

Compact Cities: Everyday Life, Governance and the Built Environment

An Annotated Bibliography and Literature Review



Suzanne Vallance, Harvey C. Perkins, Jennifer E. Dixon,

Compact Cities: Everyday Life, Governance and the Built Environment

An Annotated Bibliography and Literature Review

PHOTO CREDITS

Front cover: Suzanne Vallance

Published 2009 by
School of Architecture and Planning, University of Auckland
Private Bag 92019, Auckland



Suzanne Vallance, Harvey Perkins, Jennifer Dixon

Soft Cover
ISBN 978-0-473-15724-1

Web/PDF
ISBN 978-0-473-15856-9

Preface

This publication comprises a literature review on quality of life in compact cities from a social scientific perspective. Though compact cities are generally thought to be the most sustainable urban form, it is debateable whether or not such cities do perform better across social, economic or bio-physical environmental measures. Furthermore, urban intensification and consolidation is often rejected and resisted by urban residents who prefer low-density, suburban settings. Consequently, cities continue to 'sprawl'.

This publication has four parts. Part one is an essay reviewing and synthesising lessons from the articles presented in the subsequent three sections. These sections each address a particular aspect of quality of life in the city: its form (part 2), the way it is governed and managed (part 3) and the ways in which people relate with each other and with 'nature' in the urban context (part 4).

Introduction

The Brundtland Report's (WCED, 1987) use of the term 'sustainable development' has splintered into a variety of popular derivatives, including 'sustainable cities' and 'urban sustainability'. It is now widely acknowledged that cities have a major role to play in the pursuit of sustainability because over half the world's population lives in urban areas, and cities are also convenient ways of giving administrative effect to global sustainability goals. As a corollary, a planning paradigm has emerged which connects the idea of sustainable cities to a more compact urban form. Various labels such as Smart Growth (popular in the U.S.), urban compaction, consolidation, intensification, or containment, adherents advocate mixing compatible land uses, increasing residential densities and implementing traffic calming/reducing strategies. Such strategies are intended to prevent sprawl, reduce emissions from private motor cars, and provide a number of social and economic benefits including 'vibrancy', reduced crime and increased retail opportunities.

Despite the long list of supposed advantages, with the exception of a few exemplary 'New Urban' developments and urban villages, the press surrounding compaction policies is often negative (see, for example, the Smart Growth Network's articles collection, many of which lament public opposition to their projects) with public opposition to infilling and consolidation well-documented in the popular media of many cities, both in New Zealand and internationally. Sustainability advocates and local governments exhort city-dwellers to care more actively for the bio-physical environment and whilst many residents accept the need for change in principle, the idea can be far less appealing in practice, particularly when living more 'sustainably' in compact urban forms demands lifestyle changes, many of which challenge deeply held beliefs and values around suburban living.

The imposition of compact city policies can have perverse effects (Neuman, 2009 provides a good overview). Clark (2005) has argued that 'blunt compaction policies can result in 'unanticipated or unregulated coping strategies' seen, for example, when market mechanisms aimed at pricing people out of their cars have the contradictory effect of encouraging sprawl and car use because people drive further out to enjoy free parking at suburban malls. He describes this as the kind of regressive outcome that can result when those who are better off try to circumvent planners' and environmental managers' intentions, regulations and market interventions. Cumulatively, these clever, individual solutions become problematic. Jenks, Burton and Williams (1996, 1998, 2000), Vallance, Perkins and Moore (2005) and Howley (2008) have made a similar point arguing that, to be truly sustainable, the compact city must have a reasonable degree of support from local residents. If not, 'those who can will leave the city, and only the most disadvantaged will be left: a scenario which is unsustainable' (Jenks et al., 1998, p.84). The challenge for democracies thus lies in achieving a balance between maximising the opportunities for cities to contribute to general bio-physical environmental health and well-being, whilst ensuring the city is a place in which people actually want to live.

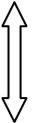
In a departure from many of the conventional readings of urban compaction, in this annotated bibliography we treat urban sustainability - and efforts to achieve it - as a social, as opposed to bio-physical environmental, issue. Our purpose is to bring

together those insights from a wide range of social scientific work that may help us achieve a better understanding of the different problems compaction generates. Our aim is to explore ways of transcending the confines of the orthodox urban sustainability paradigm, which is largely focused on the bio-physical environment, whilst retaining support for positive and sustainable urban change.

In doing so, a number of angles need to be considered. First, the urban sustainability paradigm represents a largely ‘modernist’ movement clashing with increasingly diverse ‘post-modern’ contemporary urban lifestyles that are individualistic, hedonistically consumption-oriented and increasingly mistrustful of scientific and technological supremacy. Ways of reconciling this contradiction need to be explored. This brings us in to contact with a second strand of literature which addresses the everyday realities of urban life in post-industrial and post-modern cities. Though a great deal has been written about the more spectacular and crisis-driven aspects of sustainability – the doomsday writings of ecosystem collapse, species extinction, toxic overload, global warming – also crucial is a better understanding of the more routine, almost banal ways in which such concerns are understood and acted upon in the context of everyday life and how these connect with residents’ dwelling-related practices in compact cities. Third, there is a need to understand how urban administrators, translate these global concerns and communicate them to urban residents. Finally, it is crucial that we evaluate the lessons from the literature regarding ways in which compact cities can become places in which people want to live, work and play.

The material included here is therefore disparate and suggests a need to suspend disciplinary allegiance in order to draw what we can from the wide range of work being conducted in these areas. We begin with an overview of the different interpretations (and subsequent applications) of the concept of urban sustainability and of the ways in which broad ideas about the environment are constructed and contested. We then look at the connections between urban sustainability, science and technology, and post-industrialisation in order to explore the ways these influence the construction of different ‘socio-natures’, across different scales. We then look at the relationships between quality of life and urban compaction before providing an overview of more or less practical urban elements that help create liveable compact cities (see Table 1).

Table One: Factors influencing (compact) urban sustainability in post-industrial cities

<p>Theory</p>  <p>Practice</p>	<p>Socionature, hybrids of urban/rural, society/ environment</p> <p>Post-modern, flexible, wary, hedonistic, contextual</p> <p>Global and local natures</p> <p>Post-industrial and ‘creative cities’</p> <p>Cities ‘compact’ in qualitative (cultural) and quantitative ways</p> <p>Governance, participation regulation, ‘spaces’, ‘publics’</p> <p>Science, technology, AIDA or CBSM</p> <p>Urban design</p>
---	--

Urban sustainability

Though early conceptualisations of urban sustainability emphasised bio-physical environmental aspects (see, for example, Rees 1997; Nijkamp and Pepping 1998), social and economic considerations have subsequently become important features of the discourse (Basiago 1998; Hogget 2001; Enyedi 2002; Bickerstaff and Walker 2003; Halme, Jasch and Scharp 2004; Bromley, Tallon and Thomas 2005; Kallstrom and Ljung 2005; Barr and Gilg 2006; Head and Muir 2006; Mayer and Knox 2006; Kotchen 2007; Krueger and Savage 2007). This is not without its problems; research into the various ways in which sustainability has been understood and applied suggest 'sustainability' is many things, in different places and times.¹ As there is no generic, fixed urban state we can call sustainable, for everyone, everywhere, for all time, Whitehead (2003) has argued that planning for urban sustainability has to be seen as a socio-political process of regulation that includes neo-liberal state ideologies and inter-urban competition. 'Sustainability' is less about so-called objective assessments of the bio-physical environment, and more about the ways in which certain interests are promoted and legitimised through discourse (of, for example, 'best practice' (Bulkeley and Betsill 2005; Bulkeley and Kern 2006)) and materiality (Castree 2003; Krueger and Agyeman 2005; Heyen 2006). This has led to much discussion about the extent to which nature and, subsequently, 'environmental crises' are constructed more generally (Demeritt 2002; Rutherford 2007).

Tangential to such debates are those around the appropriateness of sustainability as a planning goal. Konvitz (1995), Crabtree (2006), and Bagheri and Hjorth (2007) for example, have argued that it is more important to build the capacity to adapt to change into social systems rather than try and attain an ecological steady state. In this view, sustainable systems are those which enhance diversity, flexibility and adaptability whilst maintaining core functionality. Justice, equity, trust and power sharing are important because the issues facing residents are rarely environmental but rest on the *ability* to apply green technologies (Crabtree, 2006). Social, economic, and cultural institutions including housing providers, the wider community, and various financial organisations and markets influenced these abilities.

Given there is no generic way of conceptualising or operationalising urban sustainability, it is also difficult to establish a consensus over ideal urban densities and

¹ Though they have not been included in this annotated bibliography, see also Devuyt, D. and Hens, L. (2000). Introducing and measuring sustainable development initiatives by local authorities in Canada and Flanders. *Environment, Development and Sustainability* 2, 81-105; Berke, P. and Conroy, M. (2000). Are we planning for sustainable development? *Journal of the American Planning Association* 66 (1), 21-33; Dodson, J. and Mees, P. (2003). Realistic sustainability? Urban transport planning in Wellington, New Zealand. *New Zealand Geographer* 59 (2), 27-33; Freeman, C. (2004). Sustainable development from rhetoric to practice? A New Zealand Perspective. *International Planning Studies* 9 (4), 307-326; Vallance, S. (2007). The Sustainability Imperative and Urban New Zealand. Environment, Society and Design Division, Lincoln University, PO Box 84, Lincoln, Canterbury, New Zealand; Haughton, G. (1998). Searching for the Sustainable City; competing philosophical rationales and processes of 'ideological capture' in Adelaide, South Australia. *Urban Studies* 36 (11): 1891-1906; Portney, K. (2003). *Taking Sustainable Cities Seriously*. Cambridge, Massachusetts, MIT Press. and Baehler, K. (2007). Social sustainability: New Zealand solutions for Tocqueville's problem. *Social Policy Journal of New Zealand* 31 (22), 19 who has argued it is easier to identify that which is 'unsustainable'.

degrees of compaction. Residential densities that are socially acceptable in the central business district, and that actually create a vibrant, flourishing and diverse street life, may not be well-received by suburban residents who want to escape the 'concrete jungle' (Vallance, Perkins and Moore 2005). Acceptable levels of compaction will vary from city to city and from country to country. Densities *per se* are therefore less important than the cultural traditions and social practices to which they are applied (Jenks, Burton and Williams, 1996; Urban Taskforce, 1999, 2005; Carmona, 2001; Neuman, 2009).

The Postmodern and Post-Industrial City

Scholars have adopted different positions vis-à-vis the (late-)modern, post-industrial, and postmodern conditions. Whilst some treat postmodernism as a linear consequence of de-industrialisation, others treat it as a condition that defies chronological order and that appears in different forms in different places (Cahill 2001; Hutton 2004). There is some consensus to be found, however; the postmodern city is characterised by plurality and fragmentation (Craglia, Leontidou, Nuvolati and Schweikart 2004), by emphasising consumption over production (Clarke 1997; Paolucci 2001), and culture over class (Clark et al. 2002; McCann 2002; Stevenson 2002; Fyson 2005). Postmodernity is also characterised by a pervasive scepticism with regards to the role of rationality, science and technology. Rather than signifying progress, in line with much of the 'risk' literature, these have come to stand for the 'systematized destruction of people and resources through wars, narrowly focused economic initiatives, and short-sighted ecological policies' (Welcomer, Gioia and Kilduff, 2000, p. 1177). Thus postmodernism opposes totalising explanations and instead challenges the ways knowledge is used to promote some interests over others. For the purposes of this bibliography, our reading is that postmodernism is *in part* driven by processes of de-industrialisation, and *in part* a reaction against the techno-rational elements of modernism based on order imposed from above.

With regards to the role of de-industrialisation, it has been argued that a city's economic well-being is no longer tied so firmly to resource inputs (Gospodini 2006), but depends on its ability to attract and retain innovative, mobile 'creatives' who underpin the knowledge economy. Like tourists, these creatives demand salubrious environs, abundant entertainment options (Turner 2002) and a good quality of life (Clark, Lloyd, Wong and Jain 2002; While, Jonas and Gibbs 2004; Lambiri, Biagi and Royuela 2007), which has implications for the ways in which cities are planned physically, imagined and promoted, and brought to life (Lefebvre 1991, in translation; Soja 2000; Merrifield 2005). Under these conditions, it is very difficult to see how unwelcome, top-down eco-strategies, such as urban compaction, can be imposed on a mobile, well-resourced and demanding creative class. This raises interesting questions about the tools that are available to urban planners and managers that are palatable to the citizens of democratic states.

Socionatures and global natures

One of the challenges associated with bringing about an urban renaissance is finding means through which the city is re-enchanted. This goes beyond merely regenerating

and repopulating inner city areas and instead emphasises the need for a cultural shift (Carmona, 2001); that is, a reconfiguration of the way people see themselves, their relationship with the city and the environment. It marks a shift away from Romantic vision of the industrial city as a centre of ‘fornication and covetousness’, and accentuates the benefits and joys of urban life.² Manchester, Bristol and Birmingham are among those advancing policies to promote this urban renaissance in the UK, with Detroit a leading example from the US.

In seeking this re-enchantment, or in exploring rural-urban relationships, there is an expanding literature devoted to the ‘environmental borderlands’ (Zimmerer 2007) of hybridised ‘socio-natures’. Some of this work maintains a distinction between society and the environment whilst arguing for closer connections between the two (Harrison, Burgess and Filias 1996; Cairns 2003), whereas others challenge the existence of this orthodox binary claiming it is illusory and that it contributes to bio-physical environmental degradation and social injustice (Murdoch and Lowe 2003; Blunt 2005; Hinchliffe, Kearnes, Degen and Whatmore 2005; Wainwright 2005; Whitehead 2005; Head et al. 2006; Heyen 2006; O’Sullivan, Manson, Messina and Crawford 2006; Perkins 2007).

Such work challenges established taxonomies and emphasises multiple and interrelated networks of human/non-human interactions. As an example of such work, Eden and Tunstall’s (2006) study of a water restoration project showed the river’s edge acted as an ecosystem, but that it also formed a border between disparate socio-economic groups. The restoration project’s success depended on recognising both of these functions. Likewise, Allon and Sofoulis’ (2006) study into the Everyday Water project) treated water as a socio-technical complex, embedded within wider social structures. Reconfiguring socio-natural relations along these lines highlights ways in which society and place, space and nature are co-constitutive, and situates these connections as contributing to new expressions of environmental stewardship, ethics and citizenship (Head et al. 2006; Wolch 2007). Such work also has implications for the way we deliberately manipulate space (Hargreaves, 2004; Purdon, 2003).

Associated with questions about the permeability of society-environment relations is the debate over scale and ways in which we might better comprehend ‘global nature’. Many environmental issues, such as climate change, species extinction, or the ozone hole, are considered ‘global’ yet the actions needed to mitigate or rectify these problems are to be implemented by the nation-state, local authority, or other

² Compare, for example, Ruskin’s *Letters to the Clergy on the Lord’s Prayer and the Church* with Aristotle’s vision of the city state:

The great cities of the earth...have become...loathsome centres of fornication and covetousness – the smoke of their sin going up into the face of heaven like the furnace of Sodom; and the pollution of it rotting and raging in the bones and souls of the peasant people round them, as if they were each a volcano whose ashes broke out in blains upon man and beast (John Ruskin, *Letters to the Clergy on the Lord’s Prayer and the Church*, 1880, in Hall, 2002, p. 13).

The [city] state came about as a means of securing life itself. It continues in being to secure the *good life* (Aristotle, *The Politics*, trans 1962, p. 59).

institution (Petts 2005; Wilson, 2006; Lindseth, 2004; Lundqvist 2004; Masuda and Crooks 2007). Clearly, individual actions, cumulatively, are also very important' and thus attempts at identifying ways in which global nature can be given greater importance in people's everyday lives has also received much attention of late (Braun, 2006; Carolan 2007). The focus has been on finding ways to make these connections more relevant in the hope of modifying people's behaviour and encouraging greater levels of participation. This may involve a reconceptualisation of 'the environment' that fits better with people's everyday experiences (Macnaghten and Jacobs 1999; Macnaghten 2003) and the mundane choices they make (Jarvis 2007).

Burningham and Thrush's (2001; 2003) research has demonstrated that wider 'environmental problems' are often interpreted in terms of local effects on health and well-being with 'big issues', such as pollution, being less important than 'minor' concerns like dog litter. They found that practical and financial concerns were the main drivers of environmental action. Bickerstaff and Walker (1999; 2001; 2003) used the example of air pollution to show how information about this problem was evaluated against personal experience. They claim that everyday life acts as a kind of prism through which more distant televised or web-based claims about the environment are mediated and this raises many interesting questions about the role of scientific information in the quest for sustainability (also see Graves 2003).

Scientific nature, vernacular science and behaviour change

There is a great ambivalence in the literature with regards to the role of science and technology. On one hand it is believed that scientists will find objective, value-free solutions to the myriad problems we face, from food shortages (solved through genetic modification) to global warming (achieved by developing energy efficient technologies).³ On the other hand, science and technology can be seen as headless monsters acting in the State- or corporate-interest, and not so much value-free as being ethically suspect or lacking a culture of care (Jarvis, 2007; Wolch, 2007).

Other work on the role of science in our society shows that the way knowledge is constructed and governed is as important as other ways of exercising power. Consequently, it is essential to interpret critically information suggesting that the environment is in crisis, with crucial questions being how such information is obtained, and who is actually authorised to 'save' the environment (Rutherford 2007). Such questions illustrate the way power is divided between 'experts' and 'lay people' with a growing number of authors suggesting that the elevation of expert knowledge in the discourse legitimises standardised and reductionist responses to contemporary environmental issues. This simultaneously undermines contextual and holistic approaches (Bickerstaff et al. 1999; Welcomer et al. 2000; 2001; 2003; Soneryd 2004; Cardinal 2006; Evans and Marvin 2006), and risks failing to engage with the public and the 'rhetorical situation' (Myers and Macnaghten, 1998, in Barr 2003) in which scientific information is understood.

³ For examples see Lane, B. (2000). Public understanding of the environmental impact of road transport. *Public Understanding of Science* 9, 165-174 or Hunter, C., Carmichael, K and Pangbourne, K. (2006). Household ecological footprinting using a new diary based data gathering approach. *Local Environment* 11 (3), 307-327.

Though scientific information can be helpful, it is not enough (Barr et al. 2006) and should be combined with a better understanding of: people's beliefs, values and emotions (Stoll-Kleeman, O'Riordan and Jaeger 2001; Barr, Ford and Gilg 2003; Linden and Carlsson-Kanyama 2003; Powell, Dunwoody, Griffin and Niuewirth 2007). Also important are people's skills (Oskamp 2002) and socio-demographic characteristics including levels of education (McDonald, Lane, Haycock and Chalk 2004). In terms of our discussion of the postmodern and post-industrial city, it may be necessary to identify different sub-populations with particular practical needs and, importantly, these various 'publics' (Blake 1999; Walker 1999; Church and Elster 2002; Bickerstaff et al. 2003) may be graduated along cultural as well as the traditional socio-economic lines (Ungar 2000).⁴

These various aspects can contribute to a 'vernacular science' (Wagner 2007) attuned to the complexities of everyday life that relies on positive and attractive images and metaphors (Ungar 2000; Hahn 2002; Wagner 2007), even if they are not strictly correct or accurate in a scientific sense (Evans et al. 2006; Bonnes, Uzzell, Carrus and Kelay 2007). Backstrand (2004) advocates the notion of 'civic expertise' as a model within which public participation balances scientific technocracy, and encourages the development of social as well as technical solutions. Thus, a vernacular science might also incorporate a stronger social dimension given work suggesting that a concern for the well-being of others might be a better motivator for behaviour change than anxiety about abstract global nature (Bulkeley, 2000; Jarvis, 2001, 2003, 2007; Lindseth, 2004; Petts, 2005; Hogget, 2001).

In a somewhat different approach, rather than trying to change people's behaviour through information and education, advocates of community-based social marketing focus on the factors that prevent people from behaving in the desired fashion. An in-depth understanding of these factors is achieved through qualitative research, then tested on the wider population through quantitative methods. A strategy is then designed to overcome those barriers using 'tools' that include group, public and existing 'commitment', prompts, norms, communication, incentives and removal of external barriers. The strategy is pilot-tested and different strategies can be tailored to different segments of the public (McKenzie-Mohr, n.d.; Chard, 2004; Frame, 2004; Henley 2006; Kennedy, 2006). Essentially, community based social marketing adopts the view that we can change people's behaviour without necessarily changing their attitudes or values. As an example, residents might be encouraged to recycle more because it is free rather than because it is good for the environment.

Governance, participation and regulation

The postmodern, post-industrial condition places novel demands on local authorities and the way they manage urban affairs. Emotion, symbolism, flexibility, uncertainty, plurality, differentiation, decentralisation and fragmentation challenge established modes of government, as does the need for the support and cooperation of a wide range of actors (Bulkeley et al. 2006). That diversity and difference are managed

⁴ Or even according to species if we invite 'nature' into the mix (see Ellis, R. Waterton, C. (2005). Caught between the cartographic and the ethnographic imagination: the whereabouts of amateurs, professionals and nature in knowing bio-diversity. *Environment and Planning D-Society and Space* 23: 673-693.

properly is crucial if a city is to extract the benefits – such as stimulating the imagination and driving innovation - offered by plurality. The risk is that the celebration of diversity that can be used to re-enchant the city decays instead into a fear of difference, mistrust and incivility (Atkinson 2003; Mommaas 2004; Amin 2006; Rantisi et al. 2006).

Wigmans (2001) uses the case of Rotterdam to illustrate a postmodern or 'contingent' approach to urban governance which draws on a different notion of control and where the city is seen as a sum of different projects, segmented according to various opportunities. This replaces notions of the city as a closed spatial entity and encourages local government to become more flexible, responsive and project-oriented. Consultation and 'urban debates' are invited at the very early stages of urban planning so as to elevate levels of public support.⁵ This is consistent with a view of urban sustainability as a process, or as procedure- rather than strictly and only goal-driven.

The purpose of planning changes under such conditions. Planning is seen less as demanding and imposing coherency, but instead emphasises managing the various interdependencies and connections that build the city. Planners take on the role of 'knowledge brokers' who essentially translate across disciplines, frameworks and paradigms, and who are able to help generate common criteria for discussion and decision-making (Satterthwaite 1998; Burningham et al. 2001; Ali 2006; Boone and Modarres, 2006; Evans and Marvin, 2006; Bonnes et al. 2007). 'Participation' comes to be seen as part of a deliberative process where the legitimacy of decisions is based not only on scientific validity but also on the support of affected parties. Citizen juries and citizen polls, stakeholder fora and referenda may help the evolution of new institutions that will combat the tendency to engage in mere 'cosmetic adjustments' to entrenched scientific supremacy (Backstrand, 2004).

Everyday life

In the past, the search for 'structural' explanations of social phenomena has tended to outweigh a focus on the everyday, mundane ways people make and sustain their worlds. Recently, however, this has undergone something of a transformation and there is an emergent literature problematising the connections between spectacular global nature and rather more banal everyday environments framed by practical considerations (McCann, 2002; Crouch 2003; Bernheimer and Weisner 2007). The quotidian, therefore, has been presented as a good foundation for further study because it a) is often presented as commonplace and routine but is actually complex and multifaceted; b) daily life is rhythmic, active and temporally alive; and c) it is a site where socially relevant and practical knowledge is produced and absorbed (Whitehead 2005) through performance and embodied practice.

Performance is concerned with the ways in which sustainability is actively 'done' and the way it then becomes embodied practice, through habit, over time. It is through

⁵ Though see Reed (2007) who endorses the notion of broad consultation and engagement but challenges the unquestioning belief that greater participation will always equal better outcomes (Reed, M. G. (2007). Uneven environmental management: a Canadian perspective." *Environmental Management* 39 (1): 30-49).

practice that people experiment with different ideas about nature and the environment (Cloke and Jones, 2001; Bhatti and Church 2004; Blunt 2005; Carolan, 2007), and it is through practice that particular ideas are stabilised (Crouch 2003). The concept of dwelling (see Ingold, 2000) is useful because it emphasises the importance of shared practical activities (also see Hobson, 2003) through which the contest between abstract and context-driven knowledge is resolved through sensory accounts of a situation (Soneryd 2004). This challenges modern ways of knowing where truth is separated from such corporeal considerations as emotion and feeling, and has connections with ways 'vernacular science' might be undertaken.

In situating the sustainability debate within the methodologically challenging, context-dependent and holistic nature of everyday life (Colantonio 2007), a number of empirical studies remind us of the need to be attentive to various concerns about quality of life. Theoretically, it is now commonplace to see quality of life as having both objective (or external) and subjective (psychological) elements (Leitmann 1999; Massam 2002; Pacione 2003; van Kamp, Leidelmeijer, Marsman and de Hollander 2003; Akbar 2005; Kowaltowski, da Silva, Pina, Labaki, Ruschel and Moreira 2006; Sirgy, Michalos, Ferriss, Easterlin, Patrick and Pavot 2006; Roberts and Clement 2007; Kitchen and Muhajarine 2008). Consequentially, assessments of 'the environment', its ecological integrity, and its capacity to service our wants and process our wastes are balanced against people's expectations and desires. For some, bringing these into harmony is the essence of sustainability (Ruida, 2006; Satterthwaite, 1998; Roberts, 2007).

Whilst this is ideal in the abstract, everyday practicalities can make it difficult to achieve. Chard (2004) has argued that while people may be concerned about aspects of their environment, they may be *more* concerned about other things. Similarly, Jarvis' (2001) study of households' choices concerning where and how to live (in compact versus dispersed cities) suggested that residential location, for example, is not a discrete choice but is situated alongside other concerns around family time, earnings, parenting, tastes and identities – some of which have to give way to others. Jarvis argued that we need a better understanding of 'what gives' in order to find ways in which we might align sustainability and everyday routines. She contends that we should not abandon the search for sustainability but that we need to be more attentive to quality of life concerns - or 'what it takes in a practical sense to routinely accommodate work, home and daily life' – and bring these considerations into the mix.

Quality of life and the city

The academic trend towards emphasising non-material aspects of quality of life finds its complement in work conducted on the city itself, specifically with reference to intercity competition. We have already discussed the demands placed on the city given the transition from industrial to post-industrial 'creative' cities, however more needs to be said about the connections this has with residents' quality of life.

The general idea is that as cities compete for mobile talented workers and tourists, local authorities are inclined to direct public funds towards convention centres, casinos, sports stadia and other 'spectacular' urban features. Many now question this approach (Flyvbjerg, Bruzelius and Rothengatter 2003). Hanna and Walton-Roberts

(2004) use Toronto, Canada, to illustrate how this process can contribute to a situation whereby resources and responsibilities start to separate. This can have adverse impacts on poorer people's urban quality of life because the state diverts funds away from less glamorous, but perhaps more fundamental, services and facilities. Ironically, calls to compete on the world stage for sky towers, sky scrapers and other testaments to grandeur, can be counter-productive in terms of quality of place (comprising physical growth, social and environmental quality, and governance) because truly competitive cities are not just a manifestation of financial bottom lines, but reflect the satisfaction of multiple needs. Enyedi (2002) has made a similar point, arguing that urban sustainability is not just about being globally competitive but involves citizens feeling safe. Otherwise both capital and the 'successful strata' of mobile creatives will flee the city leaving a hollow shell of bio-physical environmental, social and economic decay.

