

Are high quality neighbourhoods socially cohesive? Methodological challenges of unpacking multidimensional concepts

Dr. Nicola Dempsey

Post-Doctoral Research Assistant
Oxford Institute for Sustainable Development (OISD)
Oxford Brookes University
Gipsy Lane
Oxford, OX3 0BP
Email: ndempsey@brookes.ac.uk

*******DRAFT – PLEASE DO NOT QUOTE WITHOUT PERMISSION*******

Introduction

There are widespread claims in academia, UK government policy and practice that good quality neighbourhoods are an important component of liveable “places for people” (Office of the Deputy Prime Minister [ODPM], 2005b). The assertions made point to a direct and positive association between high quality neighbourhoods (e.g. those which are clean, green and safe) and socially cohesive behaviour and attitudes (Hastings *et al.*, 2005; ODPM, 2002). This claimed association is, however, not supported by an evidence base. Furthermore, and fundamentally, neither is there consensus on how high quality, or social cohesion, is defined. Both concepts are open to interpretation, and their definitions may differ greatly according to the perspectives of different stakeholders and the different scales at which they are examined.

This paper provides a theoretical discussion of the concepts of high quality and social cohesion, and following on from this, operationalizes them as indicators at the scale of the neighbourhood. The implications of the subjectivity of quality, as well as other inherent methodological difficulties in the empirical examination of both concepts at this scale, will be examined. Primary data will be called on throughout the paper in offering some solutions to the methodological issues. This doctoral research was conducted under the umbrella of CityForm: Sustainable Urban Form Consortium¹. This 4-year EPSRC-funded research project has the primary research aim of examining the nature and extent of the association between the urban form and sustainability (www.city-form.org).

The focus on high quality environments

Theorists, policy makers and practitioners have long described the importance of built environments which are of a high quality. Focus on improving the quality of the built environment frequently rises because of a claimed need to enhance the existing environment. In response to cities being ‘ulcers on the face of our beautiful island’, Ebenezer Howard created the Garden City concept in the late nineteenth century with the aim of combining the best of both country and city life ‘without the disadvantages of either’ (Cowan, 1997, p. 11). Raymond Unwin aspired to create beautiful homes in beautiful gardens ‘and a beautiful city for all’ (Unwin, 1906, cited in Miller, 1992). Joseph Rowntree promoted villages with ‘more wholesome living conditions’ in the early 1900s (Rowntree, 1907, cited in Miller, 1992). And in the US in the early twentieth century, Daniel Burnham aimed, in Chicago, to ‘restore to the city a lost visual and aesthetic harmony’ (Hall, 2002a, p. 192). Such traditions continued through the twentieth and into the twenty-first century in the UK,

through policies and guidance specifying residential densities and recommending designs and layouts of residential areas and public spaces (Central Housing Advisory Committee, 1944; Department of the Environment Transport and the Regions, 2000; Jenks, 1983; Local Government Board, 1918; Ministry of Housing and Local Government, 1952; Ministry of Housing and Local Government, 1962; Office of the Deputy Prime Minister, 2005a).

Recent British housing policy has placed strong emphasis on the quality of the built environment in order 'to break the mould of mediocrity that has characterized so much new housing development' (CABE and Department for Transport Local Government and the Regions [DTLR], 2002, p. 5). In 1999, the government funded body, CABE, was created to 'stand[s] for an improvement in people's quality of life through good design' and 'champion[s] well-designed buildings and public space' (2006, p. 3). Hastings *et al.* comment that the current focus on the quality of the built environment is stronger than it has ever been, in particular through its adoption in UK policy centred on the "'liveability" of residential areas' in terms of how 'clean, safe and green' public spaces and streets are (2005, p. 2; ODPM, 2002). The National Strategy for Neighbourhood Renewal cites government priorities for improving the quality of the built environment 'across the country by 2008' as creation of attractive and welcoming parks, play areas and public spaces, improvement of the physical structure of places, and 'making places cleaner and maintaining them better' (ODPM, 2005a, p. 17; Social Exclusion Unit [SEU] 2001). Recent national initiatives and publications discuss the best and worst streets and towns, perhaps suggesting that this is something that the public and media feel strongly about (Jordison, 2003; www.streetsofshame.org.uk). This is supported by research conducted by the Department for Environment, Food and Rural Affairs (Defra) which indicates that the quality of the built environment in their immediate residential locality is invariably a top priority for residents (2004, p. 3).

The government's urban white paper published in 2000 identifies the importance of design and quality in improving urban areas to attract people back into urban neighbourhoods (DETR, 2000a). A major point in this policy document is the provision of 'plenty of good quality public spaces' and 'attractive homes' (*ibid.*, p. 9). Concentration on the importance of design has led to a plethora of prescriptive urban design guidance, which offers advice on 'the art of making places for people' (CABE and DETR, 2000; 2002; Llewelyn-Davies, 2000; Urban Task Force, 1999). Such literature defines the objectives of urban design, which include giving a place 'its own identity', creating a place 'that is easy to get to and move through', and a 'place that can change easily...with variety and choice' (CABE and DETR, 2000, p. 15). Llewelyn-Davies, in the *Urban Design Compendium*, describes urban design as a process of creating 'safe, comfortable, varied and attractive' places for people. They should 'strike a balance between the natural and man-made environment' (2000, p. 14).

Such generalized statements, arguably difficult to interpret and implement, are commonly used by theorists, practitioners and policy-makers. Bentley *et al.* argue that 'ideals are not enough: they have to be linked through appropriate design ideas to the fabric of the built environment itself' (1985, p. 9). Various attempts have been made to identify the specific characteristics of high quality urban places (Bentley *et al.*, 1985; Duany, 2003; Lynch, 1960; Jacobs and Appleyard, 1987). Some of these approaches focus on the visual quality of the built environment (Cullen, 1961; Lynch, 1960; Nasar, 1998), while others focus on the importance of the meaning that the built environment holds for residents and other users (Rapoport, 1982; Relph, 1976). Other design strategies relate to the design of neighbourhoods, often in the form of principles or objectives, without consistently establishing the means by which they are to be achieved (Burton and Mitchell, 2006, p. 12). Such design strategies are provided in the principles established by Clarence Perry's

neighbourhood unit in the 1920s in the US, more recent new urbanism theory in the US and the Urban Villages group in the UK among others (Aldous, 1992; Carmona *et al.*, 2003; Hallman, 1984; Robbins, 2004). In the UK recent policy guidance on the design of neighbourhoods and public space largely accepts and promotes the principles of sustainability (Barton *et al.*, 2003; Burton and Mitchell, 2006; Urban Task Force, 1999; ODPM, 2003). However, the requirements of a sustainable community are also described in relatively abstract terms, such as a 'safe and healthy environment with well-designed public and green space' with a 'sense of place' (ODPM, 2003, p. 5). It can be argued that the very nature of nebulous concepts such as sense of place, good design and safety depend on the specific built environment in a given urban area, and in this way, design guidance should remain generalized. However, some operationalization of these abstract terms is provided in prescriptive theory and policy guidance.

