Wellbeing, Inequality and the Role of Urban Form

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Abstract
The study of wellbeing is fast becoming a key consideration for urban planning, architecture, design and policy makers as it can provide a system to measure social progress. However, it is the topic of wellbeing inequality which requires urgent attention if the wellbeing agenda is to achieve its potential to improve social justice (NEF, 2015). Although average national wellbeing scores are rising in the UK, so is inequality of wellbeing. Those living in deprived neighbourhoods are more likely to experience adversity in health, education, mobility and social inclusion. This pattern of disparity in wellbeing reveals an unequal geography, a space of inequality and injustice. To better understand how the nature and quality of space can influence the relationship between social progress and wellbeing, this paper proposes a new conceptual model that focuses on how spatial structures – via urban design – can promote wellbeing by reducing spatial expressions of economic disparity and facilitating positive encounters between social groups.

Keywords: Wellbeing, Inequality, Spatial Inequality, Spatial Injustice, Urban Form
1 – Introduction

1.1 – Inequality and Injustice: The Spatial Challenges of Wellbeing

On a regular basis, policymakers are faced with making judgements about what resources to promote and whose wellbeing to prioritise. Although average wellbeing scores have improved in the UK, inequality of wellbeing has also increased (NEF, 2015). One of the key issues that policymakers face is disrupting the self-reinforcing cycle of unequal economic geographies and low wellbeing outcomes.

This paper examines the pattern of disparities in wellbeing, where prominent spaces of injustice have formed. It proposes a new conceptual model that aims to depict the correlation between wellbeing, life outcomes and processes that derive from spatial inequality. From macro to micro levels, this paper argues that inequality and injustice are spatially structured. Individual wellbeing and life outcomes can be limited by exposure to this spatiality. Thus, urban form performs a critical role in the efforts to promote wellbeing.

The neighbourhood as geographical entity\(^1\) stages the focus of this study. A global perspective of spatial inequality is used to understand how the uneven pockets of wellbeing are established within a larger urban context. The role of urban form and the influence of space will be discussed throughout the paper.

The uneven territorial distribution of wellbeing leads us to two key concepts: spatial inequality and spatial injustice. Section 2 focuses on spatial inequality at global scale; Section 3 on spatial injustice at neighbourhood level, followed by the conclusion and proposed framework on Section 4.

2 - Spatial Inequality

2.1 – Defining Spatial Inequality

Amongst the fields of geography and economy, spatial inequality is often defined as income inequality across geographical or administrative units within country or region (see Milanovic 2011 & 2012 Rodriguez-Pose & Ezcurra, 2013, Justino & Moore, 2015). Social disparities are often regarded as consequences of income and wealth inequality. Justino and Moore (2015) for example, highlight the harms of income and wealth inequality, which can result in production inefficiencies as well as degrade the collective and political competence of societies, obstructing a fair distribution of public goods and justice.

Conversely, Kanbur and Venebles (2005) propose a description of spatial inequality in which wellbeing is not a consequence, but an indicator: “inequality in economic and social indicators of wellbeing across geographical units within a country” (Kanbur & Venebles, 2005:11). Wellbeing is not always directly related to income or wealth, and it follows that to obtain a more accurate picture of spatial inequality, they should be measured separately.

\(^1\) As opposed to a neighbourhood defined by social communities, which can be much more fragmented and dispersed (See Wellman 2001, 2002; Piselly, 2007).
2.2 – Trends in Spatial Inequality

There are two types of spatial inequalities based on geographical definitions:

1. Geographically disadvantaged areas vs. geographically advantaged areas. Based on ‘first nature geography’, i.e., areas with natural physical advantages or resources, such as coastal regions, and proximity to rivers.

2. Regional vs. urban. Based on ‘second nature geography’, i.e., advantage and efficiency gains created from dense agglomeration and economic concentration. Thus, productivity in urban clusters tends to be higher than in regional settings. The accumulation forces in cities act as virtuous circles of self-reinforcing development (Kanbur & Venebles, 2005:7).

