and 7.13 (because these all have the area's total population as their denominator). For example, of the total population of Tower Hamlets, 2.1% are Over 70s who are Ill & Alone (Table 7.5), 16.3% are Under 16s with their form of severe problems (Table 7.9), and 23.0% are 16-70s with those problems which were deemed severe for that age grouping (Table 7.13). Thus 41.4% of the area's population can be said to be multiply-disadvantaged in those ways which are most acute for people at their stage of life.

7.82 Table 7.14 presents the results of this form of analysis, and covers each area which has appeared in at least one of the earlier tables in this paper. The first 'block' of Table 7.14 reproduces the list of areas in Table 7.9 that is, it lists the twenty SAR areas with the highest proportions of Under 16s having severe problems. The next block adds those areas from Table 7.13 which were *not* in Table 7.9 (i.e. those areas whose 16-70 year olds are among the most beset by problems, even though their Under 16 neighbours are not among the most disadvantaged for their age group). Finally, the last 'block' is made up of areas which Table 7.5 had listed as having the most severe incidence of problems among the Over 70s but which do not appear among the 20 most severely affected areas in relation to either of the younger age groups. Table 7.14 presents the age-specific 'rankings' of each area, so that they can be compared in terms of the intensity of the problems there for each of the broad age groups. For example, Hackney has the third highest prevalence of deprivation among the Under 16s, while it is the second ranked area for both the two older age groups. Finally, the cumulative percentage value in Table 7.14 shows the proportion of all the area's residents who are suffering those problems which have been deemed here to be 'severe' for their respective age group.

7.83 A quick comparison of the rankings suggests that the areas where problems are particularly frequent among the Over 70s tend to be rather different areas from those with high levels of deprivation among the other two age groups. This could be seen as unsurprising, to the extent that the 16-70 age group's problems include those of many parents and their problems are also experienced by their Under 16 children. There are also some notable geographical patterns among those areas which rank highly for one age group but less so for one or both of the others. For

example, the second 'block' in the table is completely made up of northern areas, many of which were in former coalfields. These are the areas which have very severe problems for those in the working age group but, it seems, have less extreme deprivation among children. The third 'block' of areas is also exclusively northern, in fact, although there is more evidence here of an emphasis on former textile areas.

Table 7.14 Summary table of deprivation in the areas with most severe problems

SAR area	ranking on intensity of problems among: Under 16s	16-70s	Over 70s	% population with age-specific problems
Tower Hamlets	1	1	5	41.4
Knowsley	2	3	51	35.9
Hackney	3	2	2	36.6
Liverpool	4	4	45	34.2
Southwark	5	6	47	32.0
Manchester	6	7	33	32.1
Islington	7	5	18	31.6
Lambeth	8	13	20	29.7
Newham	9	9	60	31.7
Birmingham	10	27	82	28.0
Camden	11	26	16	26.9
Kingston-upon-Hull	12	24	2	28.0
Hammersmith & Fulham	13	44	15	25.0
Cities of London & Westminster	14	37	81	25.1
Lewisham	15	45	40	25.5
Bradford	16	52	61	25.9
Nottingham	17	36	43	26.3
Middlesbrough	18	8	1	30.9
Blackburn	19	49	42	25.8
Haringey	20	15	10	27.9
S. Tyneside	64	10	19	26.7
Easington & Sedgefield	44	11	4	27.7
Sunderland	36	12	26	27.5
Barnsley	67	14	11	25.8
Salford	28	16	9	26.7
Hartlepool & Stockton	65	17	31	25.2
Halton (Widnes & Runcorn)	22	18	39	27.4
Gateshead	58	19	8	25.1
Langbaurgh-on-Tees	50	20	64	24.8
Hyndburn (Accrington) &Rossendale	80	54	3	22.0
Rotherham	75	25	6	24.1
Bolton	63	43	7	23.2
N. Tyneside	86	51	13	22.0
Wigan	98	40	14	21.8
Rochdale	54	33	17	24.2

7.84 The areas listed do not include all those which could have high values in the last column. This is because it is possible for an area not to appear in Table 7.14 because it is ranked only just outside the twenty 'worst' areas for *all* of the age groups. Such an area would have a high cumulative proportion of its population with severe problems. In practice, no such area has a value which would place it among the very worst affected areas overall. Indeed, it is only necessary to replace Camden with Middlesbrough (listed seven places below it in the table) for the twelve areas at the top of Table 7.14 to then become the twelve areas with the highest values in terms of the last column of that table. This last column, which represents a summary of the analysis in this paper, clearly suggests that Tower Hamlets is the area with the most intense problems of deprivation a finding which accords with the 'Townsend' deprivation index (Gordon and Forrest, 1995). The overall ranking is also closely similar to the results from the ILC approach to measuring deprivation and, in general, there is a reassuring degree of agreement between all these three methods of producing rankings. In particular, the twelve 'worst' areas on *all* three measures include the six boroughs in eastern Inner London which are listed near the top of the Table 7.14 (although the other two measures' rankings also include some additional London areas within their dozen most deprived areas). Of the twelve SAR areas with the highest summary values here (Table 7.14), only Middlesbrough and Hull are not also among the twelve most deprived areas on one or both of the ILC and Townsend index.

7.85 The conclusions to be drawn at this point are essentially methodological. The fact that this analysis has not produced results which clash stridently with other research on deprivation should help it to clear the obstacle of unfamiliarity. Further, it can be argued that this pilot analysis of the SAR data has begun to reveal the extent to which multiple deprivation is a reality and in which forms and places it is more commonly found. This form of analysis, suitably developed and 'customised' to reflect a particular policy or other set of concerns, may well be an important innovation which is a conceptual and methodological advance beyond the SAS-based analyses, which look for the incidence of deprived areas, rather than of deprived people.

Appendix A The district classification

This classification is a slightly modified version of the district typology used by the OPCS. This appendix provides a complete list of the distncts in each of the eleven types, ordered by alphabetical order of county.

Inner London Boroughs
City of London
Camden
Hackney
Hammersmith & Fulham
Haringey
Islington
Kensington & Chelsea
Lambeth
Lewisham
Newham
Southwark
Tower Hamlets
Wandsworth
City of Westminster

Outer London Boroughs
Barking & Dagenham
Barnet
Bexley
Brent
Bromley
Croydon
Ealing
Enfield
Greenwich
Harrow
Havering
Hillingdon
Hounslow
Kingston-upon-Thames
Merton
Redbridge
Richmond-upon-Thames
Sutton
Waltham Forest

Principal Metropolitan Cities
Birmingham
Leeds
Liverpool
Manchester
Newcastle upon Tyne
Sheffield

Other Metropolitan Districts
Wakefield
Bury
Bolton
Wigan
Knowsley
Oldham
Rochdale
Sefton
Wirral
Barnsley
St. Helens
Rotherham
Salford
Gateshead
Doncaster
Trafford
South Tyneside
Sunderland
Tameside
Coventry
Dudley
Sandwell
Solihull
Walsall
Wolverhampton
Stockport
South Tyneside
Bradford
Calderdale
Kirklees

Large Non-Metropolitan Cities
Bristol
Derby
Plymouth
Portsmouth
Southampton
Kingston upon Hull
Leicester
Nottingham
Stoke-on-Trent

Small Non-Metropolitan Cities

Bath
Reading
Cambridge
Middlesbrough
Exeter
Durham
Brighton
Cheltenham
Gloucester
Worcester
Preston
Lincoln
Norwich
York
Oxford

Districts with Industrial Areas

Luton
Slough
Crewe & Nantwich
Ellesmere Port & Neston
Hartlepool
Langbaurgh-on-Tees
Stockton-on-Tees
Allerdale
Barrow-in-Furness
Carlisle
Copeland
Amber Valley
Bolsover
Chesterfield
Erewash
High Peak
North East Derbyshire
South Derbyshire
Chester-le-Street
Darlington
Derwentside
Wear Valley
Thurrock
Wyre Forest
Cleethorpes
Great Grimsby
Scunthorpe
Dartord
Rochester upon Medway
Swale
Blackburn
Burnley
Chorley

Hyndburn
Pendle
Rossendale
Hinckley & Bosworth
North West Leicestershire
East Northamptonshire
Kettering
Wellingborough
Blyth Valley
Wansbeck
Ashfield
Bassetlaw
Broxtowe
Gedling
Mansfield
Newark & Sherwood
Cannock Chase
East Staffordshire
Newcastle under Lyme
Staffordshire Moorlands
Tamworth
Ipswich
North Warwickshire
Nuneaton & Bedworth
Thamesdown

Districts with New Towns
Bracknell Forest
Milton Keynes
Peterborough
Halton
Warrington
Easington
Sedgefield
Redditch
Dacorum
Stevenage
Welwyn Hatfield
South Ribble
West Lancashire
Corby
Northampton
The Wrekin
Crawley
Arun
Worthing

Resort, Port & Retirement
East Devon
Teignbridge
Torbay

Bournemouth
Christchurch
East Dorset
Poole
Weymouth & Portland
Eastbourne
Hastings
Hove
Lewes
Rother
Wealden
Southend-on-Sea
Tendring
New Forest
Medina
South Wight
Canterbury
Dover
Shepway
Thanet
Blackpool
Fylde
Lancaster
Wyre
Great Yarmouth
Scarborough
Taunton Deane
Adur

Urban & Mixed Urban-Rural
Kingswood
Northavon
Wansdyke
Woodspring
North Bedfordshire
Mid Bedfordshire
South Bedfordshire
Newbury
Windsor & Maidenhead
Wokingham
Aylesbury Vale
Chiltern
South Bucks
Wycombe
Huntingdonshire
South Cambridgeshire
Chester
Congleton
Macclesfield
Vale Royal
Brentwood

Castle Point
Chelmsford
Colchester
Epping Forest
Maldon
Rochford
Stroud
Tewkesbury
Basingstoke & Deane
East Hampshire
Eastleigh
Fareham
Gosport
Hart
Havant
Rushmoor
Test Valley
Winchester
Bromsgrove
Hereford
Broxbourne
East Hertfordshire
Hertsmere
North Hertfordshire
St Albans
Three Rivers
Watford
East Yorkshire Borough of Beverley
Gillingham
Gravesham
Maidstone
Sevenoaks
Tonbridge & Malling
Tunbridge Wells
Ribble Valley
Blaby
Charnwood
Harborough
Oadby and Wigston
Rutland
North Kesteven
South Northamptonshire
Castle Morpeth
Harrogate
Richmondshire
Selby
Cherwell
South Oxfordshire
Vale of White Horse
West Oxfordshire
Shrewsbury & Atcham

Lichfield
South Staffordshire
Stafford
Forest Heath
Elmbridge
Epsom and Ewell
Guildford
Mole Valley
Reigate & Banstead
Runnymede
Spelthorne
Surrey Heath
Tandridge
Waverley
Woking
Rugby
Stratford-on-Avon
Warwick
Horsham
Mid Sussex
Kennet
North Wiltshire
Salisbury
West Wiltshire

Remoter Mainly Rural
East Cambridgeshire
Fenland
Caradon
Carrick
Kerrier
North Cornwall
Penwith
Restormel
Isles of Scilly
Eden
South Lakeland
The Derbyshire Dales
North Devon
South Hams
Mid Devon
Torridge
West Devon
North Dorset
Purbeck
West Dorset
Teesdale
Braintree
Uttlesford
Cotswold
Forest of Dean

Leominster
Malvern Hills
South Herefordshire
Wychavon
Boothferry
East Yorkshire
Glanford
Holderness
Ashford
Melton
Boston
East Lindsey
South Holland
South Kesteven
West Lindsey
Breckland
Broadland
North Norfolk
South Norfolk
Kings Lynn and West Norfolk
Daventry
Alnwick
Berwick upon Tweed
Tynedale
Craven
Hambleton
Ryedale
Bridgnorth
North Shropshire
Oswestry
South Shropshire
Mendip
Sedgemoor
South Somerset
West Somerset
Bambergh
Mid Suffolk
St. Edmundsbury
Suffolk Coastal
Waveney
Chichester

Appendix B The definition of inner urban areas

B. 1 In order to examine socio-demographic pattems and trends for inner and outer urban areas in England, a sample of cities needed to be selected and their inner areas identified.

