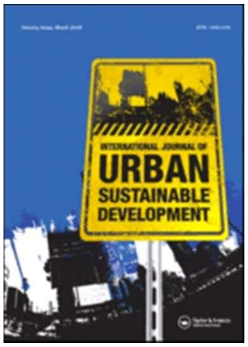

Social innovation in urban spaces

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Abstract

Recent international policy advocating for social innovation to be part of strategies to promote sustainable urban development has energised this emerging body of literature. However, there is a need for more sector-specific research to integrate findings on the spatiality of social innovation, co-operative processes, and place-scale relations. This article presents a review (2002-2018) of social innovation in urban spaces. Based on data from 114 publications, the review indicates that research in the spatiality of social innovation can be grouped into three major themes: 1) Spatial planning and community development; 2) Governance; 3) Co-production and service design. The findings suggest that in general the collaboration of end users in place-based development are central to this process of urban change and that process is as significant as the outcome. This article concludes with a research agenda to address identified lacunas.

Keywords: social innovation, urban space, sustainable development, spatial planning, governance, co-production, literature review.

1.0. Introduction

There is a growing view that social innovation should be supported and replicated. It has gained prominence in public policy and contemporary social science research (Baker & Mehmood, 2015; Howaldt, Butzin, Domanski, & Kaletka, 2014; Manzini, 2015; Moulaert, MacCallum, Mehmood, & Hamdouch, 2013), mainly because of the notion that social innovation may directly lead to societal benefit. In public policy, the meaning of social innovation has developed in two directions. First, that social innovation can be initiated in any economic sector. Second, that social innovation initiatives are not limited to addressing welfare and social inclusion challenges, but also concern issues of environmental protection and sustainable development (BEPA, 2011; European Commission, 2010). Approaches to studying social innovation in urban spaces have centred on analysing territorial development, urban cohesion, the role of multilevel stakeholders, intermediation spaces and establishing networks to connect places of social innovation (Benneworth & Cunha, 2015; Brandsen, Cattacin, Evers, & Zimmer, 2016; Edwards-Schachter, Matti, & Alcántara, 2012; Manzini, 2015). Social innovation is recurrently positioned as an important element in addressing grand societal challenges, from the local to global scales, such as poverty and social exclusion, immigration and demographic changes, the rising cost of healthcare and wellbeing, food security, climate change and energy transition (European Commission, 2013a, 2013b). Societal challenges are ever-increasingly experienced in urban areas as over half of the world's population now resides in cities — a trend projected to rise to 70% by 2050 (Keivani, 2010; UNFPA, 2016).

Although social innovations in urban spaces can be linked to sustainable development as they tend to embed prominent spatial dimensions, being habitually contingent on locality (Baker & Mehmood, 2015; Pisano, Lange, & Berger, 2015; Smets & van Lindert, 2016), uncertainties exist due to conceptual and definitional ambiguities of the term, as well as with regards to the diversity, range and levels of their impact. In the context of urban austerity post the 2008 global financial crash, combined with a growing interest in collaborative approaches to spatial development, societal challenges have brought a renewed attention to the potential roles of social innovation to sustainable urban development policy. In light of the recent profusion of publications on social innovation and lack of synthesis, the aim of this review is to investigate the main definitions, characteristics, and research focus of social innovation research in urban spaces. The article now proceeds to explain the methodology undertaken, which is followed by an analysis of existing definitions and characteristics of social innovation in urban environments. Subsequently, it groups the research into an organising framework of major themes and categories. The following section reviews and critically proposes a framework for understanding current knowledge on social innovation in urban spaces. The conclusions synthesise the main findings and recommends avenues for further research.

2.0. Methodology

This review includes publications from the period between 2002 to 2018. Van der Have & Rubalcaba (2016) designate 2002 to be the start of the take-off phase of current social innovation research, and therefore, a relevant juncture to commence a contemporary review of social innovation in urban spaces. Searches were conducted on EBSCO Discovery Service platform using the key term “social innovation” combined with “urban”; “space”; “sustainable development”; and “built environment”. Boolean operators were used in refining searches to link terms and synonyms. Truncation techniques were employed to catch all forms of a term. The search results listed 15,482 records sorted according to relevance. The first 335 listed records included three or more of the search terms. A manual screening of journal, abstracts, key words, contents pages and title identified 178 potentially relevant articles. Records that were duplicates, inaccessible or did not meet the search eligibility of the review to explicitly use the concept of social innovation within urban spaces were excluded. A final screening of the principal content of articles to determine their direct relevance led to the inclusion of 114 studies. Only texts in English were reviewed. A content analysis of publication title, abstract, key words and their main body of text was undertaken, which lead to findings being categorised and clustered into different social innovation schools of thought and primary thematic groups. The following section examines the review findings.

3.0. Social innovation: definitions, characteristics, and scales

Debates on social innovation intensify in periods of political and social instability. In the 19th century, social innovation was presented as a pejorative term to refer to revolutionary aspects of socialism, social reform and the social economy (Godin, 2015). During the 1930s it was associated with the rise of the welfare state, and in the 1960s with new social movements for emancipation and democratisation. From the end of the 20th century to the 2000s it was given new impetus and positive connotation, first in the context of local development for deindustrialising cities, and second by a renewed interest in the social and solidarity economy for welfare provision after the financial crises of 2008 (Moulaert, Mehmood, MacCallum, & Leubolt, 2017). Yet, there is no consensus on the definition of social innovation today (Benneworth & Cunha, 2015; Moulaert et al., 2013; Mulgan, Tucker, Ali, & Sanders, 2007; Pol & Ville, 2009; Rüede & Lurtz, 2012; The Young Foundation, 2012). Taken in isolation, the definitions of 'social' and 'innovation' seem no less contentious. Social is commonly understood as the production of social value to the public, or society as a whole, in contrast to privately accrued profit (BEPA, 2011; Murray, Caulier-Grice, & Mulgan, 2010; Phills, Deiglmeier, & Miller, 2008; TEPSIE, 2014). As for social value, it is often presented as addressing social needs or challenges, or improving capacity to act, wellbeing and quality of life (BEPA, 2011; Moulaert et al., 2005; Murray et al., 2010). However, caution is expressed on outcomes claiming to 'be good for society' due to their social impact being contextually bounded and subject to interpretation (Evers, Ewert, & Brandsen, 2014; Moulaert et al., 2005). Innovation is generally understood as a novel solution concerning processes of refunctioning or recombination of existing assets and resources (BEPA, 2011; Manzini, 2015). Conversely, others challenge the appropriateness of the term novel. For instance, Rüede & Lurtz (2012) query its breadth of application, arguing that there is a lack of precision to what a novel solution constitutes. Godin (2015), in turn, distinguishes between novelty and innovation on the political basis that the latter means introducing change into the established order in a non-trivial manner. Put together, distinct definitions of social innovation are found across disciplines, with varying emphasis (Rüede & Lurtz, 2012). Social innovation is often deemed a quasi-concept with hybrid characteristics adaptable to different situations, flexible for policymakers though also relevant for empirical analysis (BEPA, 2014; Bonifacio, 2014; European Commission, 2013a, 2013c; TEPSIE, 2014). The comprehensive review found 22 different, but complementary, definitions. The most salient ones to this review are shown in Table 1.