Conclusion

If compact cities are, in fact, desirable in terms of sustainability, urban planners, practitioners and decision-makers need to become more adept at maintaining the balance between bio-physical environmental, economic and social issues. Given the dictates of the post-industrial creative economy, the limitations of democracy, and the postmodern challenge to scientific supremacy a new approach is needed if there is to be a beneficial urban renaissance (see Table 1). Such an innovative approach is likely to work over three levels: socionatures ('worldview'); governance (institutions) and the built form (see Table 1).

Table 1. Design Guidelines

<p>Include narrow streets</p> <p>Create walkable neighbourhoods by developing well networked spaces</p> <p>Line street frontages with retail activity</p> <p>Have many small buildings instead of a few large ones</p> <p>Include porticos, arcades, low fences and shelters</p> <p>Include seating options and opportunities</p> <p>Provide on-street parking rather than large parking lots</p> <p>Plant trees</p> <p>Provide a range of housing choices, housing types and housing prices</p> <p>Mix compatible uses</p> <p>Run design charettes</p> <p>Keep the area clean and tidy</p> <p>Provide good, safe public open spaces</p> <p>Preserve local characteristics and heritage</p> <p>Reinvent strip malls as mixed use.</p> <p>Recognise the preference for both high and low density living</p> <p>Evaluate what land is available for infilling, particularly on brownfield and derelict sites, and encourage development in those areas.</p> <p>Coordinate development</p> <p>Run a variety of programmes, festivals, markets, outdoor movies to encourage community ownership and a sense of place</p> <p>(Arbury (n.d); NAR (n.d.); Urban Task Force 1999, 2005; Rogers, 2005; Institute for Ecological Health 2002; Matilla 2002; Tallon and Bromley 2004; Chan and Lee 2008; Grant and Bohdanow 2008; Wheeler 2008</p>

Much of the literature addressed the relationship between people and their environment, using the term ‘socio-nature’ to indicate the value of a new relationship between the two that is co-constitutive rather than dualistic. Central to this are the ways in which we know and understand the world around us. Much of the literature included here suggests that the tendency of sustainability advocates to frame so-called environmental issues in scientific terms is problematic given the postmodern challenge to totalising, techno-rational explanations and solutions. Consequently, attention has turned to contextual or contingent approaches that allow us to translate abstract goals into specific, practical measures. Further, a contextual approach allows us to make judgements about actions that serve bio-physical environmental, social and economic goals, in effect killing several birds with one stone. This also counters the tendency to develop solutions to environmental problems independent of their social and economic context; a propensity that can further exacerbate the problems of disadvantaged groups.

A contextual approach also encourages us to foster a sense of place that highlights the connections between people and their environment. Though communities are no longer necessarily spatially fixed, place-relationships are still culturally very important and also a means through which certain goals can be achieved. One possible expression of this is ‘stewardship’ which lies somewhere between quasi-religious nature worship and pure instrumentalism (Stevenson 2002). It implies a balance between scientific readings of, for example, maximum sustainable yields and romantic readings of fragile nature under threat. It also implies a responsiveness to place that can be achieved through performance, ‘taskscape’, embodied and, often, shared experiences. Over time, this kind of value-driven, interactive education can help build an environmental ethic that has been tested in place and will likely withstand the sometimes ambiguous or overly complicated information we receive about the world.

The emphasis on pluralism, fragmentation, diversity and difference can hide the strong connections that still exist between the larger social structures and individual agency. ‘Global nature’, for example, still manifests at the local scale, in neighbourhoods and in people’s homes. The literature presented in this bibliography has illustrated the utility of looking not only at the micro-level (which is often neglected or dismissed as too mundane) but also at the connections between scales and how they interact. Often this interaction manifests in institutions that can serve as a useful location through which agency is constrained or supported by structural change, and where the cumulative effect of individual, small scale ‘accommodations’ drives wider transformations.

Postmodernism’s challenge to meta-theory demands new ways of thinking about the relationship between ‘experts’ and ‘the public’ (or, rather, ‘publics’ or shifting citizen alliances) (Table 2). Deliberative democracy and participatory planning both encourage the kind of civic expertise Backstrand (2004) sees as central to combating scientific technocracy and encouraging the development of *socio*-technical solutions. It recognises that members of the public have their own areas about knowledge that are borne out of familiarity with their environment, that are temporally alive, and holistic in character.

Box 2. Summary of the Literature

Combining science with stories, metaphors, art, activities so as to make emotional or moral connections with urban residents. (Stoll Kleeman, O'Riordan, T. and Jaeger 2001; Oskamp 2002; Burningham and Thrush 2003; Backstrand 2004; Chard 2004; McDonald, Lane, Haycock and Chalk 2004; Akbar 2005; Ali 2006; Mulvihilla and Milan 2007; Cameron, Mulligan and Wheatley 2007; Wolch 2007) .

Contextualising scientific information (Bickerstaff and Walker 1999; Ungar 2000; Lucas, Grosvenor and Simpson 2001; Mayer, Danis and Greenberg 2002; Hobson 2003; Bromley, Tallon and Thomas 2005; Lindenberg and Steg 2007; Powell, Dunwoody, Griffin, and Niuewirth 2007).

Recognising different interest groups and framing messages accordingly (Bickerstaff and Walker 1999; Blake 1999; Walker 1999; Ungar 2000; Petts and Brooks 2006).

Engaging in more meaningful participatory procedures (O'Hara 1999; Wigmans 2001; Wendorf 2006), early on, before the problem has been defined by experts (Welcomer, Gioia, and Kilduff 2000; Backstrand 2004; Vantanan and Marttunan 2005).

Providing or establishing new institutions that encourage counter-expertise (e.g., citizen juries) and 'transgressive' spaces of consultation (Backstrand 2004; Soneryd 2004; Peel and Gregory Lloyd 2007; Jupp 2008) .

Craft a vision and 'sell' the compact city (Arbury n.d.; Urban Task Force 1999; Tallon and Bromley 2004; Rogers 2005; Hubacek, Guan, and Barua 2007).

Rehumanising cities by integrating social and economic concerns and retaining a focus on quality of life issues (Bulkeley 2000; Cahill 2001; Jarvis 2001; Stevenson 2002; Burningham and Thrush 2003; Hanna and Walton-Roberts 2004; Clark 2005; Boone and Modarres 2006; Krueger and Savage 2007; Mulvihilla and Milan 2007; Budd, Novrich, and Pierce 2008; Neuman 2009).

Building capacity for change through adaptive governance (Konvitz 1995; Budd, Novrich and Pierce 2008).

Provide knowledge brokers and positive spaces for negotiation (Evans and Marvin 2006; Bonnes et al. 2007; Peel and Gregory Lloyd 2007)

A managed growth strategy developed with an understanding that cultural preferences for certain housing types will change slowly over **time** (Fraser, 2005; Urban Task Force 1999, 2005; Clark, Lloyd Wong, and Jain 2002; Rogers 2005; Jim and Chen 2007; Vlek and Steg 2007; Howley, 2008; Jupp 2008).

Such exhortations are not new; however, very few local authorities seem to be able to abandon their traditional roles in favour of strong participatory models. After all, what is left to the planner who is no longer able to plan? The literature suggests that planners need not abandon their posts so much as employ new mechanisms and media through which they communicate with those people and institutions interested in and affected by their work. Essentially this means recognising that communication works both ways, engaging with residents early on in flexible decision-making processes and recognising the value of community efforts to improve their city. Another way of looking at planners' roles is finding out what people would like to happen and then evaluating this to see if their suggestions actually lead to desirable results that are reasonable in terms of social, economic and ecological senses (Vantanen and Marttunen 2005).

In the postmodern city urban authorities are charged with acting as facilitators and enablers who direct their effort towards creating 'positive planning spaces' (Peel and Gregory Lloyd 2007), in which common criteria and vocabularies are created. Rather than the orthodox goal-centred model of urban management, planners can adopt a project- or process-based approach by helping identify, bring together and manage the interdependencies between various interests.

Local authorities also have a role to play in terms of both support and leadership. As well as the usual recycling facilities, funding, information and training, support could be given to many of those activities that do not necessarily appear to contribute towards standard readings of sustainability that focus on the bio-physical environment, *but that underpin urban sustainability and resilience nonetheless*. Resilience is a city's ability to withstand both sudden shocks and 'slow emergencies'. In this view sustainability is less about attaining a steady ecological state and more about building capacity in social systems, and about being adaptable whilst maintaining core functionality. Unfortunately, many of these activities fall outside the traditional core business of the state (urban food regimes, car pooling, citizen juries, referenda, small scale allotments, community gardens, furniture recycling schemes) and others are even seen as antithetical (local currencies and some forms of trade and exchange).

In terms of leadership, not only do urban authorities need to be seen to be doing the right thing; they need to demonstrate their own efficacy by dealing successfully with local problems and making sure local needs are met, even as they address global issues. Addressing local needs engenders trust, establishes the effectiveness of their administration and, furthermore, enables and empowers residents to act.

Much of the literature presented here either implicitly or explicitly argues for a more managed approach so as to ensure the potential benefits of urban compaction (or its variants such as Hall's (2005) 'beads on a string' model) are actually realised (Fraser, 2005; Hall, 2005; Urban Task Force, 1999, 2005; Clark, Lloyd, Wong, and Jain, 2002; Rogers, 2005; Jim and Chen, 2007; Vlek and Steg, 2007; Howely, 2008; Jupp, 2008; Neuman, 2009). Business interests have long tried to influence the 'needs' and desires of residents and, as Hubacek, Guan and Barua (2007) have argued, there is no reason why sustainability advocates cannot do the same. This will demand that

proponents of sustainability understand *people* as well as they understand the bio-physical aspects of the environment, and be prepared to use metaphors, stories, art and images to complement, or even replace, scientific information. Community-based social marketing seems well suited to such circumstances, particularly given the emphasis on the removal of barriers rather than spreading the messages of science, and the in-depth understanding of the sometimes differing, sometimes overlapping needs of citizens' groups and associated institutions.

Urban sustainability, in the final analysis, may be less about the bio-physical environment and 'nature', more about the immaterial and the symbolic, morality, aesthetics, emotion, and all manner of practices used to enchant the various urban worlds in which we live. We may need to consider new market/state mixes that facilitate the creation of liveable cities, and find better ways of selling the benefits of urban living to an increasingly wary and mobile public.

The Built Environment

This section contains annotations directed towards tangible aspects of the built environment, such as housing form, densities, and infrastructure. Also included here is work discussing elements that might be considered distinctly ‘post-industrial’ and the connections between this, urban form and service provision.

1. Arbury, J. (n.d). From Urban Sprawl to Compact City: An Analysis of Urban Growth Management in Auckland. Masters Thesis; University of Auckland. <http://portal.jarbury.net/thesis.pdf>

Arbury's goal was to examine approaches to the compact city that are feasible and acceptable. Some studies conducted in the UK have suggested that densities over 200 bedspaces per hectare are unfavourable, however, much of the contemporary urban development is as low as 50 bedspaces per hectare. Consequently, there is considerable leeway to increase densities whilst staying below the danger zone (Rydin, 1992). The author cites a number of works (Hasse and Lathrop, 2003; Carruthers and Ulfrasson, 2003; van der Burg and Dielmann, 2004) which highlight the complexity of the relationships between urban form, function and sustainability. Much of this work suggests that compaction will be acceptable if it is designed well. Arbury cites Porta and Renne's (2005) work on ‘urban fabric indicators’ including: accessibility, land-use diversity, public/private realm, natural surveillance, permeability/street connectivity, employment density, number of buildings, and number of lots. These are combined with ‘street indicators’ that measure the sustainability of particular urban designs. These highlight the importance of micro-level street features such as sky exposure, façade continuity, softness, social width, visual complexity, the apparent number of buildings, and sedibility (seating opportunities). Porta and Renne's work, based in Australia, suggests good urban design includes:

- 1) Narrow streets that accommodate the pedestrian over the automobile.
- 2) Not isolating buildings in lots, but lining the street.
- 3) Not allowing setbacks: buildings should be as continuous as possible along the street.
- 4) Constructing many small buildings instead of a few large ones.
- 5) Designing retail at the ground floor wherever possible.
- 6) Avoiding large barren parking lots: on-street parking is much better as it integrates with the rest of the urban landscape.
- 7) Designing porticos, arcades, low fencing, stoops, shelters and the like: everything that can provide a soft transition from the street to the building.
- 8) Avoiding blank walls, large billboards, large on-street dumpsters and high light poles.
- 9) Planting trees on wide streets to create a better sense of enclosure.
- 10) Providing places to sit where possible.

Arbury argues that although it may not appear so at first glance these measures are consistent with those outlined in the Ministry for the Environment's Urban Design Protocol.

In his case study of Avondale in Auckland, Arbury found his respondents chose the area for its affordable housing, good schools, and good access to work/shops. In order to accommodate growth the largest number of respondents (33 per cent) welcomed limited development in unused sites, 26 per cent thought constructing terraced housing, townhouses and small apartment buildings was acceptable, and a further 24 per cent thought infill housing was the best way to 'intensify' or 'consolidate' the area. The results showed a clear aversion to high density apartments. Another interesting result was that although participants agreed that the area was well-served by public transport, very few residents used it. In conclusion, the author noted that 'overcoming the stigma attached to intensification will be crucial' if Auckland is to achieve its urban growth management goals (p. 160). He concludes that addressing sprawl demands widespread (from transportation to media images of the suburban ideal) socio-cultural change augmented by stronger local government guidance and control.

2. Batty, M. (2008). Editorial: how tall can we go? *Environment and Planning B: Planning and Design* 35 1-2

The Burj Tower in Dubai is over 800m high. The higher the building the higher its need for artificial energy. It is also expensive to move materials up and down, and, like animals, the larger the mass, the greater the need for convoluted systems to move materials and energy around. Batty points out that although dispersion certainly has its costs, we don't really know whether a compact city form is better than a decentralised one. Tall buildings in compact cities still go 'out', just in a different direction: up.

3. Bhatti, M. & Church, A. (2004). Home, the culture of nature and meanings of gardens in late modernity. *Housing Studies*, 19(1), 37-51.

Though the authors' primary concern is to explore connections between ideas of the home and nature in late modernity, the article contributes to a better understanding of how a particular urban form – the garden - can contribute to a sense of ecological certainty on the one hand, but can generate a heightened sense of environmental threat on the other. This can lead to feelings of unease. Their study showed that the link between gardening and environmental concern is not necessarily straightforward. It may be the garden is a space within which environmental uncertainties can be explored and tested.

4. Bhatti, M. & Dixon, A. (2003). Special focus: housing, environment and sustainability. *Housing Studies*, 18(4), 501-504.

In this introduction Bhatti and Dixon make a number of points about connections between housing and sustainability, with a particular focus on the social dimensions of the concept. First, environmental ills do not necessarily affect everyone equally; some are better able to mitigate the effects (or move elsewhere) than others. Second, sometimes measures to rectify environmental problems can adversely affect vulnerable groups, as was the case when VAT was added to fuel charges in the UK in

1993. Third, the links between environmental vulnerability and access to resources needs to be explored further. They note that although the connection between sustainable practice and everyday experience is well-established, little attention has been directed towards the constraints faced by disadvantaged households. As the authors note, only when people have a certain 'quality of life' do they worry about sustainable practices. If they have yet to attain this quality of life, they are more concerned with immediate issues such as safety, litter, secure employment, and the like.

5. Bonnes, M., Uzzell, D., Carrus, G. & Kelay, T. (2007). Inhabitants' and experts' assessments of environmental quality for urban sustainability. *Journal of Social Issues*, 63(1), 59-78.

The authors compared experts' and inhabitants' assessments of the air quality and biodiversity of different areas in Guildford (UK) and Rome (Italy). The paper builds on work undertaken by UNESCO's Man and Biosphere Programme which employs a full ecology perspective accommodating both physical and social scientific principals. The Rome findings highlight the utility of residents and experts sharing common criteria in their evaluations. In terms of greenspace, for example, quantity may be more important for residents than ecological integrity. The Guildford study showed that, contrary to many experts' views, residents may possess quite detailed understandings of environmental problems though it may be expressed in qualitatively rich, rather than technically correct, terms. In conclusion, communication between the two groups was found to be important.

6. Boone, C. & Modarres, A. (2006). *City and Environment*. Philadelphia: Temple University Press.

Boone and Modarres present a relatively ambitious and wide-ranging account of the relationships between urban, rural and natural areas and in so doing call into question the feasibility of maintaining an artificial 'epistemological and ontological duality of the city and environment' (p. 36). Other points of departure from standard readings of the connections between the city and the environment include a challenge to the notion that cities are 'unnatural', unhealthy and unsustainable. Cities, they argue, 'are our most persistent spatial narratives' that are 'as much about the everyday life of their residents as they are about monuments' (pp. 1-2). Though they address issues around physical urban infrastructure, cities, in this text, are presented very much as the nexus of both social and bio-physical environmental forces and in later chapters they turn their attention to ways in which urban areas can be made more sustainable from this starting point. Somewhat unusually they give more than cursory attention to the role of social issues - including poverty, inequality, and more recently the environmental justice movement - that haunt the city and that drive urban morphology. This, they argue, underpins conceptualisations of urbanism and spatial arrangements that 'remain part of the discourse on who we are, who we wish to be, and how the images of the environment may be embedded in our daily lives' (p.37).

Life itself is also scrutinised in the context of the healthy cities movement which, along with smart growth, new urbanism and urban sustainability, has seized the imagination of planners and politicians alike. Their 'Healthy Cities and Environmental Justice' chapter provides a good discussion of the desire for a better quality of life in cities is linked to 'the environment' through the everyday actions of residents. Healthy cities are those that take a systems or holistic approach to well-being and acknowledges the links between human and ecological health. Given cultural and ecological variants, not-to-mention the many different degrees of political will and ability associated with this approach, consultation is an important part of the healthy cities ideal. They do note that the focus of the environmental justice movement is, more often than not, on *disamenities* and that, in urban areas at least, environmental injustice serves to rally residents when those disamenities are visited upon the human population.

The 'Green Spaces, Green Governance, and Planning' chapter also provides a good foundation for further connections between everyday urban features and lifestyles and sustainability. This material ranges from the ways in which urban and suburban landscapes sequester carbon to the connections between greenspaces, parks and playgrounds that embody democratic or utilitarian ideas and ideals.

The earlier chapters provide the backdrop for their seven prescriptions to a 'sustainable urban future'. The first is to be 'smart' by using our best ideas 'that improves quality of life while continuing to make cities vibrant, progressive, energetic and inviting places' ...in part through the smart use of resources and generation of waste (p.185). The second prescription is to demote the car and reinstate people as guides in the design of rehumanised cities. The third is to be careful in the redesign of existing cities, which involves recognising the creative capacity of people to modify their surroundings on one hand, and acknowledging the limitations of the spatial arrangements we inherit. Infill housing and mixed use are possible solutions. The fourth prescription for sustainable cities is to 'internalise externalities' (p. 186) which will inevitably lead to behaviour changes. Fifth is to reconsider the notion of 'health' in broader terms that acknowledge our relationship with the world around us. Their sixth prescription is to promote justice and equity and the seventh is to uncover or rediscover the lessons learned both in the past and in other places that might teach us about good city living. In all probability these will take us beyond technical fixes to approaches that integrate both social and ecological concerns.

7. Bramley, G. & Power, S. (2005). *Urban form and social sustainability: the role of density and housing type*. Paper presented at the European Network for Housing Research Conference.

The paper presents the findings of the CityForm Project undertaken by a consortium of five universities in the United Kingdom with the goals of investigating the claims of compact city advocates and exploring the relationship between urban form and social sustainability. They note that defining 'social sustainability' is problematic but that is usually involves social capital, social cohesion and social exclusion. Having identified key elements of social sustainability, the authors then assess whether urban density affects social sustainability. They found higher densities were linked to greater dissatisfaction but better access to resources, however, these effects of urban form were generally quite small.

- 8. Bromley, R., Tallon, A. & Thomas, C. (2005). City centre regeneration through residential development; contributing to sustainability. *Urban Studies*, 42(12), 2407-2429.**

The authors discuss the links between regeneration policies aimed at the inner city and urban sustainability. 'Residentialisation' helps contribute to sustainability by supporting retail activities during the day and entertainment at night, and promoting mixed use and walkability. Tenure diversification should help ensure that redevelopment is socially sustainable in the sense that gentrification and displacement of disadvantaged communities is avoided. Derelict buildings can be recycled improving the general appearance of the inner city and reducing pressure on the suburbs. The authors note that the success of such measures hinges to some extent on the social mix of the downtown area with the servicing of the night-time economy dependent on age and class. Lower status groups make use of nightclubs and higher status groups enjoy cafes and restaurants. This adds weight to arguments for a good social mix in the inner city. Younger adults made the biggest contribution to the night-time economy. These general findings are offset by the caution that policies on sustainable inner city redevelopment need to be tailored to local conditions and opportunities. The widespread aspiration to include children in the social mix might, for example, be undesirable given many inner city schools have closed down. A careful balance between housing and other commercial functions also needs to be found.

- 9. Brown, T. & Bhatti, M. (2003). Whatever happened to 'housing and the environment'? *Housing Studies*, 18(4), 505-515.**

The authors explore some of the connections between housing and sustainability. Studies in this vein could usefully focus on how housing contributes to economic growth, social integration and fair competition given the dictates of globalisation.

- 10. Burton, E., Williams, K. and Jenks, M. (1996). A question of sustainable urban form. In M. Jenks, Burton, E. and Williams, K. (Eds.). *The Compact City: A Sustainable Urban Form*. London, New York, E and FN Spon, pp. 341-345.**

In this chapter in a book of collected works Jenks, Burton and Williams explore the effects of infill housing on residents living in areas experiencing urban intensification. Their starting point was that residential intensification always has a context, and that this context is important in determining how sustainable – in terms of acceptability – infill housing might be. They also point out that often the benefits of intensification are 'strategic' but that most of the impacts are 'local' and that these impacts are not fully understood by compact city advocates. To explore these issues, they administered a questionnaire to survey residents' perceptions of the effects of intensification in 12 case study areas throughout the United Kingdom. They found that, if urban intensification is well-understood and well-managed, it *can* be acceptable to local residents but that there are limits to how much development

residents will tolerate. They call this limit 'social capacity'. The social capacity will result from a combination of 'the type of intensification, the type of area in which it takes place and the social characteristics of the people experiencing it' (p.245). 'Activity intensification' (increased *use* of buildings and more people using the area) was perceived in a more negative way than 'development intensification' (increasing the number of buildings). *Changes* in density were found to be more important than densities *per se*. They also report that the character of the area was central in affecting whether the intensification would be acceptable to local residents. Those living in higher status and suburban areas, homeowners and older people generally saw intensification as less acceptable.

11. Burton, E. (2001). *The compact city and social justice*. Paper presented at the Housing Studies Association Spring Conference, 18/19 April, University of York.

Burton begins by acknowledging the difficulties of defining and measuring social justice and equity but also notes that there appears to be some consensus in the planning community that compaction will serve these goals. Her investigation into the links between density and equity involved framing the latter in terms of income, wealth and quality of life. These are operationalised by studying the costs and benefits of compaction such as, for example, access to facilities and reduced crime. Compaction was found to have a negative effect on domestic living space, housing affordability, access to green space, crime, and a higher death rate from respiratory disease. Conversely, higher densities were associated with better access to public transport, (weak) fewer deaths attributed to mental illness, reduced social segregation, more opportunities for walking and cycling, better job opportunities for less-skilled, and better access to facilities. The nature of compaction also plays a role with development of derelict land and urban regeneration schemes bringing greater benefits.

12. Chan, E. & Lee, G. K. L. (2008). Critical factors for improving social sustainability of urban renewal projects. *Social Indicators Research*, 85(2), 243-256.

This article reports on a study into the ways in which urban design can contribute to the social sustainability of renewal projects. A quantitative survey of architects, planners, property development managers, and local citizens highlighted the need for the satisfaction of welfare requirements, the conservation of resources and the surroundings, the creation of 'harmonious living environments, the provision of facilities and services that promote 'daily life operations', and open spaces. The authors adopt Chiu's (2003) definition of social sustainability as referring to 'the maintenance and improvement of well-being of current and future generations'. This can be achieved through the provision of social infrastructure (such as schools and medical centres, and the ability to look after vulnerable groups, areas to facilitate social gatherings, and so on); job opportunities (which has been negatively correlated with poverty, social exclusion, welfare dependence and psychological problems); accessibility (to housing, leisure facilities, employment, etc); townscape design that

fosters a sense of belonging and is aesthetically pleasing; preservation of local characteristics and heritage; and the ability to fulfil psychological needs.

13. Clark, M. (2005). The Compact City: European ideal, global fix or myth? *Global Built Environment Review* 4(3): 1-11.

Clark begins his editorial by noting a basic tension between 'attempts to contain and direct urban life, and the market through which intervention takes place' (p.1). He then continues with an overview of the complex connections between everyday life, the market and planning observing that:

Cut supply, price rises and demand shifts. Sentiment attaches to familiar places: certainty defines identity. Aesthetic, cultural and ecological assets are damaged or destroyed by development. But in dynamic, individualistic, materialistic and wealthy societies, conservation must still permit 'progress': ensure opportunities for employment, education, travel, consumer goods, services and, in particular, housing. Expectations differ across the Globe and over time, and are subject to fashion, media and marketing influence, plus new imperatives. Politicians, officials, experts, opinion formers and campaigners mediate between a far from certain and fluid mix of concerns, scientific evidence, interests and anxieties. So concern about Global Warming and other environmental threats is expressed in the rhetoric, and to some extent policies, of sustainable development. Should this favour high density mixed land uses in well defined settlements, and restrict suburban, private car based, lifestyles? Can such limits be imposed, or sold, to populations whose aspirations and behaviour reflect the American Dream? And how do such imperatives relate to other urgencies: access to clean water and healthy food, and ensuring that natural disasters do not become human calamities. We need intelligence, education, safeguards, control on where and how buildings are constructed, resilience preparedness and robust communications and means of evacuation or relief. Not petty minded intervention in the minutia of how and where we live, work and travel. Or is this the point: these matter?

Clark maintains that revitalisation is better than the neglect and decay of inner cities that tends to be associated with suburban sprawl, whilst noting that this is a vision that might have to be sold (also see the Urban Task Force, 1999). Typically, only parts of the 'traditional' aspects of older compact cities are transposed onto modern cities, and this is often not done particularly well as individual preferences are ignored. Clark notes it is also difficult to accommodate social equity concerns because 'concentrated dispersal' and car free lifestyles can become an 'official orthodoxy that the better off can escape' (p.3). Finally, blunt compaction policies can result in 'unanticipated or unregulated coping strategies' seen, for example, when market mechanisms aimed at pricing people out of their cars have the contradictory effect of driving sprawl and car use as people drive further out to enjoy free parking at suburban malls. This, he describes as the kind of regressive outcome resulting from those who are better off circumventing planners' and environmental managers' intentions, regulations and market interventions. Cumulatively, these clever, individual solutions become problematic.

Burby, Nelson, Parker and Handmer (2005) remind us that planning policies generally relate to minimising risk and hazard exposure (also see Dimitriadis, Kousidonis, Lagopoulos & Constantnidou, 2002) and compact cities carry unique risks (such as natural disasters that minimally, affect more people per hectare the more compact the city). Clark also argues that the compact city ideal is 'bound up with complex notions

of function and form: of coming together in a clearly identifiable place' which implies a coherent and identifiable settlement with relatively little spill-over of labour markets, retail, or administration and servicing (p.7).

City planners have to be attentive to aspects of quality of life, to provide and promote local outdoor activities such as gardening, so as to preserve city dwellers needs for fresh air and healthy food, and preclude the need to travel to second homes, parks, and so on. It is important to note that 'lifestyles are not necessarily grounded in one, pedestrian and bicycle friendly, place' therefore we must be attentive to local interdependencies that exist within wider orbits of social and economic activities that meet people's quality of life aspirations and encourage local economic vitality .

