Critical reflections on the theory and practice of social sustainability in the built environment – a meta-analysis

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Abstract

This article presents a critical reflection on the theory and practice of social sustainability in the built environment, identifies areas of agreement and disagreement, explores theoretical and conceptual gaps and challenges, and suggests practical implications for future research and urban policy. It argues that despite revisionist approaches which challenge the tripartite structure of sustainable development, social dimension of sustainability remains an essential valid pillar. Utilising a qualitative meta-analysis methodology for undertaking critical analysis of previous research and publications on the topic, key themes of theory and practice of social sustainability are identified and critically examined. Accordingly 10 key formative characteristics of social sustainability and their research and policy implications are introduced. The article concludes with institutional observations for policy makers to achieve greater success in addressing largely underestimated dimensions of social sustainability in urban settings.

Keywords: social sustainability; sustainable development; built environment; urban theory and practice; urban policy

Introduction

The term 'sustainable development' emerged as a key concept in the literature dealing with development policies in the World Commission on Environment and Development (Brundtland) report entitled 'Our Common Future' in April 1987. In general, the key message of the Brundtland report argues that actions taken today should not compromise future generations. Based on this report, the 'classic triad of sustainable development' was formulated (WCED 1987) according to which sustainability is the meeting point of three major dimensions of ecology, economy, and society. This classic triad which is built on the triple-bottom line approach, as will be elaborated later, has been subject to critique and revision. However, there is a large degree of consensus in the literature that little attention has been given to the social dimension of sustainability in the built environment disciplines (Littig and Griessler 2005, Dempsey *et al.* 2011). Social sustainability, it is argued, appears as a 'concept in chaos' (Vallance *et al.* 2011, p. 342), has been approached in a fragmented way (Weingaertner and Moberg 2014),

1

and is the least conceptually developed of the three pillars (Dillard *et al*., 2009, Boström 2012, Woodcraft 2012). As Colantonio and Dixon (2011) assert, a comprehensive study of this concept is still missing. The concept is under-theorized or often oversimplified (Colantonio 2009), and there is a need to further develop conceptual understandings from it (Cuthill 2010).

Shortcomings related to the concept of social sustainability are of two types: theoretical concerns regarding how it should be defined and understood, and practical concerns regarding how it should be operationalized and incorporated into projects and planning (Boström 2012, p. 3). While the first shortcoming necessitates more theoretical observations to establish solid and rigorous argumentations upon which social sustainability can be defined and theorised, the latter calls for more empirical and practical investigations from which more precise and place-specific policy and planning recommendations could be drawn.

After around 30 years of scholastic debate on sustainable development, and taking into account that social sustainability is seemingly the least developed, theorised, and debated dimension of sustainable development discourse, it is now time to revisit this concept and its validity, analyze its main articulations and formulations, explore its achievements, and draw practical implications for future research and urban policy. Such a revisit is timely for three reasons. First, it examines the significance, relevance, and capacity of the social sustainability dimension within sustainable development discourse. Second, it explores key concerns and principal themes of the debate as developed and transformed over time. Third, it identifies areas of theoretical and practical challenges, promises and advances, and thus provides us with helpful hints to identify future directions. Our analyses, discussions, and conclusions in this article addresses these three critical needs. Moreover, future attempts to deal with the two above-mentioned shortcomings, namely theoretical foundations and operational frameworks, could be informed and enriched by a critical evaluation of the state of the art of the social sustainability discourse.

It should be noted that social sustainability is an essentially cross-disciplinary concept: it covers a broad range of knowledge from natural science to social science and humanities (Åhman 2013), and embraces a large number of disciplines including anthropology, sociology and cultural studies, public administration, political science, social work, public health, architecture, environmental studies, business, economics, etc. (Dillard *et al.* 2009). However, in this article, our focus will be on the built environment in its broader sense; all the studies and research examined here deal with different aspects of social sustainability of the built environment of any scale from neighbourhood to region and beyond. This enables us to give specific direction to our analysis, delimit its scope, and come up with more precise results and indications relevant to the present and future of the urban settings. This is also in line with the significance of the built environment for social sustainability as the main physical and spatial arena for urban social activities in urban settings.

This article first examines the validity of the social sustainability pillar in sustainable development discourse and argues that despite critiques of its tripartite structure, the social dimension remains a valid component. It provides a qualitative meta-analysis of the studies and research on social sustainability and explores key themes in its conceptualisation and measurement. This paves the way for a critical reflection on the discourse of social sustainability. The article then introduces 10 key formative characteristics of social sustainability which determine the future direction of the field and discusses their research and policy implications. At the end it concludes

with institutional observations for policy makers to achieve greater success in addressing largely underestimated dimensions of social sustainability in urban settings.

Social sustainability and revisionist approaches: Is social sustainability a valid pillar?

A critical reflection on the theory and practice of social sustainability should start with examining the validity of the concept as an integral component of sustainable development. As noted, the original formulation of sustainable development defines it as interaction between the three pillars of ecology, economy, and society (equity), sometimes referred to as the 'three E's'. In this sense, the 'triple-bottom line' approach has been introduced as an "expedient heuristic that understands sustainability" (Peterson 2016).

This 'classic formulation', however, has been subject to challenge and critique. Some scholars accept the triad structure but underline the urgency of providing a balance between the three components and integrating them as the prerequisite for achieving sustainability (Neuman 1998, Berke 2002, Winston and Eastaway 2008, Dale and Newman 2010, Peterson 2016), others from a revisionary standpoint propose alternatives and challenge the accuracy and sufficiency of the proposed triad framework (Hawkes 2001, Godschalk 2004, Duxbury and Jeannotte 2010, Burford *et al*. 2013, Soini and Birkeland 2014, Leal Filho *et al*. 2016). Here we reflect on a number of key critiques that will help us gain a more nuanced understanding of the debate.

The first track of criticism argues that the three components of the triad model are essentially interrelated and only an integrative approach can secure achieving the complex objectives of sustainable development. For example, Peterson contends that sustainability requires an integrated approach whereby social aspects are embedded undistinguishably in environmental and economic aspects (Peterson 2016). Campbell highlights the potential conflicts occurring along the axis of the sustainability triad as the result of contradictions between them (Campbell 1996). There is a 'property conflict', he argues, between economic growth and equity arising from competing claims on uses of property, a 'resource conflict' between economic and ecological utility arising from priorities given to natural resources, and a 'development conflict' between social equity and environmental preservation arising from contradiction between improving living standards of working people and obstacles needed for environmental protection. These conflicts should be managed, negotiated and resolved to achieve sustainable development.