B.2 Twelve areas for study (London, Liverpool, Manchester, Newcasde, Leeds, Sheffield, Birmingham, Coventry, Nottingham, Bristol, Plymouth and Preston) were chosen because they are representative of a wide range of urban area types (as defined by OPCS). They include six Principal Metropolitan Cities, one Other Metropolitan District, three Large Non-metropolitan Cities and one Small Non-metropolitan City. The cities provide a fair geographical spread across England.

B.3 For London our inner/outer analysis adopted the conventional division into Inner and Outer London Boroughs. The inner areas for the other eleven cities have been defined as those wards which were designated by the Department of the Environment as Urban Priority Areas (UPAs). The numbers of wards in each city that might be defined as 'inner', and the total number of wards in each city are as follows:

City	Inner	Total
Liverpool	21	33
Manchester	24	33
Newcastle	9	26
Leeds	12	33
Sheffleld	10	29
Birmingham	25	42
Coventry	10	18
Nottingham	7	27
Bristol	16	28
Plymouth	11	20
Preston	9	19

Appendix C Full List of Cities in each Category, Tables 2.5, 2.7,2.9 and 2.11

Table 2.5 Age structure and household composition patterns for the inner and outer areas of twelve cities, 1981-91

Variable	1991			1981-91		
	IA>AV*	OA>AV†	IA>OA‡	IA>AV*	OA>AV†	IA>OA‡
0-15	7	5	9	11	8	10
	Liverpool	Liverpool	Liverpool	London	London	London
	Manchester	Manchester	Manchester	Liverpool	Liverpool	Liverpool
	Newcastle	Nottingham	Newcastle	Manchester	Manchester	Manchester
	Leeds	Plymouth	Leeds	Newcastle	Newcastle	Newcastle
	Birmingham	Preston	Sheffield	Leeds	Birmingham	Birmingham
	Coventry		Birmingham	Sheffield	Nottingham	Leeds
	Preston		Coventry	Birmingham	Bristol	Sheffield
			Bristol	Coventry	Preston	Coventry
			Preston	Bristol		Bristol
				Plymouth		Plymouth
				Preston		
PA+						
	3	10	2	1	9	1
	Newcastle	Liverpool	Sheffield	Coventry	Liverpool	Manchester
	Sheffield	Manchester	Plymouth		Manchester	
	Plymouth	Newcastle			Leeds	
		Leeds			Sheffield	
		Sheffield			Birmingham	
		Birmingham			Coventry	
		Coventry			Nottingham	
		Nottingham			Bristol	
		Bristol			Plymouth	
		Preston				

one-person households					
12	8	12	12	8	11
London	London	London	London	London	London
Liverpool	Liverpool	Liverpool	Liverpool	Liverpool	Liverpool
Manchester	Manchester	Manchester	Manchester	Newcastle	Manchester
Newcastle	Newcastle	Newcastle	Newcastle	Sheffield	Newcastle
Leeds	Sheffield	Leeds	Leeds	Birmingham	Leeds
Sheffield	Birmingham	Sheffield	Sheffield	Coventry	Sheffield
Birmingham	Nottingham	Birmingham	Birmingham	Nottingham	Coventry
Coventry	Bristol	Coventry	Coventry	Plymouth	Nottingham
Nottingham		Nottingham	Nottingham		Bristol
Bristol		Bristol	Bristol		Plymouth
Plymouth		Plymouth	Plymouth		Preston
Preston		Preston	Preston		

Lone-parent households					
12	6	12	12	7	12
London	London	London	London	London	London
Liverpool	Liverpool	Liverpool	Liverpool	Liverpool	Liverpool
Manchester	Manchester	Manchester	Manchester	Manchester	Manchester
Newcastle	Newcastle	Newcastle	Newcastle	Newcastle	Newcastle
Leeds	Birmingham	Leeds	Leeds	Birmingham	Leeds
Sheffield	Nottingham	Sheffield	Sheffield	Nottingham	Sheffield
Birmingham		Birmingham	Birmingham	Preston	Birmingham
Coventry		Coventry	Coventry		Coventry
Nottingham		Nottingham	Nottingham		Nottingham
Bristol		Bristol	Bristol		Bristol
Plymouth		Plymouth	Plymouth		Plymouth
Preston		Preston	Preston		Preston

Figures indicate the number of cities satisfying the specified criterion, as follows:

* IA>AV: the inner areas' proportion (1991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

† OA>AV: ditto. for each city's outer area compared to England as a whole.

‡ IA>OA: the inner area's proportion 1991) is above its outer area counterpart, or its percentage point change (1981-91 is more positive than for the respective outer area.

'PA+' refers to the proportion of residents that are of pensionable age (65+ for men, 60+ for women).
'15' refers to the proportion of residents aged 15 years.
'One-person households' and 'lone-parent households' are given as a proportion of all households.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Table 2.7 Housing and car availability patterns for the inner and outer areas of twelve cities, 1981-91

Variable	1991			1981-91		
	IA>AV*	OA>AV†	IA>OA‡	IA.AV*	OA>†	IA>OA‡
Detached and semi-detached						
	0	4	0	n/a	n/a	nla
		Leeds				
		Sheffield				
		Plymouth				
		Preston				
Owner occupied						
	0	7	0	3	4	3
		London		London	Newcastle	London
		Leeds		Sheffield	Sheffield	Manchester
		Sheffield		Liverpool	Nottingham	Bristol
		Coventry			Liverpool	
		Bristol				
		Plymouth				
		Preston				
Rented from LA/NT						
	12	7	11	5	9	4
	London	Manchester	London	London	London	Newcastle
	Liverpool	Liverpool	Liverpool	Leeds	Liverpool	Nottingham
	Manchester	Newcastle	Manchester	Coventry	Manchester	Plymouth
	Newcastle	Sheffield	Newcastle	Plymouth	Leeds	Preston
	Leeds	Nottingham	Leeds	Preston	Birmingham	
	Sheffield	Leeds	Sheffield		Coventry	
	Birmingham	Birmingham	Birmingham		Bristol	
	Coventry		Coventry		Plymouth	
	Nottingham		Bristol		Preston	
	Bristol		Plymouth			
	Plymouth		Preston			
	Preston					

No car						
	12	6	12	7	10	4
	London	Liverpool	London	London	London	Liverpool
	Liverpool	Manchester	Liverpool	Liverpool	Liverpool	Manchester
	Manchester	Newcastle	Manchester	Manchester	Manchester	Newcastle
	Newcastle	Shefffield	Newcastle	Newcastle	Newcastle	Sheffield
	Leeds	Birmingham	Leeds	Sheffield	Leeds	
	Sheffield	Nottingham	Sheffield	Birmingham	Birmingham	
	Birmingham		Birmingham	Coventry	Coventry	
	Coventry		Coventry		Nottingham	
	Nottingham		Nottingham		Bristol	
	Bristol		Bristol		Plymouth	
	Plymouth		Plymouth			
	Preston		Preston			

2+ car						
	O	4	0	0	2	0
		Leeds			Leeds	
		Bristol			Plymouth	
		Plymouth				
		Preston				

Figures indicate the number of cities satisfying the specified criterion, as follows:

* IA>AV: the inner areas' proportion (1991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

† OA>AV: ditto, for each city's outer area compared to England as a whole.

‡ IA>OA: the inner area's proportion (1991) is above its outer area countepart, or its percentage point change (1981-91) is more positive than for the respective outer area.

n/a indicates that calculations were not possible because data were not collected by the 1981 census.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Table 2.9 Social patterns for the inner and outer areas of twelve cities,1981-91

Variable	1991		1981-91		
IA>AV	OA>AV	IA>OA	IA>AV	OA>AV	IA>OA
Residents ill					
11	7	12	n/a	n/a	n/a
Liverpool	Liverpool	London			
Manchester	Manchester	Liverpool			
Newcastle	Newcastle	Manchester			
Leeds	Sheffield	Newcaste			
Sheffield	Birmingham	Leeds			
Birmingham	Nottingham	Sheffield			
Coventry	Preston	Birmingham			
Nottingham		Coventry			
Bristol		Nottingham			
Plymouth		Bristol			
Preston		Plymouth			
		Preston			
0-15 ill					
12	7	12	n/a	n/a	n/a
London	Liverpool	London			
Liverpool	Manchester	Liverpool			
Manchester	Newcastle	Manchester			
Newcastle	Sheffield	Newcastle			
Leeds	Birmingham	Leeds			
Sheffield	Nottingham	Sheffield			
Birmingham	Preston	Birmingham			
Coventry		Coventry			
Nottingham		Nottingham			
Bristol		Bristol			
Plymouth		Plymouth			
Preston		Preston			
17 in education					
1	5	0	4	4	6
London	London		London	London	London
	Liverpool		Liverpool	Liverpool	Liverpool
	Leeds		Birmingham	Birmingham	Newcastle
	Birmingham		Plymouth	Plymouth	Bristol
	Plymouth				Plymouth
					Preston

30-44 with qualifications					
3	10	2	6	7	6
London	London	London	London	London	London
Nottingham	Liverpool	Nottingham	Manchester	Manchester	Leeds
Bristol	Manchester		Leeds	Newcastle	Nottingham
	Newcastle		Sheffield	Sheffield	Bristol
	Leeds		Nottingham	Birmingham	Birmingham
	Sheffield		Bristol	Coventry	Preston
	Birmingham			Bristol	
	Coventry				
	Bristol				
	Preston				
Social class I & II					
1	9	2	8	7	8
London	London	London	London	London	London
	Manchester	Nottingham	Liverpool	Manchester	Liverpool
	Newcastle		Manchester	Newcastle	Manchester
	Leeds		Leeds	Sheffield	Leeds
	Sheffield		Sheffield	Birmingham	Sheffield
	Birmingham		Nottingham	Coventry	Nottingham
	Coventry		Bristol	Bristol	Bristol
	Bristol		Preston		Plymouth
	Preston				
Social class IV & V					
11	4	12	1	8	1
Liverpool	Liverpool	London	Newcastle	London	Newcastle
Manchester	Manchester	Liverpool		Manchester	
Newcastle	Coventry	Manchester		Newcastle	
Leeds	Nottingham	Newcastle		Leeds	
Sheffield		Leeds		Sheffield	
Birmingham		Sheffield		Nottingham	
Coventry		Birmingham		Bristol	
Nottingham		Coventry		Plymouth	
Bristol		Nottingham			
Plymouth		Bristol			
Preston		Plymouth			
		Preston			

Figures indicate the number of cities satisfying the specified criterion, as follows:

IA>AV: the inner areas' proportion (l991) is above the level for England, or the percentage point change (1981-91) is more positive than the England trend, i.e. larger increase or smaller reduction.

OA>AV: ditto, for each city's outer area compared to England as a whole.

IA>OA: the inner area's proportion (1991) is above its outer area counterpart, or its percentage point change (1981-91) is more positive than for the respective outer area

'0-15 ill' refers to the proportion of 0-15 year olds with limiting long-term illness.
'17 in education' refers to the proportions of 17 year olds staying on in full time education.
'30-14 with qual.' refers to the proportion of 30-44 year olds with a degree or diploma
'Social Class IV & V' refers to the proportion of classified households headed by a person in Social Classes IV or V.

'n/a' indicates that calculations were not possible because comparable data were not collected by the 1981 census.

Source: Calculated from 1981 and 1991 Population Censuses, Crown Copyright.