[INSERT TABLE 1 ABOUT HERE]

It can be suggested that there is a polarity between the two principal meanings of social innovation: one referring to a critical, targeted approach that argues for alternatives to perceived neoliberal agendas, challenging existing power relations and structures, and is presented as radical (cf. disruptive) social innovation (Ayob, Teasdale, & Fagan, 2016; Moulaert, Martinelli, González, & Swyngedouw, 2007; Moulaert et al., 2017; Nicholls, Simon, & Gabriel, 2015; Novy & Hammer, 2007). The second meaning, presented as complementary social innovation, is broader in terms of beneficiaries and aims to meet societal needs more effectively and efficiently than existing solutions. This perspective is more congruent to existing top-down power relationships (Bonifacio, 2014; Marques, Morgan, & Richardson, 2018). Definitions are arranged by this observed polarity within Table 1. Although authors may not expressly use such terms, they serve to characterise the nature of social innovation being examined. Of particular interest within radical perspectives is the definition by Moulaert et al. (2005) that permeates across spatial planning, community development and urban governance perspectives. It stresses three core social innovation dimensions: outcomes in the satisfaction of social needs that are not currently satisfied; processes in changes in social relations, especially regarding bottom-linked territorial governance to increase participation; and empowerment by increasing socio-political capability and access to resources. The implied socio-spatial outcomes of collective empowerment, equality and social justice for equitable development are acknowledged to be subject to social construction (Evers et al., 2014; Moulaert et al., 2005). By way of contrast, complementary definitions tend to fit within existing ways of thinking and work in conjunction with asymmetrical political systems. They typically aim to increase societal capacity through the creation of hybrid stakeholder partnerships with end users to 'co-produce' urban public services, spaces and goods more effectively and efficiently than existing solutions to address market failures and state service provision (Bacon et al., 2008; BEPA, 2011; Manzini, 2014; Monge Iriarte, 2016; Mulgan et al., 2007; Murray et al., 2010; OECD, 2011). Thus, it is argued that microeconomics approaches promote solutions that are feasible within the established economic order. Consequently, there is an objective for deprived people to become productive economic subjects with an emphasis on individual attributes and empowerment (Cajaiba-Santana, 2014; Moulaert et al., 2013, 2017; Oosterlynck & González, 2013). This resource perspective is highlighted by Mulgan et al. (2007) who promotes social innovation as being innovative services that meet social needs by creating cross-sectorial collaborations in co-production scenarios. It emphasises a product dimension by focussing on replicable initiatives and the social economy for their delivery. This evolution in meaning can be traced to policy advisory bodies, stimulating discourses over new models of urban welfare provision, austerity measures, and the notion of caring neoliberalism (Moulaert et al., 2013, 2017). Any conceptualisation of social innovation, therefore, must be viewed as a process that is intrinsically political (Ayob et al., 2016; Brandsen et al., 2016).

Three central elements of importance can be observed across the characterisations proposed. First, process is routinely expressed as developing new social relations in systems or structures (Evers et al., 2014; Manzini, 2014; Moulaert et al., 2005; Mumford, 2002; TEPSIE, 2014; Westley & Antadze, 2010). Second, outcomes are presented as concerning the production of social value to meet human needs or addressing societal challenges to sustainable development (Avelino et al., 2014; Bacon et al., 2008; BEPA, 2011; Mulgan et al., 2007; Murray et al., 2010). Third, the scales of social innovation are discussed as fundamental aspects of their potential transformative impact and engagement of a range of stakeholders (Avelino et al., 2014; de Bruin & Stangl, 2013; Manzini, 2015; Moulaert et al., 2005; Mulgan et al., 2007; Westley & Antadze, 2010).

In terms of process, BEPA (2011) and Murray et al. (2010) identify six main stages of social innovations: 1) Prompts, inspirations and diagnoses, 2) Proposals and ideas, 3) Prototyping and pilots, 4) Sustaining, 5) Scaling and diffusion and 6) Systemic change. Sustainable systemic change in redesigning society through changes in relations between institutions and stakeholders is positioned by policy advisors as being the principal focus of social innovation (Baturina & Bežovan, 2015; BEPA, 2011; Murray et al., 2010). Nonetheless, it should not be assumed that social innovations will transcend each stage. It is observed that most initiatives will not reach the stage of systemic change, and others will jump between, or skip entire stages altogether (Caulier-Grice, Davies, Patrick, & Norman, 2012).

Challenges remain in measuring the longer-term outcomes of social value production due to the conditional nature of social innovations, their context of operation and intended beneficiaries. A task highlighted by the value being produced, whether for individuals or to society, often presented as forms of citizen empowerment, transparency in democracy, social cohesion and implied socio-spatial justice that will lead to a more productive society

(Baturina & Bežovan, 2015; BEPA, 2011). The multidimensional nature of these more intangible concepts has led to a call for the creation of social innovation impact metrics that can demonstrate to policy makers its effectiveness and sustainability in delivering services, meeting social needs and addressing societal challenges (BEPA, 2014; Caulier-Grice et al., 2012).

There are three hierarchical levels of social innovations (BEPA, 2011; Bonifacio, 2014; Haxeltine et al., 2013). At the micro level there are place-based social innovations. They seek to address the social needs of a specific group of citizens and users in a specific location, enhancing capability and promoting wellbeing. They focus on social demand that is characteristically not addressed by market activity or existing organisations and institutions (Bacon et al., 2008; Mulgan et al., 2007; Murray et al., 2010). At the meso level there are social innovations addressing wider societal challenges. They are broader initiatives aimed at a national spatial scale, often concerned with sustainable development practice (BEPA, 2014; European Commission, 2013b). They change the development of urban infrastructures, societal sub-systems, communities, organisations, and affect forms of governance. At the macro level there are national to international scale initiatives causing fundamental and sustained changes of existing organisational structures, systems, and relations between institutions and stakeholders. They transform the way in which society thinks and behaves (Avelino et al., 2014; Westley & Antadze, 2010).

Social Innovation in Urban Spaces

Social innovation in urban spaces is frequently examined through case studies. Research approaches are typically qualitative, using interviews, document analysis and participant observation. The three identified primary research clusters in this study are specific to the urban spatiality of social innovation and are categorised as: 1) Spatial planning and community development; 2) Governance; and 3) Co-production and service design. That is not to say this is the only conceivable categorisation of approaches across the broader field. For instance, Moulaert et al., (2005) and Howaldt et al. (2014) use multidisciplinary approaches to distinguish between the various dimensions and conceptual strands of social innovation, whereas Ilie & During (2012) classify the dominant discourses to supporting structures that work with social innovation. Political advisory bodies, such as BEPA (2011) use social outputs to distinguish between approach perspectives, conversely Murray et al., (2010) employ different economic sectors to examine ways of cultivating social innovation processes. For the purposes of this study, however, the organising framework serves to breakdown an understanding of the spatiality of the concept by examining approaches to what social innovation means, both in theory and in practice, across the various research areas in urban spaces. At the end of this section Table 2 provides an overview of the three primary research clusters.