Revisionists, on the other hand, challenge the accuracy and sufficiency of the triad framework from both theoretical and practical perspectives and argue for alternative structures to achieve comprehensive theoretical and practical frameworks. They either add one or more pillars to the classic triad of sustainable development and propose four-pillar or multi-pillar structures, or introduce alternative schemes.

The first perspective argues for the 'missing pillar' (Burford *et al*. 2013) of the sustainable development and proposes new pillars, such as culture, liveability, governance, politics, and ethical values to build a multi-pillar structure. Adding culture as the fourth pillar is one of the most repeated arguments. Introducing culture as the basic need and the bedrock of society, Hawkes suggests a broad definition of culture which encompasses values and aspirations, and besides social equity, environmental responsibility, and economic viability, he proposes cultural vitality as the fourth pillar

of sustainable development which covers wellbeing, creativity, diversity, and innovation (Hawkes 2001, p. 3). Soini and Birkeland argue that despite some academic and policy-related attempts at highlighting cultural aspects of sustainability, the role and meaning of culture in sustainable development has remained under-emphasised and under-theorised (Soini and Birkeland 2014). They propose that due to the growing significance of geographical and cultural diversity in the world and a cultural turn which involves language and new roles of culture in society, 'cultural sustainability' must be presented as the fourth and parallel dimension to ecological, economic, and social sustainability. In some countries such as Canada, Australia, and New Zealand local planning authorities have included cultural aspects into their sustainability initiatives (Duxbury and Jeannotte 2010).

Besides culture, other themes such as liveability, governance, politics, and ethical values have been also proposed as complementary pillars for sustainable development. For example, Godschalk (2004) argues that sustainable development's three components are not sufficient to guide best practices in land use planning without considering liveable community values. To address this deficiency, he proposes a 'sustainability/liveability prism' which combines values of equity, economy, ecology, and liveability, and the connecting axes represent the interaction between them. Leal Filho *et al*. (2016) propose governance as a key element for successful implementation of sustainable development policies and measures. They argue that a weak governance practice at the local and national level jeopardises achieving sustainable societies and recommend integrating principles of governance into sustainability practice. From a managerial perspective Bendell and Kearins (2005) argue for a 'political bottom line' as an emerging dimension to manage corporate political influence for sustainable development. In an attempt to include intangible dimensions of sustainable development, Burford *et al* (2013) propose 'ethical values' as the fourth and missing pillar of sustainability.

In some cases, the revisionist approach goes beyond adding new pillars to sustainable development and proposes alternative structures and frameworks. For example, Seghezzo (2009) argues that the classic triad of sustainability does not give equal weight to fundamental aspects of development, overestimates the economic dimension, is essentially anthropocentric, largely neglects space and time, and oversees personal aspects by reducing human to human needs. He proposes a triangle formed by Place, Permanence, and Persons (three Ps). Place contains three dimensions of space (x, y, z), Permanence addresses the dimension of time, and the Persons category represents human dimension. In this sense, his three Ps make a five-dimensional structure useful for academic analysis and policymaking. According to Psarikidou and Szerszynski (2012), the vey conception of the social as the third leg of sustainability creates a problematic split between the three legs and leads to narrow, de-socialized conceptions of nature and the economy. They propose a socio-material turn in the study of sustainability in which 'the economic' is embedded in social relations, and 'the social' includes relations between humans and the material world, and thus boundaries between three Es are dissolved. This perspective, they argue, "requires us to approach sustainability as a whole in a different way – as a lived, embodied form of life, with its own spatial organization and temporal rhythms" (p.37).

We argue that both critical positions recognise social sustainability as a valid pillar of sustainable development. Scholars who call for integrating the three pillars of sustainable development recognise 'social dimension' as a valid component, underline its under-developed and under-theorised status, and call for more theoretical and

empirical investigations (Littig and Griessler 2005, Peterson 2016). Both perspectives of revisionist approach either recognise the social pillar of sustainable development as an integral component of sustainable development despite adding new pillars (Hawkes 2001, Godschalk 2004, Duxbury and Jeannotte 2010, Burford *et al.* 2013, Soini and Birkeland 2014, Leal Filho *et al.* 2016), or where new frameworks are introduced social dimension is included but with different terminology (Seghezzo 2009). For example, in Seghezzo's framework, the proposed dimension of 'Person' has social implications and includes interaction between humans, human values, quality of life, social justice, and alike. Overall, social sustainability demonstrates itself as a valid, integral component of sustainable development, but as an under-theorised discourse calls for further, in-depth investigations, examinations, and theorisation. Our article builds on this argument and attempts to contribute to the debate on social sustainability.

Research Methodology

To pave the way for a critical reflection on the theory and practice of social sustainability in the built environment we first need to obtain a broad and in-depth understanding from two following subjects: how social sustainability has been conceptualised in the literature, and how social sustainability has been empirically measured. To address these two questions we have used qualitative meta-analysis method. This method enables us to combine evidence, synthesise research results across studies, and determine common themes. It is based on a systematic review and collating of available sources and information to clarify the state of a field of research, discover if some specific themes are constant across studies, construct a general interpretation grounded in the findings derived from different studies, and identify how future studies should address these themes (Noblit and Hare 1988, Timulak 2009, Davis *et al.* 2014, Cooper 2016).

In the field of urban planning meta-analysis has been a useful tool to aggregate available research on a topic and discover common threads to emerge (Ewing and Cervero 2010). It is useful for the discipline, since it enables us to combine the outcomes of numerous studies, make an overall assessment of an approach or method, and facilitate in-depth investigation of the relationship between particular variables (Littell, Corcoran, and Pillai 2008). Bartholomew and Ewing (2008) analysed 85 scenarios in 23 planning studies from 18 metropolitan areas and found out that existing transportation models remain largely insensitive to changes in land use and transportation policy. Ewing and Cervero (2010) conducted a meta-analysis of the built environment-travel literature to extract general recommendations for practice. Loulanski and Loulanski (2011) used meta-ethnography approach to explore critical factors for sustainable integration of heritage and tourism and produced a set of 15 synthesis factors. Thomas and Bertolini (2014) conducted a meta-analysis of 11 case studies of transit-oriented development plans and identified 16 critical success factors useful for planners and guiding further research. A meta-analysis of scientific sources that examined urban adaptation schemes of US cities showed that they often lack sufficient attention to equity and social vulnerability (Hughes 2015).