Table 2.11 Labour market patterns for the inner and outer areas of twelve cities,

Variable	1991			1981-91		
	IA>AV	OA>AV	IA>OA	IA>AV	OA>AV	IA>OA
Male activity rate						
	0	3 London Leeds Birmingham	0	1 Bristol	5 London Leeds Birmingham Bristol Preston	0
Female activity rate						
	1	7	0	0	4	0
	Bristol	London Leeds Sheffield Birmingham Coventry Bristol Preston			Leeds Sheffield Bristol Plymouth	
Self-employment						
	1	1	2	0	6	3
	London	London	Nottingham London		London Newcastle Sheffield Nottingham Bristol Plymouth	Manchester Liverpool Preston
Male unemployment						
	12	6	12	9	8	11
	London Liverpool Manchester Newcastle Leeds Sheffield Birmingham Coventry Nottingham Bristol Plymouth Preston	Liverpool Manchester Newcastle Sheffield Birmingham Nottingham	London Liverpool Manchester Newcastle Leeds Sheffield Birmingham Coventry Nottingham Bristol Plymouth Preston	London Liverpool Manchester Newcastle Sheffield Birmingham Nottingham Plymouth	London Liverpool Manchester Newcastle Sheffield Nottingham Bristol Plymouth	London Liverpool Manchester Newcastle Leeds Sheffield Birmingham Coventry Nottingham Bristol Plymouth

Female unemployment

12	6	12	9	6	11
London	London	London	London	London	London
Liverpool	Liverpool	Liverpool	Liverpool	Liverpool	Liverpool
Manchester	Manchester	Manchester	Manchester	Manchester	Manchester
Newcastle	Newcastle	Newcastle	Newcastle	Newcastle	Newcastle
Leeds	Birmingham	Leeds	Leeds	Sheffield	Leeds
Sheffield	Nottingham	Sheffield	Sheffield	Nottingham	Sheffield
Birmingham		Birmingham	Birmingham		Birmingham
Coventry		Coventry	Nottingham		Coventry
Nottingham		Nottingham	Bristol		Nottingham
Bristol		Bristol			Bristol
Plymouth		Plymouth			Plymouth
Preston		Preston			

Hhlds with none econ. active

11	9	12	6	9	6
Liverpool	Liverpool	London	Liverpool	Liverpool	Liverpool
Manchester	Manchester	Liverpool	Manchester	Manchester	Manchester
Newcastle	Newcastle	Manchester	Newcastle	Newcastle	Newcastle
Leeds	Leeds	Newcastle	Sheffield	Leeds	Sheffield
Sheffield	Sheffield	Leeds	Birmingham	Sheffield	Birmingham
Birmingham	Birmingham	Sheffield	Coventry	Birmingham	Preston
Coventry	Coventry	Birmingham		Coventry	
Nottingham	Nottingham	Coventry		Nottingham	
Bristol	Bristol	Nottingham		Plymouth	
Plymouth		Bristol			
Preston		Plymouth			
		Preston			

Hhlds with no-one in work

12	7	12	n/a	n/a	n/a
London	Liverpool	London			
Liverpool	Manchester	Liverpool			
Manchester	Newcastle	Manchester			
Newcastle	Sheffield	Newcastle			
Leeds	Birmingham	Leeds			
Sheffield	Coventry	Sheffield			
Birmingham	Nottingham	Birmingham			
Coventry		Coventry			
Nottingham		Nottingham			
Bristol		Bristol			
Plymouth		Plymouth			
Preston		Preston			

Appendix D Methodological Appendix

The division of the population into household types

This methodological appendix provides detailed information on the methods used in the production of the classifications for the analysis of area profiles in Chapter 3.

D.1 It is not possible to break down households according to the earner/non-earner division using data from the 1971 and 1981 censuses of population, because this distinction was not made in the Small Area Statistics of those censuses. Even if these figures were available they would produce a very complicated analysis, giving three divisions of households for three different time periods.

D.2 The method used in both classifications deliberately combines unemployed people with the employed. This is useful for showing change over long periods, as unemployment is very volatile. For analysis of change over time, it is more meaningful to look at changing rates of workforce participation. Studies of unemployment should follow year-by-year changes, rather than changes over decades. In the short term, it is particularly important that a household has an earner (which is why earners are distinguished in our 1991 classification). To monitor long term change, it is more important that they contain someone who would work if work was available.

A static classification of areas in 1991

D.3 The static classification of areas is based entirely on three variables, taken from Table 36 of the 1991 population census Small Area Statistics (SAS)[1], which provides data on Earners and Dependent Children. The three variables chosen are denoted A, B and C, and derived from the relevant cell specifications as follows:

A Households with children and no earners in 1991
61t36-8t36-14t36-19t36-26t36-32t36-37t36-44t36-49t36-55t36,
divided by 61t36

B Households with no children and no earners in 1991
8t36+14t36+26t36+32t36+44t36,
divided by 61t36

C Households with earners in 1991
19t36+37t36+49t36+55t36,
divided by 61t36

('t36' refers to 1991 SAS Table 36, and so on. For the source of 1991 cell specifications *see 1991 Census User's Guide 25* (OPCS, 1991)).

[1] Office of Population Censuses and Surveys, *1991 Census User's Guide 25, Small Area statistics*, OPCS, London, 1991.

Explanation of the groups and scale used in Figure 3.1

D.4 The map in Figure 3.1 shows all the wards the country, classified by their share of each of the groups A, B and C. The scale uses slightly different cut-off values to the national averages in order to show whether a particular type of household is over- or under-represented, relative to the numbers found in other wards. Wards in which more than 4.0% of households consisted of children and non-earners (Group A, shaded purple) have been defined as over-represented by this group. This figure was chosen rather than the national mean (5%) because the spatial distribution of households with no earners and children shows a skewed distribution. Even with this low figure, only 45% of all households lived in wards where Group A could be defined as over-represented. The cut-offs for Groups B and C are 30 per cent and 66 per cent respectively, following the same logic. We have chosen to allocate all wards to one of the three groups rather than classify some wards as 'average'. We have done this in order to avoid complicating the analysis which follows. Furthermore, although the differences between the household composition of wards are very slight, this classification produces a clear spatial pattern, which indicates its utility in an analysis such as this, suggesting that the structure in the data is strong enough to show through relatively crude indicators.

A change classification, 1971 - 1981 - 1991

D.5 The change classification is based on measurements of the levels of participation of working age adults in the workforce in each ward at each of the 1971, 1981 and 1991 censuses. Again, three variables were extracted from the census Small Area Statistics, and again the 1981 ward areas were used. People of working age in the workforce includes all those available for work, whether actually employed or not. The variables used are given below, with the relevant cell specification.[2]

X people of working age in the workforce in 1991
12t8-21t8-22t8+98t8+166t8-174t8-175t8-176t8-251t8+252t8,
divided by 1t8-10t8+155t8-163t8-164t8

Y people of working age in the workforce in 1981
719-771-774-779-784,
divided by 50-57-64-71-78-152-155-162-169-176-183

Z people of working age in the workforce in 1971
257P+258p+259P-240P-253P-228P-241P-254P-229P-242P-255P-230P-243P-256P,
divided by 415P+416P+417P+418P+325P+326P+327P+328P-359P-387P- 269P-297P-397P-411P-307P-321P-370P-321P-370P-384P-398P-412P-280P-294P-308P-322P-371P-385P-399P-413P-281P-295P-309P-323P-372P-386P-400P-414P-282P-296P-310P-324P
(where P is 1971 100 per cent Population Table)

('t8' refers to 1991 SAS Table 8, and so on. For 1991 SAS cell numbers, see *1991 Census Users Guide 25* (OPCS, 1991). For 1981 cell numbers, see Rhind (1983) Appendix 2. For 1971 cell numbers, see Rhind (1983) Appendix 3).

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[2] Office of Population Censuses and Surveys, 1991 Census User's Guide 25, Small Area Statistics, OPCS, London, 1991. See also Rhind D, A Census User's Handbook, Methuen, London, 1983.

D.6 The selection of the above variables was determined by the need for a useful measure of economic activity, which was comparable between the 1971, 1981 and 1991 censuses. These variables exclude demographic effects by focusing only on the position of people of working age. Two further points should be noted. First, between 1971 and 1981 the proportion of economically active people rose by 13% in Britain. This was largely due to the increased participation of women in the workforce, but it should be remembered that this increase in rates of workforce participation occurred at different rates and at different places in the country, and resulted in changes in the types of areas with disproportionate numbers of people available for work. Second, between 1981 and 1991 there was no overall rise in the proportion of people of working age in the workforce in Britain. The continued increase in women's participation in the workforce was off-set by other factors including an increase in early retirement for men, and an increase in the numbers of men declaring themselves as permanently sick and thus unable to work.

Combining the 'change' and 'static' classifications

D.7 The relationship between these change and static variables can be examined by considering the number of households living in wards classified as being in each type of group. Table D.1 shows in Part A the numbers of households which might be expected to be living in each type of ward if there were no relationship between change and the static structure. For example, given that 6.4 per cent of households in Britain lived in wards where households with no earners and children were over-represented in 1991, and that 24.3 per cent of households lived in wards which had seen low increases in the workforce participation over both decades, it could be expected that 1.6 per cent of all households lived in wards which had both these characteristics. (This figure is rounded to 2 per cent in the table.)

D.8 Table D.1 shows in Part B the actual proportion of households found in each cross-classification. It shows that 3 per cent (actually 3.4 per cent) of all households lived in this particular group.

D.9 Table D.1 shows in Part C how much higher or lower these observed numbers of households are from the number which we might expect if there were no relationship between economic change and current household composition. In the example which we have been following here, there were 116 per cent more households living in wards which had experienced slow economic growth and which now had many households 'with no earners and children' than might be expected. This part of Table D.1 shows that areas which saw little growth or where growth was restricted to the 1970s now tend to have many households with children and no earners, whereas areas which saw growth only in the 1980s now tend to have above average numbers of households with earners. Areas which saw growth in both decades tend to have above average numbers of households with earners or households with no earners and children, but not where these two categories overlap with households with no earners and no children. Table D.1 gives, in Part D, a number to each cross-classification to create the final 24-fold typology of wards which we will use in this report.

Table D.1 The relationship between the 'static' and 'change' classifications

Part A Proportion of households in Britain expected in each category, expressed as a percentage

Group	Little growth 1970s or 1980s	Growth in 1970s	Growth in 1980s	Growth in 1970s and 1980s	Total
A & C	2	3	2	2	10
A	2	2	2	1	6
A & B	7	8	7	7	29
B	5	5	5	4	19
B & C	1	1	1	1	5
C	7	8	8	7	31
Total	24	27	25	23	100

(For an explanation of composition of groups A, B and C, please refer back to paras. 3.27-3.52)

Part B Proportion of households in Britain in each category in 1991, expressed as a percentage

Group	Little growth 1970s or 1980s	Growth in 1970s	Growth in 1980s	Growth in 1970s and 1980s	Total
A & C	3	3	3	1	10
A	3	2	0	0	6
A & B	13	12	2	1	29
B	2	5	4	7	19
B & C	0	1	2	2	5
C	2	4	14	10	31
Total	24	27	26	23	100

Part C Deviation from Expected (Observed - Expected) divided by Expected, expressed as a percentage.

Group	Little growth 1970s or 1980s	Growth in 1970s	Growth in 1980s	Growth in 1970s and 1980s
A & C	14	3	14	-34
A	116	38	-73	-87
A & B	88	53	-70	-79
B	-53	-0	-8	68
B & C	-75	-38	36	87
C	-67	-53	80	47

Part D Numeric labels for each cross-classification type				
Group	Little growth 1970s or 1980s	Growth in 1970s	Growth in 1980s	Growth in 1970s and 1980s
A & C	1	7	13	19
A	2	8	14	20
A & B	3	9	15	21
B	4	10	16	22
B & C	5	11	17	23
C	6	12	18	24

(For an explanation of composition of groups A, B and C, please refer back to paras. 3.27-3.52)

D.10 Table D.2 gives some of the most basic census statistics for the 24 types of ward which are identified by combining the six and four-fold classifications used earlier. These statistics are the total count of residents, households, cars, rooms and children living in all the wards in each classification. The 820 residents shown to be living outside these zones were aboard ship on census night in 1991. A further 34,840 residents lived in wards which could not be classified because they had no residents of working age at one of the three census dates. (These were almost all small part post-code sectors in Scotland.) These very minor groups are included in Table D.2 to show how the counts sum correctly to the published British totals. The total counts are not particularly meaningful in their raw form but do show that all of these groups contain at least 100,000 people and at most just over 8 million people.

Note on the choice of particular constituencies

D.11 The choice of particular constituencies for further discussion, where more than one was available, was made as follows. For Type 1, Slough had the highest proportion of its residents living in wards which belong to this class (at 73.47%). The choice of Slough is somewhat arbitrary in that, as the table shows, Enfield North is a very similar area and Feltham & Heston would also qualify to characterise this type of ward if no other constituency were available. However, more of Slough's population lives in these types of wards than in others, so Slough is clearly the best choice. It is important to point out, however, that it is simply an indicative area for a type of place in which over 1.5 million people live across the country (see Table D.2). Other types prove more simple than choosing Slough as the Type 1 exemplar. For areas which typified wards falling into cross-classification Type 2, only Birmingham Ladywood had over 60% of its households falling into this category and hence was clearly the best choice. In two cases, three constituencies were available in which all the wards were allocated to the same cross-classification type. These were for Type 3 and Type 9 and the constituencies are shown in Table 3.9. These were the only cases where an arbitrary decision was made, and we chose Barnsley East to typify Type 3 areas, on the grounds that the Birmingham constituencies contained very few wards. Liverpool West Derby constituency was chosen to typify Type 9 wards for the same reason, and because, Littleborough & Saddleworth in Greater Manchester had been chosen to typify Type 6 wards.

