



City dweller aspirations for cities of the future: How do environmental and personal wellbeing feature?



Helene Joffe*, Nicholas Smith¹

Division of Psychology and Language Sciences, University College London, 26 Bedford Way, London, WC1H 0AP, UK

ARTICLE INFO

Article history:

Received 4 November 2015

Received in revised form 3 June 2016

Accepted 17 June 2016

Available online xxxx

Keywords:

City aspirations

Liveable cities

Low carbon agenda

Environmental wellbeing

Personal wellbeing

ABSTRACT

This paper explores city dweller aspirations for cities of the future in the context of global commitments to radically reduce carbon emissions by 2050; cities contribute the vast majority of these emissions and a growing bulk of the world's population lives in cities. The particular challenge of creating a carbon reduced future in democratic countries is that the measures proposed must be acceptable to the electorate. Such acceptability is fostered if carbon reduced ways of living are also felt to be wellbeing maximising. Thus the objective of the paper is to explore what kinds of cities people aspire to live in, to ascertain whether these aspirations align with or undermine carbon reduced ways of living, as well as personal wellbeing. Using a novel free associative technique, city aspirations are found to cluster around seven themes, encompassing physical and social aspects. Physically, people aspire to a city with a *range of services and facilities, green and blue spaces, efficient transport, beauty and good design*. Socially, people aspire to a *sense of community and a safe environment*. An exploration of these themes reveals that only a minority of the participants' aspirations for cities relate to lowering carbon or environmental wellbeing. Far more consensual is emphasis on, and a particular vision of, aspirations that will bring personal wellbeing. Furthermore, city dweller aspirations align with evidence concerning factors that maximise personal wellbeing but, far less, with those that produce low carbon ways of living. In order to shape a lower carbon future that city dwellers accept the potential convergence between environmental and personal wellbeing will need to be capitalised on: primarily aversion to pollution and enjoyment of communal green space.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

1. Introduction

This paper explores people's aspirations for cities of the future. It examines the city aspirations of those who live in Britain's two largest cities, London and Birmingham. Set within the context of national and international commitments to radically reduce carbon emissions by 2050, people's aspirations for cities are evaluated in light of their alignment or clash with the carbon reduction agenda. Thus the paper interrogates whether people's hopes for cities of the future are in line with carbon reduced ways of living or not. Furthermore, the particular challenge of creating a carbon reduced future in democratic countries is that the measures proposed must be acceptable to the electorate. Such acceptability is fostered if carbon reduced ways of living are also felt to be wellbeing maximising. Thus the paper analyses city dweller aspirations in relation to subjective visions of the wellbeing-enhancing city. In addition, it examines the evidence base concerning what yields

personal wellbeing. In sum the paper explores what kinds of cities people aspire to live in with an eye to whether these aspirations support or undermine both carbon reduced and wellbeing maximised ways of living.

1.1. Carbon footprint and the city

Cities produce a considerable carbon footprint. Estimates suggest that over 70% of the world's greenhouse gas emissions are produced by cities (UN-Habitat, 2011). Although the specific nature of a city's environmental impact has been debated in recent years (Hoorneweg, Sugar, & Gomez, 2011; Satterthwaite, 2008), there is firm evidence that the key sources of carbon emissions in cities relate to the consumption of fossil fuels by way of electricity, transport and industry (UN-Habitat, 2011). This consumption is rising: Aviation emissions, for example, are rising disproportionately faster than other sources of travel emissions due, in part, to the rapid growth of the airline industry (van Renssen, 2012). Moreover, this is concentrated in an elite few; affluent city dwellers are most likely to use international air travel for work and vacations (Brand & Preston, 2010). Regarding industry, while many of the most polluted cities have introduced policies to limit

* Corresponding author.

E-mail address: h.joffe@ucl.ac.uk (H. Joffe).

¹ Dr. Smith is currently a lecturer in the Department of Psychology, University of Westminster, 115 New Cavendish Street, London, W1W 6UW, UK.

industrial carbon emissions (see Holt, 2012), carbon dioxide emissions continue to increase mortality, especially in already polluted areas (Jacobson, 2008).

1.2. Wellbeing and the city

Carbon emissions are also linked to impairment of personal wellbeing (Boyko, Cooper, & Cooper, 2015). Personal wellbeing is a 'happy, healthy, or prosperous condition' (e.g. *Oxford English Dictionary*). Government bodies add to this definition 'life satisfaction' and 'lack of anxiety' (Office for National Statistics, 2011) while global bodies (e.g. World Health Organization, 2014) emphasise that mental and social wellbeing constitute the 'health' component. Thus the concept of personal wellbeing includes happiness, life satisfaction, freedom from anxiety and health. Several reviews have identified and categorised the factors that promote and hinder wellbeing (e.g. Diener, 2012, 2013; Diener et al., 1999; Huppert, 2009). One prominent approach focusses on specific factors that improve personal wellbeing (New Economics Foundation, 2008). At an individual level, these 'Five Ways to Wellbeing' are "Connect", "Be active", "Take notice", "Keep learning" and "Give". A growing evidence-base underpins these dimensions (Ruggeri, Garcia-Garzon, Maguire, & Huppert, 2016). In particular, the importance of building and maintaining connections with significant others forms a key buffer against mental ill-health (Jenkins et al., 2008; Morrow, 2001) and, adding to the 'Five Ways', so too does contact with green space (Ambrey & Fleming, 2014; White et al., 2013). Beyond these actions that foster personal wellbeing, a set of interrelated *physical* and *social* factors have been found to contribute to the personal wellbeing and ill-being of city residents. These will be reviewed prior to presentation of the study reported in this paper, which aimed to glean, from the subjective perspective of city dwellers, their aspirations for cities of the future and to then assess the alignment or clash of these with carbon reduction and wellbeing maximisation agendas.

1.3. Physical and social characteristics of cities that engender wellbeing or ill-being

The physical and social characteristics of a city interact to produce either wellbeing or ill-being. City design contributes to the sense of safety and vibrancy offered by a city (Jacobs, 1961; Wood et al., 2008). In particular, 'mixed-use' neighbourhoods, where residential, work and leisure facilities co-exist foster wellbeing (Duany, Plater-Zyberk, & Speck, 2000; Jacobs, 1961; Oldenburg, 1999). Furthermore, 'active sidewalks', where people socialise outside of both home and work contexts, nurture a sense of social connectedness and trust between city residents (Gehl, 2010; Jacobs, 1961). Social capital, the degree to which people feel connected to others in their community, is a strong predictor of happiness (Goldberg, Leyden, & Scotto, 2012; Putnam, 2000) and is perceived to be essential for health (Eriksson & Emmelin, 2013). A trusting environment, in particular, facilitates community connectedness. Spending quality time with trustworthy neighbours and the ability to call on a neighbour during an emergency predict wellbeing (Corrado, Corrado, & Santoro, 2013; Helliwell & Putnam, 2005; Kan, 2007).

Several researchers have explored how services and facilities, in particular, support wellbeing. In a study of ten international cities, residents' happiness was predicted by positive perceptions of services and facilities, convenience of public transport and access to cultural and leisure facilities (Leyden, Goldberg, & Michelbach, 2011). Furthermore, those who thought that their city was 'beautiful' reported higher levels of happiness. Corroborating this, Goldberg et al. (2012) found that those city dwellers who felt proud to live in their 'beautiful' city and who had easy access to services and facilities reported feeling healthier and more connected to others.

The importance for wellbeing of living in a 'walkable' city has also been identified (Frank et al., 2006; Saelens, Sallis, & Frank, 2003). City dwellers who live in walkable and mixed-use neighbourhoods are

more likely not only to know and trust their neighbours but to be more socially and politically engaged with the community than those living in car-dependent suburbs (Leyden, 2003). The benefits of walkable green space are well documented, with several studies highlighting the links between green space and both physical and mental health (Bell, Wilson, & Liu, 2008; Ellaway, Macintyre, & Bonnefoy, 2005; Thompson et al., 2012). While the plausibility of the causal link between wellbeing and green space has been debated in the past (Lee & Maheswaran, 2011), White et al.'s (2013) longitudinal study has made inroads into identifying the nature of the link between green space and wellbeing. The study assessed levels of mental distress and wellbeing in individuals residing in urban areas that were characterised by either the presence or absence of green space. It found that people were happier when living in areas with more green space, and, conversely, showed higher levels of distress when living in areas with little green space. The strength of this effect was reinforced by controlling for other potentially confounding variables including change of income, employment or marital status over time.

While green space tends to have a positive effect on wellbeing, high density living can foster either wellbeing or ill-being. Evans (2014) identified how certain groups in a fashionable central London neighbourhood, including families with children, the elderly and vulnerable new migrants did not benefit from the services offered by this location. Noise, litter, limited open space and low levels of community cohesion contributed to a sense of isolation for such groups. A considerable volume of further research has also documented the ill-health effects related to urban living, most notably increased levels of obesity (Arambepola et al., 2008), respiratory problems associated with urban pollutants (Environmental Audit Committee, 2014) and high crime rates, which predict ill-being (Corrado et al., 2013; Howley, Scott, & Redmond, 2009).