These geographical classifications exercise a delicate play between spatial concentration and dispersion. On the one hand, concentration can be intensified by the centripetal forces of natural advantages and economic specialisation. On the other hand, centrifugal forces of dispersion are influenced by mobility and communication factors. From an urban perspective, extreme concentration can introduce a variety of premiums and social ills that can seriously undermine efficiencies that foster mass clustering; for instance, congestion, commuting costs, greater crime and pollution. (Kim, 2008).

Despite the fundamental role of geographical advantages, the complex oscillation of inequality cannot be fully explained by spatial advantage. Historical, political and economic permutations also play a key role. For example, in traditionally rich countries such as the US and Europe, spatial inequality decreased between the wars and started rising again in the 1980s (Atkinson 2014a; Milanovic 2005; Piketty 2013; Stiglitz 2013). Justin and Moore (2015) identify three key, equality-inducing factors during the first half of the 20th Century: low levels of unemployment, increased political power of organised labour and solidarity promoting wars. Beyond the 1980s, global inequality increased sharply. Divergence of inequality during this period is often attributed to factors derived from globalisation.

Future trends of spatial inequality remain unclear as the full effect of labour-displacing technology remains unknown. According to Neo-Marxist economist Piketty (2013), it is more likely that inequality will tend to persist or intensify for the foreseeable future. His concerns are based on the recent rise of concentration of wealth reaching levels not seen since World War I, threatening political stability. Piketty believes that excessive accretion of wealth can only be undermined by rapid growth (due to technological progress or rising population) or government intervention such as adopting a global tax on wealth.

2.5 – Consequences of Spatial Inequalities

Political dynamics and quality of governance play a key role as the State can influence the distribution of wealth (Kanbur & Venebles, 2005; Kim 2008). For example, unequal distribution of infrastructure, rapid economic growth, the openness of economies and globalization are often linked to uneven regional and urban development (Kim, 2008; Kanbur & Venebles, 2005; Milanovic 2012). Extensive
spatial dissonance may provoke conflicts over the geographical distribution of resources (Østby et al. 2009, quoted from Rodríguez-Pose & Ezcurra, 2013).

From an economic perspective, spatial inequality may be beneficial or harmful (Kim, 2008). Inequality can reduce wellbeing, limit life chances of a specific sectors of society, cause social instability and poverty traps, leading to a fragmented urban and social fabric. On the other hand, concentration of trades and specialization can increase economic returns on the basis of proximity, scale and productivity. Optimal levels of inequalities\(^2\) have a fragile balance and if the economies are not internalised, beneficial effects can be disrupted.

One of the key concerns of global inequality is migration. Milanovic (2012, 2016) talks about “citizenship premiums” and argues that “a proper analysis of global inequality today requires an empirical and mental shift from concerns with class to concerns with location.” (Milanovic 2012:12). His research indicates that a place of residence has a higher impact on determining income, opportunities, and outcomes than social background. If people are unable to improve their deprived spatiality, migration becomes the only solution to escape poverty.

Figure 3 (LEFT): Level and composition of global inequality in the 19th century and around year 2000 (measured by the Theil Index). Figure 4 (RIGHT): Different countries and income classes in global income distribution, 2005. (SOURCE: Milanovic, 2012)

\(^2\) One the most influential theories on benefits and harms of Inequality is the highly criticised Rawls’ Difference Principle (Rawls, 1971). It proposes that the only morally valid sources of inequality are those that lead to life for the worst off being made better (E.g., inequality of income in order to encourage people to work hard, thus making the society as a whole, and those poorest, better off). See also Kuznets, 1955.
3 - Spatial Injustice

3.1- Defining Spatial Injustice

“The welfare of a nation can scarcely be inferred from a measurement of national income”.
(Simon Kuznets in report to the Congress, 1934)

Whereas spatial inequality is heavily accentuated by economic factors such as wealth or income, spatial injustice focuses on political aspects or devices of power and control.

