

Housing for an Urban Renaissance: Implications for Social Equity

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ABSTRACT *Current UK housing policy favours high-density, mixed-use development on previously developed urban land. This ties in with a general policy to promote an 'urban renaissance', largely because of its claimed advantages for sustainability. However, there has been little testing to date of sustainability impacts in practice. This is particularly true for the social equity aspect of sustainability, despite its acknowledged centrality to the concept. This paper outlines the development of a theory of social equity in relation to urban form and presents empirical research based on this to test the case of the so-called 'compact city', that is, high-density, mixed-use urban form. The research involved a comparative investigation of a range of alleged social equity impacts in 25 medium-sized English cities of differing levels and types of compactness. The findings suggest that, in certain respects and with certain qualifications, the compact city has the potential to promote social equity. Likely benefits include reduced car dependency and lower levels of social segregation, while the main problem is likely to be a lack of affordable, decent-sized homes. Positive effects are emerging in response to re-urbanisation and development on derelict land, and the cities which most support equity appear to be those that have a large proportion of high-density housing and a large quantity of locally provided services and facilities.*

KEY WORDS: density, re-urbanisation, social justice

Introduction

Although current housing policy in the UK focuses on issues of tenure and management, there is a growing emphasis on design and location. For example, in the Housing Green Paper, *Quality and Choice: A Decent Home for All* (DETR, 2000a), the government states its objective to promote an 'urban renaissance' by encouraging better use of existing buildings and previously developed land to meet the projected housing requirements. It is expected that there will be a need to accommodate about 3.8 million new households between 1996 and 2021, and to do this, the government supports implementation of the idea of the 'compact city', that is higher-density, mixed use development on brownfield land close to public transport nodes.

'Compact' housing is also being promoted through urban and planning

policies. The recent Urban White Paper, *Our Towns and Cities: The Future—Delivering an Urban Renaissance* (DETR, 2000b), based largely on the report of the Urban Task Force (1999), seeks to encourage people to move back into towns and cities and to promote well-designed places that make efficient use of available space and environmental resources. It supports:

- development on brownfield land, with easy access to shops, schools and other facilities on foot or bike;
- bringing empty buildings back into constructive use;
- flats over shops;
- the conversion of properties for residential use;
- prevention of sprawl.

The government is aiming to ensure that by 2008 60 per cent of new housing is on brownfield land or provided by conversions of existing buildings (DETR, 2000b).

In planning policy, the government's current intentions for housing are outlined in Planning Policy Guidance note 3 (PPG3, DETR, 2000c), which is based on the White Paper, *Planning for the Communities of the Future* (DETR, 1998a). PPG3 calls for the re-use of urban land and buildings, mixed-use development (either on a site or within individual buildings), greater intensity of development at places with good public transport access (such as town centres or around major nodes along good quality public transport corridors) and housing development densities of between 30 and 50 dwellings per hectare (as opposed to the more usual 20–30). Compact housing forms are also being promoted in policies on sustainable development (UK Government, 1999) and transport (e.g. the White Paper on Transport, UK Government, 1998), and in best practice guidance (e.g. *Planning for Sustainable Development*, DETR, 1998b).

The compact city model is supported for a number of reasons, most of which relate to sustainability. The claimed advantages include:

- conservation of the countryside;
- less need to travel by car, thus reduced fuel emissions;
- support for public transport and walking and cycling;
- better access to services and facilities;
- more efficient utility and infrastructure provision;
- revitalisation and regeneration of inner urban areas (see Jenks *et al.*, 1996).

There are now a plethora of examples of new settlements and urban villages based on the compact city model, such as Poundbury on the edge of Dorchester and the Millennium Village in Greenwich (Barton, 1999). However, despite the supporting policies and polemic, there are doubts about whether or not compact housing is genuinely sustainable. There is relatively little empirical evidence to support the many claims in its favour. Although a significant amount of research has now been carried out, it has tended to focus on particular aspects of sustainability, such as travel behaviour, and overall the evidence remains contentious (Breheny, 1992; Williams *et al.*, 2000). Of all the arguments, perhaps the least explored and most ambiguous is the claim that the compact city is socially equitable.

For a long time now, social equity or social justice (the two terms will be used interchangeably throughout this paper) has been considered an integral part of sustainability (e.g. Blowers, 1992; CEC, 1990; CIDA, 1991; Yiftachel & Hedgcock,

1993). Agyeman & Evans (1994) argue that virtually all interpretations of sustainability imply some element of equity. For example, Elkin *et al.* (1991) claim that:

sustainable development involves more than environmental conservation; it embraces the need for equity. Both intra-generational equity providing for the needs of the least advantaged in society, and inter-generational equity, ensuring a fair treatment of future generations, need to be considered. (p. 203)

Perhaps the main reason why social equity has received minimal attention in research is that it is rarely defined, let alone quantified. Commentators from a wide range of fields argue that the priority for equity studies is the development of a methodology for its measurement (e.g. Truelove, 1993). According to Cutter (1995): "The debates currently underway are not about the salience of concern, but rather how do we define, classify and measure inequity ... Geographers can make a major contribution to the formulation of equitable public policies by producing the methodological support for equity analyses" (p. 119; see also Zimmerman, 1994). In his discussion of equity more than 20 years ago, Alonso (1971) stated: "It is extraordinary that there has been so little technical discussion of a concept so central to political economy" (p. 42).

This paper begins to address this omission by developing not only a working definition of social equity, but also presenting a set of indicators for its measurement within the context of urban or housing form. It then summarises the results of a large-scale study of the relationship between urban compactness and social equity (for full details, see Burton, 1998).

A Theory of Social Equity for Research on Urban Form

Figure 1 illustrates the conceptual framework developed for considering justice related to urban form.

There are numerous interpretations of the idea of social justice but the one perhaps most relevant to urban form is the notion of distributive justice, fairness in the apportionment of resources in society (Schaffer & Lamb, 1981; Scruton, 1982). For a city to be deemed fair or unfair, it must be assumed that it delivers a range of costs and benefits to its inhabitants, and it is the manner in which these are distributed that governs whether or not it promotes equity.

Ideas of justice can only be applied to studies of urban forms if it is accepted that such forms are open to the influence of human agency, that is, that they are not purely 'natural' phenomena. This is accepted on the basis that particular urban forms, such as higher-density ones, are actively promoted in practice through policy (e.g. Eisenschitz, 1997). Cities can become more compact through development, via the mechanisms of the market and through the influence of interventions such as planning policy. Where land uses are concerned (except in agriculture and forestry and major transport and energy projects), the current UK planning system has direct controls over certain kinds of change in the environment, through strategic and local plans and development control. Planning authorities have external effects on the environment by giving or refusing permissions to land uses which themselves have environmental impacts (Jacobs, 1993).

