The Scale of Urban _
World Urbanisation and Architectural Reactions

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ABSTRACT   **The chapter represents a theoretical overview of the historical and contemporary debate on urbanisation issues. It is presented in the form of a concise interpretation of the basic concepts related to urbanisation, for the purposes of the understanding and reinterpretation of (urban) sustainability. The chapter points out the critical urban theory thesis that urbanisation is a social process generated and materialised through dynamic spatial transformation that is becoming planetary. The contemporary urbanisation fundamentally changed the cities from centric formations to the new polymorphic urban tissue deeply extended in the once rural and natural environment. Therefore, the chapter is based on the presumption that the issue of urban sustainability cannot be comprehended without an understanding of emergent interconnections and dependencies between different spatial scales, urban agglomerations, and close and distant operational territories. The management of urbanisation as a large-scale process and configuration is understood as the basic drive for the creation of sustainable urban places and territories. Furthermore, the chapter follows the contemporary methodological platforms and conceptual tools for the research of the local urban conditions in the context of planetary urbanisation. It focuses on the selected emerging urbanism approaches to researching and designing the new urban tissue, as a disciplinary path to overcoming the utopian comprehensive model of planning and designing the cities.**

KEYWORDS   urbanisation, urban age, planetary urbanisation, spatial scale, city boundaries, territory, design strategies

1 Spatial Scales of Urban Sustainability

"Sustainability is commonly misunderstood as being equal to self-sufficiency, but in a globalized world virtually nothing at a local scale is self-sufficient. To become meaningful, urban sustainability therefore has to address appropriate scales, which always would be larger than an individual city." (Elmqvist, 2013, para. 4).

The basic and most commonly used definition of the *sustainability* concept, coming from the famous Bruntland Report (UN-WCED, 1987), is essentially concerned with resources. Of course, after that point in the historical line of sustainability, the concept evolved through the numerous interpretations coming from different academic and professional fields, some of which will be explained in the other chapters of this edition. Above all, the Bruntland Report definition stayed at the core of sustainability thinking and states that we, as a civilisation, should envision and manage our development (growth) in a way that will preserve the resources for our future generations. Therefore, if we want to understand the meaning of the sustainability concept in the context of urbanism, we should first understand how the cities are functioning in terms of their resources.

The cities of today are highly dependent on resources and services from the wide territorial and planetary scale. Considering that, cities are no longer distinct territories of different sizes, surrounded by rural and natural environments, as they were until the twentieth century. On the contrary, they are connected by transportation and communication networks into almost one urban formation, dispersed and fragmented. One place is reliant on many distant places and regions around the world for food, water, electricity, and many other necessities. The city is no longer directly related only to its nearest or surrounding territories, and this large-scale character affects its own structure, functioning, and urban way of life.

Following this contemporary condition of cities, this chapter relies on the Thomas Elmqvist's thesis on the urban sustainability (Elmqvist, 2013). Cities, in order to be considered sustainable, need to manage their transformation and everyday way of life on different scales. At the city scale, there is a need to continuously work on the optimisation of the use of resources, to increase energy efficiency and to minimise waste. On a wider scale, there is a need to consider any kind of a city's dependence and impact on resources in other parts of the world. Therefore, if urbanism wants to address the sustainability, it must address the issue of contemporary urbanisation that no longer produces a city as a settlement in a traditional sense, but as a large-scale, dispersed, fragmented, and networked landscape. The question of sustainability is related to the question of *interconnectedness of various spatial scales*.

Contrary to the Elmqvist's thesis, the urban sustainability debate is predominantly concerned with the city scales, "as bounded, technologically controlled islands of eco-rationality that are largely delinked from the broader territorial formations (Brenner & Schmid, 2015, p. 157)". Interpretations of the sustainability concept in fields that deal with urban space have begun at the international level, through summits and conferences, in the nineties. Until today, they have resulted in strategies, agendas, and other types of regulatory documents that are voluntarily accepted at the national/state levels. On the other hand, their operational level is very local, where regional and city authorities play the key role in the development and implementation of the sustainability principles. The famous Agenda 21, the UN sustainability strategy defined at the UN Earth Summit in Rio de Janeiro in 1992, is an example of this hierarchical principle through which sustainability is monitored and measured on administrative spatial scales, from the state level to the local, mostly city level (UN, 1993). Although Agenda 21 called for the exchange of the collected data, the establishment of a cooperation network, as well as the formation of a common set of urban indicators of sustainable development, it stayed focused on a city scale. It rarely takes into account the wide-scale socio-economic process that does not stop at the city or national borders. Even implementation on the regional level means that sustainability is going to be measured as a sum of local and national actions in wide territories such as Europe, North America, Africa, etc. In general, sustainable development is expected to come through the implementation of common principles into hierarchically divided territories, mainly cities, taking no account of the horizontal, multi-scale functioning of the urbanisation process. The most recent UN document, adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, in 2016 (UN, 2017), dwells on the same premise.

Alongside the sustainability discourse, the prevailing body of contemporary urban ideologies is concerned with the urban condition as the city phenomenon (Brenner & Schmid, 2015). Moreover, the practices of urban planning and urban design usually deal with administratively bounded territories and predefined scales. In this sense, urban theory and practice enhance the further fragmentation of urban space, while the urban reality is deeply immersed in networks. As Elmqvist pointed out, there is a need to understand it from the perspectives of diverse scales.

This chapter will explore this 'scale misunderstanding' and point out the gap between the contemporary forms of urbanisation, multi-scaled and networked in nature, and the comprehensive ideal of the city theory and planning, still very much alive in the urbanism discipline. Furthermore, it will follow the recent theoretical body and research strategies on urbanisation that seek to understand the social and spatial relations between the concentrated habitats we call cities, and the distant territories they are now dependent on. An understanding of these relations will bring us, we believe, closer to sustainability. Consequently, managing urbanisation is what sustainability is about.

2   **The New Urban Tissue**

"...while the locus of urbanism as a mode of life is, of course, to be found characteristically in places which fulfil the requirements we shall set up as a definition of the city, urbanism is not confined to such localities but is manifest in varying degrees wherever the influences of the city reach" (Wirth, 1938, p. 7).

From the spatial point of view, urbanisation radically transformed landscapes all over the world. Traditional configuration and the experience of the city as a dense, walkable, and core-dominated unit had already begun to dissolve in the fifties. The spatial results of the post-war decentralising urban politics became soon visible, such as large-scale infrastructural systems, demolition of old city centre neighbourhoods, spreading of low-density urban peripheral structure, and repetitiveness of urban morphology. Today, all these spatial transformations are even more radicalised and extended to villages, farming fields, forests, deserts, wetlands etc. producing new social and spatial relations. Sometimes, in contrast to common knowledge, where "[s]uch a transition exposes strange urban landscapes where the marginal can be central; centrality can be on the urban margin; and the 'urban' expands far into spaces previously considered as 'countryside' (Graham & Marvin, 2002, p. 115)."