3.1. Spatial planning and community development

The articles in this cluster characteristically focus on spatial planning and community development at the local level (e.g. Drewe et al., 2008; European Commission, 2007; MacCallum et al., 2009; Moulaert et al., 2005; Oosterlynck et al., 2013). In spatial terms, local is identified as being neighbourhoods, towns and cities. This trend can be explained by social practices being embedded in local settings (Baker & Mehmood, 2015; Howaldt et al., 2014). Social innovation is understood here as a mechanism for social change through a collective process of participation with an objective for equitable development (European Commission, 2007; Klein, Fontan, & Tremblay, 2009; MacCallum et al., 2009; Moulaert et al., 2013). Research themes in this cluster encompass territorial development, spatial innovation and quality, systems thinking and societal transformation. These relate to wider themes of civic participation, spatial justice, and systemic change. In this cluster social innovation is recognised as a process and outcome (Moulaert et al., 2013; Moulaert, Martinelli, Swyngedouw, & Gonzalez, 2010; TEPSIE, 2014). The social economy and civil society are seen as the prime context and source of social innovations (Howaldt et al., 2014; Maruyama, Nishikido, & Iida, 2007; TEPSIE, 2014). A structural aim is to address the social needs of deprived neighbourhoods through a process of empowerment, improving social relations between bottom-up citizens and top-down institutions (ANSPE, 2015). Improved social relations, combined with cross-sectorial agencies, are argued to enable a context for urban development that favours social inclusion and territorial cohesion (Klein, 2009; MacCallum et al., 2009; Moulaert et al., 2013). This process disrupts existing power structures at the micro level of relationships between individuals, and at the macro level, between different classes and social groups (Moulaert et al., 2013). Consequently, there is a relationship between grassroots action, policy and spatial organisation (European Commission, 2007; Moulaert et al., 2010).

A common denominator for territorial social innovation and urban development is the concept of an ‘innovative milieu’ (Klein, 2009; MacCallum et al., 2009). This dynamic environment, where innovative capacity is nurtured and implemented through participatory community based projects, is required to reconnect placemaking with the everyday lived experience of neighbourhoods (Bacon et al., 2008). Through their engagement, local community stakeholders place social needs central to urban development and planning interventions (Moulaert et al., 2010; Oosterlynck et al., 2013). The need for integrated approaches to urban development are increasingly tangible at the neighbourhood spatial scale due to the economic restructuring of deindustrialising cities and visibility of inner-city urban decline, where social challenges in urban spaces are intensified by the spatial concentration of exclusion factors (Moulaert et al., 2013). For instance, Roubaix, a city in Lille’s metropolitan region, France, affected by the collapse of the textile industry at the end of the 20th century, with consequent urban decay and high levels of unemployment, saw the emergence of the non-profit Alentour association who facilitated exchanges between a multilevel network of local citizens, community associations and institutional partners in order to transform social relations and providing opportunities in the deprived Epeule neighbourhood. Using city and European funding, public infrastructure initiatives were defined to revive abandoned commercial spaces, to create a municipal park on industrial wasteland, to establish maintenance programmes for social housing and communal buildings, as well as promote a literacy outreach programme for children of migrant families. Community empowerment was supported by training opportunities provided to people suffering ethnic discrimination, inexperienced young people, people with few qualifications, unskilled women, and the long-term unemployed. Although Roubaix's urban renewal processes are ongoing, the neighbourhood development experiment to create multilevel networks was unable to secure long term support at the city regime level after funding ceased and did not fulfil its objective for sustained institutional change (European Commission, 2007).

There is an argument for new analytical tools to study social innovation and urban development at the local level (Moulaert et al., 2013; Woodcraft & Bacon, 2013). It is observed that social processes occur through and are influenced by, the material forms created in place-specific settings. There are deep interconnections between collaborative forms of placemaking and the character, attributes and resources that exist within a locality (Baker & Mehmood, 2015). For instance, the Place Difference framework, aimed at studying change and innovation at the local level, shows how contextual dynamics will always vary, impacting place-specific innovation processes and spatial outcomes (Woodcraft & Bacon, 2013). In turn, the Spatial Innovation Planning Design and User Involvement (SPINDUS) framework examines how different spatial disciplines conceptualise space and place. The objective is to assess and reproduce the spatial quality of a locality from the different perspective of spatial users. The framework demonstrates an integrated approach to the local analysis of space and innovation by making the connections between different spatial disciples more relational (Moulaert, Schreurs, & Van Dyck, 2011). Finally, multi-scalar frameworks on the process of change, innovation and development have focussed on the scaling up of local social innovations to systems levels with the global objectives of systemic change and societal transformation (Avelino et al., 2014; Westley & Antadze, 2010). It is hypothesised that societal transformation is produced by co-evolutionary interactions between social innovation, systems innovation, game-changing events, and narratives of change, in contrast to it being an intrinsic property of social innovation itself (Avelino et al., 2014; Haxeltine et al., 2013).

3.2. Governance

This cluster is formed by articles concerned with participatory forms of urban governance. Social innovation is understood here as a normative and analytical concept for developing new solutions around social exclusion and integration in cities with the objective for citizen empowerment (Brandsen et al., 2016; Evers et al., 2014; Gerometta, Haussermann, & Longo, 2005; Moulaert et al., 2005). Research themes in this cluster encompass urban cohesion, participatory budgeting, and multilevel governance that relate to wider themes of socio-political spatial restructuring, social inclusion and empowerment. A political shift from top-down government to bottom-up driven governance approaches to spatial development is seen as part of a wider socio-economic change within politics and spatial restructuring (Headlam & Hincks, 2016; Swyngedouw, 2005). Governance approaches can enhance social cohesion within cities when civil society contributes to multilevel democratic governance regimes favouring the social economy and public deliberation (Gerometta et al., 2005; Moulaert & Nussbaumer, 2005). For instance, collective decision-making approaches to participatory budgeting involving the state and civil society in Brazil demonstrate a mutual process of collective learning and empowerment in urban development (Novy & Leubolt, 2005). The passing of the ‘Estatuto da Cidade’ federal law in 2001, which enshrined public participation as a fundamental step in the preparation of municipal plans, was a crucial move to restructuring power relations in urban governance. In Porto Alegre, participatory budgeting was accelerated through a combination of top-down and bottom-up processes given by the election of a left wing local government and the demands of community associations for greater collective decision-making powers. There were three principal socio-political aims: to increase the grassroots participation of marginalised communities; to reverse urban development priorities in favour of disadvantaged residents; and to establish more effectual governance by eradicating corruption. Collective decision-making processes happened at three socio-spatial levels: neighbourhood assemblies, district forums of delegates and a city level general participatory council. Outcomes include improvement in urban infrastructure, as for instance the increase in facilities and extending household access to water and sanitation. The institutional innovation conceived has embodied a principle of social justice through the involvement of lower income communities, young people, and providing a platform for women who have become a majority voice in assemblies. The model was diffused to other Brazilian cities, increasing the number of urban experiments from fewer than 40 in 1993 to over 300 at the end of the 2000s. By 2004, 58% of the population of Brazilian cities of over one million inhabitants resided where local governments had implemented collective decision-making processes through participatory budgeting (Sintomer, Herzberg, & Allegretti, 2013). However, as an unintended consequence funds can be lacking for neighbourhood planning projects outside of participatory budgets. At the government level, there are also risks posed to social justice outcomes through a focus on annual investments and a lack of longer-term perspectives towards the cost of maintaining urban infrastructure initiatives. Emerging forms of participatory budgeting can now be observed across Latin America and Europe.