Distributional justice may be viewed in terms of both the fairness of the

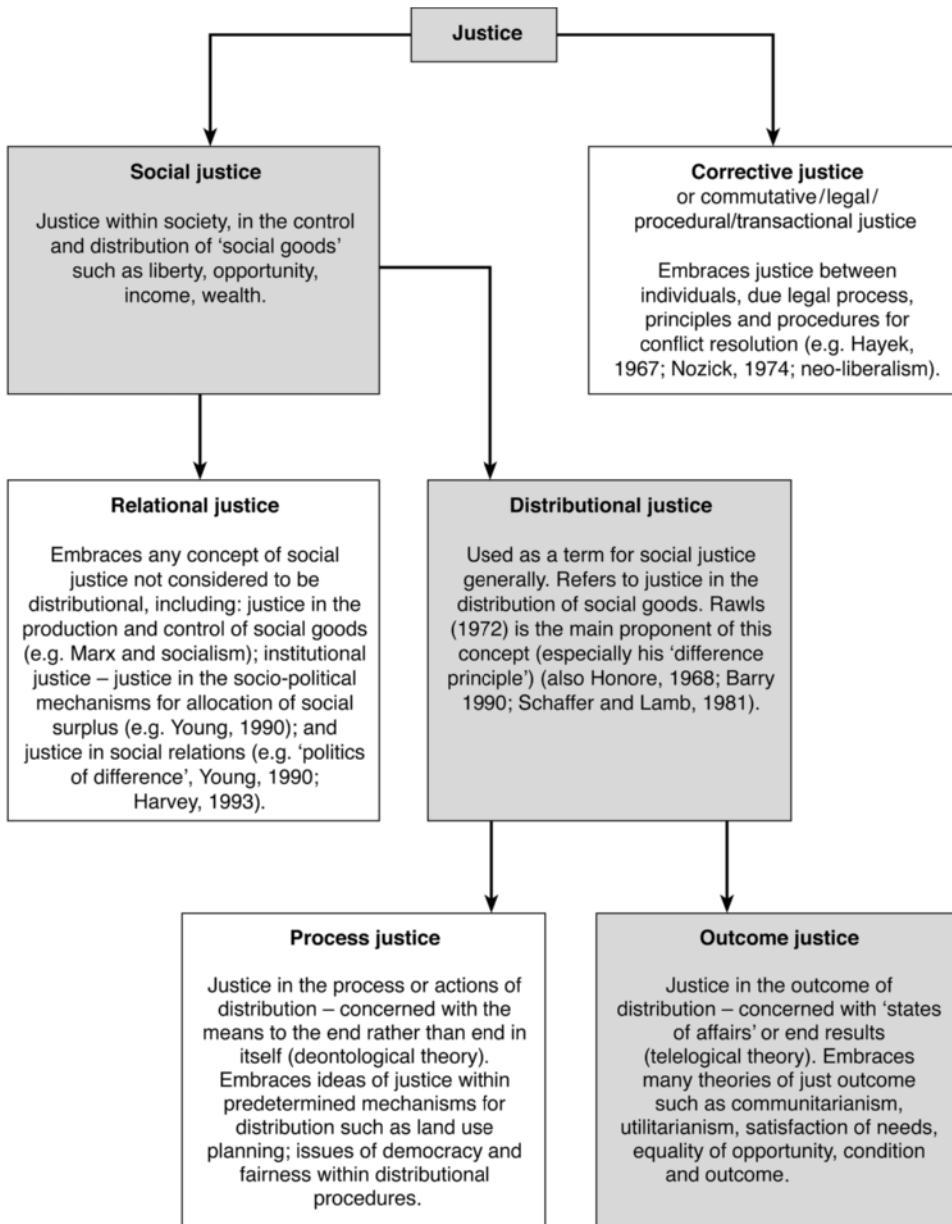


Figure 1. Categories of social justice: a conceptual framework.

Note: Shaded boxes represent categories relevant to the context of the research.

outcome of distribution (the end result) and the fairness of the actions and procedures that bring this about. The theory developed for this research focuses on the fairness of the intended end result of urban form policy and practice. An appropriate theory for judging the 'fairness' of the distribution of impacts of different urban forms was selected by identifying the most common understanding of social equity within sustainable development literature.

Existing interpretations of equity tend to focus on the satisfaction of the needs of the worst off. In particular, much of the sustainable development literature advocates the elimination of poverty (Durning, 1989; Khan, 1995; WCED, 1987), an objective closely linked to the idea of distribution according to need. However, most sustainability arguments extend the idea of social equity from the provision for need to include a relative dimension, that is, a redistribution of wealth and resources from the rich to the poor, both across and within nations (Blowers, 1992; MacLaren, 1996). The basis for these arguments is that environmental problems stem not only from poverty but also from affluence and inequality. Mullaney & Pinfield (1996) assert that the equity (or social justice) principle embedded in the Brundtland definition of sustainable development concerns the fairness with which economic, social and environmental costs and benefits are distributed between people, and the *Charter of European Cities and Towns: Towards Sustainability* (CEC, 1994) argues that an unequal distribution of income and wealth is likely to have draining effects on the vitality of urban activities and to be a source of unsustainable lifestyles (Mega, 1996). This idea of social equity is linked to the concept of equality of condition, and may require positive discrimination in favour of disadvantaged groups. In the context of sustainability, urban forms may be considered to encourage a 'fair' distribution of costs and benefits if they are associated with benefits for the conditions or life chances of the disadvantaged, so reducing the gap between the advantaged and the disadvantaged.

This definition is similar to Rawls' difference principle, according to which: "All social primary goods—liberty and opportunity, income and wealth, and the bases of self-respect—are to be distributed equally unless an unequal distribution of any or all of these goods is to the advantage of the least favoured" (1972, p. 303). Advantage and disadvantage are often defined in terms of the possession of certain social or 'primary' goods. For example, Campbell writes (1988):

justice has to do with the distribution amongst persons of benefits and burdens, these being loosely defined so as to cover any desirable or undesirable thing or experience ... Primary goods are those things which are necessary for the pursuit of any objective which is compatible with the exercise of moral agency, including freedom of thought, liberty of conscience, freedom of movement, free choice of occupation, income and wealth, and the 'social bases for self-respect'.
(p. 34)

'The disadvantaged' are defined, for the purposes of this research, as those on low incomes, that is, those worst off in terms of the possession of one of the social goods identified by Rawls. Improving the life chances of low-income groups will therefore involve an increase in their share of social goods. The focus of research on urban form must be the goods that are most influenced by the built environment. These appear to be income and wealth, and a further 'good', quality of life, which may be considered to be one of the 'social bases for self-respect'. The issues of freedom of thought and liberty of conscience, although undeniably important, are beyond the scope of this theory, particularly as they are probably more closely linked to the management and ownership of the built environment than to characteristics of urban form itself.