The spatial organization of inequality is, in part, simply a manifestation of unequal distribution of resources, opportunities or outcomes occurring at the level of individuals, families, and groups that is mapped on geographical units. However, we define spatial injustice as the intentional efforts to organize physical space in ways that maintain or reinforce that inequality. (Galster & Sharkey, 2017:2; See also Dreier, Mollenkopf, and Swanstrom 2001). In Soja’s (2009) words:

Thinking spatially about justice not only enriches our theoretical understanding, it can uncover significant new insights that extend our practical knowledge into more effective actions to achieve greater justice and democracy. Aversely, by not making the spatial explicit and assertive, these opportunities will not be so evident”. (Soja, 2009:2)

Health, education, social inclusion and mobility –both social and occupational- are some quality of life outcomes that can be distressed by spatial injustice and the prolonged occupation of a disadvantaged spatiality (Galster,2014; van Ham, 2012). This phenomenon is often referred to as area or neighbourhood effects.

3.2- Injustice, Disadvantage and Wellbeing at the Neighbourhood

The spatial effects of injustice on individual wellbeing reveal a conspicuous relationship at the neighbourhood level. According to an Office of the Deputy Prime Minister (ODPM) 2005 report, long-term exposure to spatial inequality can have a detrimental effect on individual wellbeing. That is, “Living in a deprived area adversely affects individuals’ life chances over and above what would be predicted by their personal circumstances and characteristics” (ODPM, 2005:6).

In health, for example, a substantial body of epidemiological research associates area effects (both physical and social) with a range of behaviours and outcomes, including depression, anxiety, violence, substance use, smoking, unhealthy foods intake, cardiovascular disease, obesity, lack of physical activity and low birth weight (See Ross & Mirowski, 2001; O’Campo et al 2015; Pickett & Pearl, 2001; Diez Roux, 2001). These behaviours, in turn, can have a negative effect on morbidity and life chances (Johnston & Pattie 2011; McCulloch, 2003). Long-term exposure to deprived or disadvantaged socioeconomic settings is often associated with low wellbeing outcomes, with neighbourhood effects frequently highlighted as a key obstacle to improving such outcomes (Kawachi & Berkman, 2003; O’Campo et al 2015).
In social sciences, the concept of the neighbourhood effect suggests that the social and economic status of a neighbourhood can directly or indirectly influence individual outcomes. Neighbourhood effects have preoccupied researchers as far back as 1925 (See Park et al., 1925). However, it was Wilson’s 1987 book, ‘the Truly Disadvantaged’, which sparked a renewed interest in this field, resulting in an explosion of studies and hypotheses (van Ham, 2011). Following Wilson’s publication (1987), researchers have examined the consequences of neighbourhood poverty alongside the effects of other neighbourhood conditions, such as spatial mismatch (Galster, 2012) and racial homogeneity (eg. Small & Feldman 2012).

Wilson’s (1987) theory has profound spatial associations. He argues that, during the 1970s and 1980s, American cities suffered a major socio-spatial-economic shift that saw the growth and prosperity of suburbia against the decline of urban centres. The exodus of manufacturing jobs and the middle class from the centres caused the vitality of cities to shrink. Critical revenue was removed, the spatial landscape became fragmented and pockets of poverty were enhanced. This concentration of poverty exacerbated the life chances of the poor by affecting individual outcomes, such as economic self-sufficiency, violence, drug use, low birthweight, and cognitive ability (Wilson, 1987). Reflecting on Wilson’s key proposal, Mayer and Jencks (1989:1441) hypothesised that “poor children living in overwhelmingly poor neighbourhoods find it harder to escape poverty than poor children living in more affluent neighbourhoods.” (Mayer and Jencks 1989:1441).

