

Inclusive Urbanism

Advances in research,
education and practice



RESEARCH IN URBANISM SERIES (RiUS) Vol. 6

Wolfgang Wende, Steffen Nijhuis, Angela Mensing-de Jong & Melanie Humann (Eds.)

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Edited by

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Steffen Nijhuis

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Social inequality - Favela and buildings © Gustavo Mello – stock.adobe.com.jpeg

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Editors:

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Currently the world is facing major challenges related to ongoing urbanization. More than half of the global population already lives in cities, and rapid urban growth – whether planned or spontaneous – seems set to continue. The associated large-scale transformation of urban and rural landscapes is turning the spotlight on environmental issues and questions of sustainability. The UN's Sustainable Development Goals (SDGs) and the New Urban Agenda/Habitat III provide a framework for a fast urban development by encouraging the integration of social and ecological aspects into urbanism. One important task for urbanism is to “make cities inclusive, safe, resilient and sustainable”. But what does this mean for research, education and practice in spatial design and planning? Which emerging research topics can be identified? Do we need alternative formats for teaching and for knowledge transfer? This book focuses on inclusive urbanism as one factor of sustainable urban development.

Inclusivity in this respect means confronting urban segregation in its three-dimensional nexus of economic exclusion, social exclusion and an unjust access to urban and environmental qualities and resources, which conspire to maintain the disadvantages suffered by low-power, minor and/or marginalized communities. Clearly, inclusivity is strongly linked to urban justice as well as participatory approaches.

Even before the introduction of Sustainable Development Goal No. 11, there existed a long history of research and literature already addressing the need to foster social urban justice. For example, in the early 1970s, Harvey (1973) attempted in his book “Social Justice and the City” to lay out a paradigm and baseline for the responsibility of urban geography to create inclusive urban structures. Harvey's focus was on the income inequality between richer and poorer urban neighbourhoods, and the implications for the spatial form of the city. He determined that income level is one of the main driving forces not just for inequality but also for the urban segregation of different communal groups.

In the article "The Just City", Susan Fainstein argued that democracy, diversity and equity are the three governing principles of urban justice (Fainstein 2013). She believes that local policies can make urban life better or worse for people, in particular more integrative/inclusive or more divisive/exclusive. Expanding on this view, clearly there are many decisions made at the local level, for example involving housing, transport, and recreation that differentially affect people's quality of life in respect to inclusion.

Pearsall and Anguelovski (2016) analyzed environmental gentrification, which is the exclusion, marginalization and displacement of long-term residents due to sustainability planning or green developments and amenities, such as smart growth and public park renovations. Such gentrification is leading to community homogenization as well as to the exclusion of sections of the local population who do not fit with the remaining, newly streamlined homogenous group. Hence, inclusion vs. exclusion is also a prominent aspect of landscape planning and the design of open or green spaces (see Werthmann and Bridger 2016; Tan et al. 2018). Pearsall and Anguelovski's evaluation of relevant literature indicates several similarities with inclusivity tactics, including collective neighbourhood action, community organizing and direct tactics. They deduce a need for more research on how activists can better assert the social and political dimensions of sustainability and their right to the city, as well as how green and sustainable cities can achieve justice, equity and inclusion. Our book *Inclusive Urbanism* not only presents the latest research but also several practical examples of such tactics to enable activists to better assert their claims within social and political urban decision-making processes.

Research and literature on urban justice culminated in the formulation and adoption of the previously mentioned United Nations SDG 11. At the same time, the focus of research and literature has shifted towards the issue of 'inclusiveness', in particular its meaning and implication (see e.g. Thompson-Fawcett 2008, Espino 2015 or Schreiber and Carius 2016). This has created a new and powerful movement sweeping through urban and landscape policies, promoting the aims of inclusive urbanism. This is precisely the topic of our book.

Inclusive Urbanism compiles selected contributions presented at an international conference on 'Urban Studies' held at TU Dresden on 15 and 16 November 2018. The conference was jointly organized by the TU Dresden, the TU Delft, the Leibniz Institute of Ecological Urban and Regional Development Dresden, the Czech Technical University Prague and the Wrocław University of Science and Technology. The contributions gathered here offer important observations about the development of social-ecological inclusive theories and

practices in the fields of landscape architecture, urban design and planning from the perspective of research, education and practical applications. We aim to offer a wide range of theoretical insights into the meaning of inclusive spatial design and planning while showcasing new developments at the cutting-edge of research, education and practice. The reader will receive new impulses for urbanism practice through the discussion of professional case studies.

Noteworthy elements of the book are as follows:

- the potential of the term 'spontaneous' as applied to informal settlements and structures, whereby spontaneous urbanism is more positively connoted;
- an investigation of urban commons to reveal new forms of participation, integration and co-production of public and green space;
- the introduction of examples from around the world for resilient, inclusive and sustainable urban/landscape development;
- a discussion of new teaching and visualization methods that make use of maps, graphics and various perception techniques.

We hope that our book provides a valuable contribution to the challenging question of how to shape and design inclusive urban structures.

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THEORY AND RESEARCH

Incorporating Spontaneity in Urban Disciplines

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Abstract

Spontaneity is a term with a wide range of meanings in the architectural and urban context. In principal, two predominant stereotypes of spontaneity have emerged, one related to “informal” architecture, recognized as a condition of material scarcity, and the other to urban actions performed without premeditation, which have been commonly identified as “unplanned”. In many disciplines such as sociology, art, music, literature and natural sciences, spontaneous behaviour is largely viewed as a positive quality, identified as a natural process or act. In an architectural context, however, spontaneity is often associated with poor, deprived and dilapidated urban environments. Therefore, the objective of this paper is to determine the significance of spontaneity in the architectural and urban realm as well as its incorporation in the development of the urban landscape. The first part of this paper will focus on the definition of the term and its recognition in architecture, whereby spontaneity is portrayed as a dynamic, open and unmediated concept. Additionally, taking into account the stereotypical interpretations of spontaneous architecture as informal or unplanned, an epistemological paradox will be revealed in the interaction between the architectural project and its realization. By considering the practical example of Skopje, spontaneity is interpreted as the carrier of the city's genetic material and hence incorporated in the methodology for the urban development of Skopje city.

KEYWORDS

spontaneity, informal, paradox, Skopje, sustainable urban development

1. Introduction

The term paradox, meaning a statement or context that is contradictory to an existing belief or opinion, is often used to provoke critical and innovative thinking. For example, in the late 1500s, Miguel Cervantes used this tool in his famous novel “The Ingenious Gentleman Sir Quixote of La Mancha” to illustrate with charm and humour an extraordinary world that is, in its essence, sad. The metatheatrical adventures of the main characters, the pitiable yet sweet Don Quixote and Sancho Panza, who are physically and verbally abused during their adventurous journey, challenges the reader to be amused and entertained by events that are in fact malicious and cruel. Similarly, the phenomenon of spontaneity may engender a comparable experience in the urban context. Spontaneity is a phenomenon that is simultaneously desired and rejected in planning practice. Already in the 1950s, Giedion (1954) recognized two different architectural schools, one in favour of and the other against the notion of spontaneity. The debate on this subject continued during the 1960s and 1970s with many theoreticians, such as Jane Jacobs, Christopher Alexander, Kevin Lynch and Robert Venturi, arguing that the planning principles of modern architecture tend to disregard the cultural and social circumstances of neighbourhoods. In their opinion, such principles were rigid, monotonous and indifferent to the complexity of the urban environment. Over past decades, studies on informal settlements have also tackled the paradoxical subject of spontaneity to reveal different theoretical positions. On the one hand, viewing informal urban areas around the world as an open concept of material practices and forms, we can be amused and charmed by the openness, immediacy, colourfulness and vibrancy of their life. Yet, no matter how appealing these interpretations are, there remains a bitter feeling in regard to the development of these urban phenomena. Is it enough to simply make such areas safer, aesthetically attractive and infrastructurally functional? Or is it possible for these neighbourhoods to take part in the “formal” city milieu? Because the current meaning of the term *informal settlements* seems overly narrow¹ and does not cover many of the

1 Derived from United Nations. (2016). Habitat III Issue Papers. Issue paper 22: Informal settlements.

Informal settlements are residential areas where:

- a) inhabitants have no security of tenure vis-à-vis the land or dwellings they inhabit, with modalities ranging from squatting to informal rental housing;
- b) the neighbourhoods usually lack, or are cut off from basic services and city infrastructure;
- c) the housing may not comply with current planning and building regulations and is often situated in geographically and environmentally hazardous areas.

In addition, informal settlements can be a form of real estate speculation for urban residents at all income levels, whether affluent or poor. Slums are the most deprived and excluded form of informal settlements; often located in the most hazardous urban land, they are characterized by widescale poverty and large agglomerations of dilapidated housing. In addition to tenure insecurity, slum dwellers lack a formal supply of basic infrastructure and services, public space and green areas, and constantly face the threat of eviction, disease and violence.

phenomena present in the contemporary urban context, the term *spontaneity* appears even more legitimate and worthy of deeper study. Hence, spontaneity as a feature and characteristic recognizable in both “formal” and “informal” urban environments can be additionally regarded as a common value and overall framework for future sustainable urban development.

To determine the significance and underline the potential of this phenomenon in an architectural and urban context, the present paper reports on the following aspects:

- Defining and recognizing spontaneity*: By contrasting research in urban studies with that of other scientific fields, spontaneity will be highlighted as a dynamic, open, unmediated concept that can be recognized in both formal and informal urban structures;
- Understanding and interpreting spontaneity*: The relationship between the process of design and spontaneity will be addressed by means of a literature review. The “project” in an architectural and urban context will be observed for its spontaneous aspects and, vice versa, spontaneity will be observed in the same context as planning. Hence, instead of relating it to the stereotypes “informal” and “unplanned”, spontaneity is interpreted as the realization of an unwritten project;
- Incorporating spontaneity*: By applying operational methodology for urban development in the case of Skopje, settlements with spontaneous characteristics will be incorporated within the planning process using interlacing scales, underlining their potential role in overall city development.

2. Defining and recognizing spontaneity

What is spontaneity in an architectural and urban context? Certainly, it has many meanings depending on the circumstances and the theoretical position one might take. Nevertheless, due to its etymological root signifying an unplanned action or natural phenomena, natural impulse or tendency, or in a wider sense ‘growing naturally’ (Oxford dictionaries 2019), it is usually associated with *unplanned urban phenomena*. While such phenomena predominantly have a negative connotation in urban disciplines, in other disciplines such as sociology, art, literature or the natural sciences, spontaneity is mostly viewed as a positive characteristic.

Psychologists see spontaneity an important feature of social relations between humans. Specifically, spontaneity allows us to perceive the naturalness of an individual’s character by emphasizing its true inner-nature rather than by presenting “artificially” intended or premeditated action. Furthermore, in the field of sociology, spontaneity is often interpreted as the engine of progress in social structures. According to Jacob L. Moreno, “Spontaneity

and creativity are the propelling forces in human progress, beyond and independent of libido and socioeconomic motives [that] are frequently interwoven with spontaneity-creativity, but [this proposition] does deny that spontaneity and creativity are merely a function and derivative of libido or socioeconomic motives” (Moreno 2011). Many interesting examples can also be observed in art, especially the paradigm known as reverse or Byzantine perspective (Dergowski, Parker & Massironi 1994), which was commonly used for presenting biblical scenes in Byzantine painting. Although the perspective of the space was inaccurately constructed in a geometrical sense, the observer becomes aware that the spirituality of the illustrated scenes is intended to be experienced and perceived spontaneously. According to the Russian theologian, philosopher and electrical engineer Pavel Florensky the reverse perspective is the most direct pathway for man’s spiritual eye to look at or meet the eye of God (Florensky, Misler & Salmond 2002). Indeed, many artists continued to ignore the development of linear perspective in painting in order to construct geometrically “incorrect” space, which, however, offered an imaginary “space in-between”, a world at the intersection of reality and possibility (Tagliagambe 2008). Finally, one of the most profound and accurate definitions of spontaneity is provided by physicists, who interpret it as a state of determinate chaos (Prigogine & Stenger 1984). Spontaneous behaviour is described as a condition of local instability and global stability, as demonstrated in the Lorenz attractor (see Fig. 1). Although the trajectory of a particle is unpredictable, globally the behaviour is recognizable. In other words, while each drop of the wave is moving chaotically and turbulent, together they create perfect order.

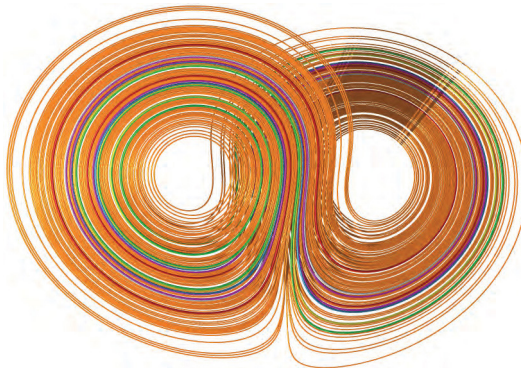


Figure 1. The Lorenz attractor.

Although each trajectory is unpredictable, globally the behaviour is recognizable
From: *The Lorenz Attractor, a Paradigm for Chaos*, Etienne Ghys

Similarly, spontaneity in an architectural and urban context can be defined as a dynamic, open, unmediated concept which, while unpredictable at the small scale, produces typical or recognizable figures at the larger scale. Such figures can be observed in many informal urban forms. They are usually composed of recycled materials and articulate various expressions and styles, commonly proliferating on a territory following a set of informal rules. The nomad settlements that appear in various forms around the globe, such as in the Far East (Ebrahim 1984) or the Romani nomads in Europe (Commissioner for Human Rights 2012), are only a few examples. One particular case is that of cross-border areas, especially between countries with disparate socio-economic conditions. The recycled transfer of building material and immigrants between the United States and Mexico has been extensively described in a study on this so-called “political equator” (Cruz & Boddington 1999). As conceptualized by Cruz and Boddington, the study takes a comprehensive look at the cross-border cities of San Diego in the USA and Tijuana in Mexico, arguing for the development of socio-economic relations rather than focusing on traditional architectural projects as a pathway to urban development. Furthermore, there is currently a global debate on slums, shanty towns or favelas as informal settlements representing a “set of conditions with social, political and cultural effects, which resist the fixing of their values by fiat” (Rao 2006) (see Fig. 2).

Today 828 million people live in slums, with this number projected to rise in the coming decades (UNDP 2019). It is estimated that 95% of urban expansion will take place in the developing world, and by 2050 the majority of the world’s population will be urban residents (United Nations, Department of Economic and Social Affairs, Population Division 2014) (UNDP 2019). In addition, some forecasts suggest that large areas of cities will be informal (Burdett & Sudjic 2011). Other kinds of spontaneous informal urban phenomena are reported such as “abusive urbanism” (Vöckler & Schweizerisches Architekturmuseum 2008), described as an emergent state of architectural voluntarism.

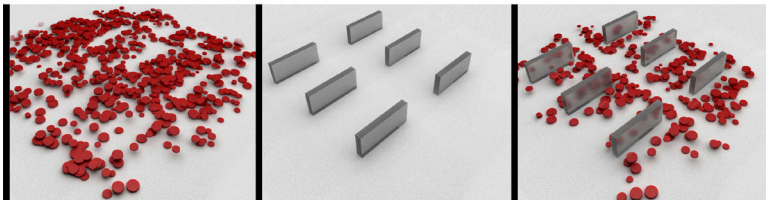


Figure 2. [above] 23 de Enero district, Caracas

Grahame Shane also recognized specific kind of informal processes which emerge as a disadvantageous outcome of the typological approach to instruments of planning. In the case of Caracas, Shane discerned a third typological shift in cities, where informal settlements eradicated in the past once again invade free areas between the typological blocks. (Caracas growth maps © Alfredo Brillembourg and Humbert Klumpner/U-TT, 2003, aerial view of 23 de Enero © Pablo Souto/U-TT). From: *Urban design since 1945: a global perspective*. David Grahame Shane, 2011

[below] Typology planning and proliferation of informal settlements. The example of Caracas, Venezuela
Diagram by Igor Noev

Then we can observe areas of morphological discontinuity defined as “urban cracks” (Clemente 2005), while contemporary “urban sprawl” as the widespread incursion of buildings into the landscape often contains unplanned residential quarters following one another without any sense of continuity (see Fig. 3). Nevertheless, the general condition by which such informal settlements can be recognized is the predominance of the private over public space, the ambiguity of public space, the impractical dimensions of road systems, insufficient infrastructure and intermittent public services (Conde & Magalhaes 2010).

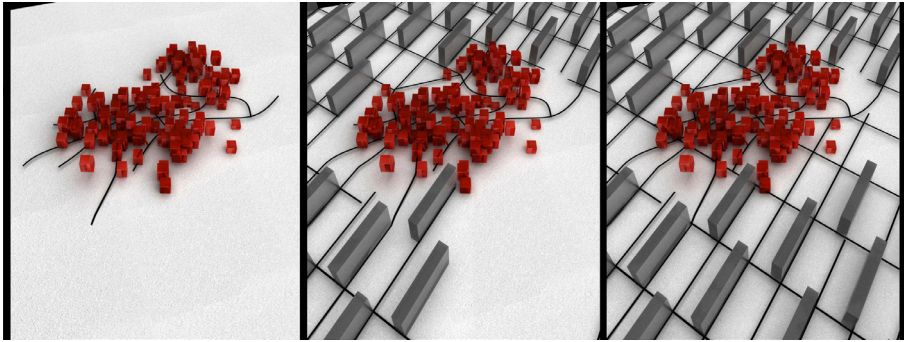


Figure 3. Urban cracks

Historic fabrics embraced within city growth. Phases of the planned city that accommodate historic fabric to create vague connections. Diagram by Igor Noev

Interestingly, there are other instances where certain formal urban figures have been regarded as spontaneous. For example, “unsigned” architecture (Rudolfsky 1964), defined as various architectural and urban settings of timeless value created by ancient unknown authors. Correspondingly, historical “traces” such as old forms of land ownership appear within the formal urban fabric as “path matrices” for generations of new buildings (De Rubertis 1998). Additionally, urban phenomena of supermodernity such as “non-places” (Augé 1995) and “placeless typologies” scattered over a territory with locations chosen for banal motives (Gregotti 1990) are the end result of individual projects with no concern for the urban whole (Secchi 1991). Finally, there are transformations and actions caused by “informal urban actors” such as citizens, emerging from a non-planned, spontaneous “urbanity” (Groth & Corijn 2005) to participate in all phases of realization and transformation of the project. Hence, transformations such as adaptations, appropriations, modifications, additions, advertisements, overhangs, laundry, etc. represent spontaneous individual actions that shape the environment as well as the human process of perceiving the urban landscape.

3. Understanding and interpreting spontaneity

Beyond the stereotype of being *informal*, or not-formal, spontaneous urban phenomena are often interpreted using other dichotomies. The *un-planned* is one commonly used notion to tackle the design process and the complex relation between the “project” and its realization. This undoubtedly includes many spontaneous aspects. In fact, in previous decades many theoreticians have argued that any “project” related to architectural and

planning disciplines is not a rigidly pre-determined figure. Instead, it includes a range of unplanned processes and experiences, and thus is liable to change, transformation, adaptation and mutation during the planning process and the timeframe of its existence. The first significant revision in the comprehension of spontaneity as part of the urban project was made at the 1951 CIAM VIII conference, entitled “The Heart of the City”. The main subject of the conference was the “heart” – or “core” – of the city, and the idea of finding the right balance between the world of the human, as informal actors, and the world of the community. Due to their spontaneous character, historic fabrics such as the city’s original core are interpreted as a carrier of the underlying genetic material. The conference also created an awareness of the existence of two different schools of architecture (McCallum 1954), one that fears “wilderness” or unregulated nature, and the other that is inspired by the significant feature of spontaneity within the historic fabric as a carrier of the city’s genetic material (Rogers 1952). For the first time, the need was recognized to turn people from passive viewers into active participants (Giedion 1954). From this moment on, numerous critiques were voiced regarding the over-simplification and over-determination of the conventional planning process.

Taking postmodernism as a continuation and criticism of the modernist movement (Habermas 2005), the critique in the last century of the post-modern opposition towards the modernist viewpoint opens up a remarkable perspective on spontaneity. For instance, C. Rowe and F. Koetter presented two different postmodern approaches that addressed critiques of Le Corbusier’s unrealized Ville Radieuse (Rowe & Koetter 1978). While the architectural practice Superstudio created a “free-from-object platform” intended to function as an open space for spontaneous improvisation, Robert Venturi proposed a designed picturesque surrealist stage-set and architectural project that defined something more than just a functional object. The background to this debate is certainly the relation between the *provisions* that are made within a design process and the inability to make precise *predictions* about the future. Hence, according to Gregotti, the reality of the architectural form is comprehended as an experience of modification (Gregotti 1986). In this respect, the project and the reality are two different, incompatible universes (Alexander 1965), considering both the formal and informal urban context. According to Alexander, the project (which is essentially a tree-like structure) is destined to transform itself spontaneously into a semi-lattice structure. Recently, introducing the concept of the “Open City” into this framework, Richard Sennett (2006) was able to gather together many ideas that introduced spontaneity as an answer to the “superficiality of urbanism”, a subject recognized and profoundly studied by Jane Jacobs (1961). She passionately advocated the idea of the spontaneous city as an open concept, arguing

that deprived neighbourhoods are chaotic and unsafe, in contrast to ordered and planned neighbourhoods, which are deemed valuable and safe. In her opinion, social and visual forms mutate through chance variation in the open city just as in nature, enabling people to better absorb, participate and adapt to change. Therefore, opposite to the overdetermined “closed” city concept, Sennett suggests an “open” system that incorporates principles such as porosity of territory, narrative indeterminacy and incomplete form, that would allow the city to become democratic not in a legal sense, but as physical experience.

Returning to the dichotomy that sees post-modernity as modernism with additional acceptances, David Harvey (2008) offers a table of stylistic oppositions between modernity and post-modernity. This list of dichotomies can help us understand how spontaneity is related to its opposite, i.e. pre-meditation (see Fig. 4). In this consideration, spontaneity is indeed an antonym of the “project”, which leads to the interpretation of being “unplanned”. However, the accuracy of this interpretation in architecture is also questionable. Certainly, an architectural object or an urban structure cannot arise suddenly and sporadically, nor are these naturally self-growing organisms. Indeed, even a simple construction such as a nomad tent must be planned at some level. Therefore, instead of describing them as “unplanned”, spontaneous phenomena in an urban context can be comprehended as the materialization of an unwritten project. This statement, however, implies another contradiction, namely the epistemological paradox of planned spontaneity (see Fig. 5). Nevertheless, the rule and the model are integral to the materialized, built environment, and hence are still two principal spatial matrixes required for its proliferation (Choay & Bratton 1997). Therefore, if we explain spontaneity as a form of dichotomy, it is hard to contrast this with formality or planning; instead, we can turn to a model that for Choay and Bratton is understood as “a critical approach to a present reality, and the modelling in space of the future reality ...”. Accordingly, several distinguishing features provide a provisional characterization of spontaneity in the architectural context: Firstly, there is no signed professional author or referent space model determining its constructive form. Secondly, it is a materialization of an unwritten project and thus not preceded by a pre-studied model. And finally, it is temporarily or permanently present at a particular location, and subject to the constraints of time and change.

<u>Modernism</u>	<u>Postmodernism</u>	<u>Premeditated</u>	<u>Spontaneous</u>
Romanticism / Symbolism	Dadaism / Paraphysics	Project	Case
Form	Antiform	Hierarchy	Uniformly
(Conjunctive, Closed)	(Disjunctive, Open)	Concentration	Dispersion
Purpose	Play	Formal	Informal
Design	Chance	Meaning	Significant
Hierarchy	Anarchy	Type	Mutant
Mastery / Logos	Exhaustion / Silence	Regular	Irregular
Art Object /	Process /	Tree	Semi-lattice
Finished Work	Performance	Rule	Routine
Distance	Participation	Central	In between
Creation/	Decreation	Multiply	Generate
Totalization	/ Deconstruction	Empiric	Practice
/ Synthesis	/ Antithesis	Modern	Postmodern
Presence	Absence	Determinate	Hypothetical
Centring	Dispersal	Provision	Genuine
Genre / Boundary	Text / Intertext	Simple	Complex
Semantics	Rhetoric	Art	Naive art
Paradigm	Syntagm	Order	Chaos
Hypotaxis	Parataxis	Made	Born
Metaphor	Metonymy	Plain	Metaphor
Selection	Combination	Real	Surreal
Root / Depth	Rhizome / Surface	Ordinary	Extraordinary
Interpretation	Against Interpretation	Usual	Exceptional
/ Reading	/ misreading	General	Particular
Signified	Signifier	Method	Proliferation
Lisible (Readerly)	Scriptible (Writerly)	Design	Arrangement
Narrative	Anti-Narrative	Desire	Impulse
/ Grande Histoire	/ Petite Histoire	Hypothesis	Need
Master Code	Idiolect	Plan	Urge
Symptom	Desire	Interpretation	Understanding
Type	Mutant	Author	Origin
Genital	Polymorphous/	Monument	Temporal
/ Phallic	Androgynous	Solid	Scarce
Paranoia	Schizophrenia	Stabile	Variable
Origin	Difference-Difference	Professional	Voluntary
/ Cause	/ Trace	Top-Down	Bottom-up
God The Father	The Holy Ghost	Utopia	Dystopia
Metaphysics	Irony	Either-or	Both-and
Determinacy	Indeterminacy		
Transcendence	Immanence		

Figure 4. [left] Stylistic oppositions between modernity and post-modernity.

From: The condition of postmodernity: an enquiry into the origins of cultural change. David Harvey 1990

[right] Stylistic oppositions between premeditation and spontaneity.

Figure by Igor Noev



Figure 5. Le Baiser de l'Hôtel de Ville (The Kiss by the Hôtel de Ville). Photo by Robert Doisneau

An example of the intriguing nature of spontaneity can be noted in the case of the famous photo “The Kiss” taken by the French photojournalist Robert Doisneau near Hôtel de Ville in Paris. The reputation of this “most romantic photo in the world” was compromised when professional actors Françoise Delbart and Jacques Carteaud admitted they had been hired by Doisneau to do a “spontaneous” kiss (Poirier 2017). Although the photograph was staged (implying that the participants were acting), this photo is still hugely significant for the city of Paris.

4. Incorporating spontaneity: The case of Skopje

The urban development of Skopje, the capital of North Macedonia, reveals an interesting paradox that has placed the city in a “vicious circle”. As the authors of the most significant urban development proposals drew up new urban narratives, they often ignored the local context as well as the legacy of preceding projects. These circumstances led the proposals to be only partially realized and even, in some cases, completely abandoned, turning the city’s contemporary urban landscape into a collage of various incomplete models (Bakalcev 2011). Within the existing urban fabric, some historical neighborhoods are wedged between the fragments of realized urban projects, representing signs of memory and the resilience of spontaneous urban processes. The areas (shown in Fig. 6) are Novo Maalo, Madzir maalo, Krnjevo, Topaana and Dukjandzhik Maalo. They are examples of extraordinary urban phenomena with identities which cannot be simply defined as either formal or informal. On one hand, significant parts of these settlements are today “formalized”, meaning that they are legally owned by their residents and formally considered in detailed urbanistic plans. On the other, dating as they do from the time of the Ottoman Empire (Kaceva, Hristova & Gorgiovska 2002), they are not designed and structured according to some formal urban plan but rather obey the “bottom-up” principle of urban structuring. Furthermore, since all the previous urban design proposals for Skopje envisioned the com-

plete eradication of such areas, they were disregarded and excluded over the years. Consequently, they appear as they do today, dilapidated and disjoined from the urban landscape. Nonetheless, the city authorities should take up the challenge to develop and to rethink these areas, thereby making the city more inclusive, resilient and sustainable. Inevitably, this means tackling the question of their identity and significance, especially considering the historical context.

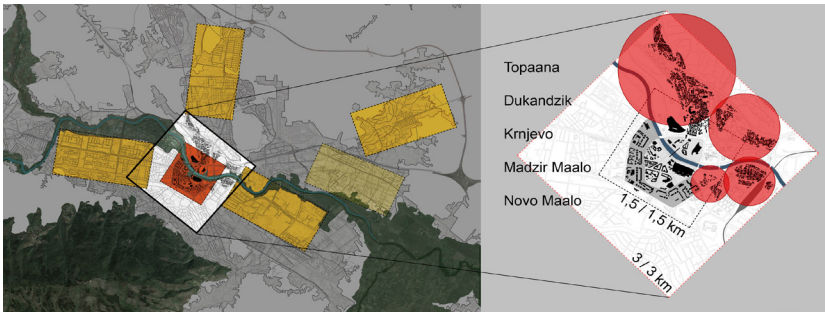


Figure 6. Fragments between fragments. Case of Skopje: Extraordinary neighbourhoods appearing between the planned urban fragments. Illustration by Igor Noev

The ancient city of Scupi (Colonia Flavia Scupinorum) was founded in the first century AD. During the turbulent ancient and medieval ages, which were afflicted by periodic war, the fall of empires as well as devastating earthquakes (Jovanova 2008), the city was ruined and abandoned several times. Finally, at the end of the 14th century, it became part of the Ottoman Empire. Topographical data and existing property lines suggest that it arose as a “traditional city” structured by irregular pattern of narrow streets following the “paths matrix“ (Caniggia and Maffei 2008). The city was divided into several districts, generally reflecting the ethnic and cultural makeup of the local residents.

After the demise of the Ottoman empire, the urban landscape of Skopje faced three significant typological shifts in the 20th century (Noev 2013) (see Fig. 7). The first shift, which can be called “*de-facto to de jure*”, appeared in the project proposed by Josif Mihajlovic in 1929, designed according to the 1914 masterplan of Dimitrije Leko. This project offered a new concept for the formation of public spaces (Korobar 2007), emphasizing an artistic approach to urban design aimed at achieving a picturesque city image. Accordingly, the significance of the spirit of the place was seen as a key element of the new city iconography.

The second shift refers to the project of Ludjek Kubes from 1948, which in contrast to that of Mihajlovic, proposed a new model for Skopje accord-

ing to the concept of the “functional city” as presented at CIAM IV of 1933 and Le Corbusier’s model of *Le ville radieuse* (Le Corbusier 1935). At that point in time, Skopje abandoned the previous model that celebrated the idea of the “genius loci” (Norberg-Schulz 1980) and, following the principles of the modern movement, started to praise the spirit of the time. The narrative interpreted the city “as a machine” (Lynch 1981) and foresaw a new East-West axis of development. The city was divided into residential, administrative, industrial and recreational zones, while typological extensions mainly occurred along the riverside.

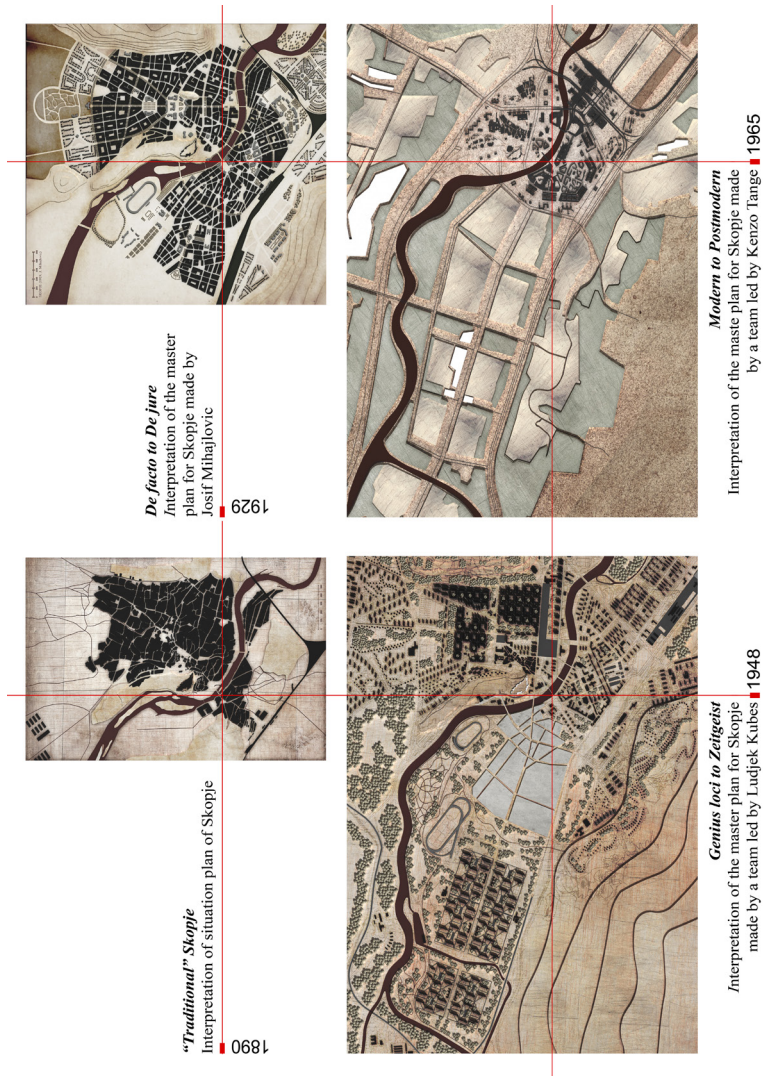


Figure 7. Three typological shifts of Skopje. Although conceptually divergent, the development projects for Skopje shared the same idea, namely the complete eradication of traditional bottom-up urban fabrics.

Illustration by Igor Noev

The third typological model for Skopje appeared after the disastrous earthquake of 1963 that left nearly 80% of the city in ruins (United Nations Educational, Scientific and Cultural Organization 1968). Following the approval of a new masterplan in 1964, and in view of the urgent need to reconstruct the devastated city centre, an international competition was conducted by the United Nations (United Nations Development Programme 1970), leading to the winning concept of a team headed by Kenzo Tange. At this point, Skopje became oriented towards a third typological model, namely an ornamented megaform (Frampton 2012). Tange and his team proposed a futuristic model obeying the principles of Japanese Metabolism, whereby mega-structural urban elements dominate over socio-economic, cultural and artistic aspects (Arsovski 1989). Although some important historical sites were preserved in this model (e.g. the old bazaar was transformed into a historic landmark), it resembled previous masterplans in the poor adaptation to the preceding models as well as to the local urban context and cultural background. The city centre became even more detached from the typological extensions realized within the previous plans. Between these two defined urban entities, fragments of bottom-up enclaves remained, existing as a kind of parallel in-between universe.

Although the three major typological shifts originated from three conceptually divergent projects, they all shared the same idea, i.e. the complete eradication of the formally unplanned, bottom-up urban fabric. Interestingly, these ideas were incompletely realized, leaving a rich legacy of spontaneous urban phenomena (Noev 2013) recognizable even in Skopje's present urban structure. It is indeed intriguing that these neighborhoods, which were to be eradicated in all formal plans, still exist as witnesses of the inadequacies and failures of the so-called conventional planning methods, which were widely debated in the past century. Paradoxically, Skopje's urban planners continue to force through "detailed urbanistic plans" based on a conventional approach, namely consolidating lots to form large perimeter blocks, instead of introducing extraordinary methodologies of development that take into consideration all those settlements with their shared values. It is evident that, instead of the simple method of "unslamming" the neighborhoods by means of demolition (Jacobs 1961), the spontaneous character of this urban phenomena requires the incorporation of "open systems" (Sennet 2010), i.e. projects outside the box of typical and overly deterministic planning. Firstly, the integration of small- and large-scale projects would certainly enable those areas to develop together within the city, sharing and advancing their distinguishing spontaneous features. In that way, they would not be viewed as ailing areas in need of confinement and separate treatment from the other parts of the urban landscape.

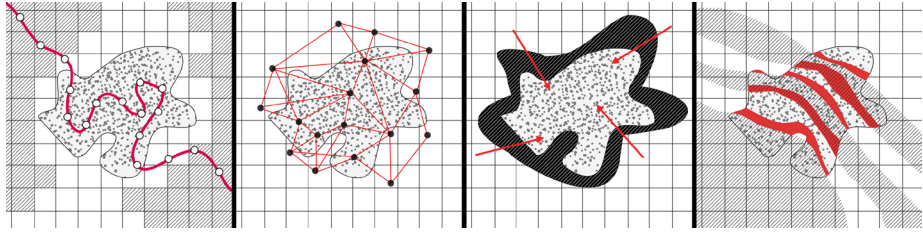


Figure 8. Diagrams of the proposed methodologies for inclusion. [1] Street as a project. [2] Creating new networks. [3] Developing the margins. [4] Urban recycling. Diagram by Igor Noev

The first is the concept of the “street as a project” (see Fig. 9). This originates with the idea that the street, viewed as a “void”, is an important structuring element of the environment, not just in a physical sense but also as a definition of personal identities, e.g. the street where one is born and raised (Schumacher 1971). Therefore, in high-density locations or at a time when negotiations between the municipality and residents are not proving successful for development, the street can be a suitable subject for architectural and urban design. In this case, the void of the street corridor could generate new public domains, allowing the city to “enter” the settlement by “tentacles”, thereby developing the existing structure without any obstacles from pre-existing units.

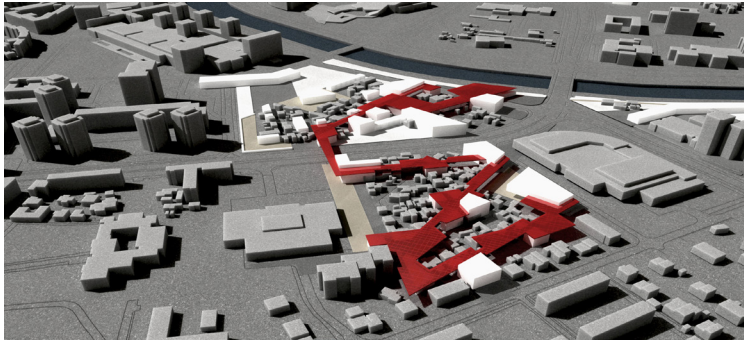


Figure 9. Method: Street as a project. Case Study: Skopje, Novo maalo. The void of the existing streets extends and becomes a source for new public domain.