After searching relevant keywords in the academic databases such as Google Scholar and Academic Search Complete and careful review of the bibliographies of the previous literature in the topic, we shortlisted 46 published studies and research that primarily focus on the subject of social sustainability or on related concepts such as social capital for further investigation. This list was reviewed against final selection

criteria including relevance to the research question, time period, type of sources, and scale of inquiry, after which 29 cases were finalised. Selected studies address different types of research questions: they either explicitly concentrate on social sustainability in the built environment, or aim at discovering its relation to other aspects of the built environment such as urban form, urban layout, transportation, and housing, or discuss social concepts such as social capital and social cohesion from the social sustainability perspective. Since social sustainability is a relatively new concept developed from 1990s onwards, sources are limited in number and time period. However, type of sources is diverse, ranging from theoretical conceptualisations to international case studies. In terms of scale, selected sources cover a range of geographies from local (e.g. a residential development or neighbourhood) to regional (e.g. province). The diversity of sources in terms of type and scale enhances accountability of the results. To avoid biased information, we gave priority to peer-reviewed articles. Sources have been analysed chronologically, as this helps to identify the evolution of the concept over the years. The analysis of resources follows a qualitative descriptive methodology to aggregate the results, present interpretive and narrative abstractions of results, and draw conclusions from a disparate set of sources (Timulak 2009, Hughes 2015). The meta-analysis was implemented in such a way that it would enable collecting evidence and material for the two key questions of the research: how social sustainability has been conceptualised and measured (requiring two inquiry tracks of conceptualisation and measurement). For the conceptualisation track, sources were carefully reviewed, analysed, and clustered based on approach (thematic concentration) and key aspects (key themes and concepts attributed to the definition and conceptualisation of social sustainability). For the measurement track, we categorised the information based on perspective (discourse to which the study belongs), objective (main goals of the study), scale (geographic focus), and indicators (number and nature of identified indicators).

Social sustainability: conceptualisation and measurement

This section presents the findings of analysis that explore how social sustainability has been conceptualized and measured, which paves the way for in-depth critical reflections and discussions in the next section. As far as conceptualisation of social sustainability is concerned: "Different people mean different things when they discuss social sustainability" (Manzi *et al.* 2010, p. 1). Some focus on meeting basic needs to address 'underdevelopment', some mean stronger environmental ethics, others point to preservation of socio-cultural traditions (Vallance *et al.* 2011). A key fact that makes defining and measuring social sustainability a difficult task is its dynamic nature which changes over time. This dynamism is rooted in the very nature of societies as dynamic entities where changing aspects such as demography, economy, social behaviour, and political opinion are accommodated.

To understand diversity, general theoretical and thematic focus, and temporal evolution of existing conceptualisations and definitions of social sustainability, a chronological summary derived from a number of publications and studies has been provided in Table 1. This table shows that social sustainability has been approached from a variety of perspectives and has been associated with a number of key themes and concepts. An analysis of the general thematic focus of the sources, what we refer to as 'approach', helps us to categorise these conceptualisations into seven main groups: cultural development and diversity, procedural quality, practical tool for urban policy, physical/non-physical aggregation, well-being, equity and democracy, and capacity building.

Table 1: Social sustainability conceptualised; key aspects of definitions

In some cases social sustainability has been seen as a concept for addressing cultural development and diversity. For Yiftachel and Hedgcock (1993, p. 140) social sustainability means the "continuing ability of a city to function as a long-term viable setting for human interaction, communication and cultural development." According to Polese and Stren (2000) social sustainability addresses policies and institutions that can integrate diverse groups and cultural practices in a just and equitable fashion. They define social sustainability as: "Development (and/or growth) that is compatible with harmonious evolution of civil society, fostering an environment conducive to compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population" (Polese and Stren 2000, p. 15–16).

Some scholars have approached social sustainability as a process rather than a product (Koning 2002) and have highlighted the procedural nature of social sustainability. In this sense, social sustainability is both a condition and a process: "a life-enhancing condition within communities, and a process within communities that can achieve that condition" (McKenzie 2004, p. 12). This implies that the social aspect of sustainability indicates " (a) the processes that generate social health and well-being now and in the future, and (b) those social institutions that facilitate environmental and economic sustainability now and for the future" (Dillard *et al*. 2009, p. 4).

In a few cases, social sustainability has been also a concern of city administrative and urban policy, such as the Social Development Plan enacted in 2005 by Vancouver's municipal authorities. According to this document "A socially sustainable community must have the ability to maintain and build on its own resources and have the resiliency to prevent and/or address problems in the future" (City of Vancouver 2005, p. 3). Social sustainability, it is argued, is built upon two kinds of resources: a) individual capacity addressing attributes that individuals can contribute to their own as well as community well-being such as education, skills, health, values and leadership, b) community capacity fostering relationships, networks and norms that facilitate collective actions that aim at improving quality of life and ensure sustainability of improvements.

Social sustainability as a physical/non-physical aggregation implies that it is associated with both social (soft) and community (hard) infrastructure: while community infrastructure addresses physical infrastructure needed for a community such as roads and urban services, social infrastructure deals with "both provision of community services that respond to the identified needs of communities, and building the 'capacity' of citizens and community groups to work together with governments for a sustainable community" (Cuthill 2010, p. 367). In a similar way, Jenks and Colin (2010) define core elements of social sustainability as two recognizable and overarching concepts of 'social equity' and 'sustainability of community.' While social equity addresses access to services, facilities and opportunities, sustainability of community comprises a set of subjects including social network and interaction, participation, sense of place, residential stability, and security (Bramley and Power 2009, Bramley *et al*. 2009, Dempsey *et al*. 2012). Social equity also implies fairness in distribution of urban resources including health and education, gender equity, and political accountability and participation (Harris and Goodwin 2001).

Supporting individual and collective well-being of the neighbourhood inhabitants is the key mission of social sustainability according to The Berkeley Group. In this sense, social sustainability "is enhanced by development which provides the right infrastructure to support a strong social and cultural life, opportunities for people to get involved, and scope for the place and the community to evolve" (Bacon *et al.* 2012, p. 9).

Equity and democracy are also introduced as the constituent elements of socially sustainable societies: "A strong definition of social sustainability must rest on the basic values of equity and democracy, the latter meant as the effective appropriation of all human rights – political, civil, economic, social and cultural – by all people" (Sachs 1999, p. 27). While equity guarantees equitable sharing of society's benefits and costs and underlines the ability of people to enjoy equal access to basic human needs regardless of race, ethnicity, gender, and income level (Opp 2016), democratic government provide a means for people to influence their governance (Larsen 2009), ensures people-oriented governance, and nurtures civic space to deepen democratic practices (Magis and Shinn 2009).