Location, once again, appears to be a driving factor for the reproduction of inequality and the spatial manifestation of injustice.

3.3 – Testing Neighbourhood Effects.

“Homogeneous neighbourhoods become self-perpetuating societal divisions” (Johnston & Pattie 2011:2)

Wilson’s theories were tested on two, key, American-based social programmes that attempted to reverse the injustice of locality. These interventions removed thousands of families from poverty trap neighbourhoods, transferring them to less-deprived spatialities. The first was the Gautreaux Assisted Housing Programme in Chicago, which ran from 1976-1990, and focussed on tackling racial segregation (see Rosenbaum & Kaufman, 1992; Popkin et al., 1993; Duncan & Zuberi, 2006).

The Gautreaux programme successfully relocated most families to low-poverty, racially-balanced neighbourhoods. It also had positive intergenerational outcomes: grown-up children have continued living in areas with lower poverty rates, higher educational outcomes, and more integrated than children growing up their original neighbourhood (Duncan & Zuberi, 2006).
In contrast to Gautreaux, the 1994-1998 Moving to Opportunity Experiment (MTO) lasted from 1994-1998 and tried tackling class marginalisation (see Clampet-Lundquist & Massey, 2008; Ludwig et al., 2008; Sampson, 2008). Surprisingly, MTO revealed mixed results. Some outcomes demonstrated significant improvement, such as mental and physical health, and young female education and behaviour (e.g., Sampson, 2008; Ludwig et al., 2013). However, other outcomes, such as economic self-sufficiency, appeared to have no impact. The complexity of interpretation led to considerable debate, especially around the extent and influence of neighbourhood effects on economic success (Clampet-Lundquist & Massey, 2008; Ludwig et al., 2008; Sampson, 2008).

In 2015, Chetty, Hendren, and Katz, presented a re-analysis of the effect of the MTO experiment. In their research, they examined how children’s long-term economic outcomes were affected by the duration of environmental exposure, finding that “every year spent in a better area during childhood increases a child’s earnings in adulthood” (Chetty, Hendren, & Katz, 2015:19). Children who relocated between the ages of 9 and 13 showed a 31-50% income increase, compared with the control group or those who remained in a deprived locality. According to the authors, the social impact of moving to a better area has a spatial as well as a chronologic dimension.
3.4 – Neighbourhood Effects Processes

According to the literature, four mechanisms may explain how the spatial characteristics of a neighbourhood can impair wellbeing and life chances (Bauder, 2002; Galster, 2012, 2014; Johnston & Pattie, 2011). These include:

- Spatial mismatch;
- Environmental factors;
- Social processes; and
- Institutional mechanisms.

3.4.1 – Spatial Mismatch

The disconnection or mismatch between the location of labour force and suitable employment is often referred to as spatial mismatch (Houston, 2004). High
unemployment and low economic self-sufficiency are the foreseeable manifestations (Galster, 2014).

The Spatial Mismatch Hypothesis (SMH) was first discussed by John Kain in 1968 as an alternative assessment to the high, black unemployment rate in American city cores (Ihlanfeldt, 1994). “The spatial mismatch hypothesis was a challenge to the prevailing notion in the US during the 1960s that employers’ racial discrimination accounted for high unemployment among African Americans” (Houston, 2005:226). According to John Kain (1968) the concentration of low-skill, city centre unemployment in North America was partly due to the suburbanisation of employment and the involuntary segregation of ethnic minorities (mainly black) communities.