Philosopher and sociologist Henry Lefebvre conceptualised the new spatial configurations that expand into and reshape rural areas, and at the same time transform historic city cores as the new *urban fabric* (*tissu urbain*) (Lefebvre, 2003/1970, p. 3). In his book *The Urban Revolution* (*La Révolution urbaine*) from 1970, he explains that this new urban landscape is forming in such a way that boundaries between the cities and their surroundings are made relative. In this relationship, a city can hardly be seen as a spatial and functional whole, while at the same time its perimeter represents an area characterised by highly dynamic forms and sizes. Lefebvre describes this simultaneous process of urbanisation as an "implosion-explosion" and its outcome tissue as "the tremendous concentration (of people, activities, wealth, goods, objects, instruments, means, and thought) of urban reality and the immense explosion, the projection of numerous, disjunct fragments (peripheries, suburbs, vacation homes, satellite towns)" (Lefebvre, 2003/1970, p. 14). These 'exploded' fragments, out of the sight of an urban dweller, but at the same time coherently connected to our urban reality, form what urban theorists and researchers Neil Brenner and Cristian Schmid call *an operational landscape* (Brenner & Schmid, 2015).

An important component in the production of the new urban tissue has been the introduction of new infrastructures. There is a complex *hardware* landscape consisting of the railways, highways, pipes, wires, and building networks that are running through, over, and under cities and hinterlands. They deliver the flow and exchange of energy, water, food, and commodities, but also of people and information. In addition,

there is a technologically advanced *software* layer of this new landscape composed of electronic signals and signs. Together, they support, and are a part of, the creation and extension of a new urban tissue in the spatial sense. However, they also support the contemporary urban life as a dynamic interplay between the body scale and global world. As a means of communication, mobility, information distribution, etc., they also support the production of a new urban experience, multi-scaled in nature.

Brenner and Schmid, in the last four decades, recognised and put forward three macro-trends that characterise the urbanisation (Brenner & Schmid, 2015). The first one is the formation of the *new geographies of uneven development* (p. 152). The previous period of industrialisation also produced uneven spatial development, but it was geographically readable as a distinctive typology of territories, such as village and city, East and West, First World and Third World, etc. In the contemporary state of urbanisation, different conditions of wealth and poverty, growth and decline, centrality and marginality, stand side by side and mutually produce each other.

The second trend of urbanisation is *the change of the basic nature of urban reality*, which means that 'exploded' contemporary condition is problematic in categorising according to the traditional bounded space typology of town, city, metropolis, and region (p.152). We are confronted with the urban reality that brings forth diverse socio-economic conditions and territorial formations. Some of its key features are the densification of inter-metropolitan networks, building the large infrastructural systems, restructuring the traditional hinterlands, extension of large-scale land-use systems devoted to recourse extraction, transformation of rural areas, operationalisation of wilderness, etc.

Finally, the third trend following urbanisation is *transformation of inherited geographies of urban governance* (p.153). Hierarchical institutional frameworks that operated according to the hierarchical territorial organisation, such as the state territory, became the worldwide network of the decision-making places. This new landscape of territorial governing is dominantly oriented to market 'liberalisation' and state deregulation.

In conclusion, although urbanisation is materialised and visible through *tissu urbain*, critical urban theory conceptualises urbanisation as a process, not exclusively as a physical appearance. The thesis explicitly put forward by Henry Lefebvre (2003/1970) has been developed through the work of other critical urban thinkers such as David Harvey (1985, 1996) and, more recently, Neil Brenner and Cristian Schmid (2013, 2015). Spatial transformations of the concentrated built environment and distant landscapes are closely intertwined with economic and governance restructuring, as well as with dramatic social and en-vironmental consequences.

"Simply put, the urban is not a (fixed) form but a process; as such, it is dynamic, historically evolving and variegated. It is materialised within the built environments and socio-spatial arrangements at all scales;

and yet it also continually creatively destroys the letter to produce new patterns of socio-spatial organisation" (Brenner & Schmid, 2015, p. 165).

The contemporary urban condition is, of course, closely related to a neoliberal model of capitalist economy. However, it is often portrayed as an almost natural and inevitable demographic, morphological and economic phenomenon (Harvey, 1996; Keil, 2016). Still, as all of these thinkers have noticed during the past five decades, the urban condition is dominantly read as a typological spatial duality of the city and the rural hinterland, and urbanisation as a demographic movement of people from a rural to an urban environment. The metropolis, rising peripheries, and immense urban networks are not mere consequences of distant political and economic forces, but should be understood as one and the same socio-spatial production, as we learned from Henry Lefebvre (Lefebvre, 1991/1974). Society is producing the spatial arrangements and space is the important medium of the (re)production of the social organisation.

3   The Recent Questioning of Urban Age Thesis

"Globally, more people live in urban areas than in rural areas, with 54 per cent of the world's population residing in urban areas in 2014. In 1950, 30 per cent of the world's population was urban, and by 2050, 66 percent of the world's population is projected to be urban. There is significant diversity in the urbanization levels reached by different regions. The most urbanized regions include Northern America (82 per cent living in urban areas in 2014), Latin America and the Caribbean (80 per cent), and Europe (73 per cent). In contrast, Africa and Asia remain mostly rural, with 40 and 48 per cent of their respective populations living in urban areas. All regions are expected to urbanize further over the coming decades. Africa and Asia are urbanizing faster than the other regions and are projected to become 56 and 64 per cent urban, respectively, by 2050" (UN-DESA-PD, 2015, p. xxi).

The UN information about the dominance of urban population over rural is widely used in all kinds of discourses and debates about the urban condition. Since 1988, the Population Division of the Department of Economic and Social Affairs of the United Nations (UN-DESA-PD) has been issuing the revised and updated estimates and projections of the urban and rural populations of all countries in the world approximately every two years.

The criteria for identifying any specific area as urban are not specifically defined by the UN-DESA-PD, but are defined by each country for its own administrative and statistical purposes. Basically, the UN-DESA-PD is just collecting the previously generated data. The explanation of the methodology identifies the several most common national criteria for the classification of a territory as urban: administrative criteria, a

minimum population threshold, population density, the presence of infrastructure such as paved roads, electricity, piped water or sewers, etc. Among the 233 countries included in the assessment in 2014, 125 used administrative criteria to distinguish between urban and rural areas and for 65 of these countries, this was the only criterion. Furthermore, 121 countries used the population size or population density criteria, and, in 49 cases, demographic characteristics were the only criterion. However, the lower limit of population size above which a settlement is considered urban varies greatly from country to country, with values between 200 and 50 000 inhabitants (UN-DESA-PD, 2015, p. 4-5).