Guidance accompanying UK Planning Policy Guidance Note 3: Housing, on how 'well designed' housing developments should be interpreted, states that a 'safe and secure environment' should be provided, which can be well maintained and is attractive with 'pleasant gardens' (DETR and CABE, 2001, p. 6). Bentley *et al.* argue that the built environment should be responsive and 'provide its users with an essentially democratic setting' (Bentley *et al.*, 1985, p. 9). For them, such a built environment should include permeability, visual appropriateness, richness in sensory experiences and variety in its range of uses. Other prescriptive theorists argue that high quality places should be well-connected by all forms of transport, and should be 'flexible enough to respond to future changes in use, lifestyle and demography' (Llewelyn-Davies, 2000, p. 14). The cleanliness and maintenance of the built environment and how welcoming it is to all users are also cited as features of high quality by others (Carmona *et al.*, 2004; CABE and DETR, 2000; Blackman *et al.*, 2003; Friedman and Rosenbaum, 2006). It is clear in this broad range of literature on high quality built environments that there is no consensus on which features of the built environment contribute to its high quality or on which features might be more important than others.

The resurgence of the concept of social cohesion

'Social cohesion' is a term commonly used to describe the social order in a physical or non-physical social setting (Coser, 1977; Forrest and Kearns, 2001; Giddens, 1993; Turok *et al.*, 2004). It is not a new concept; it was discussed by Thomas Hobbes in the seventeenth century when he sought answers to the question: how are men capable of accepting guidance by social norms and goals which make an enduring society possible (Wrong, 1961)? At the end of the nineteenth century, Émile Durkheim, often cited as the founder of sociological thought on social order and cohesion, examined the social regulations adhered to by people in a society and the normless state of *anomie* which prevails when social control breaks down (Coser, 1977; Durkheim, 1952; Giddens, 1978).

In more recent times, social cohesion has been referred to in discussions of the enhancement of economic competitiveness of a city, citizenship in European cities and assimilation and integration of different groups in a society (Hansen, 2003; Penninx *et al.*, 2004; Turok *et al.*, 2004). It has been discussed and referred to without being defined, and elsewhere, defined in different ways (Bollen and Hoyle, 1990; Buckner, 1988; Forrest and Kearns, 2001; Stafford *et al.*, 2003; Jenson, 1998). Nash and Christie argue that cohesion should mean that 'all social groups should feel able to enjoy an area's public life free from attack, abuse or hostility' (2003, p. 39). Other theorists interchangeably refer to social cohesion and social capital

(Pierson, 2002) and use 'social capital' to refer to the connections between people and their 'social networks' (Putnam, 2000, p.19), while it is argued elsewhere that social capital and social networks contribute to social cohesion (Forrest and Kearns, 2001). Social cohesion is also argued to include social control, a civic culture and reductions in wealth disparities (Kearns and Forrest, 2000); it is also said to consist of 'politically and socially tolerable divergences [which]...evolve through time' (Begg, 1995, p. 111). Elsewhere, social cohesion is said to be allied to community cohesion, derived at the societal level from the latter (at the local level) as a bottom-up process (Webster *et al.*, 2004). Policy makers have argued that social cohesion includes a common vision and sense of belonging as well as an equal appreciation of the diversity of people's backgrounds (House of Commons, 2004, p. 7); the same has also been said to constitute community cohesion (Cantle, 2001).

Such variation in definitions of social cohesion is arguably due to approaches to social cohesion which differ according to the culture, period, 'prevailing political ideas', the groups of people concerned, and the methods employed to foster social cohesion (Council of Europe, 2005, p. 23). In the UK, social cohesion has been on the policy agenda since the 1960s when Roy Jenkins defined integration 'not as a flattening process of assimilation but equal opportunity, accompanied by cultural diversity, in an atmosphere of mutual tolerance' (Rose *et al.*, 1969, p. 514). While many theoretical accounts of social cohesion in the UK do not directly address the dimensions of cultural and religious integration, policy has been increasingly shaped around them. This is, in part, most recently due to the 'disturbances' during the summer of 2001 in the northern towns of Bradford, Oldham and Burnley, and the government's response, centred on improving 'community cohesion' in specific areas in the UK (Cantle, 2001; Commission for Racial Equality [CRE], 2002a; Robinson, 2005). There is a second reason for the renewed focus in policy on social cohesion, namely its inclusion in the sustainable communities policy agenda. As well as 'featuring a quality built and natural environment', sustainable communities are defined as 'cohesive with a strong local culture' which encourage 'pride in the community and cohesion within [them]' (ODPM, 2003, p. 74; 2005a, p. 5). While statements in policy on the inclusion of social cohesion within definitions of sustainable communities are consistent, it is not defined as an individual term in its own right within this conceptual sustainability framework.

Further confusion also arises from the question of whether social cohesion is a desirable outcome that UK policy makers should strive to achieve. It is said in theory and policy that there may be a point at which social cohesion can become too strong, and manifests itself as an inward-looking closed community (Cantle, 2001; Forrest and Kearns, 1999; Mann, 1970). However, it is unclear when too much social cohesion becomes a negative factor and may result in divided neighbourhoods and disparate communities, such as in those who apparently took part in the riots of 2001 (Cantle, 2001). Such prescriptive, yet general, theory and policy on striking the 'right' amount of cohesiveness in a given place or social setting is arguably, in part, due to the theoretical scrutiny to which the associated concepts of 'community' and 'neighbourhood' are subject. A large body of literature discussing good, successful or sustainable communities and neighbourhoods arguably adheres to the 'community lost' theory, which suggests that modern communities and neighbourhoods no longer have the same sense of community or social engagement commonplace in an unspecified but bygone era, and that attempts should be made to re-capture them (Forrest and Kearns, 2001; Pahl, 1991; Schiefloe, 1990; Wilson, 1985).

The neighbourhood as a setting for social cohesion

While social cohesion is discussed and applied at a broad, societal scale (Council of Europe, 2005; Jenson, 1998; i Ruiz, 2002; Wickham, 2002), it is also considered to be a meaningful concept at the local level, described by Blackman as the 'smallest socio-spatial scale of the societies of which they are part' (Blackman, 2006, p. 2). According to Pahl, it is the local experience of residents, rather than their feelings of national identity or pride, which contributes to the sense of social cohesion in a place (1991). It is this collective experience at the local level which must be understood before social order at the national level can proceed (ibid.). Ferlander and Timms argue that aspects of identification and membership among people in a social setting form part of the concept of social cohesion and relate it closely to 'community' and, as a spatial setting in which communities exist and operate, to 'neighbourhood' (1999). This may be because these latter concepts are value-laden, which is particularly observable when they are both used to describe the places, both geographically and socially, in which people live (Dear and Wolch, 1989; Blackman, 2006; Jenks and Dempsey, 2007).