It is claimed that non-traditional stakeholders promoting social innovation initiatives in place-based development possess profound capacity for change in urban governance and socially sustainable development (Gonzalez & Healey, 2005). However, issues present themselves with state and civil society relationships due to market forces encroaching on the democratic character of the political sphere, influencing decision making processes. New governance arrangements have empowered some stakeholders, though disempowering others, and the restructuring of the parameters of political democracy can lead to democratic deficits (Headlam & Hincks, 2016; Swyngedouw, 2005). Participatory governance initiatives are affected by changes in civil society in which new contexts are continuously arising (Moulaert et al., 2005; Moulaert & Nussbaumer, 2005). These contexts are embedded in a multiscalar society of shifting power relations among participants, levels of government, governing institutions, civil society, and external market influences (Swyngedouw, 2005). Consequently, constructive cross-sectorial partnerships are required to enact local to systemic level changes (Baker & Mehmood, 2015; Gerometta et al., 2005; Howaldt et al., 2014; Swyngedouw, 2005).

Place-based forms of social innovations, such as Local Agenda 21 development or the Transition Towns movement, have provided fertile ground for researchers to study bottom-linked strategies internationally diffused to other localities. In these instances, the state is observed to be a significant broker in coordinating processes of social innovation. It is therefore argued that place-based initiatives can be scaled upwards to the macro level through state coordination, when governance processes augment the role of economic and social agents in coordinating social change. This may promote more open and participatory forms of urban governance. Consequently, places can perform a significant role in improving sustainable human-environment interactions when social, economic, and state agents of social change align across different spatial and temporal scales in combination with multilevel forms of urban governance (Baker & Mehmood, 2015). Nonetheless, the notion of successful social innovations in local governance being required to scale-up to the systems level is queried when examining social cohesion outcomes within European cities. Evidence suggests that life cycles of social innovations and the processes of emergence, stabilising and scaling up are conditional. Many initiatives are not objectively focussed towards scaling up due to often being time-limited in application, locally concentrated and small in scale (Brandsen et al., 2016; Evers et al., 2014). In closing, the scaling-up perspective therefore carries implicit normative assumptions around the objective of social innovations that can be attributed to business and government perspectives (Brandsen et al., 2016; Moulaert et al., 2017).

3.3. Co-production and service design

The focus of the articles in this cluster is on the co-production of services and the built environment. Social innovation is understood here as a collaborative process that increases societal capacity to act to meet the objective for sustainable social change (Goldsmith, 2010; Manzini, 2014; Mulgan et al., 2007; Murray et al., 2010). Research themes in this cluster encompass public services delivery, intermediation spaces, and design for social innovation that relate to the wider themes of welfare restructuring, hybrid processes, networks and institutional support. In this cluster sustainable changes are mobilised through a participative scenario in which citizens are enabled through top-down driven capacity building to take on the role of agents of change, co-producing solutions towards sustainability (Jegou &

Bonneau, 2015; Manzini, 2015). Co-production values citizens as an effective bottom-up resource in placing community needs directly within participatory forms of top-down service provision. Consequently, there is a relationship between user orientated processes of innovation and outcomes in end user empowerment. The degree of citizen involvement is distinguished in three types: 1) citizens as instigators; 2) citizens as co-designers; 3) citizens as co-implementers (Voorberg, Bekkers, & Tummers, 2014). Thus, well-established boundaries between producers and consumers become indistinct in co-production scenarios (Murray et al., 2010).

One initiative that demonstrates the hybrid character of social innovation for public service to be delivered directly by end users aims for sustainable social change across spatial scale. In 2014, the government of Thailand issued a Strategic Elderly Policy. Elderly citizens would co-produce elderly care service initiatives in combination with top-down steering to respond to the countries rapidly aging population. A principal aim was that every province would establish centres to deliver services through paid and altruistic volunteerism. Centres are run by committees of elders in collaboration with local government and their construction is funded by national government. Services are co-produced between elders and health professionals at the centres. Each centre is a node within a provincial network to foster collaboration between local government, provincial health departments and hospitals. The approach relies on hierarchical control from local government, collaborating hospitals, and the national Ministry of Health. The significance of the nationally diffused policy is reflected by evidence valuing elderly people as a community resource that improves community cohesion and resilience. This case highlights how the political objective of co-production for end users to participate in direct services provision can be supported through a top-down government arrangement in combination with an active target group to implement public services towards user needs (Howlett, Kekez, & Poocharoen, 2017).

To further support emerging forms of hybrid collaborations, the field of design and designers can become active intermediaries in supporting and replicating social innovations. The responsibility for the design of the built environment subsequently encompasses all levels and sectors (Manzini, 2014, 2015). These emerging scenarios are termed SLOC: small, local, open and connected (Manzini, 2015). The local level contextual setting, small scale and interconnectedness of social organisations undertaking social innovations is recognised as enabling them to be deeply rooted in place. The balance between local and open produces a new sense of place. Therefore, places are not considered to be objects in isolation, but instead, are viewed as nodes in networks, where shorter networks produce and reproduce the local socioeconomic fabric and the longer networks connect a specific community to the wider global community (Baker & Mehmood, 2015; Manzini, 2015; Mehmood, 2016). Design and design thinking as a means of inquiry are closely associated with social innovation, problem solving and the production of the urban environment by planners, urban designers and architects. They concern iterative human-centred approaches and the use of local expertise to co-design solutions (Monge Iriarte, 2016). At their core is the micro scale social dimensions of innovations (Brown & Wyatt, 2010; Mortati & Villari, 2014). This social approach is characterised by collaboration with diverse stakeholders, empathy with end users, institutional support and the creation of intermediation spaces (e.g. labs or hubs) (Benneworth & Cunha, 2015; Edwards-Schachter et al., 2012). This creative environment is where experimentation and failure are seen as an important process of learning and consequently, producing social innovations (Brown & Wyatt, 2010; Manzini, Appadurai, & Penin, 2010; Manzini, 2015). The typical objective centres on context-based social change at the micro level, determined through a process of mutual understanding, addressing the needs of a specific group of end users. Thus, macro level challenges are outside the normal scope of local level design thinking and addressing them will require larger social networks of designers (Brown & Wyatt, 2010; Manzini et al., 2010; Manzini, 2015). An international example can be found in Design for Social Innovation and Sustainability (DESIS), which focuses on collaborative institutional support and intermediation. Viewed as a structured vision of what design can do for social change, worldwide interconnected 'Design Labs' comprised of students, academics and researchers orientate their agency to the area of social innovations. Design activities explore what the field of design can do to prompt, increase, support, strengthen, and diffuse initiatives across levels (Manzini et al., 2010; Manzini, 2015). Finally, it may be concluded that this cluster is highly process-oriented due an emphasis on cooperation between levels. Social innovation initiatives in this regard, in their emergence and sustaining, will frequently depend on the complex interactions between local people directly concerned and the support and intervention from institutions and civic organisations. This hybrid dynamic becomes increasing evident when attempting to increase the scale of change (Manzini, 2014; Mulgan et al., 2007).