Measuring the Social Equity Impacts of the Compact City

The objectives of the research were to examine the validity of claims that the compact city promotes social equity; and to identify the aspects of urban compactness that offer the greatest potential. To do this, the study took the form of a quantitative investigation, comparing, through statistical tests, a number of social equity criteria in a large sample of UK towns and cities of varying compactness. This meant that definitions and indicators of both urban compactness and social equity had to be developed.

In form, the compact city is generally believed to be a town or city that exhibits high densities and mixed uses. In terms of processes, it is embodied in policies of intensification and containment, that is, encouraging people back into cities, brownfield development, higher-density living and environments better suited to walking and cycling. Within the three general distinctions of density, mix of uses and intensification, there are further differences in the nature of compactness (see Burton, 2002). For example, in terms of density, a city may have a high population density but low built form density, or vice versa. Therefore, a wide range of indicators was devised (41 altogether), as shown in Tables 1–3.

To use the theory of social equity developed above to test the compact city proposition, it was necessary to identify the potential costs and benefits that may be delivered by the compact city, and to determine the ways in which these would affect the life chances of the disadvantaged. This meant testing, through an empirical investigation, the claims made about the social equity impacts of urban compactness. The key claims, or social equity impacts, identified in literature and existing research are listed in Table 4.

Indicators (53 altogether) were devised to measure each of these 14 potential impacts. These are outlined in Tables 5–16. For full details, see Burton (1998).

In addition, as each aspect of social equity is subject to many influences, a further range of indicators was developed to measure possible intervening variables, such as the socio-economic status of the town or city and the level of unemployment (see Table 17).

Each social equity effect was represented by a series of different indicators, so in order to produce one value for each effect, summary measures were created by ‘adding’ together the values for groups of indicators (Table 18). To ‘add’ the scores, each indicator within a category/group was transformed into a ‘z-score’. This has the effect of standardising values across the whole range of indicators (as used by the Department of the Environment, 1983). A z-score is:

$$\frac{\text{value} - \text{mean}}{\text{standard deviation}}$$

Through this formula, each indicator is standardised to have a mean of 0.0 and a standard deviation of 1.0. Areas with an above-average performance on the indicator have a positive score and those with below-average performance have a negative score: the size of the score depends on the extent to which an area is above or below average. As some indicators are related positively and others negatively to social equity, the signs of the ‘z-scores’ were altered so that all the values increase as social equity improves. Two sets of composite indicators were created: one measuring the average of all the indicators used for each social equity effect (such as living space, segregation); and the other separating out

Table 1. Density indicators

| Variable | Measure/indicator | Source |
|----------|--|---|
| | <i>Density of population</i> | |
| | Density of local authority district in 1991: | |
| Densgr1 | Persons per hectare | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Densgr2 | Households per hectare | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Denspw | Population-weighted density, 1991: average of ward densities, measured in terms of persons per hectare | OPCS (1995) <i>Population Density, Change and Concentration in Great Britain 1971, 1981 and 1991</i> , HMSO, London |
| | <i>Density of built form</i> | |
| | 1991 | |
| Densblt1 | Persons per hectare in built-up area | 1991 Census <i>Key Statistics for Local Authorities and Ordnance Survey maps (Pathfinder range; scale 1:25 000)</i> |
| Densblt2 | Households per hectare in built-up area | 1991 Census <i>Key Statistics for Local Authorities and Ordnance Survey maps (Pathfinder range; scale 1:25 000)</i> |
| Densres1 | Persons per hectare in residential built-up area | 1991 Census <i>Key Statistics for Local Authorities</i> ; Ordnance Survey maps (<i>Pathfinder range; scale 1:25 000</i>); and DoE (1995) <i>Commercial and Industrial Floorspace Statistics 1995</i> , HMSO, London |
| Densres2 | Households per hectare in residential built-up area | 1991 Census <i>Key Statistics for Local Authorities</i> ; Ordnance Survey maps (<i>Pathfinder range; scale 1:25 000</i>); and DoE (1995) <i>Commercial and Industrial Floorspace Statistics 1995</i> , HMSO, London |
| | <i>Density of sub-centres</i> | |
| | 1991 | |
| Densext | Density of most dense ward, measured in persons per hectare | 1991 Census <i>Ward and Parish Council Monitor</i> |
| Densexs | Average density of four most dense wards, measured in persons per hectare | 1991 Census <i>Ward and Parish Council Monitor</i> |
| Densvar | Variation in density across city: variance, calculated using SPSS | 1991 Census <i>Ward and Parish Council Monitor</i> |
| | <i>Density of housing</i> | |
| | 1991 | |
| Htype1 | Percentage of total housing stock made up of higher-density dwellings (terraces, flats, conversions) | 1991 Census <i>County Monitor</i> , Table H |
| Htype2 | Percentage of total housing stock made up of lower-density dwellings (detached and semi-detached) | 1991 Census <i>County Monitor</i> , Table H |
| Htype3 | Percentage of total housing stock represented by small dwellings (1–3 rooms) | 1991 Census <i>County Report</i> , Table 57 |
| Htype4 | Percentage of total housing stock represented by large dwellings (7 or more rooms) | 1991 Census <i>County Report</i> , Table 57 |