In the UK, there is a strong focus in national policy on addressing social cohesion which is said to occur within the settings of the community and neighbourhood (ODPM, 2005a; 2005a; Whitehead, 2004). The recently launched Commission on Integration and Cohesion highlights the importance of the neighbourhood as a setting for cohesion, and government initiatives such as the Neighbourhood Strategy for Renewal are applied at the neighbourhood scale (SEU, 2000). Whitehead attributes this interest in the neighbourhood as fundamental to the urban policy of the current British government. He argues that this is two-fold: the government views the neighbourhood as a 'foundational principle of urban regeneration' and as a social setting which 'under-gird[s] a broader set of moral assumptions and practices which are central to the ideologies of central government as a whole' (2004, p. 59). Even though there is a long tradition in theory of considering social cohesion as a concept which occurs in neighbourhoods (Jacobs, 1961; Young and Willmott, 1957; Keller, 1968), it is unclear whether the neighbourhood is an appropriate and valid scale at which to address social cohesion (Amin, 2002).

The claimed social benefits of high quality built environments

As highlighted above, the main objective behind the creation of high quality built environments is argued to be the design and maintenance of 'places for people' (DETR, 2000, para. 46; Llewelyn-Davies, 2000; Urban Task Force, 1999). Carmona *et al.* point out that high quality public space is not simply a matter of aesthetic appreciation by a few, select users (2004). Rather, they argue that it has a fundamental impact on how 'all users perceive, function, and socialize in public space' (2004, p. 18). The built environment, including 'the street outside their front door [and] their local neighbourhood', is encountered by people on a daily basis, and the quality of the built environment is therefore argued to make a direct contribution to their everyday lives (Carmona *et al.*, 2004, p. 4; Gehl, 2001; Blackman and Woods, 2004). Claims have been made in policy and policy guidance that high quality built environments influence social activity in a positive way. The ongoing cross-government liveability policy agenda aims not only to improve the quality of the physical environment, but, through such improvements in neighbourhoods, also to improve residents' quality of life (Defra, 2005; Hastings *et al.*, 2005; ODPM, 2005a; also see ODPM, 2003a; SEU, 2001). Research commissioned by

CABE shows that, of those surveyed, '85% of people believed that the quality of public space impacts on quality of life and that the quality of the built environment directly impacts on the way they feel' (2002, in Carmona *et al.*, 2004, p. 4). In addition to this, the social benefits of high quality built environments are also cited in government policy which claims that a sustainable community is one which features a 'quality built and natural environment' in 'a community in which [residents]...want to live and work, now and in the future' (ODPM, 2005a, p. 4). Good quality spaces are said to 'foster social inclusion...and citizenship' and 'contribute to social cohesion' (DTLR, 2002, p. 5, p. 77), while a decline in the quality of urban space has been argued to contribute to anti-social behaviour (Brook Lyndhurst, 2004; ODPM, 2002).

There are numerous claims made about the significant influence that the quality of built environments has on specific social activities and behaviour. Research carried out for CABE Space found that, for a sample of 1500 people, the most important contribution good parks and public spaces make is to provide a sense of community, as well as providing people with places to meet and socialize (2004, p. 5). Elsewhere, it is argued that particular elements of quality of the built environment, such as the level of maintenance, have a significant impact on residents' sense of community and social interaction (Farrell *et al.*, 2004). Successful places which have their own character are claimed to contribute to residents' sense of place and sense of pride in an area (CABE and Home Builders Federation [HBF], 2005). It is also argued that good parks and attractive open spaces 'foster[ing] neighbourhood pride and community cohesion' (ODPM, 2002, p. 36). The Housing Corporation, which is committed to providing 'good quality housing in attractive, safe, clean environments' (2003, in Burton and Mitchell, 2006), which can be attributed to the policy arguments that housing development is not simply about bricks and mortar, but rather is about the creation of cohesive mixed communities supported by good quality environments (CABE, 2004; Hill, 2004).

It is therefore clear that high quality built environments are consistently argued to have an effect on the social cohesion, and associated social activities and behaviours, in urban settings. However, there is no empirical evidence to support such claims. The lack of empirical evidence or consensus on definitions of both concepts leads to a lack of clarity for theorists and practitioners, and, fundamentally, calls into question the validity of the assertions made that high quality built environments positively influence the social cohesion that occurs in a place. This thesis will contribute to knowledge by assessing the effect, if any, that features of high quality built environments are purported to have on social cohesion.

The main research aim of this project was therefore to **determine the relationship, if any, between the features that constitute a high quality built environment and social cohesion in English neighbourhoods**. In order to address this aim, it was necessary to first determine the features considered to constitute high quality in the built environment, and establish a definition of social cohesion for the purposes of this research. The remainder of this paper focuses on how this was achieved in the research and discusses some of the methodological difficulties encountered.

Defining high quality neighbourhoods

This section does not constitute a literature review of high quality within the neighbourhood context (which will be published elsewhere), but rather gives an outline of the criteria used to define quality along with some of the methodological issues that accompany such a task.

Examining a concept such as 'high quality' raises questions of how to deal with its inherent subjectivity. This subjective value is intangible; it is wholly dependent on the opinion and attitudes of the beholder. 'High quality' depends on the perceptions of the designer, the critic and the user to determine the degree of quality or excellence that something has. It cannot be assumed that each user of a building, neighbourhood, town or city has the same attitudes towards, and requirements of, the built environment. To address the subjectivity involved in arriving at a definition of high quality, common features agreed upon by theorists in their definitions of (features of) high quality built environments were selected. This was adopted as a manner of 'face validity' to ensure that, according to (prescriptive) theorists, the features selected are considered to represent a particular aspect of quality (after Bryman, 2001). The research identified features which are relevant at particular urban scales. In the main, these scales are the neighbourhood and the street. It was outside the scope of this research to examine individual buildings and some features of quality of the built environment were therefore omitted. It was also necessary for the features identified in the research to be measurable and operationalized into indicators. The final criterion was that the features were relevant to policy-making, so that implications of the findings and analyses for the focus put on the quality of the built environment in national policy.

The ten features of a high quality built environment were identified according to a comprehensive review of the literature (including UK policy documents, theory and prescriptive theory) and are listed below:

- High residential density
- Mixed land uses
- Accessibility
- Connectedness and permeability
- Legibility
- Attractiveness
- Inclusiveness
- Maintenance
- Natural surveillance
- Character of a place

The next was to select the indicators to measure each of these features of a high quality built environment. This in itself was a time-consuming process as, for example in the case of density, there is a plethora of existing indicators and caution was exercised to ensure that the most appropriate indicators were employed. Table 1 shows the indicators employed.

To measure a concept in as reliable and valid a manner possible, multiple-indicator measures are often used in social sciences research (Bryman, 2001). The choice to use more than one indicator is made because a single indicator may capture only part of the concept under scrutiny or be of too general a nature to measure the concept sufficiently (Bollen and Hoyle, 1990; Bryman, 2001, p. 67). For example, it has been argued that no single measure can accurately measure the density of a given area (Burton, 1997; Jenks and Dempsey, 2005): gross density of an area does not reveal meaningful information about its density if the bulk of the area is made up of open space.