In red: Potential street corridors selected for development by the project.

In white: Possible extensions of the corridor.

Diagram by Igor Noev

The second method, “creating new networks”, considers an alternative understanding of the word “informal” to imply information or “to inform” as well as the standard meaning of “not formal” (Brillembourg Tamayo, Feireiss, Klumpner, Kulturstiftung des Bundes & Caracas Urban Think Tank 2005) (see Fig. 10). In this approach, developing the settlement does not just mean the transformation of its physical condition but also the larger-scale development of its contextual behaviour. Consequently, existing streets can be rethought as a network to reveal new connections with surrounding public spaces. In other words, in cases where the basic structure of the settlement is in a good condition, the idea of developing network lines (including nodal points) could promote new kinds of urban flow.

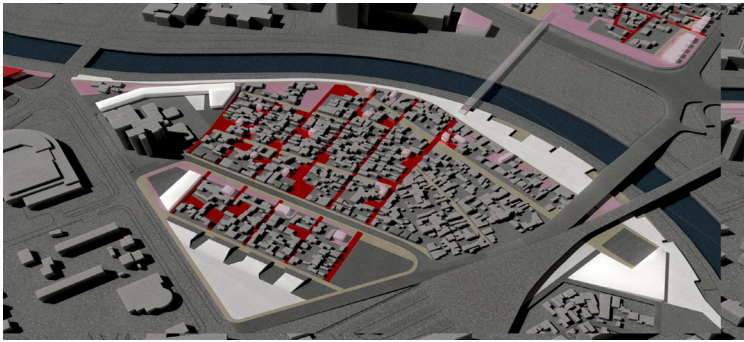


Figure 10. Method: Creating new networks. Case Study: Skopje, Madzir maalo. New network mediates the local scale by linking the newly extended “poché” piazzas as well as the large scale by connecting redefined large urban voids.

In red: Redeveloped street axes extended with small “poché” piazzas.

In white: Redefined large urban voids.

Diagram by Igor Noev

Another technique, called “developing the margins”, proposes that the secret of the form is in the nature of its limits (Simmel 1979). Specifically, the development of the margin implies the development of the entire settlement (see Fig. 11). The limit can be understood as an interval of confrontation between two different structures, as a space “in-between”, which at the same time belongs to both parties. Thus, the incorporation of those fragmented neighbourhoods can be achieved by revising the liminal areas located in-between, redesigning these as congested, porous, semi-porous or permeable inter-spaces, thereby creating new relations at scales that interlace.

Another important aspect of informal settlements is the use of recycled material. In fact, it is legitimate to consider waste as one of their resources. Therefore, the fourth method proposed here is “urban recycling”, viewing the

reuse of space as a design tool (see Fig. 12). The need for recycling is a consequence of resource scarcity, and public spaces in such neighbourhoods are certainly subject to this constraint. This could be achieved by two important features: The first considers the transformation or recycling of the “formal” surrounding environment, while the second includes transformation of semi-private space, for example front yards, courtyards etc. as a generator of new public domains.

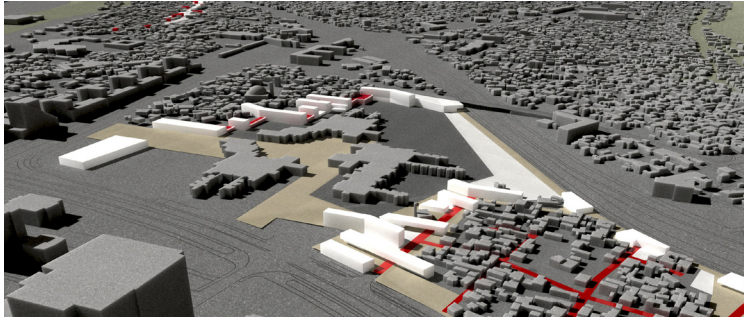


Figure 11. Method: Developing the margins. Case Study: Skopje, Krnjevo. The margin as a space “in-between” belongs to both conventional and unconventional planning. The liminal areas located in-between are correspondingly developed as congested, porous, semi-porous or permeable inter-spaces that create new relations at interlacing scales.

In white: Redefined liminal areas between the bottom-up and top-down urban fabric.

Diagram by Igor Noev



Figure 12. Method: Urban recycling. Case Study: Skopje, Dukandzik and Topaana. In this context, the top-down urban structures in the vicinity are redefined to improve the complex bottom-up urban fabric.

In red: Redefined top-down urban structure.

In yellow: Possible extensions.

In white: Redefined main street “artery” that meanders and unifies neighbourhood to generate new public domains.

Diagram by Igor Noev

5. Conclusion

The phenomenon of spontaneity has not yet been closely studied in the architectural and urban context. It has many meanings and can be identified in various urban environments, scales and circumstances. Nonetheless, spontaneity in both formal and informal urban environments can be defined as a dynamic, open and unmediated process that is unpredictable when observed at the small scale. At the same time, it results in images that are typical, identifiable and recognizable at the large scale. Furthermore, spontaneity can be also observed as a self-referential paradox, both rejected and desired in the design process. On the one hand, even the simplest construction must be planned. On the other hand, even the most formal projects will undergo unpredictable transformations and modifications caused by formal or informal urban actors. Therefore, instead of assuming a dichotomy, and identifying spontaneity as something unplanned, it represents a realization of an unwritten project in the urban environment.

The case of Skopje revealed four extraordinary neighbourhoods with spontaneous characteristics located between the planned urban fabrics. As an outcome of the preceding planning procedures, today they appear disregarded and detached from the surrounding urban landscape. Methodologies and techniques for design as discussed above, namely *street as a project*, *creating new networks*, *developing the margins* and *urban recycling*, are aimed at including these areas within the urban structure. Furthermore, they imply that the development of such areas requires the creation of an open system, an approach that rejects over-deterministic planning. Hence, the presented results do not offer a final design solution, but rather a partial-figure, an illustration of one possible scenario.

As previously stated, a paradox will provoke critical thinking about an idea. Spontaneity in the architectural and urban context certainly signifies and reveals many paradoxical circumstances. Nevertheless, spontaneity emerges as an open source that can be used as a tool to enable cities and human settlements become inclusive, safe, resilient and sustainable, as outlined in the 11th Goal of the UN's 2030 Agenda for Sustainable Urban Development (United Nations 2015). In such extraordinary environments that are simultaneously dilapidated and charming, desolate and vibrant, as well as sad and humorous, spontaneity is a value that is shared along with the wider urban landscape. It appears as a link connecting both formal and informal urban environments, constituting – like music – a universal language. And as Don Quixote said in one of his adventures: “Where there is music there can be no evil”.

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Experiences from a participation process in Göttingen Osterode

Design Thinking as a
target-oriented method
for the participation of
young people

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Abstract

Although young people are equal members of the community, they are generally excluded from municipal planning processes. This problem can be resolved by fostering participation, thereby making them more than mere spectators. Young people form a heterogeneous group of individuals who want to be taken seriously, explicitly addressed and motivated. However, it is not easy to reach and motivate youngsters to take part in participatory processes. They frequently have a busy schedule at school, time-consuming leisure activities and long travelling distances in rural areas with inadequate public transport. One approach to sparking the interest of young people, who are constantly online or on their smartphones, is to use the internet. However, methods other than digital participation are required to foster their involvement: We need a dedicated form of participation that takes account of young peoples' wishes, requirements and ideas in an interesting and attractive way.

In the district of Göttingen Osterode am Harz (a.H.), researchers and regional managers have considered various methods to encourage the participation of teenagers, identifying some concrete results that can be achieved in the target group. In particular, they tested the method of Design Thinking as a form of youth participation. In this paper we consider the background to youth participation and look at how this can be fostered, in particular by investigating the method of Design Thinking. This is found to be successful in motivating young people to get involved in urban design.

KEYWORDS

participation, Design Thinking, teenagers, inclusive

1. Introduction and background

Demographic change in the form of an ageing population is changing the structure of society. Furthermore, this trend will reinforce the migratory flow from rural areas to ever more densely populated conurbations. Against this backdrop of an ageing society and the problems this brings, it is essential to ensure that the youngest generation of citizens are not neglected but are encouraged to be self-confident and involved in their communities (Baden-Württembergstiftung gGmbH 2015, p. 9). New opportunities for co-determination are needed, especially for decisions relating to the provision of public services, which are endangered by demographic change. These opportunities have to be adapted to current circumstances. Teenagers are playing an increasingly important role in this process. They are not only consumers but also actors with the power to shape events, and thus should no longer be excluded from planning. Young people must take on new challenges in helping to design the urban environment as well as public services. A central topic of social development in the 21st century is to foster the participation of citizens, children and young people. Hitherto, the focus has generally been on adults rather than young people, who are seen as a difficult target group to reach and motivate. Innovative methods to foster their participation are needed. One such method, which has proven to be highly promising, is Design Thinking. The background to this method is explained in the following, along with details of how it can be applied. A real-world example from the Göttingen-Osterode a.H. is presented to confirm the success of this method in actually involving young people in the planning process. The aim of the article is to elucidate the use and benefits of Design Thinking when applied to public planning processes.

2. What is participation?

Participation is a recurring theme in the political, administrative and public arena. Over the years it has attracted varying degrees of interest and popularity (Stange 2013, p. 13). Clearly, citizens wish to have a say in public planning, in urban developments or projects and in related decision-making process. They demand the right to veto, to protest or propose (Nanz & Fritsche 2012, p. 9). What remains unclear, however, is the extent to which this involvement takes place or should take place. While some people are satisfied when they are regularly informed about ongoing processes, others want to participate in procedures and exert influence (Nanz 2017, p. 9). Citizen participation, however, should be seen as a discourse, i.e. an ongoing process that will not necessarily lead to a clearly voiced decision (Sommer 2015). It implies an opening of planning and policy processes to civic participation through

information, participation and cooperation (Selle 2004).

In Germany, legal regulations for citizen participation are specified at all procedural levels, for example in the following ordinances:

- § 3 BauGB (Building Code)
- § 1 Para. 3 SGB VIII (Social Code)
- § 8 Para. 1 SGB VIII (Child and Youth Welfare Act)
- country-specific municipal ordinances.

Depending on the viewpoint of the actor, whether politician, public planner or youth welfare officer, participation will be understood in different ways. Generally speaking, we can say that participation refers to the active participation of citizens in the handling of common (political) affairs or, indeed, the active participation of members of some organization (a group or association, etc.) in the common (organizational) affairs. It implies the involvement of people in political decision-making processes, in particular in elections and referendums. In a legal sense, participation refers to the involvement of the public in administrative decisions (Schubert & Klein 2001). In this context, Kaase emphasizes the voluntary nature of participation: First and foremost, citizen participation encompasses all activities that citizens undertake on a voluntary basis to influence decisions at different levels of the political system. This is understood as instrumental, goal-oriented action in the sense of participation in the political process of opinion formation and decision-making (Kaase 1995, p. 521).



Figure 1: Level of participation

Source: Own representation after Arnstein (1969, p. 216 ff)

Participation can be broken down into a number of different levels (as shown in Figure 1). Here we borrow from the eight-step model devised by Sherry Arnstein to reveal the difference between genuine optimal participation and something that merely masquerades as public participation. The ladder illustrates the power and powerlessness of people: Each of the eight rungs corresponds to a different level of citizen power to influence the end product. According to this model, citizen control is the highest level of authority that can be achieved, namely when citizens are fully in charge of a policy or plan. In contrast, the bottom rung of the ladder is described as manipulation, the lowest level of public participation, also called *non-participation*. Here the public and an outside observer are manipulated into thinking that public participation is in progress (cf. Arnstein 1969, p. 216ff).

In Arnstein's model, only three of the eight specified forms of citizen participation are instances of genuine influence exerted by all participants. Accordingly, the other forms merely pretend to pursue this goal. Although they enable participants to formulate their own views and ensure that these are heard, they do not guarantee that views and demands are actually taken into account in the decision-making process. These forms of participation thus lack penetrating power, since the decision-making authority is located with the corresponding rulers. Only in the three top rungs of the model do participants actually have the opportunity to make their own decisions and exert influence on the final decision-making process. For this reason, the top rungs of participation in this model, namely *partnership*, *delegated power* and *citizen control*, are classified as *degrees of citizen power*. The possibility of exerting influence is relatively high, even if they do not accord a leading role for citizens (cf. Elsmann 2017, p. 115ff).

In every participation process, it is unclear whether the aims of the participants will be implemented in concrete decisions. Not all citizens can participate in every decision-making process. In large cities, in particular, this is impossible for a range of factors: The expense and time required to ensure participation, the number and distribution of the population as well as their diverse interests, etc. Moreover, for a variety of reasons, not all individuals wish to be permanent participants¹ (Herrmann 2002, p. 16). Ultimately, the term *citizen participation* implies that, through an act of political and administrative will, citizens are given the chance to actively participate in decision-making and planning activities. In addition, it implies that citizens are accorded sufficient power to influence decision-making and shaping processes. Especially with regard to child and youth participation, this means that part of the power of sovereignty over one's own lifestyle is transferred from adults to children and adolescents (Fatke & Biebricher 2006, p. 26).

1 Due to a lack of time, interest or motivation or a (temporary) surfeit of participation measures, etc.

Here it is important to stress the relevance of Arnstein's model, which was developed more than 40 years ago. While acknowledging its limitations, we can say that this approach is still relevant today in discussions on participation. Indeed, numerous subsequent papers on the topic have referred to Arnstein's Ladder of Citizen Participation, for example Cornwall (2008), Stout (2010) or Collins and Ison (2006). This ongoing critical examination of Arnstein's Ladder reflects the continued interest in the issue of participation. At the same time, it also confirms that no magic formula has been found to ensure successful and effective participation in decision-making processes in the fields of politics and planning (Elsmann 2017, p. 116).

3. State of research

In recent years, there have been a number of technical and scientific discussions on the subject of participation as well as research and practical projects (best practice examples are particularly popular). Despite the existence of some pilot projects, we can basically say that various theoretical approaches which have been devised have not yet been adopted in day-to-day practice. There has certainly been no attempt at the structural anchoring of participation. Similarly, there is a dearth of independent and coherent general concepts (Stange 2013, p. 13).

Hitherto, participation has been understood as adult participation, especially in urban development research. The participation of different target groups has been viewed as irrelevant not only in practice but also in research. On the one hand, we have scientists, who can contribute their knowledge, (research and professional) experience and expertise. On the other hand, we have citizens, children and young people, who wish to contribute their opinions, expectations, specific experiences and value orientations. Scientists can use the knowledge gained in this way to analyze the processes, plans and procedures and, if necessary, further develop, improve or revise these. Hitherto, however, these participatory elements of scientific communication have often been rather neglected in Germany (Science in Dialogue 2011, p. 9). The participation of children in science has generally been a rather marginal area, with much research still to be done. Indeed, there have only been a few serious attempts to carry out online participation processes with young people (see Ertelt 2012, p. 82).

The rare instances of children's participation are currently related to municipal planning, specifically urban planning and (re)development such as traffic planning (the design of traffic routes, cycle paths and the safety of school routes). Participation also takes place in schools or in day-care centres. One exemplary area for the participation of younger children is in media and

cultural work, for example in video projects, on various children's news channels or the self-organized design of websites by older children. Here the focus is on learning effects relevant to pedagogical research that result from such procedures as well as their influence on future development (Stange 2010). There is no doubt that this field suffers from a lack of investment in research. Young people, in particular, are hardly addressed as a field of research, resulting in large gaps in this topic.

4. Participation as a part of 'Inclusive Urbanism'

It is important to clarify what we mean by 'young people'. For some experts and actors, these are simply teenagers, i.e. youngsters aged between 13 and 19 (Von Alemann 2006, p. 9f). Under German law, a young person (*ein Jugendlicher*) is defined as being between 14 and 18 years old (JGG 1974). Also the age of majority in Germany is 18, as stated in §2 of the German Civil Code (Bürgerliches Gesetzbuch [BGB] 2002). The target group in the investigated case is between 15 and 18 years old.

Clearly, 'youth' does not define itself but rather is determined externally by older social groups. This definition becomes increasingly difficult as the social group of young people becomes progressively complicated and multi-layered (Von Alemann 2006, p. 9f). Often we find hidden resistance and reservations on the part of politicians and administrators to the participation of young people. Sometimes, however, the level of participation is similar to that of adults: There is the assumption at the political and administrative level that children and young people should and want to be involved in all topics. However, this view is, generally speaking, neither correct nor effective. Young people – as well as adults – are not interested in everything around them, especially if they see no direct connection to their lives or if longer periods of time are involved (Stange 2012a, p.22). In addition, many decision-makers and planners regard young people as more likely to disrupt the technical process than enrich the decision-making basis (Fürst & Scholles 2008 p. 163). While youngsters are almost always affected by political decisions, they rarely have the opportunity to influence them. It is essential that they be accorded the right to express their positions within the social debate about the future, and play an active role in shaping the community (Siefken et al. 2013, p. 1). Yet many actors see the participation of young people as a highly costly and uncomfortable exercise. That is why they are so often excluded from the decision-making processes around urban planning. Where there is participation, it is in the design and planning of nurseries, schoolgrounds or playgrounds. Yet it cannot be denied that young people constitute the future of any community. For this reason, they must be encouraged to participate in decision-making

processes. Participation by children and young people is often viewed by adults as a risky endeavour: Youngsters generally have their own, sometimes unrealistic ideal of participation in social life (Wergin 2000, p. 7).

In addition, some experts believe that public actors are afraid of young people. According to Ertelt (2012), this is related to the binding nature of participation: Actors fear the possible loss of control if young people can express themselves in an uncontrolled and unfiltered fashion. Yet the formation of opinion is a continual and daily process. It is essential to try to deal constructively with the loss of control that is evident, among other places, on the internet. An extraordinarily large number of administrative decision-makers are not in a position to do this. Because of this fear, they are unwilling to allow procedures to be carried out which actually ask young people for their opinion and which are also immediately accessible to the public. Too little trust is placed in young people, and this lack of trust turns into fear (Ertelt 2012. This is perhaps the clearest explanation of why youngsters are so little included in public planning.

If teenagers see that they are not treated as objects or spectators in their own community, but are respected and valued as well as trusted to take on important tasks, this can be regarded as participation (Hüther 2013, p.41). Such involvement in planning processes fosters a sense of inclusivity and the desire for further participation. According to a study by the Technical University of Dortmund, young people participate for a variety of reasons, for example:

- To feel up to date: speedy access to information;
- Due to their own interests or subjective motives: self-concern, financial reward, fun, etc.;
- To receive mutual support: mutual assistance, also to counter bullying;
- To mobilize participation: draw attention to events and launch appeals;
- To experience social relationships: contributing their own opinions and receiving (positive) feedback (Kutscher et al. 2015, pp. 149, 164 & 168).

5. Design Thinking in participation processes using the example of the participation process in Göttingen

5.1 What is Design Thinking?

Design Thinking is an approach intended to solve problems and develop new ideas. It is based on the assumption that problems can be solved in a more satisfactory way if people from different disciplines work together in an environment that promotes creativity. The goal is to find solutions that are convincing from the user's point of view. It is neither a method nor a process, but an approach based on the three basic principles: team, space and process (Website Hasso-Plattner-Institut Academy GmbH (2020)). Strictly speaking, Design Thinking is a multifaceted set of methods used to solve complex

problems and to develop contemporary products. Nevertheless, it can also be applied to the improvement of services or to encourage participation (see designthinkingcoach). Under this approach, a group of people attempt to jointly solve a problem while considering everyone's needs and motivations. In this way, concepts are developed and tested at several stages (Website yeabasemedia GmbH (2018)). The Design Thinking approach is suitable not only for the development or redesign of products, but also for services, strategies and internal processes. In the investigated case, the method was employed to foster the participation of young people in Göttingen Osterode a.H.

Design Thinking is a combination of understanding, observation, brainstorming, refinement, execution and learning. The process usually consists of six steps:

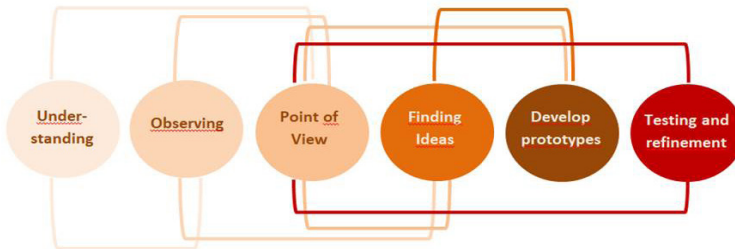


Figure 2: Steps of Design Thinking

Source: Own representation according to Website Hasso-Plattner-Institut Academy GmbH (2020)

The respective steps do not form a fixed sequence running from left to right. Instead, if a step has been completed and a problem occurs, you can go back to a previous phase. For example, if testing and refining have not been done satisfactorily, it is quite possible to start again with the creation of the persona.

The first step is *understanding*. Here values of the brainstorming phase are clearly defined. There are a number of important criteria which have to be adhered to:

- Be visual, be creative and make sketches;
- One conversation at a time – listen carefully;
- Encourage wild ideas, later you can be more specific;
- Defer judgement, accept criticism and rework your idea.

Observing is a key element. This means that the group or the groups (each consisting of a maximum of six to seven members) has to consider these issues:

- Who is the target group?
- What makes this the target group?
- What are the interests, disparities and problems?

Subsequently, the group has to develop a common standpoint. This can be used to generate ideas, develop a concept and build a prototype, i.e. a model to vividly illustrate what the realized idea could look like. At first the group has to note all kind of ideas without discussion. The ideas are ranked in the next step and assigned different priorities (based on feasibility, effort, prospects of success, demand, etc.). These ideas are fixed in a concept.

Figure 3: Profile template

Figure 4: Template Persona

For further planning it helps to create a persona, as in this example. A persona is a representation of the people who will in the end visit or use this realized concept. This makes it easier to place yourself in the position of the

target person (shown in Figures 3 and 4). When this is completed, prototypes are developed from the concept. A selection of different materials can be used to construct models, for example Lego bricks, cardboard, paper or papier-mâché, modelling clay or polystyrene. There are no limits to creativity: The more visually convincing the prototype, the better.

When the group decides the prototype is finished, it has to be tested. That means that the group has to introduce the prototype to other groups, people or experts. Then the Design Thinking group(s) get feedback, which is incorporated in the model before presentation to elicit further feedback. This process is repeated until the developers are satisfied. It is important to understand that the prototype can never be 'perfect' and thus the moment has to be chosen when it is considered 'finished'. The developer should not forget to:

- Aim for quantity;
- Stay on topic;
- Build on the ideas of others.

It is essential to ensure that the teams (each with a maximum of six people) are interdisciplinary. People of different ages, social and national backgrounds, educational attainment, etc. ensure a large range of experiences as well as background knowledge. With their different talents and creativity in a wide variety of fields, the problem can be approached from diverse perspectives. Creativity is encouraged by concepts for mobile working: Standing, running, sitting on dice, writing on whiteboards, etc. Everything is possible and allowed (Website Hasso-Plattner-Institut Academy GmbH (2020)).

The method of Design Thinking takes into account the special needs and means of communication of young people in various ways:

- By offering young people a variety of opportunities to develop and present ideas. They can develop their creativity, promote it and show their talents.
- By encouraging a lively exchange with other groups of youngsters, all of whom are involved for the same purpose. They have a lot in common and can learn from their differences.
- By developing things offline that can later be edited, presented and discussed online. Young people today are on the move, both analogue and digitally. This is supported by Design Thinking.
- By giving them the opportunity to discuss their ideas directly with experts. This gives them direct feedback, which they can accept or reject.
- By providing some tangible results. Other formats merely create sketches, pages of notes or flow charts with illustrations. Design Thinking creates something that can be presented to everyone in a vivid way.
- By encouraging them to have fun.

5.2 Youth participation in Göttingen with Design Thinking

According to forecasts, all the municipalities of Göttingen Osterode a.H. will shrink by 2025. Only the city of Göttingen could emerge unscathed from the process of stagnation: As a major centre, it possesses functions appreciated by the population, who do not wish to be cut off from valuable urban services. The further away a community is from the city of Göttingen, the more likely it is to shrink (Bertelsmann Stiftung [2010], p. 9).

It is not surprising that when the total population shrinks, the number of children and young people in the region also decreases. Indeed, the impact of the general population decline can hit specific age groups the hardest: Here the number of 0 to 10-year-olds is forecast to decrease by an average of 21% and the number of 10 to 18-year-olds by as much as 41% in the period 2010–2025. This can be largely attributed to the shrinking maternal cohort, in particular the first generation of women to have had access to the contraceptive pill (from the second half of the 1960s), resulting in fewer births. This results in the underutilization of infrastructure, a problem which requires municipal action and, ultimately, structural adjustment (Waibel 2010, p. 7).

Therefore, a major concern of the communities in Göttingen Osterode a.H. is to retain young people in the region or encourage them to return. In order to convince teenagers of the benefits of living in their community, it is necessary to know what their wishes and needs are. This is precisely where approaches to encourage participation, such as Design Thinking, have a vital role. Clearly, participation is the only way to spark the interest of young people and persuade them to remain in their community.

The problem with this method, as with most other participation methods, is how to persuade young people to take the initial step to get involved in Design Thinking. In Göttingen, it became clear that schools have to be approached in order to make initial contact and motivate teenagers. Specifically, a workshop was offered in a school auditorium. The participating young people thus avoided any extra trips to another location; furthermore, the schoolchildren were exempted from lessons for the duration of the workshop. This proved to be a decisive motivation for them to get involved in the first workshop. Once the youngsters became convinced of the method and the participation process, they voluntarily invested their free time.

Objectives of the participation project

In the region, it was found that there are either too few young people who use the municipal leisure facilities or there exist groups of young people who could make use of the facilities but do not want to. While the district of Göttingen and city of Göttingen are aware of the low utilization rates of the youth centres, the reasons for this remain unclear. In addition, there is no information on the accessibility of leisure centres by young people, what they

do in their leisure time (or would like to do but cannot) and what they would change in their region. The aim of the participation project was to identify the current leisure and mobility behaviour of local teenagers, especially in terms of accessibility. Clearly, in order for municipalities to plan for the future, they first need to know what young people's needs, wishes and ideas are with regard to leisure facilities. This includes investigating the amount of time youngsters have for participation and the extent to which digital media have gained influence on leisure and mobility behaviour (Siefken et al. 2013, p. 1; Stange 2012a, p. 51ff).

While online participation is currently an important approach, it is not the only one. Workshops are suitable for making direct contact with teenagers, clarifying open questions, identifying the persons who are taking care of them and showing that their ideas are well-received. In addition, young people who are less active online attach importance to face-to-face contact. They wish to get to know the people behind the participation project, and thus should be given the chance to participate offline in direct discussions.

For this reason, it was decided to run workshops in Göttingen. Since young people should not just give their input once, but actually contribute to finding a solution, a format had to be chosen which sparked the interest of young people and motivated them to actually deal with the topic on multiple occasions. Design Thinking seemed optimal for this.

According to experts, offline participation should only be carried out in combination with online participation. Therefore, it was decided to supplement the workshop format with an online platform. The aim was to interest young people and facilitate the participation of those who were unable to take part in the workshops due to time constraints or because the travel distances were too great. The online participation as carried out in the model region was a complex approach, requiring detailed description. Unfortunately, this cannot be done within the framework of this article. Furthermore, the online platform can be seen as irrelevant to our particular investigation and representation of the project, and therefore will be ignored in the following discussion.

The first workshop

The first workshop dedicated to Design Thinking took place on a Tuesday morning in February 2018 at a vocational school in Osterode a.H. Some of the 19 young people (five girls and 14 boys) were driven by youth workers to the workshop location in the morning and brought back in the afternoon. Otherwise, those who go to schools in other communities would have found it difficult to reach the venue, as public transport in rural areas of the region is poorly developed. The fact that school principals exempted these teenagers from classes proved to a great motivation to participate.

Initially, the participants were given some information as well as an out-

line of the goal by a regional manager and the author of this article. The aim was to help the young people understand the problems in the region, point out how they can get involved and exert influence as well as what contribution they can make to improve the leisure facilities and their accessibility. In addition, they should develop a general awareness of the problem of accessibility and the needs of their leisure facilities. As a result, three groups were formed to develop concepts, resulting in the following main ideas:

- To establish a cinema for foreign-language films in Osterode a.H.;
- To change the bus times to better suit the school schedule and introduce a new tariff structure;
- To create an official cycle route for mountain bikers.

The ideas were elaborated by means of a specific concept and the construction of a prototype, as shown in Figure 5.

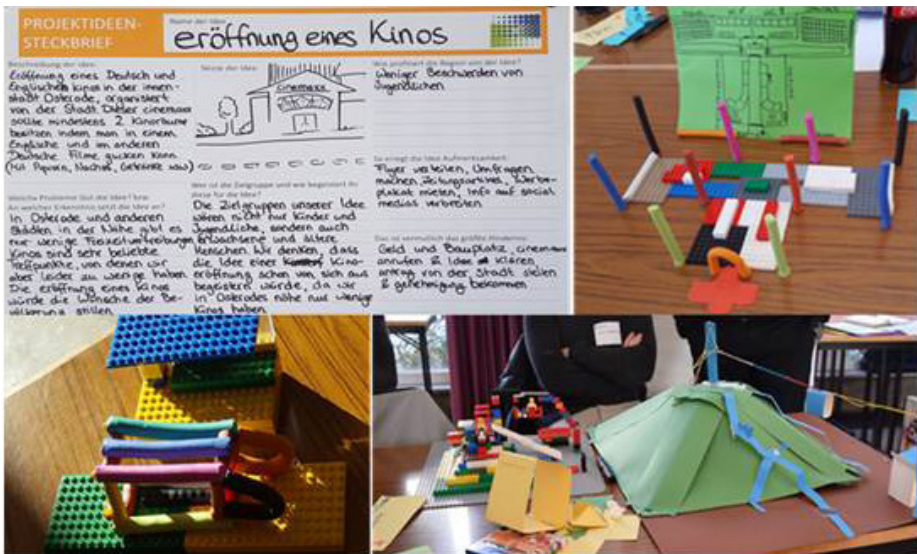


Figure 5: Prototypes and Concepts]

Upper row: concept and prototype cinema; lower row: prototype bus connection, represented by a bus stop as well as the mountain bike route.

Source: Own pictures

The typical feedback steps of Design Thinking aimed at criticizing the concepts were conducted in a balanced and constructive fashion. The participants enjoyed developing concepts, building prototypes and talking about these. Moreover, they took criticism seriously, revising their concepts and prototypes in preparation for the second workshop. The approach of Design Thinking was very well-received by the participants as well as by decision-makers such as the mayors of Osterode a.H. and Bad Grund, who were invited to attend

the later workshop and expressed their approval of the developed ideas. One mayor, an enthusiastic cyclist, promised the young people his support. After the workshop, he invited the youngsters to his office to discuss possible routes, land ownership, financial issues as well as likely hurdles and next steps (Protocol Workshop on Leisure Behaviour and Mobility 2018, Osterode am Harz).

The second workshop

Another workshop took place in April 2018 in *Dransfeld Community Centre* to discuss the feasibility and implementation of the prototypes with experts. Also held on a Tuesday morning, some of the young people were once again brought by car by local youth workers. Travel time from the youngsters' homes to the workshop locations was one hour in certain cases. It would have been even more complicated to make the trip by public transport. 12 youths (two girls and ten boys) from the first workshop took part in this second workshop; the other seven did not take part due to time constraints or because they were no longer motivated or interested in the topics. Experts, youth workers, municipal representatives and an external moderator were also present. The author of the article also supported the young people at this workshop. In this case, the invited experts were persons with particular knowledge of the developed topics, in particular with experiences from previous projects or their professional activities. A representative of the *Zweckverband Südniedersachsen* as well as a representative of the *Bikepark Bad Salzdetfurth* and local youth welfare officers took part in the workshop.

The young people discussed their concepts with the invited experts. Even though some of the latter made critical comments, the young people were happy to engage in discussion. At the same time, the experts made suggestions as to how negative aspects could be resolved, named contacts and treated the young people as equals. Discussions among the young people were also fair and objective. In the meantime they had become well acquainted, and were very friendly and respectful towards one another. There was no one left who showed such a lack of interest that it seemed he or she was only present because of the cancelled school lessons. The young people were encouraged by the experts' praise for their mostly well thought-out concepts, which made them want to continue working after the workshops (Protocol on Workshops on Youth Leisure Behaviour and Mobility 2018, Dransfeld).

Results from the workshops

The workshops were an interesting and successful experience for all teenagers. They learned that if their ideas are worked out concretely, are rethought and well presented, they can exert influence and foster change. They noticed that their role in the municipality had previously been small and

largely ignored. In this way they felt excluded. Nevertheless, the workshops showed them that when they come together and bring adult actors on board, they can really make a difference.

Cinema with foreign-language films: this group was forced to abandon the project due to the burden of schoolwork and the difficulty of the topic. Despite the support of the Göttinger youth welfare, the two young people were unable to implement their concept.

Change of the bus times: this group developed a proposal for a new tariff structure for the local transport network and submitted it to the responsible Zweckverband Südniedersachsen (ZVSN). Price proposals flowed into scenarios and measures of the new tariff report at the ZVSN. The corresponding report was published in the summer of 2019.

Official cycle route for mountain biking: this group continued to pursue its developed concept. The participants were supported by the local mayor as well as by the newly founded Mountainbike-Schul-AG. Among other things, a cyclist lobby has already been established and some routes have been planned. In the meantime, however, these young people have finished their schooling and will soon graduate. Therefore, they have no more time or interest to work on their project (status: 4/2018)

6. Conclusion

Participation is a very important theme and a necessary citizens' right (Eisel [no year], p.271 ff). Nonetheless, youth participation is an unpopular subject in public planning. The involvement of children and young people is often seen as risky by adults, who have their own, at times unrealistic, idea of the correct level of participation of youngsters in social life (Wergin 2000, p. 7). Young people are excluded from public planning processes for a variety of reasons such as fear of their input or because of limited budgets, time or personnel. In addition, teenagers are often not trusted to be able to develop ideas for the public sphere that can actually be put into practice. However, the case study of youth participation in Göttingen Osterode a.H. shows how the approach of Design Thinking can be used to encourage young people express their ideas in a creative, structured and involved way. In this case the teenagers developed well thought-out concepts, which they were happy to revise and which proved highly realistic. These concepts were built as prototypes and discussed with experts. Subsequently, the prototypes were adapted until they were actually worth implementing.

The attendance by mayors at one workshop gave a clear indication how this type of participation is received by key players: The mayors were not only impressed by the ideas of the young people but also by how the collaboration was so structured, thoughtful and respectful. There was a calm, pleasant atmosphere in which criticism was expressed and accepted.

Due to limited time and the approaching graduation from school, one project ground to a halt before it could progress to the final stages. Yet there is little doubt that Design Thinking is a very good method to foster the participation of young people. Initial ideas can be generalized, discussed and revised until they are ready to be presented to municipal authorities in a comprehensible manner. Design Thinking is a target-oriented method to get young people involved in urban design. It allows participants to develop, present, critically discuss, revise and implement ideas within a short period of time. These are working steps that have previously not been entrusted to young people. The workshops in Göttingen Osterode a.H. persuaded core actors from the administration that they do not need to be afraid of young people and their ideas.

In order for Design Thinking to be utilized effectively in public participation processes, it is necessary that the method and its application be well understood. Currently, this know-how is only available in a few municipalities.

It must also be recognized that, despite effective participation methods, young people must be taken “by the hand” and given sufficient support. They cannot implement their ideas on their own. Yet the participation of teenagers must be encouraged if they are to remain in their local communities: Involvement not only generates ideas but also encourages participants to view their place of residence positively and develop or increase a sense of home. In this way, the mentioned challenges of emigration, undersupply, demographic change, etc. could be overcome by many municipalities.

Future research projects on Design Thinking should primarily focus on how to increase motivation to participate and make contacts. Clearly, it is a huge problem to reach and motivate young people, who often have many interests and limited free time. Here the involvement of schools in participation processes can be a great help, as pupils spend more than half of their day in school. They will not lose any of their valuable free time if participation projects are organized during school hours. However, it can be a problem to convince schools to cooperate. Therefore, the question remains how young people can otherwise be contacted and motivated.

Based on the experiences from Göttingen, the following recommendations can be made for the further application of Design Thinking:

- As part of the participation method, it is important to foster good relations and exchange between young people. They should have sufficient long breaks, during which they can have informal conversations with each other.

-Good moderation may be required in those cases where there is not an even balance between extroverted and introverted youngsters. Otherwise, it can happen, for example, that self-confident boys can dominate the conversation at the expense of quieter girls.

-It is vital to get schools on board. If young people are enabled to participate in school and during class time, this will boost motivation enormously as they do not have to give up any of their leisure time and have no extra trips to make.

-Young people have to be met at eye level and are very results-oriented. If some ideas are entirely unfeasible, the youngsters must be given a comprehensible reason why they cannot be implemented. Of course, some ideas can simply be revised, whilst others have to be replaced.

-Under Design Thinking, every participation process is unique. Young people are such a heterogeneous target group that each participation process must be considered individually. The results will depend on the age of the youngsters, their social environment, the type of school, the gender balance, the level of creativity, the balance of introverted or extroverted individuals, the general mood, the developmental level, etc. Flexibility is called upon to deal with the range and variation of factors in the participation process.