14. Cooper, J., Ryley, T. & Smyth, A. (2001). Contemporary lifestyles and the implications for sustainable development policy: lessons from the UK's most car dependent city, Belfast. *Cities*, 18(2), 103-113.

The authors report on a study into Belfast residents' responses to various energy efficiency measures (including improved domestic energy efficiency, increased densification of housing, improved public transport, and the introduction of traffic restraint measures such as road user charges). The study included a 'stated preference component' designed to evaluate households' likely responses to these sustainable development policy initiatives. There was some evidence that respondents would be willing to accept properties of a similar size at moderately higher densities because they would be compensated by reduced house purchase price. Their results also showed that households with children placed a high value on larger lot sizes.

Improved public transport did not generate any statistically significant results which 'reflects its current lack of credibility as an alternative to the car' (p. 103). The study showed a high level of dependency on the private car as a means of transportation due to massive outmigration from the urban centre, with 90 per cent of people using their car to do the grocery shopping, for example. This being the case, the authors noted that road pricing to reduce the number of road miles travelled was likely to generate resistance, and produce undesirable effects as residents changed their travel pattern to avoid the tolls. They conclude that, in Belfast, 'the typical owner-occupier remains to be convinced of the merits of the current policy agenda' (p. 111).

15. Deni Green Consulting Services, A. C. A., National Key Centre for Design and RMIT. *More With Less: Initiatives to Promote Sustainable Consumption*. Canberra, Australia: Department of the Environment, Sport and Territories.

If, as it is claimed, 20 per cent of the world's population consumes 80 per cent of the resources, there is a need to look more closely at those consumption patterns. The authors define sustainable consumption as 'consumption that meets the needs of the present without compromising the ability of future generations to meet their needs' (p. 2). The report focuses on initiatives that have been taken that seek to reduce the environmental impact of Australians' consumption patterns, to see what works and why. Some of the techniques used to influence consumption patterns included

information and education campaigns, communication and promotion (including small incentives), larger incentives such as accreditation with particular bodies, obligation/coercion (mandatory standards), new/modified products, and infrastructure provision. A perception that compliance is mandatory is most effective. Incentives-based approaches were most successful where both personal and environmental benefits were promoted clearly, and extensive market research was required in order to make sure the connections were well-understood. Promotion worked best in conjunction with information and incentives, and those that relied on education and information alone met with limited success. This may have some interesting implications for housing-related consumption.

16. Dixon, J., Dupuis, A. and Lysnar, P. (2001). Issues in medium density housing. *Planning Quarterly*, June, pp. 9-11.

Dixon, Dupuis and Lysnar’s contribution to the body of knowledge about infill housing within the New Zealand context derives from their study of Ambrico Place in Waitakere City. They explored the different and, sometimes conflicting, accounts of what constitutes “good infill housing” according to various interest groups, presented in Table 1.

Table 1. Key issues in designing and developing medium density housing.

	Residents	Developers	Architects and designers	Body corporates	Off-site owners	Neighbours	Retailers	Council
Urban design principles		X						X
Economies of scale		X						
Avoid co-location	X	X						
Green space	X		X		X	X	X	
Flexible development patterns			X		X	X	X	X
Adequate parking	X			X		X		X
Privacy, security	X			X			X	
Maintenance plan	X			X				
Quality construction	X			X	X			
Infrastructure and services			X			X		
Amenities	X				X	X		
Council control of design	X					X		X

Their research has also illustrated how complicated the issue of urban consolidation is within the New Zealand context by identifying the numerous stakeholders involved in the process. Table 1 highlights a number of areas where dissension is likely to occur including outdoor green space, the quality of the construction and its design, and flexible development patterns. Dixon et al. report that these conflicting interests require a number of trade-offs including a need to provide a range of housing while still ensuring profitability and flexibility for the developer and certainty for neighbours, whilst maintaining sufficient outdoor space (p.10).

17. Enyedi, G. (2002). Social sustainability of large cities. *Ekistics*, 69(412-414), 142.

The author argues that urbanisation demands a focus on cities as sites of sustainability but that sustainability is not merely a technical problem; it is also social. Social sustainability involves harmonious relations between culturally and materially diverse groups housed within the city, enabling them to live peacefully together. Urban sustainability is not just about being globally competitive but requires citizens to feel safe. Otherwise both capital and the ‘successful strata’ will flee the city.

There are six areas of urban policy that relate directly to the social sustainability of cities:

- Urban governance
- Social and cultural policy
- Social infrastructure and public services
- Urban land use and housing
- Transport and accessibility
- Employment and economic growth

‘Social’ policy alone is insufficient in making cities socially sustainable.

18. Ewing, R., Bartholomew, K., Winkelman, S., Walters, J. and Anderson, G. (2008). Urban development and climate change, *Journal of Urbanism* 1, 201-216

This article addresses two questions. The first concerns possible reductions in vehicle-miles travelled (VMT) in the USA with a move from sprawling (characterised by widely dispersed, low-density residential development; separation of functions; a lack of major employment and population concentrations; and a roading network marked by very large block size and poor accessibility) to compact development. The authors suggest a 20 – 40% reduction for each ‘increment of new development’. The second question regards the reduction in greenhouse gas emissions that would accompany such a decrease in VMT. Their answer is that a 7–10% reduction in total transport carbon dioxide emissions by the year 2050 is possible ‘under a plausible set of assumptions’ (p. 201). They base their claim on a literature search where the ‘vast majority’ of studies (e.g. Badoe and Miller, 2000; Crane, 2000; Ewing and Cervero, 2001; Saelens et al., 2003; Heath et al., 2006) found significant relationships between urban growth patterns and travel behaviour. Such studies often employ the 4 Ds of urban development: density (residents plus jobs per square mile), diversity (of jobs to residents relative to the regional average), design (street network density, sidewalk

coverage, and route directness) and either destination accessibility and/or distance to transit, which have been incorporated into the EPA's Smart Growth Index.

They found that VMT elasticity with respect to destination accessibility was larger than the three others combined. This, they suggest, means that 'areas of high accessibility – such as city centres – may produce substantially lower VMT than dense mixed-use developments in the exurbs' (p. 206). The authors conclude that the difficulties associated with changing long-standing policies, development patterns and life styles in order to achieve the 7–10% reduction in carbon dioxide (CO₂) emissions is worth it. Not least among their reasons for this endorsement is that they believe the shift from sprawling to compact cities has other benefits besides a reduction in emissions.

19. Fraser, C. (2005). European approaches to urban living: Lessons from Interreg Projects. *Global Built Environment Review* 4(3), 24 - 34.

Fraser provides an overview of two attempts (Interreg's Living in Towns and Network of Urban Regeneration Cities) to manage the process of residential change associated with building more compact cities. Broadly, an analysis of the market, available space, and the strategies of major actors in the development process was required along with an overview of financial investment mechanisms and delivery strategies. The challenge of regenerating town centres came to be seen less as a process of discrete developments undertaken when the opportunity arose and more of a planned process. This planning process involved calculating demand in terms of quantity, market niche and type of housing required. An evaluation was then conducted of land available for housing of the following types: Greenfield sites, brownfield sites, conversion (properties where buildings could be retained and reused for housing), mini-sites (e.g. backland sites), re-occupation (e.g. empty flats over shops). Demand and availability also had to be offset against the availability of financial resources to develop the chosen sites because this 'made the difference between ordered and rational development or erratic piecemeal development' (p. 32). Furthermore, delivery was often hampered by authorities who saw intervention in the 'market' as unacceptable, 'even at the cost of leaving sites derelict and necessary 'affordable' homes unbuilt'(p. 32). Though common in the UK, Netherlands, France and the Walloon Region were more involved in the planning and implementation process. One of the main findings from this study was that the differences are not so much between countries 'which have implementation mechanisms and strategies and those which do not, but between those who are prepared to use them and those who are not' (p. 33).

20. Glaeser, E. & Gottlieb, J. (2006). Urban resurgence and the consumer city. *Urban Studies*, 43(8), 1275-1299.

The authors argue out that as real wages in many US sun-belt cities have declined in recent years, the explanation for increased urbanisation is that people enjoy access to urban amenities; that is, the city is growing due to consumption rather than production. 'Producer cities' located in areas that facilitated productivity have been replaced by 'consumer cities' with good amenities. A corresponding trend is that towards low-

density, car-dependent cities which, the authors speculate, may have some relationship with civic engagement. They found that there was a weak connection, with people in denser cities exhibiting less inclination to be involved in community projects. One explanation is that long commutes caused by congestion in denser cities inhibits the development of social capital.

21. Godschalk, D. R. (2004). Land use planning challenges - Coping with conflicts in visions of sustainable development and livable communities. *Journal of the American Planning Association*, 70(1), 5-13.

Godschalk notes the powerful appeal of the concepts of sustainable development and liveable communities but argues that the actual implementation of these ideas can generate a range of conflicts. These include development (equity versus environment), resource (economic versus ecological integrity) and property conflicts (economic growth versus equity) (as outlined by Campbell, 1996). The addition of the concept of 'liveable communities' expands on this by adding land use and design aspects to the mix, often through planning movements like Smart Growth and New Urbanism.

Godschalk proposes a new 4-point prism (adding liveability to Campbell's sustainability triangle) that suggests an expanded range of conflicts that neither sustainability, Smart Growth or New Urbanism can resolve:

- The growth management conflict between liveability and economic growth.
- The green cities conflict between liveability and ecology.
- The gentrification conflict between liveability and equity.

These, combined with Campbell's original three conflicts, can be used as a tool by which plans can be evaluated. Rather than relying on sustainable development, New Urbanism or Smart Growth, the prism points to gaps that can be filled by components of each in order to resolve these conflicts.

22. Gospodini, A. (2006). Portraying, classifying and understanding the emerging landscapes in the post-industrial city. *Cities*, 23(5), 311-330.

Dematerialisation and the emphasis on ideas rather than things have freed capital of many of the old geographic restraints of infrastructure and have placed now interchangeable cities in competition. Cities now have to offer inducements to capital, such as tax abatements, or by providing the kind of desirable soft infrastructure associated with creative cultural and leisure services and landscape transformations. In this competitive environment cities try to enhance their image in order to boost place identity and sell the city to the 'flaneur', which Gospodini describes as 'the pleasure-seeking urban voyeur' (p. 313). Avant-garde urban landscapes can serve as 'place identity generators' in postmodern cities in the same way built heritage does in modern societies (see Gospodini, 2004).

Consequently, the author argues that the inner city has become dominated by an eclectic mix of economic activities including financial services, IT firms and other knowledge-based institutions, and 'creative' urban islands. The city's periphery is

characterised by a 'diffused urbanity' which is 'heterogeneous and unruly, characterised by rubbish tips and warehouses, superstores and derelict industrial plants, office parks and sports courts, allotments and farmland' (p. 320). This area also sometimes accommodates privately planned, dispersed residential developments.

23. Grant, J. and S. Bohdanow (2008). New urbanism developments in Canada: a survey. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability* 1(2): 109-127.

In a survey of new urbanist developments, the authors found most of those projects incorporating new urban design principles tended to become more conventional over the course of the build. Whilst mixed housing types, high design standards, attractive open space systems, and a walkable environment were relatively easy to design in, efforts to incorporate viable commercial districts, increased urban densities, affordable housing, and less dependence on automobiles were not so successful. They note that although 'new urbanism and smart growth principles are affecting planning ideology, development practice may prove resistant to transformation' (p. 109). Their work suggested that these approaches may work best in major urban centres where there is some demand for high-density housing and enough diversity in the population to generate a demand for new urbanist developments. In less urbanised and generally more affordable areas, it is likely that the Canadian Dream will remain 'a big house with a double attached garage in the suburbs' (p.122).

24. Hall, T. (2005). A general method for designing sustainable settlements." *Global Built Environment Review*, 4(3): 12-18.

Though compaction has many supposed benefits there are clearly problems interpreting this as an acceptable planning goal, especially outside city centres. The house and garden form remains popular, particularly among those with children. Another dictum of dubious veracity is that low-density 'sprawl' actually leads to sustainability and higher quality of life. The author proposes a 'beads on a string' model (similar to transit oriented development models) that might overcome the contradictions of more compact urban forms by offering a variety of residential densities and green spaces connected by good public transport corridors. The emphasis is on physical form rather than land use, and different populations are required for different types of facilities. In something of an inversion, rather than aiming for particular fixed densities, the area is fixed but its density varies according to the catchment area of facilities; different family types; different characteristics of physical locations (e.g. at the urban periphery); proximity to larger settlements.

25. Howley, P. (2009). Attitudes towards compact city living. *Land Use Policy*, 26, pp. 792-798

Howley uses Dublin as a case study to explore residential living preferences, focusing on a group who have moved to a relatively high-density area. His findings suggest that, despite some advantages associated with access to services, amenities and work, many of these residents would prefer living in lower densities. The cost of urban

housing, crowding, traffic congestion, noise and pollution detracted from their residential satisfaction. Younger residents' ultimate preference for low residential densities raises questions about the sustainability (i.e. their viability) of compact cities. The case study suggests an important role for planners in ensuring a good quality of life in these areas for individuals across the life cycle.

26. Institute for Ecological Health. (2002). Design and location: making infill happen. *Linkages: Periodical of the Institute for Ecological Health* <http://www.instituteforecologicalhealth.org/pdf/link-13.pdf> (accessed Jan 09) pp. 6-9.

The author advocates a mix of approaches to infill housing, including reinventing strip malls as mixed use, building lively urban villages along transit routes, whilst allowing single family residential streets to stay like that. Traditional neighbourhood designs should be encouraged. Working with local communities is the best way to avoid opposition and lengthy delays. Choosing an appropriate location is important because support for revitalization projects is more likely than support for development in purely residential areas. The development of 'Specific Plans' for areas targeted for infill allows the community the opportunity to comment. Communities themselves could work on developing their own infill policies, guidelines and short and long term targets.

27. Jarvis, H. (2001). Urban sustainability as a function of the choices households make deciding where and how to live. *Local Environment*, 6(3), 239-256.

Jarvis begins the article by making the point that household choices about where and how to live have a profound impact on the built environment and its ecological footprint, yet we have a limited understanding of this decision-making process. Detailed observation suggests that residential location, for example, is not a discrete choice but is situated alongside other concerns around family time, earnings, parenting, tastes and identities – some of which have to give way to others. 'What gives' is generally neglected in sustainability debates and Jarvis explores this question by comparing residential location choices and everyday life in Portland (compact) and Seattle (dispersed). She concludes that compact urban forms do not necessarily lead to more localised mobility choices because they 'insufficiently reconcile the multiple components of daily production, consumption and reproduction activities'. Instead, the education of one's children, social networks and moral cultures tend to outweigh any environmental ethos. Emotional and material factors have to be considered, as does the informal economy of unpaid childcare, emotional support and so on as this can prevent the effective material integration of home-work location. Jarvis argues that we should not abandon the search for sustainability but that we need to be more attentive to both quality of life and mundane concerns around work and the home and bring these considerations into the mix.

28. Jarvis, H. (2003). Dispelling the myth that preference makes practice in residential location and transport behaviour. *Housing Studies*, 18(4), 587-606.

Jarvis reiterates the points made in her 2001 article but emphasises that it is dangerous to focus too much on compaction and densities whilst neglecting the ways in which household juggle sometimes conflicting goals and concerns. Furthermore, she argues that the future of urban form must be considered in light of lived experiences involving probable changes in patterns of work, employment and everyday life, and the decision-making enterprises that will accompany these changes.

29. Jenks, M., Burton, E. and Williams, K. (1996). *The Compact City: A Sustainable Urban Form?* London, New York, E and FN Spon.

In this collected edition, authors present a range of views on the compact city, and, though it is becoming somewhat dated, it is essential reading for those interested in consolidated urban forms namely because there is still little consensus over many of the issues raised. Part One provides an overview of compact city theory, Part Two social and economic issues, Part Three the environment and resources, Part Four measuring and monitoring and Part Five addresses implementation. Jenks, Burton and Williams, in a concluding chapter, suggest that ‘it seems improbable that the exclusive promotion of either [a compact or dispersed] urban form would reflect reality, or be an achievable goal’ (p. 342) and that a mix of the two would seem to better suit the range of needs, preferences and aspirations found in urban areas. They note that while compact urban forms reduce private auto-mobile dependency, this does not necessarily translate into less use and that better savings may be made by focussing on eco-efficient technology. In securing a good quality of life, cities must be seen as places where people want to live because ‘if development is not acceptable to those who are affected by it, it is unlikely to be sustainable’ (p. 344).

30. Jenks, M. and Burgess, R. (2000). *Compact Cities: Sustainable Urban Forms for Developing Countries.* Spon Press, London, New York.

This collected edition explores issues around urban compaction with specific reference to developing countries. Part One contains chapters with a specific reference to development, Part Two looks at compaction and intensification more generally, Part Three explores responses to compaction over various densities and Part Four addresses transportation. In a concluding chapter, Jenks notes that the generally higher densities found in developing countries do bring unique problems and opportunities and that a good local knowledge is essential in understanding the range of factors that contribute to, and act against, sustainability. He also notes that density is not an ‘absolute concept, but a relative one’ (p. 345) which is culturally determined. The potential transportation benefits associated with compaction are more likely to be obtained if formally planned for, as was the case in Curitiba, Cape Town and Durban. Political will is therefore crucial in implementing sustainable compact city policies as are fiscal measures that ensure the costs of development are carried by the developers, and good knowledge of the city’s resources, strengths and weaknesses.

31. Jim, C. Y. & W. Chen (2007). *Consumption preferences and environmental externalities: A hedonic analysis of the housing market in Guangzhou.* *Geoforum* 38: 414–431.

Jim and Chen used the hedonic pricing method (HPM) to test housing preferences in Guangzhou, China. Overall, residents valued good outdoor environments with green space provision, proximity to parks, and views of green space and water. Differences were found among residents in the old and new town: new town residents expected apartments in high-rise blocks with exclusive residential land use, and views of green space. Those living in old town preferred proximity to shopping areas, workplaces and parks, and green space within the development. Price, security, quality of property management, location, accessibility and mobility and environmental elements (within and around the development) form a ranking of motivations for buying particular homes. The study showed that green spaces and water bodies in urban areas had an important role to play in terms of amenity, landscape and recreation. People were willing to pay higher prices to live on the higher floors because they have better views, air circulation and solar access. In an interesting departure from much Anglo-American cultural models, residents preferred high plot ratios (high-rise buildings and high-density environment) which are usually viewed unfavourably in the West. The authors explain that this is because people in Guangzhou 'have preserved an ingrained mindset of linking low-rise tenement blocks to old poor-quality accommodation. Burdened by this historical baggage, they consider new high-rise buildings to be a departure from the unpleasant legacy of dilapidation, overcrowding and backwardness' (p. 425).

32. Lambiri, D., Biagi, B. & Royuela, V. (2007). Quality of life in the economic and urban economic literature. *Social Indicators Research*, 84(1), 1-25.

The authors point to the increased competition between cities as one of the reasons why quality of life has become such a feature of urban economic literature. Quality of life is viewed as an economic good because it is a) scarce and able to be traded off for other things; b) households and businesses make decisions about where to locate based on it and c) it is also a public good with funds allocated towards it. At its most rudimentary, it is associated with GDP though it is now common to work with more complex versions of the concept. City rankings generally use a variety of measures. The *Placed Rated Almanac*, for example, uses aspects of economic health, political performance, environmental conditions, health and education, and social concerns. The authors conclude that the theoretical and practical difficulties associated with measuring quality of life still need to be addressed.

33. Lin, J. J. & Yang, A. T. (2006). Does the compact-city paradigm foster sustainability? An empirical study in Taiwan. *Environment and Planning B-Planning & Design*, 33(3), 365-380.

The authors tested some of the claims about the compact city and sustainability and found that high-densities and intensification had a negative impact on environmental (ecological aspects combined with efficient resource use) and social (security, liveability and equity) sustainability, but a positive effect on economic sustainability (productivity, and personal and public finances), as did mixed land use. Measurements attached to aspects of sustainability were drawn from the United Nations Commission for Sustainable Development and included:

- Environment: Greenfield, gas consumption and pollution;
- Economic: Urban production, enterprise investment and public service expenditure;
- Social: Public services and facilities, crime rate and housing affordability.

They offer three strategies for mitigating the adverse effects of compaction. An adequate supply of green space should be provided and combined with measures to empower the community to develop and maintain public and private green areas. An adequate supply of services and facilities should also be provided, along with measures to reduce the crime rate. Measures (public housing, subsidies) to maintain housing affordability need to be addressed. Finally, economic activities could better align with environmental and social goals through, for example, the management of parks and other resources.

34. Mayer, H., Danis, C. & Greenberg, M. (2002). Smart Growth in a small urban setting: The challenges of finding an acceptable solution. *Local Environment*, 7(7), 349-362.

The authors note the range of purported benefits that Smart Growth can bring to urban areas yet acknowledge that such policies are not always popular with residents who prefer detached housing on sizeable sections/lots. They report on a project which used GIS to help community leaders and local officials evaluate development options and understand the implications of different land use patterns. Qualitative, quantitative and visual information was provided using Goal Oriented Zoning software. This helped participants to imagine how the areas might look in the near and distant future and has met with qualified success after a 16 month trial.

35. Mehta, V. (2008). Walkable streets: pedestrian behavior, perceptions and attitudes. *Journal of Urbanism* 1(3): 217 — 245.

Planning literature emphasises walkability as a desirable element of compact cities. In a quest to better understand walking behaviour in urban settings the author explored the physical activity aspects (such as 'wide sidewalks, shade-providing trees and canopies, interesting and engaging storefronts, signage and displays, street furniture, and articulated building facades'), land use factors (including 'variety and range of businesses, uniqueness of goods and services, occurrence of events organized or supported by businesses') and also sensorial (lights, sounds, smells, touches, colours, shapes, patterns, textures) and social elements. This mixed methods research found that the social aspects of walking, such as the provision of community-gathering places, the number of people and activities, and real and perceived safety from crime, are underestimated. In a hierarchy of walking needs, safety and comfort come first, followed by usefulness, sense of belonging derived from associations and familiarity with people, places, and events, and then pleurability. There is a whole range of social and environmental variables that support walking. As Brown noted 'The key to walking in urban areas may be the ability to achieve multiple goals, such as running errands, enjoying scenery and social milieu, avoiding the hassle and cost of driving, and enjoying the health benefits of walking' (2007, p. 55 in Mehta, 2008, p. 242).

Thus, in supporting walking, planners should consider physical, land-use and social aspects of the built environment simultaneously.

- 36. Moll, H., Noorman, K. , Kok, R., Engström, R, Throne-Holst, H. and Clark, C. (2005). *Pursuing more sustainable consumption by analyzing household metabolism in European countries and cities*. *Journal of Industrial Ecology*, 9(1-2).**

The authors proposed the concept of household metabolism as a way of identifying and analyzing consumption patterns of direct and indirect energy across national, local and household scales. The energy requirements for food, transport, recreation, and household effects were high for all countries (UK, Norway, Netherlands and Sweden). In their assessment, differences in these countries' efficiency of electricity generation, the average levels of household expenditures, and the average indirect energy intensities were important. Some observations within countries were the relationship between average household energy requirements and average household expenditure and lower direct energy use in urban areas. These suggested that a transportation system that includes cycling and public transport, and a compact city structure in which local recreational facilities are available, can reduce energy needs.

- 37. Mommaas, H. (2004). *Cultural clusters and the post-industrial city: Towards the remapping of urban cultural policy*. *Urban Studies*, 41(3), 507-532.**

Mommaas takes issue with the tendency to see the development of cultural clusters as an emergent urban model. Though the fragmenting of cultural interests might sit well within short-term postmodernist development regimes celebrating creativity and difference, the author argues that these diverse interests may start to undermine and constrain each other in the long-term. Mommaas calls for a more nuanced understanding of post-industrial cities that is attentive to the specifics of culture (as place-based) and commerce because cities vary widely in terms of finance, management styles, urban infrastructure and development patterns.

- 38. Moriarty, P. and Honnery, D. (2008). *Low mobility: the future of transport*. *Futures*, 40, 865-872**

The authors challenge the basic assumption that technological innovation will sustain our current mobility aspirations, arguing that the costs are too high. Instead they suggest we articulate our preferred vision for the future and then generate and develop a transport system to support it. The authors advocate non-motorised 'active' means of transport which has other benefits including better health and reduced fatalities.

- 39. National Association of Realtors. (n.d.). *Smart Growth in Principle*. http://www.realtor.org/smart_growth.nsf/docfiles/sgtoolkitchapter2.pdf/%24FILE/sgtoolkitchapter2.pdf (accessed Jan 09).**

The report describes Smart Growth as a ‘third way’, and alternative to the polemic ‘pro-growth’ and ‘no-growth’ factions that emerged in 1990s North America. Smart Growth in practice means preserving land for open space; providing transportation options; revitalizing downtowns and neighborhoods; reexamining local zoning codes to enable compatible mixed uses; reforming regulations to facilitate walkable communities; and putting town centers in the suburbs. They discuss changing demographic characteristics where, for the first time, single person households outnumber families and the impact this has on housing demand. Their polls indicate that ‘people are not opposed to growth but they do want it managed more (p.9). The results of their surveys on open space and transport were mixed. Though 46 percent agreed that businesses and homes should be built closer together in order to shorten commutes and limit congestion, 51% disagreed. When deciding where to live, the most important of the factors listed was low crime rate (98%) followed by good schools (92%), sidewalks (70%), convenient public transport (65%) and then shops and restaurants within walking distance. Their 2004 survey showed that most people (86%) would rather see funding go to improving existing communities rather than new developments in the countryside (12%).

The Smart Growth Network’s 10 Principles are:

- Create range of housing opportunities and choices
- Create walkable neighborhoods through mixing land uses and building compactly so that pedestrian corridors are safe and inviting
- Encourage community and stakeholder collaboration so as to engender public support, develop innovative solutions that suit the needs of each community.
- Foster distinctive, attractive communities with a strong sense of place through the crafting of a vision which will inform standards for development and construction that respond to the community’s values, aesthetics and needs for housing and transportation.
- Make development decisions predictable, fair and cost effective
- Mix land uses
- Preserve open space, farmland, natural beauty and critical environmental areas
- Provide a variety of transportation choices
- Strengthen and direct development towards existing communities
- Take advantage of compact building design. They acknowledge that ‘making density work, to make it acceptable and even sought after, requires working with the community to create a well-designed, well planned development. Planning and designing as a team can minimize the perceived negative impacts of density, and maximize positive outcomes’ (p. 19).

40. Neuman, M. (2005). The compact city fallacy. *Journal of Planning Education and Research*, 25, pp. 11-26

Neuman explores the ‘paradox between urban desirability and suburban liveability’ noting that, given the choice, people often choose to live in the metropolitan periphery. Given this preference, he enquires whether compact cities are sustainable, particularly in light of current configurations of urban sustainability that emphasise form over functions and processes. His paper, divided into six sections, first notes that there is no universally accepted definition of ‘compact’ and that the connections

between compaction and sustainability are equivocal. He posits that compact city advocates base their beliefs more on reactions to sprawl than empirical evidence. In the 'compact city paradox' section Neuman addresses the inverse relationship between compaction and liveability, noting that this is a matter of form and personal preference. Many residents 'vote with their feet' (p. 16) and move to the outskirts of town.