Table 2. Mix of uses indicators

| Variable | Measure/indicator | Source |
|----------|--|--|
| | <i>Provision of facilities (balance of residential and non-residential land uses)</i> | |
| Supfac1 | Number of key facilities (newsagent, restaurant/café, takeaway, food store, bank/building society, doctors' surgery, chemist) for every 1000 residents | <i>Yellow Pages</i> ; and 1991 Census <i>Key Statistics for Local Authorities</i> |
| Supfac2 | Ratio of residential to non-residential urban land | DoE (1995) <i>Commercial and Industrial Floorspace Statistics 1995</i> , HMSO, London; and 1991 Census <i>Key Statistics for Local Authorities</i> |
| Newsags | Number of newsagents for every 10,000 residents | <i>Yellow Pages</i> ; and 1991 Census <i>Key Statistics for Local Authorities</i> |
| | <i>Horizontal mix of uses (geographical spread of key facilities)</i> | |
| Sprfac1 | Percentage of postcode sectors containing less than two key facilities | <i>Yellow Pages</i> ; and <i>Postcode Directories</i> |
| Sprfac2 | Percentage of postcode sectors containing four or more key facilities | <i>Yellow Pages</i> ; and <i>Postcode Directories</i> |
| Sprfac3 | Percentage of postcode sectors containing six or more key facilities | <i>Yellow Pages</i> ; and <i>Postcode Directories</i> |
| Sprfac4 | Percentage of postcode sectors containing all seven key facilities | <i>Yellow Pages</i> ; and <i>Postcode Directories</i> |
| Mixstdev | Variation in the number of facilities per postcode sector—average standard deviation across all facilities | <i>Yellow Pages</i> ; and <i>Postcode Directories</i> |
| Mixdevno | Overall provision and spread of key facilities: variation in the number of facilities per postcode sector divided by the average number of facilities per sector | <i>Yellow Pages</i> ; and <i>Postcode Directories</i> |
| | <i>Vertical mix of uses</i> | |
| Livoshop | Living over the shop: area of retail space that includes accommodation, as a percentage of total retail space | DoE (1995) <i>Commercial and Industrial Floorspace Statistics 1995</i> , HMSO, London |
| Commres | Mixed commercial/residential uses: purpose-built flats in commercial buildings, as a percentage of all purpose-built flats | 1991 Census <i>County Report</i> , Table 59 |

indicators related to changes over time (that is, as a result of intensification). A number of broader measures were also created. Composite measures were also produced for compactness.

Sample of Case Study Towns and Cities

Twenty-five towns and cities were selected for investigation (see Table 19).

Table 3. Intensification indicators

| Variable | Measure/indicator | Source |
|----------|--|---|
| | <i>Increase in population (re-urbanisation)</i> | |
| Migrate1 | Percentage change 1981–91 in resident population through migration and other changes, using 1981 base | 1991 Census <i>County Monitor</i> , Table C |
| Migrate2 | Percentage of moving families 1991 (families with children that moved in the year preceding the census, as a percentage of all families in the area) | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , SAUS, Bristol |
| | <i>Increase in development</i> | |
| Newhous1 | Number of dwellings completed between 1980 and 1991 for every 1000 households | DoE (1990) <i>Housebuilding in England by Local Authority Areas 1981–1989</i> , Government Statistical Service, London; DoE and Welsh Office (1992) <i>Local Housing Statistics, England and Wales</i> No. 103, October 1992, Government Statistical Service, London; and 1991 Census <i>Key Statistics for Local Authorities</i> |
| Newhous2 | Number of dwellings completed 1980–91 per hectare (gross area of district) | As above |
| Newhous3 | Number of dwellings completed 1980–91 per hectare (residential built-up area of district) | As above |
| Htype5 | Percentage change 1981–91 in dwellings with 1–3 rooms | 1981 Census <i>County Report</i> , Table 29; 1991 <i>County Report</i> , Table 57 |
| Htype6 | Percentage change 1981–91 in dwellings with 7 or more rooms | As above |
| Derelic1 | Change in the amount of derelict land 1982–93, as a percentage of total residential built-up area | DoE (1991) <i>Survey of Derelict Land in England 1988</i> , HMSO, London, Vol. 2, Table 5; and DoE (1995) <i>Survey of Derelict Land in England 1993</i> , HMSO, London, Vol. 2, Table 5 (also as for Densres) |
| Derelic2 | Derelict land reclaimed 1982–93, as a percentage of total residential built-up area | As above, except Table 14 for both the 1988 and 1993 Survey |
| Devton1 | Average number of planning applications granted annually 1981–91 for every 1000 residents | DoE <i>Development Control Statistics: England</i> , Government Statistical Service, DoE Publications, London; and 1991 Census <i>Key Statistics for Local Authorities</i> |
| Devton2 | Land with outstanding planning permission for private housing development 1990–91, measured in terms of dwellings per 1000 residents | As above |

Table 3. Intensification indicators—*continued*

| Variable | Measure/indicator | Source |
|----------|--|--|
| | <i>Increase in density of new development</i> | |
| Denscha1 | Percentage change in conventional density (gross density of district, in persons per hectare) 1981–91 | OPCS (1995) <i>Population Density, Change, and Concentration in Great Britain 1971, 1981 and 1991</i> , HMSO, London |
| Denscha2 | Percentage change in conventional density (gross density of district, in persons per hectare) 1971–91 | As above |
| Denscha3 | Percentage change in population-weighted density (average of ward densities, in persons per hectare) 1981–91 | As above |
| Denscha4 | Percentage change in population-weighted density (average of ward densities, in persons per hectare) 1971–91 | As above |
| | <i>Increase in density of sub-centres</i> | |
| Denscha5 | Percentage change in density of most dense ward 1981–91 | 1981 and 1991 Census <i>Ward and Civil Parish Monitors</i> |

These represent all free-standing English districts (that is, administrative districts with less than approximately 10 per cent of their perimeters bordering on neighbouring towns/cities) with urban populations of 80 000 to 220 000, where the district boundary is close to the edge of the built-up area.

Data Collection

Values for the indicators were obtained by collecting a vast quantity of data on the sample of towns and cities. These data were derived primarily from secondary sources such as the 1991 and 1981 Censuses of Population, *Local Housing Statistics, England and Wales* (e.g. DoE and Welsh Office, 1992), *Mortality Statistics* (e.g. OPCS, 1993) and *Property Market Reports* (Valuation Office, 1991), and a variety of methods and calculations were employed to obtain final values. The data were analysed using statistical tests. For example, levels of compactness were compared with corresponding levels of social equity across all the towns and cities, using Pearson product-moment correlation coefficients. The purpose of this was to identify any significant relationships between the two sets of indicators. Examination of the correlation coefficients revealed those aspects of compactness most strongly related to positive equity impacts, and those aspects of social equity most likely to be influenced by compactness. In addition, step-wise multiple linear regression analysis was employed to establish the most important predictors of greater social equity from the whole range of compactness and intervening variables.

The indicators are unlikely to be perfect reflections of the impacts or characteristics they were designed to measure and some are relatively crude (especially the mental and respiratory health ones), so the findings should be considered as preliminary and exploratory, in an area severely under-studied.