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Towards a Landscape- based Regional Design Approach for Adaptive Transformation in Urbanizing Deltas

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Abstract

Deltaic areas are among the most promising regions in the world. Their strategic location and superior quality of their soils are core factors supporting both human development and the rise of these regions as global economic hubs. At the same time, however, deltas are extremely vulnerable to multiple threats from both climate change and the rush to urbanization. These include an increased flood risk combined with the resulting loss of ecological and social-cultural values. The urbanization of deltas can be understood as a set of complex social-ecological systems (and subsystems), each with its own dynamics and speed of change. To ensure a more sustainable future for these areas, spatial strategies are needed to strengthen resilience, i.e. help the systems to cope with their vulnerabilities as well as enhance their capacity to overcome natural and artificial threats. In this article we elaborate a landscape-based regional design approach for the adaptive urban transformation of urbanizing deltas, taking the Pearl River Delta as a case study. Based on an assessment of the dynamics of change regarding the transformational cycles of natural and urban landscape elements, eco-dynamic regional design strategies are explored to reveal greater opportunities for the exploitation of natural and social-cultural factors within the processes of urban development. Furthermore, adaptive transformational perspectives are identified to ensure reduced flood risk and inclusive socio-ecological design.

KEYWORDS

resilient urban planning and management, regional landscape design, water sensitive design, transformation perspective, adaptive urban planning, Pearl River Delta

1. Introduction

Urbanizing deltas are among the most promising and dynamic regions of the world.¹ As well as contributing greatly to the global economy, they are also valuable ecosystems (Meyer et al., 2016; Costanza et al., 1997). Deltas frequently accommodate large populations in particularly sensitive environments that are dominated by water systems. As a result, urbanizing deltas are extremely vulnerable to multiple threats (Nicholls & Cazenave, 2010; Ericson et al., 2006). Due to difficulties in steering the intensification of urban land use and economic activity within a sensitive water environment, compounding by the absence of effective governance, the outcomes of delta management are often a combination of ecosystem damage and the loss of socio-cultural values. This weakens the capacity of deltas to resist natural hazards as well as the risks associated with climate change, thereby negatively impacting the environment, the local economy as well as the health and prosperity of citizens that live around these water systems (Nijhuis, Sun & Lange, 2017).



Figure 1. The fast urbanization process within the PRD leads to confrontations between incremental long-term urban developments and fast short-term developments. Typical fishing villages and new urban developments in Pazhou, Guangzhou (photo: Guangyuan Xie, 2018).

Urbanizing deltas can be understood as a set of complex social-ecological systems and subsystems, each with their own dynamics and speed of change (Figure 1). To ensure a more sustainable future, spatial strategies are needed

¹ This article is an adapted version of a Chinese language article simultaneously published in 风景园林 (Landscape Architecture) 170 (9); 8-22.

to strengthen resilience, assist systems to cope with their vulnerabilities, and strengthen their capacity to face natural and human-made threats. These strategies have to consider the complex interrelation of systems in order to avoid damaging ripple effects, such as when urban development increases the risk of flooding. Strategies like these can highlight the potential of ecologically-sensitive urban development that ensures economic and social growth, while also providing opportunities to strengthen natural systems and lower the risk of flooding (Nijhuis, Sun & Lange, 2017). At the same time, such spatial strategies must involve a wide range of social and economic actors, while also supporting the social, economic and cultural conditions of local people. These strategies should be communicated in persuasive ways in order to gain wide understanding, support and influence (Albrechts, 2011; Healey, 2006).

Of course, dedicated spatial strategies should not merely improve the living conditions within urban deltas but also promote adaptive measures to climate change in order to decrease the level of risk. Urban planning and management must display a certain degree of adaptive capacity in order to successfully create more resilient deltas. Strategies must also identify eco-dynamic design options that not only enable the integration of nature alongside urban development processes, but also implement adaptive design principles that ensure low flood risk. Additionally, it is necessary to integrate transformative processes in governance combining spatial planning, design and disaster management in order to optimize land-use, institutions and mechanisms for an efficient, sustainable and inclusive urbanization (Nijhuis, Sun & Lange, 2017).

From the 2000s onwards, there have been serious attempts to develop an adaptive-systems approach to the planning and designing of urbanizing deltas. Examples of such attempts include the Rhine-Meuse-Scheldt (RMS) Delta in the Netherlands (Meyer et al., 2015; Rhee, 2012), the Mississippi River Delta in the United States (Wagonner et al., 2014; Campanella, 2010) and the Mekong Delta in Vietnam (Marchand et al., 2014; Shannon & De Meulder, 2013). The current paper and related research suggest a much greater potential benefit in using urban landscape dynamics in territorial governance than more traditional planning strategies (Meyer & Nijhuis 2016, 2013; Van Veelen et al., 2015). In the following, we discuss a landscape-based regional design approach for the adaptive urban transformation of urbanizing deltas, taking the Pearl River Delta as an example, while also describing the approach in some detail. In so doing, we outline an integrative approach towards the planning and design of urban landscapes, whereby natural and urban dynamics determine both the pace and form of adaptation required for adaptive urban transformation (AUT) (Nijhuis, Sun & Lange, 2017).

AUT employs landscape-based regional design methods as an integrative and multi-scale design and planning approach. The aim is to steer urban-

rural transformative processes through a combination of sector activities towards more coordinated sustainable outcomes. Landscape-based regional design is considered to be an important strategy that shapes the physical form of regions using landscape as the basic condition to generate sustainable urbanized deltas (Nijhuis, 2019). It employs spatial planning and design to open up pathways to long-term sustainable urban landscape development. In summary, regional design is a transdisciplinary effort that not only safeguards sustainable and coherent development, but also guides and shapes changes that are brought about by socio-economic and environmental processes, while establishing local identity in a region through tangible relationships (Nijhuis, 2019).

2. Pearl River Delta

For the past four decades, the world's fastest developing delta has been the Pearl River Delta (PRD) in China. In 2014, it replaced Tokyo as the largest and most populated urbanized area on the planet (World Bank, 2015). Since the 1980s, the PRD has been at the vanguard of China's groundbreaking spatial planning and socio-economic thinking (Yeh & Li, 1999). At the same time, the PRD now faces immense challenges regarding its long-term economic development because of threats posed by climate change and environmental degradation. These challenges include issues such as the disappearance of mangroves (Zhao, 2010), the loss of farmland (Hu & He, 2003), air and water pollution (Li et al., 2008), water shortages (Wang, Hu & Li, 2006), and a decrease in social security (H. Xiong, 2016).

On the one hand, the region is exposed to increasing flood risks due to urbanization in flood-prone areas (Figure 2) as well as rising sea levels and extreme typhoons/storms in summer, placing stress on the regions infrastructural systems. On the other hand, the deltaic ecosystem is becoming increasingly fragmented and vulnerable (Gao et al., 2012), resulting in a decline in both ecological services (Ye & Dong, 2010) and environmental carrying capacity (Huang, 2003). At the local level, large-scale interventions have replaced the historically diverse environmental and cultural heritage of the PRD with more uniform, featureless topographies (Guo & Situ, 2010). While local and national authorities are showing increasing awareness of the value of more integrated planning and design approaches, these have not yet been widely introduced (L. Xiong, 2016). For example, the implementation of the so-called national 'Sponge City' policy – a concept of integrated urban water management – has met with delays in the elaboration of both multiple and separate sectoral plans (Che, 2016).

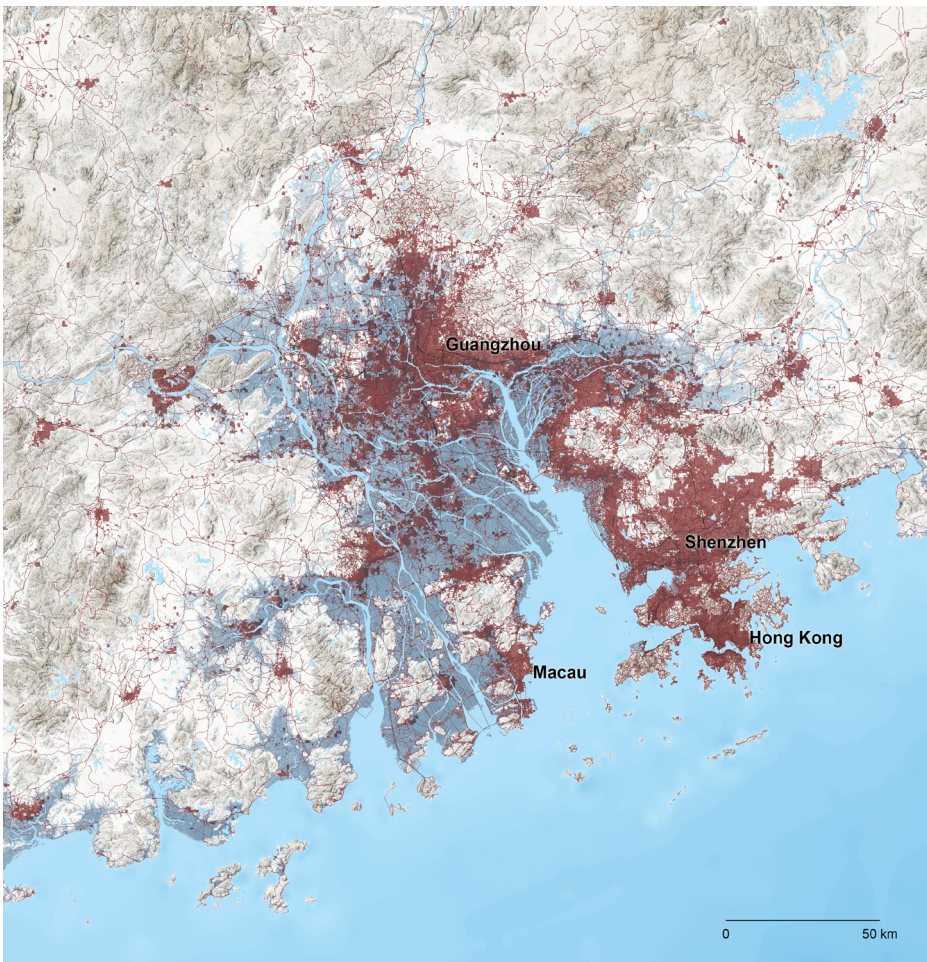


Figure 2. The PRD is the fastest urbanizing delta in the world. Most of the construction takes place in the flood-prone lowland (+10m zone, here indicated in dark blue), thereby increasing the flood risk (map: Steffen Nijhuis, 2018).

In order to guide the PRD towards a more sustainable future, there is an urgent need for new ways of planning and design in the practice of its urban development. The emerging concept and practice of landscape-based regional design offers a way of resolving the conflicts and threats that arise between economic development and environmental recovery, as well as reducing the negative repercussions of climate change. The high speed at which the PRD has developed makes it a particularly valuable case study to explore and test the potential of more adaptive integrated planning approaches, such as landscape-based regional design.

3. Landscape-based regional design

Landscape-based regional design aims to enhance spatial development by applying bioregional planning and design principles that view the urban landscape as an inclusive, dynamic and complex system. The approach builds on ideas developed and implemented by Charles Eliot (1893), Warren Manning (1913), Pieter Verhagen (1920), Patrick Abercrombie (1922), Fritz Schumacher (1923), Ian McHarg (1962) and Philip Lewis (1996).

Regional design applies principles from landscape architecture, landscape ecology, geography and architecture to spatially-oriented research, design and planning. It also utilizes ideas from systems thinking as well as complexity theory to promote a more comprehensive form of regional planning and design that addresses the complex web of relationships making up the urban landscape (Nijhuis & Jauslin, 2015). In this way, regional design offers a mode for urban transformation, the preservation of biodiversity, water resource management, improved leisure facilities, community building, stronger cultural identity and economic development (Neuman, 2000).

Landscape-based regional design identifies and guides development towards the most advantageous places, functions, scales and inter-relationships (*the strategy*) to ensure a region's sustainable growth while setting the scene for local initiatives (*interventions*) (Nijhuis & Jauslin, 2015). Regional design determines the physical shape of regions based on knowledge of the natural and urban landscape physiology and functioning with the objective of generating favourable conditions for future development. This approach also operates at different scales, from regional to local, as well as accommodating both general or more specific measures. In so doing it preserves overall continuity and promotes local contingency, also enabling a more uniform balancing of services and qualities between parts of a territory (Busquets & Correa, 2006).

Regional design is like an open-ended strategy aimed at protecting and developing resources. This is achieved by guiding developments and establishing future conditions for spatial development by means of landscape planning and design (Nijhuis & Jauslin, 2015). It also sets up robust and adaptive systems that are resilient and open to change. The organizational structures, i.e. 'strong' and coherent structures such as water and transport systems, provide the backbone for regional development; further, they facilitate adaptation to local circumstances, are strong enough to withstand challenges and yet sufficiently flexible to cope with future situations (Corner, 2004).

Regional design rooted in landscape is a social-inclusive approach that acknowledges the collective nature of the urban tissue and enables various 'actors' to participate (Allen, 1999). This approach to design generates a directed field through which various stakeholders and other participants can contribute to development. In this regard, landscape-based regional design

is a transdisciplinary undertaking that sees engineering and ecology specializations merge with spatial design thinking while also involving the ideas and knowledge of local residents. It can therefore be described as an integrative platform that organizes the physical environment, individuals and information, governance and their interaction at distinct scales through space and time (Nijhuis, 2019).

At the heart of landscape-based regional design is a strong interaction between research and design. This implies that the analytical capacity of research is closely connected to the explorative power of design. Next to typical forms of research that serve as input for design, the design process itself is employed as a vehicle not just to frame spatial problems visually but also to explore multiple possibilities and generate various solutions. Therefore, research through design can be regarded as a powerful research strategy in which complex spatial problems are approached in a creative and integrated manner. The targeted explorative process plays a central role in which thinking and producing go hand in hand. Research through design implements mechanisms of research and design that are combined with imagination, creativity, and innovation. It also reveals areas in which action, observation and searching can be applied to achieve new insights. Therefore, mapping and drawing are important tools for visual thinking and communication (Nijhuis, 2013).

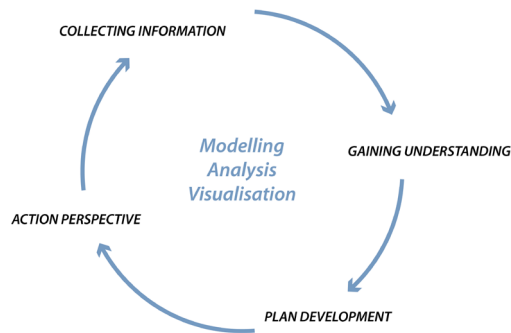


Figure 3. Four important phases in landscape-based regional design (source: Nijhuis, 2015).

4. Key phases in the regional design process

Landscape-based regional design consists of at least four iterative phases: collecting information, gaining understanding, plan development and action perspective (Figure 3).

4.1 Collecting information and gaining understanding

Before launching the design process, the objectives of the regional strategy must first be identified, based on a proper understanding of the site, particularly its challenges and potentials. For this it is necessary to collect and create data/information as well as analyzing and evaluating the region at multiple scales, including the identification and support of all relevant stakeholders. A number of important questions should be considered at the beginning of this process, such as:

- How does an area operate at local scale and in the larger regional context?
- What are the spatio-visual, historical, social and ecological structures or processes that determine the region at different scales?
- What is the current functioning of the urban and natural systems?

In order to answer these questions, it is necessary to describe, select and evaluate various spatial elements while also considering aspects of import in comprehensive urban landscape planning and design. During this process of interpreting, synthesizing and applying data, the individual acquires knowledge. The process is about exploring, analyzing and synthesizing data and information in order to increase the level of understanding on (aspects of) the region in terms of spatial relations, structures and patterns. Understanding (or 'insight') is the application of knowledge to increase effectiveness and to exercise judgement in order to add value (Rowley & Hartley, 2006). In this process, it is crucial to secure the participation of experts and stakeholders such as governmental officials, land owners and community representatives to develop a robust and inclusive understanding of the region. These different perspectives will bring fresh and complementary insights, creating a more complete picture. The various perspectives can be shared and synthesized, primarily via interactive participatory workshops; at the same time, interviews, observations and questionnaires can provide important additional clues. This co-creation of knowledge leads to a shared understanding of the characteristics of the territory as well as helping to identify the main challenges and opportunities for spatial development. Outcomes are agreed collectively and supported by pointers and specified values to ensure inclusive plan development and action perspectives.

4.2 Plan development and action perspective

Once the analysis and evaluation phase is finalized and the main challenges and opportunities have been determined in a participatory and inclusive way, the next step is to explore and develop various integral and multiscale design strategies and principles, especially regarding their potential. Typical questions here are:

- What can be done to address the challenges of the area?
- How can the potential of the region be exploited by means of multiscale projects?
- What are the key spatial structures and processes that need to be addressed and coordinated at regional scale?
- What are the strategic locations?
- Which favourable conditions that can be fostered at regional scale?
- What are the implications for on-going projects in the region?
- Which important stakeholders should be involved to ensure social-economic and ecological embedment?
- Are there any instructive (international) precedents?
- In which ways do long-term strategies and short-term design interventions interrelate, and how can they reinforce one another?

Previous studies as well as scenario building and research through design can all be exploited to answer these questions. Design thinking is also a useful way of exploring the spatial possibilities of various design strategies and principles. The keywords in this part of the process are innovation, creativity and imagination. Design strategies and principles are also explored visually while their feasibility is evaluated by designers, specialists and stakeholders. This process can also include computer models, field experiments and modelling to aid visualization and testing as well as to generate ideas. Questions that need to be addressed in this phase include:

- Which spatial-planning design strategies and principles are most promising?
- How can they be applied at multiple scales in the region, and what are the probable outcomes?
- What is the optimal solution from a spatial, social and ecological point of view?
- Is it possible to introduce historical aspects to the design?
- How can the plan be adapted to and strengthen the regional identity?
- Does the design allow for change and flexibility over time?
- How can the composition of land use-patterns, vegetation, water, urban typologies and other elements facilitate ecosystem services as well as cultural expression?

Regional design is not just a platform to prioritize, integrate and organize physical structures through the application of planning and design skills; it also requires responsible authorities to align their spatial policies towards a long-term strategy. However, new governance arrangements often need to be developed to create the right conditions for important design elements such as the realization of local projects. To this end, it is vital to involve relevant policymakers, governmental authorities as well as other stakeholders, who must all be engaged from the early stages of the planning process.

5. Understanding the PRD as a complex system

The PRD's urban landscape can be viewed as a complex system consisting of subsystems, each within its own dynamics and velocity of change (Meyer & Nijhuis, 2013). Understood as a system, the urban landscape is a material space structured as a constellation of networks and places with various organizational levels that address distinct spatial and temporal dimensions (Doxiadis, 1968; Otto, 2011; Batty, 2013). Here, the concept of *longue durée* is essential, emphasizing the long-term and persistent structures of an urban landscape under constant change. According to French historian Fernand Braudel (1966), the first level of dynamics, which is rooted in the natural environment, is characterized by a slow process of almost imperceptible transformation, repetition and natural succession; the second level is linked to long-term social, economic and cultural history; the third dynamical level is that of short-term human and political occurrences. In short, the urban landscape is continually developing through the action or interaction of natural and human structures, patterns and processes that depend on ecological, socio-cultural, economic and political factors.

5.1 Mapping landscape systems

The spatial relationships between environmental circumstances and human actions or interventions can be studied by means of cartographic explorations (i.e. mapping) to identify important conditions, critical driving forces and the effects of distinct dynamics. The mapping of landscape systems is different from the suitability maps as proposed by McHarg (1969). In the former, maps are created to understand spatial relationships and the dynamic of change rather than indicating areas where urban developments (for example) can take place. Maps of landscape systems reveal the spatial conditions that inform adaptive planning strategies and design principles. Decomposing the urban landscape into layers according to the dynamic of change is a proven method to help understand the urban landscape system (Nijhuis & Pouderoijen, 2014). Layers with a low dynamic of change are the substratum (e.g. topography, hydrology, soil) and climate (e.g. precipitation patterns, temperature, wind). These environmental factors, regarded as

the most influential conditions for land use, are known as *first tier conditions*. Infrastructural networks for transportation, water management and energy supply are grouped in another layer, termed *second tier conditions*. Displaying quicker growth and change than the first-tier environmental conditions, these are also significant conditional variables for land use. Together, these first and second tier conditions together pave the way for the development of agricultural land use and urban settlements, resulting in the layer with the highest change and transformation dynamics (Nijhuis & Pouderoijen, 2014) (Figure 4).

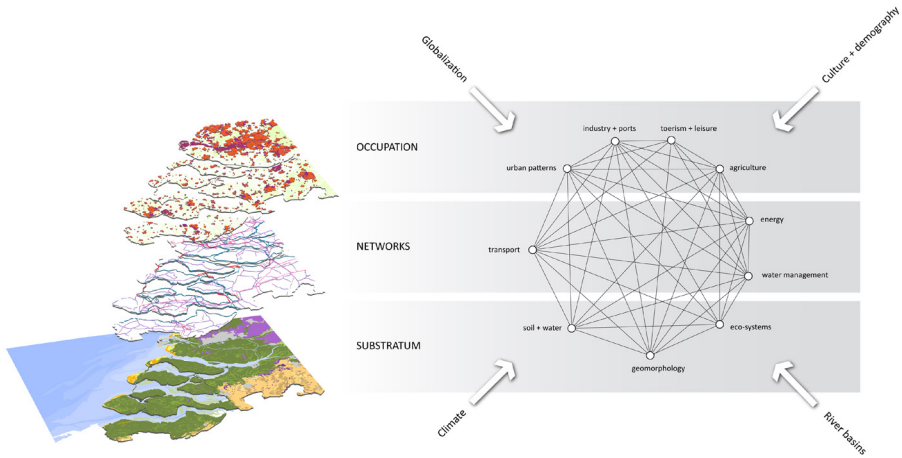


Figure 4. Understanding the urban landscape as a layered and complex system (image: Steffen Nijhuis).

6. Mapping the PRD's natural and urban system

In order to understand the natural and urban system of the PRD, three maps were constructed based on available knowledge and input from experts and stakeholders. Drawn up in a participatory process, these maps show the core physical structures and characteristic patterns of the PRD to illustrate the dynamic of the territory, the natural and urban system and their interactions. Specifically, they show the eco-agricultural system, the urban system, the infrastructure networks and urban tissue, and their relationships.

The basic components of the natural system are the climate, landforms, water and rock type. These drive the formation of soils, determine hydrology as well as the distribution of ecosystems, agricultural land-use and historical settlements or cities. The PRD can be divided into two geomorphological types. The western part of the delta is a river-dominated plain formed over the course of the past millennia by natural processes such as siltation and deposition (Figure 5).

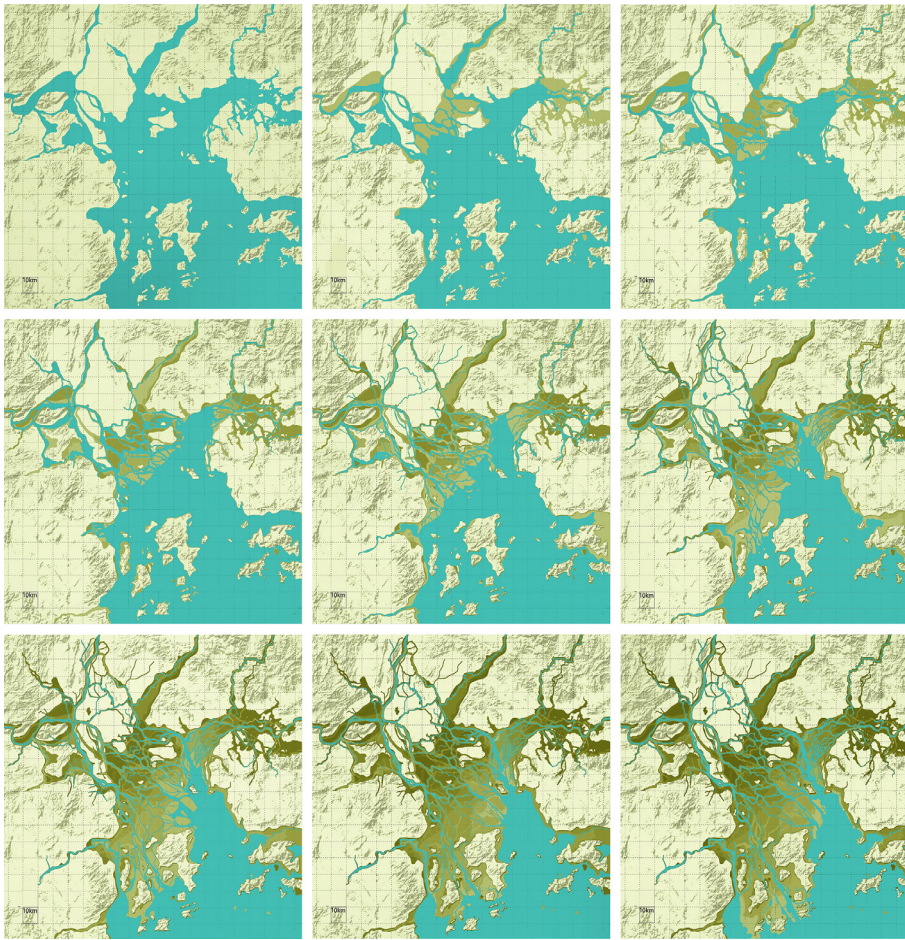


Figure 5. Landscape formation of the PRD from 4000 BC to 2015 AD (source: Xiong & Nijhuis, 2018).

The estuary to the east is tide-dominated (Xiong & Nijhuis, 2018). Almost 90% of the land in the PRD is flat terrain, with the remaining 10% made up of 160 hills and 187 islands spread around the coast (Huang & Zhang, 2004). The deltaic lowland is characterized by two sub-deltas and a tidal estuary. The rivers that dominate the PRD are the West River, the North River and the East River. Together they form a drainage basin of 453,690 km² and have a total length of 2,200 km (Zhang et al. 2008). The most important river in terms of discharge and sediment load is the West River (80% of total water discharge, 90% of total sediment load). Seasonal flooding is a common characteristic in the West and North River sub-deltas, primarily in the period from April to September. The estuary also suffers from extreme tides induced by typhoons or storm surges, mainly occurring in the typhoon season from July to September.

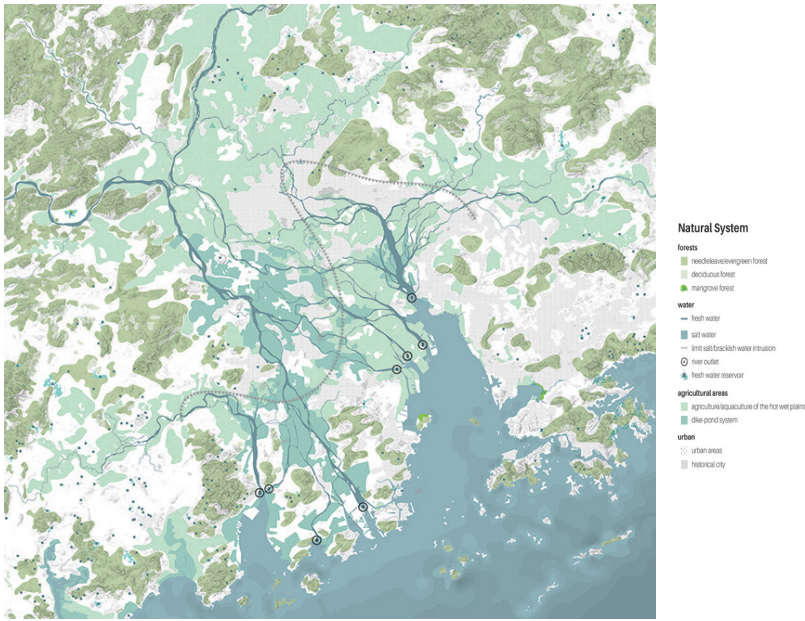


Figure 6. A map showing the eco-agricultural system of the PRD
(Map: Steffen Nijhuis, Daniele Cannatella & Liang Xiong, 2019)

The wet and flat topographical features of the PRD provide favourable conditions for wetland ecology as well as urban development and agriculture, confirmed by the long history of extensive agricultural activities stretching back more than 4000 years. This has proven to be a sustainable human-environment relationship in the ever-changing wetland environment that has arisen through frequent flooding and the continual seaward expansion of the land (Weng, 2000; Zhao & Yang, 2011). Due to the wet and flat conditions of the terrain, the local population developed over many years sophisticated multiscale, water-sensitive farming methods in the warm hot plains known as agri-aquaculture. For centuries this formed the basis of the local economy. One of the most notable of these methods, developed from the 14th century onwards in the sub-deltas, is the dike-pond system in which fish ponds are constructed between dykes bearing fruit trees (Ruddle & Zhong, 1988). By the early 17th century, the fruit trees were replaced by mulberry trees to facilitate silk production while four species of fish were farmed in the ponds. Subsequently, this type of agri-aquaculture pattern continued to grow and prosper until it hit a peak around the 1920s (Ruddle & Zhong, 1988). Today, most of these areas still feature fish ponds alongside industrial plots and urban settlements, but almost without silk production.

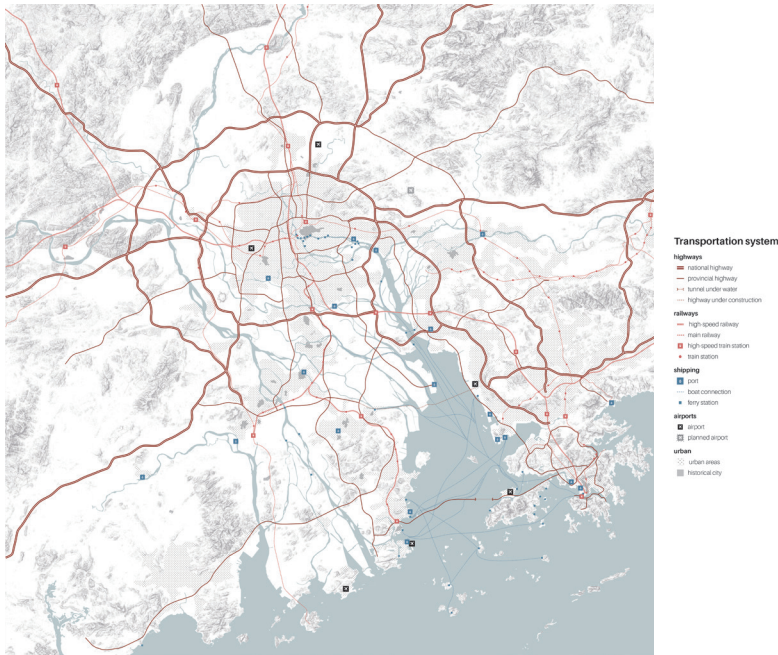


Figure 7. A map of the PRD's infrastructural system
(Map: Steffen Nijhuis, Daniele Cannatella & Liang Xiong, 2019)

Reflecting the area's large bays and riparian zones, the natural vegetation in the PRD is largely mangrove forest, wetland and wet forest. While individual mountains and ridges have traditionally hosted dry forests, large swathes of woodland were cut down in previous decades; today the process of replanting the trees has started. At the foot of the slopes, basins have been established for the supply of fresh water as well as for irrigation (Figure 6).

In the pre-industrial period, the region relied heavily on water-borne transportation. From the 1950s, however, the shift from private to public ownership of land enabled major infrastructural developments in the PRD. Large-scale dike reconstructions (Xiong & Nijhuis, 2018), the development of a vast network of (high-speed) train connections and an expansion in road infrastructure all helped to foster the region's rapid urban expansion. Well-developed road and train infrastructure can be found in the corridors from Guangzhou-Shenzhen/Hong-Kong and Guangzhou-Zhuhai/Macau. The ports of Hong Kong and Nansha are important transportation hubs, as are the international airports of Hong Kong and Guangzhou (Figure 7).

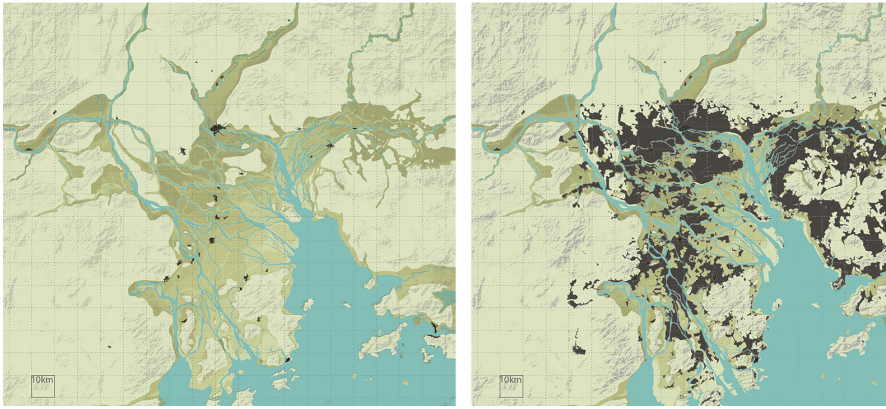


Figure 8. Urban development from 1950-2015 (source: Xiong & Nijhuis, 2018).

The histories of ancient cities such as Guangzhou, Foshan and Macau can be traced back more than 2000 years. In Guangzhou, for instance, archaeologists discovered the remains of a large royal garden and palace from around 203 BC, showcasing the rich culture of the Nanyue kingdom (Wu & Chen, 2010). It is interesting to note that the historic Lingnan gardens in the Guangdong province, with their traditional architecture, were clearly adapted to the specific climatic conditions regarding site selection, orientation, layout and construction materials, all of which had a positive impact on the micro-climate. In general, the cores of these historical cities are all oriented towards rivers and the coast for strategic reasons as well as to facilitate transportation.

From the 1950s onwards, the historical cities have benefited from infrastructural investment. In the 1980s, China created the PRD Special Economic Zone to attract foreign investment, turning the area into the world's fastest urbanizing delta (Figure 8). This gave the Pearl River Delta a certain degree of autonomy in terms of customs, finance and taxes. Manufacturing companies opened numerous factories, creating a thriving economy. During the process of urbanization, large areas inside the polders were transformed from farmland into urban settlement. According to the Guangdong Statistical Yearbook of 2016, there are now 60 million inhabitants in the PRD, a figure expected to rise to 80 million by 2030.

Within this wide-ranging urban development, different spatial patterns can be discerned: in the north, fairly concentric patterns of development are found around the historical town cores; in the east, urbanization has followed a more linear pattern along the coastline, where new settlement areas are hemmed in by mountain ridges; finally, in the west, we can observe more dispersed patterns, reflecting the traditional polder fields of this area. Today the epicentre of urbanization is the urban corridor Guangzhou-Shenzhen, with an important role for Nansha as a connection hub (Figure 9).

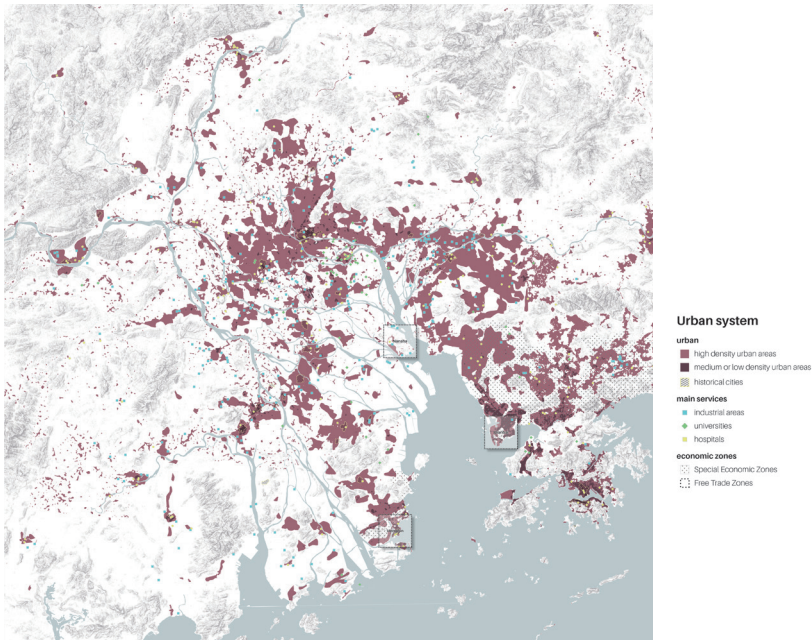


Figure 9. A map of the structure of the PRD's urban tissue (Steffen Nijhuis, Daniele Cannatella & Liang Xiong, 2019).

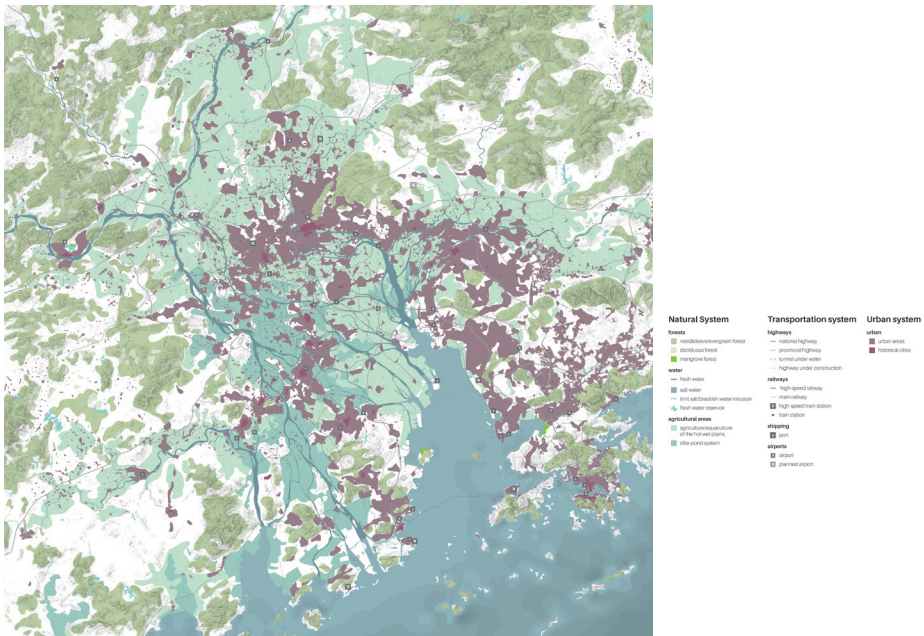


Figure 10. The urban landscape of the PRD (Steffen Nijhuis, Daniele Cannatella & Liang Xiong, 2019).