Considering the above criteria, the UN statistical data on urban population are based on very unstable methodological grounds. There is a huge gap between the diversity of socio-spatial conditions around the world and the homogenous way of contemporary thinking and measuring these conditions as urban. One could say that unifying urban categorisation based on statistics is blurring different, and sometimes degrading, living conditions of a great extent of the 'urban population'. The legitimate question is to ask: what is the purpose of the collected data? Nevertheless, the publications, especially influential on academic research and policy development, such as the UN Habitat World Cities Report, titled *Urbanisation and Development: Emerging Futures* (UNH, 2016) and *New Urban Agenda* (UN, 2017) all reference the UN demographics and consider the UN data on urban population as the starting point of the agenda.

The historical roots of this numerical approach to the urban condition, where a city is considered as an administratively defined territory with clear boundaries and a measurable population that has a tendency to grow, can be found in the period of industrial cities. According to the German Reich statistics from 1871 and the First International Statistical Conference held in Berlin in 1887, all areas with a population between 5 000 and 20 000 are defined as small towns (Schmidt-Lauber, Wolfmayr, Eckert, Gozzer, & Mitarbeiterinnen, 2011). Areas with fewer than 5 000 inhabitants are considered rural, while larger levels of urban classification are the medium cities (*Mittelstadt)* with 20 000 to 100 000 inhabitants and the large cities (*Großstädte*) with 100 000 inhabitants and more. Later, the famous American sociologist and demographer, Kinsley Davis, in the same way defined the threshold of 20 000 to 100 000 inhabitants for territory to be defined as urban (Brenner & Schmid, 2013). This demographic methodology was widely accepted and applied in the western countries after the Second World War. Although criticised even in the nineteenth century (Schmidt-Lauber et al., 2011), the statistical and administrative methodology is still in use in 121 countries, as we learned from the UN statistics.

The contemporary demographic description of the urban condition, meaning that the majority of world population is living in cities, researchers Brenner and Schmid call "urban age thesis" (Brenner & Schmid, 2013). They find that the urban age thesis of a predominantly urban population in the world and its concentration in the bounded

entities of cities is omnipresent in international professional, governmental, scholarly, and journalistic papers.

"Much like the notion of modernisation in the 1960s and that of globalization in the 1980s and 1990s, the thesis of an urban age appears to have become such an all-pervasive metanarrative that early 21ˢᵗ century readers and audiences can only nod in recognition as they are confronted with yet another incantation of its basic elements" (Brenner & Schmid, 2013, p. 4).

The demographic understanding of urbanisation as a transition of population from dispersed small rural settlements to larger, more concentrated, and denser settlements (UN-DESA-PD, 2014, p. 1) has a specific territorial assumption. The empirical and theoretical question of appropriate spatial boundaries of urban territory whose population was to be measured is converted to the numerical question on how many inhabitants are required, within a *predefined* jurisdictional unit, to justify its classification as urban (Brenner & Schmid, 2013, p. 5). Therefore, are Brenner and Schmid questioning why those specific population number thresholds are used? Why not some numbers other than 20 000 or 100 000? What are the theoretical explanations of this analytical model? Most importantly, why we are still using the same measuring method if it had not even been completely justified in the times in which it was developed.

4   Understanding the Concept of Planetary Urbanisation

"As long as we identify urbanism with the physical entity of the city, viewing it merely as rigidly delimited in space, and proceed as if the urban attributes abruptly ceased to be manifested beyond an arbitrary boundary line, we are not likely to arrive at any adequate conception of urbanism as a way of life" (Wirth, 1938, p. 4).

The traditional definition of urbanisation as the demographic change in the urban-rural territorial relationship had already been criticised in the formative years of the paradigm. Sociologist and the prominent figure of the Chicago school of sociology Louis Wirth was concerned with the problem of the numerical and spatial definition of urban and urbanisation in his influential 1938 paper "Urbanism as a way of life" (Wirth, 1938). Wirth puts forward the sociological and cultural perspective of urbanisation, where the way of everyday life is very important for the recognition of the urban condition. The sociologist was writing about the cities of his time, but he anticipated wide scale urbanisation and put forward the importance of spatial scale in understanding the urban.

"The influence which cities exert upon the social life of man are greater than the ratio of the urban population would indicate, for the city is not only in ever larger degrees the dwelling-place and the workshop of modern man, but it is the initiating and controlling center of economic, political, and cultural life that has drawn the most remote parts of the world into its orbit and woven diverse areas, peoples, and activities into a cosmos" (Wirth, 1938, p. 2).

Even in the thirties, Wirth was aware of the transformative power of urbanisation and its different socio-spatial manifestations, so he was critical about the urbanism and sociology focus on the city as a bounded space and universally comprehensive category. Consequently, Wirth emphasised the need for a new analytical theory of urban condition, one that would put in context the physical urban structure with specific social organisation and individual and collective behaviour. The general theory that explains the urban condition through the socio-spatial processes would allow the analysis and further understanding of the fast transformation of a modern man's environment. It would be based on the clear conceptualisation of the essential and common characteristics of all the socio-spatial conditions that we call urban, but at the same time it would provide the tool for empirical research on the differences at local scale and through history. Therefore, as Wirth puts it, the need for these characteristics to be exact or of the same condition is not important, and it should not be used as a recipe for the creation of urban tissue in different parts of the world (Wirth, 1938, p. 6). The contemporary theories of urbanism and the city very often define a normative prescription of aspects such as structural density, population number, area size, functional organisation etc, for the design of sustainable urban environment, usually highly supported by technological invention. What is important though, according to Wirth, is the potential that a measured entity offers for the desired state of the urban configuration, suitable for the local social and environmental condition.