Given the stress that living in cities can generate, several studies have explored the links between urbanisation and mental health (Evans, 2003), finding a connection between urban living and schizophrenia (Krabbendam & van Os, 2005; Peen et al., 2010). Population density in highly urbanised environments is strongly related to the onset of first episode psychosis (Oher et al., 2014). Assessing the mental health impact of cities more implicitly, Lederbogen et al. (2011) identified that people currently living in cities differ in how their brains processed stress and the effect was more pronounced in those who were brought up in cities. Over-responsiveness to stress, in long term city dwellers, appeared to make them more susceptible to mental ill-being.

However, high density living environments can also foster wellbeing, particularly in lower socioeconomic groups. Children living in poorer, denser areas have stronger social ties than children living in more affluent and less dense areas due to more opportunities for contact (Bernard, 1939; Boyko & Cooper, 2014; Moore, 1986). Also perhaps counterintuitively, civility or politeness, which correlates with wellbeing, can also be more prevalent in cities than rural areas. Villages with their quintessential sense of community can have higher levels of incivility than disadvantaged inner city areas. Indeed, civility was higher among residents of a deprived London borough compared with wealthy Wiltshire villagers (Griffith et al., 2011); tolerance for populations with different backgrounds was greatest in the places with the highest racial and ethnic mix.

In sum, the design and aesthetics of cities has a major impact on the personal wellbeing of their residents in part because of the interactions that design fosters. Since the quality of these interactions is central to wellbeing, people can have a strong sense of wellbeing in places that others would judge as aesthetically displeasing. This may relate to the social ties that exist in these spaces and that nurture a deep sense of belonging and rootedness (Cattell et al., 2008). This speaks to a broader conceptualisation of cities as places where not just crime and stress but also 'collective effervescence' (Jacobs, 1961) can be fostered. The 'collective joy' fostered in the ritualistic coming together of strangers who share a sense of collective identity (Ehrenreich, 2007; Novelli et al., 2013) can lend city dwellers a sense of wellbeing.

1.4. Current study

The study reported in this paper aims to investigate the kinds of cities that British city dwellers aspire to live in, set within the context of the need for carbon reduction and with an eye to whether these aspirations are wellbeing maximising. In order to orientate the in-depth examination of these aspirations for the future city, theoretical input is needed. Social representations theory (SRT) (Joffe, 2003; Moscovici & Farr, 1984) provides a useful framework. The theory focuses on how people represent unknown phenomena. The future, by definition, is unknown. According to SRT, people conceptualise the unknown by anchoring it to the ‘already known’ as well as to the existing symbols that circulate in their environments. SRT posits that the unknown is potentially threatening and threat is allayed by drawing on familiar tropes; thus the new is rendered reassuringly similar to the known. Not only is the new anchored to the known when it is conceptualised, but it is also made concrete by way of the existing symbols that circulate in the society. It is difficult for people to step beyond existing symbols and anchors, even when left free to conceptualise an unknowable future. Furthermore, by analysing the symbols and anchors that people use naturalistically, researchers gain an inroad into their deep-laid conceptualisations, feelings and desires regarding future cities. These can then be tapped by those, such as policy-makers, who seek to bring about change.

The following research questions will be addressed:

- What are the aspirations for cities of the future among the dwellers of Britain’s major cities?
- Do the most salient aspects of these aspirations align with or undermine the carbon reduction agenda?
- Do the most salient aspects of these aspirations align with or undermine personal wellbeing maximisation?

2. Method

2.1. Respondents

A purposive sample of 96 city dwellers was recruited using a recruitment agency and all interviews were conducted between April 2013

and April 2014. All participants were British born with 48 drawn from London and 48 from Birmingham. The matched samples were chosen according to demographics identified in Fig. 1. The three age groups (18–35, 36–54, 55–67) were each split evenly between male and female dwellers. The two younger age groups contained equal numbers of White British and British Minority Ethnic (BME) dwellers. For the 55–67 age groups only White British dwellers were recruited owing to there being limited numbers of British born ethnic city dwellers from this generation living in London or Birmingham. Half of the respondents were of higher socio-economic status (A, B, C1) and half of a lower socio-economic status (C2, D, E). This is a social grade system based on type of occupation, used by the Office of National Statistics (UK), among other organisations (e.g. Ipsos Connect, 2009). To ensure that the sample was not only demographically inclusive but also relatively equally spread across each city, local authority boundaries were used to determine which areas constituted London and Birmingham. London has 33 boroughs spread between Inner London (15 boroughs) and Outer London (18 boroughs). Two dwellers were sampled from each Inner London borough with one dweller selected from the remaining 18 Outer London boroughs. Birmingham is comprised of ten wards and 4–5 dwellers were selected from each of these wards.

2.2. Procedure

Following receipt of ethical approval, a recruitment agency was enlisted to select dwellers who matched the specified criteria. Dwellers were paid a small, cash incentive to participate. Before completing the interview, all dwellers were provided with an information sheet that outlined the nature of the study as a research project exploring people’s thoughts about the future. Before the study commenced, they were kept blind to the study’s focus on cities so that ideas would be spontaneous/free associative. The free association task and interview were conducted once they had signed a consent form agreeing to be interviewed and audiotaped.

2.3. Free association task

Free associations reveal what people think and feel about a phenomenon without input from the researcher concerning the range of possible responses to a given question. Thus they provide a more naturalistic

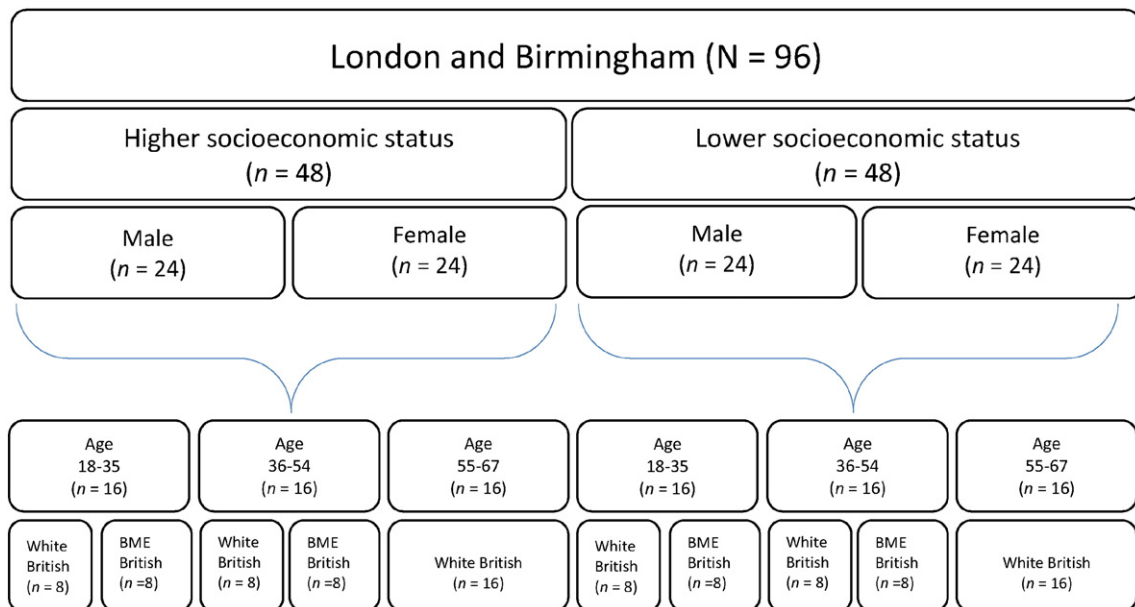
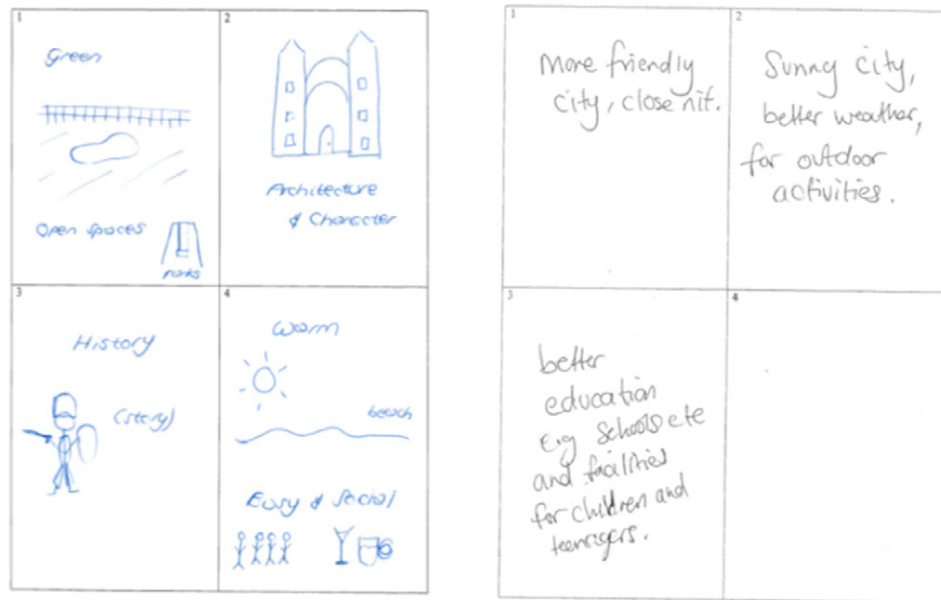


Fig. 1. City dweller demographics.