Finally, at a more operational level, social sustainability is related to actions in capacity building and skill development of the individuals and the society to address environmental and spatial inequalities. In this sense, social sustainability combines traditional social policy areas and principles, including equity and health, with a range of issues such as participation, needs, social capital, the economy, the environment, happiness, wellbeing and quality of life (Colantonio 2009).

Different approaches towards conceptualising social sustainability suggest that this concept is neither absolute nor fixed. Consequently, deriving social sustainability objectives and their corresponding indicators in order to develop an operational framework is a challenging task due to the lack of conceptual clarity and complexity of the concept (Omann and Spangenberg 2002). Despite opacity in conceptualization, researchers and scholars have developed working frameworks and identified quantifiable indicators for measuring and assessing social sustainability. To gain a deep understanding from these efforts, we analysed these studies (Table 2) based on four criteria: perspective, objective, scale, and indicators. By perspective we wanted to explore the discourse to which the research study belongs. It helps us to understand if the study adapts and extracts its central arguments from the social sustainability discourse, or draws on related concepts such as social capital, social equity, and well-being. Under objectives we identified the main goal and central questions of the research. This shows if the research aims at exploring social sustainability itself, or intends to investigate its relationship with other aspects of the built environment such as urban form, urban layout, etc. Scale looks at the level of the inquiry, from local (housing complex or neighbourhood) to the region. Indicators refer to the number and nature of indicators identified and defined for the empirical research. It also shows which aspects of social sustainability have been the basic elements of the investigation. A selective review is presented below.

Table 2: Social sustainability measured; summary of research studies

Yiftachel and Hedgcock (1993) undertook one of the first studies to examine the influence of urban planning on the level of urban social sustainability. They carried out their work in the context of Perth, Western Australia, and investigated the three indicators of equity, community and urbanity. They concluded that since the 1960s the

implemented plans had not been able to sustain the social value of Perth's metropolitan area as the resources had been distributed less equitably and the area had become less responsive to the social needs of the metropolitan and local communities. Barton (2000) developed a checklist for the sustainability of neighbourhoods based on two categories of social provision and social sustainability. Social provision includes access to facilities, built space, open space, and infrastructure, while social sustainability includes health, community safety, equity and choice. To explore the contribution of higher density to social equity Burton investigated 10 factors of access to superstores, access to green space, job accessibility, public transport use, extent of walking and cycling, amount of living space, health, crime, segregation, and affordable housing in 25 cities in the UK. The findings showed that "Social equity has limited relationship with compactness; the concept has to be broken down into its constituent elements for meaningful relationships with compactness to be apparent" (Burton 2000b, p. 1987).

Chiu (2003) assessed social sustainability of housing developments in Hong Kong using a framework with two sets of indicators clustered under liveability and equity in housing distribution and consumption. Liveability includes the two indicators of internal housing conditions and external residential quality, while equity in housing distribution and consumption comprises indicators of affordability, accessibility to housing market, inadequately housed households, accessibility to public housing, and adequacy of government subsidy in housing. The result of the study showed that the housing system of Hong Kong has been improved in terms of liveability (e.g. dwelling size, cleanliness of the surrounding area, safety, etc.) and equity (e.g. house price-to-income ratio, number of homeless persons, adequate governmental subsidy, etc.). However, the housing system has not reached the tenets of social sustainability.

To examine socially sustainable urban renewal programmes in Hong Kong, Chan and Lee provided an evaluation framework including satisfaction of welfare requirements, conservation of resources and the surroundings, creation of harmonious living environment, provisions facilitating daily life operations, form of development, and availability of open spaces as the significant underlying factors for enhancing social sustainability of local urban renewal projects (Chan and Lee 2007). This framework reflects opinions of different stakeholders involved in renewal projects, such as architects, planners, and managers.

Building on dual dimensions of social sustainability (social equity and sustainability of community) Jenks and Colin (2010) demonstrated that urban form and social sustainability are strongly interconnected. Denser urban forms are associated with higher satisfaction with the neighbourhood, higher neighbourhood problems, and more accessible services. The research also showed that sustainability of community, i.e., neighbourhood attachment, stability (versus turnover), and safety (lack of crime and disorder) display a negative, nonlinear relationship with density while group participation was least related. On the other hand social equity, i.e, use of local services, is positively related to density (Bramley and Power 2009, Bramley *et al.* 2009).

Raman (2010) proposed five indicators for measuring social cohesion of the built environment at the neighbourhood scale: sense of safety; participation, sense of belonging and sense of community; friendliness, community spirit; social network; and social interaction. In general, the research identified that low-density neighbourhoods have weaker and more spread social ties, while in higher-density neighbourhoods inhabitants enjoyed stronger but limited social networks. The study also showed that the location of public spaces, their visibility, typology and physical form of development

play a more significant role in social aspects of the built environment than density alone.

To identify and examine socially sustainable urban regeneration models and best practice measurement systems across European countries, Colantonio and Dixon (2011) developed a simplified social sustainability assessment framework, derived from the literature review, case-study analysis, and EU sustainable development policy. The main indicators included: social mix/cohesion, empowerment/participation, identity, social capital, housing, education, employment, demography, and health and safety.

The Berkley Group developed a framework to measure the social sustainability of new housing and mixed use development in the UK (Bacon *et al.* 2012). The framework consists of 13 indicators in three dimensions of infrastructure and social amenities, voice and influence, and social and cultural life. The results challenged the popular stereotype that new housing developments are less sociable and less attractive to live in; they can rapidly become strong communities with a good quality of life. Weingaertner and Moberg (2014) identified an exhaustive set of indicators from accessibility to environmental quality, with the aim of highlighting multidimensionality of social sustainability and its multifaceted nature. In a more recent publication, Opp (2016) identifies four concepts of equal access and opportunity, environmental justice, community and the value of place as the main dimensions for evaluating and assessing social sustainability efforts within jurisdictions of American cities. These dimensions are further developed into sets of specific factors (12 in sum). She gives detailed explanation about the nature of these indicators and provides practical suggestions on how these indicators can be measured using existing data or further on-site surveys in American cities context.

Discussion: the status of social sustainability discourse; a critical reflection

Our analysis sheds light on the status of social sustainability discourse in terms of conceptualisation and measurement, provides a basis for critical reflections, and suggests pointers on implications for future research, practice, and urban policy. Here we critically reflect on some key findings of our analysis.