Table D.2 Basic census characteristics of cross-classified areas

Area Type	Econ. growth*	Hhld types†	Residents (2t0)	Households (3t0)	Cars (7t21)	Rooms (9t22)	Children (66t36)
0 Total outside zones			820	0	0	0	0
1	(none)	A & C	1589569	593709	544196	2879701	393078
2	(none)	A	1994639	737785	525182	3513577	538763
3	(none)	A & B	7314112	2916803	1899554	13901960	1720378
4	(none)	B	1159921	470292	456685	2446507	228241
5	(none)	B & C	173690	67876	78578	375361	35675
6	(none)	C	1434943	541746	628283	2910041	315744
7	(1970s)	A & C	1495399	602374	492786	2796260	323871
8	(1970s)	A	1312078	529345	348245	2357773	306310
9	(1970s)	A & B	6338497	2656007	1615807	12066540	1365440
10	(1970s)	B	2588368	1117824	947193	5486471	459899
11	(1970s)	B& C	448431	186454	187830	957283	85099
12	(1970s)	C	2128890	864092	897052	4400764	425893
13	(1980s)	A & C	1645946	616805	622241	3100643	417666
14	(1980s)	A	246553	96431	79896	471745	60178
15	(1980s)	A & B	1184398	479737	413057	2371410	256171
16	(1980s)	B	2327729	956034	1035319	5088900	451996
17	(1980s)	B & C	959833	380268	454397	2101282	195090
18	(1980s)	C	8082684	3057135	3917509	16973343	1812797
19	(both)	A & C	831802	323104	301982	1575581	195087
20	(both)	A	104203	42086	35738	206762	23596
21	(both)	A & B	752983	312201	255954	1526479	155587
22	(both)	B	3709169	1585003	1548438	8149510	668724
23	(both)	B & C	1176206	474133	525129	2553814	235257
24	(both)	C	5853141	2277268	2704671	12225899	1259002
25 (unclassified)			34840	12810	12711	60872	10163
Total			54888844	21897322	20528433	110498478	11939705

* Economic growth:

'None' refers to below average increase in proportion of adults in the workforce in the 1970s and 1980s.
'1970s' refers to above average increase in proportion of adults in the workforce in the 1970s only.
'1980s' refers to above average increase in proportion of adults in the workforce in the 1980s only.
'Both' refers to above average increases in proportion of adults in the workforce in both the 1970s and the 1980s.

† Household types:
A refers to above average proportion of households with children and no earners in 1991
B refers to above average proportion of households with no children and no earners in 1991
C refers to above average proportion of households with earners in 1991

Table D.3 Full list of constituencies which could be used to typify particular types of ward in England

All Constituencies where more than 50% of the population live in one type of ward are shown.

Area number	Constituency name	Ward type	% of population
340.00	Slough	1	73.47
179.00	Enfield North	1	70.73
182.00	Feltham and Heston	1	60.17
176.00	Ealing Southall	1	57.24
192.00	Hayes and Harlington	1	50.59
420.00	Birmingham Ladywood	2	67.93
425.00	Birmingham Sparkbrook	2	51.23
64.00	Barnsley East	3	100.00
421.00	Birmingham Northfield	3	100.00
419.00	Birmingham Hodge Hill	3	100.00
485.00	Bolton South East	3	86.66
45.00	Doncaster North	3	85.10
446.00	West Bromwich West	3	82.53
62.00	Wentworth	3	79.91
52.00	Pontefract and Castleford	3	79.13
448.00	Wolverhampton South East	3	78.78
429.00	Coventry South East	3	76.66
424.00	Birmingham Small Heath	3	75.89
78.00	Leeds East	3	73.84
442.00	Walsall South	3	73.25
23.00	Jarrow	3	70.94
496.00	Leigh	3	70.17
6.00	Easington	3	69.34
445.00	West Bromwich East	3	67.02
28.00	Redcar	3	66.58
49.00	Hemsworth	3	66.32
443.00	Warley East	3	66.31
444.00	Warley West	3	66.04
131.00	Nottingham North	3	64.93
512.00	Rochdale	3	64.64
511.00	Preston	3	64.56
73.00	Huddersfield	3	64.12
84.00	Rotherham	3	62.66
24.00	Middlesbrough	3	61.93
32.00	Sunderland North	3	60.60
494.00	Eccles	3	60.27
86.00	Sheffield Brightside	3	59.44
476.00	Worsley	3	59.42

427.00	Coventry North East	3	59.29
504.00	Manchester Central	3	58.76
479.00	Ashton-under-Lyne	3	57.82
87.00	Sheffield Central	3	57.37
514.00	St. Helens North	3	57.07
158.00	Bow and Poplar	3	56.22
447.00	Wolverhampton North East	3	55.95
63.00	Barnsley Central	3	55.86
46.00	Don Valley	3	55.72
437.00	Stoke-on-Trent North	3	55.66
431.00	Dudley East	3	55.60
12.00	Sedgefield	3	55.18
438.00	Stoke-on-Trent South	3	53.24
211.00	Newham South	3	52.46
471.00	Stalybridge and Hyde	3	52.19
92.00	Ashfield	3	52.03
81.00	Leeds West	3	51.39
110.00	Mansfield	3	50.62
132.00	Nottingham South	3	50.03
465.00	Littleborough and Saddleworth	6	63.51
170.00	Croydon North West	7	100.00
159.00	Brent East	7	70.65
194.00	Hendon South	7	57.83
212.00	Norwood	8	61.09
231.00	Vauxhall	8	53.10
200.00	Islington North	8	51.89
502.00	Liverpool West Derby	9	100.00
417.00	Birmingham Erdington	9	100.00
503.00	Manchester Blackley	9	100.00
486.00	Bootle	9	87.02
506.00	Manchester Withington	9	81.19
505.00	Manchester Gorton	9	81.11
29.00	South Shields	9	80.50
501.00	Liverpool Walton	9	80.47
497.00	Liverpool Broadgreen	9	80.40
500.00	Liverpool Riverside	9	78.59
20.00	Gateshead East	9	76.71
423.00	Birmingham Selly Oak	9	72.98
416.00	Birmingham Edgbaston	9	68.88
418.00	Birmingham Hall Green	9	68.69

Table D.3 Full list of constituencies which could be used to typify particular types of ward in England (continued)

All Constituencies where more than 50% of the population live in one type of ward are shown.

Area number	Constituency name	Ward type	% of population
520.00	Wallasey	9	68.64
221.00	Southwark and Bermondsey	9	67.05
426.00	Birmingham Yardley	9	66.83
187.00	Hackney South and Shoreditch	9	66.44
205.00	Lewisham East	9	66.38
195.00	Holborn and St. Pancras	9	64.96
507.00	Manchester Wythenshawe	9	63.62
201.00	Islington South and Finsbury	9	61.39
380.00	Bristol North West	9	60.38
34.00	Tyne Bridge	9	60.04
26.00	Newcastle-upon-Tyne East	9	58.59
25.00	Newcastle-upon-Tyne Central	9	57.90
519.00	Stretford	9	56.93
341.00	Southampton Itchen	9	55.08
33.00	Sunderland South	9	54.11
483.00	Blackpool South	9	53.86
77.00	Leeds Central	9	52.99
480.00	Birkenhead	9	52.14
58.00	Sheffield Hallam	10	57.68
218.00	Richmond-upon-Thames & Barnes	12	77.25
164.00	Chelsea	12	65.57
162.00	Brentford and Isleworth	12	61.28
193.00	Hendon North	12	60.38
235.00	Wimbledon	12	58.93
183.00	Finchley	12	57.24
203.00	Kingston-upon-Thames	12	56.28
349.00	Falmouth and Camborne	15	54.44
252.00	Mid Bedfordshire	18	79.66
47.00	Elmet	18	78.18
96.00	Bosworth	18	75.52
355.00	North Wiltshire	18	72.44
351.00	Northavon	18	68.47
94.00	Blaby	18	66.73

490.00	Cheadle	18	66.57
141.00	South East Cambridgeshire	18	63.42
240.00	Billericay	18	63.07
432.00	Dudley West	18	62.51
99.00	Daventry	18	61.31
256.00	North Hertfordshire	18	60.05
348.00	Devizes	18	59.63
454.00	Congleton	18	59.49
136.00	Huntingdon	18	56.96
303.00	Mid Kent	18	56.57
213.00	Old Bexley and Sidcup	18	56.47
239.00	Beaconsfield	18	56.08
324.00	Wokingham	18	54.64
370.00	Westbury	18	54.09
269.00	Witney	18	53.77
44.00	Dewsbury	18	53.28
245.00	Chesham and Amersham	18	53.24
522.00	Warrington South	18	51.52
313.00	Romsey and Waterside	18	50.93
414.00	Wyre Forest	18	50.50
344.00	Worthing	22	83.60
336.00	Hove	22	74.04
329.00	Eastbourne	22	64.08
281.00	Arundel	22	60.57
326.00	Brighton Pavilion	22	57.12
373.00	Weston-Super-Mare	22	55.49
284.00	Bexhill and Battle	22	54.79
307.00	New Forest	22	50.13
291.00	East Surrey	24	78.05
171.00	Croydon South	24	73.40
339.00	Reigate	24	68.90
228.00	Twickenham	24	59.82
250.00	Hertford and Stortford	24	58.95
296.00	Guildford	24	55.97
223.00	Surbiton	24	54.79
83.00	Pudsey	24	50.86
478.00	Altrincham and Sale	24	50.49

Appendix E Cartograms: an explanation and index map

E.1 Cartograms are maps in which the particular representation of space chosen is made explicit. Conventional maps are often equal land area cartograms. The cartograms used here are equal population area cartograms. Each place on each cartogram is drawn as a circle with its area in proportion to its population and positioned so that the geographical topology of the country is largely preserved through the transformation. These cartograms have the advantage of focusing attention on the patterns of most importance, and emphasising the places where most people live, rather than concentrating the graphical detail on physical features (such as the intricate physical geography of the coast of Cornwall) where very few people live, as is the case with conventional maps. For further information on this visualisation technique, see Dorling (1995)[7]. The maps and cartograms show all of Britain, in order to place England within its wider context. Overleaf is a key map for the interpretation of the two cartograms used in this report.

Avon (SW) 932674
01 A Bath (vi) 78689
01 B Bristol (v) 376144
01 C Kingswood (x) 89717
01 D Northavon (x) 130647
01 E Wansdyke (x) 80003
01 F Woodspring (x) 177472

Bedfordshire (SE) 524105
02 A Luton (vii) 171671
02 B Mid Bedfordshire (x) 109801
02 C North Bedfordshire (x) 133692
02 D South Bedfordshire (x) 108941

Berkshire (SE) 735326
03 A Bracknell Forest (viii) 95949
03 B Newbury (x) 137780
03 C Reading (vi) 128877
03 D Slough (vii) 101066
03 E Windsor and Maidenhead (x) 132465
03 F Wokingham (x) 139189

Borders (SC) 103881
04 A Berwickshire (xi) 19174
04 B Ettrick and Lauderdale (xi)34038
04 C Roxburgh (xi) 35346
04 D Tweeddale (xi) 15323

Buckinghamshire (SE) 634407
05 A Aylesbury Vale (x) 145931
05 B Chiltern (x) 89838
05 C Milton Keynes (viii) 176330
05 D South Bucks (x) 62482
05 E Wycombe (x) 157906

Cambridgeshire (EA) 647089
06 A Cambridge (vi) 91933
06 B East Cambridgeshire (xi) 60416
06 C Fenland (xi) 75767
06 D Huntingdonshire (x) 144075
06 E Peterborough (viii) 153166
06 F South Cambridgeshire (x) 121732

Central (SC) 267492
07 A Clackmannan (vii) 47679
07 B Falkirk (vii) 140980
07 C Stirling (vi) 78833

Cheshire (NW) 956616
08 A Chester (x) 115458
08 B Congleton (x) 84525
08 C Crewe and Nantwich (vii) 103164
08 D Ellesmere Port and Neston (vii) 80873
08 E Halton (viii) 123716
08 F Macclesfield (x) 151590
08 G Vale Royal (x) 114605
08 H Warrington (viii) 182685

Cleveland (NO) 550293
09 A Hartlepool (vii) 90404
09 B Langbaurgh-On-Tees (vii) 145108
09 C Middlesbrough (vi) 140846
09 D Stockton-on-Tees (vii) 173912

Clwyd (WA) 408090
10 A Alyn and Deeside (vii) 73494
10 B Colwyn (ix) 55070
10 C Delyn (vii) 67849
10 D Glyndwr (xi) 41870
10 E Rhuddlan (ix) 54555
10 F Wrexham Maelor (vii) 115251

Cornwall (SW) 468425
11 A Caradon (xi) 76516
11 B Carrick (xi) 82707
11 C Isles of Scilly (xi) 2048
11 D Kerrier (xi) 87566
11 E North Cornwall (xi) 73800
11 F Penwith (xi) 59247
11 G Restormel (xi) 86519

Cumbria (NO) 483163
12 A Allerdale (vii) 95701
12 B Barrow-in-Furness (vii) 73122
12 C Carlisle (vii) 100562
12 D Copeland (vii) 71294
12 E Eden (xi) 45581
12 F South Lakeland (xi) 96897

[7] Dorling D, Visualising changing social structure from a census. Environment and Planning A 27,353-378. 1995.