Table 1. Indicators measuring features of quality of the built environment

Feature of quality	Summary of indicator(s)	Number of indicators
Gross Density	Persons and households per ha	3
Net Density	Persons and households per ha in built up/ residential area	2
Household Density	Persons per household	1
Street Density	Residential Intensity of streets	1
Mix of uses	Number of services; ratio of residential to non- residential land	5
Overall spread and provision of services	Mix and spread of services	1
Access to green space	Amount of green space	2
Overall spread of bus stops	Number and spread of bus stops	2
Bus service frequency	Number of buses per hr during weekday	1
Degree of connectedness	Number of junctions per ha and per street	2
Block size	Average distance between junctions per street	1
Landmarks	Number of landmarks	1
Nodes	Number of nodes	1
Node rating	Rating of nodes	1
Perception of attractiveness	Respondents' opinions on attractiveness of neighbourhood	1
Extent of greenery	Amount of open space and number of trees per neighbourhood	3
Pavement/street inclusiveness	Average width of pavement; instances of ramps/ dropped kerbs	3
Seating	Number of primary and secondary seating and spread	4
Bus shelters	Instances of shelters at bus stops	1
Toilets	Number of public toilets per neighbourhood	1
Maintenance - pavement state	Assessment of pavement condition per street	1
Maintenance - litter	Assessment of amount of litter per street	1
Maintenance - homes & gardens	Number of homes and gardens below average state per street	1
Extent of natural surveillance	Proportion of 'active' building frontage per street	1
Character of the neighbourhood	Interviewees' assessment of the neighbourhood's character	4
Rating of quality	Interviewees' and respondents' assessment of quality of the neighbourhood	2

Defining social cohesion

Like the preceding section, this section does not provide details of the extensive literature review conducted to arrive at a definition of social cohesion. The seven dimensions of social cohesion measured, listed below, were operationalized into indicators:

- Social interaction
- Social networks including networks of mutual support
- Sense of community in terms of social order and common norms
- Level of participation in organized activities
- Level of trust and reciprocity
- Feelings of safety

- Extent of a sense of place attachment

Table 2 shows these social indicators which are based on the subjective perceptions and behaviours of residents (Goodchild and Cole, 2001); the data is collected via questions in the household survey and semi-structured interviews. Again, multiple indicator measures are used as a single indicator addressing, for example, social interaction in the neighbourhood, which asks how many neighbours respondents go out with socially, would not be sufficient to measure social interaction fully. This one indicator takes no account of respondents' interaction with friends and family in the neighbourhood, only with neighbours, nor with other types of interaction, such as greeting or avoiding neighbours. Skjaeveland *et al.* argue that a multidimensional measure increases 'the understanding of the dynamics of neighbourhood social life' (1996, p. 415).

Table 2. Indicators measuring dimensions of social cohesion

Antecedent of social cohesion	Summary of indicator(s)	Number of indicators
Positive social interaction	Interaction with neighbours	4
Negative social interaction	Non-interaction with neighbours	2
Socialising in the neighbourhood	Socialising with neighbours	1
Network of friends	See friends/ friends in neighbourhood	2
Feelings towards neighbourhood	Pride in neighbourhood	1
Social order in neighbourhood	General relationships between neighbours	5
Active participation in organized activities	Participation in activities in neighbourhood	6
Mutual trust among neighbours	Extent of reciprocal relationships	3
Perceptions of safety	Respondents' opinions on feelings of safety in the neighbourhood	1
Perceptions of crime	Respondents' opinions on level of crime in the neighbourhood	1
Feelings of attachment to neighbourhood	Level of attachment to neighbourhood	3

A number of intervening influences were also included in the research and indicators were developed to measure them. They are listed below and include the age, gender and income of residents (Table 3).

Table 3. Indicators measuring intervening (or interfering) influences

Intervening influence	Summary of indicator(s)	Number of indicators
Social characteristics of respondent	Age; gender; ethnic group	3
Socio-economic characteristics of respondent	Individual income; household income	2
Household characteristics	Household size; household composition; car ownership; use of local services and facilities	4
Tenure	Tenure on household property	1
Accommodation characteristics	Accommodation type; access to garden	2
Residential turnover	Length of residence; plans to move house	2
Urban layout	Predominant street pattern	1

Methodological Challenges

This section focuses on the methodological challenges faced in research measuring such nebulous, subjective and multidimensional concepts. Where appropriate, primary data is called on to illustrate examples or solutions to the methodological difficulties encountered.

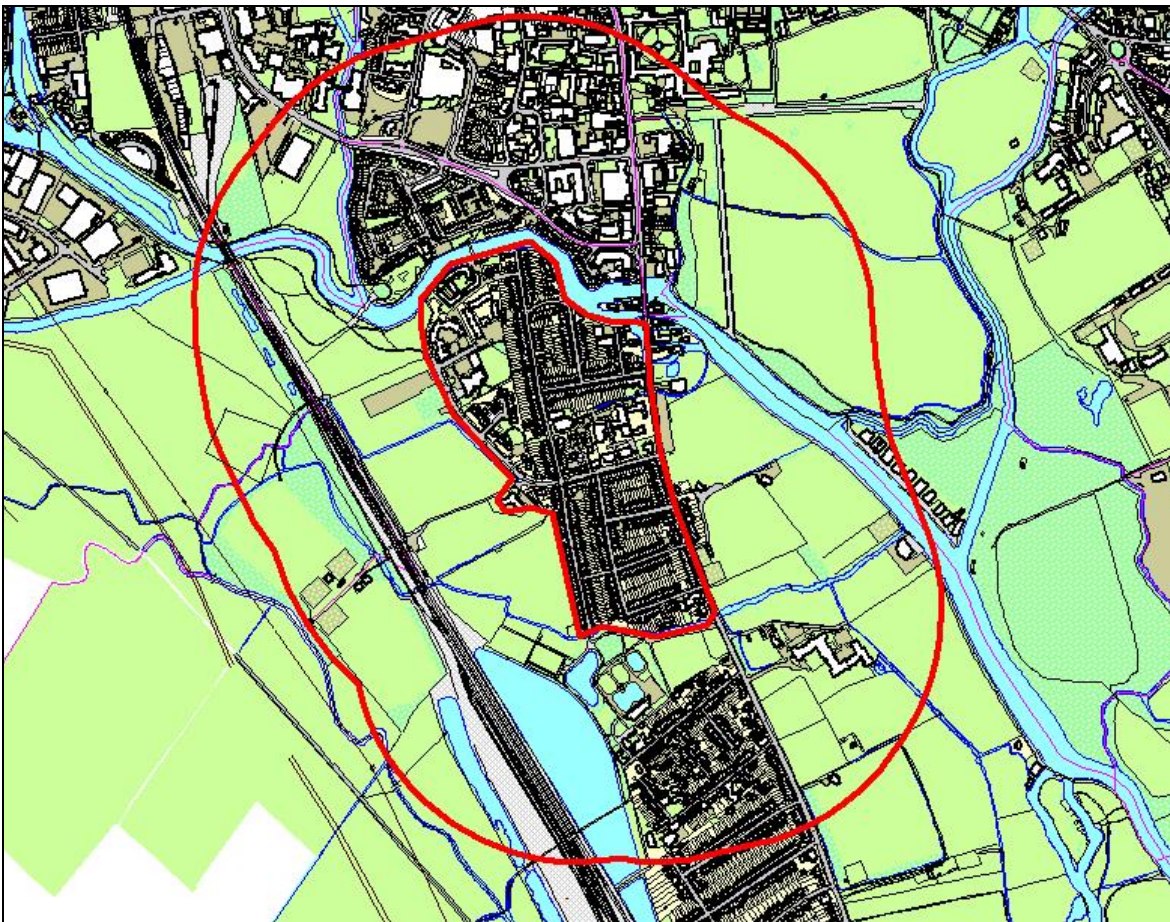
The sections above highlight the large number of indicators created in operationalizing quality of the built environment and social cohesion. Not only are the indicators numerous, they are of varying natures: specifically, they are both objective and subjective. This has implications not only for the methods of collecting the data, but also for the manner in which that data are then analysed. Firstly, it was not possible to collect the data using one method alone – a combination of secondary datasets, physical site survey checklist, household questionnaire survey and semi-structured interview was considered to be most suitable. This was largely due to a need to reduce the subjectivity on the part of the researcher and focus solely on the subjective assessment of the residents, whose opinions were sought instead of the researcher who does not have the knowledge of a neighbourhood that the residents have. While it could be argued that a researcher can be trained to qualitatively assess a built environment impartially, this would be to shy away from the inherent subjectivity which it constitutes the major component of one's interpretation of quality. Secondly, the two types of indicators also have an impact on the data analysis as there needs to be a sound theoretical and conceptual foundation to dealing with objective and subjective indicators together. For example, Table 1 shows that there are two different aspects of attractiveness measured in this research: an objective indicator measuring the extent of greenery and a subjective one measuring residents' perceptions of the neighbourhood's attractiveness. While they may measure the same overall feature of quality, these indicators are not combined to form one composite variable because they measure distinct aspects of the same feature and so are analysed as a separate variables.