SMH does not necessarily imply that suitable jobs are negligent; rather, that through de-concentration towards the outskirts, suitable jobs became remote from the location of labour force, establishing an urban geography of injustice (Kain, 1968; Holzer, 1991; Houston, 2005; Hughes, 1989; Ihlanfeldt, 1994; Kasarda, 1990). City centre residents faced three key spatial impediments to gaining employment (Ihlanfeldt, 1994; Ihlanfeldt & Sjoquist, 1998; Houston, 2005):

- **Commuting**: Not always a viable option due to financial and time costs, as well as lack of public and/or private transport (Holzer et al., 1994; Shen, 1998);
- **Migration**: Barriers in relation to social or low-cost housing can reduce the residential mobility of the low skill sector (Minford et al., 1987; Doogan, 1996). In addition, members of these groups often have a low inclination for change (Coser, 1975; Granovetter, 1983); and
- **Information**: The further a job vacancy is from home, the less likely an individual is to find out about it (Ihlanfeldt, 2004).

3.4.2 – Environmental Factors and Hazards

Environmental factors are defined as the natural and human-made characteristics of the neighbourhood that may “affect directly the mental and/or physical health of residents without affecting their behaviours” (Galster, 2012:25). Factors can include:

- Visual disorder;
- Exposure to Violence; and
- Toxic Exposure.

Evidence of visual disorder or ‘incivilities’³ include verbal harassment, public intoxication, decayed urban landscapes, abandoned cars, and broken windows. This environmental disorder reveals a physical narrative of the apparent value placed by residents on their surroundings. Research has shown that minor offences can have a direct effect on fear of crime and be a direct trigger for serious crime (Wilson and Kelling, 1982; Skogan 1990; Sampson, 1999). Wilson and Kelling (1982) introduced the theory of the ‘broken windows’, proposing that trivial environmental visual cues, such as broken windows, can entice graver felonies as residents appear more tolerant

[³ As referred to by Albert Hunter (1985).]
of neighbourhood disorder and less likely to confront or report crime. Public ‘incivilities’ are a strategic visual environmental cue for the commission of crime (Sampson, 1999).

Research has shown that exposure to violence and physical disorder can be disproportionately assigned to a certain sector of society, limiting their wellbeing and life chances whilst intensifying the uneven distribution of territorial injustice. In Chicago, Papachristos (2013) and Sampson (2012) found that violence was concentrated in neighbourhoods marked by poverty, ethnic isolation, and institutional decay. In Glasgow, Livingston et al. (2014) revealed a positive association between the number of ‘newly active’ offenders in a neighbourhood and the density of prior offenders for both violent and property crime. This research, suggests that the institutional segregation of known transgressors can be a factor for the reproduction of spatially-defined crime and criminals. Damm and Dustmann (2012) encountered similar findings in Denmark. Their study followed children within a refugee relocation programme, reporting a positive relationship between the existing stock of felons at the assigned neighbourhood and those who committed offences as young adults. Further evidence indicated that youth crime conviction rates in the neighbourhood at the time of relocation, decreases the chances to be active in the labour market or in education by age 25. Damm and Dustmann (2012) and Livingstone et al. (2014) findings support the existence of a social multiplier that is spatially structured and institutionally dispensed (see Glaeser et al., 2003).

A third factor of spatially structured injustice is the distribution of environmental hazards. Bryant and Mohai’s (1992) research focussed on the siting of environmental toxins across neighbourhoods and found that these were disproportionally located in or around low-income, racial or ethnic communities (see also Dawney & Dawkin, 2008). Kerry Ard (2015) investigated the decline of pollutant levels between 1995 and 2005 in the US, highlighting that, despite the sharp reduction nationwide, the difference of exposure between races and neighbourhoods has remained unchanged, displaying an enduring geography of injustice. Ard’s (2015) research is corroborated by Sampson and Winter (2016), who investigated lead levels in children between 1995 and 2013. Again, despite a substantial decline since the 1990s, the increased difference of exposure for children living in black neighbourhoods has been consistent “the patterns reveal both the enormous spatial disparities in exposure to environmental toxins as well as the power of public health intervention to reduce or eliminate the consequences of environmental inequality” (Galster & Sharkey, 2017:6).