London dweller, female, higher SES, aged 18-35

Birmingham dweller, female, higher SES, aged 36-54

Fig. 2. Examples of free association grids from a London and a Birmingham dweller.

inroad into people's conceptualisations than most other methods. A free associative method, termed the Grid Elaboration Method (GEM), devised by the first author, has been used in a range of studies (Farrimond & Joffe, 2006; Joffe, Washer, & Solberg, 2011; Joffe et al., 2013; O'Connor & Joffe, 2014, 2015; Smith & Joffe, 2013). The GEM's history lies in psychological evidence that when allowed to produce their own stream of images and ideas people will reveal the deep-laid roots and motivations that underpin their surface level accounts (Joffe & Else, 2014). The method reveals how people make sense of the entity to which they are asked to provide associations, not just cognitively but also emotively and symbolically.

In accordance with the GEM, a free association task was administered first: dwellers were provided with two pieces of paper, each with a grid containing four blank boxes. The instruction above the first grid asked respondents to write or draw the different words and images that showed "your aspirations for the future" and, above the second grid, "the kind of city you would aspire to live in, in the future". Above each grid, dwellers were asked to give just one thought or image per box. Only the second grid and respondent elaborations of this grid are analysed in this paper. An example of this "kind of city you would aspire to live in" grid from one London dweller and one Birmingham dweller is presented in Fig. 2.

2.4. Semi-structured interviews

Dwellers were then asked to elaborate on the content of each box in an interview that followed the free association task. This began with "can you talk me through what you have drawn/written in box 1?" Once the participant had elaborated on the first free association, the process was continued until the content of all boxes had been addressed in sequence. Prompts such as 'can you tell me more about that' were used to ensure dwellers' thoughts and feelings about cities of the future were fully explored and emerged naturalistically without insertion of content via researcher questioning. Each interview lasted between 30 and 45 min. Upon completion participants were given a survey to fill out (its method and results are not reported in this paper), debriefed about the study and thanked for their participation.

2.5. Data analysis

Analysis and coding was approached inductively once the data had been collected and the interviews fully transcribed.² A content analysis was conducted to identify the most prevalent categories of association contained in the grids. Following this, a thematic analysis was performed (Joffe, 2012; Joffe & Yardley, 2004) on the interviews: transcripts were read thoroughly and the key ideas contained in them noted and categorised. This allowed codes to develop naturalistically from what was observed in the data. These codes were grouped into sets in a coding frame.³ This ensured that a more complex picture of people's lines of (often contradictory, ambivalent and complicated) thinking was accessed, beyond the condensed, initial free associations. In order to assess the reliability of the coding frame a second coder was trained by the first coder and double coded approximately 10% of the interview transcripts. Inter-rater reliability revealed an average Kappa of 0.7 across all codes indicating that 'substantial' reliability had been achieved (Landis & Koch, 1977). Discrepancies were resolved following discussion between coders. The full data set was then analysed using the computer package Atlas ti.

3. Results

3.1. Free associations

The initial free associations that the London and Birmingham dwellers provided on their grids are shown in Fig. 3. Results illustrate that 79% of all free associations can be classified into 8 distinct categories for both sets of dwellers.

The appeal of *services and facilities* was the most salient free association across both London and Birmingham city dwellers (32%). Phrases that typified this category included "shops, nightlife, bars, things on your door step" and "more educational/museum things for kids". The second most salient categories dwellers used to classify their aspirational future cities were "*green and/or blue* [with 'blue' designating water]"

² The researcher conducting the data analysis had not read the literature on cities prior to coding.

³ The coding frame is available from the authors.

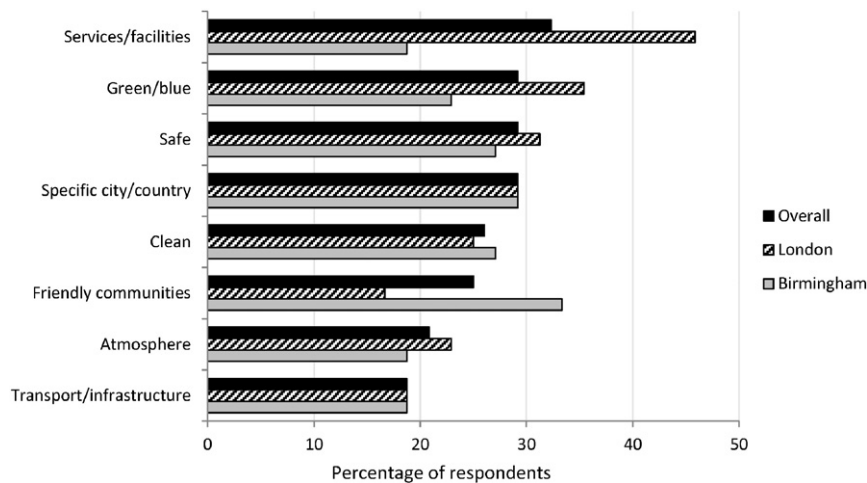


Fig. 3. Content of respondent free association grids in percentages.

(29%), “safe” (29%) and “specific city and/or country” (29%). Example associations for “green and/or blue” included “green spaces, natural environments”, “scenic - close to countryside or coast” and “environmentally friendly”. Typical associations for “safe” included “a neighbourhood without fear” and “low levels of crime”. The category “specific city and/or country” made reference to specific cities and/or countries; dwellers wrote or drew the name of a particular place. Examples included “Birmingham”, “London”, “Tokyo”, “Australia” and “Dubai”. These locations acted as reference points for particular qualities of cities that people deemed desirable.

Next most prevalent, associations with “clean” cities (26%) included “cleaner streets” and “clean air”. The aspiration for “friendly communities” (25%) included “friendly, close knit” and “good neighbours”. Other associations included the appeal of both *lively/exciting and relaxed/quiet city atmospheres* (21%) and the appeal of *efficient transport* (19%).

It is noteworthy that these initial free associations from London and Birmingham dwellers were relatively similar. There was only one significant difference between the two samples: the appeal of services and facilities was more salient among Londoners than Birmingham city dwellers ($X^2 = 8.05$, $df = 1$, $p = 0.005$). Furthermore, Birmingham city dwellers were more likely to provide a ‘friendly communities’ association compared with London city dwellers with this effect approaching significance ($X^2 = 3.56$, $df = 1$, $p = 0.059$).

3.2. Interview themes

The interview process was constituted by dwellers elaborating on their own free associations. The following section will outline the most prevalent themes found in these data concerning the qualities of cities that people desire (see Table 1) and then expand on each in turn.

Within each theme, responses were compared across age, gender, socioeconomic status, ethnicity and city of residence; differences are only reported if found to be statistically significant. It is important to highlight that only dwellers’ *subjective perspectives* are brought to the fore and examined in the results. In the discussion these are compared to the *evidence* regarding wellbeing and carbon use.

3.2.1. Physical aspects of cities

The largest constellation of interview content clustered around the physical aspects of cities seen as most desirable by British city dwellers. The physical aspects of cities were conceptualised in terms of five key themes, discussed in turn in the following sections. The physical and social aspects were entwined and so attention to the physical veers into the social and vice versa.