It was highlighted above that a number of methods of data collection need to be employed to measure such multidimensional concepts. This can have implications in terms of time and cost for the researcher which may need to be considered carefully. While conducting the research in this manner certainly was costly and time-consuming, the richness of the resulting dataset cannot be under-estimated. It is imperative that as many confounding or intervening influences be accounted for in the data analyses which also increases the list of questions to be asked of participants (but not necessarily answered), but which provide a fuller picture of household and personal characteristics which may influence responses and relationships tested.

A very important consideration which had to be dealt with in great detail and with a significant amount of primary data was the scale of the study. The study sites in this research were described as 'neighbourhoods' which is a loaded term and open to interpretation, like quality and social cohesion (never let it be said that researchers shy away from the difficult path). While it is not appropriate to conduct a theoretical debate on the concept of 'neighbourhood' here, in relation to its description by some as a social, spatial, socio-spatial and/or functional entity (Barton, 2000; Barton *et al.*, 2003; Davies and Herbert, 1993; Keller, 1968; Kearns and Turok, 2004), to define 'neighbourhood' in light of the plethora of interpretations involves care and attention. Existing methods of neighbourhood delineation, such as by postcode sectors or administrative boundaries such as ward or output area boundaries used in the Census, are well-known and commonly used in social sciences research (Crane, 1991; Hirschfield, 1994; Hirschfield and Bowers, 1997; Stafford *et al.*, 2003; Martin, 1998). However, it has not been shown that such boundaries correspond to neighbourhood

boundaries as defined by residents (Jenks and Dempsey, 2007). Consistency in the use of boundaries may be critical if the researcher is asking residents questions about their neighbourhood and (s)he is unaware of the differences in the way the neighbourhood is defined. For these reasons, an exploration of methods of operationalizing such interpretations of neighbourhood was conducted and included a small-scale study to analyze the delineations of neighbourhood according to a small sample of residents (for a fuller discussion of this study see Jenks and Dempsey, 2007). While the study showed that using a small sample to ascertain the boundaries of a neighbourhood inhabited by far more people is inappropriate and lacks rigour, it also showed that even if the sample of residents is considerably increased, identification of a *common* 'neighbourhood' area would still be inaccurate: residents may refer to different perceived neighbourhood boundaries when answering questions about different aspects of their neighbourhood. Because in this research the physical form itself is under examination, the neighbourhoods to be examined were selected according to physical, objective, and not subjective, criteria. And in order to account for the 'edge effect' (i.e. to cover the physical area which residents at the edge of the physically delineated neighbourhood consider to be their neighbourhood), a buffer zone of 400m was applied to each study site (Figure 1). Methodologically, this involved a considerable increase in resources collecting the physical data via the site survey, however no increase in sample size was required.

Figure 1. Spatial delineation of Oxford Neighbourhood 1 + 400m buffer



Other important challenges in conducting research into these nebulous concepts relate to the analysis of the data. It has already been touched on above that the nature of the indicators (objective and subjective) can have an impact on the way in which they are included in the data analysis because while they may reflect the

one feature of quality, they can relate to quite distinct aspects. This indicates that there needs to be compelling reasons why indicators are combined into one composite variable to represent one feature of quality under scrutiny. At the analysis stage of this research, this was found to be impossible for all the features of quality. While it was possible for, e.g., the indicator measuring density (because those variables making up the one resulting composite variable were all objective measures and initial factor analysis showed that they were loading onto the same factor), it was not possible for attractiveness because of the difference in variables measuring the actual extent of greenery in the neighbourhood and the perceptions of attractiveness according to residents. For this reason, these variables were treated as distinct from one another in the analyses.

Further decisions have to be made in relation to the statistical analyses chosen: in this research because of the large sample (n=859) and resulting large dataset, it was most suitable, for the most part, to conduct statistical analyses. Conducting some preliminary statistical analyses such as chi-square and correlations was ultimately not suitable, due to the large number of indicators (in total around 90, including the intervening variables). While correlations are useful to ascertain the influence of individual indicators on, here, an indicator of social cohesion, with or without the influence of one other (intervening) indicator taken into account (partial correlation), the associations under scrutiny here are complicated and correlations are unable to take this into account. For this reason, multiple regression analyses were carried out (which also incorporate correlation analysis within its tests): for the social scientist, multiple regression is a well-used statistical test (Bryman, 2001). They allow the researcher to identify not only if there are associations between independent indicators (here, features of quality and also intervening variables) and dependent indicators (here, dimensions of social cohesion), but also the strength of those associations. Because of the varying nature of the measures in the analysis (i.e. continuous and dichotomous), different regression analyses, including logistic regression, were conducted. The regression analyses highlighted the most significant predictors of the dimensions of social cohesion in a number of tests which both excluded and included intervening variables.

It could be argued that multiple regression also has deficiencies as a method of analysis like correlation but in a slightly different way. While regression can account for the *collective* influence that a set of independent indicators can have on a dependent indicator, it is unable to account for the inter-relationships between the independent variables. As a consequence, it was necessary for a number of accompanying analyses (such as ANOVA and MANOVA) be conducted to ascertain more about such inter-relationships. One solution proffered is multi-level analysis (MLA), which should also be considered when examining statistical associations in a set of clustered samples (Snijders and Bosker, 1999; Li *et al.*, 2005).