### 3.4.3 - Social Processes

Social processes are a fundamental aspect of neighbourhood effects:

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4 The 1986 to 1999 study followed children who were under 14 years old at the time of residential assignment and noted their offenses between the ages of 14 and 26 years old. (Damm & Dustmann, 2012).

5 Damm & Dustmann, (2012), looked at crime rates higher that the average for the overall population, and found a positive relationship with male subgroup only, particularly for violent crime. There was no effect with the female subgroups.
Where you are influences who you interact with; who you interact with influences what you learn and how you interpret the information and knowledge gained; and such local sources of ‘valued’ information influence how you behave – all of which takes place in spatially-defined contexts. (Johnston & Pattie, 2011:17).

In education, for example, substantial research indicates that parental and student attitudes to involvement and achievement are in part related to dominant preconceptions of their community (e.g., Kohen et al., 2008; McCulloch, 2006; Sampson et al., 2002). Furthermore, Huckfeldt (1983) presented evidence that social networks are spatially disposed. Despite individual preferences, opportunities for social ties were constrained by neighbourhood context. Associations that are structurally biased can, in turn, affect the flow of information across that social context.

Jencks and Mayer (1990) and Galster (2012) described a series of social processes in relation to neighbourhood effects, including:

- **Collective socialisation**: Subject to a critical mass, collective socialisation implies a process of assimilation of local norms imposed by key role models. According to the gravity of social networks, practices are substantiated by social pressure. In other words, social control is policed by the neighbourhood (Wilson, 1987; Jencks & Meyers, 1990). “It is through personal networks that society is structured and the individuals integrated into society” (Tilly, 1982:3);

- **Social networks**: Peer influence and social cohesion are subject to the strength and number of weak and strong ties within and across neighbourhoods (Granovetter 1973, 1983). Intrapersonal communication and intergroup information flow across those ties, affecting the balance between social disorder and collective efficacy (Sampson & Raudenbush 1999). “Behaviours, aspirations, and attitudes may be changed by contact with peers who are neighbours. Under certain conditions these changes can take on contagion dynamics that are akin to “epidemics” (Galster, 2012:25).

All the above social processes have an inherent spatial dimension. In addition, it seems that the distance between social networks can be fundamental to the structure of these processes and information flow between them. In 1950, Festinger et al. found a strong connection between proximity and social networks, revealing a common geography to social patterns where material interaction appeared to have the most influence.

However, Wellman’s research proposes that social networks are far more complex than the geographical boundaries of a neighbourhood: “Communities – in the flesh as well as in the ether – are far-flung, loosely-bounded, sparsely-knit and fragmentary” (Wellman, 2002:11). According to Wellman, spatially or neighbourhood-based interactions have become residual, largely replaced by advances in communication.

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6 Huckfeldt also notes “contextual influence is not simply a matter of assimilation and absorption. These friendship patterns also point to processes of exclusion, rejection, and hostility” (Huckfeldt, 1983:668. See also Bauder, 2002).
technology and social media. Wellman (2001, 2002) has termed the emergence of these loosely-bound communities ‘glocalisation’.

Piselly (2007), on the other hand, has attempted to bridge both spatially-structured and glocalised network theories by proposing that glocalisation has not replaced physical information flows, but instead offers additional communication channels (Piselly, 2007:875).

3.4.4 - Institutional Mechanisms

In a report published by Joseph Rowntree Foundation, Harkness et al. (2012) evaluated how the role of institutions, culture and social norms influence the geography of poverty in the UK. They discovered that uneven geographies were established under two, distinct circumstances. Areas assigned to poverty from inception with persistent deprivation (e.g., areas ‘built poor’, such as of low-income, factory worker housing) and those that have evolved into an inadequate spatiality (e.g., low-rent residential areas generated by the exodus of higher-income residents from to cities to the suburbs (see Lupton, 2003). Both areas are characterised by a lack of poor institutional intervention.