Table 4. Claimed impacts of compactness on social equity

| Claimed impact (balance of evidence/opinion) | Conflicting claims exist | Nature of evidence |
|--|-----------------------------|--------------------|
| 1. Better access to facilities (Bromley & Thomas, 1993; DoE, 1992; Rees, 1988) | | sparse |
| 2. Poorer access to green space (Breheny, 1992; Knight, 1996; Stretton, 1994) | ✓ | sparse |
| 3. Better job accessibility (Beer, 1994; Elkin <i>et al.</i> , 1991; Laws, 1994) | ✓ | sparse |
| 4. Better public transport (ECOTEC, 1993; Goodchild, 1994) | ✓ | contentious |
| 5. Greater opportunities for walking and cycling (Bourne, 1992; Bozeat <i>et al.</i> , 1992; Newman, 1992) | | contentious |
| 6. Reduced domestic living space (Brotchie, 1992; Forster, 1994; Stretton, 1996) | | sparse |
| 7. Better general health (McLaren, 1992) | ✓ | contentious |
| 8. Poorer mental health (Lewis & Booth, 1994; Pacione, 1997) | ✓ | sparse |
| 9. Poorer respiratory health (Godlee, 1992) | ✓ | sparse |
| 10. Reduced crime (Jacobs, 1961; Elkin <i>et al.</i> , 1991; Petherick, 1991) | ✓ | contentious |
| 11. Lower levels of social segregation (CEC, 1990; Fox, 1993; Hamnett, 1991; van Kempen, 1994) | | sparse |
| 12. Increased job opportunities for the less skilled (Castells & Hall, 1994; Des Rossiers, 1992; Porter, 1991) | ✓ | sparse |
| 13. Less affordable housing (Town and Country Planning Association, 1994) | ✓ | sparse |
| 14. Increased wealth (Minnery, 1992) | ✓ | sparse |

Social Equity in the Compact City

Tables 20 summarises the significant relationships found between aspects of urban compactness and the different social equity effects. The Tables of Pearson's correlation coefficients supporting these findings can be obtained from the author (see contact details).

The picture emerging is a complex one, making it difficult to say categorically whether or not the compact city supports social equity. Some of the claims identified at the beginning of the study (Table 4) were validated while others were contradicted. What was perhaps surprising was that nearly all of the 14 social equity impacts were found to have significant associations with urban compactness: job accessibility and wealth being the exceptions. Of these, the following, nine in all, were shown to be more strongly related to compactness than to any of the intervening variables:

- access to superstores;
- access to green space;
- public transport use;
- extent of walking and cycling;
- amount of domestic living space;
- death rate from mental illness;

Table 5. Indicators of access to superstores

| Variable | Measure/indicator | Source |
|----------|--|--|
| Acstore1 | Average distance to the nearest superstore (from the central point of each ward) | Ordnance Survey maps (<i>Pathfinder Series 1:25 000</i>); Office for National Statistics district maps showing ward boundaries; The Data Consultancy (1994) 1994 <i>Register of UK Hypermarkets and Superstores</i> , Unit for Retail Planning Information, Reading; and local street maps |
| Acstore2 | Distance to the nearest superstore from the centre of the most deprived ward | As above, plus 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Acstore3 | Difference in distance to the nearest superstore for the most and least deprived wards | As above |

Table 6. Indicators of access to green space

| Variable | Measure/indicator | Source |
|----------|--|--|
| Acgreen1 | Average distance to the nearest open green space (from the central point of each ward) | Ordnance Survey maps (<i>Pathfinder Series 1:25 000</i>); and Office for National Statistics district maps showing ward boundaries |
| Acgreen2 | Distance to the nearest open green space from the centre of the most deprived ward | As above, plus 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Acgreen3 | Difference in distance to the nearest open green space for the most and least deprived wards | As above |

- death rate from respiratory disease;
- crime;
- social segregation.

Notwithstanding methodological weaknesses, the findings suggest that urban compactness is a highly significant influence on social equity. This warrants further investigation, looking in depth at the individual social equity impacts. Table 21 lists the likely influences, on the basis of the research, of urban compactness, both positive and negative. For some social equity impacts, the influence of compactness depends on the form it takes, or will be possible only if other measures are put in place.

The research shows that it may be misleading to consider social equity as a single phenomenon, certainly in debates about sustainable urban form. The performance of different towns and cities varied greatly depending on the aspect

Table 7. Indicators of job accessibility

| Variable | Measure/indicator | Source |
|----------|---|--|
| Acjobs1 | Percentage of low-income employees/self-employed (socio-economic groups 1–4) who work outside the district 1991 | 1991 Census <i>County Report</i> , Table 82 |
| Acjobs2 | Percentage change 1981–91 in proportion of low-income employees/self-employed who work outside the district | 1981 Census <i>County Report</i> , Table 44; and 1991 Census <i>County Report</i> , Table 82 |
| Acjobs3 | Percentage of low-income employees/self-employed working outside district 1991 relative to percentage of high-income employees/self-employed (socio-economic groups 6, 7, 10, 11) doing so (that is, difference in percentage for low-income and high-income groups 1991) | 1991 Census <i>County Report</i> , Table 82 |
| Acjobs4 | Percentage change 1981–91 in relative proportion of low-income employees/self-employed working outside district | 1981 Census <i>County Report</i> , Table 44; and 1991 Census <i>County Report</i> , Table 82 |

Table 8. Indicators of public transport use

| Variable | Measure/indicator | Source |
|----------|--|--|
| Pubtran1 | Percentage of low-income employees/self-employed who travel to work by public transport 1991 | 1991 Census <i>County Report</i> , Table 82 |
| Pubtran2 | Percentage change 1981–91 in proportion of low-income employees/self-employed who travel to work by public transport | 1981 Census <i>County Report</i> , Table 44; and 1991 Census <i>County Report</i> , Table 82 |

of social equity being examined, and when social equity was considered in its entirety, as a combination of all the different indicators, it had only a weak relationship with compactness. In multiple regression analyses, the proportion of local authority tenants was found to be the most important predictor of social equity overall: the higher the proportion of council housing, the better the social equity, especially if the drop in those employed in manufacturing was low. Perhaps this is because, to some extent, housing factors, including quality, location and form, are controlled by standards in the public sector. Social housing offers the opportunity to ameliorate some of the negative effects that the market would otherwise deliver to low-income groups.