The synthesis map (Figure 10) shows the urban landscape resulting from the interaction between environmental conditions (e.g. substratum and climate) and the infrastructural networks for transportation, water management and energy. These conditions have paved the way for the development of agricultural land uses and urban settlements, leading to the layer with the highest dynamics of change and transformation. However, the fast pace of urbanization and climate change have led to some severe problems. Alongside rising sea levels, unprecedented storm surges from typhoons and increased river discharge have resulted in the frequent flooding of urban areas. The risk of flooding has been increased by the canalization of rivers with insufficient capacity to cope with additional discharge. Large farming areas have been transformed into industrial sites and urban areas, thereby greatly reducing their rainwater absorption/storage capacity and thus the ability to mitigate not only the risk of flooding but also water shortages. Natural mangrove forests have been cut down, making coastal areas more vulnerable to flooding. In addition to flooding, the PRD is also suffering from subsidence, saltwater intrusion, smaller areas of farmland (and thus lower food production), socio-economic problems as well as the loss of important ecological and cultural-historical sites. The collective recognition of these challenges and opportunities underlies efforts to realize a more sustainable and inclusive strategy for planning and design in the PRD.

7. Towards a sustainable future for the PRD

Adaptive urban transformations form the basis for a landscape-based regional strategy to address the main challenges and potentials of the PRD. In this strategy, natural and urban dynamics as derived from systems analysis must set the pace and nature of adaptation. The plan development and subsequent implementation will focus on the potential of interlinked economic and ecological development at multiple scales. The goal is to facilitate sustainable transformations of old industrial/housing areas as well as the region's agricultural landscape, thereby removing constraints on the expansion of built-up areas and thus accommodating continued economic and population growth. These areas, which possess good spatial conditions for long term economic development, are generally located on newly reclaimed land within the delta's estuaries, featuring a dense network of waterways, vast areas of fishing ponds as well as wetlands and agricultural land; they contain highly sensitive ecosystems and are vulnerable to flooding. In this phase, the possibilities for the development of regional green-blue infrastructure and city-level water networks are identified with the aim of increasing adaptive capacities, ecosystem services as well as water safety.



Figure 11. Exploring future scenarios for the spatial development of the PRD (photo: Steffen Nijhuis, 2018).

7.1 Scenario studies

Scenario studies have been employed to investigate the PRD's likely future development. Through a combination of empirical data, forecasting and imagination, it is possible to identify critical key locations, driving forces and likely impacts of future events, whether opportunities or threats (Meyer & Nijhuis, 2016) (Figure 11). Scenario building constitutes an useful instrument to address uncertainty and to generate understanding about trends and their relationships as well as new challenges or policies and their effects. It also structures strategic discussions and facilitates the involvement of diverse stakeholders (Dammers et al. 2013, Veeneklaas & Van den Berg, 1995). In the current case, the scenarios are conducted in an academic setting with the involvement of governmental authorities and water boards. In order to build a scenario, it is necessary to formulate an internally consistent and coherent set of hypotheses on the primary relationships to be explored. On the basis of these assumptions, a systematic yet selective description of the current scenario can be made, identifying the most significant external variables that determine the course of spatial development (Veeneklaas & Van den Berg, 1995).

7.2 Developing a regional strategic vision

Together with the assessment of urban landscape growth over time and the evaluation of present spatial development projects in the region, several

significant factors of future development have been identified, leading to an initial strategic vision for the PRD. This vision needs further elaboration, based around the idea that the PRD will develop into China's Silicon Valley, with strongly developed and well-connected urban qualities, robust green-blue frameworks, cultural-historical assets connected to the region and water sensitive socio-ecological inclusive urbanism. According to the initial idea, the East wing (Guangzhou-Hong Kong corridor) of the PRD will further develop into a well-connected red-green necklace, where strong urban hubs and marinas alternate with robust green corridors connecting the mountains to the sea. With the development of wet plains, the West wing will be transformed into a blue axis featuring water sensitive ecological agri-aquaculture and considerable flood retention capacity, complemented by strong urban hubs that benefit from transit-oriented development (TOD).

7.3 Transformation perspectives

The primary use of the regional strategic vision is to determine priorities in spatial planning and design. Backcasting is used to identify spatial transformation perspectives that help accomplish the objectives set by the strategic plan, and guide actions accordingly. The spatial transformation perspectives provide a set of adaptive design strategies that are specific to the challenges and potentials of the territories in the sub-deltas and the PRD estuary. The perspective of each transformation has spatial dimensions, namely: water sensitive and socio-ecologically inclusive, flexible and multifunctional, addressing multiple temporal and spatial scales. In the sub-deltas, the transformation perspectives are connected to river and rainwater adaptive approaches, encompassing design principles for resilient riverways, integrated agri-aquaculture, sustainable urban transformations, new urban districts, the integration of (historical) villages, industrial transformation and eco-tourism. In the estuary, the transformation perspectives are mainly connected to seawater adaptive approaches, encompassing design principles for multifunctional flood protection, harbour and marina development, land reclamation (sedimentation, erosion), the development and transformation of waterfronts as well as the protection and development of mangroves and other coastal ecosystems.

Each of these transformation perspectives must be elaborated into more detail. Design principles can be identified by studying relevant and successful (international) cases. In addition, their potential should be explored by means of a process of research through design. Strategic areas can serve as experimental sites to test the possibilities of application in a spatial and visual way. Sun, Nijhuis & Bracken (2019) provides details of a multiscale water-sensitive design of agri-aquaculture in the PRD.



Figure 12. Thinking together about the future of the PRD using a digital map table (photo: Steffen Nijhuis, 2018).

7.4 Action outlook

In order to put the gained knowledge and ideas into action, it is important to address the question of whether the right conditions for new governance arrangements can be created. Therefore, the regional design demands investigation of ways in which different stakeholders could collaborate on, agree to and fine-tune a design. As discussed, the regional design process must facilitate an understanding of urban landscape dynamics and transformations through an *ex post* evaluation of existing urban planning strategies and projects as well as an *ex ante* evaluation of scenarios of potential adaptation strategies (Nijhuis, Sun & Lange, 2017). Here communication is a central issue. In particular, it is vital to develop and utilize innovative visualization methods and tools that aid the involvement of local stakeholders and decision-makers. Throughout the process, interviews and workshops with stakeholders are organized to explore potential areas of agreement. During the workshops, stakeholders are brought together around digital map-tables (Figure 12) that illustrate the relationships between different systems. Augmented and virtual reality tools can also be employed (see e.g. Tomkins & Lange, 2019), enabling participants to see the potential repercussions of their initiatives on other systems. These innovative visualization methods serve to speed up discussions of different proposals with all stakeholders and form the basis for the further development of the regional vision and related strategy. These transformation perspectives will guide the development of the delta towards a more sustainable future.

8. Conclusion

As discussed, the PRD's urban landscape is the result of various processes and systems that display different dynamics of change and which impact on each other. The ability to interrelate systems through spatial design has become increasingly important, as the interconnection of different systems and their formal expression is a fundamental aspect of contemporary regional development.

Here we advance landscape-based regional design as an inclusive planning and design approach for the adaptive transformation of the PRD. In the above, an approach to this form of design has been outlined rather than any specific outcome. At a time of complex challenges, the development of alternative approaches such as this offers a pathway to realizing socio-ecological inclusive design processes as well as modes for collaboration amongst disciplines and stakeholders. Landscape-based regional design stimulates cooperation between disciplines such as architecture, urban planning and landscape architecture. It also reviews the agency of spatial design in giving shape to the built environment. Furthermore, as an inclusive design approach, it establishes relationships between ecological and cultural factors, between process and form, between long-term and short-term developments as well as between regional strategies and local interventions. As such, landscape-based regional design is a powerful vehicle for guiding territorial transformations in a process of creating local identity and safeguarding regional relationships, while simultaneously linking ecological and social processes to urban forms.

In sum, landscape-based regional design brings new operational power to spatial design – as an integrative, creative activity – and recognizes the regional urban landscape as a significant field of inquiry, one that is context-driven, solution-focused and transdisciplinary.

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Constructive Exceptionality

Spontaneous
urbanization and
recovered agency in
Zaatari refugee camp

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Abstract

In the increasingly urbanized Zaatari refugee camp, one prominent market street, Al-Souq, stands out as contributing to the creation of a camp city, thereby challenging the view of camps as temporary settlements. While the spatial transformation of Zaatari is indisputable, there has been little investigation into how such a transformative process has taken place. This paper questions how the interplay between human agency and structure produces space in the camp, and, eventually, the city. To this end, Al-Souq, the main market street in Zaatari, has been chosen as a case study. Employing an explorative narrative approach, the main findings denote a constructive exceptionality that facilitates space creation as well as a consequential inclusion of refugees in the camp. Furthermore, the spatial construction of Al-Souq shows that refugees are in fact active agents. Therefore, the paper concludes by offering an alternative conceptualization of camps, i.e. that they are not necessarily temporary, as well as refugees, i.e. that they are not aid-dependent victims. These notions contradict traditional humanitarian perceptions.

KEYWORDS

refugee camp, production of space, duality, agency, structure

1. Introduction

Agamben (1998) has designated camps as exceptional zones of *indistinction*, where the discrepancies between inclusion and exclusion are blurred. In his conceptualization, camps are perceived as static zones in which the primary characteristic is the maintenance of bare life. This perception is often extended to viewing refugee camps as an agglomeration of helpless victims. Yet the spontaneous urbanization of the Zaatari refugee camp (see Figure 1) suggests an entirely different situation. Today the camp exhibits multiple urban features that materialize the permanent temporariness which defines its character. For example, it features identifiable districts and neighbourhoods; streets are paved and connected to an electrical grid; households are personalized and vary in size; there are makeshift street markets offering a variety of products and services. In view of these factors, the pigeonholing of refugee camps as temporary settlements occupied by idle, helpless victims is restrictive and inadequate, specifically in regard to urban-type refugee camps.

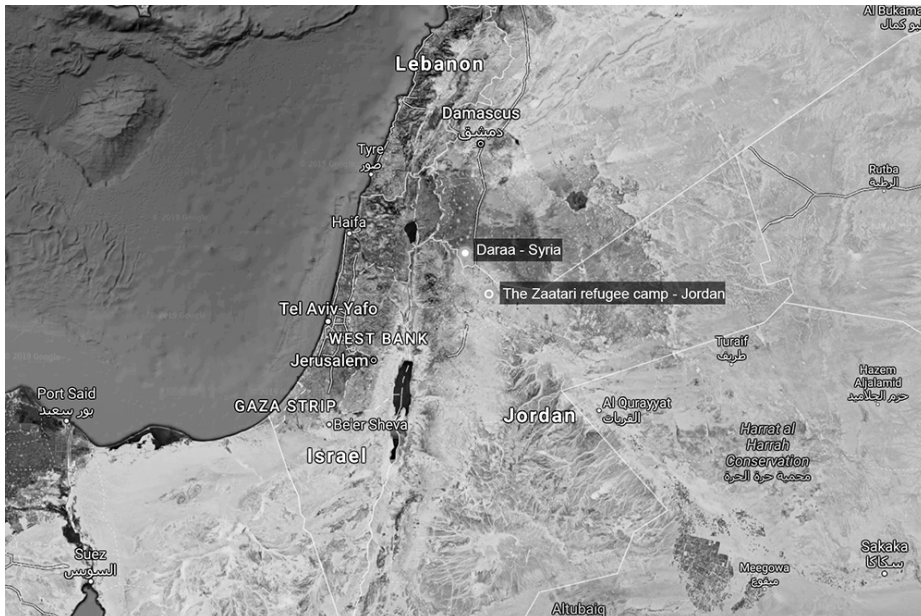


Figure 1. A satellite image illustrating the location of the Zaatari refugee camp near the Syrian-Jordanian border – provided by Google Maps (Google).

The scenario whereby camps gradually transform from tent-exclusive spaces to emergent urban settlements in order to accommodate the needs of refugees, which in turn evolve to reflect the longevity of the camp itself, is neither novel nor uncommon. Nevertheless, there is a general tendency – particularly from a humanitarian standpoint – to conceptualize camps as

temporary, since acknowledging their permanence is misguidedly associated with the promotion of suffering and deprivation. In fact, the policy of the UN Refugee Agency (UNHCR 2014) is to pursue “alternatives to camps”; when established, such camps should remain temporary, as they constitute a violation of refugees’ freedom and rights.

Thus even when camps persist for decades, they continue to be perceived through a paradigm of temporality, which in turn is extended to the perception of refugees and the life they lead inside these urbanized settlements. This recursively produces a culture of dependence (Agier 2002; see Malkki 1995; Sanyal 2014). Living in a state of continuous temporariness is inextricably accompanied by the spatial transformation of camps. While these may have some resemblance to urban informalities, they are distinctive in their own political situation, challenges and consideration. Hence, we require an alternative conceptualization of camps and refugees (Hartmann, Laue & Misselwitz 2015). Sanyal (2017) points out the need for a new vocabulary to formulate our thinking about refugee spaces beyond the mere “language of crisis”.

In this paper I argue that by exploring the way camps urbanize and by considering how the resulting spatiality is constituted, we can establish a useful lens to peer into the everyday lives of refugees inside such camps as well as discern how they counter the typical dependence, inactivity and dissociation arising through encampment. This proposition entails an alternative conceptual understanding of the camp as a socially-produced space. More specifically, by tracing the creation of Zaatari’s main market street (Al-Souq), this paper investigates the produced spatiality of the camp, seeking to understand its transformation from an assembly of tents to the produced urbanity it is today.

2. Conceiving urban-type refugee camps

The standard discourse around refugee camps poses a problem of conceptualization, both as applied to theory and practice. Hence, it is necessary for us to discuss how the concepts of *the camp* as well as *space* are perceived theoretically.

Beginning with the first concept, a basic problem in theorizing about refugee camps can be attributed to the grouping of all types of camps into a single category, namely *the camp*. Discussions about detention or concentration camps are thus often extended to urban-type refugee camps, generating an overwhelmingly critical perception of those camps as well as their inhabitants. This lack of conceptual distinction unavoidably leads to shortcomings in the description of how refugees reconstruct their lives after displacement.

The common extension of biopolitics to conceptualize camps illustrates the point. While Agamben’s (1998) initial thesis was a criticism specific to concentration camps, he nonetheless states that the camp has replaced the

city, allowing the adaptation of his biopolitics to a wider range of spaces, most importantly refugee camps (see Diken & Laustsen 2002; Elden 2006; Minca 2006, 2015; Oesch 2017). Within this approach, the camp is perceived as an *exception*, whose inhabitants are *homo sacers*, namely individuals stripped of their basic rights and reduced to *bare lives*. This view is not implausible if we think of refugee settlements, especially during the initial phases of their inception when suffering is the rule. Biopolitics and the concept of bare life are also aligned with the humanitarian perception of camps as temporary settlements inhabited by victims. Such a view, however, breaks down when we attempt to account for refugees' productive activities in camps that are urbanizing.¹ A criticism of the narrowness of the humanitarian paradigm has been reported in various accounts for this very reason (see also Malkki 1995b; Agier 2002; Sanyal 2014).

Clearly, we require an alternative approach that recognizes the produced spatiality of the camp. Specifically, an approach that brings *space* to the fore in any investigation of refuge, perceiving this as the basis and result of refugees' actions (Abourahme 2015; Abourahme & Hilal 2009; see Al-Qutub 1989; Grbac 2013; Hartmann et al. 2015; Jansen 2016; Katz 2015; Martin 2015; Peteet 2005; Ramadan 2013; Sanyal 2014). Reading camps as socio-spatial phenomena, the aim is to explore the everyday lives of refugees, the way they start over and reconstruct their lives in their new settlements. All these insights are crucial in order to remedy the flaws in our current understanding of camps and their inhabitants. Remarkably, this lens is contentious even though displacement is, by definition, about losing one's place and *ipso facto* is concerned with issues of replacement, space and place.

Both biopolitics and socio-spatial considerations are in fact appropriate to describe different aspects of the transformation of refugee camps. While the shortcomings of Agamben's thesis are increasingly criticized in the literature on spatial camps, this criticism still revolves – as Oesch (2017) explains – around an “exclusionary paradigm”. Specifically, the notion of exception can be read inversely. For instance, while Turner (2016) conceptualizes the camp as exceptional, according to him its exceptionality does not produce bare life. Fresia and Von Känel (2015) suggest that normalization follows exception during and not after encampment. Similarly, while critical of biopolitics and the term “exception”, Sanyal (2014) points out that the “exceptional category of being a refugee” is employed by camp residents to enhance their situation. Evidently, the whole picture is too complex to be captured by one or another individual approach. For this reason, I argue here for a re-engagement with Agamben's notion of exception in my exploration of Zaatari as a

1 Numerous examples of urban-type refugee camps exist around the world. Well-known cases of what has been often termed “camp cities” include the Dadaab camp in Kenya, the Palestinian camps absorbed within major cities such as Shatila in Lebanon and Wehdat in Jordan in addition to the most recent make-shift camp Kutupalong-Balukhali for Rohingya refugees in Bangladesh.

socio-spatial phenomenon, i.e. a constructive exceptionality.

Turning to the concept of *space* in relation to camps, we note that it is through the understanding of space as socially produced that the *temporary* perception of the camp falls short. Lefebvre's (1991) and Löw's (2008) accounts of space are fundamental here, the former for his triad of space and contribution towards the role of everyday life and the latter for her reformulation of Giddens' (1984) concept of duality. It is through Lefebvre's (1991) approach that we understand space beyond the perception of a mere "container" as socially produced through the interaction of three aspects, namely the physical, the mental and the *lived*. Löw (2008) extends the central contribution of Lefebvre while placing equivalent weight on the role of action, perceiving space as a duality of action and structure.

As Löw's (2008) duality will prove fundamental for our exploration of the production and constitution of space in the Zaatari refugee camp, it is valuable to provide a summary here. This duality encompasses an element of agency: repetitive daily action is crucial for the constitution of space and is motivated by knowledgeability (practical and discursive). The fact that space is produced in the camp in a simple bottom-up, unplanned manner helps to portray refugees as active subjects rather than helpless victims. Moreover, structure is provided by the rules and resources that are embedded in institutions of action.² Resources (material and immaterial) and rules (formal and informal) enable and restrict space for constitutive action. The two elements of action and structure recursively reproduce each other. Finally, along with this premise of duality, Löw (2008, p. 36) adds a third symbolic element to identify three dimensions that constitute space:

- The routinized paths of *action*;
- The *structural* dimension of spatiality;
- The constitution of places and the development of *atmospheres*.

These space-constitutive dimensions inform the overall investigation and structure of this paper. Additionally, by adopting Löw's spatial concept, I perceive Zaatari as a problem of agency vs. structure, thereby providing a standpoint from which to investigate the production of Zaatari's main market space: Al-Souq.

3. Site selection and methodology

Site selection in the large and volatile Zaatari refugee camp is far from easy. Not only is the size of the camp daunting³ but also the appropriations of space taking place are numerous and diverse in scale. While some of these transformations are harder to trace than others, street markets in Zaatari form a physical space that is the sole result of refugees' actions. This is con-

² As originally defined by Giddens (1984).

³ The camp covers an area of 5.3 km² (UNHCR 2017b).

firmed by the UNHCR standardized camp layout, which only specifies one marketplace per 20,000 inhabitants or one per settlement (camp), as opposed to a multi-use market street of privately-owned shops (UNHCR 2018).⁴

Zaatari currently has four street markets (see Fig. 2). The two main streets forming *Al-Souq* (Arabic for market) are the central *Saudi* (running left to right) along with the oldest and most famous street known as *the Champs-Élysées* (running top to bottom). All sorts of shops exist in *Al-Souq* selling basic foodstuffs, domestic supplies, pet food and even bridal dresses. It is important to note that *Al-Souq* is not only a space of transaction; it is the main space of interaction in Zaatari, a place where refugees socialize and interact, protest to voice their claims, celebrate Eid or Ramadan and even go on dates (for more on the significance of street markets, see BorkHüffer et al. 2016).



Figure 2. The main market streets in the Zaatari Refugee Camp; *Al-Souq*.

AutoCad-generated map of Zaatari by the author based on a UNHCR map collected during fieldwork.

In the following, I employ a narrative approach to explore the way in which *Al-Souq* was produced⁵ (for the connection between space, the everyday and narration, see Fischer-Nebmaier et al. 2015). The narratives of 44 shopkeepers with stores in both Saudi and Champs-Élysées were collected during a field

4 Zaatari has two supermarkets, Safeway and Tazweed (both run by the World Food Programme), together known as “the mall”.

5 The narrative approach was chosen for theoretical and logistical reasons, namely in order to obtain the security permit needed to access the camp.

trip in July 2016. The concrete situation in the camp necessitated the application of three interviewing strategies to enable both structureless and semi-structured narratives⁶. The aim was to link the individual and collective narratives in order to construct what May (2002) calls a “public narrative” of the whole market. In what follows, I explore the three dimensions that constitute Al-Souq (as identified by Löw) in order to understand how this thriving market came to be, how individual actors chose to sell specific products within clear spatial settings and what facilitated and constrained their actions.

4. From helpless victims to active agents

In a broader sense, refugee camps that undergo some spatial transformation tend to follow the same path: Refugees acting as agents to reconstruct their identities, agencies and spaces, thereby gradually turning camps into emergent cities. The eloquent description by a UNHCR Zaatari site planner recorded during my fieldwork recounts how this scenario takes place:

“We always follow them. They start the thing and we follow. Seeing them digging cesspools outside their houses, we built the whole sewage treatment plant project; they created a street module (each row of houses with a street), and we made a replica of that; they started decorating and drawing on their caravans, and we responded with the graffiti project. They come up with the ideas. Essentially, they are way ahead of us, in many ways.”

If we consider that Al-Souq is solely the outcome of refugees’ actions, then its very existence denotes active agents behind its production, challenging the humanitarian and biopolitical perception of refugees as mere victims or bare lives. This lends plausibility to the suggestion that the socio-spatial transformation of the camp inevitably materializes through the presence of certain levels of agency. Such a view is crucial in the quest to conceptualize camps.

While refugees are initially perceived as an undifferentiated mass of humans in need of help, on the ground they eventually recover their agency and reconstruct their lives. The management of refugees during the emergency period of arrival ignores their individuality since the main concern is to provide urgent humanitarian aid. This inevitably results in a loss of identity and agency, at least temporarily. Maintaining the helpless victim as the refugee archetype is, however, self-defeating since it leads to a vicious cycle of dependency, thereby hindering recovery. Agier (2002) describes this predicament as “a *problématique* of identity”, albeit solely focused on identity (the same argument can be extended to agency).

⁶ The strategies are semi-structured interviews with narrative elements, exclusively narrative interviews as well as narrative interviewing by external interviewers.

This initial state of dependency and victimhood is overcome by prospects of recovery through the gradual production of space. In fact, the collected narratives all exhibited a pattern of transition from passivity and helplessness towards activity.⁷ What starts as a crisis of loss, whether of identity or agency, ends up setting the conditions for their reestablishment. On similar grounds, Ghorashi et al. (2018) suggest that refugees be perceived as “sources of agency”, since this facilitates their inclusion in the new environment. Moreover, Wille (2011) stresses that the acknowledgment of people’s agency is crucial for their integration and to foster a sense of belonging. Refugee camps are thus not merely spaces of suffering and marginalization; they are spaces where human agency becomes possible.

5. The structural dimension of Al-Souq’s spatiality

While Al-Souq is the sole responsibility of the refugees running it – meaning it does not rely on humanitarian aid and donations – it comes as no surprise that its transformation mirrors the changing conditions of the camp. For example, once certain material resources became available in Zaatari, the refugees bought or exchanged the same resources to improve Al-Souq, materializing their permanence each step of the way. The shops were transformed from floor mats (hasira in Arabic) to tents, then to Zinco⁸ (known locally as tuti) and finally caravans⁹. This mat-tent-zinco-caravan transformation, either wholly or partially, is a part of each collected narrative. The transformation was not limited to the structure of the shops; remarkably, the products offered and hence the variety of business types present in Al-Souq also evolved greatly over time. In the following, we explore the specific resources (material and immaterial) as well as rules (formal and informal) that structured refugees’ actions in creating their shops.

5.1 Resources

When Zaatari was originally established, refugees arriving at the camp had limited resources. This was the spark that ignited Al-Souq. We can narrate the wider transformation of Zaatari’s flourishing market by detailing the specific material and immaterial resources that were drawn upon to produce the individual shops.

First, the material resources used to create Al-Souq were the essential aid packets, distributed debit cards (known colloquially in Zaatari as “the visa”), electricity as well as caravans. In fact, results show that these resources worked as a counter-encampment response, as follows:

⁷ This was identified through the performative analysis of the narratives.

⁸ A generic term for metal-roofed (or metal-walled) housing (Knudsen 2016, p. 443).

⁹ “Caravan” or “Karavana” is the term used in the camp to refer to prefabricated housing (prefabs). Unlike the common understanding of caravans, these structures are in fact immobile.

Aid: Counter dependence response

Initially refugees received aid either as packages of essential items for daily survival or through debit cards with limited funds that could only be used in the WFP supermarkets (“the mall”). It quickly became apparent that neither could meet the evolving needs of refugees. While essential aid packages can ensure survival when emergencies erupt, it is unsustainable to exclusively rely on these over longer periods of time. Refugees unanimously reported their aversion to continually eating the same pre-chosen meals. Similarly, the debit cards that could be used in “the mall” limited refugees’ budget as well as choices.

Refugees commercialized their aid items through direct sale or by exchange with Jordanian workers in order to obtain essential products unavailable in Zaatari at the time such as fresh vegetables and fruit. As a result, the first shops to open in Al-Souq were small, makeshift *convenience stores* (*dokkanas*), where refugees took charge of the basic items that constituted their everyday life, countering the *culture of dependence* that living on aid generates.

Electricity: Counter idleness response

At first there was no electricity in the camp. The original aim of connecting Zaatari to a power grid was to facilitate the work of the humanitarian agencies on-site. Nonetheless, it proved to be yet another crucial resource, informally supplying energy to refugees’ shelters and, later, to shops. This was done by directly connecting electric cords to streetlights. In fact, at that time, “*bring your own cord*” was standard advice given to refugees about to move to Zaatari. This significantly altered the quality of refugees’ lives and eventually led to the general supply of electricity to all camp residents.¹⁰

In addition to the problem of aid dependency, life without electricity in the newly established Zaatari camp entailed long periods of inactivity and waiting. The arrival of power countered this state of idleness, creating a demand for electrical devices and encouraging the establishment of shops in Al-Souq to meet this new demand. Makeshift *electric appliances* shops selling television and satellite dishes were the second in line to appear. Furthermore, other household devices could be sold (such as refrigerators, ovens or hairdryers), whose availability then paved the way for the establishment of spice merchants, bridal shops, bakeries and other shops.

Caravans: Counter displacement measure

Living in tents or zincos entailed certain levels of instability due to their fragile and mobile nature. Caravans, on the other hand, are stable and private structures that provide a form of longer-term housing. Supplied by donations

¹⁰The informal consumption of electricity left the UNHCR with a bill of \$8.7 million, necessitating the regulation of electricity inside Zaatari (Lahn 2015).

only, the slowly rising number of prefabs in Zaatari gradually transformed the camp. This in turn made prefabs a precious resource for trading and renting; they were even burgled (see Ledwith 2014).

Another significant role played by prefabs was to provide a home-like structure that allowed refugees to administer their own space. Refugees modified the layout of their shelters, adding a second space, building a fountain or designed an exterior access to the toilet. The more the prefabs looked like homes, the higher the demand for materials necessary for this enterprise. This resulted in the emergence of makeshift *building supplies* shops (*mahalat sehhiya*), *fabric shops* to furnish the newly established homes and, finally, *shops selling domestic supplies* (*asrounyeh*).

Once these material resources became available, Al-Souq offered a fertile ground for all sorts of businesses to grow. With these growing opportunities, refugees started drawing on their *immaterial resources* to start businesses. More specifically, interviewed shopkeepers specified that their previous skills or “schemas”¹¹ were factors influencing their actions in creating a shop (Sewell Jr 1992). The reasoning is easy to infer: The arrival phase in Zaatari was associated with various instabilities, which is why refugees built upon their trusted repertoire of previous skills in reconstructing their lives. Interviewed shopkeepers all listed their previously acquired skills (or those of a relative) as an essential motive behind their choice of business type.

5.2 Rules

In addition to resources, the structural dimension of spatiality is determined by rules. Of particular interest to our investigation of Zaatari are the formal (man-made) rules that govern the opening of shops or the nature of employment. These rules are merely regulatory (limited to the issuing of permits to allow products inside the camp) and were devised in a general spirit of facilitation. An in-camp and out-of-camp disparity stemming from this attitude has brought challenges to refugees who are non-camp dwellers searching for work outside Zaatari. In fact, there exist multiple narratives, included some refugees who have moved from urban settlements to Zaatari. Such reverse migration seems counterintuitive as the expected flow is in the opposite direction.

The possibilities of finding work in non-camp settlements are more complicated. Until the establishment of the Jordan Compact Plan in 2016, only 4,000 Syrian refugees working in Jordan had a work permit, a figure that has since grown to 40,000 (ILO 2017). However, this figure does not represent the actual number of people in work. Evidently, many hurdles still exist for newly

¹¹ In his discussion on duality, agency and transformation, Sewell Jr emphasizes mental structures, which he calls “schemas”. Along with rules, he identifies these as functioning like prior scripts according to which an agent acts. As he puts it: “agents become agents because of these mental structures” (Sewell Jr, 1992, p. 12).

arrived Syrian refugees who wish to integrate themselves into the Jordanian workforce. These attempts are usually coupled with protests from pressure groups representing unemployed Jordanians.

Within Zaatari, employment is either self-created (refugee-owned shops) or offered by organizations working in the camp. According to multiple UNHCR factsheets (2015, 2016; 2015b, 2015a) around 60% of working-age refugees in Zaatari generate revenue. No official rules govern the establishment of a privately-owned shop in Zaatari; this also means that no work permits are required. While general guidelines do exist to regulate employment with the NGOs present in Zaatari, their sole purpose is to ensure equality of opportunity (UNHCR 2017). That is to say, none of the rules inside Zaatari concerned with securing a livelihood and work is related to permission for refugees to work. The fact that such permits are generally assumed eases the overall process of becoming independent and recovering agency.

One reasonable question to pose at this stage is why work-related rules are more flexible and productive within Zaatari than in the host community? To further illustrate my point, I return to Agamben's (1998) notion of exception. At the same time, I refer to a dissimilar exception, one that facilitates action as opposed to constraining it. More specifically, it appears that the exceptional history of the establishment and development of Zaatari as a city of refugees is responsible for the disparity highlighted above. The refugees in Zaatari built a city of their own; they constitute the local community as opposed to being the new arrivals amongst Jordanian workers outside. While following an overarching system of rules (regarding, for example, safety and good conduct), the camp functions as a separate entity with its own logic and its own specific rules solely concerned with refugees in Zaatari.

The emergence of some Zaatari-exclusive rules is highly distinctive. As mentioned above, work-related rules have proved beneficial to both refugees and the host country. Hence, they were selected for. It is important to point out that when speaking of exceptionality, I do not mean to establish a generalizable expectation regarding all camp-related matters. A case in point is the predominance of early marriages inside the camp. Thus I do not argue for the uncritical acceptance of Zaatarian rules as a whole, but wish to shed light on a facilitating factor that happens to be camp-exclusive in comparison with other non-camp refugee settlements.

6. The atmospheric quality of Zaatari

The above-mentioned disparity between out-of-camp and in-camp conditions can be extended to a discussion of the refugees' feeling in this spatial setting. In Zaatari camp, refugees expressed a sense of belonging to the place and the community as opposed to the intense feeling of exile experienced outside, where they constantly bear the stigma of being labelled a refugee.

Therefore, another example of Zaatari's exceptionality can be traced in the last dimension constituting space, namely atmospheres.

According to Löw (2008), atmospheres are instantiated through perception. Evidently, perception is not easily generalizable due to the significant individual variation. However, we can uncover shared ideas, behaviours and experiences of those living in the camp, which, in turn, influence the generated atmospheres. By investigating these atmospheres, it is possible to infer processes of inclusion and exclusion as well as what follows from the identification and dissociation with space (see Hasse 2014; Löw 2008; Schmitz 2012).

Which expressions of inclusion or exclusion did interviewed refugees have in common? To what can we attribute the development of these expressions, and how does this discussion inform us about refugees' identification and association with Zaatari? I will answer these questions by investigating a translated excerpt from an interview with a refugee:

“Personally, I am against migrating out [of Zaatari]. I had a chance to go to Canada, but I didn't go because we are very well-adjusted here. And I don't like to go out... outside the borders of the Zaatari camp. Here I do not feel like an exile! It's true that outside people are like “our brothers”, but here I feel that I've become accustomed to things and have grown to know everybody. It is true that I left Syria, but my whole family is around me! All the people are around me. I know that their accent is Syrian, their traditions and customs [...] what is different for me here is only the weather.”

Of course, it is unsurprising that an atmospheric quality of *home* would stem from residing in one place with people from your home country. While home for most refugees in the camp was originally the city of Daara (UNHCR 2017b), now it is Zaatari. The fact that refugees commonly defend the reputation of Zaatari indicates that they feel represented by the camp or belong to a Zaatari-specific identity. While dissociation is an expected outcome of displacement, it seems that the spatial transformation of the camp has been accompanied by a reworked sense of identification. Once more, Zaatari appears as an exception to other refugee settlements. Urban refugees generally face various risks associated with being a minority group in an homogenous host community. In Zaatari, on the other hand, refugees not only come from Syria, but the majority from the same directorate in south Syria. Interviewees expressed a shared sentiment in the form of a minimal sense of exile inside Zaatari. They share an accent, their physical roots, their history as well as a common status rather than being newcomers amongst a host community. In short, Zaatari's exceptionality has also resulted in a counter-displacement or counter-exile atmospheric quality of belonging.

7. On exceptionality

Two questions arise from the conceptualization of Zaatari as an exceptional space:

First, am I promoting some political consideration of an autonomous Zaatari? The short answer is no. However, the discussion of self-governance is appropriate here. Officially speaking, Zaatari is under the joint administration of the Jordanian Government and the UNHCR (2018b). Meanwhile, various Zaatari governance plans have emerged at different times. For example, the Syrian Refugee Camp Directorate, (SRCD) implemented one plan to improve the inadequate administrative structure existing soon after Zaatari's establishment (UNHCR, UNICEF and WFP, 2014). While Ledwith (2014) also reported on a self-governance plan being developed by a Netherlands-based association of municipalities, to date there is no follow-up reports on the initiative's progress.

Exploring space and its production involves a discussion of refugees' rights to manage and govern these produced spaces. In a discussion of non-camp refugees, Sanyal (2017) makes a similar point about the need to research governance and how it transforms refugee spaces. One point of departure could be Bulley's (2014) model of "governing through community" and his proposal of an ontological shift, whereby the community leads behaviour and enhances both agency and meaning.

Martin (2015) explains how ensuring refugees' right to self-administer spaces is key to the development of camps. The residents of Zaatari are allowed to modify their spaces, albeit within certain limits, most significantly regarding a ban on the use of cement.¹² As explained by Abourahme (2015), cement is crucial in that it materializes permanence and signifies a sense of staying. It is also associated with normalcy, something that prefabs and tents do not do. The narrative of one refugee illustrates this by looking at things from the point of view of his two-year old son:

"I regret and feel sad when I think of my son Husam, who's a little older than two years. I think that this kid has seen prefabs and tents but never cement. What can he do? I often go online or show him on the television."

Second, am I promoting the isolation of refugees in a refugee-exclusive space by conceptualizing Zaatari as an exceptional space? This, too, is a hasty conclusion. Now six years old, the camp encompasses a growing generation of native Zaatarians and has seen the clear establishment of spaces and identities. In this case, dissolving the camp is no longer the humane alternative. Thus, what I am suggesting is an acknowledgement of Zaatari's existence

¹²While interviewed refugees indicated their desire to build dwellings in cement, it remains prohibited inside the camp, with the exception of flooring or to construct urban furniture.

as well as the cooperation it represents with the host country, taking into consideration the benefits afforded by its exceptional position. In fact, it is already true that the camp does not exist in complete seclusion from its surroundings, and some collaboration is already in place. Even though Zaatari's geographical location poses a challenge to a scenario whereby it follows the Palestinian-camp model, i.e. merging with existing cities, it is already connected through trade to various cities in Jordan. Interviewed refugees listed Mafraq, Ramtha, Irbid and Amman as the source of their goods. The UNHCR factsheet (2017) confirms trade-based cooperation between Zaatari and the Jordanian community. Further, refugees commute in and out of the camp for education and healthcare purposes. In this sense, Zaatari can be thought of as a *gray space*¹³ in which refugees are defying their initial confinement and employing the exceptional nature of their space to recover and reconstruct their lives.

8. Conclusion

In this paper I have investigated the process by which Al-Souq was established in Zaatari. Structuration proved a suitable lens to read the camp's produced spatiality. The main findings indicate a constructive exceptionality of the camp that not merely facilitates the creation of space but also guarantees a consequential inclusion. Furthermore, the very production of space indicates that refugees are active agents and creators as opposed to aid-dependent victims, the status commonly attached to them. Encampment is ipso facto associated with produced exclusion and dissociation as well as a general state of helplessness. All of these seem to be countered and reworked by the spatial transformation of the camp. As a result, by recognizing the urbanity and exceptionality of Zaatari, we can open the door to more context-appropriate measures for improvements to similar camps to better meet current needs and allow for more efficient progress.