3.2.1.1. *Theme 1: appeal of facilities: social, cultural, retail and municipal.* The most prevalent theme, evident in over three quarters of the dwellers, focussed on the appeal of a range of services and facilities for future cities, in particular the appeal of restaurants, cafes, pubs and clubs. These facilities were associated with high levels of personal wellbeing, providing good opportunities to meet friends and socialise. Dwellers, particularly those of a *higher socio-economic status* in the two cities, talked of the ‘buzz’ and ‘vibe’ generated in these lively and exciting places. More pragmatically, for some, cities needed to provide such facilities, to counteract the pressures created by city living. These social spaces were therefore sometimes seen as an escape, which was

Table 1

London and Birmingham residents’ aspirational cities: theme summary

Physical aspects of cities aspired to	
1	Facilities and services: social, cultural, retail and municipal (79%) <ul style="list-style-type: none"> • Appeal of restaurants/cafes/pubs/clubs and cultural facilities as social, lively and exciting places • Cultural facilities, which promote cultural heritage • Shopping facilities, which are local • Government-provided social services and facilities for younger and older city residents • Sports facilities, seen as places of sociability
2	Nature (68%) <ul style="list-style-type: none"> • Green and blue spaces seen as places of health, exercise, relaxation, escape and environmental wellbeing • Parks, fields and heaths as places to escape and exercise but also dangerous and dirty
3	Transport (60%) <ul style="list-style-type: none"> • Efficient transport seen to provide access around the city and regarded as low carbon • Transport problems result in anger and frustration and contribute to a polluted and dirty city
4	Well designed and beautiful (53%) <ul style="list-style-type: none"> • Cities that contain beautiful buildings and are accessible • Central areas of the city that are lively/exciting
5	Big vs. small cities (47%) <ul style="list-style-type: none"> • ‘Big’ cities regarded as spacious with a wider range of services and facilities • ‘Small’ cities seen as quieter and more relaxed
Social aspects of cities aspired to	
6	Sense of community (66%) <ul style="list-style-type: none"> • Friendliness seen as the defining characteristic associated with supportive and close knit neighbours • Importance of being involved in the community • Loss of community over time evoking strong feelings of ill-being
7	Safety (51%) <ul style="list-style-type: none"> • Awareness of crime linked to aspiration for safety and calls for better enforcement of the law • Fear of crime regarded as promoting the desire to protect children • Derogated societal groups blamed for crime increase

particularly important for the *female* dwellers, who had a greater tendency than the men to find the city to be too busy and noisy:

'I think if you're going to be in a city which is quite busy and quite stressful sometimes, it's nice to be social and go out with your friends... just to go and meet someone in a bar or see friends between work... cities have a lot to offer I think with restaurants and bars and cinemas and clubs and things, that you don't really get anywhere else.'

[Female, 18–35, higher SES, White British, London]

As this excerpt demonstrates the physical and social aspects of a city are inextricably entangled, in that many facilities appeal to people because they facilitate social contact.

People regularly used other places that they were familiar with as a basis for evaluating the qualities they wished to see in cities of the future. Some contrasted their own city's cosmopolitan atmosphere, it's never ending sights and activities, with the remote and isolated places they had grown up in. Others talked about the exciting cities where they had been to on holiday. These reflections evoked strong feelings of wellbeing. Specifically, North America was often mentioned, with the cities of New York and Miami singled out for their lively and exciting atmospheres. In addition, for several *Birmingham* dwellers London was used as a reference point of desirability owing to its diverse range of services and facilities. These dwellers talked about 'so much going on there' and London having 'everything apart from the sun'.

A rich culture and heritage were also revealed as hallmarks of a desirable British city, particularly for the *white*, as opposed to the British minority ethnic, respondents. *London* dwellers, in particular, were impressed by the cultural facilities that their own city had to offer, even if they had not yet visited them:

'...there's so many things in London that I haven't even done or that I hear about that I want to go and see. I haven't even had a chance to go to the Science Museum, which is shocking considering I did science but there's just so much to do. And I just think it's great that it's got so much history'

[Female, 18–35, higher SES, White British, London]

Cities were also places where people expected to find a wide range of shopping facilities. This was particularly salient for *female* dwellers. The appeal of 'local' shopping facilities was widely mentioned, in part for their convenience. Alongside enjoyment of local shopping facilities, a minority of dwellers reflected on the demise of the local British high street since it had been filled with chain shops. There was a preference for independent shops. Chain shops and larger supermarkets were seen as eroding the enjoyment associated with the social experience of shopping. This evoked feelings of ill-being and sadness:

'Sainsbury's, there's just that many people in there, you're never going to know everyone's name, you're never going to form any kind of bond with them. You just walk in, you get your stuff and you walk out. I don't even take my earphones out. A lot of the time now I use the self-check-out... they're not striving to get your custom. But in the shop [dweller's local shop] they want to keep you talking... it's nicer when you can speak to the people, isn't it'

[Male, 36–54, lower SES, White British, Birmingham]

This excerpt reveals the importance of local facilities for this city dweller and many others like him. Large chain supermarkets were seen as convenient but devoid of social interaction. This was contrasted with the strong bond established via more personalised service in independent, local shops.

In addition, the need for better schools, hospitals and efficient local council services was mentioned regularly. Several dwellers specifically identified the vulnerability of the young and the old and the need for

governments to provide sufficient services to look after these populations. Local community centres were heralded as the glue that held a community together and kept young people from 'roaming the streets'. Several spoke of their demise due to lack of funding.

In sum, city dwellers' talk of services and facilities reflected what they wanted from future cities, as well as what was not wanted. In particular, personal wellbeing was connected to services and facilities that enabled sociability, while ill-being was related to soulless shopping facilities and inefficiently run or 'dead' social services.

3.2.1.2. Theme 2: salience of nature. Green and blue space was a salient feature of the city aspirations of two thirds of *London* and *Birmingham* city dwellers. The majority of associations with nature were positive and were experienced as contributing to wellbeing. A significant proportion of *Londoners*, in particular, associated nature with health and exercise benefits. Nature's spaces, including parks, fields and heaths, were seen as places to walk, run or take children to play.

More symbolically, nature was occasionally associated with environmental wellbeing. Dwellers referred to natural spaces as the 'green lungs' of the city. These reflections revealed a personification of nature as a health-giving force:

'I'm told that we rely on trees to help put oxygen in and so on for a better quality of health. I don't know how true that is but being as we're all asthmatic in this family I suppose a bit of greenery wouldn't be a bad thing'

[Male, 36–54, higher SES, White British, Birmingham]

In addition to nature's function as the 'green lungs' of the city, many *Londoners* spoke about the appeal of nature as somewhere to relax and escape the stresses and strains of city living. Parks were symbolised as natural oases and havens of tranquillity and peacefulness. They evoked feelings of wellbeing:

'Yeah it just kind of smells ... fresh and it's kind of relaxing and tranquil. That's why I like to go there like on my breaks ... let everything kind of just go behind me, work, whatever, and just kind of have a moment for myself and then get back to the hustle and bustle after'

[Female, 18–35, higher SES, BME British, London]

Other cities and other countries were also identified as places conducive to spending time in nature. Beach cities like Sydney and Barcelona were often mentioned in relation to their easy access to the sea. This was associated with the appeal of hotter weather. Such climates facilitated a 'feel good factor' and the desire to be out in nature, whereas the weather in the UK was often viewed as a barrier to the enjoyment of nature, being too cold and rainy. For others, the experience of 'foreign' nature evoked a more intense emotive reaction. What was represented as the rather 'bland' offering of nature available in Britain was contrasted with the exhilaration of being in the Australian bush 'hearing snakes moving' or tasting oranges in Jamaica 'so natural you think it's not real'.

While the majority of dwellers talked of the appeal of spending time in nature, a minority highlighted the dangers associated with open spaces, particularly parks. They were seen as dark and often poorly lit places where people, especially *females*, felt vulnerable to attack:

'...it is a very big park, you know. ... but maybe make it a bit more light because now it's getting dark very early, just make it a bit more bright. It is quite enclosed and you have to walk through an alley and, you know, kind of late at night you don't, as a woman you don't really feel that safe'

[Female, 18–35, higher SES, BME British, London]

Parks were also associated with derogated societal groups, most notably youths, and seen as places where they have a tendency to 'hang out', drink and smoke. Others questioned the cleanliness of parks and

expressed frustration at having to walk through dirty parks, referred to as a 'big dog toilet' by a dweller. Furthermore, several expressed a sense of anger towards local councils who neglected the upkeep of parks and other communal spaces.

In sum, nature was linked to personal wellbeing by the majority of dwellers. Parks, in particular, were associated with myriad health and exercise benefits and more broadly with escape. They were sometimes explicitly associated with environmental wellbeing with reference to 'green' air. However open spaces also evoked more sinister elements of dirt and danger.

3.2.1.3. Theme 3: transport issues. Transport issues were mentioned by a majority of the sample and narrated via competing themes: efficient, accessible and clean transport as wellbeing enhancing vs. congested, noisy and dirty transport as wellbeing diminishing.

Accessible and efficient transport was highly valued. Many dwellers spoke of their enjoyment of being able to move around their city easily by public transport. The availability of the London underground was an appealing feature for several London city dwellers. A minority also mentioned electric vehicles and low carbon fuels as options for efficient and low carbon transport alternatives. Where cycling was mentioned, it tended to be connected to a healthy lifestyle rather than to reducing carbon emissions within a city.