The large-scale urbanisation that Wirth had anticipated in a modest way, Lefebvre describes in its extreme version thirty years later: "I'll begin with the following hypothesis: Society has been completely urbanised. This hypothesis implies a definition: An urban society is a society that results from a process of complete urbanization. This urbanization is virtual today, but will become real in the future" (Lefebvre, 2003/1970, p. 1). Radical in the seventies, this hypothesis of *planétarisation de l'urbain*, as Lefebvre called it, could not be considered as a hypothesis today. Society truly becomes completely urbanised. Nevertheless, what Lefebvre is also emphasising is that urbanisation should be understood as a process, not as a physical object. The result of the planetary urbanisation as a process is *the urban society* or *the urban tissue*, the changed phenomenon that could not be explained by the category of the city, that belongs to nineteenth and twentieth century knowledge foundations. In that context, "(t)he concept of the city no longer corresponds to a social object" and "(s)ociologically it is a pseudoconcept" (Lefebvre, 2003/1970, p. 57).
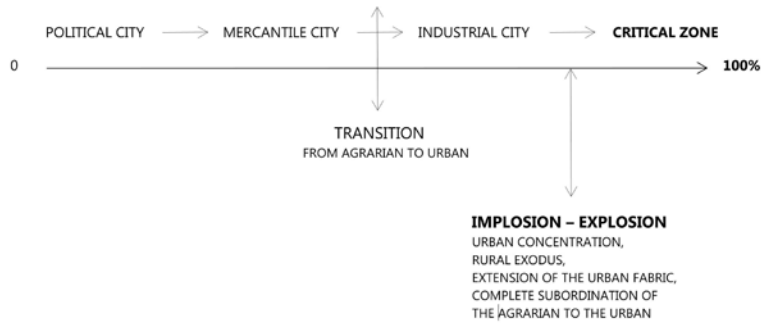
FIG. 4.1 Lefebvre's historical diagram of the process of complete urbanisation of the society *(according to Lefebvre, 2003/1970, p. 15)*

In the same manner as Wirth in the thirties and Lefebvre in the seventies, other thinkers in the field of urban studies put forward the urgent need for the new theory of urban, confronted with the discrepancy between the urban theory and design state of the art, and the real social and environmental change at the planetary scale. The most numerous papers, rooted in the critical social theory and Lefebvre's theoretical legacy, come from Brenner and Schmid, and their associates at Harvard School of Design and ETH Zurich. As they emphasise, their work does not pretentiously aim at the new substantive theory of urbanisation or urban condition. It is aiming to present *the epistemological framework* for further theoretical development and research of the past and contemporary states of urbanisation (Brenner & Schmid, 2015, p. 163).

The authors are offering the seven theses on urbanisation as a contribution to the new epistemology of urban as a collective intellectual project, built on the previous in-depth analysis of traditional and contemporary urban ideologies. Brenner and Schmid are aiming at the "open-ended" and "reflexive'' epistemological framework that may help bring into focus and render intelligible the ongoing phenomenon in relation to the simultaneous evolution of the very concepts and methods being used to study it (2015, p. 161-163). Certainly, all seven theses are equally important in the context of the theoretical venture. However, four theses on urbanisation will be shortly described in this chapter, as closely connected to the issue of urban scale.

So, what do we need to presuppose about the planetary urbanisation, before we start with the empirical inquiry of the specific environmental conditions? Following Lefebvre's theory, and against the dominant sociological and design position of the 'the city-ness', the authors define the *urban as a multi-scale process* of social and spatial transformation (Brenner & Schmid, 2015, p. 165). Urbanisation can no longer be comprehended as a universal form, settlement type, or bounded spatial unit. Urbanisation is a dynamic and historically evolving process that materialises itself across the different socio-spatial arrangements and various scales.

Furthermore, urbanisation has always comprised *three mutually constitutive "moments"*, which are: concentrated urbanisation, extended urbanisation, and differentiated urbanisation (p. 166). This means that urbanisation is not only a concentration of population, or means of production and investment, as it is predominantly referenced, but

also involves the operationalisation of distant places, territories, and landscapes. These distant urbanised spaces support the economic and social way of life of urban agglomerations. At the same time, urbanisation is not only concentrated and extended, but also differentiated. Socio-spatial configurations of different, previously emerged and inherited scales are constantly changed and "creatively destroyed" to make room for the new (Brenner & Schmid, 2015, p. 166).

Besides the three ''moments'', urbanisation should be comprehended through the *three "dimensions"* as well, in reference to Lefebvre's theory of production of space: spatial practices, territorial regulation, and everyday life (p. 169). Urbanisation is a process that involves intensive production of the built environments, various kinds of rules concerning land, labour, and resources, formal procedures of planning, and management of territorial development. At the same time, ur-banisation is developing through everyday routines and practices of people who use and appropriate the urban fabric.

Finally, *urbanisation is a planetary* wide process. In its various forms of concentration and extension, through dimensions of spatial (everyday) practice and regulation, urbanisation is spreading and changes even the distant places once called hinterlands and wilderness, producing the new urban tissue.

Besides this robust and neatly elaborated theoretical body, we must also follow the critical observations here. As well as the question of what makes the urban condition, they also ask: what are the elements of the *experience* of planetary urbanisation at the very human level? Should not we also observe and understand *how* urban condition is produced, shaped, or appropriated through the habitual, banal, and repeated everyday practice of individuals and communities (Giroud, 2015, para. 15)? Moreover, this is the point where, according to some authors, it is still analytically and politically relevant to redefine the notion of the city, in the context of contemporary urban condition. City life is still the context through which millions of people are experiencing, understanding, and transforming the planetary urbanisation (Davidson & Iveson, 2015, p. 662).

**5   The New Urban Tissue and Problem
of (Rational) Urbanism**

"Since it is out of control, the urban is about to become a major vector of the imagination. Redefined, urbanism will not only, or mostly, be a profession, but a way of thinking, an ideology: to accept what exists. We were making sand castles. Now we swim in the sea that swept them away" (Koolhaas, 1995, p. 969-971).

Beyond the urban age ideology and the celebration of the city-ness, how does urbanism as a discipline and body of knowledge deal with these unprecedented spatial and social changes, with a wide scale urbanisation? Urbanism devotion to spatial and physical order over social and cultural processes was recognised in the years after the Second World War. There were rare critical voices in the first half of the century, such as those of Patrick Geddes, Louis Wirth and Lewis Mumford. However, they became more articulated in the second half of the century, together with the undertakings of post-war renewal. The social and environmental consequences of the post-war landscape transformation, including large-scale infrastructure construction, peripheral urban area enlargement, and uncritical application of technocratic planning principles, were starting to be recognised, and criticised, in the fifties. Among the most influential voices was that by Jane Jacobs, journalist and urban activist, whose negative criticism directly pointed to the profession of urban planning (Jacobs, 1992/1961). Jacobs raises the problem of the urbanism approach as a rigid organisation of the city space and its complexity, primarily connected to the concept of the functional city and its historical roots. The theme of the urban life 'reality' is set opposite the professional ideology that exclusively deals with the physical appearance, which strives towards the visual order and finds meanings within itself.

An intellectual domain in which the problem of this *spatial determinism* lies, Henry Lefebvre called operative rationalism (Lefebvre 2003/1970, pp. 82-83). The problematic approach in urbanism in which the analytical reason is brought to its extreme is based on a detailed analysis of individual elements separately - social and economic organisation on one side and spatial structure and functions on the other. Planners, as rationalists, see the city as a contradiction and as disorderly, not recognising such states as conditions of modern self-existence. The key words that determine their further actions to bring order and normality into chaotic urban reality are coherence and completeness.