¹³A term initially coined by Yiftachel (2009) to describe the bottom-up processes of spatial production in urban informalities.

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Green Infrastructure Planning in Germany and China

A comparative approach to green space policy and planning structure

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Abstract

Green Infrastructure (GI) provides an important life-support system for regions and cities. Inspired by, supported by or copied from nature, GI is intended to deal with issues that traditional grey infrastructure can hardly accomplish. Initiated by the European Union's (EU) Biodiversity Strategy, Germany was an early adopter and thus a role model for the GI approach. In particular, a systematic GI planning system composed of formal and informal planning instruments has been established and implemented from the national to the local level. In comparison, China has not yet officially issued guidance or laws for GI planning. Instead, GI implementations are mainly concentrated at the urban and local scale in the form of green municipal engineering. Scrutinizing the spatial planning system in China, however, we can identify a top-down "5+1" model as a GI planning framework. This includes five types of statutory and non-statutory planning together with the garden city movement. Germany may benefit from China's diversified and inclusive GI development model and its efforts to promote regional transformation and enhance citizens' sense of pride in their city. On the other hand, China can learn from Germany's integrated GI planning system and top-level design. Due to the cross-cutting nature of the issues involved, China's national spatial planning system must be reformed in order to improve GI planning in the country.

The aim of this paper is to compare GI planning in Germany and China, two countries at different developmental stages and with contrasting social and governmental systems. In so doing, we hope to build a "bridge" for the exchange of experiences.

KEYWORDS

green infrastructure, green space, planning system, Sino-German

1. Introduction

Green infrastructure (GI) is considered to be an important life-support system, vital to improving the urban ecology and maintaining sustainable development (Rouse & Bunsterossa 2013). As a contemporary planning tool, GI focuses on examining the status quo and overall benefits of natural and semi-natural elements in cities and regions at multiple scales (Mell 2013; Hersperger et al. 2020). It is inspired by, supported by or copied from nature to deal with sustainable development issues in human settlements. Since the 21st century, the GI approach and ecosystem services have been seen as an important means of improving human well-being.

Germany attaches great importance to preserving the natural environment and biodiversity in the process of city and regional development. Guided by Nature-based Solutions (NbS), the country was an early adopter and thus a role model for the GI approach. In particular, a systematic GI planning system composed of formal and informal planning instruments has been established and implemented from the national to the local level. In contrast, GI is a relatively new concept in China, which has not introduced any guidance or laws for GI planning at the national level. Nevertheless, the national government has recently promoted what it calls “Ecological Civilization”, accompanied by the implementation of large numbers of GI projects. Chinese policymakers now comprehend the advantages of the GI approach compared with traditional gray infrastructure in the urban context, especially in improving urban resilience, mitigating natural disasters and controlling urban growth (Byrne 2015; Wang & Banzhaf 2018). In 2018, the State Council of China promulgated an institutional reform plan and decided to establish the Ministry of Land and Natural Resources. This will be followed by a reform of the country’s spatial planning system. Various spatial planning functions previously scattered over multiple departments will all be gathered in the newly formed Natural Resources Department. Especially with regard to GI issues, Germany’s mature green space planning system can provide a valuable reference to China in this process, particularly in how to deal with different planning levels and planning implementations at diverse scales. Due to its rapid transformation, China has necessarily encountered many new problems while trying to ensure sustainable development. Meanwhile the country’s fast and diversified inclusive renovation and development model provides opportunities for experimentation, thereby deepening existing theories, which may also be applied to the German context.

Since the original development of the GI concept, scholars and practitioners around the world have produced a wide range of policies, principles and forms of implementation (Mell 2013; Wright 2011). There is an ongoing discussion on how to establish best practices and planning implementations to share the values of GI. If we focus our evaluative lens on comparisons of

national and sub-national practice, we see a huge disparity in approach, application and structural/institutional support. From another point of view, we can see as well how localized interpretations are made by this common conceptual framework and how implementations are integrated into the existing planning framework. (Mell et al. 2017). To this end, in the current paper we intend to compare GI planning systems and their implementations in Germany and China, two countries at different developmental stages and with contrasting social and governmental systems. In so doing, we aim to build a bridge for experiential exchange between policymakers, practitioners and academics in order to determine whether transferable knowledge can be identified, recognized and translated between Germany and China.

Our analysis involves the following four tasks:

- To combine and summarize the background and research content of the GI concept;
- To analyze the development process and GI planning framework in China and Germany;
- To compare the GI approaches in policy settings, spatial planning framework, at different scales and
- To pinpoint methods and strategies for mutual benefits and innovations in GI planning and implementations.

The article is divided into five sections. This introduction is followed by Section 2, which considers the research paradigm of GI. In Sections 3 and 4, we discuss in detail the development process and spatial framework of GI in both countries. In Section 5, the GI planning approaches in Germany and China are compared and evaluated in order to reveal the potential for mutual benefits. In the final section, we derive some conclusions from our findings, which can be helpful to both countries.

2. Research paradigm of Green Infrastructure

2.1 Overview of the concept

GI is an important life-support system that can greatly improve urban ecology and help to ensure sustainable development (Ahern 2000; Weber 2000). In the late 1990s, GI was explicitly introduced in the United States. For example, Charles Little's book *The Greenway in the United States*, defines GI as "the expansion of the greenway system" and "a new infrastructure category" (Little 1990). Since then, GI has quickly become popular in the landscape planning community. Yet it is not really a new concept; its roots lie in efforts in the 20th century and even earlier by Western nations to provide leisure space for urban residents as well as to maintain public health (Benedict & McMahon 2006). Typical examples are, from the 19th centu-

ry, Olmsted's "Emerald Necklace" project in the United States (Olmsted Necklace) as well as Ebenezer Howard's idyllic urban theory (Canzonieri et al. 2007). Subsequently, the green belt concept (Mell 2009), greenway planning (Fábos & Ryan 2004) as well as garden city movements have laid the foundation for the formation of this concept.

Considering the range of international research and the varying definitions of GI, it is difficult to give GI a "global" interpretation. Previous studies have mostly focused on an evaluation of localization within national scales. The findings of these investigations are highly diverse, reflecting the specific research objectives, methods and contents (Benedict & McMahon 2006; Lennon 2015). We can summarize the different research perspectives as follows: Landscape architects and planners strive to realize landscape functions through nature-based design and configuration (Sandström & Carlsson 2008; Walz & Syrbe 2013); conservationists emphasize the GI functions of biodiversity and habitat protection (Syrbe et al. 2013); urban planners are more concerned with the comprehensive benefits that GI can provide for cities (Laforteza et al. 2013; Madureira & Andresen 2014); architects and municipal engineers stress the role of GI in greening buildings and regulating storm water (Lehmann 2014; Nickel et al. 2014); finally, geographers and ecologists focus on the ecosystem services and human well-being that GI provides (Tzoulas et al. 2007; Meerow & Newell 2017). Although academics from different countries and disciplines argue about the meaning of GI, "ecological networks", "connectivity" and "multifunctionality" are often cited as common features of GI, regardless of the precise definition (Rouse & Bunsterossa 2013; Canzonieri et al. 2007; Lennon 2015; Peter 2018). Recently, with increasing cross-disciplinary cooperation, the vanguard of GI research is focused on the following seven aspects: The ecosystem services of GI (Liquete et al. 2015; Maes et al. 2015), GI and climate-change response (Matthews et al. 2015), GI and flood regulation (Ahiablame et al. 2012; Laforteza et al. 2013), GI and the improvement of air quality (Ng et al. 2011), GI and Low Impact Development (LID) (Yu et al. 2008; Dhakal et al. 2017), GI and human well-being (Tzoulas et al. 2007; Liu et al. 2014; Nickel et al. 2014), GI and civil participation (Lovell & Taylor 2013; Byrne et al. 2015) and GI construction methods (Lennon 2015; Chang et al. 2018).

2.2 Structure, functions and scales of Green Infrastructure

Spatially speaking, GI tends to consist of core areas, corridors and stepping stones (Weber et al. 2006; Hansen & Pauleit 2014) (see Figure 1). Table 1 gives an overview of the GI paradigm, drawn from a literature review. The main characteristics are:

- Regarding constituent elements, GI includes vegetation and water bodies in both natural and semi-natural settings;
- Regarding scale, GI ranges from country, to region, to city, and site scale;
- Regarding its interdependency, GI appears as multi-functional, multi-scale and connective;
- Regarding research goals, the main purpose of GI planning is to optimize the supply of ecosystem services, to realize human well-being, to conserve biodiversity and to foster green urban (municipal) infrastructure development.

“Nature-based Solutions (NbS)” is the essence of GI methodology. These emphasize the inspiration and support that can be obtained from nature as well as the use or imitation of natural processes to address various social challenges while ensuring economic, social and environmental benefits (European Commission 2015).

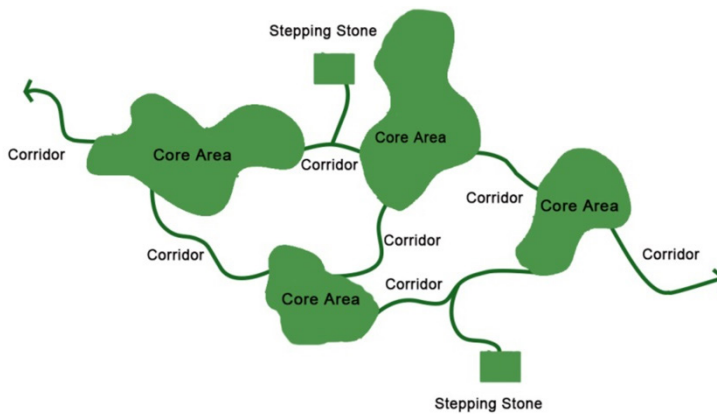


Figure 1. Structure and components of green infrastructure. © Draft Thinghao Hu

Topics	Foci	Representatives	Planning objectives	Scales
	National life-support system	Benedict & McMahon (2002); Canzonieri et al. (2007)	Realizing environmental, social and economic sustainability	From national to local scale
	Ecological network; Connectivity; Multifunctionality; Landscape function	Sandström & Carlsson (2008); Madureira et al. (2014)	Improving ecosystem services; Controlling urban sprawl; Land protection; Environmental protection; Smart growth	Natural and semi-natural areas of regions and cities
Human well-being	Storm water management; Urban heat island control; Natural disaster control	Matthews et al. (2015)	Improving urban resilience and residents' quality of life	Urban scale
	GI and ecosystem services	Tzoulas et al. (2007); Maes et al. (2015)	Providing a variety of environmental, social and economic values and services	Regional and urban scale
	Synergy and trade-offs of GI functions	Lovell & Taylor (2013); Hasse et al. (2014)	Maximizing the benefits of ecosystem services; Sustainable development	Natural or semi-natural areas
	Planning and implementations of GI	Meerow & Newell (2017)	GI planning approaches	From national to local scale
	Strategic network; Biodiversity conservation	Syrbe et al. (2013); Liqueete et al. (2015)	Enhancing ecosystem services; Maintaining biodiversity	Natural and semi-natural areas, ranging from national to regional, urban and local scale
Nature and Biodiversity Conservation	Habitat conservation; Regulating and supporting services	Weber et al. (2006); Walz & Syrbe (2013)	Preserving biodiversity	Natural and semi-natural areas of cities
	Ecological restoration and protection	Chang et al. (2018);	Sustainable land use; Ecological protection	From national to local scale
	Urban rainwater management; Permeable pavement design	Nickel (2014); Ahiablame et al. (2012)	Greening of municipal infrastructure	Urban scale
Green municipal engineering	Vertical greening and green roof	Lehmann (2014)	Green buildings; Energy-saving and environmentally-friendly design	Urban and local scale
	Low impact development; Sponge city development	Yu et al. (2008); Dhakal & Chevalier (2017)	Design for resilience; Sustainable landscape planning	Urban and local scale

Notes: The table is drawn from a review of the papers listed under "Representatives". Those sources can be found in the list of references.

Table 1: The GI paradigm.

3. Green Infrastructure planning system in Germany

3.1 Development process

In Germany, systematic GI strategies were established with the aim of preserving biodiversity and ecosystem services (European Commission 2013). These were triggered by a series of EU initiatives (i.e. Natura 2000, EU Biodiversity to 2020, etc.) intended to constrain the deterioration of habitats and the loss of biodiversity. As a key member of the EU, Germany implemented a GI development process largely in line with EU policies. In this process, Germany is continuing to deepen its understanding and response to GI, realizing that the multi-scale, multifunctional, inclusive and connective nature of GI can effectively prevent the loss of biodiversity and strengthen the supply of ecosystem services (Lafortezza et al. 2015).

Germany is a federal republic with a decentralized legislative system and 16 highly autonomous states (Länder). At the federal scale, GI planning is generally limited to overall guidance, providing basic planning for state, regional, and local development. In 2006, Germany passed a federal reform bill that revised and clarified the jurisdiction of the federal and state governments. In particular, more legislative and policy-making authority for environmental and ecological protection was transferred to the federal government such as waste disposal, the protection of air quality and water conservation. The federal government and the states implemented an “information sharing - synergy - trade-off - compensation” approach to dealing with ecological and environmental issues, aiming to minimize the likelihood of conflicting policies between the federal government and states in the areas of nature, biodiversity, marine environment and landscape protection. This also laid the policy foundation for Germany to issue GI policies and guidance documents at the federal level. In the same year, ministers from the 16 autonomous states jointly issued their “Concepts and Strategies for Spatial Development in Germany” at a ministerial conference. This policy paper emphasized the sustainable development of large-scale green spaces at the federal scale, and is seen as the official inception of GI planning in Germany (Mell et al. 2017). Since then, the country has launched a series of GI planning initiatives, policies and strategies, which continue to deepen and improve the understanding and application of GI (see Table 2 for details).

3.2 Spatial framework of Green Infrastructure planning in Germany

As already pointed out, GI is not a particularly new concept. In Germany, research has been conducted since the 1960s on urban ecology and the creation of high-quality human settlements (Blume & Sukopp 1976). Along with a deeper understanding of the relationship between human and nature, the concept of GI has been expanded to include biodiversity conservation and ecosystem services in the context of sustainable development, so it became more

interdisciplinary. Similarly, the spatial planning of GI in Germany constitutes a fully integrated system rather than merely a series of vertical or horizontal plans. Running from the national to local level, a spatial framework has been established by a series of spatial planning instruments, which are based on comprehensive plans and sectoral plans, guided by strategies/policies, and mostly implemented by informal plans (see Figure 2).

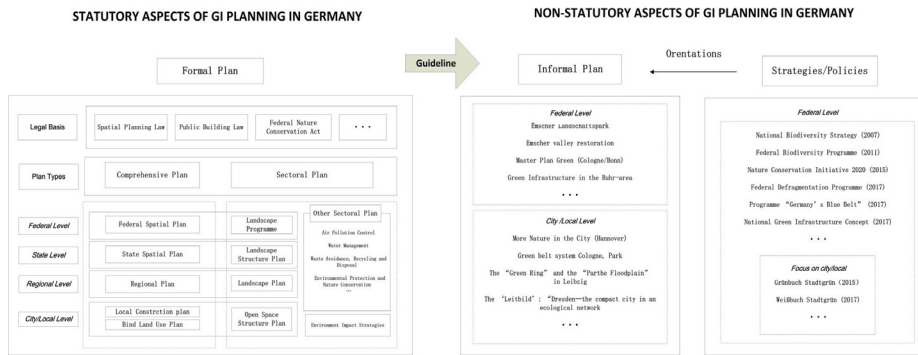


Figure 2. GI spatial planning system in Germany. © Draft Thinghao Hu

Regarding planning legislation, instruments for GI planning include comprehensive planning, landscape planning within sectoral planning, environmental impact assessments as well as other sectoral planning that more or less affects the design and implementation of GI planning (i.e. air pollution control, water management, environmental protection and nature conservation, etc.). Of these regulatory instruments, landscape planning occupies an extremely important position. The German Federal Natural Protection Act of 1976 clearly specifies the responsibility and role of landscape planning as a planning tool in protecting and maintaining landscapes and their development. Landscape planning encompasses almost all the spatial aspects of ecological protection in Germany, including collecting, assessing and summarizing diverse data about the environment and landscape. In contrast to other forms of sectoral planning, landscape planning enjoys regulatory power due to the principle of environmental priority. Therefore, comprehensive plans, land use plans and other sectoral plans must take the requirements of landscape planning into consideration (Heiland 2010).

It should be noted that in Germany, landscape planning only takes account of nature and biodiversity protection if landscape functions need to be assessed for projects or activities whose impact will conflict with the goals of nature protection (Albert et al. 2012). In contrast, GI planning specifically focuses on human well-being, using anthropocentric approaches to address

ecosystem services. It can be said that the success of today's GI planning in Germany largely depends on the close intertwining of the GI concept and the country's system of landscape planning. Specifically, the GI concept reflects the traditions and expanded scope of the German landscape planning system. Regarding scale, this system covers four levels: landscape policy planning, regional landscape planning, landscape planning and green space structure planning. These correspond with the four GI scales: the federal, regional, urban and local scale. Functionally, the "multifunctionality" emphasized by GI not only encompasses natural environmental protection and governance in the traditional sense, but also ecosystem services such as climate regulation, natural disaster prevention, control of the urban heat island effect, and the establishment of recreational space. The GI concept updates our understanding of the relationship between human and nature while providing new meaning to green space planning.

In addition to the statutory perspective of planning instruments, a large number of GI issues are resolved at different scales by means of informal instruments. At the federal level, GI plans and strategies mostly take the form of overall approaches, guidelines and standard principles aimed at realizing sustainable development, planning GI elements and networks, protecting biodiversity and promoting the quality of life. For instance, the "National Biodiversity Strategy" (BMUB 2007) implemented the EU Biodiversity Conservation Strategy at the federal level by means of habitat restoration, peatland ecological remediation and ecological compensation. Moreover, the "Federal Defragmentation Programme" provides a federal-scale GI network based on the national road network (BfN 2012) while the "Nature Conservation Initiative 2020" proposed an additional 40 strategies to improve the status of biodiversity and human well-being. This initiative also promoted the idea of using urban GI to build a renewable energy base. In 2017, the Federal Agency for Nature Conservation (BfN) issued the "Federal Green Infrastructure Concept", a policy paper which clearly defines GI as "a sustainable tool that aims to achieve natural protection and promote ecosystem services" (BfN 2017). Alongside the implementation of the EU's requirements for GI development, we can pinpoint additional GI elements at the federal level (i.e. core patches, corridors and biological diversity hotspots) as well as further planning goals and requirements for different types of protection. This is the first time that Germany has clearly proposed the GI planning paradigm at the federal level.

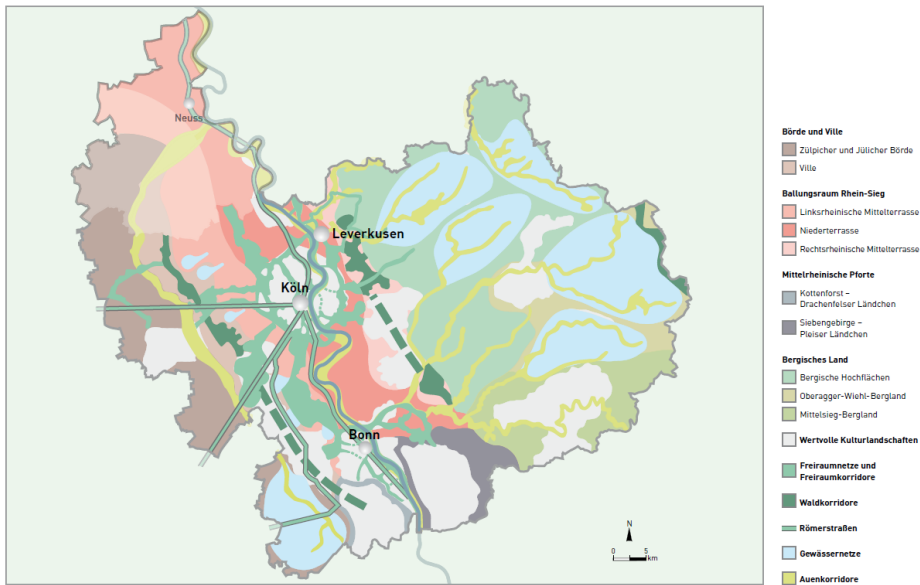


Figure 3. Spatial structure of “Master Plan Green (Cologne/Bonn)”

Source: <https://www.region-koeln-bonn.de/de/themen/natur-und-landschaft/masterplan-gruen/index.html>

At the regional level, one of the most dominant trends in spatial and sectoral planning in Germany in recent years has been the increasing popularity of informal approaches such as strategic masterplans, which are now widely used as a complement to formalized planning frameworks (Allin 2011; Blotevogel et al. 2014). Primarily, this seems to reflect a lack of flexibility and responsiveness on the part of formal planning structures, especially when reacting to short-term changes and issues. For example, the metropolitan region of Cologne/Bonn has drafted and implemented an informal “Master Plan Green (Cologne/Bonn)” aimed at sensitizing municipalities to regional-scale GI development (Reimer 2013) (see Figure 3). This plan takes full account of the new background and demands of regional planning in terms of energy transformation, climate change, transportation and sustainable infrastructure design. The plan places Cologne and Bonn at the core, with the Rhine as the main axis. It reshapes the urban landscape by integrating blue-green infrastructure in the planning area using natural-based solutions. This project integrates the following eight factors: nature and landscape maintenance, residential development, energy/climate control, structural policy and economic adjustment, regional development, inter-regional cooperation, tourism & leisure, and culture. It provides a good example of regional and departmental cooperation towards sustainable development.

At the urban and local levels, the policy paper “Green Book: Green in the City – A Livable Future” issued by BMUB and BMEL in 2015 defined the urban green space, outlining its functions and providing examples of best practices (BMUB 2015). The conclusion is that successful GI planning requires the multidimensional functions of urban greening combined with the approach of strategic networks. In 2018 came the supplementary policy paper “White Book: Green in the City – A Livable Future”. This went even further by proposing 10 specific recommendations for GI implementation at urban scales.

Green Infrastructure policies and plans	Year	Scale	Department	Key contents
Concepts and Strategies for Spatial Development in Germany	2006	Federal	Federal Ministry of Transport and Digital Infrastructure (BMVI)	Sustainable development of green spaces at the federal scale
National Biodiversity Strategy	2007	Federal, state	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)	Implementing the EU Biodiversity Conservation Strategy at the federal level through habitat restoration, peatland ecological remediation, and ecological compensation
Federal Biodiversity Programme	2011	Federal, state, urban	Federal Agency for Nature Conservation (BfN)	A number of strategies have been proposed to improve the federal ecosystem and create more urban green spaces
Federal Defragmentation Programme	2012	Federal	Federal Agency for Nature Conservation (BfN)	A federal-scale GI network based on the federal highway network was proposed
Nature Conservation Initiative 2020	2015	Federal, regional, urban	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)	40 strategies have been proposed to improve the status of biodiversity; the idea of using urban GI to build a renewable energy base
Green Book: Green in the City – A Livable Future	2015	Urban, community	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB); Federal Ministry of Food and Agriculture (BMEL)	Multifunctionality, current challenges, and urban GI development strategies were discussed
Federal Green Infrastructure Concept	2017	Federal, state, urban	Federal Agency for Nature Conservation (BfN)	The basic paradigm of German GI planning and development was determined
White Book: Green in the City – A Livable Future	2018	Urban, community	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)	10 specific strategic approaches to promote urban GI development were proposed

Table 2: German policies and plans on Green Infrastructure at the federal level

4. Green Infrastructure planning system in China

4.1 Development process

Influenced by international trends and practices in ecology, Chinese scholars began exploring the issue of urban green space in the 1990s following the Opening of China. Scientists investigated ecological spatial organization methods and ecological planning practices in the urban context. On the one hand, the main content of urban ecological planning theory and practice in this period was the design of a planning system for urban green space. This marked the beginning of an orderly and standardized development of China's green space. Nevertheless, the implementation of green space planning was mainly focused on urban areas, emphasizing the importance of greenery in "core areas" and of "key points". On the other hand, China's large-scale "eco-city construction" began in this period. At the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, in 1992, China made a commitment to formulate its own "National Agenda 21" (A White Paper on Population, Environment and Development in the 21st Century) to reflect the aims of the UN's Agenda 21. This was an overall strategy, plan and a series of measures to ensure the country's sustainable development. At the city and local level, a significant component of the Agenda was the construction of various "Eco-cities" such as "The National Environmental Protection Exemplary City", "The National Health City", "The National Garden City" and, more recently, "The Low-carbon City" and "The Sponge City".

In China, the approach of creating ecological networks can be traced back to the notion of "ecological infrastructure", first proposed by Kongjian Yu. Similar to the concept of GI, this highlights the key function of safeguarding landscapes as well as sustaining ecosystem services for human well-being (Yu et al. 2001). Since 2009, the GI concept has become popular among Chinese academics, frequently appearing in scholarly literature. As a tool or framework to protect natural resources and guide the sustainable development of urban space, it is seen as an important instrument to protect natural resources and guide sustainable urban development (Li 2009).

Since GI is a relatively new concept in China, most discussions are between academics. While the government has not yet issued any GI guidance policy at the national level, a series of recently promulgated eco-environmental guidelines reflects the need for GI functions as well as concern about ecosystem services and biodiversity conservation. In 2012, for instance, "ecological civilization" was written into the Constitution at the 18th National Congress of the Communist Party of China and became one of the important elements in the 13th Plan for National Economy and Social Development (2016–2020) (short: the Five-Year Plan). In addition, China's 13th Five-Year Plan of National Ecological Protection (2016–2020) noted that the protection

of urban biodiversity and the restoration of urban green space are key complementary factors to expand ecological services. Guided by the Five-Year Plan, China has issued a series of “environmental protection and ecological control programmes”. This category of plans further extends and refines the relevant provisions of green space development and environmental protection. Table 3 lists some programmes that take an active part in GI promotion and development.

Plans and Programmes	Department	Planning period	Requirements for GI Development
Plan for Promoting Ecological Civilization Construction	State Forestry Administration	2013-2020	Proposes specific requirements for urban forestry construction action and rural development.
National Main Function Zones Planning	Central People's Government	Issued in 2010, to be realized in 2020	National territory is identified as optimization development areas, key development areas, limited development areas, and prohibited development areas.
National Ecological Protection and Construction Planning	National Development and Reform Commission, and 12 other departments	2013-2020	Proposes five specific measures to improve urban ecology, including: urban green system planning, urban circulating forest and country park construction, urban heat island control, urban water quality management, urban vertical greening and low elevation greenbelt construction.
National Forestation Programme	State Forestry Administration	2011-2020	Puts forward requirements and measures on urban and rural afforestation, green channel and green network construction, restoration of post-mining areas.
Ecological Function Area Planning	Ministry of Environmental Protection; Chinese Academy of Sciences	From 2015	According to the nature background and ecosystem services, ecological function areas at national scale can be categorized into three major classes (ecological regulation, products provision, and human security); there are 242 such areas in China.

Table 3: China's plans and programmes to promote GI development at national level

Source: Grunewald, K., Hu, T., Kümper-Schlake, L., Wei, H., & Xu, Q. (2018). Towards 'Green Cities'—Fields of Action and Recommendations. In: Grunewald K, Li J, Xie G, Kümper-Schlake L. Eds. 2017. Towards green cities: Urban biodiversity and ecosystem services in China and Germany. Springer International Publishing (Cities and nature) pp. 175-197.

It can be said that the guiding ideology of “ecological civilization” is currently the catalyst promoting the formation of China’s GI plans and thinking. Here there are three aspects to be mentioned: First, this ideology contributes to setting up a new type of urban ecological plan, even though this is not yet secured in law. Second, “ecological civilization” is closely connected to ecological security and urban security planning (such as flood control planning, watershed planning), thereby expanding the vision of urban ecological plan-

ning. And third, it fosters an increased awareness of ecological processes. The notion of “ecological civilization”, along with its various sub-types (such as water ecological civilization), is included in the scope of urban ecological planning, thereby binding ecological civilization and grey infrastructure planning more closely together. In this way, China has started to think about solving municipal issues by means of nature-based solutions.

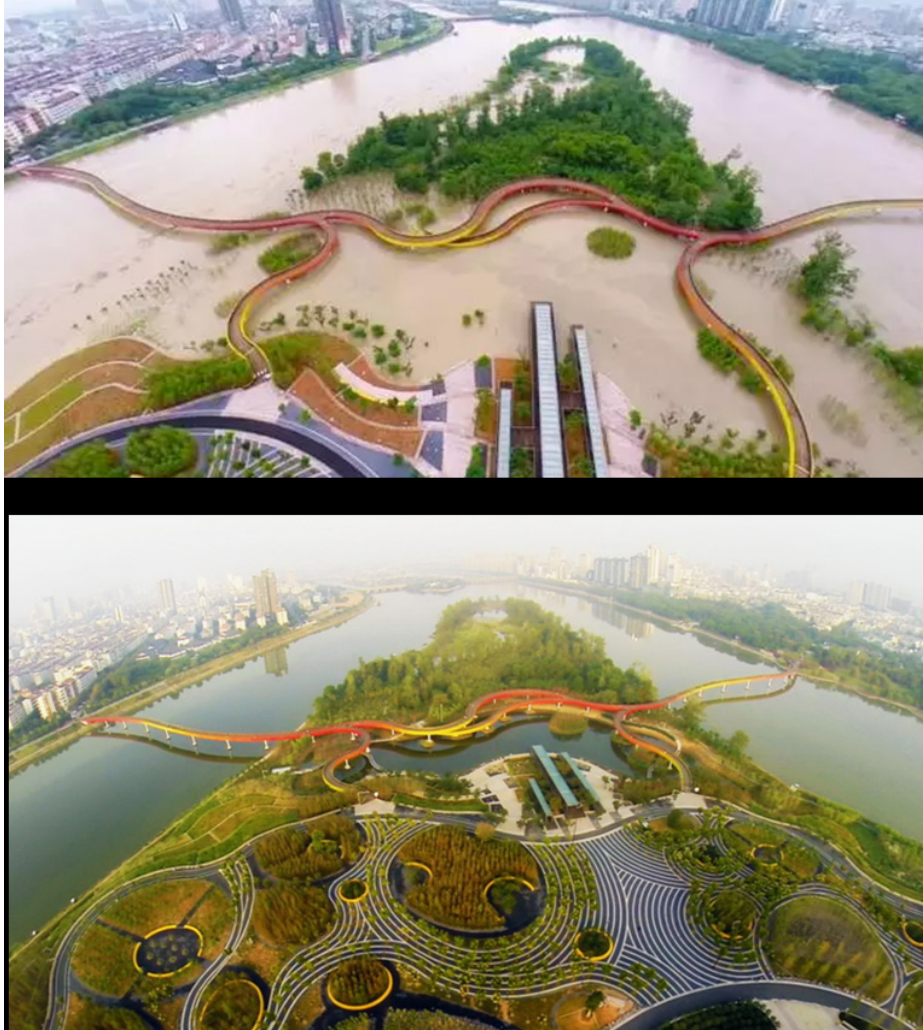


Figure 4. Yanweizhou Park during the monsoon and dry season

Source: Top picture from: Yu, K. (2017). Resilient Landscape-Yanweizhou Park, Jinhua. *Urban Environment Design*. 2017(03), pp. 327-329. Bottom picture from: Yu, K., Yu, H., Song, Y., & Zhou, S. (2015). Landscape of Resilience on the Design of Yanweizhou Park in Jinhua City. *Architectural Journal*. 2015(04), pp. 68-70.

Today, China's construction of sponge cities shows just how GI planning can be implemented by applying the idea of "ecological civilization". A typical example of this is Yanweizhou Park in Jinhua (see Figure 4). Jinhua City is located in the subtropical region of eastern China. During the wet summer monsoon season, the city is often affected by flooding. In order to protect a prominent sandbar from being inundated, the local water conservancy department built two flood control embankments, which however disrupted the local people's access to the waterbody and so harmed their appreciation of water environment. Influenced by the "sponge city" concept, the local government began to revise their ideas, aiming to establish a hydro-elastic landscape adapted to regular flooding which could maintain local people's links to nature while protecting the only floodplain habitat in the city centre (Yu 2015). With these goals in mind, Yanweizhou Park was established to transform the flood-risk area into a place of harmonious coexistence by means of sustainable landscape design. Local vegetation and a stepped bridge system adapted to seasonal flooding are the basic components of the park. A cascading hydrodynamic riverbank was constructed to collect and purify rainwater as well as to protect the ecological landscape alongside the river. In addition, the park has a full-area hydroelastic design with 100% infiltration coverage, including large-scale gravel pavement for pedestrians, ecological parking lots and permeable concrete roads (Yu et al. 2017).

4.2 Spatial framework of Green Infrastructure planning in China

GI is not identified as a priority policy in China's National Planning Policy Framework. Instead, a series of spatial planning approaches addresses various issues of sustainable development. After scrutinizing the spatial planning system, we can summarize the GI planning framework as a top-down "5+1" model. This encompasses five types of statutory plans: *National Economic and Social Development Plan*, *National Level Ecological Environment and Control Plan*, *Land-Use Plan*, *Urban Master Plan* and *Urban Green Space System Plan*, as well as *Non-statutory Plan* and *Garden City Movement* (Figure 5). The Plan for *National Economic and Social Development*, also called the "Five-Year Plan", is the overarching plan specifying the various stages of national economic and social development. In terms of GI development, this basically acts as the steering wheel, setting aggregate indicators for the country as a whole. The national Environmental Protection and Ecological Control Programme is a generic term for a series of plans that play an active role in GI construction and maintenance. Certain contents and regulations in related plans explicitly specify goals and tasks at regional, provincial and urban scale. The Land-Use Plan is one of the strictest forms of land management. It can pertain to the national, provincial, urban, and county level. It directly determines the scale, function and structure of green space in urban areas. An Urban Master Plan compre-

ensively regulates the economic and social development of urban sites, in particular the land use, spatial layout and urban management. Based on the Land-Use Index determined by the Land-Use Plan, an Urban Master Plan will further determine the layout and form of green space in urban areas. The Urban Green System Plan is a special form of the Urban Master Plan. Based on the urban characteristics, the development goal and land use layout determined by the Urban Master Plan, it formulates indicators for the development of urban green space and specifies types of landscape and green system at different scales. At the urban scale, local governments are establishing R&D institutions, universities or colleges to compile non-statutory plans that are closely related to the development and protection of GI, such as *Key Ecological Function Areas Plan*, *Biodiversity Conservation Plan*, *Wind Corridor Plan*, etc. In addition, a series of urban gardening movements have rapidly arisen in China such as the National Garden City, the National Forest City and National Ecological Garden City. These have played a positive role in improving the ecosystem services of GI in the city.

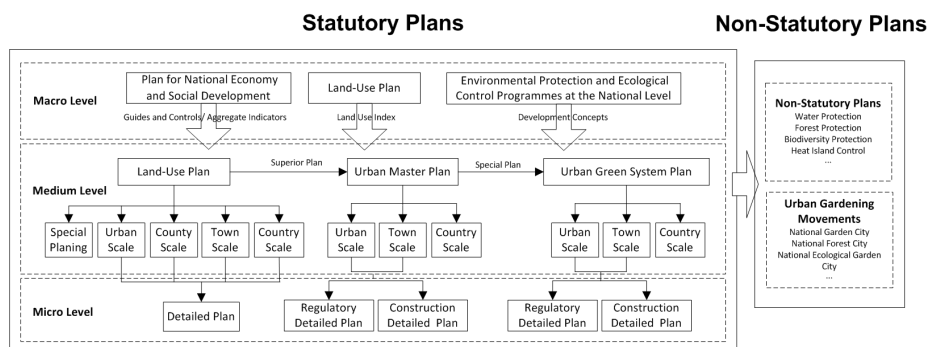


Figure 5. GI spatial planning system in China. © Draft Thinghao Hu

Among those planning approaches, there are currently three kinds of statutory plans for administrative management in China, which are the responsibility of different departments. These three plans are the Land-Use Plan under the supervision of the land and resources management department, the Urban Master Plan under the supervision of the planning and construction management department, and the Environmental Protection & Control Plan under the supervision of the environmental protection department. However, these three kinds of plans lack overall coherence in terms of planning objectives and contents, and to some extent there are functional overlaps, conflicts and contradictions. Meanwhile, their respective developmental levels and focus are different when dealing with the same issues.

The housing & construction department and land resources department aim to secure their areas of responsibility by strengthening urban and rural planning and land use planning. At the same time, the environmental protection department has introduced new types of spatial planning such as ecological environment planning and so-called ecological “red lines”. Objects are misaligned and are treated at different depths by the various plans. In order to make up for their own insufficiencies, each plan is constantly improving its respective planning system. The plans overlap in large areas, and there is a lack of integration and a certain degree of fragmentation between the various plans. Alongside the continuous expansion of various departmental plans, all departments are competing for the control of spatial planning management. This is driven by competition for power between various departments during the period of social transformation and transformed governance. The belief that “development is good sense” (发展就是硬道理) has made China choose a growth-oriented policy system from top to bottom. It’s highly entrepreneurial government is characterized by utilitarian and short-term growth goals, making the competition in spatial planning increasingly fierce.

5. Comparison of planning approaches to green infrastructure in Germany and China

5.1 Policy settings

GI policy settings in China and Germany are entirely different. In Germany, there is a strong policy of guiding, coordinating and allocating GI resources rather than offering specific planning contents. In China, however, GI guidance policy or strategies are still lacking due to the relative newness of the GI concept. However, considering the ecological and environmental protection policies promulgated by the country in the past five years, we can see a greater emphasis on ecosystem services and biodiversity. In the latest Five-Year Plan, “ecological civilization” is the key strategy for the current stage of development. Its essence is to maintain the balance of natural ecology and achieve harmony between nature and human activities.