By way of contrast to more positive references regarding transport, for most, transport evoked feelings of anger and frustration. Several Londoners talked about the tension created by 'cramped' conditions and being 'shoved' and 'pushed' by 'robotic' commuters on peak rush hour services. The car was often seen as the less stressful and even efficient option, both within London and Birmingham. Transport, both public and private, was also seen as source of pollution and dirt, which evoked strong disgust:

'It does look dirty. Dirty. New Street Station, look at New Street Station, the diesel and the pollution down there, it's absolutely disgusting.'
[Male, 55–67, lower SES, White British, Birmingham]

In sum, personal wellbeing was felt to be enhanced by efficient transport, often the car, as well as by pollution-free transport. A strong sense of personal ill-being was associated with cramped, noisy and dirty transport, which evoked feelings of anger and frustration.

3.2.1.4. Theme 4: well designed and beautiful cities. The design and planning of a city featured prominently, in the majority of dwellers' aspirations, promoting either a sense of wellbeing or ill-being. Beautiful buildings featured more prominently for London as opposed to Birmingham dwellers. They were often connected to a sense of pride. Thus aesthetics were an important indicator of how connected dwellers felt to their city and their sense of identity. Several liked the idea of 'showing off' their city to visitors or enjoyed the thrill of thinking about the experiences tourists would have:

'I love St. Paul's Cathedral... the Shard's gone up and the Gherkin, you know, all these sort of prominent buildings in our skyline, we go up to... Kite Hill up in Hampstead Heath and you get a really lovely view of London's skyline up there. I do feel quite proud to be a Londoner because it is a very special place'
[Female, 18–35, lower SES, White British, London]

The age of buildings and, in particular, the attractiveness of historical buildings was regularly singled out. New developments like London's Canary Wharf were seen by some as 'shiny and new' but also 'soulless' when compared to older areas of the city. Some talked about the character of old buildings and the feelings of warmth and fascination derived from them while others spoke about being continually 'wowed' by the cultural heritage they symbolised. Alongside

this appeal was a desire for more sensitive design that avoided the clash between the old and the new:

'When I go to the City [of London], to the square mile, I just think ... all the beautiful architectural edifices that we have, are overshadowed by shiny glass new buildings and I think that's really sad. I don't always think it's done very sympathetically although I realise it's very difficult'
[Female, 55–67, higher SES, White British, London]

Thus certain building types were regarded as ugly. Brutalist concrete design, often associated with social housing, was regarded as horrible or a 'massive blight' by some city dwellers. Such design was associated with less desirable parts of the city and the populations perceived to live in them. Certain architectural types, such as contemporary glass-clad, uniquely-shaped buildings, polarised dwellers: London's Shard was seen as revolting, looking both 'violent' and 'threatening' while London's Gherkin was 'cuddly'. Thus people's representations of the built environment are complex and polysemic, but 'old = good', 'new = bad' was the prominent pattern of representation in the data.

A minority talked of a desire to see cities of the future contain green buildings. Some talked of forms of energy efficiency that could be included in their own homes, while others took a more radical approach: Imagined designs included a 'cave house' with 'vines and trees and grass growing on top' and 'a tall skyscraper that's green with grass growing on it'. Both of these examples referred to grass on the outside of buildings reflecting these dwellers' literal imagining of a green aspirational city.

The city centre also polarised people. Some sought to live centrally, gaining a sense of comfort and security from the accessibility of central locations, embodied in the idea that a car was not needed to buy basic food items, such as bread. For others, the city centre was seen as a source of entertainment with its lively and exciting atmosphere. Yet this very atmosphere, for several dwellers, promoted ill-being. In particular, the city centre was seen as a busy, rowdy and dangerous:

'I don't go out onto Broad Street because I just find it too crowded, too rowdy and, you know, you get like different cultures, different gangs, different groups and you just feel threatened all the time ... you can't relax in that sort of atmosphere when you go out. So you avoid it, don't you?'

[Female, 55–67, higher SES, White British, Birmingham]

In sum, the way in which buildings and cities are designed has a significant impact on the wellbeing of city residents. There was widespread appeal of cities that contained beautiful buildings, both modern and historical, but designed in a way that was sensitive to the particular city's cultural heritage. The city centre was conceptualised in terms of convenience and liveliness but also felt dangerous to some.

3.2.1.5. Theme 5: big vs. small cities. Just under half of the sample referred to the physical size of their ideal city of the future. A complex interaction between the appeal of 'big' and 'small', often within an individual's own account, structured this theme. In particular, wellbeing and ill-being were associated with various qualities of 'big' and 'small' cities.

'Big' cities appealed to many, particularly Londoners and to white rather than British minority ethnic respondents, in their provision of a plethora of services and facilities, especially those of a cultural nature. London was also often talked about as a 'major city', in the top echelon of the world's cities. Major and 'big' were regarded as good so long as the facilities offered in this space were affordable and conveniently located. 'Big' was also regarded as good in terms of spaciousness. City dwellers found spaciousness appealing. Many talked about their desire to own their own space, private and secluded, away from the prying eyes of neighbours. These dwellers often lamented how densely populated their city had become with an associated sense of claustrophobia.

Fewer dwellers endorsed the appeal of smaller cities but those that did saw them as friendlier, safer and less bustling. Relatedly, there was a strong link between small cities and a relaxed and quiet atmosphere.

Those who preferred smaller places often spoke of their village-like qualities including close-knit communities and friendly neighbours. Since the dwellers all lived in cities, reflections on the appeal of smaller living places usually contained a comparison of 'here' vs. 'there', with 'there' arousing feelings of happiness, and occasional nostalgia:

'I used to do fishing when I was a kid ... we used to go out at 4 o'clock in the morning and go down to the reef in Eastbourne and when the tide was out you could wade out to the reef, put your lobster pots down and get your crabs in the morning, the following day. So I used to do that and I think maybe the thought behind it all of saying what's my future city like, my future city would probably be as remote as that. I think that would be my ultimate and I think it would be good for everybody'

[Male, 55–67, higher SES, White British, London]

In sum, city dwellers were divided, often internally, as to whether they desired spacious, large cities or more close-knit, smaller cities. Big cities were regarded as centres of entertainment offering diversity and choice. However, the busy and loud city was also regarded as frustrating with the smaller, quieter city seen as more relaxing, friendly and safe.

3.2.2. Social aspects of cities

The second set of themes deals with the social aspects of living in cities. More specifically, city dweller aspirations for cities centre not only on the physical aspects of cities but also on social interactions within them, primarily the sense of community and of crime experienced within the city.

3.2.2.1. Theme 6: sense of community. The desire for a strong sense of community was expressed by approximately two thirds of dwellers. Friendliness was seen as a defining characteristic, particularly for Birmingham dwellers and for younger dwellers across the two cities. The importance of friendly communities co-existed with the desire to live in cohesive and close-knit communities; these evoked feelings of happiness and warmth:

'Well since we've moved here, this bit of the street where we are, they're just like very friendly. Everybody talks to each other and I just think it's lovely. I think there's not many places that are like that, like not many of my friends or family know their neighbours'

[Female, 18–35, higher SES, White British, Birmingham]

Having good neighbours aided a sense of community and many highlighted the important functions neighbours provide, including increased feelings of safety:

'I couldn't imagine living somewhere where I didn't know my neighbours ... that's alien to me, I can't imagine living next door to somebody and not actually knowing their first name, or being able to knock in an emergency if something was needed'

[Female, 36–54, lower SES, White British, London]

A sense of happiness was also regularly associated with being involved in community activities. High levels of involvement in the community were associated with a strong community spirit and a sense of belonging. Several city dwellers spoke of community events and the sense of intimacy they created including the Royal Wedding, the Queen's Diamond Jubilee and the London Olympics:

'...I quite liked it in London when the Olympics were going on and when there was a royal wedding, so like big things that involve the whole city ... everyone just seemed... a bit happier. ... everyone sort of came together even though you don't know anyone so it was quite nice'

[Female, 18–35, lower SES, White British, London]

Smaller towns and villages were identified by some dwellers as places that had the best sense of community. In these places, everyone knows each other's business; everyone looks out for each other.

Dwellers experienced such places as 'going back in time'. The pub, the church fete and the local butcher were used to symbolise a simpler and more relaxed way of living. This idyllic atmosphere was thought to provide, above all else, the sense of community that many city dwellers desired.

A sense of community was seen by the majority of dwellers as a highly important attribute of a future liveable city. Major regret was expressed concerning its erosion. In particular, many lamented the loss of what life was like in cities when they were younger. Communities were places where people knew their neighbours and looked out for one another: local children played outside in the streets in a care-free way. This symbolised how socially connected the neighbourhood was. Children of the present, by contrast, were represented as isolating themselves in their rooms surfing the internet and playing 'X box'. Moreover, certain groups, or gangs of children were symbolised as threatening and dangerous. Many also felt that contemporary communities were defined by a general lack of mutual respect, often exacerbated by increasingly hectic and technologized lifestyles. The sense was that nobody invested time in maintaining neighbourly relationships. Ill-being and associated feelings of sadness were frequently evoked by such descriptions:

'...a lot of people are quite hostile or they don't want to say hello to you or they're just looking at you like why is she smiling at me. ... It's like everyone's just interested in themselves and their own worlds now, it's not a community anymore ... people just seem really, really hostile and unhappy. ... Everyone's just rushing everywhere; nobody wants to talk to anybody'

[Female, 18–35, lower SES, BME, Birmingham]

In sum, a city which provides citizens with a sense of community was seen as a hallmark of liveability. For many, this was associated with friendly neighbours fostering a close-knit and interconnected environment. Increasingly insular lifestyles were seen as having severed community ties. Similarly, time-pressures and technology were regarded as having eroded connectedness. This evoked feelings of ill-being.