Following the same line of the critique of spatial determinism, sociologist Richard Sennett wrote in much recent times:

"Urbanists, globally, anticipated the 'control freakery' of New Labour by a good half-century; in the grip of rigid images, precise delineations, the urban imagination lost vitality. In particular, what's missing in

modern urbanism is a sense of time – not time looking backwards nostalgically but forward-looking time, the city understood as process, its imagery changing through use, an urban imagination image formed by anticipation, friendly to surprise" (Sennett, 2006, p. 11).

The basic thesis of criticism formulated by Jacobs, Lefebvre, and later Sennett, is a thesis on design principles that advances the static spatial form above the social and cultural processes. The relationship between the spatial form and social relations is perceived as very simplified, one-way oriented, and insensitive to time and change (Novakovic & Djukic, 2015, p. 416). Therefore, urbanism that ignores social and cultural processes of different scales, specifically of everyday life, is not in a position to interpret and design spaces of urbanisation. Following the evolution of rational planning critique (above) and the recent elaboration of the urbanism crisis during the twentieth century (Koolhaas, 1995; Graham & Marvin, 2002; Bajić-Brković, 2002; Palermo 2010, 2014; Inam 2014; Quito papers, 2017), the general and most important characteristics of the problem of urbanism in the wake of planetary urbanisation are extracted.

The profession of urbanism is primarily focused on the formal and morphological qualities of a city. The future vision of a city development is translated into comprehensive spatial plans that are supposed to lead to the desired spatial and social condition, in the defined period. However, in reality, *comprehensive plans* showed their *inflexible nature,* having had a very low capacity to adapt to multiple and often conflicting economic and social demands across space and time. The classical and rational urban planning tradition based on the hierarchical spatial order and linear scenario development is very difficult to relate to the contemporary complex spatial, social, and economic urbanisation processes. The plan, as the main outcome of a planning practice and the crucial regulatory mechanism of urbanisation, failed in coping with real life processes.

Theoretical discourse in urban planning, urban design, and architecture is lacking the coherent paradigmatic framework *(no common ground)* related to the questions of urbanisation, necessary for interpreting, mapping, and designing spatial transformation. The theoretical debate on urbanism is very often developed around separate disciplinary ideologies that are not rooted in the socio-spatial context, nor in real technical and practical demands. Besides the search for new concepts, the new tools and methodologies for the interpretation and design of urban territories are also yet to be defined.

It is also important to notice *the fragmentation of urbanism,* to narrowly focused and separated disciplines in terms of spatial scale they consider, and the tools and methodologies with which they operate. Urban planning, mostly devoted to city-scale spatial regulation, is immersed in theoretical debates about the decision-making processes and interest struggles, and has lost the physical urban space as the subject of its consideration. At the same time, urban design is understood as a small spatial scale practice, backed down to a morphological and

aesthetic scope of intervention, predominantly of public space. Further fragmentation and specialisation come from a professional's tendency to focus on the different issues of the urban condition separately, resulting in concepts such as landscape urbanism, everyday urbanism, tactical urbanism, ecological urbanism, emergent urbanism, etc. (for detailed elaboration, see Barnett, 2011).

The *lack of reformatory tendencies*, true ambition for innovation, and radical creative visions of urban future in urbanism praxis and theory, are based on the essential understanding of contemporary urban condition. The urbanism discipline is more oriented towards the re-reading of past theoretical accomplishments or towards an adaptive postmodern spirit of (neoliberal) deregulation, to accept what comes first.

The urbanism issues described above cast doubt upon the social role of the discipline and its influential capacity in the wake of wide-scale urbanisation. Spatial determinism and disciplinary separation led to the fragmented views on urban condition and impossibility to understand the proper scale of urbanisation. As Rem Koolhaas concluded in general, "(i)n spite of its early promise, its frequent bravery, urbanism has been unable to invent and implement at the scale demanded by its apocalyptic demographics" (Koolhaas, 1995, p. 961). The gap between real human needs, urbanism intervention, and the planetary spatial transformation is becoming wider and more visible. At the same time, its lack of capacity to comprehend and follow the contemporary spatial change and socio-economic activities is rarely the subject of discipline self-questioning (Palermo, 2010).

₆ Architectural Utopias of Urbanisation

"What can urbanism be? …How we think about cities absolutely impacts how we design them. The most fundamental shifts in transforming cities do not happen by tinkering around the edges, but by fundamentally rethinking processes, methods, and outcomes of urbanism" (Inam, 2014, vii).

The large-scale urbanisation and the ephemerality of city boundaries were part of the *design ideas* about the future of cities very often during the nineteenth and twentieth century. Architectural theorist and historian Francoise Choay filtered those ideas about urban condition into the urban model typology (Choay, 1978/1965). According to Choay, the two basic models of the city, *progressive* and *cultural*, can be easily read according to the attitude towards the city boundaries, the relationship of city to the wider environment, and the scale of urbanisation. While the culturally rooted ideas about the city and urban community envisioned distinct boundaries between the man-made urban structure and the natural environment, progressive models imagined the urban as a

technologically driven development of endless carpet-like fabric of greenery and buildings.

The famous Ebenezer Howard's the Garden City model, although presented as a 'marriage' between rural and urban, had very clear city boundaries. They meant not only the borderline between the city and the natural environment, but also the limits of city growth in physical and population sense (max. of 30 000 people). The Garden City could not widen and spread, it could only multiply and reproduce on the other locations.

On the opposite side of urban model spectrum are the progressive models of urban condition, such as the plans and projects by Tony Garnier, Walter Gropius, and Le Corbusier, which are of more importance for this chapter. However, even more radical in the city boundary disintegration was the *naturalistic* model of Frank Lloyd Wright. The image of the future city envisioned by the famous architect in his 1932 book called *The Disappearing City* looks at least prophetic today. Among the other people who were ahead of their time, Wright could see the fast development of transportation and communication networks and the advance it could bring to developers and business people. His *Broadacre City* was a vision of a decentralised and dispersed city in which the city boundaries did not exist. Anticipating contemporary urbanisation, Wright wrote:

"To put a new outside upon any existing city is simply impossible now. The carcass of the city is far too old, too far gone. It is too fundamentally wrong for the future we now foresee. Hopelessly, helplessly, inorganic it lies there where the great new forces molding modern life are most concerned. Those forces are making its concentrations not only useless but deadly or poisonous by force of circumstances being driven inward, meantime relentlessly preparing to within, to explode. Reactions that should by reasonable natural organic change drive the city somewhere into somewhat other and else are everywhere at work. The new city will be nowhere, yet everywhere. Broadacre city." (italic from original) (Wright, 2005/1945, p. 320).