The concept of social sustainability, like the generic concept of sustainability and sustainable development, lacks any clear theoretical formulation so that there is no consensus on its definition and areas of coverage. As Weingaertner and Moberg (2014, p. 2) put it, "There is no single blueprint definition to social sustainability, and the definitions that exist are often derived according to discipline-specific criteria or study perspectives, rather than being general." Our analysis confirms the lack of singular definition in social sustainability discourse. However, we argue that this lack is not necessarily negative. To the contrary, diverse definitions and theoretical approaches could be understood as an asset and extremely productive and generative. As Davidson points out, the diversity of approaches towards defining social sustainability is "inevitable and desirable" (Davidson 2010). This could be interpreted as a positive point, since "social sustainability is often more useful as an ambiguous and poorly defined phrase that users can shape to their own circumstances" (Manzi *et al.* 2010, p. 21). In this sense, instead of providing a fixed definition and a solid framework applicable to all cases, scales, and contexts, it hints at some general values, essential relevant concepts, and basic characteristics which should be adapted and re-formulated to fit the given context. As Boström puts it, social sustainability may not be the best concept to address complexities of social aspects of sustainability, but provides

"promising channels for communicating more broadly and playing a constructive part in wider sustainability debates, both locally and transnationally" (Boström 2012, p. 13).

Despite opacity in definition and diversity in approaches, analysing conceptualisation of social sustainability, as summarised in Table 1, provides us with some basic insights into the condition and status of social sustainability discourse. A chronological investigation seems to suggest that social sustainability has been studied and conceptualised later than the two other elements of the triad of sustainable development, namely economic and environmental sustainability. Existing sources and literature appears to be concentrated on the late 1990s and early 2000s, at least a decade after the time sustainable development became the mainstream.

Looking at the nature of the key aspects associated with approaches and definitions (Table 1) indicates that there is a shift from traditional themes such as employment, poverty, and basic needs to more intangible and less measurable themes such as identity, sense of place, happiness, and social networks; a shift from 'hard' themes towards 'soft' concepts (Colantonio 2009). This shift implies growing concern regarding non-physical aspects of sustainability and its qualities. This sophistication, of course, mirrors the changing character of social needs, but makes measuring social sustainability a critical challenge (Colantonio and Dixon 2011).

Our analysis challenges the dominant wisdom on social sustainability as an essentially weak and slippery concept. Although, at the first glance, social sustainability appears to be approached fragmentally (Weingaertner and Moberg 2014) and presents itself as a "concept in chaos" (Vallance *et al*. 2011, p. 342), a closer look at the definitions and formulations suggest that some key features and characteristics have been repeatedly attributed to it. To identify these attributes, we conducted a thematic analysis of the key aspects in order to categorise them into a number of generic and comprehensive themes. The result indicates that there are some central principles associated with social sustainability underlined by the researchers and scholars. As Table 3 shows, social sustainability has been conceptualised around seven key principles: equity; democracy, participation, and civic society; social inclusion and mix; social networking and interaction; livelihood and sense of place; safety and security; human well-being; and quality of life.

Table 3: Social sustainability, principles and key aspects

Equity is the most important and repeatedly referenced principle, as if social sustainability is synonymous with it. Equity has been approached from different perspectives of gender, generations, rights, access to services, opportunities of employment, education, health etc. In this sense, equity is an all-embracing concept that addresses all the basic human rights and is the backbone of a socially sustainable community. Democracy, participation, and civic society occupy the second place of importance regarding social sustainability. The aim is having the right to practice democratic processes, effectively participate in political and communal activities through civic society, and thus achieve a people-oriented governance and an empowered community. This is followed by social inclusion and social mix that indicate a socially diverse but inclusive community, where spatial segregation is negated and cultural diversity is celebrated. Social networking and interaction makes a society socially cohesive and interconnected, and enhances social capital. Sense of livelihood and sense of place make the human environment vital and vivid, safety and

security make it attractive for living, and human well-being and quality of life secures a healthy and happy life possible.

Earlier we reviewed research studies that developed practical frameworks for measuring social sustainability, and analysed them based on four concept-codes of perspective, objective, scale, and indicators (Table 2). A careful examination of the outcomes provides us with another fresh insight into the social sustainability discourse. In terms of the departure point or perspective, the majority of the studies take social sustainability as their departure point. However, in some studies social equity, social cohesion, and social capital have been also the departure points. This supports two earlier arguments we made. Firstly, in the same way that sustainability appeared as an ideal development model globally (Wheeler 2013), social sustainability gradually presented itself as a mainstream concept for dealing with social dimensions of a sustainable future. Secondly, social sustainability turned into an umbrella concept for previously debated concepts which were used for addressing the social dimension of the built environment, such as social equity, social capital, social cohesion, and social justice.

The analysis also suggests that more recent research on social sustainability has shifted from macro scales of city and region into micro scales of communities and neighbourhoods, and this indicates that neighbourhoods and communities are becoming the primary spatial unit for investigating social sustainability. This reflects the call for investigating social sustainability at the local scale on the one hand (Hamiduddin 2015), and the growing significance of urban neighbourhoods in different areas of urban planning and design on the other (Pagano 2015, Davoudi and Madanipour 2015, Forrest 2008, Whitehead 2003, Brenner and Theodore 2002, Madanipour 2001, Kallus and Law-Yone 2000). Despite this general shift, macro scales of district, city, and region have been also the scale of inquiry, which highlight the relevance of social sustainability to all geographical and territorial realms. In terms of objectives and goals, studies pursue a diverse range of purposes, mainly trying to investigate the relationship between social sustainability and other physical or non-physical elements such as density, urban form, and housing. In this sense, social sustainability appears to be understood as an essentially multidimensional and cross-disciplinary concept with critical relationships with other aspects of the built environment (Åhman 2013).

Coming to the question of indicators our analysis provides some helpful pointers. First, there is an explicit diversity regarding the appropriate indicators for measuring social sustainability that are defined and developed according to the goals and objectives of the study. Secondly, since social aspects are essentially scale-based, social sustainability measures have been defined according to the 'scale' of the study (Penninx *et al*. 2004); issues like employment are more related to the city scale, while sense of place can be investigated at the neighbourhood scale. Therefore, the measurement scale is a determinant criterion for defining the number and nature of measuring indicators. Moreover, a chronological investigation of the nature of the indicators reveals that there is a shift from primarily physical aspects to more non-physical aspects, or from mainly quantitative aspects into substantively qualitative ones. For example, indicators such as sense of place, feeling of safety, social interaction, and well-being are mainly the focus of recent studies rather than physical aspects such as access to facilities and urban amenities or other more objective qualitative aspects such as economic prosperity. This shift from hard indicators to soft indicators encourages us to underline the 'relational' nature of social sustainability indicators and bring into question their generic relevance to different socio-cultural and spatial contexts.