3.2.2.2. Theme 7: safety and awareness of crime. The final theme that addressed the social qualities of future liveable cities was awareness of crime, mentioned by half of the dwellers. This was linked to an aspiration for safety. Several dwellers spoke about their desire to live in safe neighbourhoods and not to be scared of leaving their houses. As such, fear of crime was a salient contributor to ill-being. Reflecting on the past, many saw the communities and cities in which they currently lived as more dangerous:

'I'd like to think that the city we lived in was secure. I'd be much happier feeling that me and my family are living in a secure place where the crime rate isn't so high, where there wasn't a drug problem ... which my kids don't see because, you know, our kids don't play out on the street. I was allowed to when I was a kid but things were different then. ... People did leave their door open and times have changed so much'

[Male, 36–54, lower SES, white, Birmingham]

The 'open door', talked about by a number of participants, was a symbol of feeling safe in one's own home. This co-existed with the need to protect children, given parents' ever present worries concerning children playing outside. A number of participants made reference to media stories as a source of such worries.

Awareness of crime was also linked to the desire for stronger law enforcement. Several dwellers thought that people could 'get away' with much more now than in the past. When dwellers were younger, police officers were viewed as authority figures, revered and feared in equal measure. A number of dwellers recounted early life altercations with police officers ending with a 'clip round the ear' that sent the fear of God through them. Enforcement was seen to have 'no teeth' nowadays,

which increased crime. A more visible police service was seen as a solution. The desire for a safer neighbourhood was symbolised by the 'the local bobby' who walks the streets, knows everybody by name and identifies local, trouble hotspots. Contemporary policing was seen as deficient by comparison:

'In the 60s there was a very big police presence. We used to see policemen all the time. Not in cars, walking around ... we have got community policemen but they don't seem to have the same powers ... they don't give people the same confidence as the proper police do'

[Male, 55–67, lower SES, White British, London]

Dwellers also spoke of derogated and stigmatized 'others' who many regarded as responsible for the increases in crime. 'Gangs', 'hoodies' and 'youths', were seen as key perpetrators. Several dwellers linked these derogated societal groups to the negative aspects of living in a multicultural society:

'You know, basically segregation you get lots of problems with the young, between each other, you know, the different communities ... they just don't get on. You get gang warfare and all sorts of things, which isn't good. I'd like to, you know, see a situation where you could sort of cut that down but it seems a constant problem. You go in the town at night and there's young gangs of different ethnic communities mooching around and they get together ... the wrong thing's said, you know, fists are flying. There's gunshot wounds every week in Birmingham, it's not good'

[Male, 55–67, lower SES, White British, Birmingham]

In sum, awareness of crime was high for half of the interview dwellers. Most saliently, this awareness was linked to an aspiration for safety, particularly expressed through the importance of protecting children. Stronger enforcement was seen to be a requirement in reducing crime rates, with derogated groups most likely to be blamed for public disorder.

4. Discussion

What are the aspirations for cities of the future among the dwellers of Britain's major cities? Those who live in Britain's two largest cities aspire for the cities of the future to contain a set of interrelated physical and social elements. They desire cities with a range of services and facilities, from retail through to cultural and community-based. They want such cities to be well designed and beautiful, as well as to have an efficient and accessible transport system. They value nature within the city, particularly insofar as it enhances health and facilitates relaxation and escape. They enjoy the variety offered by large cities but also long for the serenity of quieter places. A sense of community is regarded as highly desirable as is freedom from crime. Overall, the three most salient themes in the data were *desire for services and facilities*, the *appeal of nature* and *longing for a sense of community*. These are explored below, noting any demographic differences.

The homogeneity of the representations across the two cities was noteworthy, however, some specificity was discernible too. London and Birmingham residents placed differential emphasis on services/facilities versus friendly communities. While Londoners placed high value on their services/facilities, Birmingham dwellers viewed London as the hub of culturally great facilities while viewing their own city as one who's key attribute was friendly communities. The issue of scale also played a role in that for Birmingham dwellers neighbourliness often defined community, while for Londoners city-scale occasions like Royal Events and the Olympics furnished a sense of community. Having said this, dwellers in both cities mourned the loss of a sense of community and desired its return.

An emphasis on the liveliness and exciting nature of the city's services and facilities was more prominent in the higher socio-economic, rather than lower socio-economic, groups. Furthermore, it was

women, rather than men, who talked of the city being too busy and noisy, linking this to stress and ill-being. In addition, the white dwellers were more likely than the British minority ethnic dwellers to talk of the richness of culture in their city and to view big cities in a positive light. Taken together, these group differences suggest that white, higher socio-economic men have a more positive experience of big cities than their counterparts. Having held much of the power throughout history, it is in a sense no surprise that this group has formed cities that appeal to its sensibilities.

What about the appeal of nature? This was more of a focus in the London as opposed to the Birmingham interviews, though common to both cities, and may reflect the idealised wishes of large city dwellers. Communal green space was viewed highly positively by the majority of those who mentioned it. For city dwellers, public green spaces provide one of the few avenues for direct contact with nature (Fuller et al., 2007). British people have been conceptualised as fundamentally urban, with rural longings (Short, 2002). This hankering after an idealised notion of landscape and, by extension, nature, has its roots in the 17th century Romantic Movement, which ennobled rural settings. This is enshrined in Constable paintings and Wordsworth poems, which linger in British consciousness as fixed visions of a lost, idyllic past (Short, 2002).

The future city aspirations in this study corroborate Goldberg et al.'s (2012) large-scale findings in relation to the factors that create individual level happiness across five major cities internationally: Berlin, London, New York, Paris and Toronto. This indicates that when people are asked about their aspirations for cities of the future they answer in terms of the qualities of a city that they feel will create happiness. What this study adds to this large-scale vision is a more nuanced sense of people's relationship to their cities and what, specifically, creates their sense of wellbeing.

The nuance of the data lies in how the wellbeing enhancing future city is represented. First and foremost, it is represented in terms of existing symbols that hark back, with nostalgia, to times past: the unknown and unknowable future is apprehended, in the main, in terms of the known. In particular, it is anchored back to an idealised vision of a time when doors were left open while children played outside without adult supervision, bobbies [British police officers] patrolled the streets on foot and people used local shops and went to church fetes, pubs and local community centres. Within all of these symbols lies a vision of the more socially connected and neighbourly feelings that people crave. This corroborates social representations theory's claim that the new is apprehended in terms of the known and that the known constrains people's visions.

Of course in each culture 'the known' is culturally-specific and so the visions held of the future will be constrained by different pasts. It is symbols that allow for the assimilation of the unknown, they concretise abstract thinking about the future. Socially and culturally generated and communicated, symbols present complicated messages in simple, vivid and often emotive ways (Nerlich & Jaspal, 2014; Verkuyten, 1995). Thus, symbols reveal the essence of what people want from future cities. In essence and in juxtaposition to the massive research attention given to the 'smart' city, with its implications of technological fixes for city dweller concerns, *face-to-face interaction is key for British large city dwellers' sense of the liveability of their cities*: people want to see the bobby walking on the street, they want to interact with friendly people in shops, fetes and pubs. They crave a sense of community.

Throughout the data, with few exceptions, the old is conceptualised as good and the new as bad. Contemporary society is represented as having generated youthful gangs and shopping centres filled with dreary chain shops. The character of the city is threatened by these symbols of an anxiety-generating, broken community. Even the beauty of buildings is admired if they are old and symbolise the cultural heritage of the city, with far less focus on the creativity, ingenuity and technological know-how reflected in many new buildings. Again, the technological-infused 'smart' agenda is not to the fore in most people's visions.

In a small minority of interviews, like those that envisioned buildings with greenery growing on their surface, imagination burst through an otherwise conventionalised picture. Thus, while there is widespread idealisation of times past, even among the *youngest* age group, there are also signs of enjoyment of future, new visions of the city in a small minority. However, if one asks, on the basis of this data, in what respect future city aspirations differ from the known, liked aspects of current cities, the answer is that, for the most part, they do not.