With distinguishable boundaries or not, the most of Choay's urban models are about the completely new urban environments, where the existing historic and industrial city is considered as a place of disorder, inappropriate and unhealthy for the development of modern men, as Wright clearly explained. However, the urban theory of the nineteenth and twentieth century defined urbanisation as the *growth of historical city*, relating the newly designed city expansion to the existing one. Urbanists of the time also posed the question of how to design a logical expansion of urban tissue beyond the existing boundaries.

Probably the most paradigmatic model in this context is Ildefonso Cerdá's *General Theory of 'Urbanización'* and his 1859 plan for the expansion of Barcelona. While his plan for Barcelona is widely known, his impressive and wide-in-scope theoretical work is yet to be fully appreciated. Cerdá was highly ambitious to establish the foundations

of a new discipline that would have the city as the subject of general scientific theory (Soria y Puig, 1995). During a period of more than twenty years, Cerdá developed the theoretical body that supposed to serve an eminently practical purpose, which he applied to his plans or projects, as he called them, for Barcelona and Madrid. His city building theory envisioned the city as a network of many systems through many scales, from transportation, infrastructure, and housing, to morphological elements as urban blocks, street intersections, and pedestrian paths. At the same time, his theory covered the urban aspects of economy, legislation, administration, and politics. Cerdá offered a comprehensive view on the city as a construction and evolution of many aspects and elements in mutual relationship. He was first to use the term *urbanizatión* in 1860 and in the next decade he expanded this theory of urbanisation to the comprehension of the land beyond the city limits (for detailed elaboration, see Soria y Puig, 1999).

Urbanism ideology of the industrial and modern city, including Cerdá's theory, has the fundamental assumption that makes urban historians, such as Francois Choay and Robert Fishman, call them utopian (Choay, 1978/1965; Fishman, 1999). The assumption is that we can expand and rebuild our cities according to a new and better model - the unitary solution for social and spatial problems. Instead of a process, the city was seen as the image, as the object and the model that can be reproduced. This utopian vision had already started to disintegrate in the second half of the twentieth century and the postmodern urbanism thinking rejected the modernistic visions as false and contrary to human needs. Urban theory, after the sixties, was returning to a redesign of existing cities according to the rule of historical continuity, often celebrating the *cultural* models of the past. However, while the urban thinkers and designers are searching for the answers inside the cities, the urbanisation process of a networked and neoliberal society is developing the urban in the opposite direction, outside the city limits to become planetary. As Robert Fishman asks: as "(w)e have not replaced Le Corbusier's answer to what Manuel Castells calls "the urban question" by a better one" and "we no longer believe that a unitary answer exists", what could urbanism be in the context of planetary urbanisation, after the end of cities and beyond utopia? (Fishman, 1999, para. 2)

7   **Planetary Urbanisation and the Large-Scale Design Strategies**

"Territory charts out a space, a territory, for architecture beyond conceptualisations of context or environment, understood as that stable setting which pre-exists the production of new things. Ultimately, it suggests a role for architecture as a strategy of environmental tinkering versus one of accommodation or balance with an external natural world" (Gissen, 2011).

Today, the research and design of the cities and territories need a set of general theoretical fundamentals about the urban condition. This is important not only because the urban reality has changed and our theoretical apparatus is old, but because this apparatus needs to be operational in analytical and methodological terms, in the context of planetary urbanisation. A common theoretical frame will enable the definition of specific elements and their relations for evaluation of the existing urban places and creation of the specific design strategies. This will not demand that all urban places reach these criteria in the same way.

The most elaborated reactions to the contemporary process of urbanisation are coming from the advanced urbanism research hubs, such as *Urban Theory Lab* (Harvard Graduate School of Design), *Future Cities Laboratory* (ETH Zurich), *ETH Studio Basel - Contemporary City Institute*, and *TRULAB: Laboratory for designing urban transformation*. These 'laboratories' are running research programmes about the transformation of urban areas around the world. They offer emerging urbanism approaches for research of the new urban tissue and socio-spatial configurations of different scales, with the aim of understanding and interpreting various interconnections and dependencies between a city and the close and distant urban spaces that are important for a city life.

Based on Lefebvre's general theory of the production of space, Christian Schmid (affiliated to the three laboratories mentioned) developed the simple conceptual system that can be used in the concrete empirical analysis of urban space. The methodological proposal is that the new urban configurations can be investigated through the three concepts: networks, borders, and differences (Schmid, 2006). Application of these criteria in the research of different locations enables the comprehension of the specific forms of urban condition.

According to a conceptual triad, urban space consists of many different kinds of interaction *networks*, such as networks of communication, trade, and daily routines. These interactions are related to the spatial practices and have their own material infrastructures, so they can be understood through their physical appearance. By understanding the 'position' of a specific place inside the urban networks, we are closer

to understanding that specific urban condition. In that context, the important characteristics of a place are the number of networks running through it, the range of networks, their material infrastructures, and its development over time. Central and peripheral positions of a specific urban area are no longer defined by their geographical position in territory, but by their relational position in urban networks (Schmid, 2006, pp. 170-171).

Although urbanisation, as a planetary process, deals with dissolving the geographical city boundaries and blurring the division between the rural and urban, *borders* are still important urban elements. Studying the development and quality of borders means a search for the potential of connections and relations. "Hence, it is not the lifting of borders that is an indication of urbanism but their transformation into the productive aspects of urban culture" (p. 173). There is a constant need to redefine what and where the border is in spatial terms.

Differences are the third criterion that defines the urban condition, according to Schmid (p. 173). Following Lefebvre, the author is describing the city as a place where social differences collide and become productive. However, the mere presence of cultural differences is not enough for the urban context to be productive in this sense. The basic question is how these differences relate to each other, and whether they interact and exchange, thus releasing the potential for city to reinvent itself. Segregation, marginalisation and ghettoisation are very common appearances of spatially isolated, and therefore unproductive, social and cultural differences, as Schmid reminds us. To research the differences is to detect the degree of their presence, and then, their active behaviour and the possibilities of their coexistence and exchange.

The criterion set was first explained and applied in the ETH Studio Basel project *Switzerland: An Urban Portrait 1999 – 2003* (Diener, Herzog, Meili, de Meuron, & Schmid, 2006), and it was further developed in the ETH Future Cities Laboratory project, *Territories of Extended Urbanisation* in 2015 (Schmid & Topalovic, n.d.). This research of Singapore's hinterlands, as the focal location of the project, is rooted in the assumption that the relationship of the cities with the wider urbanising territories, such as operational landscapes, natural environments and hinterlands, are central to understanding the cities and sustainability (Topalovic, 2015, p. 14). The case study of Singapore is the exemplar and central case study of extended and planetary urbanisation. The project brings alive the old architectural idea about the unity of a city and its surroundings, understood as two inseparable parts of the same phenomenon, as leading researcher Milica Topalovic explains (Topalovic, 2015, p. 12). The research puts forward the *territorial approach* to the interpretation of urbanisation, applied to Singapore's spatial transformation and its resource dependency from various close and distant lands. Urbanisation, as a process, is not explained by the city itself, Singapore agglomeration and centrality, but through the urbanising region and hinterlands that this city is a part of. In the context of networks and borders, the research showed that Singapore is a part of numerous and various networks of trade and exchange

across the planetary range. Its urban condition has spread and moved far beyond the administrative or geographical borders of the city.