Neuman then takes issue with the taking the compact city as a 'synonym for the sustainable city' (p. 17) raising questions about the relationship between the two in terms of carrying capacity, fitness (between organism and habitat), resilience, diversity, and balance. So a sustainable city is one that can 'keep going over the long run' (p. 20), whilst maintaining functional integrity, in place-specific conditions over different times/scales.

He asks whether the compact city responds to these four themes. 'Cookie-cutter' designs are produced generically thus undermining the first principle as does the tendency to 'reduce a complex entity – the city – to one criterion – density' (p. 21). He notes that, often, 'dense cities are unhealthy' in terms of pollution (p. 22) and only deal partly with interrelating urban functions. Consequently, 'we have to look beyond the compact city for answers to the sustainability question' (p. 22). In reframing the question, Neuman attempts to move away from compact as a reaction to sprawl noting that 'one cannot overlook the fact that form is both the structure that shapes process and the structure that emerges from a process' (p. 22). Because form is only a snapshot of process, and not a measure of sustainability in itself, we should be asking instead whether the processes of city-building, living, producing and consuming are sustainable.

41. Nijkamp, P. & Pepping, G. (1998). A meta-analytical comparison on sustainable city initiatives. *Urban Studies*, 35(9), 1481-1500.

The authors discuss the factors that can be used to explain the success of sustainable city initiatives. They evaluated 12 programmes related to energy use across three countries (Netherlands, Italy and Greece) and found that technological factors were the best explanatory factor followed by the country and then financial considerations. Interestingly enough in terms of more recent studies, user-related, organisational, social and ecological factors were less important.

42. Portney, K. (2003). *Taking Sustainable Cities Seriously*. MIT Press: Cambridge, Massachusetts.

Portney's work is a systematic investigation into why and how some cities engage with the idea of sustainability whilst others do not. He compares a number of cities - he later focuses on eight in particular - in the United States that have adopted a sustainability approach in order to address this question and other concerns, such as whether the policies these cities adopt make a difference and which measures are most effective. Portney's search for answers to these questions is informed by urban regime theory.

The first chapter provides an overview of the sustainability concept and its connections to sustainable economic development and sustainable communities. This provides the foundation for the concept of a sustainable city. Portney acknowledges the complexity and confusion surrounding these terms, but notes that it is the working definitions of sustainability that cities adopt that provide clues as to what they see as important. Despite bio-physical environmental underpinnings that suggest ecosystems or city regions might be better geographical units with which to work, cities' administrative foundations justify the focus on urban areas.

The second chapter addresses various problems and methods associated measuring how seriously cities are about their sustainability initiatives. He notes that assessments of bio-physical environmental dimensions are perhaps less difficult than more nebulous issues around quality of life. Chapters three through to six focus on particular aspects of the sustainability concept including energy, economic growth, smart growth, public participation and community, and environmental and social justice. A closer examination of the efforts of eight cities that have 'really' engaged with the concept of sustainability is the focus of chapter seven. Chapter eight provides some examples of cities strong on rhetoric but that have failed to take sustainability seriously and this assessment provides the foundation for a deeper discussion of the ideological drivers of the different expressions of the concept.

43. Rantisi, N., Leslie, D. & Christopherson, S. (2006). Guest editorial: placing the creative economy. *Environment & Planning A*, 38, 1789-1797.

In this guest editorial the authors explore some of the issues relevant to the creative industries debate. They begin by noting a distinctly urban component which springs from the need for face-to-face contact among key players and the establishment of trust. Proximity to training institutions and access to a pool of skilled workers is also central to many creative industries. Cities also form centres where 'cultural competencies' are generated and this challenges the orthodox distinction between the cultural and economic spheres. In general this leads to two responses in terms of industrial policy with the first involving social relations and the second based on the consumption practices of those mobile, skilled workers upon which the creative industries depend.

The urban dimension, as a locus of experimentation and interaction is explored in some detail. Urban density is positioned as important as all manner of people are forced to 'rub shoulders'. The formation of an advertising quarter is also seen as key in stimulating the exchange of information in a 'regard' economy (Pratt, 2006, this issue). Urban centres also act as conduits through which global knowledge and innovation flows.

The authors are also keen to point out that the material form of these creative cities also deserves attention. Housing, for example, plays a vital role. Affordable housing stimulates creativity because it allows creative workers to focus on their craft rather than taking up conventional work to pay the rent. Makusen (2006, same issue) makes a similar point regarding the importance of materiality in the provision of meeting points, such as artists' clubhouses, live-work studios and small performing arts venues. Hutton (2006, same issue), adds to the debate by pointing out that many of

these creative individuals have a preference for inner city living where the look and feel of the place is as important as its function. Finally, Rantisi et al. seek to politicise the debate by introducing some of the more controversial aspects of creative cities. What, for example, are the implications of a focus on creativity for smaller cities in different geographical contexts and what are the consequences of a focus on creativity that is valued only for its contribution to economic growth? There are also all manner of issues around social development and equity. Inner city redevelopment to suit the creative class may lead to the displacement of existing residents and the impacts creativity-led policies have on the silent majority of non-creatives. The authors call for a better investigation into the winners and losers of the creative imperative.

**44. Rodgers, R. (2005). *Towards a Strong urban Renaissance*,
http://www.urbantaskforce.org/UTF_final_report.pdf: Accessed Dec 08.**

In this updated version of *Towards an Urban Renaissance* (1999) the Urban Task Force's vision is described as integrated and multifaceted so as to create urban communities that:

- are well designed, compact and connected
- support a diverse range of uses in a sustainable urban environment
- are well-integrated with public transport
- are adaptable to change.

This can be achieved through placing design professionals at strategic levels so that they are available to advise to Ministers, mayors, and local authorities. Public transport should be funded and prioritised according to its ability to service multiple goals including both urban regeneration and general transportation needs and business. Appropriate housing and social mixes can be promoted through the development of targets and the development of brownfield sites should form the first step in regeneration programmes. Neighbourhoods should be made both safe and beautiful, both for aesthetic and economic reasons as cities engage in competition for 'footloose international companies' (p. 5) and mobile, creative workers.

Rogers also notes that 'Too much emphasis is given to the delivery of quantity rather than the benefits of quality' and that even when experienced designers are involved in a regeneration project, 'the brief often undervalues the benefits of design' (p. 7). Furthermore, the development guidelines for high profile urban sites tend to place more importance on short term commercial gain than the creation of an integrated urban vision that will bring economic benefits in the long term. Exacerbating the failure of such ventures is the ways in which such projects are often imposed on local communities when they should be involved in the creation of the vision underpinning such developments.

The Taskforce recommends empowering local authorities (in their strategic, co-ordinating role), residents, and voluntary and community organisations so as to introduce more contestability in local service delivery.

- 45. Stanvliet, R., Parnell, S. (2006). The contribution of the UNESCO biosphere reserve concept to urban resilience. *Management of Environmental Quality*, 17(4), 437 .**

The authors argue that the problem facing cities is how the quality of life of all city dwellers can be balanced against environmental challenge of diminishing natural resources. With this goal they evaluate the contribution of the UNESCO biosphere reserve concept and how it might increase urban resilience. Stanvliet and Parnell outline seven 'services' that the natural environment provides and that are essential for improved quality of life in urban areas. These underpin the biosphere reserve concept and comprise energy, water, air filtering, microclimate regulation, noise reduction, sewage treatment, and recreational and cultural areas.

- 46. Stevens, Q. (2006). The shape of urban experience: a re-evaluation of Lynch's five elements. *Environment and Planning B-Planning & Design*, 33(6), 803-823.**

Using a phenomenological and behavioural perspective, Stevens explores the role of impractical, non-instrumental or 'playful' experiences people enjoy in urban areas. He focuses on four spatial elements (landmarks, districts, thresholds, and props) and shows how the latter two in particular tend to facilitate or encourage playful behaviour. Stevens' phenomenological approach is interesting because it brings an active dimension to urban morphology studies that tend to focus on the visual aspects of city plans and built form. It is also useful in connecting seemingly prosaic features of the built environment, such as doorways and curtains with often-overlooked daily non-instrumental urban experiences that influence quality of life.

- 47. Tallon, A. & Bromley, R. (2004). Exploring the attractions of inner city living. *Geoforum* 34, 771-787.**

The authors used interviews to explore the positive and negative aspects of living in the city centres of Bristol and Swansea. Whilst younger adults appreciated the socio-cultural aspects of inner city living, older respondents liked the environmental features. The implications of the study included more diverse marketing of inner city areas to appeal to a wider audience, and not just to 'gentrifiers' with dual-careers in smaller households. The main positive features included being close to facilities and services (B36/S43%); attractive location (B28%); close to work (particularly younger residents); good housing, close to friends. Almost 99 per cent thought that living in the city centre was 'convenient' with walkability a distinct advantage. The under 30s were particularly interested in the style of city living and the nightlife. The disadvantages included noise, crime, traffic, and parking. Residents thought the inner city could be improved via revitalisation policies, better housing, tidying up, shops, better public spaces and more affordable housing. Almost 60 per cent of Swansea residents felt unsafe at night. The mundane 'convenience' and 'practical' aspects might be as good as 'lifestyle' aspects in the promotion of inner city areas.

48. Turner, R. (2002). The politics of design and development in the postmodern downtown. *Journal of Urban Affairs*, 24(5), 533-548

Turner argues that the downtown areas of cities have become more like theme parks serving the interests of tourists than places serving the needs of residents. Privatisation and surveillance makes access to downtown places undemocratic which can undermine the rights of the homeless, ethnic and minority businesses, people on low incomes and women. The author argues that this is part of postmodern politics; tourism-based activities were seen as meeting a wider range of needs than industry or manufacturing businesses in downtown areas but, as her study shows, this can have consequences for populations living adjacent to these areas. Downtowns can become 'enclaves of postmodern consumption' or 'fortresses' with areas of disadvantage contained close-by. Authorities should be aware that healthy downtowns serve a range of needs.

49. Urban Task Force (1999). *But Would You Live There? Shaping Attitudes to Urban Living*. Bristol, University of Bristol.

The introduction presents the essence of the dilemma facing many planners: 'that the impetus of current policy to encourage more house-building in urban areas appears to run counter to the expressed desires of the British public and indeed to the house-building industry which reflects and shapes those desires. However well-justified it might be, a policy which is out of tune with public opinion will never be effective' (p. 1). The aim of the Urban Task Force was to explore the factors that influence people's attitudes towards urban living, and how to make 'the city a place of choice' (p. 1). Though the Task Force found some research on people's residential preferences, they found very little work on how these attitudes were shaped. They used work from tourism, cognitive psychology, media studies and marketing to inform three 'Citizen Workshops' which were similar to extended focus groups.

These yielded five key themes:

A lack of shared language around such words as urban, suburban, city and inner city indicated a need for a careful use of terms in promotional literature. Urban was fairly neutral, city positive and inner city negative. Compact was more positive than 'dense'. Attitudes to generic terms (like urban and suburban) can be very different to people's their feelings about particular places - specific cities or even neighbourhoods within those cities - so images and photographs of real places are more powerful than general ones of 'city living'.

Consumers are able to see when they are being sold something and, as a consequence, distrust information provided about it. Information from public agencies is particularly suspect because of a lack of trust and because it tends to be less sophisticated than material from private companies. People strive for a balance between urban and suburban aspirations, therefore the potential is there to use their urban aspirations in favour of urban locations. The participants tended to be risk averse and needed assurance that urban areas will be safe rather than exciting. Likewise modern housing styles were seen as more risky than 'classic' design. Their conclusion was that there is scope to 'sell' the idea of urban living to wide range of people given appropriate initiatives. The tourism industry has generated some of the most sophisticated forms of place making and marketing. Real estate and

residential marketing material has tended to focus on new urban apartments, however, the lifestyle tends to be promoted as much as the location or apartment itself. Place marketing directed at businesses also influences images of the city. Such positive images tend to conflict with media reports and movies of inner city crime, grime and hardship (Trainspotting, Bladerunner). It is also clear that people experience the city in different ways and that there are different submarkets requiring different scripts of the city. Little research has been conducted on links between different information sources and the sub-groups though it seemed that in general younger participants were influenced by media imagery and Friends/Seinfeld programs and took less notice of negative press coverage. 'Soul' was an important factor that was seen to emerge from places developing over time in a natural way - you couldn't contrive it. People may be persuaded about the benefits of urban living based on recent changes and improvements rather than traditional advantages like convenience.

50. Vallance, S. (2005). *Neighbours Interpretations of Infill Housing*. Unpublished Masters Thesis. Human Sciences Division, Lincoln University

This research highlighted the ways in which Christchurch residents' interpretations of, and responses to, infill housing were influenced by the ideals and imagery associated with both bio-physical arrangements and the socio-cultural milieu of suburban living. Suburbia was shown to be a site of conflict and contest over meanings which consequently governed what is acceptable in those areas and who has the right to reside there. This is expressed in a discourse of the 'concrete jungle' pitted against 'family homes', and the present day 'rat race' contrasted with 'the good old days' of neighbourliness and community spirit. Such interpretations of infill housing often inspire, and then maintain, 'us' and 'them' divisions that are symbolised by certain housing styles. Therefore, at the heart of these interpretations of infill housing and residents' reactions was the assault on people's sense of place and the invasion of the Other.

Vallance's research also found that excluding socio-cultural components of 'the environment' meant that simply manipulating the built form of urban areas will not necessarily promote a more sustainable city. Urban planning should therefore encompass not only environmental, but also social and economic considerations as well because if the compact city is truly a desirable planning goal, infill housing must be carefully managed in such a way as to mitigate adverse effects on residents and accommodate their geographic imagination. The city must be a place where people want to live. If not, those who can leave the city will do so, a situation which is unsustainable in the long term

51. van den Berg, A., Hartig, T. & Staats, H. (2007). Preference for nature in urbanised societies: stress, restoration and the pursuit of sustainability. *Journal of Social Issues*, 63(1).

Environmental psychology literature suggests that nature serves a restorative function and that urban planning needs to address this. Rather than promote the flight to greener suburbs, the authors consider the practical challenge of balancing density with access to natural settings. They conclude that there may be a relationship between

density and preferences for different types of natural settings that vary from simple open space to that providing greater ecological biodiversity.

52. Wendorf, G. (2006). Sustainability through incorporating tenants' preferences in redevelopment processes. *Housing in an expanding Europe: theory, policy, participation and implementation*. ENHR. Ljubljana, Slovenia.

Wendorf presents the results of 'The Green Folder' which is a new participatory tool for designing green leisure spaces on residential estates. The author sees this as a way of 'provoking dialogue' between neighbours and 'awaken' social capital which then influences localised leisure options and behaviour. It can have a positive impact on traffic reduction, and residents' senses of place. The Green Folder method involves personally distributing the folder to every household, and explaining possibilities for participation. Successful aspects of this folder include the 'Write us a postcard' where residents chose from a set of picture-postcards of their settlement along with an invitation to tell the planners, housing companies and other stakeholders what they should know about the place, what should be done and what should be avoided. Other components included stickers to be put on maps of the area. An on-site exhibition of the collated results gave residents a further opportunity for feedback.

**53. Wheeler, S. (2008). *A practical guide to creating vibrant places throughout the Bay Area*. Greenbelt Alliance
www.greenbelt.org/downloads/resources/report_smartinfll2008.pdf
(accessed Jan 09)**

Wheeler and the Greenbelt Alliance see infill as 'an opportunity to use the Bay Area's growth to make our communities better' (p. 3). They argue that 'Done well, infill can rebuild abandoned areas, bring new life to old downtowns, and provide homes where people can meet their needs close by. It can create neighbourhoods where it is safe and pleasant to walk or bike, where driving is not the only option. It can create more attractive, inviting communities' (p. 3). The strategies for good infilling cover a range of planning, community, design and development (simplifying regulations) principles. Planning means evaluating 'what land is available for infill and actively encourage development there' (p. 3). Including the community has the benefits of reducing opposition, and making sure the advantages and disadvantages are shared fairly. Design is used to ensure a good fit between the neighbourhood and how it is used. Higher densities, mixed uses, a variety of housing types and parking reduction principles should guide design.

In a section entitled 'Overcoming Misconceptions' the author claims that residents' concerns about increased traffic are often unfounded because 'good infill that helps to broaden transportation choices can attract residents with few or no cars, and can reduce existing residents' need to drive, decreasing overall traffic in the city' (p. 10). In contrast, low-density development 'breeds traffic congestion'. The best traffic reduction strategy is to mix neighbourhoods and shopping areas so it is easier for people to walk, bike, and use trains and buses. Concerns about density are also unfounded because, the author claims, these fears 'have more to do with unattractive

development than with density itself' (p. 12). Designed well, high densities can still accommodate and provide visible and useable spaces which contribute to more vibrant, safe, and inviting environments. Planners can counter perception problems by describing how densities can reduce crime (by converting deserted or neglected areas into mixed use streets with around the clock activity and informal surveillance) , support services and transport options, invigorate local business and contribute to attractive spaces, rather than talking about units per hectare. Design charettes can be useful with visual aids can helping counter the idea that infilled spaces all resemble Manhattan, with a loss of local character.

Wheeler argues that infill has the potential to meet the housing needs of singles, young people, empty nesters, the elderly, and couples without children who value areas with good amenities and services.

In terms of planning, the author advocates the following strategies:

Planning

- Adopt an urban growth boundary and within the boundary develop general plans, specific plans, and zoning codes.
- Publicly identify land available for infill using consistent and objective standards for site selection. This should be treated as an informational resource for developers rather than a development mandate.
- Develop specific plans that signal the intention to invest in a neighbourhood with infill potential (around downtowns, transit stations, declining neighbourhoods, historic areas, around a factory or mall that is closing), gain community support and develop a plan for coordinated infilling.
- Introduce Redevelopment Agencies which help identify infill parcels, re-cover brownfield sites, add infrastructure, amenities and services and generally coordinate development.

Community

- Working constructively with neighbours by involving them early.
- Build a range of housing types to encourage affordability. Public land can be used for affordable housing.
- Revitalise neighbourhoods in decline.
- Prevent displacement by undertaking fine grain infill in older, established neighbourhoods rather than large scale projects.
- Make sure new developments benefit the whole community by requiring all developments over a certain size provide, for example, open space, schools, or childcare. Use local hiring policies, and set aside some retail spaces for local use (grocery stores, banks, etc).
- Provide well-networked public open/green/recreation spaces and pedestrian ways.
- Consider running regular programs, festivals, markets, outdoor movies and so on, in these public spaces to foster community ownership and a sense of place.

Design

- Plan for density by allowing more development in appropriate areas.
- Reduce parking restrictions.

- Develop design guidelines and supplement the city's zoning with a "form-based code" that regulates building size, shape, location, and relation to the street rather than the uses of the indoor space or the density.
- Preserve and/or restore natural features, such as creeks and heritage trees of infill areas to provide a 'refreshing feel'.

Development

- Clean up brownfield sites.
- Improve financing and funding mechanisms and streamline the approvals process.
- Facilitate the building process by training staff, and creating clear and simple procedures.

54. While, A., Jonas, A. E. G. & Gibbs, D. (2004). The environment and the entrepreneurial city: Searching for the urban 'sustainability fix' in Manchester and Leeds. *International Journal of Urban and Regional Research*, 28(3), 549-569.

The greening of the urban growth machine is a response to demands for the better management of ecological impacts from both within and outside post-industrial urban areas. Driven by changes in state rules, interurban competition and environmental concerns, the authors outline the use of an 'urban sustainability fix' in which the 'growth first' model is passed over in favour of the selective adoption of principles and practices associated with ecological modernisation. Urban entrepreneurship itself might, in fact, depend on the successful management of this process. The authors use Manchester and Leeds to illustrate challenges facing industrial cities as they implement their particular sustainability fixes that have the potential to reconnect what were often separate economic, social and environmental policies. Devolution of responsibility requires local government to manage (if not resolve) investment in environmental initiatives, various new partnerships and alternative forms of economic activities. The case studies show that particular geographies constrain the various meanings and consequences of urban policy, however, a 'light greening' appears to be something of a necessity for the entrepreneurial city.

55. Winston, N. and M. Pareja-Eastaway (July 2-5, 2006). On indicators of Sustainable Housing in the European Urban Context. *Housing in an expanding Europe: theory, policy, participation and implementation*. Ljubljana, Slovenia, ENHR.

The authors argue that although indicators are usually thought to be objective, scientifically valid, and robust, in practice they 'are selected as a result of conflict and co-operation between relevant policy actors with different perceptions of sustainable development and its importance for national policy' (p. 1). Nonetheless, they proceed to outline their overview of a range of housing sustainability indicators and advice on best practice. In developing these indicators, the authors refer to the Bellagio principles which include: a guiding vision and clear goals; a holistic perspective incorporating social, ecological and economic sub-systems, their state and direction; essential elements like inter- and intra- generational equity, over-consumption,

poverty, human rights, and access to services; adequate scope with appropriate time horizons able to accommodate both human and ecosystem time and geographic scales; having a practical focus with a limited number of key issues and indicators; being open with data and methods available to all; communicating effectively; encouraging broad participation; ongoing assessment; and building institutional capacity.

They also provide a list of 'key dates' in the development of urban sustainability indicators:

1992 Agenda 21 (Rio Declaration on Environment and Development) calls for the construction of indicators

1996 UNCSO initial set of indicators

1999 European Common Indicators Project established

2000? European system of social indicators

2001 UNCSO revised core indicators

2001 EU Sustainable Development Strategy

2003 European Common Indicators report

2004 Aalborg +10 targets for the sustainability of European Cities and Towns

2005 EU sustainable development indicators

They then describe an expanded view of urban sustainability that includes housing aspects that has been developed by the ESSO (European System of Social Indicators).

This includes:

- Availability of dwellings: relative size of dwelling stock
- Size of dwelling: rooms per person and living space per person (under preparation)
- Amenities: availability of flushing toilet, bath/shower; central heating; balcony, terrace/garden
- State of repair of dwelling: dwellings in deficient state of repair
- Tenure status percentage of owners
- Type of accommodation
- Households living in one-family house / in a large apartment house
- Affordability of housing: burden of housing costs; average rent/qm in ppp (under preparation); average rental burden
- Facilities in residential area: accessibility of shops; public transport; family doctor
- Environmental quality of residential area: noise pollution; air pollution; accessibility of green space
- Public safety: crime in residential area
- Subjective evaluation of housing conditions: shortage of space; high burden of housing costs; mean satisfaction with housing situation; satisfied with housing situation
- Subjective evaluation of the residential area: subjective safety in the residential area, satisfaction with neighbourhood
- Regional disparities in housing conditions: regional disparities in availability of amenities and rental burden
- Income related inequality of housing conditions
- Income related inequality in: dwelling size; availability of amenities; and tenure status.

- Homelessness (data not currently available) and poor housing conditions: Percentage of homeless people, overcrowded dwellings; lack of basic amenities
- Area used for settlement: built up land per inhabitant (under prep)
- Energy consumption use of environment-friendly energy sources for heating; energy consumption for space heating; energy loss per building (under prep); insulation of housing stock (under prep)
- Preferences related to dwelling: need for own room per household member; need for a garden, balcony or terrace; preference of a one family house (data currently not available)
- Preferences related to residential area (data currently not available): preference for living in rural/urban area.

Winston and Pareja-Eastaway advocate this indicator set because it has a strong conceptual foundation, it includes a range of social (equity and distribution), economic and environmental measures, and it includes contributions from residents. It therefore avoids the limitations of sustainable development indicators that neglect housing, but it also seems relevant to first world countries.

Governance, Participation and Regulation in Post-Industrial Cities

This section summarises a very wide-range of work concerning governance, participation and regulation in post-industrial cities. This work does not necessarily focus on the city or quality of life, but contributes to our understanding of these issues through their discussion of more general concerns or parallel debates. Some of this work discusses, for example, ways in which a social scientific or rehumanised transition from 'managing the environment' to 'managing the ways in which people use the environment' might occur; some provide a critique of the modern, rationality-based paradigm; others consider new roles for planners and decision-makers in postmodern conditions.

56. Ali, M. (2006). Waste management as if people matter. *Habitat International*, 30(4), 729-730.

The author makes a number of useful points in this introduction to a special issue about waste management. Ali notes that a people-centred approach is essential as it is necessary to understand public attitudes towards consumption, recycling, and the safe disposal of wastes, as well as people's expectations. New methods of waste management tend to lead to increased charges, but this can have an adverse impact on disadvantaged populations. Recycling requires high levels of commitment from the public and new relationships between local authorities and residents. Ali argues that most waste management strategies fail to recognise the importance of people and that we need to move from 'public consultation' to participation and ownership. Plans need to be more attentive to realities on the ground rather than rely solely on technical and financial viabilities in decision-making.

57. Allen, W. (2002). *Using Participatory and Learning Based Approaches for Environmental Management to Help Achieve Constructive Behaviour Change*. Wellington: Landcare Research for the Ministry of the Environment, PO Box 10362, Wellington.

Allen posits that behaviour change is a combination of knowing what to do in an enabling environment and the existence of an imperative (motivation). Teaching is a process that supports the construction and reconstruction of new knowledge rather than just the communication of existing ideas. It is a cyclic process of experiencing, reflection, conceptualising and planning. There is a strong need to examine the social context in which behaviour change takes place. Allen recommends allowing enough time for change to take place because participation is not a one-off event like consultation. Sufficient resources and perseverance are needed and the process should be as important as the goal. Building capacity is key aspect of environmental change and this requires a sense of cooperation, good communication, and the making links with other groups and organisations.

58. Backstrand, K. (2004). Scientisation vs. civic expertise in environmental governance: Eco-feminist, eco-modern and post-modern responses. *Environmental Politics*, 13(4), 695-714.

The author evaluates emergent forms of environmental governance given critical insights from eco-modernism (which re-configures scientific rationality along the lines of reflexive modernisation), postmodernism which challenges the supremacy of scientific knowledge, and eco-feminism which problematises the connections between technocratic science and patriarchy. Backstrand then presents 'civic expertise' as a model upon which public participation balances scientific technocracy and encourages the development of social rather than technical solutions. Civic expertise 'represents a middle ground between the eco-modernist call for a reflexive science, the eco-feminist rejection of instrumental scientific reason and the postmodern scepticism of scientific progress' (p. 704), though this will require a rethinking of many epistemological, institutional and normative foundations.

Post-positivist science acknowledges the contingency of scientific claims, the cultural and political context in which science is practiced, and the way scientific knowledge is negotiated. The limitations of science (the uncertainty, the plurality of other knowledges) demand a more deliberative process where the legitimacy of decisions is based not only on scientific validity but also on the support of affected parties. Nonetheless, much of the practice of deliberative democracy retains both the distinction between 'expert' and 'lay', and the objective existence rather than the contested creation of environmental problems and this underpins the need for new institutions that allow greater public participation and provide 'counter-expertise' (p.708). Citizen juries and citizen polls, stakeholder fora and referenda may help these new institutions develop and combat the tendency to engage in mere 'cosmetic adjustments' to entrenched scientific supremacy.

59. Bagheri, A. & Hjorth, P. (2007). Planning for sustainable development: a paradigm shift towards a process-based approach. *Sustainable Development*, 15(2), 83-96.

The authors argue that sustainable development should be regarded as a process rather than a goal. Rather than forecasting to inform strategic planning, the authors advocate 'backcasting' (how did we get to this point) which involves engaging with all affected parties, valuing their input but also instigating a process of social learning in order to implement a process of sustainable development.

60. Barr, S. (2003). Strategies for sustainability: citizens and responsible environmental behaviour. *Area*, 35(3), 227-240.