Do the most salient aspects of these aspirations align with or undermine the carbon reduction agenda? A complex picture emerges regarding the carbon reduction agenda. Chiefly, it aligns for only a minority of the sample. Less than 5% of dwellers mentioned the word “carbon” or the phrases “global warming” or “climate change” in their interviews. Furthermore, while the aspiration for green space was salient in the majority of the interviews, only a minority made the connection between green space and environmental wellbeing; most were far more focussed on the escape and exercise facilitating qualities of green space.

Furthermore, while very few city dwellers made explicit mention of ‘green’ buildings or sustainable architecture, sustainable transport was fairly widely mentioned. The appeal of efficient transport systems was related to both a desire for improved accessibility and lower urban pollution levels. In particular, images of a dirty and polluted city were prevalent and reviled. This echoes findings from other studies that identify a strong dislike of pollution (O’Neill & Nicholson-Cole, 2009; O’Neill et al., 2013). This intense dislike of pollution and exaltation of clean air could be garnered in efforts to reduce carbon emissions, as could the affinity that many British city dwellers have for green space.

Having said this, many of the dwellers’ aspirations were in conflict with the low carbon agenda. The appeal of spacious cities and houses, for example, is at odds with the compact city model that prescribes high density living to control urban growth (Hillman, 1996; Rogers & Power, 2000). Also prevalent was the desire for continued car use, particularly in places with limited public transport, or in environments where residents have personal security concerns. Such motivations for car use echo other studies (Beirao & Cabral, 2007; Guiver, 2007) and compete with the low carbon agenda. This study found that people like their cars and find them to be efficient. There is, of course, a tension between dislike of pollution and wanting to drive cars (particularly non-electric cars), yet dwellers seldom notice such inconsistencies.

Having addressed how the data speak to the low carbon agenda, the final question pertains to whether the most salient aspects of the city aspirations found in London and Birmingham align with or undermine personal wellbeing maximisation? Aspirations for cities of the future are synonymous with what people feel will make them happy in a city. Thus while environmental wellbeing was not to the fore, personal wellbeing lay at the heart of people’s representations of cities of the future. A crucial quality that the majority of city dwellers wished for was a strong sense of community. Empirical evidence regarding the causes of personal wellbeing aligns with this wish: feeling connected to and involved with one’s community is a key predictor of wellbeing and overall happiness (Leyden et al., 2011).

5. Conclusions

Utilising a novel methodology that elicits people’s naturalistic conceptualisations of the aspirational city, the study reported in this paper identifies a nuanced portrait of the qualities of cities that British city dwellers value. The picture that emerges fits closely with and enhances existing large scale research on the qualities that constitute the liveability of a city internationally (Goldberg et al., 2012), thereby pointing to the robust nature of the findings. While personal wellbeing is often to the fore in city dweller aspirations, environmental wellbeing is not. Where aspirations do align – as is the case with the appeal of green space, of local amenities to which one does not need to drive, of green design and especially of clean transport – they match only for a minority of residents. This creates a tension between two broad visions

of future cities – one held by city residents themselves and another constructed by practitioners and policy makers who seek radical reductions in carbon emissions. In order to change the status quo there is a need to amalgamate low carbon initiatives into qualities that are currently seen as personal wellbeing enhancing.

The major emphasis on the personal wellbeing enhancing aspects of community in the data suggests that low carbon initiatives that enhance community spirit would have a good chance of being adopted. Indeed, numerous civic engagement initiatives or ‘grassroots innovations’ (Seyfang & Smith, 2007) have sprung up in recent years to address the low carbon challenge (Middlemiss, 2011; Wirth, 2014) while also strengthening the sense of collective identity (Seyfang & Haxeltine, 2012). At a policy level such initiatives empower local communities, a goal set by many governments (Barry & Chapman, 2009). Middlemiss (2011), for example, refers to the ‘Green Gym’ initiative, a British city-based gardening (e.g. organic food growing) and conservation project that promotes health, environmental engagement and community cohesion simultaneously.

Finally, since a growing number of major psychological theorists afford emotion a primary role in motivating behaviour, the strong emotions evident in the data could be galvanised to build more carbon-neutral cities. Primarily, dwellers’ love of communal green space for its relaxation, escape and exercise benefits and anger and disgust regarding transport-related pollution could be capitalised on to change the status quo. Protection of the ‘green lungs’ of the city maximises both personal and environmental wellbeing.

Acknowledgements and ethical approval

This research was funded by the EPSRC (Engineering and Physical Sciences Research Council) grant *Transforming the Engineering of Cities to Deliver Societal and Planetary Wellbeing* no. EP/J017698/1. The Principal Investigator of the overall project is Christopher Rogers, University of Birmingham. This study received ethical approval for Non-Invasive Research on Healthy Adults from the UCL Division of Psychology and Language Sciences Ethics Committee (REF number CEHP/2013/500).

References

- Ambrey, C., & Fleming, C. (2014). Public greenspace and life satisfaction in urban Australia. *Urban Studies*, 51(6), 1290–1321.
- Arambepola, C., et al. (2008). Urban living and obesity: Is it independent of its population and lifestyle characteristics? *Tropical Medicine & International Health*, 13(4), 448–457.
- Barry, M., & Chapman, R. (2009). Distributed small-scale wind in New Zealand: Advantages, barriers and policy support instruments. *Energy Policy*, 37(9), 3358–3369.
- Beirao, G., & Cabral, J. A. S. (2007). Understanding attitudes towards public transport and private car: A qualitative study. *Transport Policy*, 14(6), 478–489.
- Bell, J. F., Wilson, J. S., & Liu, G. C. (2008). Neighborhood greenness and 2-year changes in body mass index of children and youth. *American Journal of Preventive Medicine*, 35(6), 547–553.
- Bernard, J. (1939). The neighborhood behavior of school children in relation to age and socioeconomic status. *American Sociological Review*, 4, 652–662.
- Boyko, C. T., & Cooper, R. (2014). Density and mental wellbeing. In R. Cooper, E. Burton, & C. L. Cooper (Eds.), *Wellbeing and the environment: Wellbeing: A complete reference guide*. Oxford: John Wiley & Sons.
- Boyko, C. T., Cooper, R., & Cooper, C. (2015). Measures to assess wellbeing in low-carbon-dioxide cities. *Proceedings of the ICE: Urban design and planning*.
- Brand, C., & Preston, J. M. (2010). ‘60-20 emission’-The unequal distribution of greenhouse gas emissions from personal, non-business travel in the UK. *Transport Policy*, 17(1), 9–19.
- Cattell, V., et al. (2008). Mingling, observing, and lingering: Everyday public spaces and their implications for well-being and social relations. *Health & Place*, 14(3), 544–561.
- Corrado, G., Corrado, L., & Santoro, E. (2013). On the individual and social determinants of neighbourhood satisfaction and attachment. *Regional Studies*, 47(4), 544–562.
- Diener, E. (2012). New findings and future directions for subjective well-being research. *The American Psychologist*, 67(8), 590–597.
- Diener, E. (2013). The remarkable changes in the science of subjective well-being. *Perspectives on Psychological Science*, 8(6), 663–666.
- Diener, E., et al. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125(2), 276–302.
- Duany, A., Plater-Zyberk, E., & Speck, J. (2000). *Suburban nation*. New York: North Point Press.
- Ehrenreich, B. (2007). *Dancing in the streets: A history of collective joy*. New York, USA: Metropolitan Books.