Following Topalovic, the right questions to be asked in the context of urban sustainability are: What is the appropriate scale of urban hinterlands? Should we *plan and design* these lands woven into a city orbit? How are we supposed to govern this large-scale spatial transformation and the socio-economic processes that are crossing all kind of administrative borders? (2015, p. 25-27)
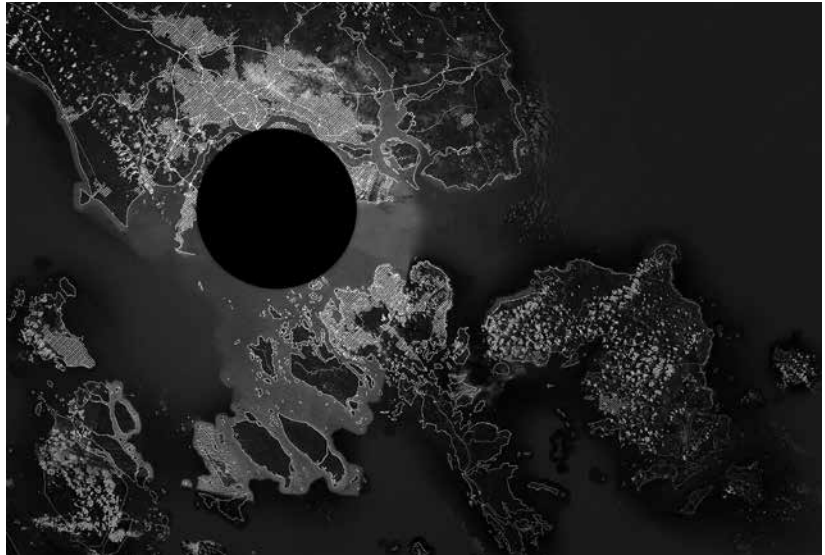

FIG. 7.1 The Eclipse Method applied to Singapore territorial research. Hiding away the city enables the adequate perspective and analysis of the urban hinterlands. *(Topalovic, ETH Zurich D-ARCH Architecture and Territorial Planning, 2015)*

8 Conclusion: Towards Sustainable Spatial Design

Urbanisation fundamentally changed the world over the last three decades. It transformed the existing cities and produced the new urban tissue that extended deeply into the once rural and natural environment. The new urban tissue is not only concentrated like the city before, in the traditional sense, but is also dispersed and polymorphous. The once distinctive boundaries between the urban and rural are transformed and fragmented, putting the wide and distant territories in the functional and spatial orbit of the city.

The fundamental question for urbanism is how to adapt to these changes, and manage and design the relations between the cities and the close and distant landscapes on which they are dependent and which they change through this dependency. This issue is more complicated if we acknowledge that the growth of the cities today is directed (if at all) inside the administrative borders of a city, metropolitan, national, or sometimes regional area. However, urbanisation is not evolving exclusively inside any administrative or even spatial borders. Urban condition today is rooted in the globally networked economic and social processes that change the configurations of existing cities and transform the land far beyond local and national borders.

In the context of this change, called the planetary urbanisation, urban theorists and researchers are putting forward the need for a refreshed epistemological framework, new theory and concepts about the urban condition, beyond the traditional city notion. This would provide architecture and urbanism with the basis for the creation of the new strategies of spatial design and overcoming the (utopian) comprehensive model of physical order.

The general theory is not a substitute for the specific research on the local urban condition. On the contrary, the planetary urbanisation theory emphasises that urbanisation is always rendered by historical and geographical circumstances, with endless possibilities of mor phological results and temporal dynamics of socio-spatial trans- formation. However, the local urban condition is also generated through its relations to larger scale. The local urban condition is a part of the planetary urban tissue, which is "at once the framework and the basis for the many forms of socio-spatial differentiation" (Brenner, 2015, p. 175). Therefore, next to general theories of urbanisation as a planetary process, urbanism needs the methodological platforms and conceptual tools for the research of the local urban condition.

We will repeat the questions put forward by the researcher Milica Topalovic: "Should then the scope of the discipline of architecture be broadened once again, beyond the limits of the city, to include urban territories? Do the scales of urbanisation today demand a larger view? (Topalovic, 2015, p. 11)" They definitely do. Contemporary urbanism (and architecture) needs this scale approach adjustment, to embrace the new urban tissue, and to understand its place specificities inside the global patterns and development during the time. This "larger view" would allow the discipline to potentially take part in managing the process of urbanisation and designing urban territories. Of course, this means the cooperation with other disciplines and the creation of interdisciplinary context of research and action. The strongest tool that architecture will bring to this interdisciplinary large view are design synthetic ways of thinking, rooted in urban history knowledge and sensitive to cultural differences (Topalovic, 2015, p. 32).

The scale question does not only imply the disciplinary larger view, but also the overcoming disciplinary fragmentation to separated spatial scales of interest and practice for architecture, urban design and urban planning. This does not mean that these historical disciplines should merge to one. They need to work on the new common theoretical platform and shared understanding of what the urban and urbanisation are today. Moreover, they need to participate in each other's ventures, always bringing different scale perspectives to the project.

To become meaningful, urban sustainability must address appropriate scales that would always be larger than an individual system concerned (Elmqvist, 2013). This means that managing the relationships between the spatial scales, agglomerations, and the 'non-city' landscapes, which have become very important in supporting urban life, is a necessary part of the path to sustainability.

References

Bajić-Brković, M. (2002). Urban planning in Yugoslavia in the 20th century: the case study of Belgrade. *Architecture and urbanism* 9, 19-31. Retrieved from http://scindeks-clanci.ceon.rs/data/pdf/0354-6055/2002/0354-60550209019B.pdf

Barnett, J. (2011). A short guide to 60 of the newest urbanisms: and there could be more. *Planning*, 77 (April), 19-21. Retrieved from https://www.uc.edu/cdc/urban_database/urban_imaging/60_Newest_Urbanisms.pdf

Brenner, N., & Schmid, C. (2013). The 'Urban age' in question. *International journal of urban and regional research*, 38(3), 731-755. doi:10.1111/1468-2427.12115

Brenner, N., & Schmid, C. (2015). Towards a new epistemology of the urban? *City: analysis of urban trends, culture, theory, policy, action*, 19(2-3), 151-182. doi:10.1080/13604813.2015.1014712

Choay, F. (1978). *Urbanizam, utopija i stvarnost* [Urbanism, utopia and reality]. Belgrade: Građevinska knjiga. (Original work published 1965).