Primarily non-physical nature of indicators suggests that they are perception based and existential, and thus are essentially place-specific. For example, sense of place is a phenomenological and existential subject fundamentally related to the historical-cultural background of the inhabitants of a community. Social interaction and satisfaction with home, on the other hand, are culturally-loaded; a certain extent of social interaction which is considered optimal in a particular cultural sphere might be perceived unfavourable in a different place. Similarly, satisfaction with home has different meanings in different socio-cultural contexts; an acceptable living condition in one country might be unacceptable in another. Thus, outcomes of social sustainability research become relational and problematise unconditional generalisation.

Conclusion: advances in social sustainability discourse and practical implications for future research and policy

Our analysis of the conceptualisations of social sustainability and the way this concept has been operationalised helped us to gain fresh insights into the past and present evolution of social sustainability discourse and illuminate recent advances in the field. Accordingly, we can suggest possible pathways for progressing this discourse based on 10 key formative characteristics that are presented in Table 4. These can potentially have significant research and policy implications to the benefit of both academic and professional communities.

Table 4: Key formative characteristics of social sustainability discourse, research and policy implications

      The first two key formative characteristics underline the under-theorised and under-developed status of social sustainability and the opacity in its definition. As we discussed earlier, despite critiques on the sufficiency of tripartite structure of sustainable development and reformist views which suggest complementary pillars to fill the gaps and establish coherent and comprehensive formulations, the social dimension remains a valid pillar. However, social sustainability has been repeatedly claimed to be the least developed element of sustainable development (Ročak et al. 2016, Yoo and Lee 2016, Woodcraft 2012, Colantonio and Dixon 2011, Cuthill 2010, Davidson 2010, Bramley et al. 2009, Colantonio 2009, Koning 2002, Yiftachel and Hedgcock, 1993). Different approaches to social sustainability have resulted in a fragmented, sometimes contradictory, body of literature. We argued that the lack of solid definition and conceptual framework is not a disadvantage: it reflects the complexity of the social dimension of sustainability and also allows researchers to develop case-specific and place-specific formulations. This implies that social sustainability should be subject to more in-depth studies and research, its interconnectivity with other aspects of sustainable development is to be more systematically and comprehensively explored and discussed. Such research should recognize diversity of definition and conceptualization, and develop place-specific interpretations relevant to the socio-spatial particularity of the place, informed by the key themes that could be drawn from the literature. This also necessitates more place-specific or context-sensitive investigations (Kytta et al. 2016), from which cities and communities can take advantage. Local authorities and city administrations should establish collaboration with research institutions, direct community concerns and questions to be researched, facilitate empirical research at the community level, and establish global dialogue with other cities to learn from different approaches towards achieving social sustainability.

The next two key formative characteristics highlight the area of consensus observable behind the theoretical diversity, and the discursive shift in the nature of agreed themes. In fact, despite disagreement in definition, we observed a number of key themes which have been integral to argumentations of the social sustainability discourse, such as equity, participation, social interaction, and safety, to name but a few. From a chronological point of view, intangible and less physical aspects have been gradually dominating the measurable and physical aspects, implying necessity of more qualitative investigations. In research, key principles should be formulated as main indicators for in-depth studies, their interconnectivity and interaction should be questioned and investigated. The shift from tangible to intangible qualities in conceptualization should be celebrated, as it reflects non-physicality of socio-cultural dimension of societies. It also implies employing qualitative methods to explain complexity and rational behind the indicators, as some scholars have already underlined (Boschmann and Kwan 2008, Chiu 2003). City-wide urban strategies should focus on the principle themes of social sustainability, and enhancing qualities related to these themes should be introduced as main objectives and goals of the urban programmes. These programmes should also go beyond technical objetives and address in-depth non-physical qualities.

The emergence and dominance of sustainability discourse in the 1990s has to a large degree absorbed previously developed and debated concepts in social science research such as social capital, social cohesion, and social justice, and introduced a generic and umbrella concept under which other social concepts can be studied and investigated. This is an advantage for the social sustainability discourse, as it can benefit from the well-developed arguments of these concepts and their scientific achievements. At the practical level social sustainability should be an integral part of any urban project, so that all the development policies should have a social sustainability dimension. However, this faces some critical challenges. Firstly, systematic methodologies which incorporate social sustainability concerns into urban development planning are missing (Turner 2012). Secondly, it is likely that policy makers exploit social sustainability rhetoric for justifying and legitimising market-oriented and unjust development programmes (Lees 2014). Finally, incorporation of social sustainability qualities into urban policy should be collaborative and avoid being prescriptive and top-down (Gressgård 2015).

The sixth and seventh key formative characteristic is about the territorial multiscalarity of application and its focal shift from macro to micro scale. Social sustainability has a multiscalar nature from national and regional to the local which makes it relevant to all urban scales. Recent research, however, has given more weight to the local scale of community and neighbourhood. This implies encouraging micro-scale surveys at the local level of community and neighbourhood, and conducting in-depth multi-method qualitative research which is more practical at the small urban areas. This also parallels the revival of neighbourhood in recent urban policy (Gallent and Robinson 2013; Pagano 2015) which necessitates investigating and assessing social impacts of the neighbourhood-oriented programmes and projects. The focus on the local scale, however, should not lead to negligence of meso and macro scales.

Social sustainability in the built environment has gained a multidisciplinary character and investigates interconnectivity and linkages between constitutional indicators of different disciplines, for example the impact of physical improvements of redevelopment schemes on social aspects of the community. However, there is no single evaluation framework applicable to all disciplines and scales. This implies that any

evaluation framework should identify its relevant indicators and measures based on the two important factors of goal and scale of the study; what is relevant to one scale, could be less relevant to another scale. Thus, social sustainability research should move towards multidisciplinary and bricolage approaches (Denzin and Lincoln 2011). Social sustainability discourse can also provide us with a strong theoretical framework and serve as a reliable departure point for evaluating development programmes and initiatives. However, we need to be careful since "scaling up to engage with citywide planning strategies, without losing the social specificity of neighbourhood experience will be difficult" (Woodcraft 2012, p. 33).