[INSERT TABLE 2 ABOUT HERE]

4.0. Discussion

International policy is gearing towards promoting social innovation for sustainable development. For example, social innovation figures prominently in the Europe 2020 strategy and, in the context of austerity, is viewed as playing a central role in meeting the needs of citizens and addressing societal challenges more efficiently and effectively than present approaches. However, along with the growing of the emerging field of contemporary social innovation research, definitions and approaches to what social innovation can be also multiplied. In this context, although social innovation appears to be an important element in sustainable urban development practices, a lack of precision of what social innovation can actually be or do hinders its further development. In order to counter further fragmentation and unmapped differentiation, this article offers an empirical and conceptual reference for the understanding of definitions and contemporary approaches to social innovation in urban spaces. It is here proposed that although a limiting and static definition is to be avoided, it is necessary that a conceptual meaning of social innovation be better defined and agreed if social innovation is to provide a framework for positive transformation of cities. A holistic, but focused, perspective of social innovation can, on the one hand, allow for differentiation in relation to similar phenomena, and on the other hand develop an understanding of its multiple potentialities.

Social innovation can bridge bottom-up and top-down perspectives, occur at various spatial levels, be implemented in different domains of knowledge and across sectors (BEPA, 2011; European Commission, 2010; Murray et al., 2010). Social innovation has in common three core conceptual components observable within the variances of existing definitions. First, it is a process that concerns new social relations, in systems or structures. Second, it concerns an outcome of new social value, by serving needs or addressing socially relevant problems. Third, that it is applicable at multiple scales: micro, meso, and macro. There are normative assumptions about the outcomes of social innovations ‘being good for society’ and local micro initiatives needing to be scalable to meso and macro levels to be considered successful, notably from the perspective of policy makers.

Conceptually, social innovation connects to sustainable development through the fulfilment of human needs. Seen by the United Nations as ‘meeting the needs of the present without compromising the ability of future generations to meet their own needs’ (WECD, 1987, p.43) the 2030 Agenda stresses the importance of innovation to achieving Sustainable Development Goals. Though it may not expressly use the term ‘social innovation’, given the conceptual focus on satisfying human needs through new social practices and structures, social innovation has the potential to address aspects of the Agenda that emphasise inclusion and equity, markedly for health, education, employment and poverty alleviation (UNCTAD, 2017). In addressing market or state failures or to incumbent models of service provision, social innovations are seen to challenge existing models of production and consumption through experimenting with novel, potentially transformative, institutional and societal changes (Kemp et al., 2015). This is significant to attaining the Goals, as they will arguably require transformative rather than incremental change. As such, social innovations provide value as spaces of experimentation with novel ideas and practices, transcending their immediate impact on beneficiaries (UNCTAD, 2017). By recognising human development relies on changing social practices, the United Nations has acknowledged that social innovations have significant roles to play in sustainable development. For example, their Social Development Network is supporting the use of social innovation to address the societal challenges of ageing population and gender inequality in the Asia Pacific region (Millard, 2018). To accelerate their diffusion across scale will require cross-sectorial partnerships and top-down support, especially through state steering. Consequently, this has implications for the multidimensional types of governance arrangements required.

The scope of structural change produced by citizen participation is a principal issue in distinguishing between perspectives of social innovation for sustainable development. Radical characterisations target a more inclusive political process on behalf of marginalised groups and deprived communities to direct urban policies towards addressing previously unmet needs. Whereas, complementary characterisations do not explicitly specify for changes in socio-political dynamics to accomplish a broader societal aim of meeting human needs. The spatial planning and community development literature reasons that integrative development and physical regeneration strategies within cities should be merged with empowering bottom-linked governance across different spatial scales: neighbourhood, urban, regional, national and international. Thus, spatial scale connects micro level initiatives to macro level structural changes (Moulaert et al., 2013; Moulaert & Mehmood, 2011). The transformation of urban regeneration strategies to multilateral approaches, including integrating policies from other spheres, such as housing, education, employment, health, and ecology are required. Therefore, the broad pillars of social, economic, and environmental sustainability are assimilated within a comprehensive sustainable development framework. Similarly, the urban governance literature stresses the need to focus on citizen participation at the local level for integrated decision-making processes in combination with structural and processual changes: from top-down asymmetrical steering to bottom-up socio-political structures. Structural changes support spatial cohesion for sustainable development by empowering communities to influence the administration of deprived areas to tackle socio-spatial segregation and exclusion by addressing specific needs (ANSPE, 2015; MacCallum et al., 2009; Parra, 2013; Swyngedouw, 2005). In this scenario, people make collective decisions to improve their wellbeing and socio-economic situation, becoming more self-sufficient and self-sustained. Whereas, the co-production and service design literature proposes changes in social relations and behaviours between citizens and local authorities. It implies collaboration between urban stakeholders and a shared responsibility towards the common (e.g. public spaces, services, and goods), re-defining the role of citizens from end users to 'active partners' in urban processes concerning societal change (Voorberg et al., 2014). Thus, citizens are understood as being embedded urban resources to jointly develop and deliver sustainable solutions to societal challenges (Monge Iriarte, 2016). Neighbourhoods become active agents of social change and small-scale initiatives can be connected to global networks in distributed systems (Manzini, 2015). In the collaborative scenario, social innovation is considered an asset that utilises existing knowledge and territorial expertise to produce new knowledge, improving urban resilience to societal challenges through developing society's capacity to act (Murray et al., 2010).

Approaches within and across the clusters, whether processes of decision making, spatial planning, or service provision, highlight the role of active citizen participation. However, to operationalise and sustain citizen engagement in urban development will require behavioural changes within existing social institutions, structures and systems. New policies and strategies need to be developed that consider structural variables, such as scale, ownership and nature of the initiative. Contextual factors such as local leadership and institutional culture will influence the degree of openness and participation. Therefore, social innovation for sustainable development requires greater citizen rights in the planning, designing, commissioning, delivering, and evaluating of urban initiatives through a restructuring of power relations to develop stakeholder capacity with ongoing communication and exchange (Moulaert et al., 2013; TEPSIE, 2014).

Social innovation being considered as fundamentally good for society can be a source of contention. Baturina & Bežovan (2015) stress that vulnerable groups can be excluded by initiatives produced by more affluent citizens due to not recognising different group needs in forming public agendas. For instance, the High Line linear park highlights New York's rising inequality. The resident led development used a combination of public and private funds. It was steered by the Friends of the High Line non-profit organisation who sought to transform the abandoned elevated railway to a serve a community purpose as a recreational green space within a highly urbanised area. The philanthropic organisation is supported by numerous wealthy donors and operates the greenway initiative on behalf of the city parks department. Since opening in 2009, the park is visited annually by five million people and led to other cities in the United States proposing regeneration models to redevelop obsolete urban infrastructure as public spaces with social utility. However, the use of public money was controversial. The bottom-up initiative received more funding in 2012 than municipal parks in the rest of the city due to the match funding process. It also stimulated real estate development and a process of gentrification in adjacent Chelsea neighbourhood to the detriment of established minority communities and businesses through property rental increases (Reichl, 2016). Thus, the contingent nature of social innovations presents challenges for measuring the impact of broader long-term outcomes of social value production and their relationship to socially sustainable development. It should not be implicitly assumed that social innovation is a panacea to resolving wicked problems globally (Godin, 2015).