Barr notes that policymakers have recently become more interested in the ways individuals can be encouraged to behave in ways that are more environmentally aware in and around the home. Changing behaviour is often seen as a matter of awareness and knowledge, however, Barr concludes that the 'linear' model of information from scientists to policy to society is not always effective. The work of Macnaghten and

Urry (1998) and Burgess et al. (1998) suggest that a 'value-action-gap' can arise because certain behaviours depend on a wide range of factors that cannot be accommodated within this Awareness, Information, Decision, Action (AIDA) model. The 'scientisation' of this model disenfranchises residents and can alienate them from the context or 'rhetorical situation' (Myers and Macnaghten, 1998) in which they experience environmental problems. Information campaigns alone are therefore unlikely to be effective.

Instead, eco-friendly behaviour is subject to a range of influences, such as environmental values (egoistic to altruistic; biocentric to anthropocentric; ecocentric to technocentric), situational factors (access to services; demographic characteristics; 'knowledge') and psychological variables (intrinsic motivation; responsiveness to pressure). Recycling behaviour will probably respond to convenience and, with kerbside recycling, norms are easily formed. Waste minimisation, on the other hand, is more dependent on personal values. Some environmental problems are therefore more or less likely to succeed given particular approaches.

61. Basiago, A. D. (1998). Economic, social, and environmental sustainability in development theory and urban planning practice. *Environmentalist*, 18(2), 145(117).

With about half the world's population now living in cities, increased diversity means urban areas are threatened with social conflict, environmental degradation and the disintegration of basic services. Urban sustainability, a term that embodies economic, social, and environmental planning practices, is often presented as the solution to a variety of ills and the author looks to Curitiba, Brazil, Kerala, India, and Nayarit, Mexico for examples alternative approaches. Basiago understands urban sustainability to be an 'organising principle governing activity at all levels of an urban system' rather than an end-state or goal (p. 148). This is consistent with the confusion we see between abstract principles and practical guidelines. Agenda 21 presents several practical measures for the socio-economic realm including equity, entrepreneurship and technology transfer through access to land, land tenure security, tenants' rights, credit policies, the reduction of homelessness through the provision of affordable housing, fostering small businesses.

Social sustainability involves 'equity, empowerment, accessibility, participation, sharing, cultural identity and institutional stability' (p. 149). Social sustainability is both a system of social organization that reduces poverty and a nexus between social conditions and environmental degradation. Though they are not all applicable to developed countries, some of the means through which social sustainability can be achieved include:

- A view that natural resources are limited
- Stressing equitable distribution over production
- Deliberative decision-making processes
- Valuing family and community over the individual
- Cherishing folk life over entertainment
- Reducing family size and resource use
- Avoiding economic disparities
- Making citizens economic stakeholders

- Using resources efficiently
- Addressing 'wellness needs' for nutrition, education and health

These are examples of three cities' paths to social sustainability but Basiago concludes that each city must find its own imaginative solutions to problems of sustainability.

62. Bickerstaff, K. & Walker, G. (1999). Clearing the smog: Public responses to air quality information. *Local Environment*, 4(3), 279-294.

Bickerstaff and Walker aim for a better understanding of the sense-making processes that occur when the public receives information, particularly given the ways such information is evaluated against everyday experiences. Their research showed that air pollution information was often seen as complex or overly technical, or invalid when assessed against the participants' own observations. In terms of behaviour change, official information was far less important than direct evidence and assessments of their own health. Furthermore, resistance to changes in travel behaviour, for example, was justified in terms of parking restraints and congestion rather than any attempt to reduce air pollution. A lack of responsibility and or conviction in personal efficacy appeared to play a role, as did a belief that the government and industry were more appropriate targets for change.

In conclusion, information was found to be less important than an appropriate contextualisation of evidence that resounded with day-to-day encounters. Giving such information local context and relevance may increase the level of attention and acceptance it receives. Furthermore, the public cannot be assumed to be homogenous and passive in their reception of information, however, this does have implications for the ways in which official material is simplified for public consumption. As the authors note, 'information designed to suit all needs is in fact satisfying few' (p. 292).

63. Bickerstaff, K. & Walker, G. (2001). Public understanding of air pollution: the 'localisation' of environmental risk. *Global Environmental Change*, 11, 133-145.

Bickerstaff and Walker situate this study within the debate over the ways the public understands global environmental risks in the local context. The sense-making processes they identify emphasise the importance of personal experience over information provided by other institutions. Meeting the goals of environmental management therefore requires a good understanding of public perceptions and values and, more specifically, how these connect with other concerns. Top-down models relying on information provision are unlikely to effect lasting change if it lands in a 'physical and social vacuum'. Local people can be helpful in terms of identifying relevant environmental problems and connecting those to practical means of addressing those concerns.

- 64. Bickerstaff, K. & Walker, G. (2003). The place(s) of matter: matter out of place - public understandings of air pollution. *Progress in Human Geography*, 27(1), 45-67.**

Bickerstaff and Walker invoke a social constructionist approach – defined as the way ‘knowledge of the everyday world and of nature is constructed through processes of social interaction and the mobilisation of disparate rhetorical and representational resources’ - to challenge what they see as dominant political discourses and ‘legitimate’ policy responses to contemporary environmental problems such as air pollution. The authors challenge the utility of simple binaries between experts and lay people in knowing the environment. They also claim that everyday life acts as a kind of prism through which more distant televised or web-based claims about the environment are mediated. In conclusion, the authors note that although scientific information tends to be dismissed by the public as confusing or irrelevant, the supply of meaningful information to a variety of publics is difficult to achieve in practice particularly when even more holistic means of dealing with environmental problems are limited to the physical (such as land use and transport planning) whilst the social is excluded.

- 65. Blake, J. (1999). Overcoming the 'value-action gap' in environmental policy: tensions between national and local experience. *Local Environment*, 4(3), 257-280.**

Blake investigates the tensions between national policies and local programmes aimed towards overcoming the ‘value action gap’ that is seen to arise as a result of information-based approaches to environmental education. Widespread participation has come to be seen as ideal yet Blake advocates a more nuanced approach is required where different ‘publics’ are acknowledged.

- 66. Budd, W., Novrich, J. and Pierce, C. B. (2008). Cultural sources of variations in US urban sustainability attributes. *Cities* 25: 257–267.**

The authors build on Jepson's (2007) conclusion that the adoption of sustainability policies was essentially inexplicable but argue that sustainability outcomes are actually tied to often overlooked cultural effects. They used five sustainability indicators (public health; environmental quality; economic vitality; countermeasures to urban sprawl; and official sustainability planning activities and policies) across 49 US urban areas and measured these against three political-cultural dimensions: social capital (Putnam, 2000), creative class (Florida, 2002) and historical legacy (Elazar, 1994). Their analysis showed that these three political subcultures accounted for variations in sustainability attributes. Further analysis suggested that the most progress has been made in cities 'where social capital resources have been mobilized to promote collective action directed toward sustainability, and where a moralistic political culture heritage serves as an important facilitator of progress toward this goal' (p.265).

These results support their claim that adaptive governance contributes to sustainability because it incorporates value trade-offs; citizen participation and the

operationalisation of their vision; and monitoring and feedback. Adaptive governance utilises social capital, networks, leadership, and trust (see Folke et al., 2005 and Hetherington, 2005) thus emphasising the value of trust building within a moralistic political culture. The adaptive governance model is useful because, following Folke, it implies the capacity to respond to change and improve communities. In so doing, they conclude that it is important that sustainability be presented as a complex but achievable series of goals directed towards future generations, and not just those with a motivation to protect the environment.

67. Bulkeley, H. (2000). Common knowledge? Public understanding of climate change in New Castle, Australia. *Public Understanding of Science*, 9, 313-333.

The author challenges the utility of relying too much on information as a means of promoting behaviour change arguing that this approach works better when combined with a better understanding of local knowledge and community values. The provision of information should be combined with policies that address social and institutional barriers to public engagement with environmental concerns. Scientific knowledge of environmental problems is less important in terms of behaviour change than social rules, social networks and relations with (and trust in) other institutions and it is therefore essential that a better understanding of these factors is achieved. That such institutions are themselves seen to be doing the right thing is critical in combating feelings of being ineffective in the face of climate change. A mix of surveys and focus groups suggested that people could be encouraged to adopt certain behaviours based as much on their moral content (towards other species and future generations) or economic prudence as concern about climate change.

68. Bulkeley, H. (2006). Urban sustainability: learning from best practice? *Environment and Planning A*, 38(6), 1029-1044.

Bulkeley explores how the increasingly large literature devoted to the 'best practice' of urban sustainability is produced and used. She concludes that best practice is not so much about the dissemination of lessons as a way of discursive process where policy problems are reframed. 'Best practice' is both a political rationality and governmental technology that various networks and coalitions use to promote particular urban futures. These practices inevitably become 'enmeshed in the particularities of places' (p. 1029) and have to compete with other local governmentalities. Practicing best practice then becomes a matter of actors trying to make sense of the everyday context in which this knowledge is created and to use this knowledge to challenge or support particular versions of urban sustainability.

69. Bulkeley, H. H. & Betsill, M. (2005). Rethinking sustainable cities; multilevel governance and the 'urban' politics of climate change. *Environmental Politics*, 14(1), 42-63.

Bulkeley and Betsill discuss the implications of combining a newfound emphasis on urban sustainability with the lack of clarity as to its meaning and how it should be

achieved in practice. The focus on technocentric models of sustainability means critical questions about the political contests over the term are often neglected. The focus on the 'urban' has also meant that other questions of scale have been overlooked. They challenge the idea that 'global', 'national' and 'local' environmental politics take place in isolation and argue that the tendency to focus on the city as a discrete entity is partly responsible for an implementation deficit. Cities are influenced from the outside through governance structures involving national and supra-national bodies, their competencies and agendas, and the ways in which these help frame particular place-specific policies and programmes.

70. Bulkeley, H. & Kern, C. (2006). Local government and the governing of climate change in Germany and the UK. *Urban Studies*, 43(12), 2237-2259.

A comparison of climate change policies in Germany and UK revealed certain similarities, such as efforts being concentrated in the energy sphere and the use of 'self-governing and enabling' strategies. Supra-national financial and political conditions impact on local policies, as do local capacities and competencies. Rather than mere information provision, it is argued that local governments need political support and guidance so that they can use both traditional forms of authority and employ governance strategies that involve offering incentives to other actors.

71. Church, C. & Elster, J. (2002). *Thinking Locally, Acting Nationally: Lessons for National Policy from Local Sustainability*. York: Joseph Rowntree Foundation.

Church and Elster note the frequent separation of environmental and social concerns in the pervasive discourse around sustainable development whilst highlighting the importance of overcoming this gap. They present the findings of their research into the extent to which local strategies have been successful in linking environmental and social concerns, the extent to which these lessons feed into the broader sustainable development agenda, and how national policy can help remove obstacles that impeded local initiatives.

They found that while some links are being made between social and environmental policy, these connections are often unplanned and encounter many barriers at both a practical and conceptual level. Action at the local level needs to be seen as valuable as it can be an effective way of enhancing the bio-physical environment whilst at the same time improving quality of life. Improved information provision and networks, training, funding, and the provision of practical tools and resources could assist action at this level. National and regional bodies have a role to play in coordinating this. Local authorities should take advantage of their mandate to promote 'well-being' whilst remaining attuned to community needs and aspirations through the recognition of the value of community initiatives and expertise.

72. Clark, T., Lloyd, R., Wong, K. & Jain, P. (2002). Amenities drive urban growth. *Journal of Urban Affairs*, 24(5), 493-515.

The authors argue that, because of globalisation, the field of urban studies needs to revise and update its theories of urban change. This is primarily because culture is generally subordinated to work as an explanatory factor in urban change but that cultural vitality is increasingly important in terms of a city's economic well-being. In the post-industrial city quality of life is a major consideration with citizens viewing their surroundings almost as tourists do, with aesthetics, services and attractiveness important aspects. The article's focus is on the kinds of amenities the post-industrial city can reasonably sustain.

Globalisation has repositioned cities as 'market participants', as entertainment machines that emphasise consumption over production, and as 'democracy' when cities that lag come under pressure from other groups, organisations, and institutions. There are more contacts and much more information about options and this leads citizens to redefine their own ambitions and the fields of competition have expanded beyond traditional hierarchies. Under these conditions Molotch's (1976) 'cities as growth machines' model loses its explanatory power with urban economic viability now less dependent on growth at any cost and more reliant on attracting and retaining knowledgeable workers. The provision of public goods, such as clean air, parks and so on, has become more complicated. Clark et al. argue that 'the lifestyle concerns of social participants are increasingly important in defining the overall rationale for, and in turn driving, other urban social processes' (p. 499). Rather than being a mere by-product of production, quality of life is the new driver of production and this contributes to a 'New Political Culture'. The implications include a need for a more managed growth strategy.

73. Crabtree, L. (2006). Sustainability begins at home? An ecological exploration of sub/urban Australian community-focused housing initiatives. *Geoforum*, 37(4), 519-535.

With reference to housing and insights from ecology, Crabtree presents research findings on housing sustainability, defined as not only the built form but also affiliated social systems, tenure models and delivery systems. 'Sustainability', in this approach, is more (or as much) to do with sociological imbalances as with 'the environment' and it should be seen more as a process than a goal. Crabtree draws on a strand in the literature that focuses on building capacity in social systems rather than trying to attain an ecological steady state. Sustainable systems are therefore those that invoke diversity, flexibility and adaptability whilst maintaining core functionality. Combining ecological and sociological goals is achieved in everyday lived realities, such as co-operatives and informal exchange systems, that encourage community control, autonomy, self-determination, relevance and purpose in life. Sustainability cannot be viewed as a singular model that can be applied generically but is rather a context-driven process driven by a set of principles including justice, equity, trust and power sharing.

The research found the issues facing the different housing projects examined were rarely environmental but that the *ability* to apply green technologies, for example, was

influenced by social, economic, and cultural institutions including housing providers, the wider community and various financial organisations and markets.

74. Ellis, R. & Waterton, C. (2005). Caught between the cartographic and the ethnographic imagination: The whereabouts of amateurs, professionals and nature in knowing bio-diversity. *Environment and Planning D-Society & Space*, 23, 673-693.

Ellis and Waterton document new forms of public engagement noted in biodiversity policy in the United Kingdom that now include such 'participants' as nature, amateur naturalists, as well as professional biologists and conservationists. Using the bio-diversity action plan (BAP) and the Natural History Museum's participatory initiative, they illustrate how such approaches are both 'complexifying' as the networks of knowers of nature are extended, and simplifying as the new inclusions are disciplined into existing frameworks.

75. Eskeland, G. & Feyzioglu, T. (1997). Rationing can backfire: the day without a car. *World Bank Economic Review*, 11(3), 383-408.

Ironically, measures in Mexico to reduce private car use through a ban on each car on a particular weekday actually increased total car driving. Some households bought additional cars in order to circumvent the ban and, unfortunately, many of these extra cars were older models which generated more pollution. This is a good illustration of how eco-strategies that do not find public favour can be counter-productive.

76. Evans, R. & Marvin, S. (2006). Researching the sustainable city: three modes of interdisciplinarity. *Environment and Planning A*, 38(6), 1009-1028.

This paper uses the UK Research Council's treatment of the issue of the sustainable city during the 1990s to explore ways in which interdisciplinarity is practiced. Though a radical form of interdisciplinarity was proposed, in practice either science or technology or society was emphasised and this, along with the outsourcing of programmes to local authorities, diluted their revolutionary beginnings. Though the concept of sustainable cities clearly demands an interdisciplinary approach, we may have to acknowledge that the different disciplines involved are 'neither cumulative nor complementary' (p. 1013). The authors argue that once it is recognised that knowledge is cultural we can begin to challenge the superiority of the way problems are framed scientifically. This then encourages the admission of a wider group of 'experts' to the debate, and, as a corollary, funding and resource allocation problems might be resolved by this broader participation. The authors also see a place for the involvement of 'knowledge brokers' who essentially translate across disciplines, frameworks and paradigms. Finally, and perhaps most importantly in the context of this bibliography, politically or democratically accountable solutions might be more appropriate goals than those that are scientifically accurate.

77. Frame, B. (2004). The Big Clean Up: social marketing for the Auckland region. *Local Environment*, 9(6), 507-526.

The Big Clean Up (BCU) was a campaign undertaken by the Auckland Regional Council (New Zealand) with the intention of promoting more sustainable ways of living using social marketing techniques. It represents a move away from technical solutions to environmental problems and a shift towards 'people-based solutions'. The BCU's goals included raising awareness, creating connections between environmental issues and individual behaviour, providing simple solutions and creating personal action plans. The BCU focused on one issue at a time, with television campaigns and household programmes – including simple actions to take - rolling out simultaneously.

It is argued that social marketing works best when individual motivation programmes are combined with structural change. Underlying concepts include a behavioural (people-centred) focus where communications target specific actions; an applied or practical approach where broad environmental concepts are translated in ways that are relevant in daily life; interactive education where people learn by doing rather than by seeing or hearing; tailored to individuals, groups and communities.

78. Fyson, A. (2005). Fyson on... culture's role in creating social sustainability. *Planning* (1643), 10.

Fyson argues that social sustainability needs to include cultural aspects because they help shape social life. Cultural considerations should therefore be part of planning processes though it is often difficult to quantify the 'returns' made on cultural investments.

79. Hanna, K. & Walton-Roberts, M. (2004). Quality of Place and the Rescaling of Urban Governance: The Case of Toronto. *Journal of Canadian Studies*, 38(3), 37 - 67

The authors posit globalisation (described as a complex process embodying conditions of instant communication and the rapid movement of people, goods, and ideas) as contributing to the rescaling of governance that brings cities –command and control nodes - to the forefront in discourses of economic competitiveness. Hanna and Walton-Roberts use Toronto, Canada, to illustrate how this process can contribute to a situation whereby resources and responsibilities separate with adverse impacts on urban quality of life as the state's provision of socio-cultural context diminishes. Ironically, calls for competitiveness are counter-productive in terms of quality of place (comprising physical growth, social and environmental quality, and governance) though, the authors argue, this need not be the case. A change in focus away from the spectacular towards social infrastructure is required because, they argue, 'competitive global cities cannot be created or maintained by chasing an imaginary bottom line while ignoring the multiple needs of those who reside within them' (p. 61).

80. Harrison, C., Burgess, J. & Filias, P. (1996). Rationalising environmental responsibilities. *Global Environmental Change*, 6(3), 215-234.

This is one of the earlier pieces of work exploring the ways people justify their inaction over environmental concerns. They found little evidence that respondents from either the Netherlands or the United Kingdom were incorporating pro-environmental behaviour into daily practice. Though committed environmentalists advocated particular behaviours, these were seen as difficult to adopt given wider social practices around consumption. The nature of people's contract with the state was important with respondents seemingly more accustomed to being treated as consumers rather than citizens and, consequently, governmental green rhetoric was dismissed. Environmental responsibility was more likely to be felt in those Dutch neighbourhoods demonstrating a belief in the benefits of wider social contracts than among those in more alienated conditions in the UK.

81. Hastings, A., Flint, J., McKenzie, C. & Mills, C. (2005). *Cleaning Up Neighbourhoods*. Bristol, UK: Policy Press

This study identified a gap in environmental amenity between deprived and less-deprived neighbourhoods where poorer areas experienced more – and more severe – environmental problems. The authors attribute this to range of factors including less economic activity, higher population densities which leads to greater 'wear and tear' and high numbers of vulnerable households, all of which meant these residents were less able to control their environment. Authorities found it difficult to keep on top of problems like waste collection and graffiti and service provision was sometimes compromised by fear of violence and threats.

The study also found that this situation could be remedied by targeting areas for improvement which led to higher expectations and cooperation from residents, and endorsement from service providers as their jobs became easier. The different forms of addressing environmental problems included standardised provision (which works when all areas receive high levels of service), 'hot-spotting' (which augments standardised approaches but is not necessarily strategic in nature) and formal (explicitly recognises and attempts to address deprivation) and tacit targeting (a less controversial approach to needs-based provision). Closing the gap requires political and financial support from central government and is only likely to succeed if the amenities of less-deprived neighbourhoods are maintained.

82. Haughton, G. G. (1998). Searching for the Sustainable City; competing philosophical rationales and processes of 'ideological capture' in Adelaide, South Australia. *Urban Studies*, 36(11), 1891-1906.

Haughton identified the enormous variation in approaches to the sustainable city and subsequently focused on four models of, and four experiments with, the concept of sustainable urban development. 'Light green' cities are externally dependent and

market driven with a 'go for it' approach to economic growth. Redesigning cities accommodate growth but balance this with consultation and planning. Self-reliant cities are based on local capacities, participation and selected forms of economic growth. Fair shares or 'deep green' cities are guided by concerns for both carrying capacity and equity. Economic growth regulated and the precautionary principle employed. These were then studied in relation to four experiments that showed 'ideological capture' to be important in terms of using the rhetoric of sustainability to promote certain agendas. The success of these various experiments therefore rested on the extent to which they were successful in capturing the ideological imagination.

83. Henley, C. (2006). *Individual and Community Involvement and Steps to Achieve It*. Auckland: Waitakere City Council.

Henley compares the community-based social marketing approach (which emphasises direct contact among community members and the removal of structural barriers) and environmental education (which utilises strong values, critical thinking and reflective learning and assumes that behaviour change is a result of education, awareness and attitude change). A comparison is also implied between 'co-creative' and 'top-down' approaches. The benefits of a co-creative approach are enhanced ownership of issues and solutions, the building of social capital, and an increased understanding of issues. One of the main benefits of the community-based social marketing approach is that all messages are thoroughly pre-tested which allows the final programmes to be targeted to different groups and barriers removed. Potential problems are that the community-based social marketing approach is intensive in terms of human resources and the multiple pre-tests can be expensive.

Community-based social marketing approaches work best when barriers to behaviour change are identified, pilot programme to overcome barriers developed, implemented and monitored. Also required is commitment from intention to action; prompts to remind us to act; norms-building with community support via acts of compliance and conformity that are visible and internalised; communication using effective messages that capture attention; targeting by audience, using credible source, framing messages positively, establishing goals, modelling the desired behaviour, encouraging social diffusion, giving feedback on progress; providing incentives; and making change convenient.

84. Hobson, K. (2003). *Thinking habits into action: the role of knowledge and process in questioning household consumption practices*. *Local Environment*, 8(1), 95-112.

Hobson outlines a cultural politics of sustainability framework to better understand how and in what forms people in high-income countries use information to modify their consumption-related behaviours. Many environmental stresses can be linked to the material aspirations of consumers in the First World thus the invocation to 'do more with less' and adopt a 'sustainable lifestyle'. Such campaigns tend to use an information-based approach where it is assumed greater knowledge will lead to behaviour change. Despite these campaigns (the Conservative Party's 'Helping the

Earth Begins at Home' and 'Going for Green' and the Labour Government's 'Are you doing your bit'?) levels of consumption continue to rise.

The Global Action Plan's 'Action at Home' programme addresses consumption practices over time and in a range of contexts including the home, school and work. Information is targeted towards specific geographical locations (rather than the national level) and each programme involves GAP, a local organisation, a group of volunteers and participating households.

Hobson identified a number of literary strands relevant to consumption. Psychologists grapple with links between attitudes, values, norms, intentions and behaviour. Sociologists have tried to find connections between environmental behaviours and demographic characteristics and/or social norms that run counter to environmental concerns. The relevance of 'the environment' as a public good has also been questioned given the way it connects to other debates around trust, public understandings of science and so on. Connections to other concerns problematises the individual lifestyle as a site of social change and Hobson argues that the micropolitics of the household reveals the nature of consumption to be a collective endeavour. Finally literature on social practice sees consumption as part of an identity project. Using Giddens' theory of structuration Hobson focuses on the hidden knowledge or practical consciousness that allows people to go about daily life without having to make decisions constantly. This is not so much a cognitive process as an embodied one concerned with such things as 'how to turn the tap off'. Discursive consciousness, on the other hand, concerns the actions of which individuals are more aware.

The author argues that this distinction aligns with those types of everyday behaviour that changed as a result of the GAP programme and those that remained the same. A better understanding of how the unconscious becomes problematic can therefore yield good results as when participants questioned why they left the television or lights on. This process is contingent on the whether the behaviour in question arises from practical consciousness and how the problem is framed, however. Providing knowledge that speaks to the participants, or putting data into a known context, is also important though Hobson notes such 'facts' were often soon forgotten. Rather, the participants realised that they could do things differently and started to question other practices in which they engaged.

In contrast, more complex behaviours, such as shopping, that required high order decision-making tended to remain unchanged as a result of the programme. Of interest is the finding that decision-making *is* taking place and that the public is not totally inert. The kind of information provided by the GAP project is incorporated and impacts on the individual's discursive consciousness even if behaviour does not change dramatically. Hobson makes a strong case for the claim that scientific knowledge *per se* is less important than allowing individuals to make connections between that information and their daily practices. Advocates of sustainable consumption should address how vested interests and ambiguities are framed and acknowledge such practices as sites of personal and political struggle.

85. Hogget, P. (2001). Democracy, social relations and ecowelfare. *Social Policy & Administration*, 35(5), 608-626.

The author notes that the green movement can lack appeal if it is presented as the champion of frugal, small-scale community living but that it could appear more convincing if the quality of human and social relations was more prominent in the discourse. This, combined with a respect for nature, forms the basis of an ecowelfare in which people might flourish in a more balanced way through the development of more diverse forms of democracy.

Hogget outlines three versions of the good society. The first, based on consumerism, posits well-being as dependent on the variety and number of goods and services one can purchase. The second, welfare-statism, relies on the quantity of public goods that a citizen may enjoy by right. The third, ecowelfare, presents well-being as an effect of the quality of relations between people and between people and nature. Ecowelfarism requires qualitative change in interdependencies between a) nature and people (including the 'tragic voice of nature' (p. 615) as heard in processes of aging, sickness, madness and so on); b) a democracy of emotions which recognises the fluidity of our roles and character; c) emancipatory welfare practices in which citizens are seen as co-determining subjects and not just objects of social policy; and d) a 'convivialisation of community life' and the 'expressive possibilities of everyday life in public spaces' (p. 616).

Qualitative change here would impact upon fundamental democratic processes including those around the distribution of risk and reward. As the author notes: Governments have tried to exclude citizens from participation in the complex ethical and moral questions that saturate collective everyday living. Our ethical powers are undernourished in comparison to our technical abilities. And as a result we live in a risk saturated world endangered at all levels by technique which has been developed as a means to control nature, including the nature within us (p. 617). A plurality of participatory mechanisms facilitating greater involvement of more diverse groups in different settings is essential in combating this tendency.

86. Hubacek, K., Guan, D. & Barua, A. (2007). Changing lifestyles and consumption patterns in developing countries: A scenario analysis for China and India. *Futures*, 39(9), 1084-1096.

This paper explores the impact of changing consumption patterns of Chinese and Indian populations highlighting population, affluence and technology as driving forces in environmental pollution. They apply the equation of $\text{Impact} = \text{Population} \times \text{Affluence} \times \text{Technology}$ (I=PAT) to calculate the likely changes in CO₂ emissions and discuss some of the benefits and disadvantages of this model. Their remarks with regards to the United States and Japan indicate cultural differences play a role in consumption patterns and they conclude that developing countries could benefit from avoiding the wasteful patterns that Northern populations seem addicted to, however they acknowledge this might be difficult given the desire to emulate Western lifestyles. Despite this, the authors argue that although influencing consumers is difficult, particularly on a limited budget, companies and marketing agencies constantly try to manage people's needs and desires and they question why 'green campaigns' should not be able to do likewise.