Derbyshire (EM) 928636

13 A Amber Valley (vii) 113014
13 B Bolsover (vii) 70437
13 C Chesterfield (vii) 95885
13 D Derby (v) 218802
13 E Derbyshire Dales (was West Derbyshire) (xi) 67562
13 F Erewash (vii) 104984
13 G High Peak (vii) 85092
13 H North East Derbyshire (vii) 101088
13 I South Derbyshire (vii) 71772

Devon (SW) 1009950

14 A East Devon (ix) 115873
14 B Exeter (vi) 98125
14 C Mid Devon (xi) 64258
14 D North Devon (xi) 84800
14 E Plymouth (v) 243355
14 F South Hams (xi) 77565
14 G Teignbridge (ix) 108233
14 H Torbay (ix) 119670
14 I Torridge (xi) 52129
14 J West Devon (xi) 45895

Dorset (SW) 645166

15 A Bournemouth (ix) 151302
15 B Christchurch (ix) 40865
15 C East Dorset (was Wimborne) (ix) 78698
15 D North Dorset (xi) 52110
15 E Poole (ix) 133048
15 F Purbeck (xi) 42445
15 G West Dorset (xi) 85463
15 H Weymouth and Portland (ix) 61233

Dumfries and Galloway (SC) 147805

16 A Annandale and Eskdale (xi) 37087
16 B Nithsdale (x) 57012
16 C Stewartry (xi) 23629
16 D Wigtown (xi) 30077

Durham (NO) 593430

17 A Chester-le-Street (vii) 52224
17 B Darlington (vii) 98906
17 C Derwentside (vii) 86046
17 D Durham (vi) 81086
17 E Easington (viii) 97821
17 F Sedgefield (viii) 90530
17 G Teesdale (xi) 24068
17 H Wear Valley (vii) 62746

Dyfed (WA) 343543

18 A Carmarthen (xi) 55119
18 B Ceredigion (xi) 63094
18 C Dinefwr (xi) 38026
18 D Llanelli (vii) 75219
18 E Preseli Pembrokeshire (xi) 70157
18 F South Pembrokeshire (xi) 41886

East Sussex (SE) 690447

19 A Brighton (vi) 143582
19 B Eastbourne (ix) 81395
19 C Hastings (ix) 80820
19 D Hove (ix) 85364
19 E Lewes (ix) 87389
19 F Rother (ix) 81683
19 G Wealden (ix) 130214

Essex (SE) 1528577

20 A Basildon (viii) 161736
20 B Braintree (xi) 119160
20 C Brentwood (x) 70597
20 D Castle Point (x) 85948
20 E Chelmsford (x) 152418
20 F Colchester (x) 142507
20 G Epping Forest (x) 116027
20 H Harlow (viii) 74629
20 I Maldon (x) 52547
20 J Rochford (x) 75395
20 K Southend-on-Sea (ix) 158517
20 L Tendring (ix) 125813
20 M Thurrock (vii) 127795
20 N Uttlesford (xi) 65432

Fife (SC) 341199

21 A Dunfermline (vii) 127258
21 B Kirkcaldy (viii) 147053
21 C North East Fife (xi) 66888

Gloucestershire (SW) 528370

22 A Cheltenham (vi) 86482
22 B Cotswold (xi) 73370
22 C Forest of Dean (xi) 75351
22 D Gloucester (vi) 94256
22 E Stroud (x) 110972
22 F Tewkesbury (x) 87937

Grampian (SC) 503888

23 A Aberdeen City (v) 204885
23 B Banff and Buchan (xi) 85303
23 C Gordon (xi) 76642
23 D Kincardine and Deeside (xi) 53442
23 E Moray (xi) 83616

Greater London (SE) 6679699

24 A Barking and Dagenham (ii)143680
24 B Barnet (ii) 293564
24 C Bexley (ii) 215615
24 D Brent (ii) 243025
24 E Bromley (ii) 290609
24 F Camden (i) 170444
24 G City Of London (i) 4142
24 H Croydon (ii) 313510
24 I Ealing (ii) 275257
24 J Enfield (ii) 257417
24 K Greenwich (ii) 207650
24 L Hackney (i) 181248
24 M Hammersmith and Fulham (i) 148502
24 N Haringey (i) 202204
24 O Harrow (ii) 200100
24 P Havering (ii) 229492
24 Q Hillingdon (ii) 231602
24 R Hounslow (ii) 204397
24 S Islington (i) 164686
24 T Kensington and Chelsea (i) 138394
24 U Kingston upon Thames (ii) 132996
24 V Lambeth (i) 244834
24 W Lewisham (i) 230983
24 X Merton (ii) 168470
24 Y Newham (i) 212170
24 Z Redbridge (ii) 226218
24 A1 Richmond Upon Thames (ii) 160732
24 B1 Southwark (i) 218541
24 C1 Sutton (ii) 168880
24 D1 Tower Hamlets (i) 161064
24 E1 Waltham Forest (ii) 212033
24 F1 Wandsworth (i) 252425
24 G1 Westminster, City of (i) 174814

Greater Manchester (NW) 2499441

25 A Bolton (iv) 258584
25 B Bury (iv) 176760
25 C Manchester (iii) 404861
25 D Oldham (iv) 216531
25 E Rochdale (iv) 202164
25 F Salford (iv) 220463
25 G Stockport (iv) 284395
25 H Tameside (iv) 216431
25 I Trafford (iv) 212731
25 J Wigan (iv) 306521

Gwent (WA) 442212

26 A Blaenau Gwent (vii) 76468
26 B Islwyn (vii) 64525
26 C Monmouth (x) 74633
26 D Newport (vi) 136048
26 E Torfaen (viii) 90527

Gwynedd (WA) 235452

27 A Aberconwy (ix) 52972
27 B Arfon (xi) 53296
27 C Dwyfor (xi) 27070
27 D Meirionnydd (xi) 32965
27 E Ynys Mon-Isle of Anglesey (xi) 69149

Hampshire (SE) 1540467

28 A Basingstoke and Deane (x) 143710
28 B East Hampshire (x) 103460
28 C Eastleigh (x) 105999
28 D Fareham (x) 99262
28 E Gosport (x) 75061
28 F Hart (x) 87764
28 G Havant (x) 119697
28 H New Forest (ix) 160456

Hampshire (SE) 1540467 (continued)

28 I Portsmouth (v) 174679
28 J Rushmoor (x) 75683
28 K Southampton (v) 196855
28 L Test Valley (x) 101428
28 M Winchester (x) 96386

Hereford and Worcester (WM) 676747

29 A Bromsgrove (x) 91544
29 B Hereford (x) 50234
29 C Leominster (xi) 39913
29 D Malvern Hills (xi) 86902
29 E Redditch (viii) 78106
29 F South Herefordshire (xi) 51763
29 G Worcester (vi) 80784
29 H Wychavon (xi) 102687
29 I Wyre Forest (vii) 94814

Hertfordshire (SE) 973286

30 A Broxbourne (x) 81449
30 B Dacorum (viii) 132240
30 C East Hertfordshire (x) 116266
30 D Hertsmere (x) 87590
30 E North Hertfordshire (x) 111371
30 F St.Albans (x) 126202
30 G Stevenage (viii) 74699
30 H Three Rivers (x) 78457
30 I Watford (x) 74566
30 J Welwyn Hatfield (viii) 92366

Highland (SC) 204004

31 A Badenoch and Strathspey (xi)11008
31 B Caithness (xi) 26710
31 C Inverness (vi) 62186
31 D Lochaber (vii) 19310
31 E Nairn (xi) 10623
31 F Ross and Cromarty (xi) 48950
31 G Skye and Lochalsh (xi) 11754
31 H Sutherland (xi) 13216

Humberside (YH) 858040

32 A Boothferry (xi) 64158
32 B Cleethorpes (vii) 69066
32 C East Yorkshire (xi) 84072
32 D East Yorkshire Borough of Beverley (was Beverley) (x)111699
32 E Glanford (xi) 71771
32 F Great Grimsby (vii) 90517
32 G Holderness (xi) 51000
32 H Kingston upon Hull (v) 254113
32 I Scunthorpe (vii) 61550

Islands (SC) 71734

33 A Orkney Islands (xi) 19612
33 B Shetland Islands (xi) 22522
33 C Western Isles Islands (xi) 29600

Isle of Wight (SE) 124577

34 A Medina (ix) 71104
34 B South Wight (ix) 53473

Kent (SE) 1508873

35 A Ashford (xi) 92331
35 B Canterbury (ix) 124435
35 C Dartford (vii) 76420
35 D Dover (ix) 102714
35 E Gillingham (x) 95358
35 F Gravesham (x) 93234
35 G Maidstone (x) 136209
35 H Rochester upon Medway (vii) 144857
35 I Sevenoaks (x) 111066
35 J Shepway (ix) 91486
35 K Swale (vii) 115766
35 L Thanet (ix) 123664
35 M Tonbridge and Malling (x) 101763
35 N Tunbridge Wells (x) 99538

Lancashire (NW) 1383998

36 A Blackburn (vii) 136612
36 B Blackpool (ix) 146069
36 C Burnley (vii) 92415
36 D Chorley (vii) 96366
36 E Fylde (ix) 70999
36 F Hyndburn (vii) 78390
36 G Lancaster (ix) 123850
36 H Pendle (vii) 85111
36 I Preston (vi) 126082
36 J Ribble Valley (x) 50482
36 K Rossendale (vii) 65681
36 L South Ribble (viii) 102139
36 M West Lancashire (viii) 107978
36 N Wyre (ix) 101818

Leicestershire (EM) 867521

37 A Blaby (x) 82700
37 B Charnwood (x) 141806
37 C Harborough (x) 67607
37 D Hinckley and Bosworth (vii) 96201
37 E Leicester (v) 270493
37 F Melton (xi) 45112
37 G North West Leicestershire (vii) 80566
37 H Oadby and Wigston (x) 51547
37 I Rutland (x) 31489

Lincolnshire (EM) 584536

38 A Boston (xi) 53225
38 B East Lindsey (xi) 116957
38 C Lincoln (vi) 81987
38 D North Kesteven (x) 79942
38 E South Holland (xi) 67261
38 F South Kesteven (xi) 108945
38 G West Lindsey (xi) 76218

Lothian (SC) 726010

39 A East Lothian (x) 84114
39 B Edinburgh City (v) 418914
39 C Midlothian (vii) 78845
39 D West Lothian (viii) 144137

Merseyside (NW) 1403642

40 A Knowsley (iv) 152091
40 B Liverpool (iii) 452450
40 C Sefton (iv) 289538
40 D St. Helens (iv) 178764
40 E Wirral (iv) 330767

Mid Glamorgan (WA) 534101

41 A Cynon Valley (vii) 65171
41 B Merthyr Tydfil (vii) 59317
41 C Ogwr (vii) 132442
41 D Rhondda (vii) 78344
41 E Rhymney Valley (vii) 103400
41 F Taff-Ely (vii) 95427

Norfolk (EA) 744272

42 A Breckland (xi) 107167
42 B Broadland (xi) 106292
42 C Great Yarmouth (ix) 87719
42 D King's Lynn and West Norfolk (was West Norfolk) (xi) 129118
42 E North Norfolk (xi) 90461
42 F Norwich (vi) 120895
42 G South Norfolk (xi) 102612