As noted earlier, a main strand of social sustainability research examines its relationship with other aspects of the built environment. Two issues are of high importance in investigating interconnectivity between elements of social sustainability and different aspects of the built environment: the 'degree' of interconnectivity and the 'nature' of interconnectivity. While the 'degree' of interconnectivity explores the extent of correlation between different aspects, the 'nature' of interconnectivity clarifies the positive or negative value of correlation. The example of relationship between social sustainability and compact urban form can clarify this argument. The literature suggests a high level of consensus on the interconnectivity and co-relation between aspects of social sustainability and urban form (Dempsey *et al*. 2012, Dave 2011, Karuppannan and Sivam 2011, Raman 2010, Miles and Song 2009, Burton 2000a, Bramley *et al*. 2009, Bramley and Power 2009, Burton 2000b, Jenks *et al*. 1996, Yiftachel and Hedgcock 1993). The main question, however, is the 'degree' and 'nature' of this interconnectivity. In other words, more comparative empirical studies need to be conducted to explore 'positive or negative impact' of the interconnection. This is an area where disagreement comes into the debate; different research report different degrees and nature of interconnectivity between urban form and social sustainability, very much rooted in the 'context' of the study area; physical characteristic of the built environment and its socio-cultural, economic, and political structure.

Finally, results of any social sustainability research are fundamentally place-specific and socio-cultural driven, and this brings into question wider unconditional generalization. As Allen and Lloyd-Jones (2010, p. 80) put it for the neighbourhood context, "The meaning of social sustainability is not the same for every neighbourhood; it is necessary to make the idea explicit for each specific area". This implies that validity and accountability of results should be carefully examined, recommendations and proposed guidelines should be reconsidered for the given place and case. This is of high importance for policy makers when they look at the best practices and import policy strategies from other contexts and cities.

To end we provide the following institutional observations in order to enhance success in addressing social sustainability in urban settings. Firstly, social sustainability needs to be institutionally integrated into urban policies and become a prominent aspect of a sustainable future besides economy and environmental dimensions. As previously noted, only in a few cases such as Vancouver, the concept of social sustainability per se, and not similar concepts such as social capital, social equity and a like, has served as the departure point for policies regarding enhancing social challenges of the society. Secondly, social sustainability of cities, due to the inherent dynamics of societies, gains a procedural character. This procedural nature should be recognised, and this implies long-term monitoring schemes to obtain a longitudinal as well as latitudinal understanding from communities and their changing dynamics to plan needed actions.

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Table 1: Social sustainability conceptualised; key aspects of definitions

Author	Approach	Key Aspects
(Yiftachel and Hedgcock 1993)	cultural development	viability of human interaction, communication, and cultural development; vitality, solidarity and common sense of place among citizens; lack of violent intergroup conflict; lack of conspicuous spatial segregation; chronic political stability
(Sachs 1999)	equity and democracy	equity; democracy: effective appropriation of all human rights – political, civil, economic, social and cultural – by all people
(Polese and Stren 2000)	cultural development	harmonious civil society; cohabitation of culturally and socially diverse groups; social integration; quality of life for all segments of the population
(Harris and Goodwin 2001)	physical/non-physical aggregation	fairness in distribution of opportunity; adequate provision of social services, including health and education; gender equity; political accountability and participation
(Koning 2002)	procedural quality	socially juts and equal; without social exclusion; a decent quality of life or livelihood for all the people; emancipation, freedom and solidarity
(McKenzie 2004)	procedural quality	equity of access to key services; equity between generations; effective cultural relations and protection of cultural values; widespread political participation of citizens; intergeneration awareness of social sustainability; a sense of community responsibility; empowered community; and political advocacy
(City of Vancouver 2005)	urban policy	equity; social inclusion and interaction; security; adaptability
(Magis and Shinn 2009)	equity and democracy	human well-being; equity; democratic government; democratic civil society
(Larsen 2009)	equity and democracy	social inclusion; human dignity; people-oriented governance; equal learning opportunities
(Colantonio 2009)	capacity building	capacity building and skill development; equity and health; participation; needs; social capital; happiness; well-being; quality of life
(Manzi *et al.* 2010)	physical/non-physical aggregation	equality in employment, education, health, etc.; reduced social exclusion; community empowerment; proportionate social infrastructure; effective access to goods and services; environmental equality; high social capital
(Bramley and Power 2009) (Dempsey *et al.* 2012)	physical/non-physical aggregation	access to services, facilities and opportunities; social network and interaction; participation; sense of place; residential stability; security
(Boström 2012)	procedural quality	provision of basic needs; equality of rights; access to infrastructure; employment; educational equality; security; civic society and social capital; health; social cohesion; cultural diversity; sense of community; provision of housing; quality of life; participation and decision making; empowerment; social monitoring
(Murphy 2012)	equity and democracy	equity; awareness for sustainability; participation; social cohesion
(Bacon *et al.* 2012)	well-being	people's quality of life; individual and collective well-being; communal interaction and function; right infrastructure; social and cultural life; residents involvement; scope for the place and the community to evolve
(Opp 2016)	equity and democracy	equal access and opportunity, environmental justice, community and the value of place, and basic human needs

Table 2: Social sustainability measured; summary of research studies

Author	Perspective	Objective	Scale	Indicators
(Yiftachel and Hedgcock 1993)	social sustainability	influence of urban planning on the level of urban social sustainability	city	equity; community; urbanity
(Barton 2000)	social sustainability	check list for the sustainability of neighbourhoods	neighbourhood	access to facilities; built space; open space; infrastructure; health; community safety; equity and choice
(Burton 2000b)	social equity	higher-densities and social equity	city	access to superstores; access to green space; job accessibility; public transport use; extent of waking and cycling; amount of living space; health; crime; segregation; affordable housing.
(Chiu 2003)	social sustainability	exploring the relationship between housing and social sustainability	districts/housing developments	internal housing conditions; external residential quality; affordability; accessibility to housing market; inadequately housed household; accessibility to public housing; adequacy of government subsidy in housing
(Chan and Lee 2007)	social sustainability	examining socially sustainability of urban renewal programs	not specific	satisfaction of welfare requirements; conservation of resources and the surroundings; creation of harmonious living environment; provisions facilitating daily life operations; form of development; availability of open spaces
(Knippenberg et al. 2007)	social capital	developing and spreading knowledge about sustainable development	region (province)	health and care facilities; solidarity; safety; cultural diversity; citizenship; living environment; education and training
(Bramley and Power 2009)	social sustainability	relationship between residential density and social sustainability	neighbourhood	access to services; interaction with other residents or social networks; participation in collective community activities; pride or sense of place; residential stability (versus turnover), security (lack of crime and disorder)
(Cuthill 2010)	social sustainability	a framework for investigating social sustainability	urban regional	social capital; social infrastructure; social justice and equity; engaged governance
(Raman 2010)	social cohesion	relationship between urban design and layout and aspects of social and communal life	neighbourhood	sense of safety; participation, sense of belonging and sense of community; friendliness, community spirit; social network; social interaction
(Dempsey et al. 2011)	social sustainability	exploring concept of social sustainability within the British urban context	neighbourhood	social interaction, participation in collective groups, community stability, pride/ sense of place; safety/security