Unlike Germany, China’s GI-related policies and strategies lack statutory force. Instead of specific indicators and requirements, imprecise and vague expressions are employed such as “vigorously develop”, “deeply implement” or “constantly improving”. Those “ambiguous” planning guidance frequently resulted in mass deviations in planning goals or requirements when GI projects were implemented from central to local levels. Instead, planning should explicitly mention the specific goals, functional department, implementation process and index parameters rather than leaving these to the imagination of local authorities. In Germany, the federal government made clear and detailed clauses regarding the definition of GI, various categories of GI elements, as well as control and management regulations in its “Federal Green Infrastructure Concept (2017)”. China needs to adopt this kind of upper-level

guidance. Regardless of the different political systems, China requires a specific top-down design of GI to ensure the quality and quantity of GI projects and to reduce “vanity projects” as well as unnecessary waste in GI project construction.

5.2 Spatial planning framework

From the horizontal perspective, Germany’s GI spatial planning system is supported by a solid body of law and a series of spatial planning instruments. These provide specific instruments and methods for the protection, development and construction of GI at different levels and scales. The GI spatial planning system greatly benefits from the reciprocal feedback mechanism (*Gegenstromprinzip*). The final GI implementation is actually a state of equilibrium achieved through the interaction of upper-level planning and lower-level planning. In this way we see that GI planning is not a unidirectional top-down flow.

In China, the GI planning system is embedded within a strictly vertical, top-down planning framework. However, as mentioned above, there are numerous problems in the horizontal relationship between different plans, leading to a non-unified, incoherent pattern of GI development. While there are a considerable number of seemingly well-implemented GI flagship projects (largely due to generous funding), these projects, when compared to equivalent German GI projects, show an overly fast construction schedule, excessive budgets, and fierce competition in the bidding process. However, due to the systematic problems mentioned, most GI practices implemented at urban and local scales merely reflect quantity and indicator requirements for spatial layout rather than aspects of required functions and quality. For instance, in the context of constructing sponge cities, some wetland projects pay too much attention to the role of municipal functions while neglecting civil participation and human well-being. In some cities, the construction of a “flagship project” comes at the cost of reduced ecological resources in nearby rural areas.

5.3 Planning scales

GI projects have been implemented in Germany at multiple scales. Since ecosystem services extend beyond administrative boundaries, GI functions should not be limited to administrative borders. Compared with Germany, planning implementations in China are mostly concentrated at the urban and local scale using green municipal engineering methods, as can be seen in China’s sponge cities. Due to the country’s vast territory, diverse terrain and different climate regions, there are only a few cases of planning beyond urban scale. As a result, it is hard to form a continuous ecological network at the national scale. “*Ecological Function Area Planning*” is China’s current

attempt at this. According to the classification of ecosystem services, national ecological function areas can be categorized into three major classes (ecological regulation, products provision, and human security), leading to the identification of a total of 242 areas in China. However, departing from the connectivity and network emphasized by GI, these areas are isolated from each other and are defined only in terms of individual functions. Compared with GI planning at the national scale, regional planning cooperation and cooperation between cities is easier to realize due to the same type of natural environmental conditions they possess as well as the similar economic and policy conditions. Therefore, cooperation between cities and regions needs to be further strengthened in China.

5.4 Planning design and civil participation

The systematization and implementation of GI planning requires the extensive participation and cooperation of multi-stakeholders. In Germany, local governments, academics, non-governmental organizations as well as the public are closely involved in the negotiation process to resolve planning issues, status problems and determine planning visions for future development. Yet it cannot be denied that such decision-making mechanisms also make spatial planning activities compete with a strong system of sectoral policies, leading to poor efficiency and flexibility in GI planning process (Lennon 2015).

In China, the government acts as the principal actor specifying the planning and design requirements for GI development. Under this system, the government first sets up a project and declares the design requirements. This is followed by the participation of contractors, R&D institutions, universities or colleges in a binding procedure to compete for the planning and design tasks. When the design phase is complete, the planning scheme is reviewed by the planning regulation commission and then presented to the public for feedback before final implementation. Using this method of implementation, GI projects can be completed within two to three years. However, the “public participation” phase of Chinese planning process can actually be understood as a “planning results demonstration”. The role of multi-stakeholders participation is highly restricted in both the goal-setting and final decision stages. Normally, the decision-making stage of the plan is merely the result of negotiation between the government and GI planners.

6. Discussion and conclusion: Towards mutually-beneficial green infrastructure planning

It has proved difficult to establish a transferable rationale for GI not only due to the different national conditions of Germany and China but also the dynamism of planning discussions and relative novelty of GI praxis. Against this background, the basic aim of this study is to take account of the current state of affairs and find the best pathway to sustainable development in the two countries by means of the GI approach, as well as to identify potential strategies to achieve those goals. For this reason, the discussion offers the opportunity to broaden both Germany's and China's developmental vision as well as to introduce some fresh thinking to GI planning.

Based on this comparative study, Germany can benefit from China's experiences as follows:

Firstly, Germany can consider the usage of GI to promote China's development and the revival of regional industry. Currently, German planners are facing the challenge of shrinkage processes in the form of structural crises, outmigration and general demographic decline due to low birth rates. Thanks to the rapid development and large investment in "ecological civilization" construction in China, the country boasts a number of projects in the field of renewable energy based on the GI approach such as wind power plants, biomass and photovoltaics established in old industrial heartlands. For example, coalmining is a sector currently affected by both shifting energy structures as well as resource exhaustion. Shenjiazhuang coal mine- a local coalmining enterprise in Ci County, China, has pursued an industrial transformation model called "Photovoltaic +". The result has been to establish a multi-industry cluster of photovoltaics plus agriculture as the basic industry, accompanied by the development of ecotourism and the processing of agricultural products. The "Photovoltaic +" project has not only increased the number of available jobs, thereby attracting young people to the local region, but has also boosted regional development. This case of regional recovery through the transformation of traditional industries into green industries could serve as a model for Germany. In the future, both countries can exchange their respective experiences by organizing symposiums and field visits, etc. Germany can also offer its advanced technologies to aid China's green industry, thereby ensuring a win-win situation.

Secondly, China's fast, diversified and inclusive development model provides a great experimental field to explore and advance existing theories in Germany. This is a process which demands the participation of German enterprises, landscape planners and architects. For example, in 2008 the government of Xuzhou cooperated with its counterpart in North Rhine-Westphalia in the project "Implementation of ecological restoration of coalmining subsidence areas in north Xuzhou". After 10 years of joint efforts, Xuzhou won the "Habitat Scroll of Honour Award" in 2018 for its achievements in restor-

ing areas suffering from subsidence as well as in the treatment of solid waste from coalmining. With its current vigorous promotion of “ecological civilization” and sustainable development, China is highly receptive to ideas and solutions that could be provided by additional external actors in the concerned areas. Therefore, German enterprises, landscape planners and architects could participate in the project bidding process and bring their experience of GI planning and design to bear in China.

Thirdly, the Chinese government has gathered successful and remarkable experience in fostering citizens’ awareness of and participation in “ecological construction”. A series of urban gardening movements has arisen with great rapidity such as the National Garden City, the National Forest City and the National Ecological Garden City. The respective ministry establishes guidelines with specific indicators for such “urban gardening movements” and provide subsidies and supporting policies if cities meet the specified standards. Later, the ministries evaluate the experiences of selected cities and extend the most successful examples to the national scale. Urban gardening movements not only help to protect and develop urban green space and the natural environment, but also promote an understanding and pride of local people in their urban setting as well as boosting a sense of responsibility and environmental awareness (see Figure 6). There is no doubt that Germany’s strict protection of the natural environment can be considered a role model for many countries around the world. Drawing on the Chinese experience, city and local governments in Germany can organize activities that make use of the natural environment such as marathons, rowing competitions and triathlons in order to reduce any residual disconnection between humans and nature, thereby improving the pride and happiness of urban residents.



Figure 6. Civic participation in national forest city construction movement in Xuzhou, China
Source: Photo provided by Xuzhou Forestry and Garden Bureau.

Fourthly, it is essential to regard urban GI as a way of promoting cultural services for the elderly. Urban parks and green space have a special appeal for elderly Chinese living in the city. For many older citizens, the biggest challenge of aging is not physical decline but rather psychological changes and a lack of purpose after retirement (Hu et al 2016). In China, urban parks have become important leisure and recreational sites for older people, who engage in sports as well as other activities, or simply meet up for a chat. Urban parks also provide the ideal platform for the realization of active aging. In Germany, local authorities and communities can use green space and even allotment gardens to organize activities as well as promote communication between elderly citizens (see Figure 7).



Figure 7. Parks are ideal places for elderly Chinese to exercise and take part in social activities.

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There is no doubt that China can learn and benefit from Germany, which acts as a role model in GI planning and implementation. Although many GI projects have been speedily and efficiently implemented in China, it can be questioned whether these projects will really achieve the sustainable development goals of the country's cities. In addition, cross-sectoral issues often arise when different statutory plans propose conflicting standards regarding the same issue at identical planning levels. In view of these problems, the following four specific points should be learned from Germany. *Firstly*, quantity and quality should be accorded equal importance when GI projects are being

planned and implemented. *Secondly*, it is vital to regard GI as a long-term goal. This will avoid any rush to achieve some instant benefit and thus neglect long-term interests. *Thirdly*, planning scales need to be expanded from local and urban scale to regional level. *Fourthly*, multi-stakeholder cooperation and civil participation should be further enhanced in the planning process.

In view of these suggestions, it seems unlikely that progress will be made without changing the existing spatial planning system in China. In March 2018, the country's State Council issued an institutional reform scheme which foresaw the establishment of the Ministry of Land and Natural Resources to supervise the implementation of a new territorial and spatial planning system. This provides an unprecedented opportunity for GI planning and implementation in China over the next years. The national spatial planning system will be integrated, thereby solving the problem of overlapping spatial planning by exercising control over the use of all land matters. Although the implementation rules for the new territorial and spatial planning system have yet to be issued, "multi-planning integration" and "ecological priority" have been determined as basic principles. This revision of the national spatial planning system is undoubtedly a direct response to criticism of the current chaotic situation of multi-regulations. No doubt this will prove to be a tortuous process in which problems cannot be predicted beforehand, but must be identified and solved step by step. Clearly, Germany's system of spatial planning is a result of its history, culture, ideology and social developmental stage, and cannot be completely copied by China. However, a balanced and comprehensive legal system, horizontal and longitudinal hierarchical coordination mechanisms, as well as spatial planning and departmental resource integration can be regarded as essential components of China's reform and reconstruction of spatial planning.

It is hoped that this study provides a straightforward entry point for readers to understand the GI concept and planning approach in Germany and China. As a policy and planning framework bringing comprehensive benefits, Germany has gathered extensive experience in the GI approach. China, where GI is a relatively new concept, thus has a great opportunity to learn from Germany. Although the two countries are quite different in a number of respects, we believe that this comparative study will broaden the ideas and perspectives for stakeholders to better solve current issues or problems that may be encountered in the future. Furthermore, we strongly recommend that the two countries focus on common challenges in future research, discussing ways of solving these through closer cooperation.

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EDUCATION

Landscape Architectural Perspectives as Agent for Generous Design

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Abstract

Landscape architectonic compositions that draw on the underlying landscape structure can function as a carrier for changing programmes, cultures, processes, etc. Precisely such an explicitly spatial design is required to foster the inclusive city, one that is not only socially just but also sensitive to the environment while allowing for and evoking diverse social and natural processes. The objective of an 'inclusive city' is often related to social issues, which might easily lead to the exclusion of ecological values; the opposite approach may prove equally exclusive. Inclusivity also means creating room for the unexpected. From a design point of view, this requires two underlying attitudes: a willingness to see any design assignment from different perspectives as well as a readiness to create sustainable, flexible and open designs.

These two attitudes are inherent to landscape architecture, which traditionally prioritizes the site over the programme, and—because of the long term, time-based condition of the landscape—is forced to think in open-ended designs. In this paper we discuss a selection of graduation projects of the landscape architecture track at the TU Delft in order to illustrate how inclusivity is inherent to a complete understanding of landscape architecture. Four essential perspectives on analysis and design—perception, palimpsest, process and scale continuum—are discussed in order to reveal their capacity to serve as a basis for designing inclusive urban landscapes.

KEYWORDS

landscape architecture, education, perception, palimpsest, process, scale-continuum, inclusive urbanism, generous cities

1. Introduction

When based on the underlying landscape structure, landscape architectural compositions can function as carriers for change, transforming programmes, cultures, societies, intentions and interpretations. A truly inclusive city is not only socially just, but also sensitive to the environment, allowing for and evoking diverse social and natural processes. Explicit spatial design is needed to enable this type of inclusivity. From a design point of view, this requires two underlying attitudes: a willingness to see any design assignment from different points of view (through different lenses or perspectives) as well as a readiness to create sustainable, flexible and open designs that allow for change.

These two attitudes can be considered inherent to landscape architecture, which traditionally takes the site as the entry to transformation rather than the programme, and—because of the long term, time-based condition of the landscape—is forced to think in terms of open-ended design. “As a profession, landscape architecture is inclusive, seeking to actively promote consensus between stakeholders. Landscape architecture encourages interaction with the broader community and draws upon consumer interest. Users hold the key to how an area works and how it should work in the future. Collaborative planning and design through the involvement of those affected is a key ingredient to successful outcomes.” (James Hayther, IFLA president, in IFLA news #97) However, this is not as straightforward as it sounds.

Good examples notwithstanding, we perceive two opposing tendencies, specifically in projects that focus on social and/or ecological issues. At one end of the spectrum, we can identify landscape architects who tend to focus on problems and solutions with a technical and scientific basis, isolating rather than including. This attitude gives rise to concerns “about the relation between recent design cultures and the socio-political context in which they seek to intervene, with the associated hypothesis that these designs risk being too disconnected from their socio-political context in order to ‘hit the ground’ and materialize,” as De Block, Lehrer, Danneels and Notteboom state in their insightful critique on metropolitan development in Brussels, which they view as an example of a much broader tendency. They rightfully question the contemporary, simplified landscape approach with its tendency towards a techno-managerial rationale based on infrastructural and ecological systems, while ignoring competing spatial claims and democratic political processes, “thus ultimately subjugating everything to a scientific reading of the territory.” (2018, pp. 81-94) Landscape architects at the other end of the spectrum tend to emphasize political-social processes, preferring to act as process managers with less concern for spatial or physical-contextual issues, or for the meaning and perception of place.

A focus on social issues might easily lead to the exclusion of ecological

values and thus to a less sustainable city, just as a focus on ecological values could lead to the exclusion of social qualities. Moreover, by focusing on social or ecological system services based on measurable data, we can easily exclude less visible, less expressive voices in society. Inclusivity implies exclusivity. Hence, to avoid the narrative often associated with inclusivity, it would be better to speak of a “generous” city, as this: leaves room for friction, for multiple views, for change and for the unexpected (Voorthuis, n.d.).

Whereas designing for inclusivity starts from a perceived problem (exclusivity), an essential component of landscape architecture—in the view we have developed at TU Delft—is that the starting point of any design is not the problem statement but the specific properties of a place and its situation. These constitute both the rationale and the material for making landscape architectural designs in which the form and character derive from the physical, atmospheric and historical properties of the location and the larger territory. The rich, complex and layered properties of a place that will then form the starting point for design can only be grasped when viewed from different angles. Thus, social and ecological inclusivity (or generosity) is not an assignment in itself, but is—or should be—inherent to landscape architecture in general. Indeed, adopting different perspectives in analysis and design can be described as an inclusive design attitude in itself.

Urban landscape theorist Sébastien Marot distinguished four principles as the foundation of landscape architectural analysis and design, namely:

- the choreography of specific materials and spaces in the landscape (three-dimensional sequencing);
- recalling and building on history (anamnesis);
- staging and cultivating new conditions (preparation); and
- creating relationships with boundaries, adjacent areas, the environment and context (relational structuring) (1995, pp. 49–50).

These perspectives have been further elaborated by others such as Prominski (2004), Jauslin (2012), Nijhuis (2013) and Van der Velde (2018). Over the years the authors have deepened their own understanding of the perspectives through guiding students in their graduation projects. Specifically, we have refined and redefined them as *perception*, *palimpsest*, *process* and *scale-continuum* to underpin the analysis and design of (urban) landscapes in research and education. In the following, we will illustrate and study each perspective separately by presenting several graduation projects. The aim is to illustrate the range of aspects and interpretations of analysis and design within each perspective. In light of the issue at hand, it is important to stress that we deliberately selected graduation projects which did not address the question of inclusivity as their assignment. This shows that inclusivity is always included (even unintentionally) in the design process if these per-

spectives are fully embedded. We will argue that considering landscape architectural analysis and design from these different perspectives is not so much a novel design attitude but a reevaluation of existing landscape architectural knowledge.

2. Perception

In landscape, space is not a void determined by its built surroundings, but rather a habitat in which the sky and the subsurface enter into diverse relationships, shaped by the properties of both. Since the experience of space (perception) is the core of the relationship between people and landscape, the aesthetic dimension is strongly emphasized throughout the Landscape Architecture master track at TU Delft. Students are taught to create aesthetic spatial structures as spaces to be experienced. “The aesthetic dimension is not an optional add-on to managing the town and landscape as dynamic systems but an integral aspect. Aesthetics is not a matter of ornamentation but of creating experiences and spaces for social routines and spatial anchored activities.” (Braae, 2015, p. 122) Clearly, this perspective addresses the shape and functioning of three-dimensional landscape space, which creates spatial dynamics. Perceived space consists of physical as well as ephemeral and structural components. It concerns the shape, dimensions and proportions of the space, as well as the plasticity of surfaces, screens and volumes, and finally its appearances in terms of colour, texture and light. It also addresses spatial relationships regarding structural organization and organizing principles. The focus is on research and design of the landscape as experienced “from the inside” by an observer moving through space.

With a growing emphasis on complex systems in architecture, urbanism and landscape architecture, there seems to be a fading appreciation of the perception of form, the immediate and the sensory. However, in order to act, to plan and to relate to our living environment, one first needs to experience it. Perception through all our senses is central to reading and designing inclusive landscapes for people, animals and plants. The perceivable form is the container, as it were, to hold the content such as planned programmes as well as unexpected uses, well-researched and not (yet) understood social and ecological processes. Intense spatial compositions (valued through perception) offer space for change and, as such, are the starting point for generous urban landscapes.

In order to unearth the underlying landscape qualities of the fragmented urban landscape of Germany’s Ruhrgebiet, Boya Zhang takes walking as an entry for her thesis project (2016). Her hypothesis is that by walking through a fragmented area such as the Ruhrgebiet, which has a history of social and ecological problems, we can begin to create connections in the landscape. The bodily sensations and muscle movement of walking are essential as-

pects of landscape perception. As James Gibson elaborated: “Not only does [locomotion] depend on perception, but perception depends on locomotion in as much as a moving point of observation is necessary for any adequate acquaintance with the environment. So, we must perceive in order to move, but we must also move in order to perceive.” (Gibson, 1979, p. 223). Based on research by Lawrence Halprin (1970), Zhang uses a system of “scores” to note various external and internal aspects of her route, with the aim of objectifying her personal experience as the basis for site analysis and design that connects space, movement and experience. Dissecting her own experiences while walking different routes, she translates essential modes of perception—the kinaesthetic, the visual and the auditory—into diagrams that express turns in the road, ascents and descents, road crossings, scales as well as the proportion of space, sound and vision (Fig. 1). By emphasizing the experience of the walk, Zhang opens up the lost spaces of the Ruhrgebiet, a strategy that not so much determines and directs as gives space and allows for a wide range of effects and uses. The paths will enable—even trigger—different experiences, regardless of the background or social status of each walker. Hence, we see that starting from experience rather than from function generously opens up the landscape for people without exclusion.

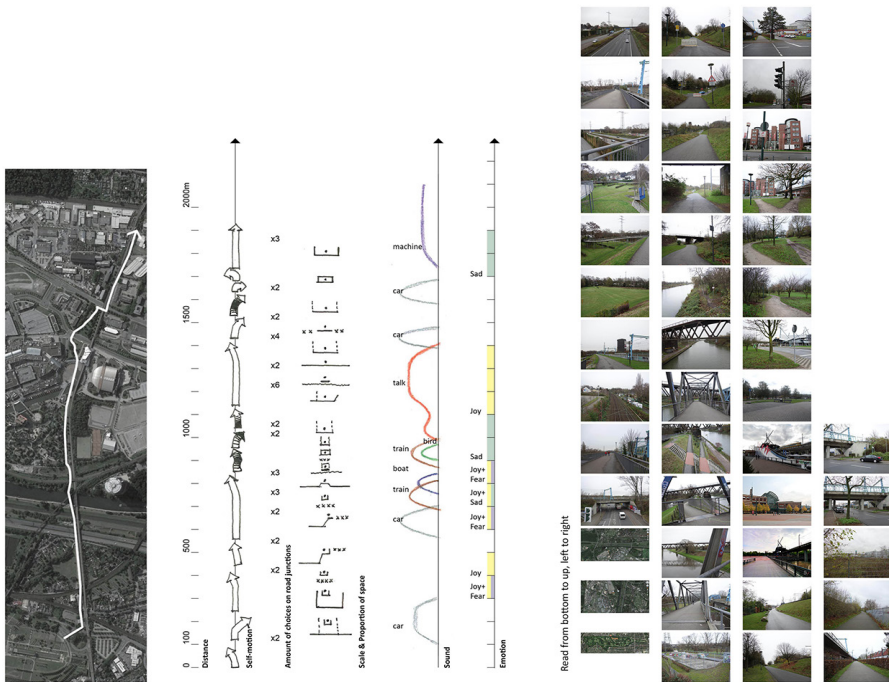


Figure 1. ‘The Shape of a Walk’: the score as a tool for the transformation of subjective experiences into site-specific qualities. (B. Zhang, 2016)

The perspective of perception not only addresses passive perception but also the affective relationship between space and perceiver. Spatial structure cannot be reduced to a description of fixed properties; it is not an issue of formal outlines but is also relevant because of its potential for action. This understanding informs the starting point of the project by Alexandra Karampournioti, who has designed a series of urban gardens in Rotterdam, borrowing from the affect theory as elaborated by Gibson (1979). The design expresses the gardens' potential for action, namely the way their site-specific qualities can affect and are affected by the observer, the user. She translates her precise and sensitive site analyses into "affective gradients", thereby generating design responses which can in turn create new affective gradients (see Figs. 2 and 3). These aim to deviate from the expected while bringing "the promise of returning to chaos; [the gardens] are a most marvellous uncertain and fragile centre that allows us to become other, to escape the homogeneous, embrace heterogeneity, only to make ourselves anew." (Smith, 2017, p. 34). Karampournioti's emphasis on the unexpected and the unusual is an attempt to turn the city away from a focus on programme and control, opening up spaces for social appropriation as well as unforeseen natural processes.

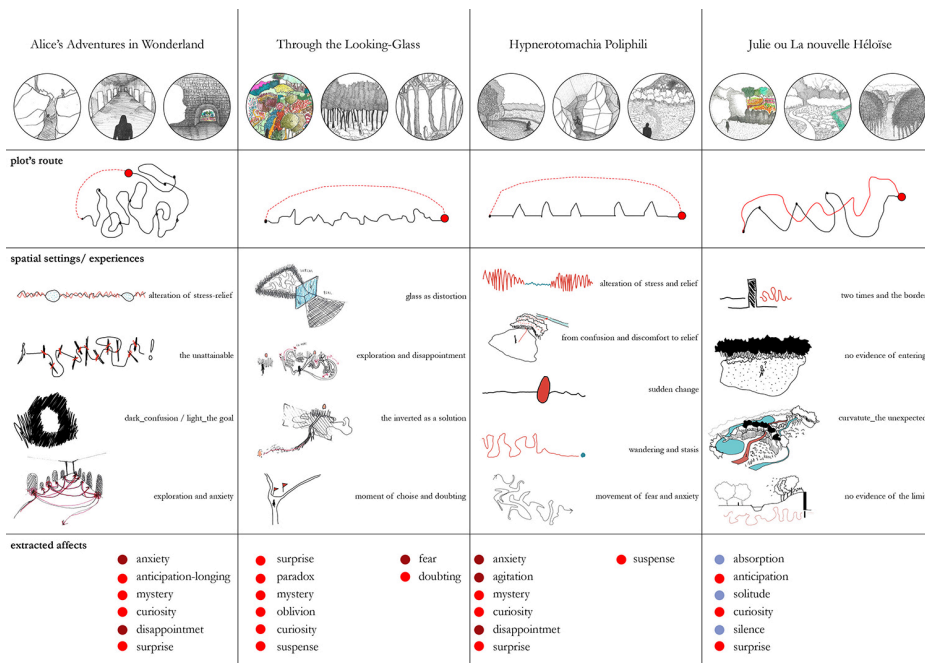


Figure 2. 'The Gardens of Deviation': analysis of effects in fictional gardens. (A. Karampournioti, 2018)

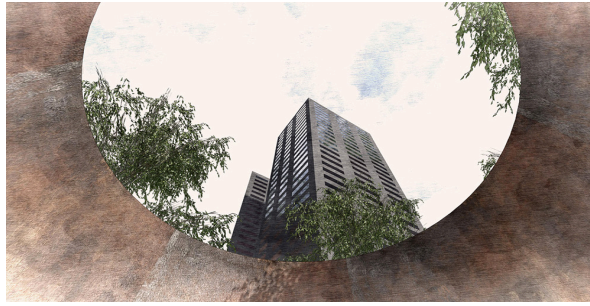


Figure 3. The Gardens of Deviation': design intervention emphasizing the "feeling of sublime isolation".
(A. Karampournioti, 2018)

3. Palimpsest

Characteristically, landscape architects think in extended periods. The present plays a modest role, sandwiched between the weight of the past and opportunities for the future (Van Etteger, 2015, p. 221). The *genius loci*, the character of the place, concerns the geographical and aesthetic, the historical and social character of the location. As it appears to us at a certain instant, landscape is the result of a series of past developments, of a succession of layers over time and a series of decisions taken at different moments for various reasons. Landscape architectural design is not autonomous but adds successive chapters to an ongoing story. As such, the landscape can be "read" as a biography that reveals all activities as well as political, cultural and economic changes of the past as a layered entity. This explains our use of the term palimpsest, which originally referred to the practice of reusing parchment or vellum by scraping or washing off existing text. As this was never a perfect process, a remnant was always left, overwritten but still visible if looked at in a particular way. Similarly, a landscape can be conceptualized as the product of successive episodes of physical change, still more or less visible as a different layer in the current landscape. These traces of different times can reinforce or contradict one another, while old and new patterns are superimposed and present at the same time. Knowledge of these layers is one of the starting points for new transformations of the respective landscape. This attention to the past does not mean that a landscape architect should shy away from radical changes when needed: a well-considered response to what went before may be a subtle transition or a sudden rupture. As Elizabeth Meyer wrote: "The landscape does not sit silently awaiting the arrival of an architectural object. The site—and land—speaks prior to the act of design." (1997, p. 168). A sound basis for both natural and social transformations is to design spaces based on site-specific qualities, thereby allowing for multiple and unexpected practices and uses.

In the graduation project of Federica Sanchez, the many layers of a site's history come together symbiotically as a basis for her design proposal. Starting with the objective of researching and designing a so-called "healing landscape", the decayed and eerie ruins of the former psychiatric hospital San Salvi in Florence does not seem the most obvious choice. Yet the site's history as a place for healing offers exactly those qualities needed to guide the design, which Sanchez conceives as a slow metamorphosis from a *locus terribilis* into a *locus amoenus* (see Figs. 4 and 5). This is achieved by taking the strong, concentric spatial concept of the former hospital as a framework for a sequential design that transitions from open to enclosed, from natural to architectural, from action to contemplation, and so on. By transforming this tear in the urban fabric into a landscape, and the impenetrable walls into connectors, the former hospital becomes an integral part of the city, accessible to schoolkids, tourists, hipsters and tired businesswomen as well as the homeless and the socially excluded.

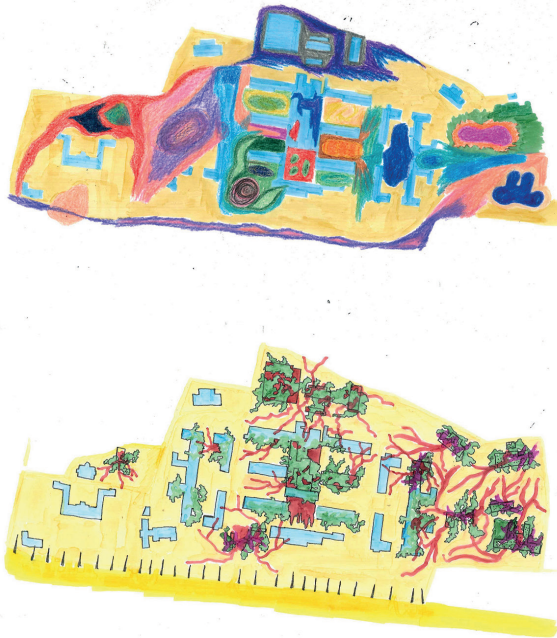


Figure 4. 'Healing Landscapes, Ex-psychiatric Hospital into Healing Landscape': the metamorphosis from *locus terribilis* into *locus amoenus*. (F. Sanchez, 2018)

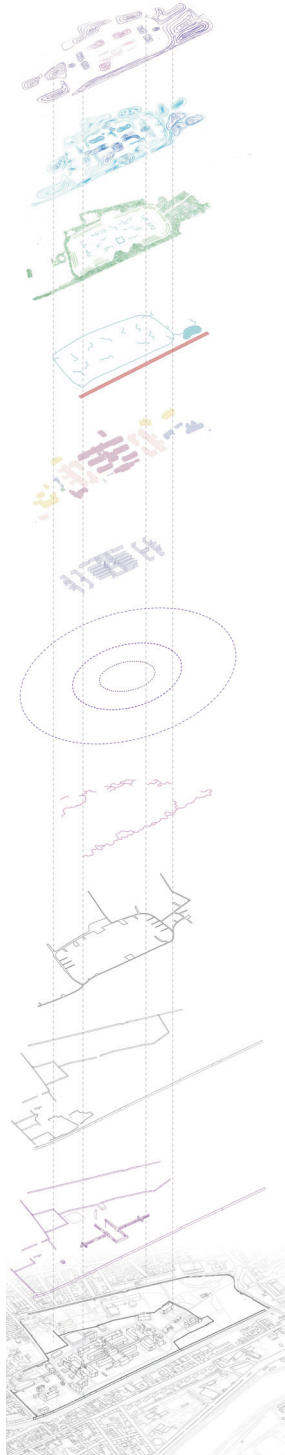


Figure 5. 'Healing Landscapes, Ex-psychiatric Hospital into Healing Landscape': layers of site analysis inspiring the "layers of rings" concept that guides the site transformation. (F. Sanchez, 2018)

Understanding the landscape as a palimpsest does not mean an uncritical acceptance of the existing but necessitates an alternative reading, one that searches for latent conditions, possibilities and processes. Eleni Chronopoulou's reading of Kifissos, an abused river area in Athens, Greece, is an example of this. Kifissos has become part of the city's infrastructural network, functioning as a highway and a conduit for sewage. The unpredictable dynamics of the river are strictly confined by concrete boundaries, expressing a conceived necessity to dominate nature. Chronopoulou describes the site as representing a juxtaposition of natural vs. constructed elements, formal vs. informal urban patterns or indeed uncontrolled dynamic processes vs. overcontrolled landscapes. Kifissos acts as a spatial boundary in the city, articulating the phenomena of social segregation while reflecting the tense urban tissue of neighbourhoods that have been formally designed, as opposed to those that have grown spontaneously. The reading of the existing landscape in terms of these oppositions exposes latent conditions of coexistence (see Fig. 6). Extracted from their habitual settings, these conditions translate into design concepts, combining to create a flexible landscape architectural framework that integrates social, environmental and technical aspects. The new topography is based on that which came before. The resulting connective landscape not only addresses the relationship between the river, the highway and the city in terms of water safety and adaptiveness; it also aims to create an integrative landscape that is open to various acts of appropriation, a joint surface for diverse social groups (see Fig. 7).

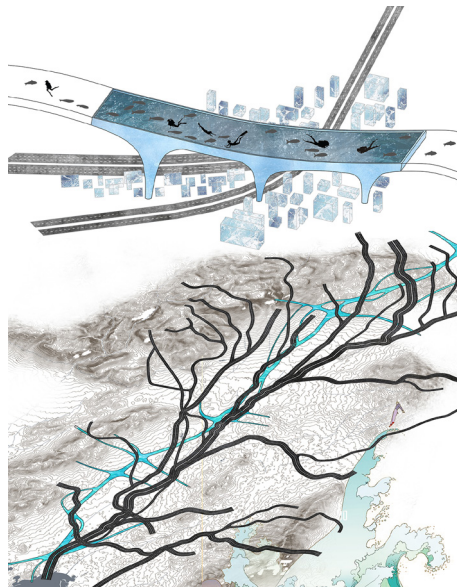


Figure 6. 'The oppositions of Kifissos, from static duality to dynamic coexistence': concept of flows. (E. Chronopoulou, 2018)

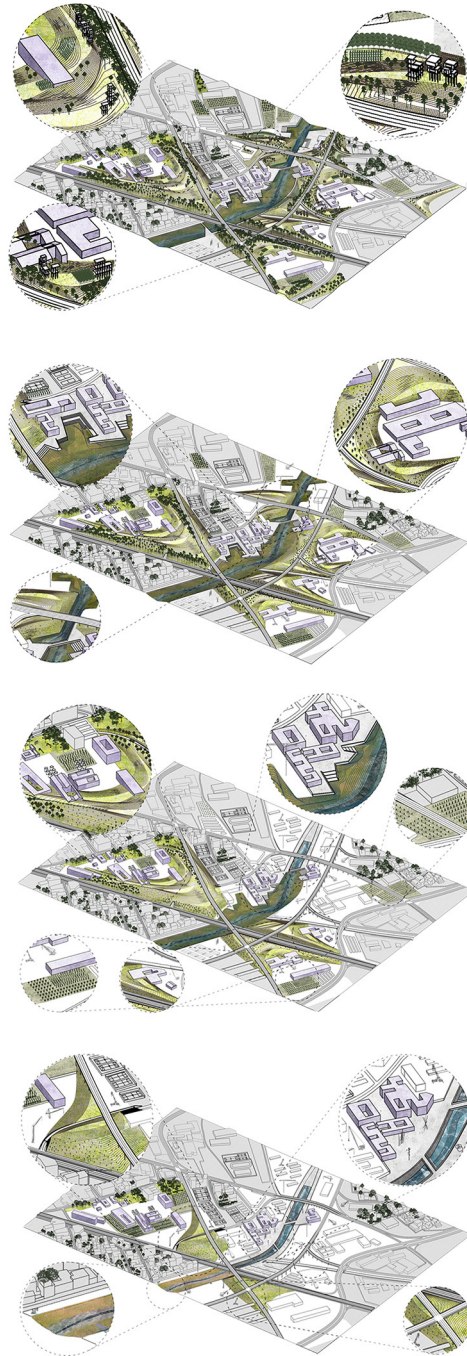


Figure 7. 'The oppositions of Kifissos, from static duality to dynamic coexistence': gradual growth of the topography of affordance to the growth of vegetation and the emergence of informal interventions. (E. Chronopoulou, 2018)

4. Process

As architecture, urbanism and landscape architecture continue to evolve as professions, they are increasingly being forced to address the issue of complexity. An understanding of and ability to work with processes are now recognized as essential to research and design efforts to reshape the built environment. Growing populations and the speed of technological developments have increased the dynamics of systems and made it almost impossible to forecast the near future. For landscape architects, this perspective is an integral part of the discipline, since the primary “material” we work with grows, erodes, weathers, etc. Every landscape can be said to present a dynamic, continuous process of becoming.

Reading the landscape as a palimpsest promotes an understanding of form, spatiality and structure as a legacy of the past. If, on the other hand, we view the landscape as a holistic and dynamic “system of systems”, then it is understood as an expression of the dynamic interaction between ecological, social and economic processes. These various processes are continually altering the landscape, making the dynamics of transformation a key issue in research and design. Any landscape architectural design is essentially open-ended. By reading a location as a living and dynamic organism, the landscape architect prepares locations, however rundown or contaminated, for an unforeseen future. Considering the time a plan needs to evolve, the focus has to be future-based instead of responding rigidly to today’s needs. Designing in this way means accepting a landscape as being unfinished and incomplete; instead of building a definitive solution, seeds are sown, residents mobilized, questions asked and potentialities structured. In order to design inclusive landscapes, we must take account of ecological, economic and social processes.

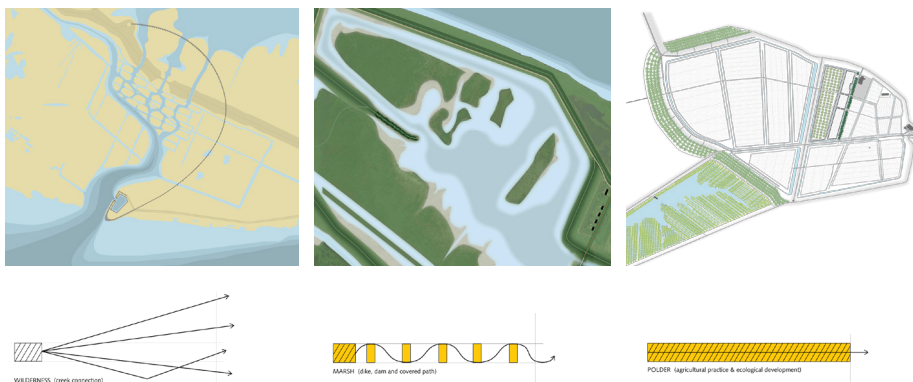


Figure 8. Tiengemeten, Three Design Approaches to Nature Development: wilderness, polder and marsh each have their own maintenance regimes. (M. Overvoorde, 2016)

Process design projects assume the role of strategies to steer likely future developments by establishing structures and forms to support, facilitate and provoke these transformations. By including processes of construction and maintenance, Margot Overvoorde emphasizes the phases of implementation and the measures needed to support or develop the project. The project site Tiengemetten, an island in the Netherlands, is composed of three different landscape types: polder, marsh and wilderness. By considering these landscapes as three different expressions of the man-nature relationship, she extracts three approaches, each with their own unique degree of design, intervention and management strategy to address diverse natural processes. The polder reflects the cultivated landscape through the design of one overall system of intervention and continuous management (see Fig. 8). Small interventions in the marsh provide the conditions for ecological development and the chance to experience and understand this development. In contrast, only one precise intervention is made in the wilderness, namely to release freshwater intertidal processes from human control in order to change the landscape and create ideal conditions.