North Yorkshire (YH) 702161

43 A Craven (xi) 49891
43 B Hambleton (xi) 79425
43 C Harrogate (x) 143526
43 D Richmondshire (x) 44179
43 E Ryedale (xi) 90746
43 F Scarborough (ix) 106221
43 G Selby (x) 89419
43 H York (vi) 98745

Northamptonshire (EM) 578807

44 A Corby (viii) 53044
44 B Daventry (xi) 62886
44 C East Northamptonshire (vii) 67686
44 D Kettering (vii) 76150
44 E Northampton (viii) 180567
44 F South Northamptonshire (x) 70685
44 G Wellingborough (vii) 67789

Northumberland (NO) 304694

45 A Alnwick (xi) 30081
45 B Berwick-upon-Tweed (xi) 26731
45 C Blyth Valley (vii) 79584
45 D Castle Morpeth (x) 50299
45 E Tynedale (xi) 57275
45 F Wansbeck (vii) 60724

Nottinghamshire (EM) 993872

46 A Ashfield (vii) 108364
46 B Bassetlaw (vii) 103979
46 C Broxtowe (vii) 107137
46 D Gedling (vii) 106500
46 E Mansfield (vii) 100386
46 F Newark and Sherwood (vii)106417
46 G Nottingham (v) 263522
46 H Rushcliffe (x) 97567

Oxfordshire (SE) 547584
47 A Cherwell (x) 117840
47 B Oxford (vi) 96853
47 C South Oxfordshire (x) 132718
47 D Vale of White Horse (x) 109922
47 E West Oxfordshire (x) 90251

Powys (WA) 117467
48 A Brecknock (xi) 41145
48 B Montgomeryshire (viii) 52692
48 C Radnor (xi) 23630

Shropshire (WM) 406387
49 A Bridgnorth (xi) 50511
49 B North Shropshire (xi) 52873
49 C Oswestry (xi) 33508
49 D Shrewsbury and Atcham (x) 91749
49 E South Shropshire (xi) 38230
49 F The Wrekin (viii) 139516

Somerset (SW) 460368
50 A Mendip (xi) 95603
50 B Sedgemoor (xi) 97763
50 C South Somerset (was Yeovil) (xi) 141655
50 D Taunton Deane (ix) 93696
50 E West Somerset (xi) 31643

South Glamorgan (WA) 392780
51 A Cardiff (v) 279042
51 B Vale of Glamorgan (x) 113725

South Yorkshire (YH) 1262630
52 A Barnsley (iv) 220937
52 B Doncaster (iv) 288854
52 C Rotherham (iv) 251637
52 D Sheffield (iii) 501202

Staffordshire (WM) 1031135
53 A Cannock Chase (vii) 88833
53 B East Staffordshire (vii) 97105
53 C Lichfield (x) 92679
53 D Newcastle-under-Lyme (vii)119091
53 E South Staffordshire (x) 105487
53 F Stafford (x) 117788
53 G Staffordshire Moorlands (vii)95450
53 H Stoke-on-Trent (v) 244637
53 I Tamworth (vii) 70065

Strathclyde (SC) 2248706
54 A Argyll and Bute (xi) 65140
54 B Bearsden and Milngavie (iv) 40612
54 C Clydebank (iv) 45717
54 D Clydesdale (was Lanark) (x) 57588
54 E Cumbernauld and Kilsyth (viii) 62412
54 F Cumnock and Doon Valley (vii) 42594
54 G Cunninghame (viii) 136875
54 H Dumbarton (vii) 77173
54 I East Kilbride (iv) 82777
54 J Eastwood (iv) 59959
54 K Glasgow City (iii) 662853
54 L Hamilton (iv) 105202
54 M Inverclyde (vii) 90103
54 N Kilmarnock and Loudoun (vii) 79861
54 O Kyle and Carrick (x) 112658
54 P Monklands (iv) 102379
54 Q Motherwell (iv) 142632
54 R Renfrew (iv) 196980
54 S Strathkelvin (iv) 85191

Suffolk (EA) 636266
55 A Babergh (xi) 79632
55 B Forest Heath (x) 54843
55 C Ipswich (vii) 117365
55 D Mid Suffolk (xi) 78383
55 E St.Edmundsbury (xi) 91731
55 F Suffolk Coastal (xi) 107547
55 G Waveney (xi) 106750

Surrey (SE) 1018003
56 A Elmbridge (x) 114479
56 B Epsom and Ewell (x) 67007
56 C Guildford (x) 122378
56 D Mole Valley (x) 79220
56 E Reigate and Banstead (x) 117777
56 F Runnymede (x) 71789
56 G Spelthorne (x) 89987
56 H Surrey Heath (x) 79073
56 I Tandridge (x) 76969
56 J Waverley (x) 113212
56 K Woking (x) 86765

Tayside (SC) 383848
57 A Angus (xi) 94480
57 B Dundee City (v) 165873
57 C Perth and Kinross (xi) 123495

Tyne and Wear (NO) 1095152
58 A Gateshead (iv) 199588
58 B Newcastle upon Tyne (iii) 259541
58 C North Tyneside (iv) 192278
58 D South Tyneside (iv) 154691
58 E Sunderland (iv) 289038

Warwickshire (WM) 484247
59 A North Warwickshire (vii) 60747
59 B Nuneaton and Bedworth (vii) 117052
59 C Rugby (x) 84563
59 D Stratford-on-Avon (x) 105586
59 E Warwick (x) 116299

West Glamorgan (WA) 361428
60 A Lliw Valley (vii) 63611
60 B Neath (vii) 65400
60 C Port Talbort (was Afan) (vii) 51023
60 D Swansea (v) 181303

West Midlands (WM) 2551671
61 A Birmingham (iii) 961041
61 B Coventry (iv) 294387
61 C Dudley (iv) 304615
61 D Sandwell (iv) 290091
61 E Solihull (iv) 199859
61 F Walsall (iv) 259488
61 G Wolverhampton (iv) 242190

West Sussex (SE) 702290
62 A Adur (ix) 58016
62 B Arun (ix) 129357
62 C Chichester (xi) 101358
62 D Crawley (viii) 70711
62 E Horsham (x) 117680
62 F Mid Sussex (x) 128355
62 G Worthing (ix) 96157

West Yorkshire (YH) 2013693
63 A Bradford (iv) 457344
63 B Calderdale (iv) 191585
63 C Kirklees (iv) 373127
63 D Leeds (iii) 680722
63 E Wakefield (iv) 310915

Wiltshire (SW) 564471
64 A Kennet (x) 68526
64 B North Wiltshire (x) 111974
64 C Salisbury (x) 105318
64 D Thamesdown (vii) 170850
64 E West Wiltshire (x) 107803

Appendix F The 1991 census Special Migration Statistics

F.1 The Special Migration Statistics (SMS) comprise two sets (Sets 1 and 2) which provide a range of statistics relating to the characteristics of one-year migrants and migrant households. SMS Set 1 covers one-year migration flows within and between each ward in England and Wales, and each postcode sector in Scotland. SMS Set 2 provides information on one-year migration flows at the local authority district level in Great Britain. The data are generated from the responses to the 1991 census question on 'usual address one year ago' (that is, at 21 April 1990).

F.2 The tables available in the SMS are shown below. Two tables are available for each flow in Set 1, namely Tables 1 and 2, containing 12 counts. Associated with each flow in Set 2 are ten tables for England (11 in Wales and Scotland). These tables contain a total of 88 counts for flows with a destination in England.

F.3 The supreme advantage of the SMS over the information on migration residents available from the standard census output (County Reports, Local Base Statistics and Small Area Statistics) is that they provide details of place of usual residence twelve months before the census and thus make it possible to measure out-migration from a place and, by reference to comparable in-migration data, to calculate the net migration balance.

F.4 At the same time, it is important to be aware that the SMS suffer from certain limitations that affect their usefulness in the present context:

- out-migration will be recorded only if the destination is somewhere else in Great Britain, so net migration impacts can be examined with respect only to migration within Britain and not with Northern Ireland or other countries;
- the analysis cannot include anyone who was omitted from the census (not just the 'missing million', but also migrants who did migrate during the year before the census but then died before census night), nor anyone under the age of one at the census, nor anyone who did not give adequate details of their previous address (including the imputed population). In broad terms, 2 per cent of persons were entirely omitted from the census, another 2 per cent were imputed, around 1 in 10 migrants are believed to have failed to declare that they were migrants, and around 1 in 15 are classified as 'origin not stated';
- The range of tabulations included in the SMS is far more limited than the data on migrant residents in the standard census output, both in range of topics and in degree of cross-tabulations;

- use of Tables 4-10 in the Set 2 data is affected by thresholding and suppression imposed because of confidentiality restrictions. Tables 4-7 are released only for flows including at least 10 migrants and more than one household, and Tables 8-10 only for flows including at least 10 migrant households. Set 2 Tables 1-3 are available for all flows, and there is no suppression affecting the Set 1 data;
- there is no information on the characteristics and circumstances of migrants before their move, so it is not possible to measure confidently the effect on places of out-migration for those characteristics that can change in unpredictable ways over time and particularly as a result of a move, such as housing tenure and economic position, and thus it is not possible to gauge accurately the net-migration impact in these respects.

F.5 Finally, it should be noted that, where the impact of migration is calculated in the form of a rate, the denominator is taken directly from the relevant 1991 census record which, by definition, relates to the position at the end of the period of observation rather than to the beginning of the pre-census year (or the mid-point). In most cases, the inaccuracy arising from this approach is trivial because the size and profile of the base population will not have been altered greatly over these few months by either migration or other causes, and it is also small by comparison with the possible effects of the coverage and data quality problems.

Table F.1 All Migrants: age (5 broad age groups) by sex

100% Sample

Age	Male	Female
1-15	1	2
16-29	3	4
30-44	5	6
45- Pensionable age	7	8
Pensionable age +	9	10

Table F.2 Wholly moving households and residents in wholly moving households: counts

100% Sample

Wholly moving households	Residents in wholly moving households
1	
	2

Table F.3 All migrants: age (5 year groups) by sex

100% Sample

Age	Male	Female
1-4	1	2
5-9	3	4
10-14	5	6
15	7	8
16-19	9	10
20-24	11	12
25-29	13	14
30-34	15	16
35-39	17	18
40-44	19	20
45-49	21	22
50-54	23	24
55-59	25	26
60-64	27	28
65-69	29	30
70-74	31	32
75-79	33	34
80-84	35	36
85+	37	38

Table F.4 All migrants: marital status by sex

100% Sample

Sex	Single	Married	Widowed/Divorced
Male	1	2	3
Female	4	5	6

Table F.5 All migrants: ethnic group

100% Sample

White	Black groups	Indian, Pakistani and Bangladeshi	Chinese and Other
1	2	3	4

Table F.6 All migrants: whether resident in households by whether suffering liming long term illness

100% Sample

	With limiting long-term illness	Without limiting long-term illness
In households	1	2
Not in households	3	4

Table F.7 All migrants aged 16+: economic position

Self employed	Other employed	Un-employed	Retired (inactive)	Student inactive	Other (active)	*100% Sample* Student
1	2	3	4	5	6	7

Table F.8 Wholly moving households: tenure

England and Wales Owner occupied	Rented from LA/ New town	Other rented	*100% Sample*
1	2	3	

Table F.8 Wholly moving households: tenure

Scotland Owner occupied	Rented from LA	Rented from NT /Scottish Homes	*100% Sample* Other rented
1	2	3	4

Table F.9 Wholly moving households: sex and economic position of head

100% Sample

Sex of head of household		Economic position of head of household				
Male	Female	Self employed	Other employed	Un-employed	Retired inactive	Other
1	2	3	4	5	6	7

Table F.10 Residents in wholly moving households: sex and economic position of head

100% Sample

Sex of head of household		Economic position of head of household				
Male	Female	Self employed	Other employed	Un-employed	Retired inactive	Other
1	2	3	4	5	6	7

Table F.11 All migrants: Gaelic speakers

Scotland	*100% Sample*
Migrants resident in Scotland who speak Gaelic	1

Table F.12 All migrants: Welsh speakers

Wales	*100% Sample*
Migrants resident in Wales who speak Welsh	1

Appendix G: Definition of zones for Tables 5.3-5.12

(see Figures G.1-G.10)