87. Hunter, C., Carmichael, K. & Pangbourne, K. (2006). Household ecological footprinting using a new diary based data gathering approach. *Local Environment*, 11(3), 307-327.

The authors report on a study of a new household-level ecological footprinting approach that used self-completed diaries and interviews to track household consumption and resource use. Although it was in some ways useful in terms of educating householders about their environmental impact the finding suggested simply demonstrating to people how unsustainable they were could lead to feelings of powerlessness. The diary method, though time-consuming, might be best used in conjunction with other methods to highlight areas where change would be most beneficial.

88. Jarvis, H. (2007). Home-truths about care-less competitiveness. *International Journal of Urban and Regional Research*, 31(1), 207-214.

Jarvis argues that much of the city-regions literature neglects the ‘mundane’ ways in which cities and regions are reproduced socially through everyday, household-level decision-making processes. Initiatives that concentrate on growth tend to discourage ‘an ethic of care’ that underpins such processes as volunteering and ‘free’ environmental resources. While ‘macho’ discourses of new urbanism and liveability are dominant, everyday decisions involving transport or choice of schools are overlooked which leads Jarvis to call for a feminist approach which entertains household level decision-making. One of the ways in which seemingly all-powerful forces of, for example, ‘globalisation’ is resisted is to reduce mortgage liability by downsizing, cutting back on wasteful journeys and by valuing family and community time.

Questions around ‘liveability for who’ have the potential to challenge unreflective emphases on urban competitiveness and encourage a new focus on social well-being and environmental stewardship but liveability is too often a tool of neoliberals in market-based approaches. Liveability and marketability elide into a discourse concerned with attracting and retaining skilled, mobile workers. As McDowell (2004) has observed, however, competitiveness cannot allocate those resources or services exchanged voluntarily or out of love.

A focus on the household provides three benefits: First, it highlights structural inequalities that limit the range of choices actually available. Second, the ways in which households actually operate under certain constraints is highlighted. Finally, a focus on social reproduction is useful in connecting households within and between regions to illustrate how political interventions manifest at a range of scales.

89. Jupp, E. (2008). The feeling of participation: everyday spaces and urban change. *Geoforum*, 39, 331-343.

The author notes how participatory procedures often maintain state/public divisions, with power retained by the authority. She explores strategies for more genuine engagement, emphasising small scale interactions and feelings (of being comfortable, 'at home', 'helping out' and 'keeping going') including the benefits of 'buzz'. Jupp's argument is that the notion of participation should be expanded to include community-led groups and spaces not usually included in the process. Such an approach addresses the Foucauldian critique that participation is usually to incorporate rather than empower. Counter-publics and appreciation of informal political processes are neglected aspects of participatory procedures. Jupp's methods go beyond invitations to join participatory events and instead recognises low key 'everyday spaces of engagement' (p. 340) such as having a cup of tea together. Officials could invest in creating frameworks to connect residents through, for example, experimental art projects, gardens or children's play sessions. It is also necessary to understand that this kind of participation is long-term.

90. Konvitz, J. W. (1995). Improving the city environment. *OECD Observer* 197, p17-32.

Konvitz challenges the conventional wisdom of seeing sustainable cities as those that minimise their impact on the environment arguing that cities, like ecosystems, are dynamic and that sustainability involves a process of constant change as we cope with the interactions of man and nature. The state of the environment in absolute terms is therefore a poorer indicator of a city's sustainability than the provision of a strategy for dealing with new problems where 'the environment' is factored into decision-making.

91. Krueger, R. & Savage, L. (2007). City-regions and social reproduction: A 'place' for sustainable development? *International Journal of Urban and Regional Research*, 31(1), 215-223.

Krueger and Savage question whether the analytical framework of sustainable development accounts for the social reproduction of city regions that have recently been used to explain a city's competitiveness. They argue that the many conceptualisations of sustainable development tend to overlook many social and economic dimensions of city-regions. They use a combination of sustainability-related and labour geography literature and a case study of a Boston hospital's privatisation to illustrate their point.

92. Leitmann, J. (1999). Can city quality of life indicators be objective and relevant: towards a participatory tool for sustaining urban development. *Local Environment*, 4(2), 169-180.

The author makes a distinction between individual and public quality of life, with the latter using the city itself as the unit of analysis due to the impact its components (air and water quality, economic productivity, green spaces, employment opportunities, crime, and so on) have on individual quality of life components (health, self-esteem, play, friends, neighbourhood, etc). The problems with this dual structure include

contradictions between the two levels, the *appearance* of objectivity that suggests a false consensus, and the way notions of quality are bound to culture. This being the case, Leitmann argues that it is unlikely quality of life indicators can be objective, but that does not stop them from being relevant providing they are developed through consultation, connected to policies and programmes, and realistic. He concludes that the most useful indicators are connected to the real world and reflect local needs; that they should be developed at the level they will be implemented yet still connected to policies and programmes; and realistic (affordable, observable and measurable, able to be collected regularly, understandable and accepted, change-sensitive, and balanced).

93. Linden, A. & Carlsson-Kanyama, A. (2003). Environmentally friendly disposal behaviour and local support systems: lessons from a metropolitan area. *Local Environment*, 8(3), 291-301.

The authors divide motivating factors determining waste disposal behaviour into external (administration, economics, provision of services and information) and internal (knowledge, values and attitudes) categories. When these align, behaviour can change quite quickly as it did in the case of recycling non-toxic material. Internal factors centred on environmental concern are likely to be short-lived without supportive external motivators as was the case of reuse and repair strategies.

94. Lindenberg, S. & Steg, L. (2007). Normative, gain and hedonic goal frames guiding environmental behaviour. *Journal of Social Issues*, 63(1), 117-137.

The authors base their study on 'goal framing theory' which posits that the way people process information depends on the way their goals are framed. In the context of behaviour relating to the environment, normative goal framing (what is appropriate) tend to be pro-environment whereas gain (to guard and improve one's resources) and hedonic (to feel better right now) goals tend not to be. Consequently, there are three ways of managing environmentally sound behaviour: First, by strengthening normative goals; second, by making gain and hedonic goals more consistent with normative goals and third; by establishing the prominence of the normative frame requires abstract exhortations (such as 'be environmentally friendly') to specific behaviour (such as taking shorter showers). Knowledge, awareness and moralising 'campaigns' help normalise desired behaviour.

With regards to reducing discrepancies between normative and hedonic goal frames, the authors acknowledge that little is known about ways of promoting positive feelings in connection to pro-environmental behaviour. They suggest that whatever mix of rewards, incentives and penalties is used, the normative goal should be strengthened as well. Research has shown that sanctions seen as disincentives strengthen a gain frame. The implications for public policy are to provide information designed to infuse people with strong negative emotions about anti-environmental behaviour and to develop measures that overcome barriers to the desired behaviour.

95. Lindseth, G. (2004). The Cities for Climate Protection Campaign (CCPC) and the framing of local climate policy. *Local Environment* 9 (4):325-336.

Taking a constructionist perspective, 'framing' entails representing 'reality' in selected ways so as to influence the causal interpretation, moral dimensions and recommended actions. Framing is therefore a kind of 'strategic action' (p. 328) in need of constant evaluation and monitoring if it is to be successful.

96. Lucas Associates and Christchurch City Council (1998). *Restoring Avoca Valley Stream: A Community Model*. Christchurch City Council.

The report presents findings on a study of a community-led initiative to restore a local stream, make it ecologically healthy, and provide recreation opportunities. Community involvement was important as much of the land along the riverside was privately owned. The researchers conducted interviews with landowners, site meetings, and a public workshop to encourage the involvement of other individuals and organisations. They recommend allowing plenty of time for the project to evolve and to involve all affected parties early on. Facilitators should be present and easily available. Such recommendations could arguably apply to all manner of developments, including those that bring change to the built urban environment.

97. Lucas, K., Grosvenor, T. & Simpson, R. (2001). *Transport, the Environment and Social Exclusion*. York: Joseph Rowntree Foundation.

The report presents findings of the authors' research into the ways in which environmental and social concerns overlap in the context of transportation. They found that there were some characteristics in common but that they might have different causes. The goals of environmentalists and social activists do not always align; reducing automobility will depend on the provision of fast, efficient, quality services, but such service is likely to be more expensive and confined to high demand routes further exacerbating the exclusion of some marginalised groups. For these people, issues such as global warming were largely inconsequential given the immediacy of other, more local concerns such as a lack of adequate safe and convenient transport that allows them access to employment, education and health care.

98. Macnaghten, P. & Jacobs, M. (1999). Public identification with sustainable development. *Global Environmental Change*, 7(1), 5-24.

The authors note that public participation has become a core strategy associated with sustainable development but question the extent to which the public identify with the concept and the analysis that underpins it. They ask whether there is a public recognition of a problem of 'unsustainability' and a general endorsement of the solutions that accompany this construct. As they state, it is 'inconceivable' that many of the proposed changes can be implemented without public acceptance, therefore a better understanding of the relevance of the concept as it affects people's lived

experiences is crucial. It is unreasonable to expect public participation if the concept remains divorced from this context and becomes 'curiously sterile' as a result.

Participation can be either direct (implemented in the home) or indirect (via processes of consultation) but in both cases participants have to believe in the project. Local authority assessments of the extent to which the public is likely to support their initiatives tend to rely on qualitative and quantitative studies of the level of awareness, knowledge or ignorance. 'Sustainability indicators' have emerged as a preferred form of conveying information and communicating with the public in expectation that behaviour will change as result.

The authors examined this assumption through the use of focus groups using a simplified version of sustainable development that incorporated people's economic needs, quality of life aspirations and environmental limits. The research showed information was seen to be more credible when the participant could corroborate it in terms of personal experience. 'Quality of life' was not a term that resonated with all participants, particularly those who were struggling to get by. For those on average or above average incomes, quality of life was connected to personal rather than social aspirations though many of the goods associated with the term were 'public' or 'environmental', such as reduced crime, safe streets, enjoying the countryside, and so on. The government was seen to be as much the cause of many problems as the solution and the respondents displayed a distinct lack of belief in their own ability to bring about meaningful change.

This has implications for both direct and indirect forms of participation; it is highly questionable whether sustainability indicators are effective in terms of bringing about behaviour change, as knowledge is less important than trust in those institutions providing the information.

99. Major, A. & Atwood, L. (2004). Environmental risks in the news: issues, sources, problems, values. *Public Understanding of Science*, 13, 295-308.

The authors evaluate differences in news stories that report on environmental risks and those that do not. News tends to focus on events, therefore unusual but high impact occurrences receive greater coverage than more mundane but widespread risks. Furthermore, the event itself receives more attention than the issues surrounding it. Consequently, news coverage does not readily provide adequate information about the realities of risks that the public might use to make decisions. This is important given the news media, for many people, are the primary sources of information on environmental issues and are the main conduits between the public and the scientific community and government.

100. Matilla, H. (2002). Aesthetic justice and urban planning: Who ought to have the right to design cities? *Geojournal* 58, 131-138.

Matilla identifies two approaches to planning: equity planning versus planning and designing for aesthetics. Whilst planners should pay attention to both, there is a tendency to emphasise one over the other. Planners have addressed aesthetics through a modernist 'architecture in a large scale' in the hope that social objectives would be

achieved through manipulation of built form; however, it is widely accepted that this approach has failed to address those social and political issues. Authors like David Harvey (1996) have instead advocated social justice be delivered through attention to social processes rather than built form, but this 'procedural turn' has sidelined issues around aesthetics. Matilla maintains that, despite some claims to the contrary, modernist physical planning sought to achieve certain social and moral objectives, *and* the equitable distribution of an aesthetically pleasing environment but that they generally failed at the latter task because they 'valued novelty and experimentation instead of traditional values and the preferences of the public' (p. 133). Thus, the author argues that the best way to provide 'aesthetic justice' is by opening the aesthetic dimension of urban planning to public participation.

Though Habermas' communicative action is useful, Kantian thought suggests aesthetic judgements cannot be proved by arguments so that 'the producers of aesthetic objects cannot give reasons for what they do, and nor should they, since there is no room for disagreement within aesthetic matters' (pp. 137-8). For Matilla, this does not mean we cannot discuss matters of taste, but that we should see communication and collaborative decision-making as a kind of 'aesthetic education' (p. 138) where different groups learn from each other rather than having designers designate what is good and attractive.

101. McCann, E. (2002). The cultural politics of local economic development: meaning-making, place-making, and the urban policy process. *Geoforum*, 33(3), 385-398.

McCann argues that meaning-making discourses that are the major concern of cultural politics are integral to the place-making politics associated with local economic development. This is not only about attracting investment but is an essential feature of *intra-local* politics where different interest groups engage in a struggle over the way local space economies develop and, consequently, whose interests are served. McCann's case studies suggest that these struggles are not usually presented in terms of exchange values so much as the naturalisation of social values that establish developments as good, bad, appropriate or unworthy, etc. The author's work relates to participatory planning by highlighting the role of non-elites in this process and by situating everyday life experiences and 'making a living' as more than just a backdrop for development politics. Environmental planning is closely connected with this sphere though such mundane concerns often fall below the radar or academic analyses. 'What [McCann asks] can be more important than having a job, being sheltered, feeding your family, not being marginalised or discriminated against, and being sure that the water you drink or food you eat is not contaminated'? In conclusion, McCann argues that local *economic* development and the *cultural* politics of making meaning, making a living, and making place are intricately connected.

- 102. McDonald, A., Lane, S. N., Haycock, N. E. & Chalk, E. A. (2004). Rivers of dreams: on the gulf between theoretical and practical aspects of an upland river restoration. *Transactions of the Institute of British Geographers*, 29(3), 257-281.**

This paper uses a case study to illustrate the development and application of a conceptual model that was applied to a river restoration project that combined ecological, geomorphological, social and economic issues. Their paper highlights the gap between 'ideal goals' as defined by science and practical, institutional and financial constraints.

Time and budget constraints often mean idealised, scientific approaches to restoration (how target river reaches work, catchment scale audits and so on) are unlikely to succeed, therefore local knowledge is essential in filling in the gaps. Furthermore, public participation is often required in order to get the project moving and identification with, or valuing of, the project may be crucial in terms of its continued social relevance. This means that options for restoration may appear unsound when evaluated in a technical sense alone but may be more sensible when seen as part of a social process which emphasises management rather than restoration. Several factors make this shift in emphasis more likely to succeed. First, recoverable, reversible or flexible decision-making processes. Second, an incremental change away from hard engineering. Finally, seeing restoration and, we would argue, other urban eco-processes as a social, political and economic process rather than a technical problem is crucial.

- 103. Mulvihilla, P. and M. Milan (2007). Subtle world: Beyond sustainability, beyond information. *Futures* 39: 657–668.**

A great deal of work links sustainable behaviours with information provision whilst acknowledging that the connection is complex and problematic. The concept of sustainability is 'an uninspiring abstraction' and although other terms - such as diversity or equity - can be similarly accused unlike 'sustainability' they can at least be sensed in everyday lives. Sustainability, they argue, is only compelling when contextualised within certain processes or activities —sustainable energy or transportation. Without this contextualisation, other goals become more compelling because in a practical sense there are environmental and development contradictions that make win-win outcomes seem unlikely if not impossible.

These authors argue for a cautious connection between sustainability and information noting:

If sustainability and information are problematic terms separately, together they form a house of mirrors, leading to circular, self-referential questions. Does information need to be sustainable, and what if it does? How much does ecological sustainability depend on information? If knowledge gaps are barriers to the pursuit of sustainability, is more information the answer? Is information overload a primary cause of ecological unsustainability? Are information-intensive solutions sustainable? Are information technologies a net benefit in terms of "dealing with complexity", or do they add complexity and perpetuate wicked problems? Is the information economy a step toward

ecological sustainability, or simply a diversion? And so on...(P. 664).

They conclude that people are motivated by a variety of factors and this 'inherent diversity and complexity of motivations demands an equally diverse and nuanced approach to stimulating change' (p. 665). 'Clouded by the vagaries of the information society', a central message is a need for more subtle approaches to the challenges of sustainability based in personal, creative, spiritual and ecological dimensions.

104. O'Hara, S. (1999). Community based urban development: a strategy for improving social sustainability. *International Journal of Social Economics*, 26(10/11), 1327.

Writing from a social economic perspective O'Hara contends that both social and natural capital stocks must be maintained if long term economic activity is to remain viable. Social capital concerns the benefits derived from networks, norms, and social trust that contribute to social organisation and that cities need to maintain its vitality. Economic activity is therefore situated within, or is a subsystem of, an environmental and social context. Consequently, development strategies should be attentive to the needs and skills of urban residents. Broad based citizen involvement helps provide information and strengthens community interest in new developments. Participatory approaches facilitate the kinds of connections - the communication, networking skills, and community identity - that help build the social capital that underpins social sustainability.

105. Oskamp, S. (2002). Environmentally responsible behaviour: Teaching and promoting it effectively. *Analyses of Social Issues and Public Policy*, 2(1), 173-182.

In the war against an uninhabitable Earth, Oskamp lists a series of barriers to sustainability and motivational techniques for facilitating more environmentally friendly behaviour. Information is rarely sufficient in bringing about behaviour change, but can be effective when combined with motivators (flooding, droughts, etc), skills and other enablers (appropriate technology and equipment). Obstacles include resistance from those who profit from consumption and pollution-causing processes, as well as from individuals who do things out of habit, are selfish, who may feel helpless or fearful and who may believe in technological fixes. Addressing individual behaviour change could incorporate using popular literature as well as traditional textbooks, on-line sources, vivid scenarios of environmental problems, describe different problems and facilitate discussion of their implications for society, discuss the importance of behavioural norms, challenge faith in technological fixes, encourage environmental activism, and – most critically – present such action as a war against extinction.

106. Peel, D. & Gregory Lloyd, M. (2007). Positive planning for wind turbines in an urban context. *Local Environment*, 12(4), 243-254.

The authors note that attempts to carry out green political objectives is often frustrated at the local level by an 'implementation impasse'. They use a case-study of a wind farm (which can be seen as both an environmental solution and problem) to explore state-market-civil relations and how positive planning may address an impasse that can be exacerbated by the urban context where the balance between environmental, social and economic interests can be very different. The role of planners was to create a positive space wherein evidence could be presented and debated, and the various arguments evaluated and mediated. Positive planning is facilitated by developers being sensitive to locals' concerns, a proactive approach, and a transparent planning system.

107. Petts, J. & Brooks, C. (2006). Expert conceptualisations of the role of lay knowledge in environmental decision-making: challenges for deliberative democracy. *Environment and Planning A*, 38(6), 1045-1059.

Using survey evidence of expert conceptualisations of the value of 'public' or 'lay' knowledge in environmental decision-making the authors conclude that professionals suspect the public misunderstand environmental issues. They identify a tension between the realisation that the public need to 'buy-in' to environmental problems the requirement for wider engagement. A cultural shift is required whereby experts come to value public participation and appreciate the way in which problems, like air pollution, are socio-politically framed. The article provides a comprehensive and well-supported overview of where these tensions lie and argue that more research is required in order to better understand how this divide between the expert and lay person might be overcome through a more deliberative approach. The deliberative process is one which 'engages more directly with the local contexts that directly impact on effectiveness' (p.1057).

108. Powell, M., Dunwoody, S., Griffin, R. & Niuewirth, K. (2007). Exploring lay uncertainty about an environmental health risk. *Public Understanding of Science*, 16, 323-343.

The authors explore the social and contextual factors that influence laypeople's understanding of, and reactions to, environmental risk. This challenges a widely adopted approach that emphasises reactions to risk as dependent on knowledge alone. Emotions, communication processes, trust, issue importance, information exposure and interpersonal discussion also play a part, as do personal experience and socio-economic characteristics (disadvantaged communities are more likely to suffer environmental ills whilst those that are better off might feel more effective in their actions).

109. Rydin, Y. (2006). Joined up knowledge for the sustainable city. *Environment & Planning A*, 38, 1005-1008.

In this introduction to a special issue of *Environment and Planning A* concerned with urban sustainability Rydin makes the case that multiple knowledges are important in

environmental planning and environmental policy but that combining these contributions from both lay-people and professionals is difficult. Some of the problems arise from the belief that knowledge is additive meaning different knowledges contribute to an ever-expanding view of a singular reality. But knowledges are constrained by the institutions that produce them and they are not always compatible resting, as they do, on different ways of knowing. Common norms, trust and reciprocity will be essential if new institutions are to form through which various knowledges might be reconciled.

110. Santos, L. D. & Martins, I. (2007). Monitoring urban quality of life: The Porto experience. *Social Indicators Research*, 80(2), 411-425.

The authors outline a new system developed by the Porto City Council to monitor urban quality of life. The system employs both quantitative statistical indicators and qualitative components that use citizens' perceptions of their conditions of life. Issues that the system tried to address were the scale of analysis (city versus neighbourhood, region and nation) and how these interact, and differences that might occur given a distinction between users of services, such as libraries and hospitals, and residents more generally.

111. Soneryd, L. (2004). Hearing as a way of dwelling: the active sense-making of environmental risk and nuisance. *Environment and Planning D-Society & Space*, 22(5), 737-753.

Soneryd uses the case of an Environmental Impact Assessment for a proposed airport to illustrate the ways in which including a range of stakeholders in decision-making can conflict with the standardised regulation of environmental effects and change. Whether or not the EIA met its goals reflects how well it addressed environmental protection versus individual rights, how well it understood the population the development affected, and how it balanced issues around financial compensation versus commitment to dialogue. At the centre of this evaluation are problems around how different knowledges can be assimilated given the rational, standardised ways of knowing favoured by experts and the active sense-making of affected residents. Soneryd takes issue with the tendency to situate both lay-people and professionals or experts as homogenous groups. Though the constructionist argument accounts for the manifold ways in which the environment can be interpreted it locates these understandings as generated by symbolic orders in the mind as opposed to shared experiences in place. Ingold's (2000) work on dwelling is useful in emphasising the importance of shared practical activities through which particular sensibilities are incorporated into the body. In this light, the implications of divisions of labour and specialisation manifest not only as a contest between abstract and context-driven knowledge but also conflicting sensory accounts of a situation.

Soneryd's case study of airport noise provides a good illustration of how abstract readings of sound do not always match residents' interpretations and everyday experiences. The implications for the EIA approach is that communal dialogue is

perhaps more relevant in Strategic Environmental Assessment which takes place before certain options are foreclosed (as the often are by the time many EIAs are conducted). New 'shared spaces' need to be created within the EIA process to avoid environmental effects becoming technical matters divorced from the everyday experience of residents.

112. Stoll Kleeman, S., O'Riordan, T. & Jaeger, C. (2001). The psychology of denial concerning climate mitigation measures. *Global Environmental Change*, 11, 107-117.

Focus groups were used to explore residents' understandings of, and reactions to, global climate change and found both concern and confusion. The respondents erected a series of barriers to justify their lack of individual and collective (through various institutions) action with regards to climate change. Changing their lifestyle and reducing their levels of material comfort was seen as daunting, thus rationalisations for inaction included exaggerating the costs of change, blaming others, and raising doubts over the effectiveness of their actions given the seemingly distant and uncertain nature of climate change.

Instilling a sense of responsibility may be key in overcoming these barriers. Prolonged and progressive information campaigns that are specifically targeted towards certain belief patterns (involving psycho-social variables) may help with this goal. Such programmes might consider using tools (models, computers) that enable residents to visualise the effects of climate change and story-telling (in a range of locations from the school to the petrol station) to reinforce the message. These can be combined with other incentives, school-based education and demonstrable, clear signals from government.

113. Vantanan, A. & Marttunan, M. (2005). Public involvement in multi-objective water level regulation development projects. *Environmental Impact Assessment Review*, 25, 281-304.

The authors present a number of recommendations for encouraging public involvement. These include providing facilitators who have expertise in social, ecological and economic areas. The project should be organised in such a way that conditions for social learning are improved. Representativeness and inclusivity can be enhanced by using a variety of communicative methods to communicate including the internet and teleconferencing. The authors advise leaving some space for the project to guide itself and for improvisation, but balance this with planning, allowing enough time and enough funding. Their approach involved finding out what people would like to happen and then evaluating this to see if their suggestions actually lead to desirable results that are reasonable in terms of social, economic and ecological senses. This may provide a useful model for proposed changes to the built environment.

114. Walker, G. (1999). Polluters, victims, citizens, consumers, obstacles, outsiders and experts. *Local Environment*, 4(3), 253-256.

In this guest editorial Walker explores the multidimensional role of 'the public' in environmental decision-making and management positing the importance of dialogue and consensus building that is required. The author argues that a better understanding of public responses to environmental concerns and more effective means of communicating with residents are needed. He makes a number of points: That there may be more than one 'public' existing in fractured, dynamic contexts; that there may be more than one 'rational' response to environmental concern depending on whether issue is treated in isolation or connected to other concerns around equity, fairness and so on; that lay/expert distinctions are challenged as a result of these multiple rationalities; the degree to which the different publics distrust government and industry; a lack of empowerment that can lead to apathy; and the range of barriers (individuality, lack of responsibility, impracticality of solutions, economic interests, institutional apathy and poor education) that hinder more eco-friendly behaviour.

115. Weinstein, Z. (2008). Citizen participation: the case of Israel Project Renewal. *Journal of Urbanism* 1(2).

The article explores the factors that contribute to, or impede, citizen participation in housing renewal projects based on Israel's Project Renewal. The delicacy of the area, and its social diversity, called for a new approach that the author called "Democracy Shock," where residents and government officials came together in the neighborhood itself to try and work out an acceptable approach to managing the neighborhood's problems. Though this worked for a time, participation declined over the years, thus the notion of Leading Interest Groups of voluntary activists was developed. These aim to circumvent problems associated with local leadership ('such as political influences, self-interests, few activists, years of personal grind, leadership that remained in power too long, and lack of innovative leadership') by encouraging residents to be leaders of change. LIGs The Think Tank staff, heads of local authority departments, community social workers, residents and leading interest group representatives. Uniquely, aspects of this public decision-making process led to a government legal decision which entitled residents to a certain measure of influence, thus creating a different balance of power.

Aspects that hinder this process include: 'An administration using regeneration policy for short-term solutions; social and economic issues that are not on the public and governmental agendas; a powerless mayor; demographic composition (long term residents, new comers, youngsters); population changes (in- and out-migration); lack of information; a majority of tenants living on rent in public housing; lack of resident skills; the lack of community building; a lack of public and community institutions; lack of authentic neighbourhood leadership; low financial investments; shortage of professional personnel' (p. 153). Factors which helped this process included: 'A City Hall that cares; professional staff aware of democratization processes; socio-economic level of the neighbourhood/city; the degree of legitimacy given to resident representatives; the number and scope of local resident organizations and NGOs existing in the neighborhood; the number and quality of stakeholders; a high percentage of housing ownership; a pragmatic resident committee; a community that works according to a "SMART" (Special,

Measurable, Achievable, Realistic, Time bound) vision; resident involvement in volunteering activities; community cohesion; and the variety of community institutions' (p. 153).

116. Whitehead, M. (2003). (Re)analysing the sustainable city: nature, urbanisation and the regulation of socio-environmental relations in the UK. *Urban Studies*, 40(7), 1183-1206.

Whitehead first evaluates a number of programmes and policies to identify what a sustainable city is (or what it should be) noting that it is as much political ideal as a place or location. Consequently, it is better understood as a complex of ideas, struggles, discourses and material practices that challenge the idea of the city as an ontological pre-given.