Clos, J., Sennett, R., Burdett R., & Sassen, S. (2017, Janury 31). *Towards an open city: the Quito papers and the New urban agenda*. Retrieved from https://files.lsecities.net/files/2017/01/Quito-Papers-Preview-Version2.3.pdf

Davidson, M., & Iveson, K. (2015). Beyond city limits. A conceptual and political defense of 'the city' as an anchoring concept for critical urban theory. *CITY* 19(5), 646–664. Retrieved from http://dx.doi.org/10.1080/13604813.2015.1078603.

Diener, R., Herzog, J., Meili, M., Meuron, P. de, & Schmid, C. (Eds.). (2006). *Switzerland: an urban portrait*. Basel: Birkhauser.

Elmqvist, T. (2013). Urban sustainability and resilience—why we need to focus on scales. Retrieved from https://www.thenatureofcities.com/2013/03/27/urban-sustainability-and-resilience-why-we-need-to-focus-on-scales/

Fishman, R. (1998). Beyond utopia: urbanism after the end of cities. Retrieved from http://www.publicspace.org/en/text-library/eng/a004-beyond-utopia-urbanism-after-the-end-of-cities

Giroud, M. (2015, November 27). Beyond "planetary urbanization": recasting contemporary urban research. *Métropolitiques*. Retrieved from http://www.metropolitiques.eu/Beyond-plane-tary-urbanization.html

Gisen, D. (Ed.). (2010). *Territory: architecture beyond environment*. Cambridge: Academy Press.

Graham, S., & Marvin, S. (2002). *Splintering urbanism. Networked infrastructures, technological mobilities and the urban condition*. London and New York: Routledge.

Harvey, D. (1985). *The urbanization of capital: studies in the history and theory of capitalist urbanization*. Baltimore: John Hopkins University Press.

Harvey, D. (1996). Cities or urbanization? *City: analysis of urban trends, culture, theory, policy, action*, 1(1-2), 38-61. doi: 10.1080/13604819608900022

Inem, A. (2014). *Designing urban transformation*. New York and London: Routledge.

Jacobs, J. (1992). *The death and life of great American cities*. New York: Vintage Books. (Original work published 1961).

Keil, R. (2016). Urban neoliberalism. Rolling with the changes in a globalizing world. In S. Springer, B. Kean, & M. Julie (Eds.), *The handbook of neoliberalism* (pp. 385-397). New York and London: Routledge, Taylor and Francis Group.

Koolhaas, R. (1995). What ever happened to urbanism? In OMA, R. Koolhaas, & B. Mau, *S, M, L, XL* (pp. 959-971). New York: The Monacelli Press.

Lefebvre, H. (1991). *The production of space.* Blackwell Publishing. (Original work published 1971).

Lefebvre, H. (2003). *The urban revolution*. Minneapolis, London: University of Minnesota Press. (Original work published 1970).

Novaković, N. & Đukić, A. (2015). Urban form and public safety: how public open space shapes social behaviour in public housing neighbourhoods. In I. Đorđević, M. Glamočak, S. Stanarević, & J. Gačić (Eds.), *Twenty years of human security: theoretical foundations and practical applications*, (pp. 411-423). Belgrade: University of Belgrade – Faculty of Security Studies.

Palermo, P. C. (2014). What ever is happening to urban planning and urban design? Musings on the current gap between theory and practice. *City, Territory and Architecture* 1(7), 1-9. Retrieved from https://doi.org/10.1186/2195-2701-1-7

Palermo, P. C., & Ponzini, D. (2010). *Spatial planning and urban development. Critical perspectives* [e-book]. Springer Netherlands. doi: 10.1007/978-90-481-8870-3

Schmid C. (2006) Networks, borders, differences: towards a theory of the urban. In R. Diener, J. Herzog, M. Meili, P. de Meuron & C. Schmid (Eds.), *Switzerland: an urban portrait* (pp. 164-173). Basel: Birkhauser.

Schmid, C., & Topalovic, M. (n.d.). *Territories of Extended Urbanisation*. Retrieved from https://www.ethz.ch/content/specialinterest/dual/fcl/en/research/archipelago-cities/extended-ur-banisation.html

Schmidt-Lauber, B., Wolfmayr, G., Eckert, A., Gozzer, L., & Mitarbeiterinnen, E. (2011). *Middletown urbanities – Ethnographic urban studies in Wels and Hildesheim*. Retrieved from http://www.middletownurbanities.com/

Sennett, R. (2006). *The open city*. Retrieved from Cities Programme at the London School of Economics and Political Science and the Alfred Herrhausen Socety. http://lsecities.net/media/objects/articles/the-open-city/en-gb/

Soria y Puig, A. (1995). Ildefonso Cerdá's general theory of 'urbanización'. *The town planning review*, 66 (1), 15-39. Retrieved from http://www.jstor.org/stable/40113676

Soria y Puig, A. (1999). *Cerda: The Five Bases of the General Theory of Urbanization*. Milan: Electa.

Topalovic, M. (2015). *Architecture of territory. Beyond the limits of the city: research and design of urbanising territories*. Inaugural lecture presented by Milica Topalovic on November 30, 2015 at the ETH Zurich. Retrieved from https://doi.org/10.3929/ethz-a-010794553

UN (United Nations). (1993). *Agenda 21*. Retrieved from UNDESA Sustainable development knowledge platform. https://sustainabledevelopment.un.org/outcomedocuments/agenda21

UN (United Nations). (2017). *New urban agenda*. Retrieved from http://habitat3.org/the-new-urban-agenda/

UN-DESA-PD (United Nations, Department of Economic and Social Affairs, Population Division). (2015). *World urbanization prospects: the 2014 revision*, (ST/ESA/SER.A/366). Retrieved from https://esa.un.org/unpd/wup/Publications/Files/WUP2014-Report.pdf

UNH (United Nations Habitat). (2016). *Urbanisation and development: emerging futures. World cities report 2016*. Retrieved from http://wcr.unhabitat.org/

UN-WCED (United Nations World Commission on Environment and Development). (1987). *Report of the World commission on environment and development: our common future*. Retrieved from UN Documents. Gathering a body of global agreements. http://www.un-documents.net/k-001303.htm

Wirth, L. (1938). Urbanism as a way of life. *The American journal of sociology*, 44(1), 1-24. Retrieved from http://www.jstor.org/stable/2768119?origin=JSTOR-pdf

Wright, F. L. (2005). *Frank Lloyd Wright: an autobiography*. Pomegranate. (Original work published 1945).