Table 9. Indicators of the extent of walking and cycling

| Variable | Measure/indicator | Source |
|----------|--|---|
| Cardep1 | Percentage of low-income employees/self-employed who travel to work on foot or bicycle 1991 | 1991 Census <i>County Report</i> , Table 82 |
| Cardep2 | Percentage change 1981–91 in proportion of low-income employees/self-employed who travel to work on foot or bicycle | 1981 Census <i>County Report</i> , Table 44; and 1991 Census <i>County Report</i> , Table 82 |
| Cardep3 | Percentage of low-income employees/self-employed travelling to work on foot or bicycle relative to the percentage of high-income employees/self-employed who do so 1991 (difference between low-income and high-income groups) | 1991 Census <i>County Report</i> , Table 82 |
| Cardep4 | Percentage change 1981–91 in relative proportion of low-income employees/self-employed who travel to work on foot or bicycle | 1981 Census <i>County Report</i> , Table 44; and 1991 Census <i>County Report</i> , Table 82. |

Table 10. Indicators of the amount of domestic living space

| Variable | Measure/indicator | Source |
|----------|--|--|
| Lspace1 | Average number of rooms per household 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Lspace2 | Percentage change 1981–91 in average number of rooms per household | 1981 and 1991 Census <i>Key Statistics for Local Authorities</i> |
| Lspace3 | Overcrowding: percentage of households with over one person per room 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Lspace4 | Percentage of low-income (that is, social renting) three-person households with small homes (1–3 rooms) 1991 | 1991 Census <i>County Report</i> , Table 22 |
| Lspace5 | Percentage of low-income (that is, social renting) three-person households with over one person per room 1991 | 1991 Census <i>County Report</i> , Table 23 |
| Lspace6 | Percentage of three-person owner occupier households either in particularly small or large dwellings (1–3 rooms or 7 + rooms) 1991 | 1991 Census <i>County Report</i> , Table 22 |
| Lspace7 | Percentage change 1981–91 in overcrowding—the proportion of low-income (social renting) households with over one person per room | 1981 Census <i>County Report</i> , Table 27; and 1991 Census <i>County Report</i> , Table 23 |

Table 11. Indicators of health

| Variable | Measure/indicator | Source |
|----------|--|--|
| Health1 | Percentage of residents with limiting long-term illness 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> , Table 4 |
| Health2 | Percentage of residents under pensionable age with limiting long-term illness 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> , Table 4 |
| Health3 | Deaths from respiratory disease, as a percentage of all deaths 1991 | OPCS (1993) <i>1991 Mortality Statistics: Area—England and Wales</i> , Series DH5 No. 18 Microfiche, HMSO, London |
| Health4 | Deaths from mental illness, as a percentage of all deaths 1991 | OPCS (1993) <i>1991 Mortality Statistics: Area—England and Wales</i> , Series DH5 No. 18 Microfiche, HMSO, London |
| Health5 | Percentage change 1981–91 in proportion of deaths from respiratory disease | OPCS (1983) <i>1981 Mortality Statistics: Area—England and Wales</i> , Series DH5 No. 8 Microfiche, HMSO, London; and OPCS (1993) <i>1991 Mortality Statistics: Area—England and Wales</i> , Series DH5 No. 18 Microfiche, HMSO, London |

Table 12. Indicators of crime

| Variable | Measure/indicator | Source |
|----------|--|---|
| Crime1 | Average home contents insurance premium 1995 (up to limit of £35,000, excluding extended accidental damage, for a three-bedroomed house) | Eagle Star <i>Homestar Ideal</i> home contents insurance premiums as at 1 August 1996 |
| Crime2 | Highest home contents insurance premium 1995 | Eagle Star <i>Homestar Ideal</i> home contents insurance premiums as at 1 August 1996 |
| Crime3 | Variation in the cost of home contents insurance 1995: difference between highest and lowest premium | Eagle Star <i>Homestar Ideal</i> home contents insurance premiums as at 1 August 1996 |

Socially Equitable Compactness

In seeking to find lessons for the future on the form that our towns and cities should take, it was worth identifying the aspects of urban compactness that appear most likely to support social equity. In terms of the three main categories of compactness used for the research (density, mix of uses and intensification), density was found to be related to the widest range of social equity indicators,

Table 13. Indicators of social segregation

| Variable | Measure/indicator | Source |
|----------|--|--|
| Segreg1 | Segregation of ethnic households, by ward 1991, using the index of dissimilarity | 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segreg2 | Segregation of owner occupier households, by ward 1991, using the index of dissimilarity | 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segreg3 | Segregation of households in local authority accommodation, by ward 1991, using the index of dissimilarity | 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segreg4 | Segregation of car-less households, by ward 1991, using the index of dissimilarity | 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segreg5 | Segregation of single-parent households, by ward 1991, using the index of dissimilarity | 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segreg6 | Segregation of low-income households (average of all groups above), by ward 1991, using the index of dissimilarity | 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segcha1 | Percentage change 1981–91 in segregation of ethnic households, by ward | 1981 and 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segcha2 | Percentage change 1981–91 in segregation of owner occupier households, by ward | 1981 and 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segcha3 | Percentage change 1981–91 in segregation of households in local authority rented accommodation, by ward | 1981 and 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segcha4 | Percentage change 1981–91 in segregation of car-less households, by ward | 1981 and 1991 Census <i>Ward and Civil Parish Monitors</i> |
| Segcha5 | Percentage change 1981–91 in segregation of low-income households (average of all groups above), by ward | 1981 and 1991 Census <i>Ward and Civil Parish Monitors</i> |

although the positive influences were outnumbered by the negative ones. Overall, intensification had the most limited but also most positive influence. Furthermore, the possibility that other influences of intensification may become apparent over a longer time-period cannot be dismissed. Mixed-use cities appeared the most egalitarian, in other words, the position of the least well off relative to the most well off was better in comparison with the other cities. This did not preclude the possibility that everyone was worse off, simply that the gap between the two groups was less. Perhaps a more useful finding was that some individual aspects of compactness were particularly positive across the board. These were:

- A large range and/or number of facilities in a city
- A high proportion of high-density housing forms (such as apartments and terraced housing)

Table 14. Indicators of job opportunities for the less skilled

| Variable | Measure/indicator | Source |
|----------|--|--|
| Supjobs1 | Ratio of jobs to economically-active residents for low-income occupations (socio-economic groups 6, 7, 10, 11) 1991 | 1991 Census <i>County Report</i> , Table 92; Table 5 |
| Supjobs2 | Ratio of jobs to economically-active residents for low-income occupations, relative to the same ratio for high-income occupations (socio-economic groups 1–4) (difference between low-income and high-income opportunities) 1991 | 1991 Census <i>County Report</i> , Table 92; Table 5 |
| Supjobs3 | Percentage change 1981–91 in job opportunities for low-income occupations (ratio of total jobs to total number of relevantly skilled residents) | 1981 Census <i>County Report</i> , Table 46; Table 4; 1991 Census <i>County Report</i> , Table 92; Table 5 |
| Supjobs4 | Percentage change 1981–91 in relative position of lower-skilled residents in terms of job opportunities (change in ratio for low-income occupations minus ratio for high-income occupations) | 1981 Census <i>County Report</i> , Table 46; Table 4; 1991 Census <i>County Report</i> , Table 92; Table 5 |