With reference to regulation theory, the sustainable city is an economic space where economic, social and ecological contradictions associated with capitalism are worked through. According to the literature the reproduction of capitalist socio-economic relations occurs through 'modes of regulation' that Whitehead criticises as emphasising stability and functionality rather than change and conflict. Regulation, for the author, is less a series of modes of regulation and more of a process conditioned by socio-political institutions – many of which are now framing their practice in terms of sustainability. This, for Whitehead, means the sustainable city is best understood as 'a strategy designed to address the traditional social and economic regulatory problems of urban areas, in and through a new set of environmental priorities and ecological practices' (p. 1190).

The socio-cultural regulation of cities is also heavily influenced by the messy environmental relations of everyday life. Whitehead employs two studies – one of 'the sick city' (Stoke on Trent) and one of 'the politics of nature' (the Black Country) to illustrate his conceptualisation of sustainable cities. His analysis emphasises the city as a less of a 'technocratic exercise of town planning and urban design' and more of a set of wider socio-political processes of regulation including neo-liberal state ideologies and inter-urban competition. This, in turn, exposes three other 'myths' pertaining to the sustainable city: First, that they are not always equally sustainable for all. Second, sustainable cities are not uniform but vary widely given specific scales and spaces. Third, the discourse of sustainability demands capital repackages or rehumanises neo-liberal projects.

117. Wigmans, G. (2001). Contingent governance and the enabling city. *City*, 5(2), 203-223

Wigmans uses the case of Rotterdam to illustrate a postmodern or 'contingent' approach to urban governance which suits an age of uncertainty and unpredictability. It draws on a different notion of control that can apply to postmodern urban planning given increased differentiation, decentralisation and fragmentation. The city as a sum of different projects and segmented according to various opportunities replaced notions of the city as a closed spatial entity. Likewise, local government became more flexible, responsive and project-oriented. Consultation and 'urban debates' are

instigated with various interests included at very early stages. The traditional 'top-down' approach has been replaced with increased openness with governance spread over a range of actors with interdependencies constituting points of action. Local governance becomes more procedure- than goal-driven. The purpose is not to impose coherency but to manage the various interdependencies and connections present.

118. Wilson, (2006). Adapting to climate change at the local level: The spatial planning response. *Local Environment*, 11(6), 609-625.

Wilson explores the tension between the short-term thinking evident in many local level plans and policies and the long-term implications of climate change. The research found planners experienced difficulties making connections between policies for climate change (flooding, greenhouse gas reduction, water resources, habitats and so on) and other issues such as tourism, outdoor spaces, recreation provision, café culture and other aspects of the 24 hour city. In part this was due to a shroud of uncertainty around the consequences of climate change and a lack of communication between local officials and wider networks of state and non-state actors concerned with this issue who could provide clues as to the likely impacts of climate change at the local level.

Urban Socionatures (in Post-Industrial Cities)

This section includes annotations discussing various aspects of post-industrial and postmodern urban socionatures, and the implications these have for the way people can be encouraged to connect with the environment. Much of this literature explores ways in which ‘illusory’ boundaries between ‘society’ and ‘environment’ can be challenged and overcome, or our relationships with ‘nature’ re-contextualised in the urban environment for the collective interest.

119. Akbar, O. (2005). The self healing power of cities - Quality of urban life. *Gesundheitswesen*, 67(12), 827-831.

Akbar argues that a city’s health is measured not only by the absence of illness, but also by the mentality of its citizens and their quality of life. Coming to a consensus as to what quality of life might mean will involve scientists working more closely with artists, engineers and designers.

120. Allon F. & Sofoulis, Z. (2006). Everyday water: Cultures in transition. *Australian Geographer*, 37(1), 45-55.

The authors report on a study into the Everyday Water project which was innovative in the way it saw water as a socio-technical complex of different definitions, everyday applications, and cultural traditions rather than a discrete resource. Seeing water as embedded within wider social structures provided a number of insights into the way water use might be understood and managed. Individual actions and innovations need to be supported in terms of information provision and leadership. Incentives could also be used to help change their habits and behaviours in order to facilitate a new ‘water culture’.

121. Barr, S. & Gilg, A. (2006). Sustainable lifestyles: Framing environmental action in and around the home. *Geoforum*, 37(6), 906-920.

Barr and Gilg’s article addresses two problems with the British Government’s Sustainable Development strategy. The first issue is the conventional and quite limited definition of ‘environmental action’ that compartmentalises particular behaviours. The second concerns the assumption that information and awareness campaigns will lead to greater public engagement with environmental problems. Their concern is to use insights from the Theory of Planned Behaviour (TPB) to explore everyday environmental practices and the ways in which such practices might point to discernable lifestyle groups that exhibit different behavioural properties. The authors explain that TPB can be helpful in that it ‘conceptualises social behaviour as being contingent on the two major influences of ‘intention to act’ and ‘perceived behavioural control’ (or ‘how able’ an individual feels to act)’ with intentions being a combination of subjective norms and attitudes towards the behaviour.

This approach, combined with social composition (a term that encompasses, for example, access to recycling facilities as well as demographic variables), personal belief in efficacy, trust in institutions providing information and consumption attitudes contribute to four profiles of the 'modern environmental activist': Committed environmentalists, Mainstream environmentalists, Occasional environmentalists and Non-environmentalists. These are then related to activity domains such as green consumption involving habitual activities that require adjustments rather than shifts in behaviour, and mechanised behaviour, such as recycling. Interestingly, the research showed a link between a lack of interest in the environment and a belief that technology can provide solutions to environmental dilemmas. Another finding was that trust in the providers of information is not a significant factor. In conclusion, the authors argue that geographers could be more attentive to an exploration of the ways in which environmental behaviours relate to other areas of interest, such as leisure or work, as these settings outside the home also mould responses to environmental problems.

122. Bhatti, M. M. & Church, A. (2004). Home, the culture of nature and meanings of gardens in late modernity. *Housing Studies*, 19(1), 37-51.

Though the authors' primary concern is to explore connections between ideas of the home and nature in late modernity, the article contributes to a better understanding of how everyday gardening practice can contribute to a sense of ecological certainty on the one hand, but can generate a heightened sense of environmental threat on the other, leading to feelings of unease. This showed the link between gardening and environmental concern is not necessarily straightforward. It may be the garden is a space within which environmental uncertainties can be explored and tested.

123. Blunt, A. (2005). Cultural geography: Cultural geographies of the home. *Progress in Human Geography*, 29(4), 505-515.

The author traces some of the more recent developments in cultural geography with specific reference to the home. Blunt addresses three 'homely' constructs: 'Residence' is concerned with domestic architecture and design. 'Dwelling' pertains to lived experiences but notes the concept of dwelling has undergone a change in emphasis from phenomenological work on authentic human experience to 'inhuman' thinking about place based on actor-network theory, non-representational theory and the sociology of science. 'Cohabitation' relates to the 'domestic entanglements of nature and culture' (p. 506). The author draws on a range of work (including Anker, 2003; Kaika, 2004; King, 2003; Hitchings, 2003) to demonstrate the importance of the domesticated environment as a site whereby environmental ethics are made and perpetuated.

124. Braun, B. (2006). Environmental issues: global natures in the space of assemblage. *Progress in Human Geography*, 30(5), 644-654.

Here Braun revisits his earlier material on urban nature asserting once again that nature in urban areas must be understood ‘in terms of spatio-temporalities that are often global in nature’ (p. 644). This article focuses on work that posits nature as global in scale (where the global is understood as an ‘effect’ as opposed to a ‘condition’) in order to explore how socionatures are made or assembled through webs of different ‘length, density and duration and whose consequences are experienced differently in different places’. This is a difficult task and in order to gain some understanding of the processes behind global assemblages of nature, Braun relates David Harvey’s advice to become aware of the social, ecological and spatial processes at work in a mundane bowl of breakfast cereal. This reveals that the seemingly most localised entity – our body – is connected in rather intimate ways to other people and things in distant parts of the world. These types of commodity chains, though interesting in themselves, do not attend to how and why the composition of these chains representing socionatures vary. In the final analysis, along with neoliberalism and the rescaling of governance, the global conversation of socionature happens through localised encounters.

125. Bryant, R. & Goodman, M. (2004). Consuming narratives: The political ecology of 'alternative' consumption. *Transactions of the Institute of British Geographers*, 29, 344-366.

Two sets of consumption practices are examined. The first explores the connections between tropical deforestation and conservation-minded lifestyles in the North. The second examines links between concerns for social justice in the South and consumption in the North. Both utilise ‘uncritical’ consumption as a weak form of activism that might be called ‘caring at a distance’. The authors note a tendency to see consumption as ‘the frontline’ whereby ‘everyday acts – eating, bathing, shopping or dressing – are politicised’ (p. 344). This so-called green consumption is made up of particular rationalities and assumptions embedded in everyday practices which rely on the commodification of resistance itself with ‘fair trade’ products being good examples. Though the authors do not extend consumption to the built form, one wonders at the implications this has for what is often the biggest purchase we make: our home.

126. Burningham, K. & Thrush, D. (2001). *The Environmental Concerns of Disadvantaged Groups*. York: Joseph Rowntree Foundation

Disadvantaged populations are more likely to be exposed to environmental problems and they are also more likely to experience adverse effects from measures taken to remedy bio-physical environmental concerns. The authors’ study of four disadvantaged groups (in a deprived urban neighbourhood, an urban estate next to a busy road, in an ex-mining town, and in a rural area) found that wider ‘environmental problems’ were interpreted in terms of effects on local impacts on health and well-being. ‘Big issues’, such as pollution, were less important than ‘minor’ concerns like dog litter, and practical and financial concerns were the main drivers of environmental action. Residents were concerned about others’ views of their neighbourhood as derelict or dirty. The research found strong connections between social, economic and

environmental issues. As an example, energy saving (often requiring long-term investments power saving appliances) was seen as ideal but irrelevant when one was unable to immediately heat a cold and draughty home. The authors warn against addressing environmental problems in isolation from social and economic aspects lest these measures exacerbate existing hardships. They also note that the environmental justice movement, which links poor people to poor environments, might serve to reinforce disempowering negative images.

127. Burningham, K. & Thrush, D. (2003). Experiencing environmental inequality: the everyday concerns of disadvantaged groups. *Housing Studies*, 18(4), 517-536.

It has been widely noted that disadvantaged groups often bear a disproportionate level of environmental externalities. Furthermore, the authors note that policies pursued in isolation from more general social and economic concerns can amplify these effects unequal distribution of environmental 'goods' and 'bads'. The authors present the results of a study into the ways disadvantaged communities experience and talk about two environmental problems: pollution and fuel shortages. They found that these were a source of concern but that they tended to be connected to and contextualised by local concerns such as their impact on health, safety, and quality of life. Fuel shortage, for example, was experienced as an inability to heat one's home adequately with the result that a black fungus – the Black Death – often grew on the walls leading to coughs and chest infections. This accentuates the necessity of addressing environmental and social concerns together.

The authors offer three practical recommendations: First, improving local environmental quality might have to work at the level of imagery and reputation as well as tangible features. Second, the label 'disadvantaged' may actually accentuate those residents' sense of powerlessness which, in turn, can lead to apathy in the face of environmental concerns. Finally, local involvement is necessary in order to ensure social and ecological issues (and the links between them) are understood. As the authors note, while features of local environmental quality may seem trivial in the face of global climate change and the like, 'there is a need to start where people are' (p. 534). It is unlikely that people will enthusiastically address such large problems when their home environment is substandard and it is also unlikely that there will be widespread belief that authorities can adequately address global problems if they cannot improve environmental quality at the local level.

128. Cahill, M. (2001). The implications of consumerism for the transition to a sustainable society. *Social Policy & Administration*, 35(5), 627-639.

The author begins by acknowledging the appeal of the consumer lifestyle and the ways in which consumption patterns now contribute to the identity projects of rich-world residents. Cahill argues that present day consumption patterns of Western residents are unsustainable but that sustainability advocates have to acknowledge the 'profound attachment to consumption which has pervaded culture and society in the rich world and its undeniable appeal to the poor world' (p. 628). Though consumerism is often positioned as part of the postmodern condition it is a consequence of long

term trends in manufacturing and consumer markets which gave the working classes increased purchasing power. This became connected to the pursuit of a private rather than public life as home-based leisure and individual freedom replace community and choices about products become more important than those about political parties. Technology, from cars to cell-phones - has promoted and intensified forces of individualisation and disengagement from public life.

This forms the background for Cahill's discussion of sustainable consumption which, he argues, must acknowledge the role of consumption in identity and expression and the importance of convenience in a time-pressed society. The car is a good example as it epitomises both the convenience and the identity-making roles of consumption objects. The author also points out that there are many losers in the game of consumption, such as those who cannot afford to participate in the market or those who participate by living on credit.

Consequently, Cahill argues that it is at the 'micro-social' policy level that environmental change must occur if disadvantaged groups are to benefit. This can be achieved through the creation of, for example, small, local parks that are looked after properly, safe sidewalks and aesthetically pleasant environs that encourage walking. Such policies will need to be accompanied by an altered social philosophy that promotes communal and sustainable values, though this will be difficult given the lack of vision that might motivate people to change their lifestyles away from consumption and towards sustainability.

129. Cairns, J. (2003). Materialophilia, biophilia, and sustainable use of the planet. *International Journal of Sustainable Development and World Ecology*, 10(1), 43-48.

Cairns argues that conflicts over global resources actually makes those resources more scarce as natural capital is destroyed. Consequently, sustainability will require a more equitable distribution of resources among both people and other species. Materialophilia or 'the quest for greater material possessions' also works against sustainability hence Cairns argues for biophilia, defined as 'the innately emotional affiliation of human beings to other living organisms', which should promote the conservation and accumulation of natural capital that underpins ecological integrity.

130. Cameron, J., Mulligan, M. & Wheatley, V. (2007). Building a place-responsive society through inclusive local projects and networks. *Local Environment*, 9(2), 147-163.

Cameron et al. report on a project which, among other goals, identified the value of bioregional awareness and place responsiveness in conservation and environmental education. Situated within the debate over place-responsiveness of Aboriginal and non-Aboriginals the authors agree with the idea that a sense of place is the foundation of ecological identity and that environmental education should be re-enriched with stories that facilitate inclusive place-making efforts. Other lessons included using the notion of 'bioregion' to dismantle political and social boundaries, the presence of

indigenous people and other key individuals and providing appropriate facilitators for the story-telling events.

131. Cardinal, N. (2006). The exclusive city: identifying, measuring, and drawing attention to Aboriginal and Indigenous experiences in an urban context. *Cities*, 23(3), 217-228.

As Cardinal notes, Aboriginal and Indigenous people are among the world's poorest and, further, now form a substantial part of urban populations. Very little literature exists that explores the connections between such peoples' quality of life and urban sustainability. This is interesting given postmodernity's recognition of other voices, and in this article, the author presents an indicators system that was developed by the Centre for Native Policy and Research based on the Aboriginal concept of the medicine wheel. It comprises the four elements of physical/economic, spiritual/cultural, emotional/social, and mental/environment and uses these as the foundation of sustainability. The addition of cultural and spiritual aspects was important as these elements often form the 'glue' that holds the others together. The medicine wheel ensured indicators were culturally relevant and embedded in a more holistic context in order to combat the tendency to rely on individual indicators that work against building an overall picture. The use of the medicine wheel showed Aboriginal people in Greater Vancouver had reduced quality of life compared to other residents. Cardinal argues that Aboriginal and Indigenous people should be involved in the definition and development of sustainability indicators.

132. Carolan, M. S. (2007). Introducing the concept of tactile space: creating lasting social and environmental commitments. *Geoforum*, 38(6), 1264-1275.

Carolan elucidates on the concept of tactile space which is where different forms of representational and non-representational knowledge are exchanged and where the subject/object dichotomy is dissolved. As a result, individuals are instilled with an enduring sense of relationality both with other people and the environment. Tactile space does this by reducing 'epistemic distance' which arises through temporal and spatial extension (e.g. globalisation), complexity and/or uncertainty, practice (e.g. situated knowing), and 'relationality' (feedback loops). It has a participatory dimension where individuals, through social networks, trade knowledge claims and negotiate non-representational spaces in an embodied way. Consequently, the biophilic imagination is stirred and this can challenge modern methods of knowing where truth becomes divorced from emotion, feeling and other corporeal sensations.

133. Chard, J. (2004). Wai Care: Why Care?: Measuring the Success of Community-Based Environmental Programmes. A thesis submitted in partial fulfilment of a degree of Master of Science. Auckland University, Auckland

Chard reports on the Wai Care programme which was designed to achieve improved water quality of an urban river through attitude and behaviour change of local residents. She argued that attitudes have three elements: Affective (like, dislike),

cognitive (beliefs true and false) and behavioural (reactions and behaves). Links between these are difficult to define as are connections between attitudes and behaviour. As the developers of the community-based social marketing approach have argued, ‘campaigns relying on information provision and nothing else have ... “often have little or no effect on behaviour”’ (McKenzie Mohr and Smith 1999, in Chard, p. 11) though other literature suggests awareness and knowledge can have an effect. Chard explains this gap using the argument that people may be concerned about rivers, but may be *more* concerned about other things.

Actions likely to increase the chances of success include identifying barriers to participation, making ‘emotional contact’ with the natural world through experiential learning, demonstrating how individuals can be effective using local examples, and allowing plenty of time.

134. Cloke, P. & Jones, O. (2001). Dwelling, place and landscape: an orchard in Somerset. *Environment & Planning A*, 33, 649-666.

The authors explore the concept of dwelling through a case study of an orchard in Somerset as a partial critique of the treatment of place and non-human agency in the context of actor network theory (ANT). Though ANT has challenged nature/society binaries and highlighted the role of networked agency, the various roles and capacities of non-human actants still needs to be appreciated. Place formation is also rendered problematic given the constant combining and recombining of ‘all manner of things’ (p. 650).

The concept of dwelling, on the other hand, emphasises how people are embedded in the world and in particular places, and *things* are a critical aspect of this being-in-the-world. Dwelling is also both temporal and spatial and place therefore survives the relational constructs that have come to challenge simplistic binaries. It is performed and experienced in places which are fluid, yet binding, and dynamic yet familiar. Authenticity is an important part of the dwelling concept and this has implications for ‘natural’ landscapes, such as orchards, and certainly for urban environments. Cloke and Jones argue that associating authenticity with a sterilised museum of past landscapes does not necessarily sit well with the concept of dwelling. They favour of a weaving together of past and present practices and taskscapes that help constitute place. This is a reading that is possibly less romantic than other conceptualisations but one that is more useful given our world of flows of people and ideas.

135. Crouch, D. (2003a). Spacing, performing and becoming: Tangles in the mundane. *Environment & Planning A*, 35, 1945-1960.

Crouch’s intention in this article is to explore how space is encountered performatively and as embodied practice. He employs the notion of ‘spacing’ which is to be understood as the subjective and practical ways an individual makes sense of, and handles, their environment. The practice of space underpins lay geographical knowledge with performance emphasising everyday protocols and performativity more crucial in processes of reconfiguring the novel and the development of new

strategies. These adjustments do not need to be dramatic because the very intimacy of performativities in the everyday constitutes a potentially powerful force of change.

- 136. Crouch, D. (2003b). Performances and constitutions of natures: a consideration of the performance of lay geographies. *The Sociological Review*, 51(s2), 17-30.**

Crouch discusses ways in which nature might be reconfigured through performance (understood as both staged events and processes of self-actualisation in everyday life) though the constituting of nature is inter-subjective. Using the practice of 'doing allotments' Crouch demonstrates that nature cannot be divorced from everyday experiences and other contexts, but is rather engaged both in and through what people do 'alongside other trajectories of human activity' (p. 23). Nature is not just there to be observed; it engulfs the individual and is uncovered, discovered, understood, challenged and revealed in doing. Performing nature provides practical knowledge and stabilises different versions of nature.

- 137. Demeritt, D. (2002). What is the 'social construction of nature'? A typology and sympathetic critique. *Progress in Human Geography*, 26(6), 767-790.**

Demeritt seeks to clarify the increasingly ubiquitous concept of the 'social construction of nature'. He makes a distinction between two veins of constructionist approaches: construction-as-refutation (which relates to false beliefs about the world, such as 'natural' hierarchies or gender imbalances) and construction-as-philosophical-critique (which is more radical in its challenge to established dualisms of culture/nature, subject/object and representation/reality and other established epistemological orthodoxies). He also distinguishes between nature as a constructed concept and nature as materially constructed before exploring the political implications of these two different positions. The belief that climate change, for example, is a social construct has unnerved many because it can then be easily dismissed or sidelined.

Demeritt then provides an overview of phenomenological constructionism (reality is made through ongoing social interactions), the sociology of scientific knowledge (where phenomena known by science are also socially constructed), discursive constructionism (which examines the role of language in the formulation of reality), and Actor Network Theory (truth and reality are dependent on the strength of networks made up of both human and non-human actants).

Given the complexity of the idea and its overuse Demeritt believes there may be better ways of challenging taken-for-granted beliefs about nature, which, somewhat ironically, includes calling misconceptions 'wrong'.

- 138. Eames, M. (2006). *Reconciling Environmental and Social Concerns: Findings from the JRF Research Programme*. York: The Joseph Rowntree Foundation**

Eames presents a summary of a seven year research programme on how environmental and social concerns might be reconciled. The main findings include strong connections between vulnerability, deprivation and social exclusion, and poor health, poor quality of life and poor access to resources. Local issues, such as littering, graffiti, dog fouling and the like have an immediate negative impact on the environment and are linked strongly to socio-economic concerns such as anti-social behaviour, unemployment, crime, etc. Treating these as separate issues can exacerbate adverse effects on these communities, therefore there is a need to integrate social, economic and environmental policy. Improving the local physical environment can lead to gentrification and displacement; raising levels of education and income can mean those who can leave the area if conditions are poor. The notion of environmental justice might provide a good foundation for such an approach as it addresses the issues of fair distribution of resources, the right not to suffer adverse effects of environmental policies and the right to environmental information and decision-making.

Although sustainable consumption was not an explicit focus of the research, some valuable lessons were learned along the way. Disadvantaged groups tended to see 'green' products as expensive and, with limited information and knowledge, product claims were seen as confusing. This points to the exclusive nature of some of the environmental discourse. Financial necessity often means those on limited incomes already engage in eco-friendly behaviour, such as cycling and walking and switching off appliances, therefore the identification and promotion of economic benefits could prove influential. Small-scale local initiatives, such as allotments, community gardens and furniture recycling schemes could prove helpful.

139. Eden, S. & Tunstall, S. (2006). Ecological versus social restoration. *Environment and Planning C*, 24, 661-680.

These authors argue that ecological restoration programmes often fail to engage the public because of their scientific and practical approach, even though the scientific community may see the programmes as quite radical. Experts often see 'community science' as inferior, 'botched', and less useful and tend to favour models where communities are seen as passive recipients of expert knowledge. Eden and Tunstall argue for a social scientific understanding of ecological restoration projects that complements lessons from the natural sciences. This is necessary because social considerations can sometimes override ecological ones. They give an example of river restoration in urban areas where rivers are sometimes seen as 'borders' not bridges, where some residents actually want barriers between different social groups maintained. Such considerations have consequences for how restoration projects should be carried out.

140. Fyfe, N., Bannister, J. & Kearns, A. (2006). (In)civility and the city. *Urban Studies*.

The authors discuss the history of (in)civility and city noting that throughout the ages cities have been seen as both civilising and dehumanising. In recent decades, the diversity of the city has been seen as 'threatening rather than enriching' (p. 854) and

this drives such urban phenomena as gated communities and private police forces. Civility is 'achieved through the exclusion of incivilities' and the 'exclusion of the unrespectable but, consequently, the city becomes 'hostile to difference' (p. 854). The authors distinguish between 'proximate' and diffuse civility with the former equated with politeness, and the latter concerned having a more general responsibility for others and other spaces whether we share those spaces with others directly or not. Though incivility is often associated with an almost criminal, anti-social behaviour, the authors draw upon the work of Phillips and Smith (same issue) who focus on more everyday examples of queue jumping and people bumping into one another at the train station.

In conclusion the authors contend we need to explore further the relationship between civility and the city, and how people experience (in)civility. Those policies designed to foster civility (such as the exclusion of disorder) also need to be examined for unintended side-effects (such as fear of the stranger). This article sheds light on why people dislike higher densities and inner city living, and why greenfield, suburban development is so attractive.

141. Gilg, A., Barr, S. & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, 37(6), 481-504.

The authors explore the consequences of the emergent theme of 'sustainable lifestyles' of which green consumption is but one aspect of a wider, more holistic way of living. Their study of 1600 Devon households and the everyday environmental actions of the inhabitants revealed four types of environmentalist. They found a 12 year age gap between committed- and non-environmentalists and discovered males may be less environmentally active. Home-owners and 'pro-social' respondents were more likely to be committed environmentalists.

142. Green, K. & Foster, C. (2005). Give peas a chance: transformations in food consumption and production systems. *Technological Forecasting and Social Change*, 72(6), 663-679.

The authors use the humble pea to illustrate the environmental and social sustainability of different strategies of food production, processing, distribution and consumption activities. They argue that innovation undertaken with environmental goals will engender new products and processes as well as new socio-technical arrangements, thus a better systems-based understanding of the processes underlying developments is crucial. Social sustainability is evaluated in terms of inputs into the production (and consumption) system.

143. Green K. & Vergragt, P. (2002). Towards developing sustainable households: a methodology for developing sustainable technological and social innovations. *Futures*, 34, 381-400.

Technical innovations will be insufficient in achieving necessary reductions in energy use, thus social innovations – changes in lifestyles and culture - are also required. The

SusHouse Project focuses on clothing, housing and food in five European countries using creativity workshops (creative solutions), scenarios (micro-level norm building), environmental and economic assessments and backcasting to evaluate consumer acceptance (focus groups and a questionnaire). The resulting Design Oriented Scenarios (e.g. high-tech rural gardens, virtual shopping, neighbourhood food centres) were tested for environmental and economic gains and acceptability. The 'designs' were located in 2050 so as to stimulate innovative thinking.

144. Hahn, E. (2002). Towards ecological urban restructuring: A challenging new eco-cultural approach. *Ekistics*, 69(412-414), 103-115.

Hahn claims that the sustainability of post-industrial urban society itself is under threat and that most of the forms of urbanisation that we see today will lead to 'an ecological dead end' (p. 103). Freed from the old ecological attachments (such as making things that were efficient and long-lasting combined with limited opportunities to import goods and export externalities) via technology's 'triumph over nature' urban systems have become increasingly dependent on sensitive global logistics and transport infrastructure. Cities, Hahn argues, are both cause and solution to this contemporary ecological crisis but finding answers that are widely accepted will be difficult. Hahn notes that we have yet to bring about the necessary ecological paradigm shift due to a failure to connect it with images that are 'positive, attractive, exciting and desirable' (p. 112-113). Rational arguments will not suffice. Instead we have to address people at the emotional, subconscious level. Hahn invokes the metaphor of the industrial tanker and the modern sailboat to engender broad appeal.

145. Halme, M., Jasch, C. & Scharp, M. (2004). Sustainable homeservices? Toward household services that enhance ecological, social and economic sustainability? *Ecological Economics*, 51(1-2), 125-138.

The authors argue that replacing goods with services as a solution to environmental problems emphasises eco-efficiency over other dimensions of sustainability. They note that social and economic considerations are 'often forgotten or by-passed without scrutiny' and offer an alternative set of indicators for assessing the sustainability of home-related services. Though the focus is on the home, institutional arrangements are also assessed because they help frame household behaviour. They define sustainable homeservices as those that relate to living at a home and contribute that positively to sustainable development in its environmental, social and economic dimensions.