The clustered selection process of the sample (i.e. the sample residing in a number of neighbourhoods) created difficulties in the research process. Underlying the study site and sample selection process was the need to capture both physical and non-physical data relating to neighbourhoods and residents' perceptions of, and attitudes towards, them. The variation that may occur *between* the different neighbourhoods (in terms of the features of quality and the extent of social cohesion) is not accounted for in total sample multiple regression analysis; and neither is the variation that may occur *within* them. There is therefore an argument for examining not only the total sample, but also the variation which may exist between the samples in the different neighbourhoods. Multilevel analysis focuses on 'nested sources of variability' and is applicable to the random two-stage sample approach taken in this research (Snijders and Bosker, 1999, p. 1), where, firstly, neighbourhoods were selected and, secondly, the sample within them selected. Multilevel analysis is

increasing in popularity in social sciences and built environment, and particularly epidemiological, research (Oakes, 1994; Fisher and Li, 2004; Li *et al.*, 2005), but, like other forms of statistical analysis, it is subject to certain assumptions which need to be borne in mind. For example, the 'ideal' number of groups (here, neighbourhoods) is at least one hundred in MLA; having said this, researchers have used MLA with much fewer than this number (Hox and Maas, 2001; Fisher and Li, 2004).

Concluding points

This paper has attempted to outline some of the methodological challenges that a researcher encounters when engaging in research of a multidimensional nature. Multidimensional not only in terms of the definition of concepts examined, but also in relation to the methods of data collection and analysis. By way of example, primary research conducted as part of the CityForm research consortium was called upon. The research approach adopted to measure the relationship between the quality of the built environment and social cohesion was described and the development of indicators operationalized to measure these concepts was outlined. A number of methodological difficulties were outlined which, while offering some solutions, also leave the reader with a number of concluding thoughts to bear in mind when engaging in such research. Firstly, the measurement of such concepts involves a number of methods of data collection which can be both time consuming and conceptually challenging. Care was taken in this research to justify not only the employment of the neighbourhood as the scale of the study, but also the definition and subsequent delineation of the neighbourhood as a physical area, which involved primary research not envisaged at the outset of the research. Secondly, the number of indicators developed was considerable, and the use of composite indicators can be an asset when dealing with numerous measures. However, caution is necessary to justify the combination of such indicators: not simply based on their collective measurement of the same concept. There should be theoretically-grounded reasons for the coalescence of these indicators. Thirdly, the sampling strategy should be considered alongside the analysis stage later on in the research: can the sample be as random as possible or is it more feasible for it to be of a clustered nature? Either way, the way in which the data are then analyzed should be identified: cross-sectional or clustered? Total sample analyzed or nested samples within a larger sample? The inherent variability which may occur between the groups (or here, neighbourhoods) may have a statistical effect on the associations examined which should be controlled for in the statistical testing.

While this paper does not attempt to solve all the methodological problems that can arise when analyzing multidimensional concepts, it does highlight the importance of decision-making in the research process and a desirable *integrated* approach to bear in mind. Decisions made at the literature review stage can have fundamental impacts on later stages of the research. This paper therefore does not try to offer novel solutions to difficulties in the research process, but it is hoped that, by highlighting some of the challenges, it encourages the researcher to conduct research of quality.

References

- Aldous, T. (1992). *Urban Villages: a concept for creating mixed-use urban developments on a sustainable scale*. London: Urban Villages Group.
- Amin, A. (2002). Ethnicity and the multicultural city: living with diversity. *Environment and Planning A*, 34: pp. 959-980.

- Barton, H. (2000). Urban Form and Locality. In: Barton, H. (ed.) *Sustainable Communities: the potential for eco-neighbourhoods*. London: Earthscan, pp. 105-122.
- Barton, H., Grant, M. and Guise, R. (2003). *Shaping Neighbourhoods: a guide for health, sustainability and vitality*. London: Spon Press.
- Begg, I. (1995). Threats to Cohesion. In: Amin, A. and Tomaney, J. (eds.) *Behind the Myth of European Union: prospects for cohesion*. London: Routledge, pp. 110-124.
- Bentley, I., Alcock, A., Murrain, P., McGlynn, S. and Smith, G. (1985). *Responsive Environments: a manual for designers*. Oxford: Architectural Press.
- Blackman, T. (2006). *Placing Health: neighbourhood renewal, health improvement and complexity*. Bristol: Policy Press.
- Blackman, T., Mitchell, L., Burton, E., Jenks, M., Parsons, M., Raman, S. and Williams, K. (2003). The Accessibility of Public Spaces for People with Dementia: a new priority for the 'open city'. *Disability & Society*, 18(3): pp. 357-371.
- Blackman, T. and Woods, R. (2004). Social Problems and Public Policy. In: Ritzer, G. (ed.) *Handbook of Social Problems: as comparative international perspective*. Thousand Oaks, California: Sage, pp. 47-66.
- Bollen, K. A. and Hoyle, R. H. (1990). Perceived Cohesion: a conceptual and empirical examination. *Social Forces*, 69(2): pp. 479-504.
- Brook Lyndhurst (2004). *Research Report 11: environmental exclusion review*. London: Office of the Deputy Prime Minister.
- Bryman, A. (2001). *Social Research Methods*. Oxford: Oxford University Press.
- Buckner, J. C. (1988). The Development of an Instrument to Measure Neighbourhood Cohesion. *American Journal of Community Psychology*, 16(6): pp. 771-791.
- Burton, E. (1997). *The Compact City: just or just compact?* Oxford: unpublished PhD thesis, Oxford Brookes University.
- Burton, E. and Mitchell, L. (2006). *Inclusive Urban Design: streets for life*. Oxford: Architectural Press.
- Cantle, T. (2001). *Community Cohesion: A Report of the Independent Review Team*. London: Home Office.
- Carmona, M., De Magalhaes, C., Hammond, L., Blum, R., Yang, D., with Happold, B., Caulton, J., Fitchett, H. and Clifford, K. (2004). *Living Places: Caring for Quality*. London: Office of the Deputy Prime Minister.
- Carmona, M., Heath, T., Oc, T. and Tiesdell, S. (2003). *Public Places Urban Spaces: The Dimensions of Urban Design*. Oxford: Architectural Press.
- Central Housing Advisory Committee (1944). *The Design of Dwellings: report of the Design of Dwellings Sub-Committee of the Central Housing Advisory Committee appointed by the Minister of Health; and, report of a study group of the Ministry of Town and Country Planning on site planning and layout in relation to housing*. London: HMSO.
- Commission for Architecture and the Built Environment (2004). *Design Reviewed Urban Housing: lessons learnt from projects reviewed by CABE's expert design panel* London: CABE.
- Commission for Architecture and the Built Environment (2006). *Who We Are. What we do. Why it matters*. London: CABE.
- Commission for Architecture and the Built Environment and Department of the Environment Transport and the Regions (2000). *By Design: urban design in the planning system: towards better practice*. London: Thomas Telford.
- Commission for Architecture and the Built Environment and Department of the Environment Transport and the Regions (2002). *Paving the Way: how we achieve clean, safe and attractive streets*. Tonbridge, Kent: Thomas Telford.
- Commission for Architecture and the Built Environment and Home Builders Federation (2005). *Building for Life: delivering great places to live: 20 questions you need to answer*. London: CABE.
- Commission for Racial Equality (2002a) *Community Cohesion: our responsibility*. London, Commission for Racial Equality.
- Coser, L. A. (1977). *Masters of Sociological Thought: ideas in historical and social context*. New York: Harcourt Brace Jovanovich.
- Council of Europe (2005). *Methodological Guide: concerted development of social cohesion indicators*. Brussels: Council of Europe.
- Cowan, R. (1997). *The Connected City: a new approach to making cities work*. London: Urban Initiatives.
- Crane, J. (1991). The Epidemic Theory of Ghettos and Neighbourhood Effects of Dropping Out and Teenage Childbearing. *American Journal of Sociology*, 96(5): pp. 1226-1259.
- Cullen, G. (1961). *Townscape*. London: The Architectural Press.
- Davies, W. K. D. and Herbert, J. T. (1993). *Communities Within Cities: an urban social geography*. London: Belhaven Press.
- Dear, M. J. and Wolch, J. R. (1989). How Territory Shapes Social Life. In: Wolch, J. and Dear, M. (eds.) *The Power of Geography: how territory shapes social life*. London: Unwin Hyman, pp. 3-18.
- Department for Environment Food and Rural Affairs (2004). *Evidence and Innovation Strategy 2005-08: consultation document*. London: Department for Environment, Food and Rural Affairs.