Table 15. Indicators of housing affordability

| Variable | Measure/indicator | Source |
|----------|---|---|
| Affordh1 | Average price of bottom-of-the-market (second-hand pre-1919 terrace) dwelling relative to average weekly earnings (average price divided by average gross weekly earnings for full-time manual males on adult rates) 1991 | Valuation Office <i>Property Market Report</i> Autumn 1991; Central Statistical Office <i>New Earnings Survey 1991</i> , HMSO, London |
| Affordh2 | Percentage change 1983–91 in average price of bottom-of-the-market dwelling relative to average weekly earnings | Valuation Office <i>Property Market Report</i> Autumn 1991; Autumn 1983; Central Statistical Office <i>New Earnings Survey 1991</i> , HMSO, London; <i>New Earnings Survey 1983</i> |
| Affordh3 | Average weekly net unrebated local authority rent 1991 | Housing Revenue Accounts Statistics 1992 |
| Affordh4 | Percentage of local authority and private tenants in receipt of rent rebate 1991 | Housing Revenue Accounts Statistics, 1992 |
| Affordh5 | Percentage homeless (persons in hostels, bed and breakfasts, rough sleepers and concealed households) | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |

Table 16. Indicators of wealth

| Variable | Measure/indicator | Source |
|----------|---|---|
| wealth1 | Percentage increase 1983–91 in average price of bottom-of-the-market dwelling | Valuation Office <i>Property Market Report</i> Autumn 1991; Autumn 1983 |
| wealth2 | Difference between bottom-of-the-market and top-of-the-market (post-1960 second-hand detached house) in increase in average price 1983–91 | Valuation Office <i>Property Market Report</i> Autumn 1991; Autumn 1983 |

Table 17. Indicators of intervening variables

| Variable | Measure/indicator | Source |
|----------|---|--|
| Car-less | <i>Car-less households</i> Percentage of households without access to a car 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Deprivt | <i>Deprivation</i> ‘Townsend’ deprivation z-score which adds scores for four 1991 census variables: — percentage of households without access to a car; — percentage of households not owner occupiers; — percentage of households in overcrowded accommodation (over 1 person/room); — unemployed as a percentage of economically active population | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |
| Hldsize | <i>Household size</i> Average household size 1991 | Central Statistical Office (1992) <i>Regional Trends 27</i> , Government Statistical Service, London: Table 15.2 |
| Hneed | <i>Housing need</i> Persons in hostels or bed and breakfasts, rough sleepers and concealed households, as a percentage of total population (1991) | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |
| Ineqearn | <i>Inequality in income</i> Inequality index for household earnings (squared coefficient of variation). Earnings are calculated by applying the <i>New Earnings Survey</i> data to census occupational profiles (1991) | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |
| Manuf | <i>Size of manufacturing sector</i> Percentage of employees or self-employed working in the manufacturing sector 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Manufch | <i>Change in size of manufacturing sector</i> Percentage change in employees or self-employed working in the manufacturing sector 1981–91 | 1991 Census <i>Key Statistics for Local Authorities</i> |

Table 17. Indicators of intervening variables—*continued*

| Variable | Measure/indicator | Source |
|----------|--|---|
| Meanearn | <i>Average income</i> Mean earnings of resident population. Earnings are calculated by applying the <i>New Earnings Survey</i> data to Census occupational profiles (1991) | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |
| Midclass | <i>Middle-class population</i> All professional and associated occupations with relatively high pay, translating roughly into standard occupational classes 1 to 3, as a percentage of total population (1991) | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |
| Pension | <i>Age of population</i> Percentage of residents over pension age (1991) | Central Statistical Office (1992) <i>Regional Trends 27</i> , Government Statistical Service, London: Table 15.1 |
| Region | <i>Region</i> Standard regions of England: 1. North 2. Yorkshire and Humberside 3. East Midlands 4. East Anglia 5. South East 6. South West 7. West Midlands 8. North West | Census of Population definitions |
| Rentla | <i>Housing tenure</i> Percentage of households in local authority rented accommodation 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Rentlach | <i>Change in housing tenure</i> Percentage change 1981–1991 in households in local authority rented accommodation | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Size1 | <i>Town/city population size</i> Total residents 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> |
| Size2 | <i>Town/city size by area</i> Total area of district minus area of open space outside boundary of built-up area 1991 | 1991 Census <i>Key Statistics for Local Authorities</i> ; and 1: 25 000 OS <i>Pathfinder</i> maps |
| Type1 | <i>Type of town/city</i> Craig's definitions developed for OPCS | Craig, J. (1985) <i>A Socio-Economic Classification of Local and Health Authorities of Great Britain</i> , OPCS Studies on Medical and Population Subjects No. 48, HMSO, London |
| Wealthy | <i>The wealthy</i> Preponderance of wealthy households 1991 measured by adding z-scores for: — DINKY (dual income no kids yet) households as a percentage of all households; — percentage of households in large houses (7 or more rooms); — percentage of households with 2 or more cars; | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |

Table 17. Indicators of intervening variables—*continued*

| Variable | Measure/indicator | Source |
|----------|--|--|
| Yunempl | — percentage of population in occupations with average gross wages above £23,705 <i>The young unemployed</i> All 16 and 17 year olds unemployed as a percentage of those employed 1991 | Gordon, D. & Forrest, R. (1995) <i>People and Places 2: Social and Economic Distinctions in England</i> , School for Advanced Urban Studies, Bristol |

Table 18. Composite indicators

| Variable | Description |
|----------|---|
| Compact | Average of all compactness variables |
| Dens | Average of all density variables |
| Mixuse | All mix of uses variables |
| Intens | All intensification variables |
| Intpop | All population intensification variables |
| Intblt | All built forms intensification variables |
| Sequity | Overall measure of social equity—average across all variables |
| Xsequity | Overall measure of social equity excluding variables measuring changes over time (that is, intensification effects) |
| Seeam | Measure of social equity across all variables related to earning capacity |
| Seexpend | Measure of social equity across all variables related to living expenses |
| Seqofl | Measure of social equity across all variables related to quality of life |

Table 19. Sample of towns and cities

| Large non-metropolitan cities | Small non-metropolitan cities | Industrial | Districts with new towns | Resort and retirement |
|-------------------------------|-------------------------------|---------------|--------------------------|-----------------------|
| Derby | Bath | Great Grimsby | Crawley | Blackpool |
| Southampton | Cambridge | Luton | Harlow | Eastbourne |
| | Cheltenham | Ipswich | Northampton | Hastings |
| | Exeter | Scunthorpe | Stevenage | Southend-on-Sea |
| | Gloucester | Slough | | Worthing |
| | Lincoln | | | |
| | Oxford | | | |
| | Worcester | | | |
| | York | | | |

Note: Cities divided into Craig's (1985) categories.