They begin their discussion by outlining the merits of results-oriented services which focus on fulfilling needs, ideally independently of particular products. This contributes to eco-efficiency in several ways. First, when the manufacturer retains ownership, they are motivated to make a durable product because they sell the use of the goods rather than the goods themselves. Second, more intensive use of a product reduces the likelihood of it becoming obsolete before it is outdated or out of fashion. Third, customers may choose products more suitable to their task than they would if they had to buy a product outright. They give the example of a car-sharing system where the user may choose a car that fits the transportation task *at hand* thus reducing

‘overkill’, that is, choosing products that are too big or over-accessorised in order to be prepared for all possible contingencies.

In order to assess the social sustainability of home services, they draw upon quality of life literature that suggests (see Gatersleben, 2001) comfort, health, safety, freedom/control, social justice, social relations, and education and development are important.

The set of indicators for sustainable homeservices that they develop are presented below.

Environmental aspects	Social aspects	Economic aspects
Material use	Equity	Employment
Energy use	Health	Financial situation of residents
Water use	Safety and security	Regional products and services
Waste and emissions	Comfort	Profitability of the service
Space use	Social contacts	
Transport	Empowerment	
Organic products	Information and awareness	

‘Equity’ is satisfied when the service improves equality between people, when it mitigates combat social exclusion, and when it facilitates fair trade. The ‘Health’ pertains to whether the service contributes to preventing mental or physical illness. ‘Safety and Security’ concerns the prevention of crime, vandalism and injury in the neighbourhood. ‘Comfort’ covers the effects of the service on noise, odour, pollution, and convenience for the residents. The ‘Social Contacts’ indicator assesses the degree to which the service promotes social self-help (barter shops and swap Internet sites) and communication. ‘Empowerment’ pertains to the ability to act on one's own volition and influence the world in which one lives (cf. Sen, 1999). Finally, ‘Information and Awareness’ concerns the degree to which the service increases the training, awareness and skills of the residents.

146. Hargreaves, A. (2004). Building communities of place: habitual movement around significant places. *Journal of Housing and the Built Environment*, 19(1), 49-65.

The author notes a contrast between ‘place’, which is often presented as inert, and conceptualisations of community and family, which are more dynamic and interesting. Hargreaves argues that a better alliance between place and interest are central to achieving social sustainability in housing developments via habitual movements through locally distinct places. A sense of place can foster a feeling that one belongs to an environment, therefore the creation of a sense of place should be one of the goals of urban planning and the identification of habitual patterns of movement are an important part of this. This has implications for the placement of services and the layout of streets and roads. More broadly it contributes to social sustainability which he defines as ‘the adequate provision of resources for people as part of communities to reproduce and “meet the needs of the present without compromising the ability of future generations to meet their needs”’. This can occur through the placement of goods and services which promote social integration. What has been sustained in the past is an important part of this conceptualisation of social sustainability as ‘being in the world combines the mental and material into one human

experience that can be remembered, shared and communicated to become social' (p. 54). These constructions of place affect self-image, expressions of community as well as collective action and identification with 'the environment'. Locally distinct features contribute to both sense of place and sense of community, however it is the perception of these features, and not the objective structure, that is most important. The temporal component of dwelling is important here as it takes time for people to be socialised into seeing particular people, places and things as important.

In summarising Hargreaves argues that social sustainability and sense of place are interrelated concepts concerned with 'how appropriate behaviours towards the environment are constituted in the context of a community' (p. 63). 'Social movement' (the ability to get around) and 'significance' (knowing where to go) are central ideas, and are important when considering the tangible layout of new subdivisions and developments.

147. Head, L. & Muir, P. (2006). Suburban life and the boundaries of nature: resilience and rupture in Australian backyard gardens. *Transactions of the Institute of British Geographers*, 31(4), 505-524.

The authors maintain that dualistic forms of environmental management that separate society and nature are remarkably persistent given the increasingly robust body of literature devoted to hybridity. Their research sought to explore why and how this preference for dualistic approaches are maintained and how they might be disrupted and challenged. Using ethnographic methods, the authors highlight the ways in which people engage with birds and plants and the like in everyday settings, specifically their suburban gardens. Head and Muir begin with a short account of Lorenzo and Caterina's backyard which adjoins a remnant stand of Eucalypts. Lorenzo, they note, 'does not talk about endangered species. His narrative is about productivity and family and about being involved with the soil' (p.505). The result is an on-going stewardship of these threatened trees. They go on to describe other nearby residents' attitudes to the remnant stand noting the great variation among them in terms of the values that underpin them but that all unsettle orthodox binaries between immigrant/indigenous and culture/nature. Subsequently they discuss binaries and boundaries with hybrid frameworks presented as a way of exploring the liminal spaces between them. In exploring how 'nature', 'native plants', 'weeds' and so on are treated by the various residents, they conclude that the 'social dimensions of these networks need as much attention as the biological ones' (p. 522).

148. Heynen, N. (2006). Green urban political ecologies: toward a better understanding of inner-city environmental change. *Environment and Planning A*, 38(3), 499-418.

Heynen uses a Marxist urban political ecology framework to explore connections between metabolism and urban environmental change and the ways uneven urban environments develop. The author uses the relationship between income and urban forest canopy in Indianapolis to explain the socionatural metabolism (or urban environmental change) of cities. A Marxist interpretation is useful because it sees socionatural relations as played out *unevenly* through the metabolism of nature with

the green canopy distributed via consumptive practices, income, power relations, and so on.

149. Hinchliffe, S., Kearnes, M. B., Degen, M. & Whatmore, S. (2005). Urban wild things: a cosmopolitical experiment. *Environment and Planning D-Society & Space*, 23(5), 643-658.

The authors seek to bring to our attention the diverse range of things, practices and entities that inhabit the city, many of which go unnoticed in urban politics. Hinchliffe et al. explore what might be required in order to bring these urban wilds into the political sphere, though the authors note, wild things are often too unstable a base on which we might build an orthodox politics along established binaries of nature and society. One of the most important lessons involves learning how to even sense these non-human worlds and make them more visible.

150. Hogget, P. (2001). Democracy, social relations and ecowelfare. *Social Policy & Administration*, 35(5), 608-626.

The author notes that the green movement can lack appeal if it is presented as the champion of frugal, small-scale community living but that it could appear more convincing if the quality of human and social relations was more prominent in the discourse. This, combined with a respect for nature, forms the basis of an ecowelfare in which people might flourish in a more balanced way through the development of more diverse forms of democracy.

Hogget outlines three versions of the good society. The first, based on consumerism, posits well-being as dependent on the variety and number of goods and services one can purchase. The second, welfare-statism, relies on the quantity of public goods that a citizen may enjoy by right. The third, ecowelfare, presents well-being as an effect of the quality of relations between people and between people and nature. Ecowelfarism requires qualitative change in interdependencies between a) nature and people (including the 'tragic voice of nature' (p. 615) as heard in processes of aging, sickness, madness and so on); b) a democracy of emotions which recognises the fluidity of our roles and character; c) emancipatory welfare practices in which citizens are seen as co-determining subjects and not just objects of social policy; and d) a 'convivialisation of community life' and the 'expressive possibilities of everyday life in public spaces' (p. 616).

Qualitative change here would impact upon fundamental democratic processes including those around the distribution of risk and reward. As the author notes:

Governments have tried to exclude citizens from participation in the complex ethical and moral questions that saturate collective everyday living. Our ethical powers are undernourished in comparison to our technical abilities. And as a result we live in a risk saturated world endangered at all levels by technique which has been developed as a means to control nature, including the nature within us (p. 617).

A plurality of participatory mechanisms facilitating greater involvement of more diverse groups in different settings is essential in combating this tendency.

151. Kallstrom, H. N. & Ljung, M. (2005). Social sustainability and collaborative learning. *Ambio*, 34(4-5), 376-382.

In this article Kallstrom and Ljung present a vision of social sustainability that emphasises 'recognition' as a basis for sustainable social and environmental conditions. Recognition has three levels (love/care, equal rights, solidarity) and affects self-identity.

They present sustainable development as a function of resilient social-ecological systems that builds upon strong social relations, individual satisfaction with work tasks, the discussion and sharing of responsibility with other people; confidence in the future; and experience of recognition from family, friends, and society. More broadly, social sustainability is based on social-psychological concepts including the fulfilment of basic human needs (protection, freedom, understanding, participation, creativity, and affection).

152. Lundqvist, L. (2004). Greening the people's home: The formative power of the sustainable development discourse in Swedish housing. *Urban Studies*, 41(7), 1283-1301.

Sustainable development is a common part of planning discourse but Lundqvist questions what it takes for this concept to achieve formative power. The author employs Hajer's three stages of discourse: Interpellations (that consist of the presentation of new ideas as stories) which lead to discourse structuration (the terms and rules of the debate) and, finally, new practices. These require a majority coalition adhering to a particular story, however, who tells the story is also important. The adoption of metaphors and stories that have already been institutionalised assists with formative aspects but this can be compromised if the storyline is inconsistent with established practice at the local level where it is to be implemented.

153. Macnaghten, P. (2003). Embodying the environment in everyday life practices. *The Sociological Review*, 51(1), 63-84.

In line with much of the socionature literature, Macnaghten argues that 'the environment' should be reconceptualised to engender a better fit with people's everyday experiences. The now orthodox view of a fragile global nature in need of saving via information (e.g. AIDA models) is challenged in favour of more localised, socially embodied practices. Increasingly individualised lifestyles are a factor that complicates this relationship between the 'environment' and everyday life and at the same time, globalisation makes people feel both more connected with, and vulnerable to, distant events and people. The research, conducted on behalf of Greenpeace, showed that many of the threats to global nature – global warming, deforestation, ozone depletion and so on – were detached from everyday life. A perceived lack of

agency and lack of faith in institutionalised responses to global problems accounted for some of this disengagement.

Three alternative readings of the environment and nature were explored; as a source of pleasure and escape from the burdens and corruptions of modern daily life; as a setting in which social bonds are created and maintained; and as a problem or set of problems. These may provide a better foundation upon which an empowered politics of the environment can be developed.

154. Masuda, J. R. & Crooks, V. A. (2007). Introduction: (Re)thinking the scales of lived experience. *Area*, 39(3), 257-258.

In this article Masuda and Crooks explore the ontological and epistemological status of 'scale' with an eye to exploring what the practice of this term can tell us about the connections between people's lives 'in-place' and the wider forces that influence them. They argue the merits of an 'experiential' approach which is attentive to the ways in which global, national, regional or local scales shape everyday life.

155. Mayer, H. & Knox, P. (2006). Slow cities: Sustainable places in a fast world. *Journal of Urban Affairs*, 28(4), 321-334.

The authors relate the findings of a study of two German 'Slow Cities'; an approach, they argue, that represents an alternative to corporate-centred urban development. The Slow Cities movement (as an off-shoot of the Slow Foods movement) is sensitive to the intricate connections between economic, social and environmental concerns enacted at the grassroots level through the lens of liveability. Local context is as important as local ingredients in the city's efforts to promote sustainability and conviviality.

156. Michelson, M. (2002). Success for whom? The place of people in 21st century cities. *Ekistics*, 69, 120-122.

The author outlines the contribution of the Ekistics Grid and the ekistics movement which focuses on the intricate social ecology of cities and people's role within this complex. This is part of a wider movement questioning why and how so much policy overlooks the fundamentals of human needs and aspirations. Why, for example, is housing so often seen as an economic commodity and not a home in which people live (see, for example, Hagerstrand and Pahl)? Recent contributions to a renewed call to examine the purpose of growth include widespread deinstitutionalisation (of prisoners and the mentally ill), the provision of public and emergency services, environmental justice and a growing awareness that despite technologies that compress time and space for some, others are still very much place-connected and dependent.

- 157. O'Sullivan, D., Manson, S. M., Messina, J. P. & Crawford, T. W. (2006). Space, place, and complexity science. *Environment and Planning A*, 38(4), 611-617.**

O'Sullivan et al. identify complexity as one of the stronger currents in scientific thought over the last few decades. In this guest editorial of an issue devoted to complexity the authors introduce some of the ways in which the concept can be construed as spatial. They highlight definitions of the idea that emphasise how systems cannot be understood through analysis of their components. Complex systems therefore defy the reductionist approach of many scientific disciplines. The complicated ways people relate to and react with their environment is a growing field of interest which, they argue, 'pushes complexity research beyond its usual focus of stylised, 'toy-like' models towards the messy reality of human decision-making in the context of social and natural systems' (p. 613).

- 158. Purdon, M. (2003). The Nature of ecosystem management: postmodernism and plurality in the sustainable management of the boreal forest. *Environmental Science & Policy*, 6(4), 377-388.**

The author employs Habermas' theory of communicative action to explore a particular case of ecosystem management. He draws on the definition of communicative action provided in the Routledge Encyclopedia of Philosophy as involving:

a distinction between 'consent-oriented' (or communicative) and 'success-oriented' (or purposive-rational) actions ... The goal or 'telos' of communicative action is not expressed or realised in an attempt to influence others, but in the attempt to reach an agreement or mutual understanding (Verständigung) about something in the world. Thus, while all action is teleological or goal-oriented in a broad sense, in the case of communicative action any further ends the agent may have are subordinated to the goal of achieving a mutually shared definition of the agent's lifeworldly situation through a cooperative process of interpretation. In acting communicatively, individuals more or less naïvely accept as valid the various claims raised with their utterance or action and mutually suppose that each is prepared to provide reasons for them should their validity be questioned.

Communication is therefore dependent on rational argument and discussion as it is through this that we establish an 'ontological validity', though this depends on the creation of a legitimate sociopolitical context. Without this, we would have to resort to not necessarily rational means of coercion, force or abstract moral standards.

Purdon outlines ways in which the notion of sustainable forest management (SFM) rests on an opposition between nature and society, or humans and the environment. This is achieved through a description of the ways forest managers now try to emulate 'natural disturbances', such as floods and fires, that seem devastating but that ultimately contribute to the well-being of the forest. He argues that the idea of Nature is socially mediated through the connections of reason and power and asks, if Nature is a social construction, how and when does ecosystem management become a social decision. It is by seeing it in these terms that ecosystem managers can reconnect with citizens and citizens with forest management though this will require greater transparency and participation.

- 159. Roberts, J. A. & Clement, A. (2007). Materialism and satisfaction with over-all quality of life and eight life domains. *Social Indicators Research*, 82(1), 79-92.**

The authors provide an extensive literature review exploring the links between materialism and the impacts on both society and the individual. Much of this work suggests materialism relates negatively to satisfaction and self esteem at a personal level, and to decreased concern for the environment and participation in public issues at a broader social level.

They investigated the relationship between materialism and eight aspects of quality of life and found that materialism and happiness were inversely related. The centrality aspect of materialism was negatively correlated with seven of the quality of life domains (family, friends, yourself, residence, health, and amount of fun, money, and job) the success aspect was negatively correlated with six domains. Roberts and Clement suggest an organismic explanation for these results where those motivated by extrinsic goals tend to experience reduced well-being. Unrealistically high expectations about standards of living might also play a role.

- 160. Rutherford, S. (2007). Green governmentality: insights and opportunities in the study of nature's rule. *Progress in Human Geography*, 31(3), 291-307.**

In this article, Rutherford uses 'nature' as a lens through which the idea of governmentality might be explored emphasising analytics of power, biopolitics, and technologies of the self. She begins with an introduction to the notion of governmentality outlining how the state gets strength from the construction of knowledge as opposed to the imposition of law from above. The making and governing of truth is as important as other ways of exercising power. Thus 'the ways in which the environment is constructed as in crisis, how knowledge about it is formed, and who then is authorised to save it' are crucial questions (p. 295). Rutherford observes through the analytics of power that many environmental organisations 'produce the truth of a global environment under threat, rescaling the debate upward to erase specificity and difference'. In addition, the biopolitics of nature situate experts as the most appropriate managers of environmental crises. Finally, in her discussion of technologies of the self and subject formation, Rutherford notes how, under the benign eyes of experts, responsibility for the environment is placed on the individual who is encouraged to act in simplistic, eco-friendly ways. Rutherford concludes that while the notion of governmentality has much to offer, we also need to be attentive to unintended consequences, acts of resistance, occlusion and location.

- 161. Stevenson, N. (2002). Consumer culture, ecology and the possibility of cosmopolitan citizenship. *Consumption, Markets and Culture*, 5(5), 305-319.**

The author begins by raising connections between consumer culture, ecological issues and citizenship by drawing on Zygmunt Bauman's distinction between a producer society (requiring an expanding supply of labour, and based on collectivism and state welfare) and that of the consumer who is 'easily excitable, quickly bored, has few

substantial commitments, and values individual choice above all else' (p. 307). As citizens consumers are said to be guided by aesthetics rather than ethics, and the 'right to enjoy' rather than political ideology.

Stevenson argues, however, that citizenship and consumption can be linked through purchasing decisions based on the moral or ecological aspects of the product, whether they be 'GE free' or 'fair-trade'. In the age of consumption, citizenship is dominated less by class interests and more by cultural affiliation. As such, Stevenson challenges the established practice of seeing consumerism as undermining citizenship. Though visits to the mall may take more of our time than traditional forms of democratic engagement, shopping has become the 'daily election' (p. 309). Nonetheless, shopping cannot replace established practices of citizenship, morality and ethics completely because it is the more orthodox expression of these that gives consumers the political content on which they make purchasing decisions.

The prospect of a cosmopolitan version of an ecological politics is therefore dependent on our 'imaginative ability to connect questions of ethics to those of pleasure' (p. 310). Responsibility and obligation may serve as a better basis for more sustainable futures than either instrumentalism (where nature is a resource) or quasi-religious nature worship. This allows us to avoid the situation whereby we either conquer or submit to nature and instead ask questions about appropriate forms of stewardship. In connecting ecology to established class politics the author points out that they do not always align. Environmental risks and ills are often exported to poorer areas or poorer societies. A more cosmopolitan citizenship is required, one that rests on human rights and a better understanding of how politicised consumption might be better utilised.

162. Ungar, S. (2000). Knowledge, ignorance and the popular culture: Climate change versus the ozone hole. *Public Understanding of Science*, 9, 297-312.

Based on a study of public reactions to ozone depletion and climate change, this article takes a novel approach to the information-based approach to behaviour change. Ungar notes 'ignorance' of environmental issues inevitably increases as specialised knowledge of the issue grows. This 'knowledge-ignorance paradox' therefore supports the author's contention that with ignorance being the norm, it is pockets of knowledge that need explaining. In an 'attention economy that favours celebrity facts and militates against the acquisition of scientific knowledge' (p. 308) surveys of public knowledge are likely to be less useful than studies investigating what people need to know in order to make issues relevant. This might involve the identification of sub-populations with particular practical needs. Information presented to the public might be best couched in 'bridging metaphors' that resonate in popular culture than scientific jargon.

163. van Kamp, I., Leidelmeijer, K., Marsman, G. & de Hollander, A. (2003). Urban environmental quality and human well-being. *Landscape and Urban Planning*, 65 (1-2), 5-18.

This article reviews concepts of liveability, environmental quality, quality of life and sustainability, and their underlying conceptual models (human ecology, quality of life, city planning approaches, social indicators, and satisfaction research). They compare these in terms of domain, indicator, scale, time-frame and context and that a multidisciplinary conceptual framework of environmental quality and quality of life is required in order to integrate physical, spatial and social aspects of urban liveability and well-being.

They note a distinct lack of consensus around the ways in which concepts concerning 'liveability', 'quality of life', 'quality of place' and 'sustainability' relate to each other, the ways in which people-environment interactions are presented, the treatment of objective attributes versus subjective perceptions, causality between the concepts and whether the concept was thought to be constant or variable over place, time, culture.

They did find some areas where the concepts overlapped: liveability, quality of place and sustainability all relate to aspects of person-environment relationships, however, one or the other is usually emphasised over the other. Liveability and quality of place pertained to the environment whereas quality of life was related primarily to the person. Sustainability focused on the future whereas liveability and quality of life emphasised the 'here and now'.

164. Vlek, C. & Steg, L. (2007). Human behaviour and environmental sustainability: Problems, driving forces, and research topics. *Journal of Social Issues*, 63(1), 1-19.

The authors introduce a special issue concerned with social aspects of environmental issues. They provide an overview of a modified version of the 'I=PAT' formula (Impact=Population x Affluence x Technology) where C (culture expressed by values and norms) and I (institutions) are included. Policies for environmental sustainability can be directed at any one of these five factors. With regards to affluence, Vlek and Steg note a transformation from the meeting of basic needs to a 'luxury fever' (Frank, 1999) for new temptations. They call for a 'broader than material' foundation for improved quality of life (p. 7) whilst also noting that consumers appear to be locked in to wasteful behaviours by social structures and processes. Institutions supporting the 'addiction' to short term economic growth are also discussed and this is both reflected and driven by cultural processes. Long term thinking and collectivism need to become embedded if sustainable solutions are to be found.

165. Wagner, W. (2007). Vernacular science knowledge: its role in everyday life communication. *Public Understanding of Science*, 16, 7-22.

Wagner addresses why, how, and in which form the public understands and assimilates scientific knowledge. He argues that this process is dictated, to a certain extent, by social efficiency and evidence. The iconic and metaphoric representations of scientific knowledge – that is, the vernacular science – can be 'wrong' in scientific terms but are, nonetheless, useful in the construction of discourses and belief systems among the lay public. Mundane, symbolic and esoteric facts combine to form a

common knowledge that is, in fact, graduated along the lines of structural processes that govern people's access to information. Everyday thinking and common sense serve the purpose of ensuring social survival; scientific validity is less important than social suitability. Everyday thinking has three aspects: First, being affected means certain behaviours have consequences so perception and thought occur in the context of everyday activities and concerns. Second, people are constantly taking action, some of which is guided by strongly held beliefs, some by incomplete and hazy facts. A cognitive effect of the latter is to 'extremize' opinions to reduce ambiguity. Third, the social setting helps determine what actions are required and this places significant constraints around what might appear to be chaotic multitude of possible choices. Consequently, concrete knowledge is of more value than abstract information; inference is guided by metaphor and analogy; people experience cause and effect; and the rules and reasons of communication guide everyday behaviour.

Two approaches serve to integrate knowledge and behaviour: The first is the information-based model where there is a correlation between scientific knowledge and attitude. The other is the contextual model which connects science with politics, social trust, and so on. Wagner questions whether either of these explain how and why the public obtains scientific knowledge in the first place. He posits six explanations: The need to operate fairly sophisticated everyday appliances; a general interest in what is going on in the world; familiarising oneself with the new and innovative; attaining symbolic capital or power; and the ability to participate in the general web of social exchange and discourse.

Social representation theory states that social representations and their objects are 'collectively elaborated' by a community in order to communicate and Wagner uses this in his examination of genetic engineering, sexual conception and psychiatric knowledge. These examples highlight the role of symbolic coping, the social structure of metaphorical knowledge and discursive polyphasia where contradictory beliefs about the same object are expressed differently in different situations. Contradictions need not be disturbing so long as they suit different life worlds in which they have a relevant communicative purpose. Common sense is not necessarily rational in the scientific sense but it is 'evident' if it engenders social understanding.

166. Whitehead, M. (2005). Between the marvellous and the mundane: everyday life in the socialist city and the politics of the environment. *Environment and Planning D-Society & Space*, 23(2), 273-294.

In this article Whitehead addresses Latour's claims that the tension between overinflation and banalisation had resulted in the environmental movement losing political impetus. Overinflation relates to the tendency in the environmental movement to sensationalise or dramatise ecological crises with the result that they are dehumanised and dislocated from people's everyday concerns. On the other hand, the attempt to reintegrate ecological concerns into everyday life has resulted in even very important problems becoming 'indistinct' and inseparable from a host of other more or less pressing issues. Using the case study of Katowice, Poland, Whitehead claims that the quotidian might prove a useful foundation upon which connections between sociological and ecological politics, different spatial scales and different socio-natural contexts can be made. This is a response to much of the work conducted on urban

nature which pursues the wild and the feral (or the ecologically marvellous) as islands floating in a sea of banality. A second concern is that although much of the work on hybridity and urban socionatures rightly emphasises multiple and interrelated networks of human/non-human interactions, there is a general failure to identify the political opportunities these relations present.

Everyday life provides a good foundation for further study because it a) is often presented as commonplace and routine but is actually complex and multifaceted; b) daily life is rhythmic, active and temporally alive; and c) it is a site where socially relevant and practical knowledge is produced and absorbed. Whitehead draws upon Seigworth's (2000) work which posits the everyday as 'banality in overflow' (or beyond control) and 'pure process in excess' (more than is needed). These terms give us a new appreciation of the importance daily life in terms of new epistemologies, politics and ways of being while at the same time explaining why the everyday can never be entirely rational. Rational transcendence is therefore passed over in favour of immersion in the complexities of daily life that connects the particular and the generic.

In concluding Whitehead believes the quotidian is where and how we can accommodate 'hybridity' and 'socionatures' that challenge the human/non-human divide without forgoing the discursive reference point 'nature' gives us.

167. Wolch, J. (2007). Green Urban Worlds. *Annals of the Association of American Geographers*, 97(2), 373-384.

Wolch uses a study of the Los Angeles River to situate multidisciplinary urban geographic research can help with efforts to make cities more sustainable. She argues that the restoration of the city's ecological integrity, the redesign of productive and consumptive practices and the promotion of social and ecological justice are central to this cause. Wolch begins by outlining the need to recast the city/nature dichotomy and acknowledge the presence of urban nature within the confines of the city. 'Urban biogeography', 'urban geomorphology', an 'urban hydrology' and an urban GIS science might provide social and ecological conditions necessary for bringing plants and animals back *and* provide opportunities for less advantaged communities to enjoy access to a more pleasant area. Wolch notes the problems generated by consumption and posits producers' adoption of 'strong' ecological modernisation as key factors in urban residents being able to reuse, reduce and recycle wastes. Consumptive practices would also need to change in order to make cities more sustainable. Green consumerism is not enough; also required are alternative urban food regimes, local currency systems, shared car arrangements, 'off-the-grid' housing schemes and social marketing to reduce overall consumption. With specific reference to the Los Angeles river, Wolch demonstrates the role the altered imaginaries associated with the river have played in the way it is understood and treated by residents, politicians and planners and the importance of 'ecological citizenship'. This citizenship is not based on traditional legal or 'contractual' notions of the term but is characterised by ecological justice and an 'ethics of care' (p. 379) that must become a guide for a more general audience. Part of this ecological citizenship is the development of a green consciousness that will most likely 'pit individuals against dominant political-economic structures and institutions predicated on constant growth and accumulation' and throw current everyday urban practice into question (p.379). Wolch is aware that

in everyday terms, managing these imaginaries that drive behaviour change is not easy and may, in fact, involve 'wading around in the muck' (p. 379).

168. Zimmerer, K. S. (2007). Cultural ecology (and political ecology) in the 'environmental borderlands': exploring the expanded connectivities within geography. *Progress in Human Geography*, 31(2), 227-244.

Zimmerer provides an overview of how Environmental Science and Technology Studies, Historical Environmental Geography and Global Environmental Change and Policy Studies conceptualise nature/society, human/environment relations. He argues that an emergent set of bio-physical environmental problems, such as global warming and climate change and so on, have expanded the frontiers of new 'environmental borderlands'. Many of these are inter- or intra-disciplinary and include 'socio-nature' and 'hybrid landscapes'. He concludes that cultural ecology is central to the new environmental borderlands and that geographers are well-placed to exploit the potential of this increasingly popular field. The strengths of this article are twofold: First is the comprehensive list of work conducted along these lines and second is Zimmerer's exploration, categorisation and clarification of what can appear to those new to this area as a somewhat chaotic set of antecedents.