Department for Environment Food and Rural Affairs (2005) *Evidence and Innovation Strategy 2005-08: consultation document*. London, Department for Environment, Food and Rural Affairs.

Department for Transport Local Government and the Regions (2002). *Green Spaces, Better Places: Final Report of the Urban Green Spaces Taskforce*. London: Department for Transport, Local Government and the Regions.

Department of the Environment Transport and the Regions (2000) *Planning Policy Guidance Note 3: housing*. London, DETR.

Department of the Environment Transport and the Regions (2000a) *Our Towns and Cities: the future*. Norwich, Stationery Office.

Department of the Environment Transport and the Regions and Commission for Architecture and the Built Environment (2001). *Better Places to Live: by design. A companion guide to PPG 3*. Tonbridge: Thomas Telford.

Duany, A. (2003). Neighbourhood Design in Practice. In: Neal, P. (ed.) *Urban Villages and the Making of Communities*. London: Spon Press, pp. 84-101.

Durkheim, E. (1952). *Suicide: a study in sociology*. London: Routledge and Kegan Paul Ltd.

Farrell, S. J., Aubrey, T. and Coulombe, D. (2004). Neighbourhoods and Neighbours: do they contribute to personal well-being? *Journal of Community Psychology*, 32(1): pp. 9-25.

Ferlander, S. and Timms, D. (1999). *Social Cohesion and On-line Community*. Brussels: European Commission.

Fisher, K. J. and Li, F. (2004). A Community-Based Walking Trial to Improve Neighbourhood Quality of Life in Older Adults: a multilevel analysis. *Annals of Behavioural Medicine*, 28(3): pp. 186-194.

Forrest, R. and Kearns, A. (1999). *Joined-Up Places? social cohesion and neighbourhood regeneration*. York: YPS for the Joseph Rowntree Foundation.

Forrest, R. and Kearns, A. (2001). Social Cohesion, Social Capital and the Neighbourhood. *Urban Studies*, 38(12): pp. 2125-2143.

Friedman, S. and Rosenbaum, E. (2006). Does Suburban Residence Mean Better Neighborhood Conditions for All Households? assessing the influence of nativity status and race/ethnicity. *Social Science Research*, 36(1): pp. 1-27.

Gehl, J. (2001). *Life Between Buildings: using public space*. Copenhagen: Arkitektens Forlag.

Giddens, A. (1978). *Durkheim*. London: Fontana Press.

Giddens, A. (1993). *Sociology*. Cambridge: Polity Press.

Goodchild, B. and Cole, I. (2001). Social balance and mixed neighbourhoods in Britain since 1979: a review of discourse and practice in social housing. *Environment and Planning D: Society and Space*, 19: pp. 103-121.

Hall, P. (2002a). *Cities of Tomorrow*. Oxford: Blackwell.

Hallman, H. W. (1984). *Neighbourhoods: their place in urban life*. Beverly Hills, California: Sage Publications.

Hansen, R. (2003). Measures of integration. *Connections*, (Summer 2003, online publication): pp. 1-5.

Hastings, A., Flint, J., McKenzie, C. and Mills, C. (2005). *Cleaning up neighbourhoods: environmental problems and service provision in deprived areas*. Bristol: The Policy Press for Joseph Rowntree Foundation.

Hill, K. (2004) *Mainstreaming Community Cohesion in Housing* Speech given on 14th October 2004.

Hirschfield, A. (1994). Using the 1991 Population Census to Study Deprivation. *Planning Practice and Research*, 9(1): pp. 43-54.

Hirschfield, A. and Bowers, K. J. (1997). The Effect of Social Cohesion on Levels of Recorded Crime in Disadvantaged Areas. *Urban Studies*, 34(8): pp. 1275-1295.

House of Commons ODPM Housing Planning Local Government and the Regions Committee (2004). *Social Cohesion: sixth report of session 2003-04*. London: The Stationery Office.

Hox, J. J. and Maas, C. J. M. (2001). The Accuracy of Multilevel Structural Equation Modeling with Pseudobalanced Groups and Small Samples. *Structural Equation Modeling*, 8(2): pp. 157-174.

i Ruiz, J. P. (2002). Culture, Connectedness and Social Cohesion in Spain. *Canadian Journal of Communication*, 27: pp. 167-177.

Jacobs, A. and Appleyard, D. (1987). Towards an Urban Manifesto: a prologue. *Journal of the American Planning Association*, 53: pp. 112-120.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. Harmondsworth: Penguin Books.

Jenks, M. (1983). *The Relationship Between Design Guidance and the Layout of Public Sector Housing Estates*. Oxford: unpublished PhD Thesis, Oxford Polytechnic.

Jenks, M. and Dempsey, N. (2005). The Language and Meaning of Density. In: Jenks, M. and Dempsey, N. (eds.) *Future Forms and Design for Sustainable Cities*. Oxford: Architectural Press, pp. 287-309.

Jenks, M. and Dempsey, N. (2007). Defining the Neighbourhood: challenges for empirical research. *Town Planning Review*, 78(2): pp. 153-177.

Jenson, J. (1998). *Mapping Social Cohesion: the state of Canadian research*. Ottawa: Canadian Policy Research Networks Inc.

Jordison, S. (2003). *Crap Towns: the 50 worst places to live in the UK*. London: The Idler.