Overvoorde distinguishes between landscape processes to create a legible and differentiated landscape, which is one way of creating space for everybody. Barbara Prezelj, on the other hand, celebrates the friction inherent to a diverse society. She proposes ways in which one can productively engage with places of friction, more specifically with the unfamiliarity of disturbed sites, without reducing their complexity or eliminating their creative potential for the sake of “familiarization”. In an age when novel approaches to contaminated sites are much needed, her design proposal for Fort de Vaujours, an abandoned nuclear site and a designated area for gypsum extraction near Paris, rejects instant solutions to advocate a performative approach to design. This combines the performative capacity of a landscape with its cultural expression, embracing uncertainty and, over time, striving towards a multitude of affective encounters. The main challenge of the project is not only to understand a landscape as a complex system in a process of constant change, but to simultaneously view the landscape intervention as a continuous action that can unfold in various directions with various outcomes (see Fig. 9). In this way, the project could well be described as an instance of “continuous participatory design”, one where feedback is not recorded in conference rooms or on-screen using computer modelling but preferably on-site, so that design can be shaped by the conditions of a specific locality, and where actors involved in the design process are not exclusively human (see Fig. 10).

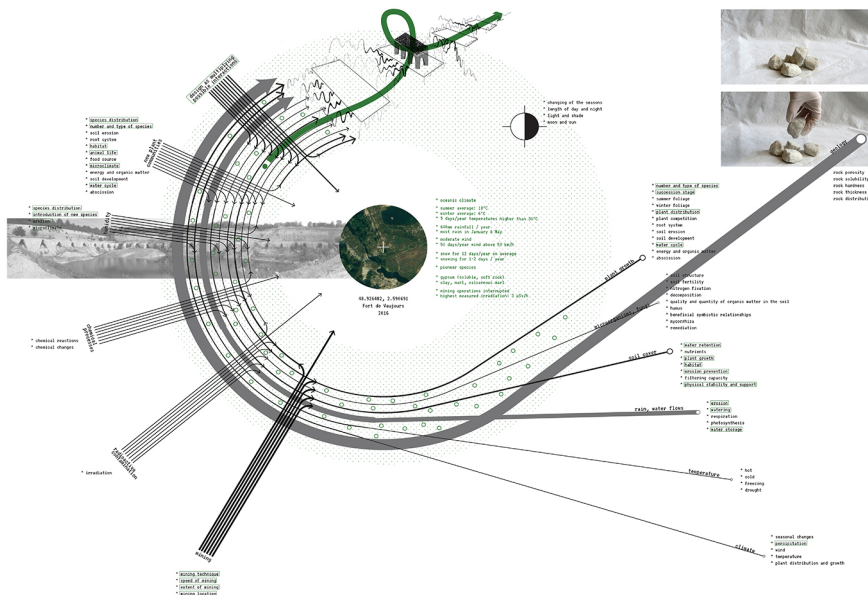


Figure 9. 'Unfamiliar Territory, Approaching Posthuman Landscapes': diagram of forces guiding the development of the site. (B. Prezelj, 2016)

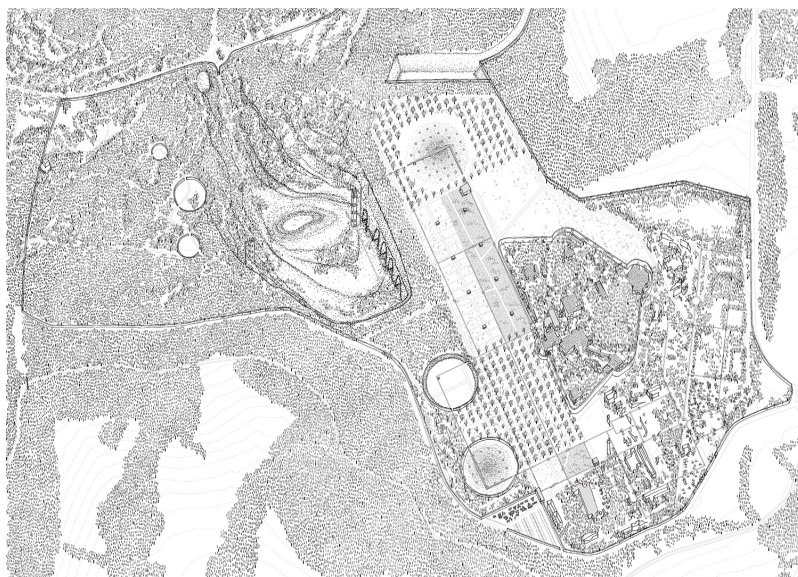


Figure 10. 'Unfamiliar Territory, Approaching Posthuman Landscapes': potential site development in 2047. (B. Prezelj, 2016)

Another approach to designing with landscape processes is taken by Ayu Tri Prestasia, who aims to develop an adaptive landscape strategy by integrating the dynamics of water, ecosystems and humans in order to enhance the spatial and social quality of the Volta estuary of Ghana. The outcome of this project reveals the potential of guiding development and triggering discussions between stakeholders in order to realize sustainable solutions for the problems of population growth, insufficient food production, high unemployment, rising sea levels, and the deterioration of ecosystems. One of the approaches to steer processes is building with nature: making use of natural processes, such as catching sediments in the riverbed, while integrating flexible solutions for infrastructure and creating opportunities to boost economic and ecological conditions. Moreover, “building with nature also means building with society” (De Vriend & Van Koningsveld, 2012). Defined design interventions, such as a path and a watchtower combined with a water reservoir, are implemented to monitor and measure the development of the processes and to transfer knowledge (see Fig. 11). These nodes accommodate and invite various groups of local residents to meet, learn and work as well as to appropriate the landscape and become part of the living estuary.

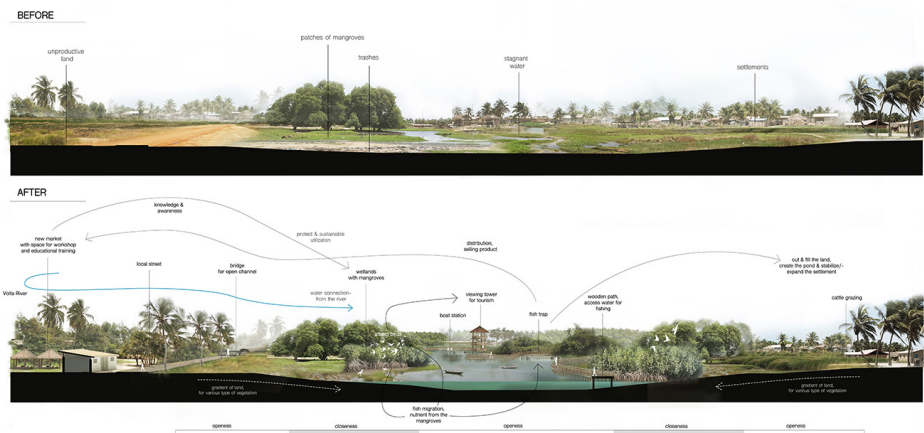


Figure 11. The Living Estuary of the Volta Delta: Changes in a highly dynamic landscape in the Volta Estuary, Ghana, before and after the transformation. (A. Tri Prestasia, 2018)

5. Scale-continuum

No site exists in isolation or in a state of complete exclusion. A landscape intervention not only creates new local realities but also changes and influences systems that transcend the location. It affects and is affected by stakeholders within and outside the site boundaries, and on different scales, which means that inclusive design looks beyond the confines of a design location. The first step towards inclusivity is thinking in relations. The supportive structure for these “stakeholders” is the physical landscape, a relational structure that connects scales with spatial, ecological, functional and social qualities. Any landscape architectonic design has a spatial and physical connection to its direct surroundings and further afield, in a telescopic series of spaces stretching up to the horizon. This is the expression of the physical situation as well as the social, political and ecological context.

In this respect it is helpful to consider three domains encountered by designers, as distinguished by Carol Burns and Andrea Kahn (2005, p. xii). These are the domains of intervention, influence and effect. The first corresponds to the formal (ownership) boundaries of a design location, i.e. the location that a designer receives from a client with an associated design query. The domain of influence addresses the various systems and forces that act on the location, even if they do not take place within its boundaries, such as groundwater levels or infrastructure. The design intervention often introduces elements whose influence goes beyond the location itself, thereby determining the domain of effect. This is the area outside the location that is influenced by the intervention, such as rising house prices due to the construction of a new park or changing ecosystems.

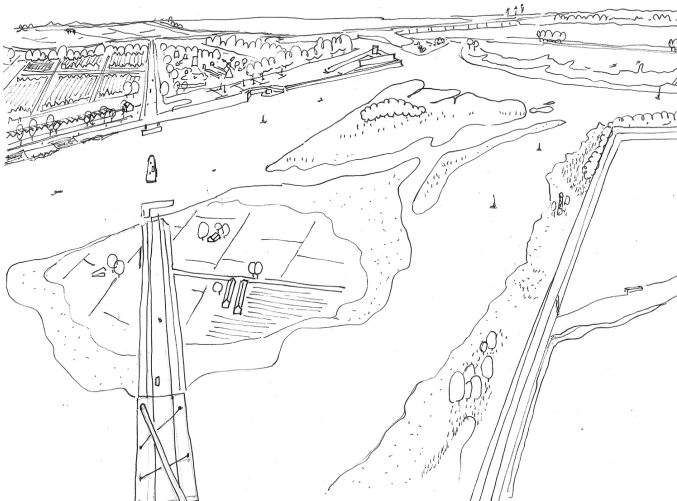


Figure 12. ‘People Watch, Let Nature Build’: the wide channel connects to large lakes and changes the course of the water flow in the Delta. (E. Ottevanger, 2016)

Emma Ottevanger illustrates how a single design intervention can have effects on different scales through her design for a wide channel to “pierce” Goeree-Overflakkee, an island in the Southwest delta of the Netherlands. This intervention changes the discharge course of the Rhine, creates an extensive freshwater reservoir, adds to the existing boat network and opens up new possibilities for the delta ecosystem. The channel connects Haringvliet Lake with Grevelingen Lake, two former sea inlets, while also reconnecting the village of Stellendam—which has been pushed to the interior of the island through land reclamation—to the open water. This would enable the village to attract water sport enthusiasts and develop its tourism sector, thereby creating new employment opportunities (see Fig. 12).

If not executed with an understanding of scalar relationships, a single design intervention can also destroy the scale-continuum, as Maria Alexandrescu highlights in her analysis of Nicolae Ceaușescu’s civic centre (which includes the Palace of the Parliament) in the heart of Bucharest. Its construction established a rigid “frame” by demolishing the old city fabric and fencing off the site. As diagnosed by Alexandrescu, the urban void that was introduced imposes a fixed scale on the landscape, destroying a pattern of scalar relationships (street-yard-house-neighbourhood). However, this is just one instance of what a frame can do. Derived from the theory developed by Cache and Speaks (1995), the non-scalar concept of the frame that Alexandrescu introduces both as an analytical tool and a design element questions what it is that makes things specific. To understand landscape through the frame is also to perceive landscape as continuous, under constant transformation, always susceptible to further articulation and elaboration. With her design intervention of a series of frames, which interact with the existing frames, Alexandrescu generates an overlapping “frame of frames”, resulting in a series of nested parks that stretch across scales (see Fig. 13). Each frame additionally acts as a “germ”, operating beyond its boundaries while remaining localized as an intensity. Combined, overlaid and meshed with other interventions, each frame produces frames at larger scales, re-framing the site and the city. In contrast to the construction of the civic centre, which put into action several defined forms of use (parliament, art museum, ministries), these new framing devices activate the site, enabling but not imposing multiple meanings and practices. One example is an orchard, which incorporates and uses the existing frame of a natural ridge to construct semi-underground storage cellars for the harvested fruit. The orchard encompasses meadows to attract bees and encourage the pollination needed for fruit production, thereby reintroducing cultivation practices once common to Bucharest. The design helps to generate a communal, productive landscape.

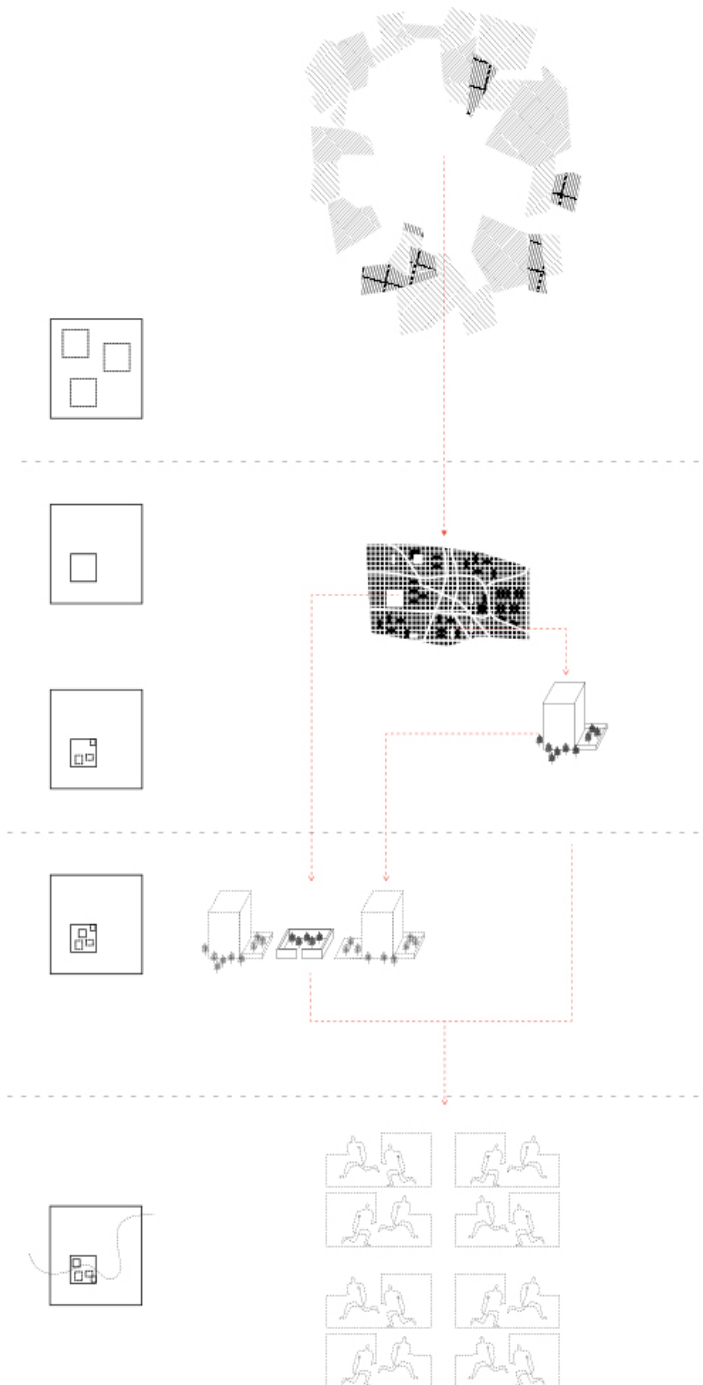


Figure 13. 'Frame of frames: the hierarchy of frames describes a typical urban fabric of Bucharest before the commencement of the destruction undertaken for the new civic centre, where the hierarchy of framing and separations ensures a permeability which moves through nested scales from dwelling to neighbourhood, to city.' (M. Alexandrescu, 2016)

6. Conclusion

In following these diverse design perspectives, the students have all established frameworks for inclusivity. They have created compositions that are spatially defined but open in content, compositions that are not so much determined by their use but which allow for multiple uses, involvement, integrations of flora and fauna, interpretations, affects, meanings and processes. The four discussed perspectives—perception, palimpsest, process and scale-continuum—enable a designer to create an (urban) landscape for all, for the known present as well as the unknown future.

From the project descriptions, it becomes apparent that none of the perspectives are mutually exclusive; indeed, they cannot work in isolation. Each of the works address, more or less consciously, all four perspectives for their analysis and design of the urban landscape. Whereas the combination of a specific location, design context and the personality of each designer has inevitably led to one of the perspectives becoming more strongly expressed or explicit (a common thread, as it were), it is still informed by the other perspectives, and vice versa. This is the richness and value of the landscape architectural approach. Each perspective takes the landscape qualities of the site as the starting point rather than a problem, programme, or intention. By beginning with the landscape itself, we can avoid the imposition of any specific programmatic requirement, instead allowing for multiple uses and users. This is inclusivity in its most basic sense. Together, these perspectives provide input for the creation of a spatial, material and perceivable framework that works through all scales and evolves over time. Landscape architectural design that is rooted in alternative readings of the landscape from different perspectives of space and time can sustain such a framework, derived as it is from the latent conditions, possibilities and processes found in the existing landscape. Creating a framework rather than accommodating specific programmes implies that the design does not choose or select which meaning, use, user or agent to include or exclude, but even accepts and welcomes collisions and frictions.

Designing for inclusivity does not, and should not, instigate new ways of design. Quite the opposite: methods of design that start by reading an existing landscape from different perspectives serve to inform inclusivity and foster generosity. A generous city is more than an inclusive city; it allows for and invites multiple (human and nonhuman) uses, users and interpretations, the known and the unknown, in smooth cooperation as well as in friction.

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LAB of Inclusive Urbanism as a Format to Educate Urban Designers

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Abstract

In this paper we discuss the didactic method known as the LAB, a short intensive programme in urban design developed in the years 2009-2019 by various Faculties of Architecture including the Technical University of Dresden, the Cracow University of Technology and the Czech Technical University in Prague.

The main aim of this contribution is to introduce the LAB format in urban design education, stressing its innovative and inclusive aspects. The LAB includes the formulation of a spatial strategy based on the existing urban identity as well as socioeconomic and demographic conditions of a location; it brings a unique set of participants, collaborators and stakeholders to a site, which is indispensable for an inclusive approach. The LAB provides a valuable format in addition to standard studio projects in urban design education. The preparatory phase involves an analysis of the case study, conducted remotely using geo-data portals and with information provided by the local administration. To foster inclusiveness in this analytical phase, it is necessary to take account of pre-studies as well as particular on-site experience complemented by the knowledge and expertise of local government, NGOs and local residents. In the LAB, approx. 35 to 60 students consider complex historical, political, natural and cultural conditions, placing these in the context of the current spatial and social situation of the city. The added value is also the possibility of exchanging ideas, working methods and individual mapping skills by participants from various universities, countries and curricula (such as architecture, urban design, spatial planning and landscape architecture). Furthermore, the LAB serves as a useful platform for open discussion between local stakeholders and representatives of the administration. It supports objective debate, free of potentially conflicting political and financial considerations.

KEYWORDS

Inclusive Urbanism LAB, didactic format, strategic approach development, local stakeholders' platform, urban education exchange, mapping presentation methods

1. Introduction

The aim of this article is to present the LAB as a new didactic method, examining its historical predecessors, the circumstances of its origins and its subsequent development.

In the search for new formats in urban design education, the idea of bringing together international teams in short, intensive LAB workshops on complex urban issues was born in 2009. The focus of the investigation initially dealt with the repercussions of World War II on the spatial and social structure of cities today. This issue became the general topic of the intensive programme 'Facing the Impact of the Second World War: Urban Design in Contemporary European Cities – FI-WW2' coordinated in the years 2009–2012 by CUT Krakow with the participation of TU Delft, HAWK Hildesheim and HTW Dresden.¹ The issues were investigated for various urban settlements that had undergone relevant structural transformations during and after the war, namely Owięcim, Rotterdam and Dresden (LABs held in 2009, 2011 and 2012, respectively) (Racoń-Leja 2019).² Due to the complexity of these issues and the difficulty of applying them to the study cases, the team of tutors started to formulate a new working methodology. Questions which kept recurring were: How can we keep the programme of the LAB workshop coherent when it moves on to other emerging topics? Are we able to transfer the methods developed in the context of the urban history of WWII to other case studies?

These questions became crucial as the programme was further expanded to encompass cities with difficult demographic conditions, such as those arising from Europe's political convulsions after the fall of the Iron Curtain. These activities also received stronger formal support under the aegis of the Competence Center Urban Renewal of the Federal State of Saxony-Anhalt based in Magdeburg.³ Coordinated by the HTW Dresden, this programme concentrated on two sites: Schierke (a part of the city of Wernigerode/Harz) in 2013 and Halle-Neustadt in 2014. The realization required a much stronger participation of stakeholders (Mensing-de Jong 2010). The spectrum of educational partners was also broadened to include – alongside the HTW Dresden – the TU Delft and the CUT Krakow, the University of Chalmers in Gothenburg and Gent University. Two LABs lasting six days each were carried out in the years 2013–2014.⁴

1 University teams included: from CUT Kraków (which prepared the EU application and lead the programme), Krzysztof Bieda and Kinga Racoń-Leja (Programme Coordinator) and tutors Anna Palej, Bartłomiej Homiński i Michał Palej; from TU Delft, Marc Schoonderbeek, Micha de Haas, Eelco Dekker and Finnbar McComb; from HTW Dresden, Cornelius Scherzer and Angela Mensing-de Jong; from HAWK Hildesheim, Michael V. Sprysch, Thomas Kauertz and Michael Wagner. FI-WW2 was financed as an Erasmus Intensive Programme; webpage: www.urbanwarimpacts.eu (access: 10.01.2019)

2 www.urbanwarimpacts.eu – official program website (accessed: 10.07.2019).

3 <https://www.kompetenzzentrum-stadtumbau.de/> (accessed: 10.07.2019).

4 Universities were represented by: from HTW Dresden, Angela Mensing-de Jong and Cornelius Scherzer

Their success led to the continuation of the format in 2018 in Gothenburg (Racoń-Leja 2018) and 2019 where the focus on cross-border cooperation was on border towns of Selb (Germany) and Aš (Czech Republic). The last LAB was coordinated by the TU Dresden with the participation of TU Delft, University of Chalmers Gothenburg, CUT Krakow, CTU Prague and ENSA Strasbourg.⁵ New challenges helped to develop the method further, revealing huge possibilities for the implementation of results.

Many elements of the developed format require ongoing evaluation and clarification, including the source of funding, the duration of the programme or the possibilities of subsequent applications by the studied cities and their institutions. European funding programmes had a significant impact on the formation of the LAB and its development. The opportunity of raising funds through Erasmus Intensive Programmes, distributed by national agencies (as in the case of FI-WW2), further supported the initiative. Today, financial support for workshops has been limited within the new formula of Erasmus Plus, rendering more difficult the realization of short programmes.

Regardless of the genesis of a theme and the site for an urban LAB, we tend to involve different stakeholders from the outset. Jointly implemented activities are often funded by local authorities and regional programmes, with external institutions involved in revitalization processes. In the case of the two LABs in Saxony-Anhalt, the Competence Centre for Urban Renewal of the Federal State served as a client for the cooperating universities. For the 2013 LAB, the Centre signed a MoU with the HTW Dresden to develop a short intensive programme on urban issues with international partners for the former mountain resort of Schierke. Halle-Neustadt followed in 2014. The costs for the accommodation of students and tutors as well as the workspace were in both cases financed by the Competence Centre. This issue was of particular importance due to the limited financial resources that the universities have for extra activities and also the shortage of Erasmus funds for these formats. While the financial involvement of a city and a state placed more pressure on the dissemination of final results, this also strengthened the possibilities of their implementation (Webel 2014).

(Coordinators); from TU Delft, Micha de Haas; from CUT Krakow, Krzysztof Bieda, Kinga Racoń-Leja and Przemysław Kowalski; from Ghent University, Pieter Uyttenhove and David Peleman; from the University of Chalmers, Michael Ekegren.

5 The academics involved were: from TU Dresden, Angela Mensing-de Jong (Coordinator); from TU Delft, Micha de Haas; from CTU Prague, Jiri Klokocka, Jana Zdráhalová and Henry Hanson, from CUT Krakow, Kinga Racoń-Leja; from the University of Chalmers, Michael Ekegren; and from ENSA Strasbourg, Denis Bocquet.

2. The LAB Format

In recent years, there has been much international debate on contemporary approaches to urban design education⁶, the current state of the discipline (The History of Urban Design at Schools of Architecture 2017) and practical experiences in urban design from countries with different social, cultural and economic conditions (Christiaanse 2018). One outcome of the fruitful discussions has been to rethink the educational aspect of urban design. Universities face the challenge of ensuring that students do not view the future as a mere projection of the present but, instead, to consider alternative ways of urban living, leisure or modes of work. To this end, academics are searching for an innovative way to teach urban design.

The pioneering 'inclusive' approach was introduced by the ILA&UD programme, which ran from 1974 to 2004.⁷ Established by Giancarlo De Carlo as a reaction to the Modernist movement (De Carlo 1992), it brought students from around the world to work on cities. The collaboration took the form of a Laboratory, in which great attention was paid to a contextual approach as well as fieldwork and mutual discussion. Outcomes in the form of various architectural and urban solutions were presented to the public, thereby contributing significantly to the inclusiveness of the process (De Carlo 1992). The discipline of urban design has gone on to incorporate the participatory approach (Moore-Cherrya, Mccarthy 2016), contextual and heritage-based thinking (Embaby 2019) as well as the combined use of qualitative-quantitative methods (Berta, Bottero, Ferretti 2016). The future of urban design workshops was discussed at the seminar 'The Role of International Workshops in the Process of Architectural Education' (Franta ed. 2016) hosted by CUT Krakow in 2013. One innovative approach has been the EcoRehab workshop network (2010–2014), which introduced new concepts for revitalizing areas of mass housing (Gyurkovich ed. 2012).⁸

Within the field of urban design, education workshops are a particularly useful tool. They offer participants from diverse backgrounds the conditions of an on-site laboratory, which cannot be offered in a standard curriculum. The particularities of the applied methodology can vary from programme to programme, depending on the collaboration of universities and local partners, their interests and challenges. The involvement of professionals, urban designers and city planners will influence the educational outcomes. Inclusiveness is a critical aspect of the urban design workshop, as this can significantly expand the spectrum of possible dissemination. The cities which we

6 Contemporary urban design education. AA School of architecture (2016), source: <https://www.youtube.com/watch?v=USSV-DBdBZU&t=3237s> (accessed: 10.05.2019).

7 <https://radical-pedagogies.com/search-cases/i08-international-laboratory-architecture-urban-design-ilaud/>; <http://www.team10online.org/team10/carlo/index.html>; (both retrieved on 27.08.2019).

8 Involving UAUIM Bucharest, PoliMi Milan, CUT Krakow, FH Frankfurt am Main and UPC_BarcelonaTECH.

have worked on since 2009 present complex historical, political and social settings. We quickly realized that regular revitalization and urban redevelopment projects would be insufficient in such cases. Therefore, the new LAB format was created to offer students an educational and intellectual environment that would foster intensive study of the complex problems and aid the search for the best responses.

LAB is a workshop format specifically designed for the modelling of alternative urban strategies and to enable directed comparative analysis. The specifics of the LAB idea as formulated by the university teams allow for the parallel development of various spatial-social concepts, each representing one potential urban model. The models developed by the teams are carefully devised to permit final comparisons of various trends and development possibilities of the studied city cases. Inspired by the ILA&UD, we also included methods of a participatory or multi-disciplinary approach to allow for an intense site analysis and strategy-based thinking as the foundation for further urban development. The process – on site and with the support of various stakeholders – required an inclusive approach (Mensing-de Jong 2010). By replacing conventional design thinking with multi-faceted strategies, the innovative LAB format extends the potential areas of application.

2.1 The main features of LAB

The direct implementation of the Erasmus Intensive Course within the FI-WW2⁹ formula enabled us to initially conduct the LAB as a two-week programme. This included urban analysis and formulation of the urban strategy with some ‘zoom-in’ examples as well as two public presentations at the end of each week. The limited availability of teachers and difficulties in acquiring external funds prompted us to reduce and intensify the programme to a 6-day LAB format from 2013. The LAB often falls in different parts of the semester, compounded by the fact that universities do not start their academic year at the same time. Nonetheless, we try to link the workshop to a design studio and work with students for the remainder of the semester in order to develop strategies and ideas into more detailed proposals.

Due to the involvement of different universities and the complex problems that the LABs address, an intensive preparatory phase is required before the actual work with the students. It is crucial that the participating academics formulate the specific tasks for each LAB. The on-site visits are used to meet the local authorities, architects and community representatives. Such visits also help us to learn how the professionals and the municipality understand current urban problems and challenges, as well as what their visions are. These direct site inspections contribute significantly to a more accurate

⁹ Here and elsewhere in the text, FI-WW2 refers to the programme ‘Facing the Impact of the Second World War: Urban Design in Contemporary European Cities 2009-2012’.

refinement of addressed issues to reflect the real-world setting. In larger cities, the visits help to choose the areas of investigation. An introductory package, created and shared with the tutors from the cooperating universities, includes essential materials such as historical and current maps, strategic and land use plans, photographs as well as documents of the urban and social history of the analyzed areas.

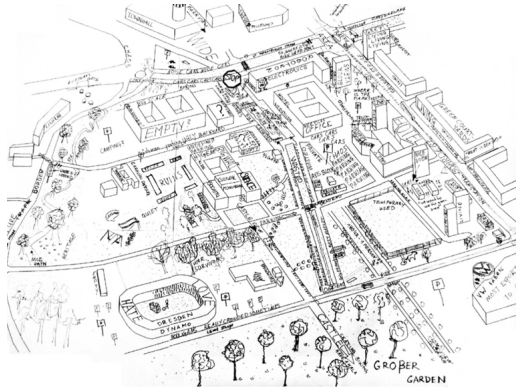


Figure 1. Urban Analysis LAB. Dresden (D) 2012 – ‘Atlas’ drawings as an example for mental maps. Sketch of the structure of Dresden within the programme FI-WW2 (Source: FI-WW2, 2012, group 4: M. Arasimowicz, S. v. Bunner, M. Lizak, Q. Philippe, J. Pinkawa, C. Su)

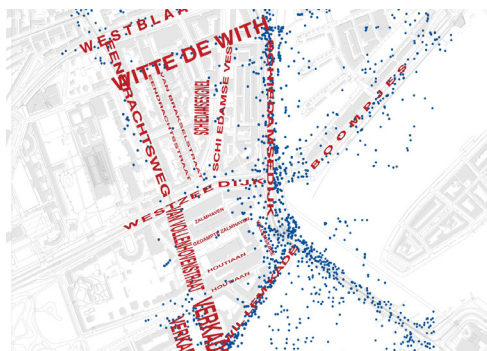


Figure 2. Urban Analysis LAB. Rotterdam (H) 2011 – Mapping of the activities registered within Internet portals. Study for Rotterdam within the programme FI-WW2 (Source: FI-WW2, 2011, group 1: S. Fasche, K. Franczak, I. Rożnowska, S. Taskan, E. Tcholakova)

The content of the LAB supports individual analytical studies. Previous investigations by the participants can significantly improve the understanding within the LAB and influence the creation of good analytical material – useful also as an additional research tool (Niezabitowska 2014). For example, the Border Conditions Studio from TU Delft developed working methods

which focused on cities with a ‘space of conflict’, including Nicosia, Belfast or Rotterdam (Schoonderbeek 2010). This influenced the LAB format by introducing unconventional tools such as mental maps to create ‘Atlas’ drawings of subjective observations [see Fig. 1], thereby mapping places of ‘collective memory’ (Frijhoff 1989, Meyer 1999). In-situ studies using experimental exploratory techniques were also a significant achievement and one pillar of the urban laboratory. To this end, we supported students in exploring various unconventional approaches using data drawn from the Internet as well as on-site observations to map the activities of local people in Rotterdam [Fig. 2].

In formulating the urban LAB, we abandoned the traditional approach of applying the results of the workshops to concrete urban design projects – understood as defined spatial solutions. Instead, the teams’ work focused on the development of urban strategies for selected areas or the entire town or city. Emphasis was placed on the application of an appropriate programme by means of ‘toolboxes’ to attribute functions and spaces to particular social groups. We also considered the scheduling of various time stages – as in the case of Halle-Neustadt or the Ringön-Gothenburg area (Racoñ-Leja 2018). The academics conducting the work concentrated on encouraging the teams to differentiate their strategies. The proper running of the various elements of the LAB format had a positive impact on the development of a broader spectrum of strategies, which was appreciated by the cities and local stakeholders. Their juxtaposition could be treated as a proper urban planning laboratory, providing six to seven different development strategies (models) for a given area or city.

2.2 The LAB process

The methodology of the ‘LAB of Inclusive Urbanism’ developed by the team members of the partner universities consists of a three-step formula covering the preparatory-analytical phase, an intensive on-site programme and a closing phase in which students and academics continue their work throughout the semester. Its most substantial element is the formulation of sophisticated strategies developed during an intensive on-site workshop.

The LAB formula has been carefully scheduled step by step. An introductory session on the first evening is a chance for the students to discuss their preparatory activities. On the next day, the local stakeholders and partners present and explain their points of view and expectations of the LAB. Planned as a public event, other groups and citizens are encouraged to attend and discuss the issues from their perspective. In the afternoon, students and local representatives visit the site. On the second day, the teams start working on their perception of the site, revising the introductory package, developing methods of analysis as well as initial concepts. The tutors encourage the teams in their approaches before an intermediate public presentation on

the afternoon of the third day. This presentation enables a comparison of the various concepts as well as a discussion of the approaches with local stakeholders. There is also the opportunity to refine the ideas of the teams to encompass a broader range of approaches or to focus more on particular issues. Another day of full work follows. On the fifth day, the teams present their strategies at a public venue and prepare a poster exhibition. The local authorities, planners, residents and tutors can discuss the outcomes by examining the posters. Such critical feedback leads to valuable later modifications of the presented concepts as part of the course or diploma projects of the students.

2.3 Inclusiveness: essential to the LAB context

One of the inclusive aspects of the LAB is the collaboration of students from diverse backgrounds and educational experience. By means of short programme formula, it is possible to link the activities of individuals from different universities and disciplines such as architecture, urban design, landscape architecture or urban planning. The core element of the LAB, namely the joint workshop, requires precise preparation and coordination. The 35 to 60 students participating in each LAB are divided into groups of five or six in order to bring together persons from different universities and disciplines. Their experience of these multidisciplinary working teams is a substantial asset for the students, preparing them for their professional career.

Another cornerstone of the LAB inclusive approach is the selection of the topic itself. The LAB themes always reflect the shared European history of the analyzed countries (Mumford 1961). In particular, the selection of the investigated urban areas takes into consideration the political, social and economic past, thereby enabling the comparison of diverse impacts that the historical factors had on individual countries, regions and even parts of a town or city.

Previous topics addressed by LABs have ranged from the repercussions of WWII on cities (FI-WW2), shrinking cities or the disparate development of settlements on the border region between the former East and West blocs. The goal of the programme has been to strengthen European identity through a coherent and multi-faceted approach to urban design. Activities have been based on thorough multilateral studies of the urban context supported by study of the history of urban design. The approach to the analysed cities has gone beyond the traditional spectrum of work. Instead, the analyses have been supported by research into social and environmental issues as well as knowledge of our shared European heritage to co-create the broad project context. An inclusive approach to the subject has involved connecting technology and science with the humanities. The specific areas of research within LAB have included: architecture, urban design, building construction, landscape architecture, history and the history of urban design, social sciences, heritage protection and economic issues (Bieda, Racoń-Leja 2008).

Last but not least, the inclusive nature of the LAB can be described as the creation of a platform to foster open exchange between the participants from the various universities and disciplines as well as to encourage dialogue with the local authorities as well as interested associations and groups.

3. LAB Case Studies for Inclusive Urbanism

We can regard each of the LABs carried out during the last ten years as an individual case study for an inclusive approach to urbanism. The first three LABs, which were held in Owiećim in 2009, Rotterdam in 2011 and Dresden in 2012, had a shared focus on urban structures affected by the impact of WWII. These were part of the intensive ERASMUS programme FI-WW2. In more detail, the following formats variously addressed rising urban challenges such as demographic change, urban shrinkage or discontinuity in development due to political change.

3.1 Dresden 2012 – Informal temporary use as a tool for revaluation and redevelopment

In Dresden we termed the area of investigation the ‘Dresden Doughnut’, constituting as it did a ring around the historic centre. Dividing this ring into segments enabled the seven teams to conduct a more in-depth analysis as well as longer on-site investigations. Considered as a whole, the ‘doughnut’ gives Dresden the appearance of a ‘perforated city’. All of the groups focused on vacant or undefined open spaces located either between residential settlements constructed in the 1950s or individual lots that were simply left vacant after the bombing of 1945. Various concepts elaborated the idea of temporary usage as a strategy for possible future development. One group managed to involve residents and a nearby hotel in a ‘Guerrilla Gardening Project’ [see Fig. 3], which included the night-time planting by students of flowers in an abandoned site used as an illegal parking lot. They then observed whether people became aware of the change and respected the new ‘occupancy’ as a public garden. Local residents as well as the staff of a nearby hotel offered to water and take care of the plants. In fact, the brownfield was successfully appropriated, serving as a basis for a public reoccupation process proposed by the team. The impact of such small projects, especially ones which involved social participation, was noticeable. The local groups that participated in the community activities generally continued taking care of the revalued places. It is only in recent years, in the wake of Dresden’s booming property market, that many of the formerly vacant lots have become built-up.