5.0. Conclusions

The findings observed across the different clusters have indicated that the collaboration of end users in place-based urban development are central to the process of change. Relating citizen agency to social innovation and spatial change, the social construction of space occurs through a process of transformative collective action that causes abstract urban spaces to be (re)produced with social meaning as places of social innovation. The process component of social innovation is observed to be as significant as the projected outcome, especially around participatory social learning, empowerment, emulation and diffusing ways of thinking. A possible explanation for this might be the difficulty in analysing longer-term outcomes of urban initiatives. Participative and collaborative processes of citizen co-production are symbolic activities, endowing urban spaces with collective social meaning as places, giving legitimacy to democratic forms of urban governance. However, absences in understanding can be observed concerning the conceptual characterisation of the various levels of stakeholder involvement in the co-production of the urban environment. These oversights encompass the different role of citizens, intermediaries, and the relationship of co-production processes to place-based outcomes. Consequently, further research challenges lie in the conceptualisation of social innovation, the study of place-based outcomes of citizen co-production processes caused by multilevel social innovation initiatives (bottom-up to top-down) and understanding the significance of social innovation to sustainable urban development practices.

In seeking conceptual clarity, this study first recommends that attempts at forming a comprehensive and collective definition of social innovation should be undertaken and be based on the three core conceptual components of process, outcome and scale. Second, it would be valuable to investigate further the relationship between collaborative processes of social innovation and their urban spatial outcomes, articulated as the co-production of places of social innovation. The literature has often focussed on the role of citizens as co-designers of the urban environment in collaboration with experts in structures complementary to existing top-down methods. Alternative forms of co-production and hybrid arrangements between bottom-up and top-down levels have received less attention. Further research should focus on how the different types of co-production of the urban environment influence the development of places of social innovation. Third, the literature often stresses the political aim of replicating and diffusing local initiatives to other localities. However, this study has shown that European, Canadian, US and Australasian scholarly works published in English are notably prominent in social innovation research and policy debates. This presents opportunities for broadening the mapping of research communities beyond this geographical scope, especially to developing countries, and to include publications in other languages. Furthermore, the importance of contextual forces and the contingent nature of social innovations present challenges to generalise findings. This task can be aided by the further comparison of cases across different cities showing the extent of varying local system influences on social innovation processes. Cross-case analysis will allow for a pattern recognition in core processes, identifying key stakeholders, intermediaries, and end user roles across varying urban localities. The resultant insight can be incorporated into a process framework of socio-spatial innovation for the diffusion of places of social innovation.

References

ANSPE. (2015). Social Innovation. Retrieved April 19, 2015, from http://www.anspe.gov.co

Avelino, F., Wittmayer, J., Haxeltine, A., Kemp, R., O'Riordan, T., Weaver, P., … Rotmans, J. (2014). *Game Changers and Transformative Social Innovation*. Rotterdam.

Ayob, N., Teasdale, S., & Fagan, K. (2016). How Social Innovation "Came to Be": Tracing the Evolution of a Contested Concept. *Journal of Social Policy*, *45*(4), 1–19.

Bacon, N., Faizullah, N., Mulgan, G., & Woodcraft, S. (2008). *Transformers. How local areas innovate to address changing social needs*. London.

Baker, S., & Mehmood, A. (2015). Social Innovation and the Governance of Sustainable Places. *Local Environment: The International Journal of Justice and Sustainability*, *20*(3), 321–334.

Baturina, D., & Bežovan, G. (2015). *(Social) Innovation Impact - Review of Research*. Brussels.

Benneworth, P., & Cunha, J. (2015). Universities contributions to social innovation: reflections in theory & practice. *European Journal of Innovation Management*, *18*(4), 508–527.

BEPA. (2011). *Empowering people, driving change Social Innovation in the European Union*. Brussels.

BEPA. (2014). *Social innovation A Decade of Changes*. Brussels.

Bonifacio, M. (2014). Social Innovation: a Novel Policy Stream or a Policy Compromise? An EU Perspective. *European Review*, *22*(01), 145–169.

Brandsen, T., Cattacin, S., Evers, A., & Zimmer, A. (Eds.). (2016). *Social Innovations in the Urban Context*. London: Springer.

Brown, T., & Wyatt, J. (2010). Design Thinking for Social Innovation. *SSIR*, 31–35.

Cajaiba-Santana, G. (2014). Social innovation: Moving the field forward. A conceptual framework. *Technological Forecasting and Social Change*, *82*(1), 42–51.

Caulier-Grice, J., Davies, A., Patrick, R., & Norman, W. (2012). *Defining Social Innovation*. Brussels.

de Bruin, A., & Stangl, L. M. (2013). The Social Innovation Continuum: Towards Addressing Definitional Ambiguity. Liege: EMES.

Drewe, P., Klein, J.-L., & Hulsbergen, E. (Eds.). (2008). *The Challenge of Social Innovation in Urban Revitalization*. Amsterdam: Techne Press.

Edwards-Schachter, M. E., Matti, C. E., & Alcántara, E. (2012). Fostering Quality of Life through Social Innovation: A Living Lab Methodology Study Case. *Review of Policy Research*, *29*(6), 672–692.

European Commission. (2007). *Social innovation, governance and community building SINGOCOM*. Brussels.

European Commission. (2010). *This is European Social Innovation*. Brussels.

European Commission. (2013a). *Guide to social innovation*. Brussels.

European Commission. (2013b). *Horizon 2020 EU Research and Innovation: Tackling Societal Challenges*. Brussels.

European Commission. (2013c). *Social innovation research in the European Union*. Brussels.

Evers, A., Ewert, B., & Brandsen, T. (Eds.). (2014). *Social Innovations for social cohesion*. Liege: WILCO.

Gerometta, J., Haussermann, H., & Longo, G. (2005). Social Innovation and Civil Society in Urban Governance: Strategies for an Inclusive City. *Urban Studies*, *42*(11), 2007–2021.

Godin, B. (2015). *Innovation Contested: The Idea of Innovation Over the Centuries*. Oxford: Routledge.

Goldsmith, S. (2010). *The Power of Social Innovation*. San Francisco: Jossey-Bass.

Gonzalez, S., & Healey, P. (2005). A Sociological Institutionalist Approach to the Study of Innovation in Governance Capacity. *Urban Studies*, *42*(11), 2055–2069.

Haxeltine, A., Avelino, F., Wittmayer, J., Kemp, R., Weaver, P., Backhaus, J., & O'Riordan,

T. (2013). Transformative social innovation. In *Social Frontiers*. London: Nesta.

Headlam, N., & Hincks, S. (2016). *Reflecting on the Role of Social Innovation in Urban Policy*. Manchester.

Howaldt, J., Butzin, A., Domanski, D., & Kaletka, C. (2014). *Theoretical Approaches to Social Innovation*. Dortmund.

Howlett, M., Kekez, A., & Poocharoen, O.-O. (2017). Understanding Co-Production as a Policy Tool. *Journal of Comparative Policy Analysis: Research and Practice*, *19*(5), 487–501.

Ilie, E. G., & During, R. (2012). *An analysis of social innovation discourses in Europe Concepts and Strategies of Social Innovation*. Wageningen.