Table G.2 The zones used for analysing flows around Birmingham

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Birmingham (inner), Sandwell (inner)
outer	2	Birmingham (outer), Sandwell (outer)
Wolverhampton	3	Dudley, Wolverhampton, Walsall
Solihull	4	Solihull
Coventry	5	Coventry, Nuneaton & Bedworth
Redditch	6	Warwick, Stratford-on-Avon, Redditch, Bromsgrove
Tamworth	7	N. Warwickshire, Tamworth, Lichfield, Cannock Chase
elsewhere	8	

Figure G.2 Birmingham

Table G.1 The zones used for analysing flows around London

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Inner London Boroughs
outer	2	Outer London Boroughs
Chatham	3	Dartford, Gravesham, Rochester-upon-Medway, Gillingham, Swale
Gatwick	4	Sevenoaks, Tonbridge & Malling, Maidstone, TunbridgeWells, Crawley, Mid Sussex, Horsham, Tandridge, Reigate & Banstead, Mole Valley, Epsom & Ewell, Elmbridge
Slough	5	Waverley, Woking, Guildford, Surrey Heath, Runneymede, Spelthorne, Slough, Windsor & Maidenhead, Bracknell Forest, Wokingham, Wycombe, S. Bucks, Chiltern, Rushmoor, Hart
Harlow	6	Watford, Three Rivers, Dacorum, St. Albans, Hertsmere, Welwyn Hatfield, Broxbourne, E. Hertfordshire, Uttlesford, Harlow, Epping Forest, Brentwood, Chelmsford, Braintree, Maldon
Southend	7	Thurrock, Basildon, Castle Point, Southend-on-Sea, Rochford
elsewhere	8	

Figure G.1 London

Table G.3 The zones used for analysing flows around Manchester

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Manchester (inner), Salford (inner), Trafford (inner)
outer	2	Manchester (outer), Salford (outer), Trafford (outer)
Rochdale	3	Bury, Rochdale, Rossendale
Stockport	4	Oldham, Tameside, Stockport
Bolton	5	Bolton, Wigan
Macclesfield	6	Macclesfield, High Peak
elsewhere	7	

Figure G.3 Manchester

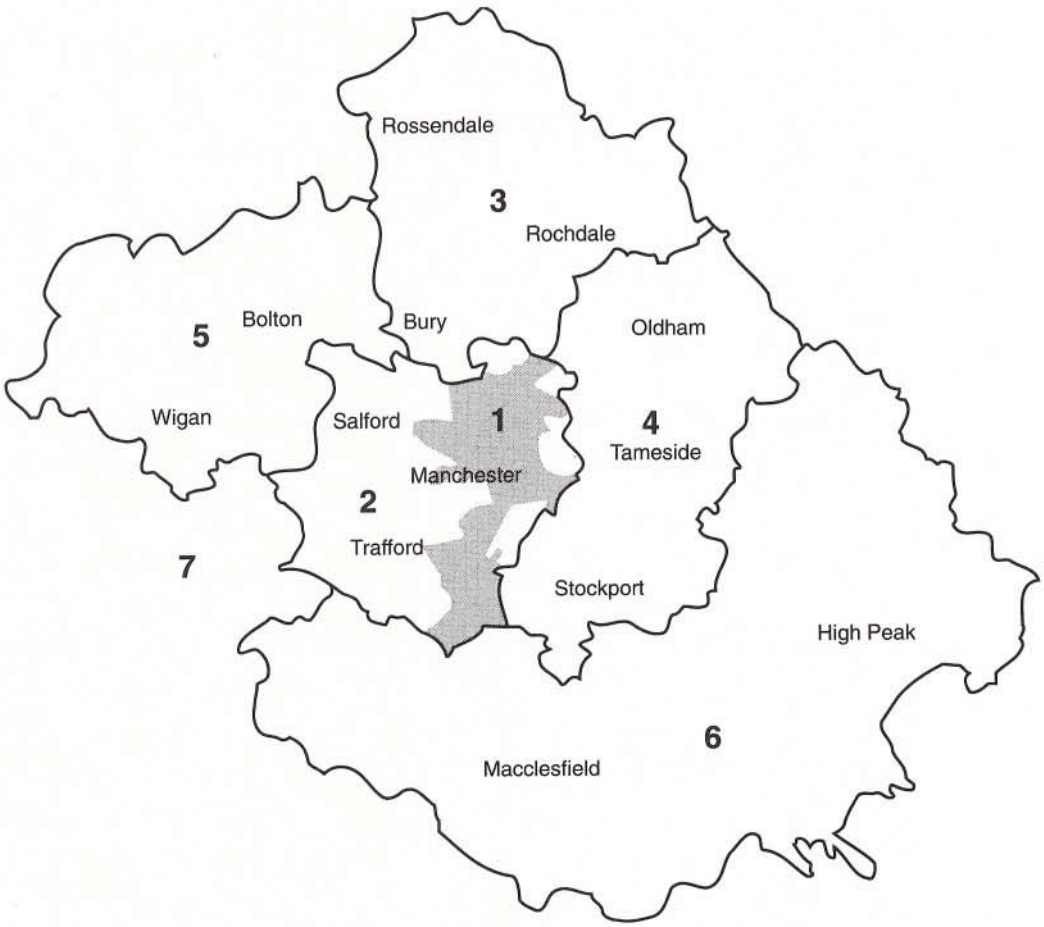


Table G.4 The zones used for analysing flows around Liverpool

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Liverpool (inner), Sefton (inner), Knowsley (inner)
outer	2	Liverpool (outer), Sefton (outer), Knowsley (outer)
Warrington	3	St. Helens, Halton, Warrington
Birkenhead	4	Wirral, Ellesmere Port & Neston, Alyn & Deeside
Skelmersdale	5	W. Lancashire
Chester	6	Chester, Vale Royal
elsewhere	7	

Figure G.4 Liverpool

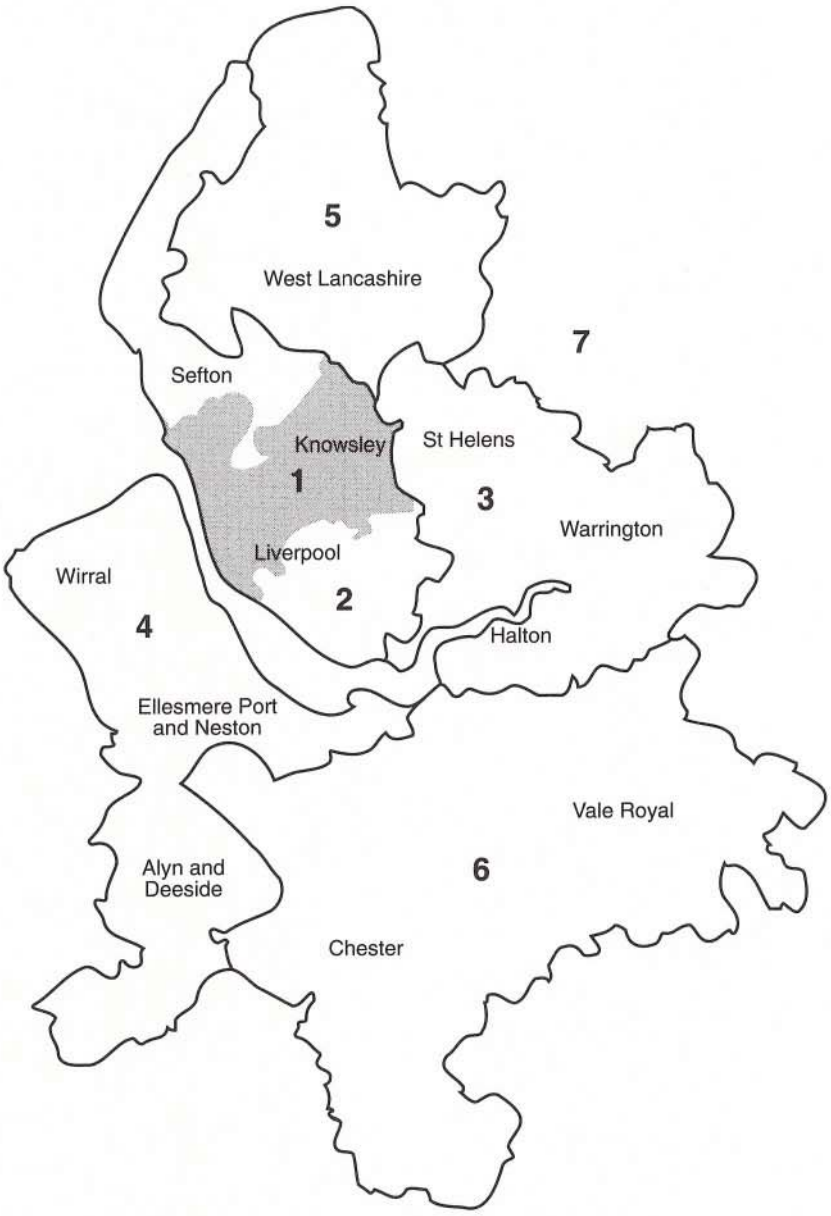


Table G.5 The zones used for analysing flows around Newcastle

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Newcastle-upon-Tyne (inner), Gateshead (inner)
outer	2	Newcastle-upon-Tyne (outer), Gateshead (outer)
Shields	3	N. Tyneside, S. Tyneside
Sunderland	4	Sunderland
Ashington	5	Blyth Valley, Wansbeck
Hexham	6	Castle Morpeth, Tynedale
Durham	7	Derwentside, Chester-le-Street, Durham
elsewhere	8	

Figure G.5 Newcastle

Table G.6 The zones used for analysing flows around Leeds

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Leeds (inner)
outer	2	Leeds (outer)
Bradford	3	Bradford
Huddersfield	4	Calderdale, Kirklees
Wakefield	5	Wakefield
York	6	Selby, York
Harrogate	7	Harrogate
elsewhere	8	

Figure G.6 Leeds

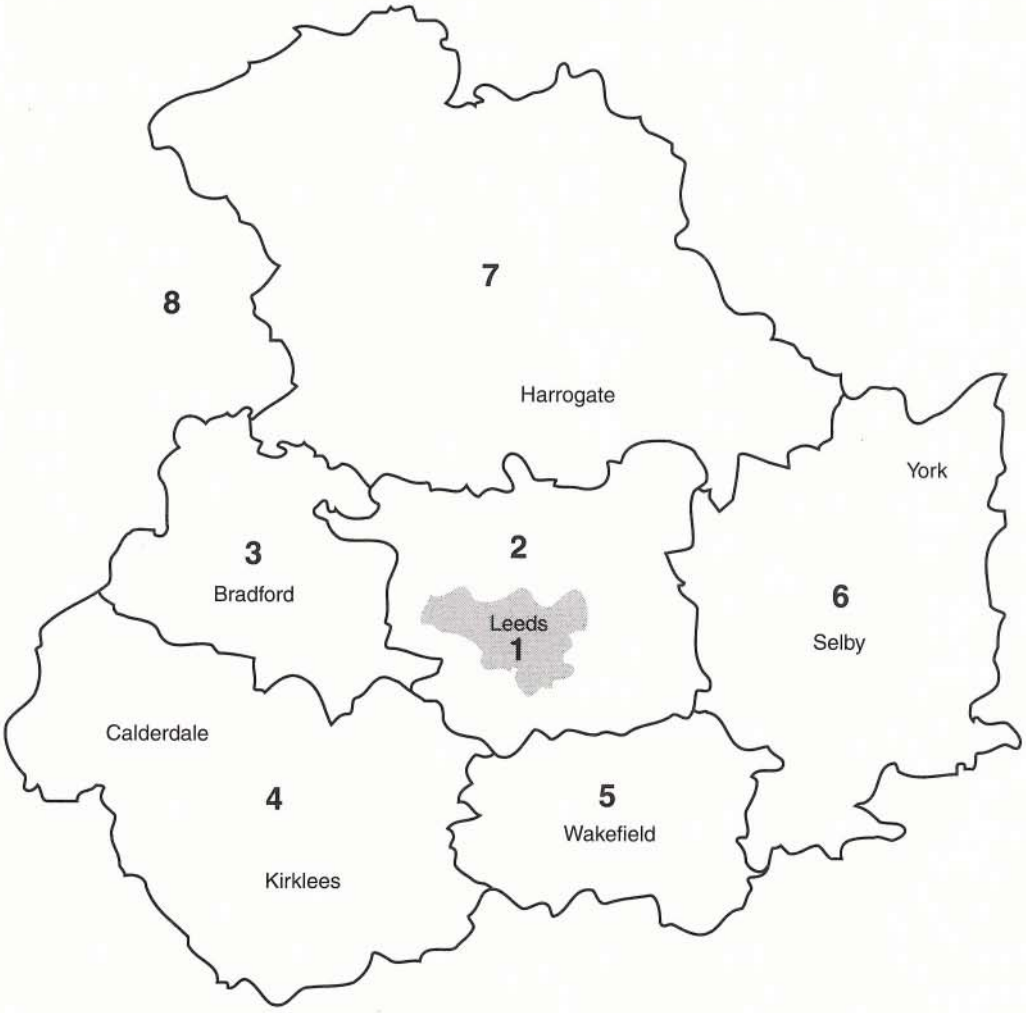


Table G.7 The zones used for analysing flows around Sheffield

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Sheffield (inner)
outer	2	Sheffield (outer)
Rotherham	3	Barnsley, Rotherham
Doncaster	4	Doncaster, Bassetlaw
Chesterfield	5	Chesterfield, N. E. Derbyshire, Bolsover
Matlock	6	Derbyshire Dales
elsewhere	7	