(Colantonio and Dixon 2011)	social sustainability	developing a simplified social sustainability assessment framework	district/neighbourhood	social mix/cohesion; empowerment/participation; identity; social capital; housing; education; employment; demography; health and safety
(Karuppannan and Sivam 2011)	well-being	the impact of urban form on social sustainability at the neighbourhood level	neighbourhood	knowing the neighbours; frequency of meeting the neighbours; participation in community and social activity; opportunities for formal and informal gathering; pride of place; safety concerns; feeling strongly attached to the residence; stop and chat with neighbours or say hello; number of neighbours visited; making new friends
(Dave 2010, Dave 2011)	social sustainability	relationship between density and social aspects of sustainability in developing countries	neighbourhood	access to facilities and amenities; amount of living space; health of the inhabitants; community spirit and social interaction; sense of safety; satisfaction with the neighbourhood
(Bacon et al. 2012)	social sustainability	developing a framework to measure the social sustainability of new housing and mixed use developments	housing developments	provision of community space: transport links; place with distinctive character; integration with wider neighbourhood; accessible street layout; adaptable physical space for future development; perceptions of ability to influence local area; willingness to act to improve area; positive local identity; relationships with neighbours; well-being; feelings of safety; community facilities
(Weingaertner and Moberg 2014)	social sustainability	identifying common aspects of social sustainability	no specific	accessibility; social capital and networks; health and well-being; social cohesion and inclusion; safety and security; fair distribution of income, employment; local democracy, participation and empowerment; cultural heritage; education and training; equal opportunities and equity; housing and community stability; connectivity and movement; social Justice; sense of place and belonging; mixed use and tenure; attractive public realm; local environmental quality and amenity
(Opp 2016)	social sustainability	Proposing framework for evaluating and assessing social sustainability efforts within jurisdictions of American cities	city	access to open spaces/recreation; equal access to job opportunities; equal access in connectivity and transportation; equal education access and opportunity; procedural fairness; environmental justice index by census tract; health risk and well-being; social capital; social segregation; affordable housing; safety and security; fair distribution of income

Table 3: Social sustainability, principles and key aspects

Principles	Key Aspects
Equity	quality of life for all segments of the population/ fairness in distribution of opportunity/adequate provision of social services/gender equity/socially justice/equity of access to key services/equity between generations/ equal learning opportunities/ equality in employment, education, health, etc./proportionate social infrastructure/environmental equality/equality of rights
Democracy, participation, and civic society	effective appropriation of all human rights – political, civil, economic, social and cultural – by all people/harmonious civil society/political accountability and participation/freedom and solidarity/emancipation/ widespread political participation of citizens/a sense of community responsibility/empowered community/political advocacy/democratic civil society/people-oriented governance/community empowerment
Social Inclusion and Mix	lack of spatial segregation/cohabitation of culturally and socially diverse groups/social integration/cultural diversity/effective cultural relations and protection of cultural values
Social Networking and Interaction	viability of human interaction, communication, and cultural development/ social cohesion
Livelihood and Sense of Place	vitality/solidarity and common sense of place among citizens/ a decent quality of life or livelihood for all the people
Safety and Security	lack of violent intergroup conflict/chronic political stability
Human well-being and quality of life	human dignity/happiness/health/individual and collective well-being

Table 4: Key formative characteristics of social sustainability discourse, research and policy implications

Key Formative Characteristics	Explanation	Implications	
		Research implications	**Policy implications**
Space for further investigation	Social sustainability is the least developed element of the sustainable development pillar.	conducting more comparative, international and interdisciplinary investigations / conducting further empirical research / prompting place-specific surveys /discussing and clarifying areas of commonality and difference	establishing collaboration with research institutions / directing community concerns into research / learning from diversity of approaches / establishing global dialogue with social sustainability-driven urban programmes
Opacity in definition as potentiality	There is an inevitable disagreement on the definition of social sustainability, and this opacity gives flexibility to adapt it to the complexity of the society in question.		
Key themes and areas of consensus	Despite disagreement in conceptualization of social sustainability, it has been formulated around some key principles such as equity, democracy, social inclusion, social interaction, livelihood, safety, and well-being.	developing key principles into main indicators for in-depth studies / researching interconnectivity and interaction of key principles / bringing soft qualities of social sustainability to the front stage of investigations	introducing key themes as main concerns of city-wide urban policies / highlighting key principles in redevelopment projects / launching programmes to enrich qualities of each principle / moving from technical ethos is urban policy towards soft qualities / giving priority to intangible qualities of the built environment
Shift from hard to soft themes	Conceptualizations of social sustainability have shift from hard, measurable themes towards soft, intangible ones.		
Social sustainability as an umbrella concept	Social sustainability has turned to an umbrella concept to investigate previously debated social concepts such as such as social equity, social capital, social cohesion, and social justice.	Taking advantage of the advances of all relevant social concepts to enrich social sustainability discourse/making constructive dialogue with similar social concepts and identifying areas of commonality and difference	introducing social sustainability as a key component of all urban policies and development projects
Territorial multiscalarity	Social sustainability enjoys a territorial multiscalarity of application from micro (community) to macro (regional and national).	encouraging micro-scale surveys at the local level of community and neighbourhood / conducting in-depth multi-method qualitative research	focusing on neighbourhood-oriented urban programmes and projects for promoting social sustainability
Shift to micro scale	Despite this multiscalar nature, there is a scalar shift in social sustainability studies from macro scale to the micro scale of neighbourhood.		
Multidisciplinary enquiry	Social sustainability research advocates a multidisciplinary approach to explore interconnectivity of aspects of social sustainability to physical-nonphysical dimensions of the built environment.	moving towards multidisciplinary approaches / employing bricolage methodologies / developing evaluation frameworks / exploring nature and degree of interconnectivity between elements of social sustainability	
Goal- and	Social sustainability indicators are		

scale-specific indicators	determined based on the 'goal' and 'scale' of the enquiry.		
Relational nature of outcomes	Non-physical social sustainability indicators are 'relational' and 'place-specific' by nature, and thus problematize any generalisation.	examining validity and accountability of research results / conducting comparative studies for more accountability of results	examining imported urban policies and strategies from other contexts