Jegou, F., & Bonneau, M. (2015). *Social innovation in cities, URBACT II*. Saint Denis.

Keivani, R. (2010). A review of the main challenges to urban sustainability. *International Journal of Urban Sustainable Development*, *1*(1-2), 5–16.

Kemp, R., Zuijderwijk, L., Weaver, P., Seyfang, G., Avelino, F., Strasser, T., … Ruijsink, S. (2015). Doing things differently. Maastricht: TRANSIT.

Klein, J.-L. (2009). Territorial Development and Social Innovation. *Canadian Journal of Regional Science*, *32*(1), 3–12.

Klein, J.-L., Fontan, J.-M., & Tremblay, D.-G. (2009). Social Entrepreneurs, Local Initiatives and Social Economy. *Canadian Journal of Regional Science*, *32*(1), 23–42.

MacCallum, D., Moulaert, F., Hillier, J., & Haddock, S. V. (Eds.). (2009). *Social Innovation and Territorial Development*. Farnham: Ashgate.

Manzini, E. (2014). Making Things Happen: Social Innovation and Design. *MIT Design Issues*, *30*(1), 1–12.

Manzini, E. (2015). *Design, When Everybody Designs An Introduction to Design for Social Innovation*. Cambridge, Massachusetts: MIT Press.

Manzini, E., Appadurai, A., & Penin, L. (2010). Change Design. *The Journal of Design Strategies*, *4*(1), 7–21.

Marques, P., Morgan, K., & Richardson, R. (2018). Social innovation in question: The theoretical and practical implications of a contested concept. *Environment and Planning*

C, *36*(3), 496–512.

Maruyama, Y., Nishikido, M., & Iida, T. (2007). The rise of community wind power in Japan: Enhanced acceptance through social innovation. *Energy Policy*, *35*(5), 2761–2769.

Mehmood, A. (2016). Of resilient places: planning for urban resilience. *European Planning Studies*, *24*(2), 407–419.

Millard, J. (2018). How Social Innovation Underpins Sustainable Development. In J. Howaldt, C. Kaletka, A. Schröder, & M. Zirngiebl (Eds.), *Atlas of Social Innovation* (pp. 40–43). Dortmund: TU Dortmund University.

Monge Iriarte, N. (2016). Social Innovation Methodologies and Research. LaFIS.

Mortati, M., & Villari, B. (2014). Design for Social Innovation. In *ServDes.2014* (pp. 79–88).

Moulaert, F., MacCallum, D., Mehmood, A., & Hamdouch, A. (Eds.). (2013). *The International Handbook on Social Innovation*. Cheltenham: Edward Elgar.

Moulaert, F., Martinelli, F., González, S., & Swyngedouw, E. (2007). Social Innovation and Governance in European Cities. *European Urban and Regional Studies*, *14*(3), 195–209.

Moulaert, F., Martinelli, F., Swyngedouw, E., & Gonzalez, S. (2005). Towards Alternative Model(s) of Local Innovation. *Urban Studies*, *42*(11), 1969–1990.

Moulaert, F., Martinelli, F., Swyngedouw, E., & Gonzalez, S. (Eds.). (2010). *Can Neighbourhoods Save the City? Community development and social innovation*. Abingdon: Routledge.

Moulaert, F., & Mehmood, A. (2011). Spaces of social innovation. In A. Pike, A. Rodriguez-Pose, & J. Tomaney (Eds.), *Handbook of local and regional development* (pp. 212–225). Abingdon: Routledge.

Moulaert, F., Mehmood, A., MacCallum, D., & Leubolt, B. (Eds.). (2017). *Social Innovation as a Trigger for Transformations*. Brussels: European Commission.

Moulaert, F., & Nussbaumer, J. (2005). Defining the Social Economy and its Governance at the Neighbourhood Level: A Methodological Reflection. *Urban Studies*, *42*(11), 2071–2088.

Moulaert, F., Schreurs, J., & Van Dyck, B. (2011). Reading space to ‘address’ spatial quality. Newcastle: Spindus.

Mulgan, G., Tucker, S., Ali, R., & Sanders, B. (2007). *Social Innovation: what it is, why it matters, how it can be accelerated*. London.

Mumford, M. D. (2002). Social Innovation: Ten Cases From Benjamin Franklin. *Creativity Research Journal*, *14*(2), 253–266.

Murray, R., Caulier-Grice, J., & Mulgan, G. (2010). *The Open Book of Social Innovation*. London: NESTA.

Nicholls, A., Simon, J., & Gabriel, M. (Eds.). (2015). *New Frontiers in Social Innovation Research*. Basingstoke: Palgrave Macmillan.

Novy, A., & Hammer, E. (2007). Radical Innovation in the Era of Liberal Governance. *European Urban and Regional Studies*, *14*(3), 210 –222.

Novy, A., & Leubolt, B. (2005). Participatory Budgeting in Porto Alegre: Social Innovation and the Dialectical Relationship of State and Civil Society. *Urban Studies*, *42*(11), 2023–2036.

OECD. (2011). *Fostering Innovation to Address Social Challenges*. Paris.

Oosterlynck, S., & González, S. (2013). "Don''t Waste a Crisis': Opening up the City Yet Again for Neoliberal Experimentation. *International Journal of Urban and Regional Research*, *37*, 1075–1082.

Oosterlynck, S., Kazepov, Y., Cools, P., Barberis, E., Wukovitsch, F., Sarius, T., & Leubolt, B. (2013). *The butterfly and the elephant: local social innovation, the welfare state and new poverty dynamics*. *IMPROVE*. Brussels.

Parra, C. (2013). Social sustainability: a competing concept to social innovation? In F. Moulaert, D. MacCallum, A. Mehmood, & A. Hamdouch (Eds.), *The international handbook on social innovation* (pp. 142–154). Cheltenham: Edward Elgar.

Phills, J., Deiglmeier, K., & Miller, D. (2008). Rediscovering social innovation. *SSIR*, (Fall), 34–43.

Pisano, U., Lange, L., & Berger, G. (2015). *Social Innovation in Europe*. *ESDN Quarterly Report* (Vol. 36). Vienna.

Pol, E., & Ville, S. P. (2009). Social innovation: buzz word or enduring term? *Journal of Socio-Economics*, *38*(6), 878–885.

Reichl, A. J. (2016). The High Line and the ideal of democratic public space. *Urban*

Geography, *37*(6), 904–925.

Rüede, D., & Lurtz, K. (2012). *Mapping the various meanings of social innovation: Towards a differentiated understanding of an emerging concept*. Oestrich-Winkel.

Sintomer, Y., Herzberg, C., & Allegretti, G. (2013). Participatory Budgeting Worldwide. Bonn: Engagement Global.

Smets, P., & van Lindert, P. (2016). Sustainable housing and the urban poor. *International Journal of Urban Sustainable Development*, *8*(1), 1–9.

Swyngedouw, E. (2005). Governance Innovation and the Citizen: The Janus Face of Governance-beyond-the-State. *Urban Studies*, *42*(11), 1991–2006.

TEPSIE. (2014). *Social Innovation Theory and Research: A Summary of the Findings from TEPSIE*. Brussels.

The Young Foundation. (2012). Social Innovation Overview. Brussels: European Commission.