Figure G.7 Sheffield

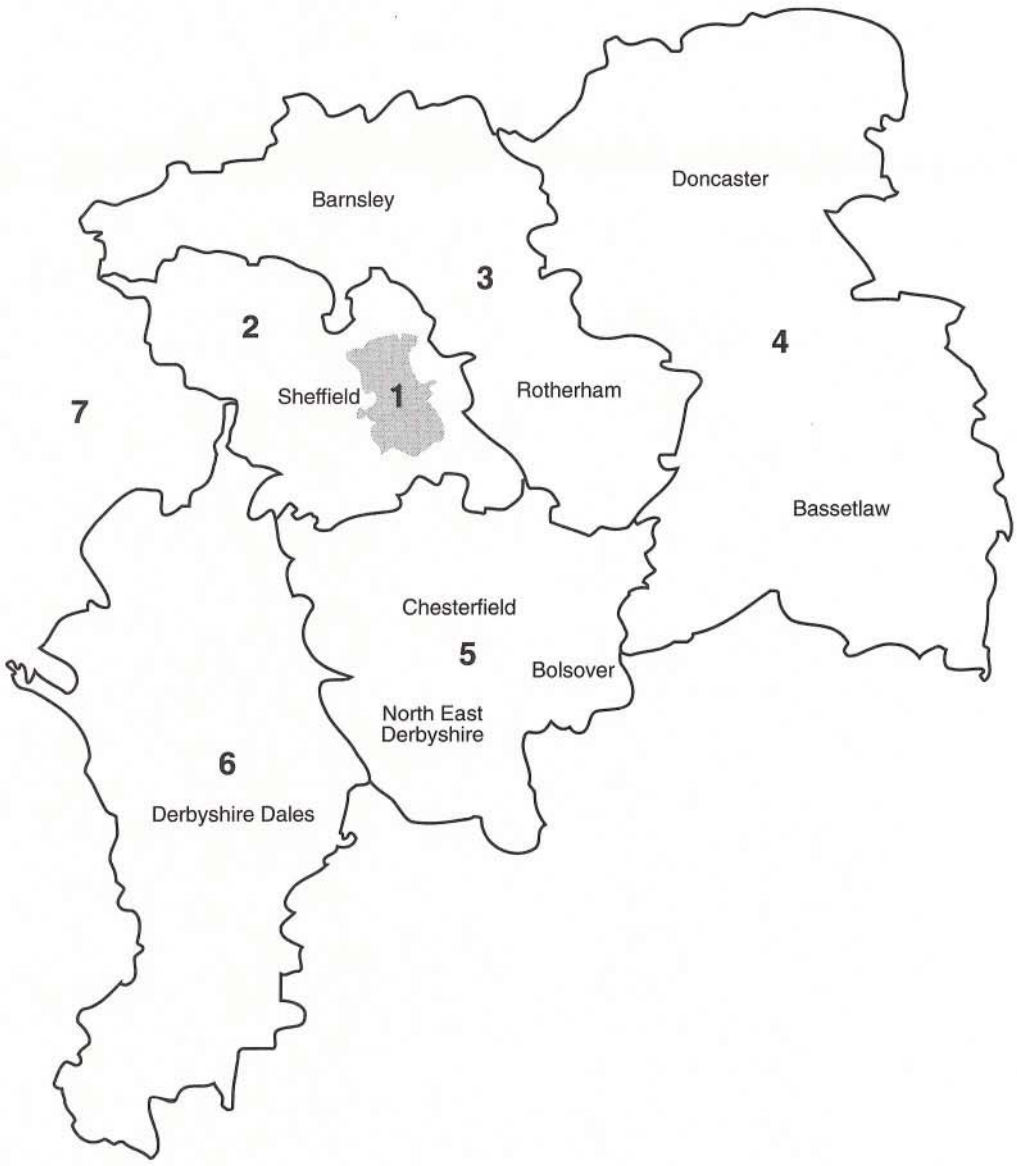


Table G.8 The zones used for analysing flows around Bristol

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Bristol (inner)
outer	2	Bristol (outer)
Filton	3	Kingswood, Northavon
Bath	4	Bath
Keynsham	5	Wansdyke
Weston	6	Woodspring
Stroud	7	Stroud, N. Wiltshire
elsewhere	8	

Figure G.8 Bristol

Table G.9 The zones used for analysing flows around Nottingham

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Nottingham (inner)
outer	2	Nottingham (outer)
Ilkeston	3	Broxtowe, Ashfield, Erewash, Amber Valley
Mansfield	4	Mansfield, Newark
W.Bridgford	5	Gedling, Rushcliffe
Grantham	6	Melton, S. Kesteven
Loughborough	7	N. W. Leicestershire, Charnwood
elsewhere	8	

Figure G.9 Nottingham

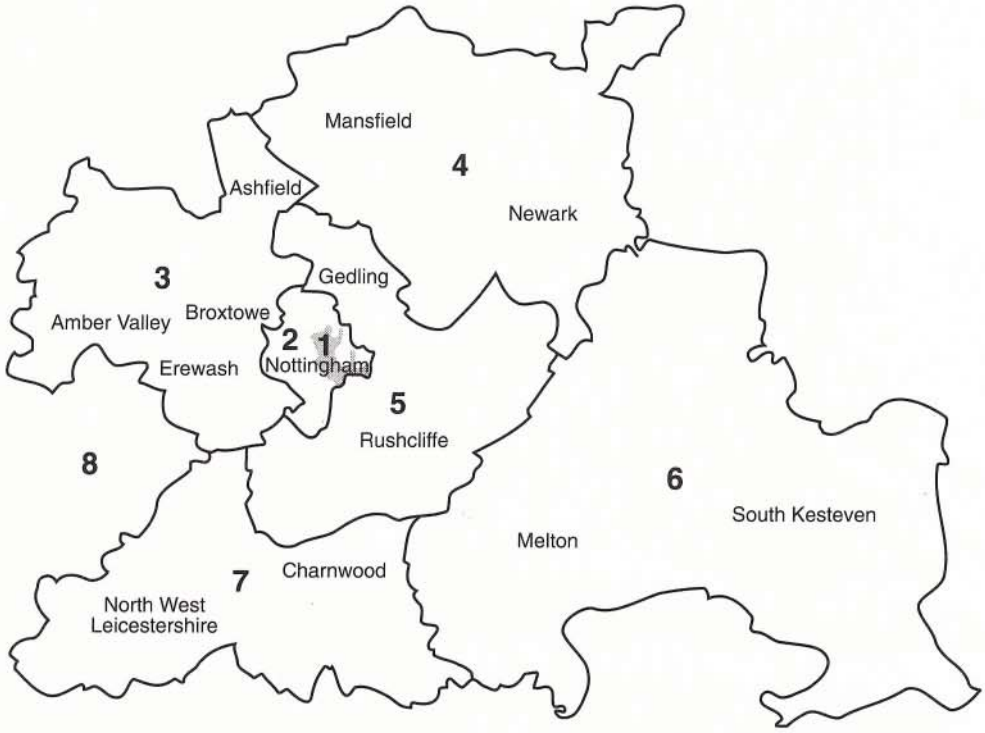
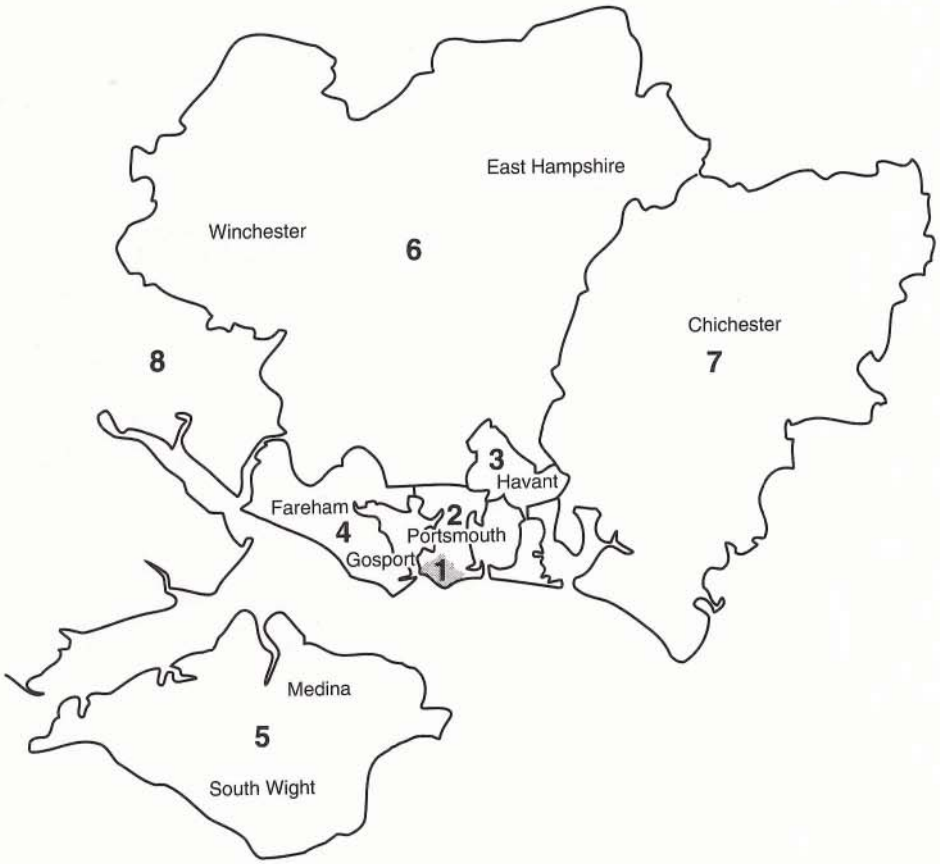


Table G.10 The zones used for analysing flows around Portsmouth

Name on Table	Zone no. on Figure	Zone definition (local authority districts)
inner	1	Portsmouth (inner)
outer	2	Portsmouth (outer)
Havant	3	Havant
Gosport	4	Gosport, Fareham
I.o.Wight	5	Medina, S. Wight
Winchester	6	Winchester, E. Hampshire
Chichester	7	Chichester
elsewhere	8	

Figure G.10 Portsmouth



Appendix H

Table H.1 Migration effect on indices of dissimilarity by ethnic group

Year	White	Black	South Asian	Other	Unknown
1990	2.83	60.53	55.78	39.51	19.54
1991	2.83	60.59	55.78	39.53	20.47
1992	2.82	60.65	55.78	39.55	20.29
1993	2.82	60.72	55.79	39.59	20.12
1994	2.82	60.79	55.79	39.64	19.96
1995	2.82	60.86	55.80	39.69	19.81
1996	2.83	60.92	55.80	39.73	19.67
1997	2.83	60.98	55.81	39.79	19.53
1998	2.83	61.05	55.82	39.85	19.40
1999	2.84	61.11	55.83	39.91	19.27
2000	2.85	61.17	55.84	39.96	19.14

The figures given are the percentage of the population who would have to move if their district-level distribution were to equate with that of the population as a whole. Figures after 1991 assume that the pattern of internal migration continues between districts at the same rates as in 1990-91.

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