- Ellaway, A., Macintyre, S., & Bonnefoy, X. (2005). Graffiti, greenery, and obesity in adults: Secondary analysis of European cross sectional survey. *British Medical Journal*, 331(7517), 611–612.
- Environmental Audit Committee (2014). *Action on air quality*. London: House of Commons.
- Eriksson, M., & Emmelin, M. (2013). What constitutes a health-enabling neighborhood? A grounded theory situational analysis addressing the significance of social capital and gender. *Social Science & Medicine*, 97, 112–123.
- Evans, G. W. (2003). The built environment and mental health. *J. Urban Health Bull. N. Y. Acad. Med.*, 80(4), 536–555.
- Evans, G. (2014). Living in the city. Mixed use and quality of life. In R. Cooper, E. Burton, & C. L. Cooper (Eds.), *Wellbeing and the environment: Wellbeing: A complete reference guide*. Oxford: Wiley-Blackwell.
- Farrimond, H. R., & Joffe, H. (2006). Pollution, peril and poverty: A British study of the stigmatization of smokers. *Journal of Community and Applied Social Psychology*, 16(6), 481–491.
- Frank, L. D., et al. (2006). Many pathways from land use to health - Associations between neighborhood walkability and active transportation, body mass index, and air quality. *Journal of the American Planning Association*, 72(1), 75–87.
- Fuller, R. A., et al. (2007). Psychological benefits of greenspace increase with biodiversity. *Biology Letters*, 3(4), 390–394.
- Gehl, J. (2010). *Cities for people*. Washington: Island Press.
- Goldberg, A., Leyden, K. M., & Scotto, T. J. (2012). Untangling what makes cities liveable: Happiness in five cities. *Proceedings of the Institution of Civil Engineers - Urban Design and Planning*, 165, 127–136.
- Griffith, P., et al. (2011). *Charm offensive: Cultivating civility in 21st century Britain*. The Young Foundation: London.
- Guiver, J. W. (2007). Modal talk: Discourse analysis of how people talk about bus and car travel. *Transportation Research Part A: Policy and Practice*, 41(3), 233–248.
- Helliwell, J. F., & Putnam, R. (2005). The social context of well-being. In F. A. Huppert, N. Baylis, & B. Keverne (Eds.), *The science of well-being*. New York, USA: Oxford University Press.
- Hillman, M. (1996). In favour of the compact city. In M. Jenks, E. Burton, & K. Williams (Eds.), *The compact city: A sustainable urban form*. Abingdon: Spon Press.
- Holt, W. G. (2012). *Urban areas and global climate change*. Bingley, UK: Emerald Book Publishing Ltd.
- Hoorneweg, D., Sugar, L., & Gomez, C. L. T. (2011). Cities and greenhouse gas emissions: Moving forward. *Environment and Urbanization*, 23(1), 207–227.
- Howley, P., Scott, M., & Redmond, D. (2009). Sustainability versus liveability: An investigation of neighbourhood satisfaction. *Journal of Environmental Planning and Management*, 52(6), 847–864.
- Huppert, F. A. (2009). Psychological well-being: Evidence regarding its causes and consequences. *Applied Psychology: Health and Well-being*, 1(2), 137–164.
- Ipsos Connect (2009). *Social grade: A classification tool. Bite sized thought piece*.
- Jacobs, J. (1961). *The death and life of great American cities*. New York: Random House.
- Jacobson, M. Z. (2008). On the causal link between carbon dioxide and air pollution mortality. *Geophysical Research Letters*, 36(L03809), 1–5.
- Jenkins, R., et al. (2008). *Mental health: Future challenges*. London: The Government Office for Science.
- Joffe, H. (2003). Risk: From perception to social representation. *The British Journal of Social Psychology*, 42, 55–73.
- Joffe, H. (2012). Thematic analysis. In D. Harper, & A. Thompson (Eds.), *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners*. Oxford: Wiley-Blackwell.
- Joffe, H., & Else, J. (2014). Free association in psychology and the grid elaboration method. *Review of General Psychology*, 18(3), 173–185.
- Joffe, H., & Yardley, L. (2004). Content and thematic analysis. *Research methods for clinical and health psychology*. London: Sage.
- Joffe, H., Washer, P., & Solberg, C. (2011). Public engagement with emerging infectious disease: The case of MRSA in Britain. *Psychology & Health*, 26(667–683).
- Joffe, H., et al. (2013). Social representations of earthquakes: A study of people living in three highly seismic areas. *Earthquake Spectra*, 29(2), 367–397.
- Kan, K. (2007). Residential mobility and social capital. *Journal of Urban Economics*, 61(3), 436–457.
- Krabbendam, L., & van Os, J. (2005). Schizophrenia and urbanicity: A major environmental influence - Conditional on genetic risk. *Schizophrenia Bulletin*, 31(4), 795–799.
- Landis, J. R., & Koch, G. G. (1977). Measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159–174.
- Lederbogen, F., et al. (2011). City living and urban upbringing affect neural social stress processing in humans. *Nature*, 474(7352), 498–501.
- Lee, A. C. K., & Maheswaran, R. (2011). The health benefits of urban green spaces: A review of the evidence. *Journal of Public Health*, 33(2), 212–222.
- Leyden, K. M. (2003). Social capital and the built environment: The importance of walkable neighborhoods. *American Journal of Public Health*, 93(9), 1546–1551.
- Leyden, K. M., Goldberg, A., & Michelbach, P. (2011). Understanding the pursuit of happiness in ten major cities. *Urban Affairs Review*, 47(6), 861–888.
- Middlemiss, L. (2011). The power of community: How community-based organizations stimulate sustainable lifestyles among participants. *Society and Natural Resources*, 24(11), 1157–1173.
- Moore, R. C. (1986). *Childhood's domain: Play and place in child development*. London: Croon Helm.
- Morrow, V. (2001). *Networks and neighbourhoods: Children's and young people's perspectives*. London: NHS Health Development Agency.
- Moscovici, S., & Farr, R. M. (1984). The phenomenon of social representations. In R. M. Farr, & S. Moscovici (Eds.), *Social representations*. Cambridge: Cambridge University Press.
- Nerlich, B., & Jaspal, R. (2014). Images of extreme weather: Symbolising human responses to climate change. *Science and Culture*, 23(2), 253–276.
- New Economics Foundation (2008). *Five ways to wellbeing*. (London).
- Novelli, D., et al. (2013). Crowdedness mediates the effect of social identification on positive emotion in a crowd: A survey of two crowd events. *PLoS One*, 8(11).
- O'Connor, C., & Joffe, H. (2014). Social representations of brain research: Exploring public (dis)engagement with contemporary neuroscience. *Science Communication*, 36(5), 617–645.
- O'Connor, C., & Joffe, H. (2015). How the public engages with brain optimization: The media-mind relationship. *Science, Technology & Human Values*, 40(5), 712–743.
- Office for National Statistics (2011). *Measuring what matters: National statistician's reflections on the national debate on measuring national well-being*. Newport, Wales: Office for National Statistics.
- Oher, F. J., et al. (2014). The effect of the environment on symptom dimensions in the first episode of psychosis: A multilevel study. *Psychological Medicine*, 44(11), 2419–2430.
- Oldenburg, R. (1999). *The great good place: Cafes, coffee shops, community centres, beauty parlors, general stores, bars, hangouts, and how they get you through the day*. New York: Marlowe.
- O'Neill, S., & Nicholson-Cole, S. (2009). "Fear won't do it": Promoting positive engagement with climate change through visual and iconic representations. *Science Communication*, 30(3), 355–379.
- O'Neill, S., et al. (2013). On the use of imagery for climate change engagement. *Global Environmental Change*, 23(2), 413–421.
- Oxford English Dictionary (2014). "Well-being, n.". (3rd ed.). Oxford University Press (December).
- Peen, J., et al. (2010). The current status of urban-rural differences in psychiatric disorders. *Acta Psychiatrica Scandinavica*, 121(2), 84–93.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York, USA: Simon and Schuster.
- van Renssen, S. (2012). Climate battle for the skies. *Nature Climate Change*, 2, 308–309.
- Rogers, R., & Power, A. (2000). *Cities for a small country*. London: Faber and Faber.
- Ruggeri, K., Garcia-Garzon, E., Maguire, Á., & Huppert, F. A. (2016). *Five Ways to Well-being: Insights from a comprehensive well-being measure ESRC Policy Report*.
- Saelens, B. E., Sallis, J. F., & Frank, L. D. (2003). Environmental correlates of walking and cycling: Findings from the transportation, urban design, and planning literatures. *Annals of Behavioral Medicine*, 25(2), 80–91.
- Satterthwaite, D. (2008). Cities' contribution to global warming: Notes on the allocation of greenhouse gas emissions. *Environment and Urbanization*, 20(2), 539–549.
- Seyfang, G., & Haxeltine, A. (2012). Growing grassroots innovations: Exploring the role of community-based initiatives in governing sustainable energy transitions. *Environment and Planning*, 30(3), 381–400.
- Seyfang, G., & Smith, A. (2007). Grassroots innovations for sustainable development: Towards a new research and policy agenda. *Environmental Politics*, 16(4), 584–603.
- Short, L. (2002). Wind power and English landscape identity. In M. J. Pasqualetti, P. Gipe, & R. Righter (Eds.), *Wind power in view: Energy landscapes in a crowded world*. San Diego: Academic Press.
- Smith, N., & Joffe, H. (2013). How the public engages with global warming: A social representations approach. *Public Understanding of Science*, 22(1), 16–32.
- Thompson, C. W., et al. (2012). More green space is linked to less stress in deprived communities: Evidence from salivary cortisol patterns. *Landscape and Urban Planning*, 105(3), 221–229.
- UN-Habitat (2011). *Cities and climate change: Global report on human settlements 2011*. Washington D.C, USA: United Nations Human Settlements Programme (UN-Habitat).
- Verkuyten, M. (1995). Symbols and social representations. *Journal for the Theory of Social Behaviour*, 25(3), 263–284.
- White, M. P., et al. (2013). Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. *Psychological Science*, 24(6), 920–928.
- Wirth, S. (2014). Communities matter: Institutional preconditions for community renewable energy. *Energy Policy*, 70, 236–246.
- Wood, L., et al. (2008). The anatomy of the safe and social suburb: An exploratory study of the built environment, social capital and residents' perceptions of safety. *Health & Place*, 14(1), 15–31.
- World Health Organization (2014). *Basic documents* (48th ed.). Geneva, Switzerland: World Health Organization.