UNCTAD. (2017). New innovation approaches to support the implementation of the Sustainable Development Goals. Geneva: United Nations.

UNFPA. (2016). Urbanization. Retrieved October 24, 2016, from www.unfpa.org/urbanization

van der Have, R. P., & Rubalcaba, L. (2016). Social innovation research: An emerging area of innovation studies? *Research Policy*, *45*, 1923–1935.

Voorberg, W. H., Bekkers, V. J. J. M., & Tummers, L. G. (2014). A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey. *Public Management Review*, *17*(9), 1333–1357.

WCED. (1987). *Our Common Future*. Geneva.

Westley, F., & Antadze, N. (2010). Making a difference: Strategies for scaling social innovation for greater impact. *The Innovation Journal: The Public Sector Innovation Journal*, *15*(2), 1–19.

Woodcraft, S., & Bacon, N. (2013). Innovating places: A new role for “Place difference.” In *Social Frontiers*. London: Nesta.

Table 1. Social innovation definitions.

Author/ Organisation (arranged by chronological order)	**Indicative Definition of 'Social Innovation'**	**Characteristics and Spatial Dynamics**
	'Radical' interpretation of social innovation as driver of structural changes in power relations	
Moulaert, Martinelli, Swyngedouw, & Gonzalez (2005, p.1978)	'…path-dependent and contextual…changes in agendas, agency and institutions that lead to a better inclusion of excluded groups and individuals in various spheres of society at various spatial scales. …strongly a matter of process innovation, i.e. changes in the dynamics of social relations, including power relations. …very much about social inclusion, it is also about countering or overcoming conservative forces that are eager to strengthen or preserve social exclusion situations. Social innovation therefore explicitly refers to an ethical position of social justice.'	• Understood as socio-political structuring concept in integrated area development (economy, housing, education etc); • multi-scalar innovation in social relations between neighbourhoods and wider territories embedding them; • presented as comprehensive concept, indicating multidimensional process of social change; • innovation in urban governance dynamics and restructuring power relations; • new forms of civic involvement, participation and democratisation.
Westley & Antadze (2010, p.2)	'…a complex process of introducing new products, processes or programs that profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs. Such successful social innovations have durability and broad impact.'	• Causes disruptive social change at systemic level; • socio-ecological systems resilience of natural and built environment for re-engaging vulnerable populations; • systems and complexity theory focussing on life cycles, feedback loops, continuous change in cross-scale dynamic (urban to regional to national to global) with linked interactions in social networks; • institutional change in behaviours, policies, procedures to address underlying structural causes (socio-political, economic) of seemingly intractable social challenges such as homelessness.
Avelino et al. (2014, p.9)* (TRANSIT)	'New social practices, including new (combinations of) ideas, models, rules, social relations'	• Causal interactions between context specific micro social innovations, meso level systemic social change and macro societal transformation;

	*'Transformative social innovation' contributing to system innovation and societal transformation.	• focus on globally networked initiatives and movements; • systems and complexity theory highlighting roles and interactions of local level institutions, practices, and micro-politics; • institutional changes in (dis)empowerment of governance and social learning • urban processes connecting social and ecological challenges to sustainable development.
Evers, Ewert, & Brandsen (2014, p.11) (WILCO)	'…processes alike, as: ideas, turned into practical approaches; new in the context where they appear; attracting hopes for better coping strategies and solutions; marked by a high degree of risk and uncertainty due inter alia to the specific context wherein they appear…in a significant way, new and disruptive towards the routines and structures prevailing in a given (welfare) system or local setting. Whether or not they can be seen as 'better' (more effective / social /democratic) is a question of its own that can only be answered in retrospective.'	• Supports urban cohesion, counters social vulnerability and exclusion; • emerging practices in bottom-up initiatives; • emphasis on urban governance and services institutions; • process dimension in organisation of decision-making and built environment interaction; • open governance of local authorities; • institutional, historical perspective of local governance and welfare systems; • transnational networks.
'Complementary' interpretation of social innovation to current political systems		
Mulgan (2007, p.8) (SBS Skoll & SIX)	'New ideas that work in meeting social goals…Innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organisations whose primary purposes are social.'	• Practical and organisational understanding of socio-institutional change; • civil society innovation to market and state failures in providing employment and welfare; • emphasis on place-based social entrepreneurship, enterprises providing bottom-up local solutions to macro scale social needs and goals; • instrumental, micro-economistic approach; • growth and scaling-up of socio-economic open innovations.
Murray et al. (2010, p.10) (NESTA & the Young Foundation)	'…for the social and public good. It is innovation inspired by the desire to meet social needs which can be neglected by traditional forms of private market provision and which have often been poorly served or unresolved by services organised by the state. Social innovation can take place inside or outside of public services. It can be developed by the public, private or third sectors, or users and communities – but equally, some innovation developed…does not qualify as social innovation because it does not directly address major social challenges.'	• No fixed boundaries; • intersects social economy, entrepreneurship, enterprise; • distributed systems and networks to manage relationships; • emphasises socio-institutional collaboration, intermediation, repeated interactions; • self-management and public participation; • micro-level innovations meeting social needs linked to services transformation and economic features of macro to meso levels of public sector welfare solutions.
BEPA (2011, p.33) cf. (Bacon et al., 2008, p.13)	'…are social in both their ends and their means. …new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations. …that are not only good for society but also enhance society's capacity to act.'	• Understood in market economy terms; • presented as alternative instrument to services provision; • entrepreneurial discourse emphasising activation of third sector and social business initiatives as agent for social innovations for meeting macro scale social needs; • scalar focus on national to international level welfare and social policies in contrast to local level reforms and context specific socio-political needs.
Manzini (2014, p.57)* (DESIS)	'…a process of change emerging from the creative re-combination of existing assets (from social capital to historical heritage, from traditional craftsmanship to accessible advanced technology), the aim of which is to achieve socially recognized goals in a new way.' *Utilises Mulgan et al. (2007); BEPA (2011) definitions in Manzini (2015, p.11).	• Driver of social change processes towards sustainable society; • design in and for social innovation to meet needs, forms of collaboration, comprising new signifiers making change tangible; • inclusive view of creative bottom-up design for any sphere; • examines relationships between social innovation, design styles and use; • co-design practices for dialogue in urban organisation of shared public spaces and ecology; • instrument for placemaking.

Table 2. Basic overview of social innovation research clusters.

Dimensions	Research clusters Spatial planning and community development	Governance	Co-production and service design
General understanding of social innovation	Social change through collective process of civic participation	Developing new solutions around urban social exclusion and integration	Collaborative process to increase society's capacity to act
Principal objectives	Equitable development	Citizen empowerment	Sustainable change
Research themes	Territorial development; spatial innovation and quality; systems thinking and societal transformation	Urban cohesion; participatory budgeting; multilevel governance	Public services delivery; intermediation spaces; design for social innovation
Intended outcomes	Socio-spatial justice	Social cohesion	End user empowerment
Instruments	Integrated approaches to territorial development	Bottom-linked collective decision-making processes	Hybrid collaborations; institutional support
Spatial scale	Neighbourhood to city; potentially connects to national to international social movements	Neighbourhood to city; state support and coordination to scale-up processes nationally	Emphasises scaling up neighbourhood initiatives to institutional networks and distributed national to international systems