- Kearns, A. and Forrest, R. (2000). Social Cohesion and Multilevel Governance. *Urban Studies*, 37(5-6): pp. 995-1017.
- Kearns, A. and Turok, I. (2004). *Sustainable Communities: dimensions and challenges*. ESRC/ODPM postgraduate research programme working paper 1. Liverpool John Moores University, ESRC Cities Programme and Office of the Deputy Prime Minister.
- Keller, S. (1968). *The Urban Neighbourhood: a sociological perspective*. New York: Random House.
- Li, F., Fisher, K. J., Brownson, R. C. and Bosworth, M. (2005). Multilevel modelling of built environment characteristics related to neighbourhood walking activity in older adults. *Journal of Epidemiology and Community Health*, 59: pp. 558-564.
- Llewelyn-Davies (2000). *Urban Design Compendium*. London: English Partnerships.
- Local Government Board (1918). *Report of the Committee on Building Construction in Connection with the Provision of Dwellings for the Working Classes*. London: HMSO.
- Lynch, K. (1960). *The Image of the City*. MIT Press: Massachusetts.
- Mann, M. (1970). The Social Cohesion of Liberal Democracy. *American Sociological Review*, 35(3): pp. 423-439.
- Martin, D. (1998). Automatic Neighbourhood Identification from Population Surfaces. *Computers, Environment and Urban Systems*, 22(2): pp. 107-120.
- Miller, M. (1992). *Raymond Unwin : garden cities and town planning*. Leicester: Leicester University Press.
- Ministry of Housing and Local Government (1952). *The Density of Residential Areas*. London: HMSO.
- Ministry of Housing and Local Government (1962). *Residential Areas: higher densities, Planning Bulletin 2*. London: HMSO.
- Nasar, J. L. (1998). *The Evaluative Image of the City*. Thousand Oaks, California: Sage Publications, Inc.
- Nash, V. and Christie, I. (2003). *Making Sense of Community*. London: Institute for Public Policy Research.
- Oakes, J. M. (1994). The (mis)estimation of neighbourhood effects: causal inference for a practicable social epidemiology. *Social Science & Medicine*, 58(10): pp. 1929-1952.
- Office of the Deputy Prime Minister (2002). *Living Places: cleaner, safer, greener*. London: Office of the Deputy Prime Minister.
- Office of the Deputy Prime Minister (2003) *Sustainable Communities: building for the future*. London, Office of the Deputy Prime Minister.
- Office of the Deputy Prime Minister (2005a). *Making It Happen in Neighbourhoods: the national strategy for neighbourhood renewal – four years on*. Wetherby: Office of the Deputy Prime Minister.
- Office of the Deputy Prime Minister (2005b). *Sustainable Communities: homes for all*. Norwich: The Stationery Office.
- Office of the Deputy Prime Minister (2005a). *Sustainable Communities: homes for all*. Norwich: The Stationery Office.
- Pahl, R. (1991). The Search for Social Cohesion: from Durkheim to the European Commission. *European Journal of Sociology*, 32: pp. 345-360.
- Penninx, R., Kraal, K., Martinello, M. and Vertovec, S. (2004). Introduction: European Cities and Their New Residents. In: Penninx, R., Kraal, K., Martinello, M. & Vertovec, S. (eds.) *Citizenship in European Cities: Immigrants, Local Politics and Integration Policies*. Aldershot: Ashgate, pp. 1-16.
- Pierson, J. (2002). *Tackling Social Exclusion*. London: Routledge.
- Putnam, R. D. (2000). *Bowling Alone*. New York: Simon & Schuster.
- Rapoport, A. (1982). *The Meaning of the Built Environment: a Nonverbal Communication Approach*. Beverly Hills, California: SAGE Publications.
- Relph, E. (1976). *Place and Placelessness*. London: Pion Limited.
- Robbins, E. (2004). New Urbanism. In: Robbins, E. and El-Khoury, R. (eds.) *Shaping the City: studies in history, theory and urban design*. London: Routledge, pp. 212-230.
- Robinson, D. (2005). The Search for Community Cohesion: key themes and dominant concepts of the public policy agenda. *Urban Studies*, 42(8): pp. 1411-1427.
- Rose, E. J. D., with Deakin, N., and Abrams, M., Jackson, V., Peston, M., Vanags, A. H., Cohen, B., Gaitskell, J. and Ward, P. (1969). *Colour and Citizenship: a report on British race relations*. London: Oxford University Press for the Institute of Race Relations.
- Schiefloe, P. M. (1990). Networks in Urban Neighbourhoods: lost, saved or liberated communities? *Scandinavian Housing and Planning Research*, 7: pp. 93-103.
- Skjaeveland, O., Garling, T. and Maeland, J. G. (1996). A Multidimensional Measure of Neighbouring. *American Journal of Sociology*, 24(3): pp. 413-435.
- Snijders, T. and Bosker, R. (1999). *Multilevel Analysis: an introduction to basic and advanced multilevel modeling*. London: SAGE.
- Social Exclusion Unit (2000). *Minority Ethnic Issues in Social Exclusion and Neighbourhood Renewal*. London: Cabinet Office.
- Social Exclusion Unit (2001). *A New Commitment to Neighbourhood Renewal: national strategy action plan: report by the Social Exclusion Unit*. London: Social Exclusion Unit.

Stafford, M., Bartley, M., Sacker, A., Marmot, M., Wilkinson, R., Boreham, R. and Thomas, R. (2003). Measuring the Social Environment: social cohesion and material deprivation in English and Scottish neighbourhoods. *Environment and Planning A*, 35: pp. 1459-1475.

Turok, I., Bailey, N., Atkinson, R., Bramley, G., Docherty, I., Gibb, K., Goodlad, R., Hastings, A., Kintrea, K., Kirk, K., Liebovitz, B. L., Morgan, J. and Paddison, R. (2004). Sources of City Prosperity and Cohesion: the case of Glasgow and Edinburgh. In: Boddy, M. and Parkinson, M. (eds.) *City Matters: competitiveness, cohesion and urban governance*. London: Policy Press, pp. 13-31.

Urban Task Force (1999) *Towards an Urban Renaissance*. London, E & F Spon.

Webster, C., Blackman, T., Sapsford, R., Neil, B. and Chapman, T. (2004). *A Better Place to Live: social and community cohesion in Middlesbrough*. Middlesbrough: Social Futures Institute.

Whitehead, M. (2004). The Urban Neighbourhood and the Moral Geographies of British Urban Policy. In: Johnstone, C. and Whitehead, M. (eds.) *New Horizons on British Urban Policy: perspectives on New Labour's urban renaissance*. Aldershot: Ashgate, pp. 59-73.

Wickham, J. (2002). *The End of the European Social Model: before It began?* Dublin: Irish Congress of Trade Unions.

Wilson, B. R. (1985). Morality in the Evolution of the Modern Social System. *British Journal of Sociology*, 36(3): pp. 315-332.

Wrong, D. H. (1961). The Oversocialized Conception of Man in Modern Sociology. *American Sociological Review*, 26(2): pp. 183-193.

Young, M. and Willmott, P. (1957). *Family and Kinship in East London*. London: Routledge & Kegan Paul Ltd.

ⁱ This paper forms part of the output from the core research programme of 'Cityform– the Sustainable Urban Form Consortium', funded by the Engineering and Physical Sciences Research Council (EPSRC) under its Sustainable Urban Environment (SUE) Programme (Grant number GR/520529/01).