Table 20. Summary of significant relationships between compactness and social equity

| Social equity effect (on relative or absolute position of poor) | Significant relationships with compactness | | | More strongly related to intervening variables |
|--|--|----------------------------|---------------------------------|---|
| | density | mix of uses | intensification | |
| 1. Access to superstores (relative) | + | | | |
| | (households) | | | |
| 2. Access to green space (relative) | - | | | |
| | (households) | | | |
| 3. Job accessibility | | | | ✓ |
| 4. Public transport use (absolute) | + | | | |
| | (pop./extremes) | | | |
| 5. Walking and cycling | - | + | | |
| | (housing form) | (spread/no. facilities) | | |
| 6. Domestic living space (absolute) | - | | | |
| | (net/pop./hshlds/ form) | | | |
| 7. General health | - | + | | ✓ |
| | (extremes) | (horizontal mix) | | |
| | | - (vertical mix) | | |
| 8. Mental health | + | | | |
| | (housing form) | | | |
| 9. Respiratory health | | - | | |
| | | (spread/no. facilities) | | |
| 10. Crime (relative) | - | | | only relative position of poor |
| | (net/pop./ extremes) | | | |
| 11. Social segregation (esp. by tenure) | + | | + | |
| | (housing form) | | (in-migration) | |
| 12. Job opportunities | | + | + | ✓ |
| | | (vertical/no. facs) | (non-res./ derelict land) | (for overall measure) |
| | | - (spread facs) | | |
| 13. Affordable housing (homeowners) | - | | + | ✓ |
| | (housing form) | | (higher densities) | |
| 14. Wealth (absolute) | - ? | | | ✓ |
| | (housing form) | | | |
| Overall measure of social equity | + | | | |
| | (housing form) | | | |
| Overall measure of social equality | - | + | | |
| | (variation) | (spread/no. facilities) | | |

Notes: + = positive relationship; - = negative relationship; ? = unclear.

Table 21. Possible influences of urban compactness (in descending order of significance)

| Negative | Positive |
|---|---|
| Less domestic living space | Increased public transport use |
| Lack of affordable housing | Lower death rate from mental illness (but weak indicator) |
| Poorer access to green space | Reduced social segregation |
| Slightly increased crime levels | Greater scope for walking and cycling (with provisos) |
| Higher death rate from respiratory disease (but weak indicator) | Better job opportunities for the less skilled (with provisos) |
| | Better access to facilities (with provisos) |

- A high incidence of re-urbanisation
- Redevelopment of derelict land

If future development achieved these outcomes, then it would be likely to be beneficial for low-income groups.

Conclusions

The research reported in this paper suggests strongly that the development of housing that supports the idea of an urban renaissance has impacts on social equity. Financing, tenure and management are not the only aspects of housing that influence the life chances, opportunities and well-being of the least well off in UK towns and cities. For designers and housing providers seeking to promote social equity, the implications of the research are that higher-density housing such as apartments and terraces are the best forms of housing, especially if they are developed on derelict land in areas where there are plenty of locally-provided services and facilities. Encouraging people to move back into towns and cities seems to improve social equity generally, leading to increased public transport use, better mental health and reduced segregation of low-income groups. For housing policy makers, the important lessons from the research are that many of the potential benefits of the urban renaissance, including increased scope for walking and cycling, job opportunities and good access to facilities, will fail to materialise without accompanying measures, and the possible negative impacts, such as small dwellings, lack of affordability, shortage of green space, risks to respiratory health and increased crime, need to be addressed.

In addition to concerns about how just the outcome of an urban renaissance would be, there are doubts about whether pursuit of the proposition is just in itself. Critics argue that it violates the basic justice of free choice. Policies that discourage the type of housing that, allegedly, most people desire—low-density housing in rural locations—are seen to be coercive. Bate *et al.*'s recent report (2000) for the Joseph Rowntree Foundation (based on latest data from the Office for National Statistics) confirms that there is a continued drift in population away from urban areas to suburbs and rural areas. Those leaving for the countryside tend to be

relatively wealthy families and their children, and there is a significant movement of older couples retiring to the seaside and other attractive areas. Housebuilders' marketing surveys also reveal a strong consumer demand for low-density, decentralised housing forms, in particular detached houses with gardens and as much space as possible (e.g. Mulholland Associates, 1995). The arguments diverge between those who believe such trends and statistics clearly reflect public preferences, and those who emphasise constraints on 'free' choice and absence of attractive alternatives, but, as Breheny (1997) asserts, "If opinions about desirable residential locations are to be believed, then the compaction solution will be deeply unpopular" (p. 213).

If the urban renaissance is to be achieved in a just way, then it needs to be made an attractive proposition. According to two reports produced for the government, *Living in Urban England: Attitudes and Aspirations* (DETR, 2000d) and *The State of English Cities* (DETR, 2000e), in the preparation of the Urban White Paper, the main reasons why households are unwilling to live in cities are concerns about crime, noise, air quality, heavy traffic, nuisance from street parking and litter/rubbish dumping, the quality of schools and the general appearance of their areas (DETR, 2000d). Therefore, new housing development in cities needs to be designed to a high standard, incorporating features that are considered important to people's quality of life (such as individual front doors onto streets and an appropriate proportion of homes with gardens or balconies and terraces). Further, the condition and appearance of neighbourhoods need to be improved to minimise crime and traffic problems. Finally, it is vital that local services, particularly schools, are of a high standard, comparable with their counterparts in the suburbs and rural areas. According to a recent report on the potential for an urban renaissance in the South East, what is required is "a shift in attitudes as well as action and investment on many fronts ... It is not just a question of building more, higher density housing in towns, but also of creating really attractive living environments within easy reach of a range of facilities (including jobs), and of tackling some of the main disadvantages associated with urban living" (URBED and The Bartlett School of Planning, University College London, 2000, p. 2). This is a tall order, but sustainable, socially equitable urban form is unlikely to be achieved without it.

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