Institutional processes of neighbourhood effects stress the importance of local resources, including schools, parks, libraries, medical facilities or children's programs that provide opportunities in comparatively wealthier neighbourhoods (Shonkoff and Phillips 2000:330). According to Galster (2012), local authorities may offer lesser public services and facilities due to a limited tax base, incompetence, corruption, or other operational challenges, amplifying the effects of uneven spatiality by reducing personal development and educational opportunities of residents.

Beatty and Fothergill (2011) have looked at the spatial distribution of employment and the perception of ill health. Their data suggests that, where labour demands are high, those with health issues and disabilities are more likely to work. Conversely, in regions with low employment opportunities, ill health seemed to have a stronger influence on those unable to work:

Claims for incapacity benefits have as a result become increasingly concentrated by area, with reforms to incapacity benefits expected to lead to significant loss of income while having little effect on employment (Beatty and Fothergill, 2011).

4 – Conclusion: Towards a Spatial Injustice Framework

Although awareness in wellbeing has increased amongst policy makers, many initiatives to improve life outcomes fail to reach their potential across all sectors of society (NEF, 2015; Smyth & Vanclay, 2017). The literature reviewed above advocates a strong link between reduced life chances, low wellbeing and inequality. Furthermore, some of the literature also implies that inequality can be spatially structured (Huckfeldt, 1983; Johnston & Pattie, 2011), facilitating the creation of

7 ‘Glocalisation’, however, according to Wellman (2002), does not apply to segregated ethnic or racial communities.
poverty traps where the reproduction of disparity and deprivation is said to be ‘contagious’ (Jencks & Meyer, 1990; Galster, 2012). The incapacity to avoid or escape such communicable hardships defines spatial injustice (Galster & Sharkey, 2017).

As part as a PhD thesis, this paper proposes a new conceptual model to better understand how processes that are spatially structured influence the relationship between social progress and wellbeing. The aim of the model is to highlight neighbourhood factors that, via urban form can promote wellbeing and increase life outcomes by reducing spatial expressions of economic disparity. This framework can be used by policy makers and designers as an overarching conceptual model to ensure key issues are considered by focussing on the analysis of social progress in relation to the design of neighbourhoods. It can support different phases of local initiatives such as strategic definition, briefing, data collection, development, monitoring, design and social review. It can also be used an infographic or template to stimulate a discussion that aims to mitigate effects of spatial injustice.

The proposed framework places wellbeing at its core, as it is intended for projects or initiatives that target social progress through wellbeing. The framework measures wellbeing through key life outcomes - health, education, social exclusion and social/occupational mobility and it aims to ascertain how these outcomes are influenced by four critical neighbourhood processes:

- **Geographical Factors**: Spatial mismatch (access to suitable jobs);
- **Environmental factors**: Exposure to neglected surroundings, violence, hazards and toxins;
- **Social processes**: Cohesion, control, networks and collective socialisation; and
- **Institutional mechanism**: Access to quality public services.

Using only key or significant measures increases the framework’s simplicity and broadens its practicality and accessibility to a larger audience of stakeholders.
All four factors – geographical, environmental, social and institutional – can produce and reproduce spatial inequality. This propagation of uneven geographies can be due to personal preferences or economic concentration initiated by natural, physical advantages. However, as revealed by Ard’s (2015) and Sampson and Winter’s (2016) research, institutional mechanisms can have additional powers over geographical, environmental and social processes to control the dissemination of spatial injustice. For equity of wellbeing to be a driving consideration for the making and implementation of policy, further research is required about the impact of the spatial composition of neighbourhoods (i.e., its urban form) on the distribution of wellbeing, in order to ascertain how urban design can reduce spatial injustice and improve wellbeing.

The model will be applied in two case studies of deprived neighbourhoods in Manchester (UK); lessons from the case studies will be used to develop design guidelines/policy for decision-makers interested in improving the equality of wellbeing in their neighbourhoods.

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