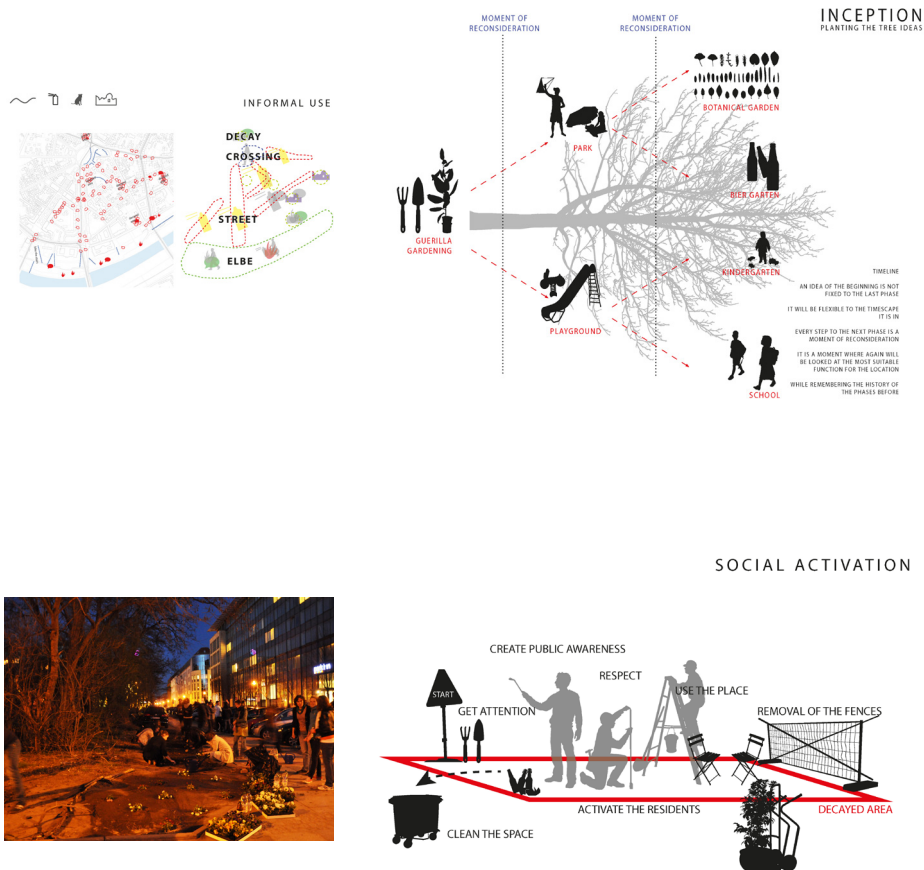


Figure 3. Urban Strategy LAB in Dresden (D) 2012. Temporary use of vacant lots as a concept for redevelopment in Dresden-Neustadt: 'Guerilla Gardening Project' with social participation. (Source: FI-WW2, 2012, group 6: M. Grzywna, E. Guzik, M. Mikitta, P. Niemeijer, S. Schmidt, E. v. Winsen).

3.2 Schierke 2013 – From mountain village to spa to the perfect place to get older?

The urban setting was completely different in the case of Schierke. The Competence Centre for Urban Renewal of the Federal State of Saxony-Anhalt proposed that we work with students on the small village of Schierke (in the municipality of Wernigerode), a formerly famous spa in the Harz Mountains region. The challenge was to deal with a radically shrinking and ageing population while simultaneously boosting regional tourism rooted in the glorious history of the spa village.

Schierke going slow

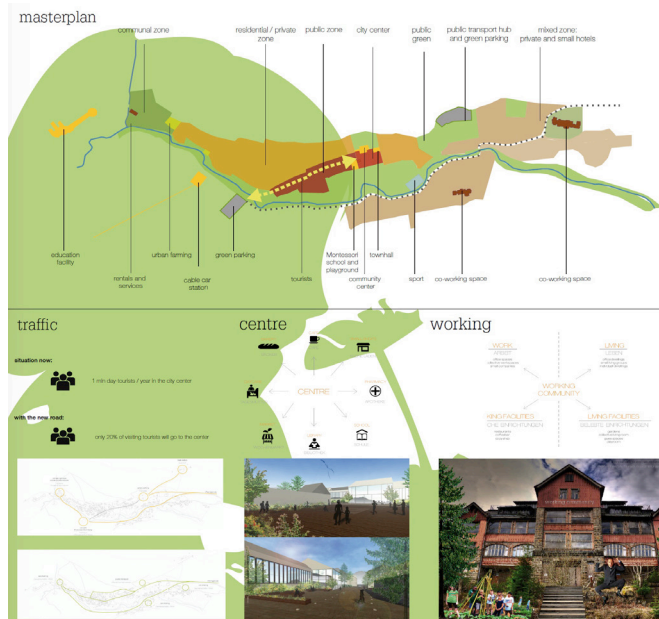
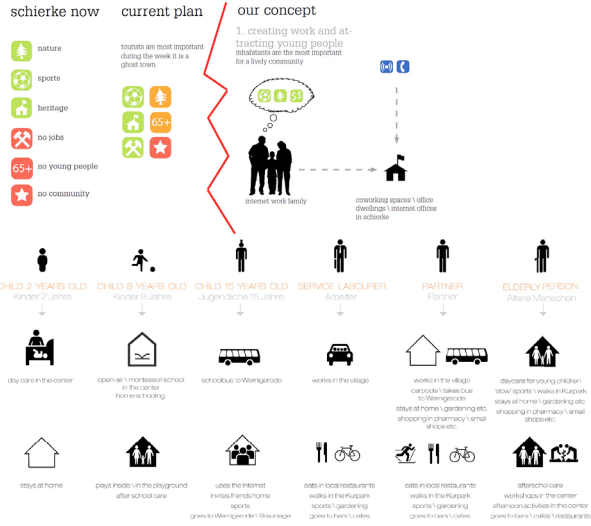


Figure 4. Urban Strategy LAB in Schierke (D) 2013. Concept for the village as an ideal place for slow living. (Source: Workshop 2013, group 2: M. Adam, A. Batkiewicz, K. Dorda, C. Guy, T. Guziak, S. Jaura, R. Mueller).

The concepts developed by the teams focused on nature and ‘slow’ tourism [see Fig. 4]. The strategy of creating an exclusive spa meant that private transport had to be kept outside the settlement. One of the groups presented Schierke as ‘A perfect place to grow old’. The natural environment, beautiful surroundings and reactivated infrastructure of the former hotels and spas would doubtless attract not only older people but also provide job opportunities and ensure a positive future. In Schierke, a fierce discussion was triggered by a local authority plan to build a vast car park at the entrance to the Brocken Mountain for hikers who wished to walk to the top as well as for skiers. The LAB participants pointed out the negative impact of this investment on the future development of the town. The parking area would serve as a physical barrier between Schierke’s centre and the nearby touristic areas, depriving the centre of the positive economic impulse of around a million tourists a year (Kowalski 2013). Yet the local authorities finally decided to construct the car park and, in the year after the workshop, demolished one of the most famous former grand hotels. Although the federal state was in favour of more sustainable development and was even willing to help with subsidies, the local authority chose a ‘fast and easy’ solution.

3.3 Halle-Neustadt 2014: From uniformity to diversity

Halle-Neustadt was founded in 1964 when the East German government began to plan this model socialist town, and people began to move from all parts of the GDR to work in the chemical industry. After the reunification of Germany in 1989, the local population plummeted from almost 100,000 to around 45,000 by 2014, the year in which the LAB took place. The 60 students from Cracow, Delft, Dresden, Gent and Gothenburg were confronted with vacant buildings in the centre, undeveloped open space between dwellings and a legacy of oversized social and technical infrastructure. Ten teams worked to make ‘HaNeu’ (as it is popularly known) more attractive. The students proposed new connections between the city and adjacent parks, the improvement of open space by reinterpreting it for temporary use as well as new types of living units. Another focus was to introduce forms of rural production into what had been solely a residential town.

Together with scientists from other disciplines, the LAB explored the potentials of urban agriculture, vertical farming and even the establishment of IT server farms in existing vacant buildings. Concepts for five towers in the city centre were further developed in Delft and Dresden before being finally presented and discussed at the 2014 Architectural Biennale in Venice [see Fig. 5]. Although the likely beneficial impact of the programme was widely disseminated at the local and regional level, the ideas were viewed with a certain level of suspicion. Nonetheless, the concepts revealed the potential of the buildings, stimulating public discussion about the value of GDR modernist

architecture and infrastructure. In 2017, 57% of the local residents in Halle voted against the demolition of one of the residential slabs, instead supporting its reuse as an office building for the city administration.

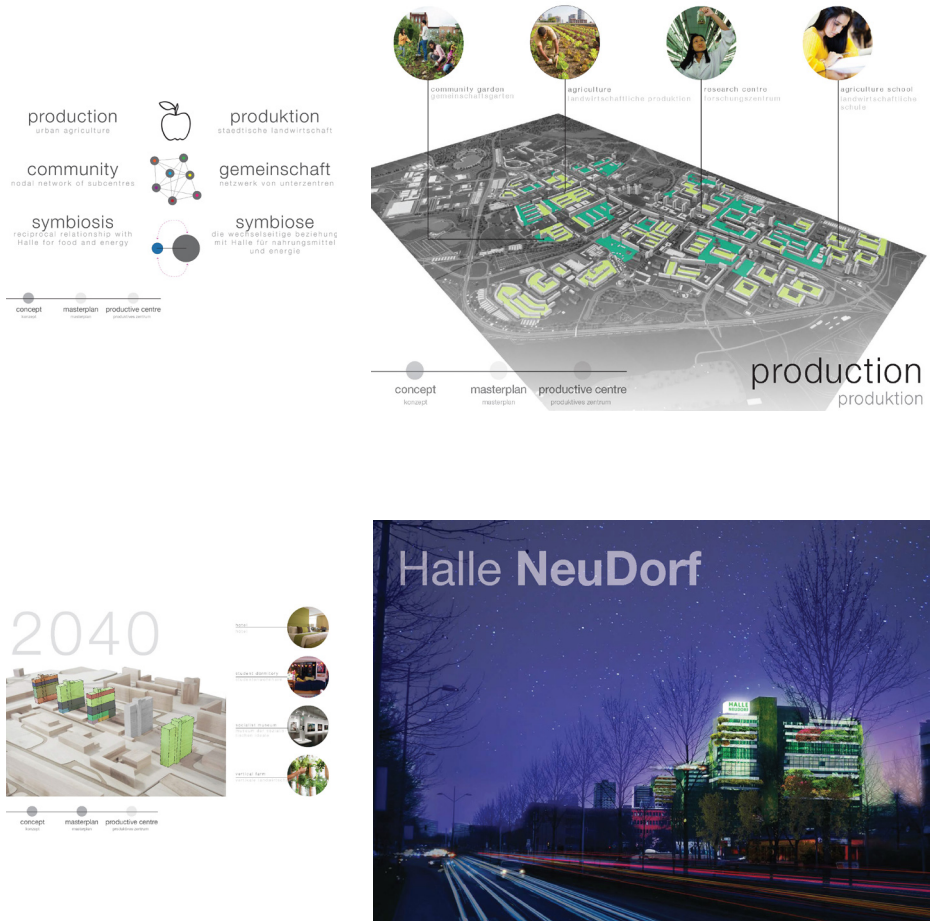


Figure 5. Urban Strategy LAB in Halle-Neustadt (D) 2014. Concept for a new productive community 'Halle NeuDorf' with urban agriculture on vacant lots and vertical farming in the empty high-rise buildings in the centre (Source: Workshop 2014, group 2: A. Anwar, A. Bogaert, J. Forner, K. Glodowska, M. Matraszek, W. Shang).

3.4 Selb – Aš: Unified by the border?

Previously lying on opposing sides of the Iron Curtain, the border towns of Aš in the Czech Republic and Selb in Germany represent two different urban histories and contrasting developmental pathways. While a significant proportion of the urban structure in Aš is today dilapidated, and large swathes of the urban fabric have been torn down and replaced with concrete housing estates, the city of Selb has seen a gradual improvement in its housing stock and the restoration of its historical centre. The different legal environments and working conditions in the two countries have fostered a growth in gambling businesses in the Czech border region as well as the migration of Czechs seeking better job opportunities in Germany, further intensifying the economic imbalance in the region. The European Union has explored ways to improve the economic and social links while fostering the search for mutually beneficial forms of development. In fact, the municipalities already cooperate well at a cultural and social level. While a strategic plan for improved cooperation in the future was previously worked out, no measurements regarding urban planning followed. Therefore, the local authorities took the opportunity to invite experts from the universities of Dresden, Cracow, Prague, Delft and Strasbourg to provide an international view and enable comparison with similar situations in other parts of Europe. The on-site visits of the students and teachers were supported by the two towns while the Rosenthal company provided workspace in their factory.

Through the LAB it was possible to approach the urban sites while disregarding the border, thereby overcoming the established limits. The leitmotif of the LAB became ‘Stronger together!’ The students pointed out some of the formerly inherent places on the border that had deteriorated and become forgotten. Their proposals suggested a new use for these spaces, a combination of private businesses such as a local café or hostels and a new tourist centre that the city of Aš wants to realize. The recreational use of the area could be encouraged by properly linking the two settlements by means of a tourist trail, taking advantage of the existing large bicycle track in the region; this would also encourage people to visit the newly ‘discovered’ sites [see Fig. 6]. The projects were presented to the local authorities and residents. The cities of Selb and Aš intend to host the ‘Bavarian–Czech Friendship Weeks’ in 2023, with the LAB supporting this cross-border cooperation. The preparatory phase has already served as a platform for the planning authorities and architects on both sides of the border to exchange their expertise and ideas.

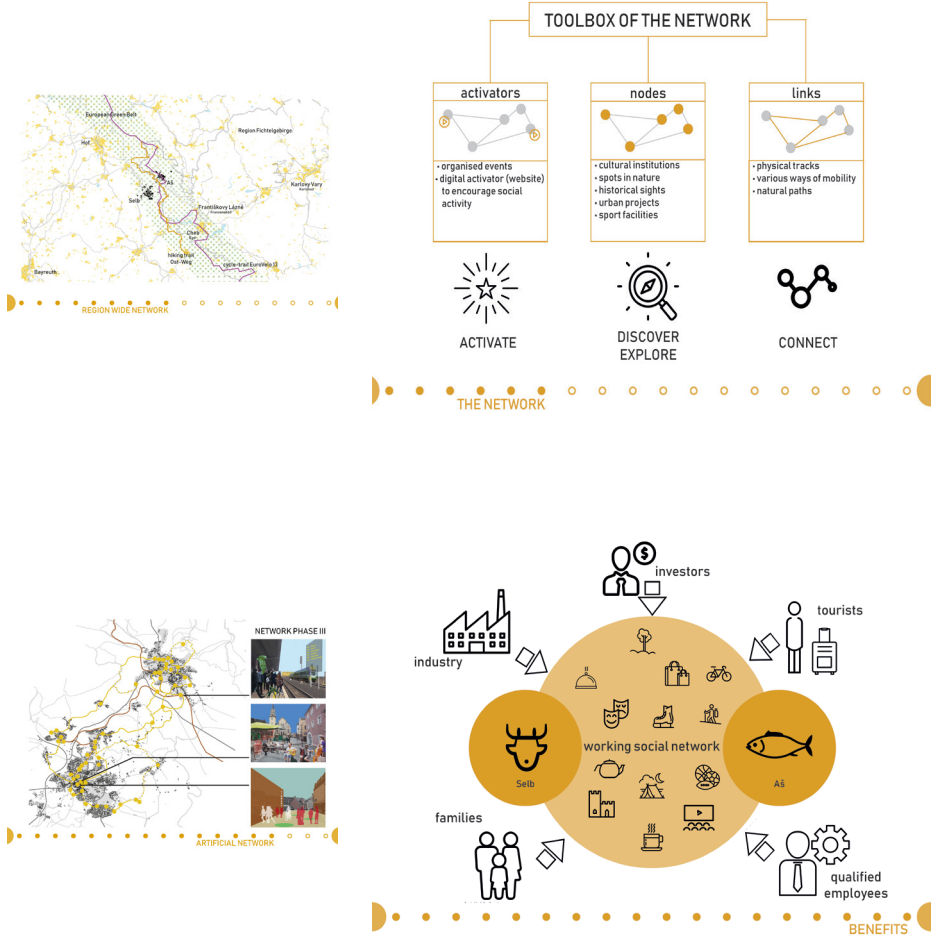


Figure 6. Urban Strategy LAB in Aš (CZ) and Selb (D) 2019. Concept for a new social and spatial network between the two towns (Source: Workshop 2019, groups 4: P. Berger, V. Felbrich, M. Garnarczyk, D. Maassen, H. Song).

4. Dissemination, limitations and future steps

The success of the LAB format depends on the involvement and commitment of municipalities, their willingness to disseminate results and to use the material prepared by the team. For example, the interest of the Competence Centre was to explore the possibilities of future inclusive development of sites and cities in the focus of the federal state. In particular, current challenges to urban renewal are demographic change, shrinkage in large prefab-housing estates and poorly utilized public space. The developed ideas should also serve as models for other cities in the region. All results from the on-site

LABs and later projects were published on the Competence Centre website¹⁰, accompanied by documentation in the form of brochures. The design projects demonstrated the potential of sites, frequently attracting the interest of likely investors and developers in cities that were undergoing structural changes and were suffering from under-investment.

Additionally, the LAB format created a platform for exchange between the different stakeholders in the towns and cities. In Germany, there is an interdependence as well as competition between the federal states and cities regarding planning policies. Often the state is the owner of urban property designated for development and thus a key player in the real-estate market. Furthermore, the ministries of each federal state decide on the direction in which future subsidies will flow. The public discussion of the LAB results provides a framework that allows state and municipal representatives to concentrate on the issues at hand and disregard their formal positions. Concepts developed in this framework facilitate open discussion between, not only the federal state and cities, but also between citizens and public authorities, thereby fostering a more inclusive approach.

A public Internet platform was created to gather all materials developed by the programme regarding the repercussions of WWII. However, as daily maintenance was required to secure the platform, the decision was taken to abandon this project. Nonetheless, this is an efficient way to disseminate the LAB results and should be implemented in the future.

The contributions of academics and professionals involved in the realized programme were significant, even outstanding, representing the architecture, urban design and urban history of Belgium, Czech Republic, France, Germany, Netherlands, Poland and Sweden. The programme also made it possible to contact experts from local government and administration – including those responsible for spatial development and other local institutions of the studied town and cities. The involvement of various academic partners was a valuable element of educational exchange. It has also led to joint scientific activities, for example applications for research programmes and cooperation between graduate schools.

The results of the LABs constitute valuable didactic material, which has been developed by the tutors in various urban and architectural scenarios and courses, including diploma theses. Several projects have been promoted jointly by the participating universities. The involvement of students from CUT Krakow in the further development of LAB concepts has been supported by the prestigious Georgius Agricola scholarship offered at the TU Dresden.

The LABs prove how important it is to collaborate closely with students on difficult topics. It forces future professionals to become more sensitive and responsive in their work by participating in international teams and jointly de-

¹⁰<https://www.kompetenzzentrum-stadtumbau.de/entwuerfe-2/halle-neustadt/>; (access: 08.05.2019).

veloping projects that can be directly discussed with local experts and residents. It is an extraordinary experience that teaches responsibility at every level. The LABs appear to be a viable and successful way of teaching, learning and cooperating. New topics are currently being prepared, building on the well-received cross-border cooperation in Aš and Selb. Such cross-border issues are highly relevant in the European context, encompassing a wide range of cities with complex historical development pathways, reflected in their spatial conditions and urban space. We expect that will serve to boost the level of inclusiveness of the LAB format.

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Image Tagging and Gearing Resources Applied to Students' Graphic Materials

Learning techniques in pursuit of inclusiveness for urban and landscape design

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Abstract

Inclusiveness can be considered a requirement for contemporary statements in urban and landscape design referring to age, condition, gender or nature. But how is inclusiveness influenced by spatial design? Can this relation be measured or proven? And more precisely, which interactions are considered across different generations or between human and non-human agents?

This paper describes student's work evaluation procedures through a methodology consisting of selecting picture-based content from initial reference materials provided by teaching staff, as well as graphic material designed and produced by the students, to further analyze these through data visualization techniques and the production of info-graphics. In a latter step, a gearing game – which is a type of sociogram used to understand agents and matters of interest – is utilized to drive a discussion about design statements for further stages of development concerning students' design projects. The first stages of the methodology are strongly influenced by how the students perceive elements from reference materials and represent these in their own design productions. A literature review further investigates the dichotomy between representation and perception, and the generation of subjective images.

As a final consideration, this work aims to create combined methodologies by incorporating participatory observation methods (e.g. photovoice and flow charts) from the social sciences into urban and landscape design, as they are understood through an accurate design of the learning experience. Similarly, non-representational design and dataviz diagrams from urban and landscape design could potentially be implemented in the teaching of social sciences.

KEYWORDS

perception, participatory planning, image tagging, non-representational, transdisciplinary

1. Introduction

This paper describes a joint methodology based upon the intersection of two research strands, inspired by and referring to (1) participatory and (2) observational methods. As can be seen in Figure 1, observational as well as participatory methods are deployed to achieve specific goals through the utilization of tools and techniques of data management and visualization.

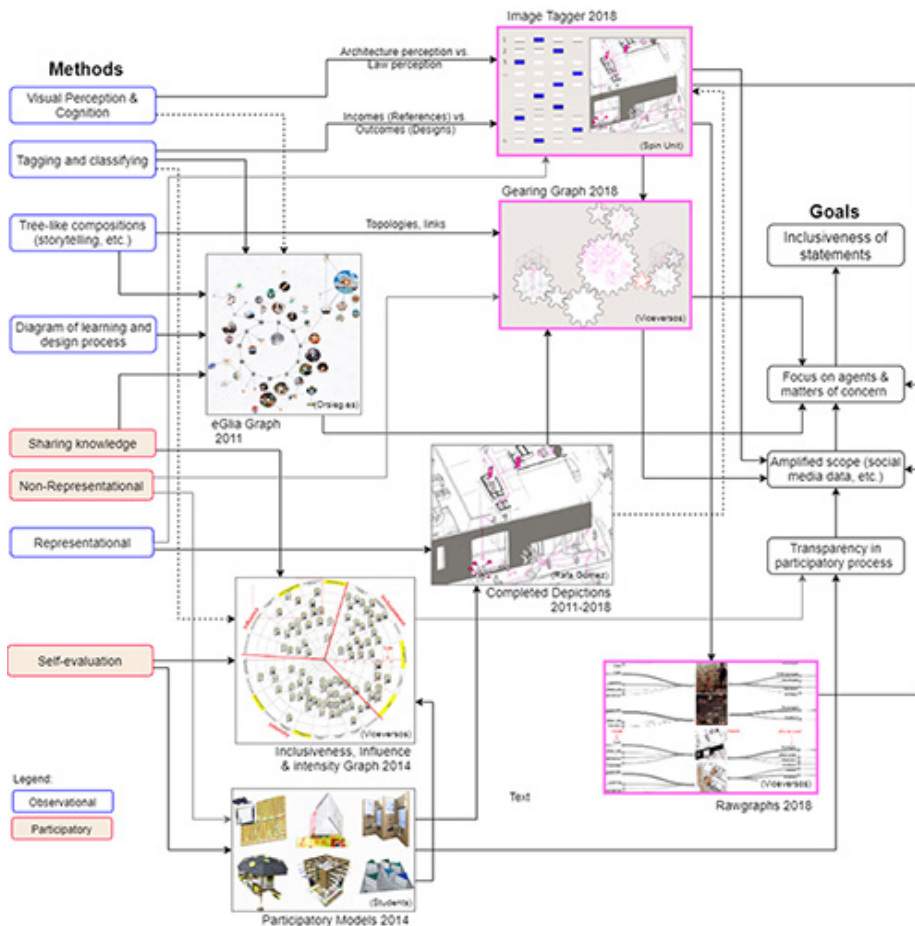


Figure 1. Diagram of methods, resources and goals. Classified into observational and participatory resources, methods are ordered in time (source: author).

As the original definition of participatory methods is to get experts involved to community debates as a way to understand how stakeholders successfully resolve planning issues (Cook 2005, p. 167), this paper presents an academic interpretation of those methods by considering resources that allow us to disseminate the authorship of design decisions. Following this discourse

and assuming that observational methods enhance decision-making by investigating controversies from the outside without being actively involved in them, the aforementioned academic interpretation utilizes various means of categorizing problems through visual recognition and perception.

In this context, the first mentioned research strand follows methods under the umbrella of non-representational techniques, whereas the second uses representational procedures. Interestingly, both of these academic domains, when applied to an urban and landscape design framework, aim for inclusiveness by avoiding segregation through design principles. They attempt to prove the evidence of an environment inhabited by more than human entities alone, an environment which seeks to show and label itself through a progressively more open and transparent representation. Over the past years, these conceptual methodologies have been gradually deployed in architecture and urban design studios – and especially in emerging schools – raising discussions and controversies on how to approach inclusive design through educational procedures (Gisbert 2016; Carrasco & Abellán 2015).

The methods presented in this paper were implemented in an evaluation of design statements and overall targets in Urban and Landscape Design Units at the University of Alicante. Two main topics were addressed, one focusing on human/non-human interactions and the other on inter-generational design. Both deal with inclusiveness through spatial design.

2. Methodologies

2.1 On participatory methods

While one of the fundamental goals of the natural and social sciences is to generate in-depth knowledge of an environmental reality, participatory methods complement a similar approach to the definition of natural or social ecosystems by adding the final goal of realizing inclusiveness in decision-making processes (Kesby et al. 2005; Francés 2016). With a non-rigid structure of data collection and a non-hierarchical (horizontal) communication structure, most ways of performing participatory techniques make use of non-representational methodologies, which encompass relational multiplicities by reinforcing their narrative and intangible values.

“Our self-evidently more-than-human, more-than-textual, multi-sensual worlds (...) a mosaic of theoretical ideas borrowed from fields as different as performance studies, material culture studies, cultural studies, the sociology of the body and emotions, and the sociology and anthropology of the senses.” (Vannini 2015, p. 3).

As examples of participatory tools, we can name collective mapping, handcrafted models as well as testing instruments in which actors themselves decide which scale or stakeholders to work with. These devices have been described as “something instrumental: a technical artifact for articu-

lating some difference between world and thinking” (McCormack 2015, p. 94) and follow some of the design methods carried out by pioneering architects in facilitation processes, such as Simone and Lucien Kroll in the last decades of the 20th Century (Bouchain 2013, p. 117).

2.2 On observational methods

Several scholars acknowledge the close relation between the perception of physical elements or spaces and the representation of these (Jakob 2016; López Baeza et al. 2016). The perception process integrates a system in which physical reality is experienced subjectively and incorporated to the subject’s system of interpretations. Single components of physical space and objects are merged with subjective elements such as memories, feelings, education and personal background to be associated with existing concepts learnt in advance (Jakob 2016). As one intends to represent something previously perceived, the process is similar. The main narrative of the element to be represented is decomposed into individual concepts, and a story is told through them. For example, when someone perceives a house, they first acknowledge the house as a whole concept before subsequently focusing on individual elements and details; in contrast, when someone represents a house, they first draw the roof, the windows, the doors, the chimney, etc., before these individual elements are consolidated into the representation of the concept as a whole. Applying a similar approach to urban space, Lynch (1960) defines the concept of *environmental image* to explain perception through a cognitive approach, where elements such as readability, comfort and the personal background of the perceiving subject come into play (López Baeza et al. 2016). This environmental image is generated by two main elements; the first is a perceived image of a physical form (e.g. a boulevard) and the second is the contextualization of the self in relation to that (e.g. a boulevard perceived as the boundary of the home neighborhood).

Research on how people perceive space has always been a key topic in urban and landscape research. Cognitive processes consider observational methods that relate the perception of elements with social behaviour driven by stimuli-context-response internal relations, which are adaptive and respond to evolving urban conditions (Hou et al. 2014).

As described above, the strong linkage between the perception and representation of concepts allows us to deepen our consideration of the former through the taxonomy of the latter. Thanks to the second strand of research, which refers to database analysis instruments such as media content or digital images, we are able to subsequently translate results to produce diagrams for further study and interpretation. A key step is the early transferral of represented elements (i.e. images) into a list of parameters and options, “valuable because they afford a way of going beyond the conventions of certain

kinds of representations” (McCormack 2015, p. 95) in order to be managed and analyzed as data.

Addressing both participatory and observational methods, our intention is to follow the discourse of Anderson and Ash (2015) on *backgrounds of thought and life* to focus on the affective, embodied conditions for representational acts and practices, labeling these spaces *affective atmospheres*. To portray this phenomenon, Anderson and Ash (2015) take account of anxiety and other internal feelings related to the perception of environment along with its way of being manifested in situations of daily life such as patients in a hospital waiting for doctor’s attention. In this sense, methodologies are a way of giving visibility to components of such specific situations.

3. Resources and tools

This exploratory research is based on two main resources related to participatory and observational approaches, namely a tree-like gearing graph and a software-based tool to tag and interpret images.

3.1 Tree-like Gearing Graph

Here a set of rotating gears is utilized to depict and explain the sociological nature of a given design context (see Figures 7 and 8). This works as a collection of mobile objects to display arrangements of solid bases on which to place agent models or stakeholder drawings. The number of agents can be increased and the origin of the arrangement can be established with relation to a specific narrative coherence. The whole assembly can be synchronized to support a design statement and its expected performance.

This model provides a simplified representation of a complex relational-network system by means of a tree topology, featuring simple cause-effect relationships and first-order bifurcations. The system allows functions or roles to be assigned to each size of gear. Furthermore, single concepts can be assigned as *blocking* keys, preventing the rotation of the gears as a way of detecting potential major players in the represented system.

Previous displays using a similar typological approach are *eGlia* and *Inclusiveness, Influence and Intensity* graphs. The *eGlia* graph is an online tool used to compile and tag digital objects such as videos, photos, blogs, etc. as well as to display non-linear learning processes pertaining to the design work of a group of students during an academic semester (Hernández 2011) (Figure 2a). Through a tree-like deployment rising from a circle of attendees, each secondary node is a graphic object or hyperlink to another type of material, thereby providing external references. *eGlie* is named after *glia* or *neuroglia* cells, a specific type of nerve tissue that constitutes a matrix to support neural networks. Conceptualizing this process, *eGlia* aims to visualize how raw information is transferred across learning paths and among students, avoiding the

limitations of traditional forms of communication and documentation.

“During design workshops, storyboards, photographs, field studies, etc. allow tangible communication (...) but the outcomes and process of these workshops remain often inaccessible for people that do not partake” (Schoffelen, Huybrechts & Devisch 2019, p. 248).

The *Inclusiveness, Influence and Intensity* graph is used to analyze learning outcomes and order the collective production of a group of students over one semester (Carrasco et al. 2019) (Figure 2b). Its name is inspired by the indicators employed in the *Democracy Cube* graph (Fung 2006) along three scaled axes, although in this case each indicator has the same visual value: a portion or a circle. When students design private space able to induce some kind of communitarian benefit for a neighborhood, this graph expresses the veracity of *in situ* activities held to detect their needs and abilities. Through the use of this tool, students are able to publicly express their opinions about each other’s work, and suggest which is the most successful. Radially scaled inside out, some designs proved successful under specific parameters, whereas others had no visibility. All in all, these dynamic methodologies are able to compile opinions about complex questions such as the ability to design processes or to express how stakeholders understand assessment.

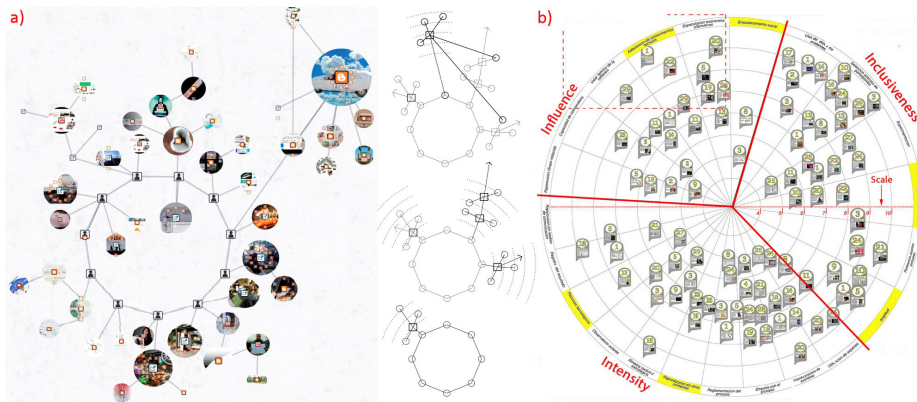


Figure 2. An *eGlia* graph: **[a]** Set of participants in central circle, personal & team production extend radially (design and code: Sergi Hernández Carretero, 2011); **[b]** *Influence, Inclusiveness & Intensity* graph to evaluate the collective production over the semester (performed at Design Unit Antonio Abellán & José Carrasco, 2014).

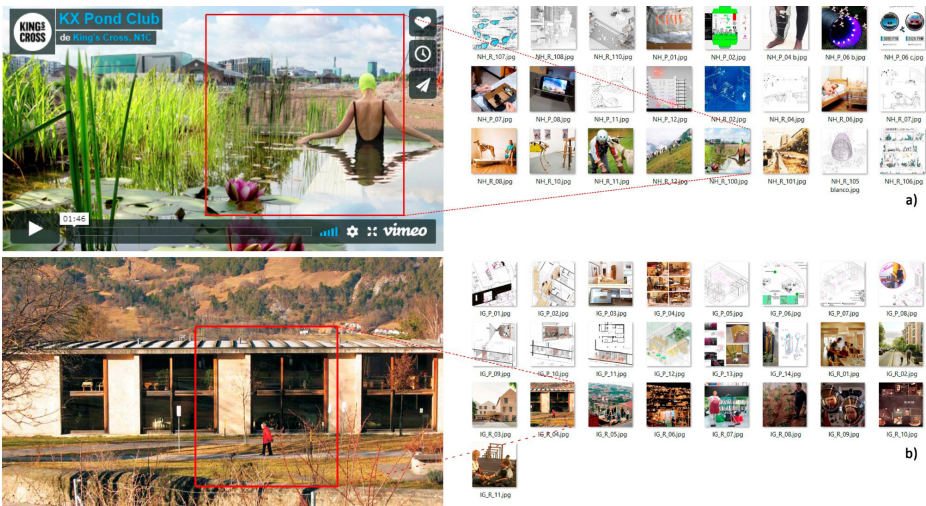


Figure 3. [a] Sample of images selected from reference materials; and [b] graphic material produced by students (source: author).

3.2 Image-tagging software

The second main resource utilized in this research is *ImageTagger*, a tool developed by SPIN Unit to help interpret graphic content on online posts. It creates a string-based dataframe in which metadata is linked to pictures by manually tagging an interpretation of their content. In our case, images were tagged by mixed groups of architecture and law students. Images were taken from graphic material produced by students (*design projects*) as well as from references given to them at the beginning of the semester (*references*). Samples from both topics – inter-generational and human/non-human relations – were considered.



Figure 4. Tagger interface, digital tool developed by Spin Unit (source: López Baeza et al. 2018; image sample: Rafael Gómez Durán, student).

Tags are based on a pre-defined matrix of parameters and values so that each parameter can be associated with a chosen value (e.g. parameter 'size', value 'small'). The software records the choices and links them to the corresponding picture. In a later step, parameters and values (tags) are merged with a picture's metadata. Figure 4 shows the tagger interface, displaying a set of parameters (rows of buttons) and values (every individual button) which are manually associated to the displayed picture by clicking the buttons.

Previous research based on picture tagging has been performed in several disciplines in the intersection between social science, computer science and urban studies (e.g. Döring, Reif & Poeschl 2016; Cheng et al. 2011; Gibbs et al. 2015; Park et al. 2014). More specifically in the study of urban space, López Baeza et al. (2016) examined the individual valuation and shared perception of a newly remodeled street through Instagram pictures; further, Cerrone et al. (2015) performed a comparative study of pictures taken in diverse urban fabrics in several Baltic cities to conclude a correspondence between morphology, behavioural patterns and representational trends.

Statistical data can be transferred to a sociogram, a two-dimensional graphical image of relationships between stakeholders or concepts by means of cause-effect chains (Francés 2016) to portray qualitative tendencies and enable further interpretation.

4. Results

As a result of the implementation of the resources described in both observational and participatory methodologies, Figure 1 shows how graphic standards and original resources were produced over time to achieve the ultimate goal of accomplishing inclusive urban and landscape design. One can observe how depictions of land for which designs have been agreed were accompanied by years of participatory techniques. Linear links indicate sequences and branches in this kind of evolutionary process. Techniques can be organized in representational and non-representational categories. The ability to identify agents and matters of interest is as valuable as the ability to create stories in support of statements.

Students tagged fifty images grouped into two topics, namely inter-agency and human/non-human relations. Subsequently, they used the tree-like gearing device as a vehicle to express possibilities on the combination of agents in order to communicate a possible statement of design. Categories and selected values helped to orientate discourses. As complementary material, info-graphics were developed using data visualization software.

The results obtained from the image-tagger software reveal that images tend to refer to prospective situations (design projects) of living conditions between humans, non-humans, architectures, technologies and goods. A set of results pointed towards a special focus on the comparison between "Link-

age”, “Handling”, “Technology” or “Common Space” (Figures 5 and 6). The sense of these categories links into the concept of inclusiveness through “the degree to which we feel at home in a place, and that is not just a function of who we know in that place, but how we know it, what we experience in it, and the degree to which our memories and narratives are associated with its natural and built environment” (Parkinson, 2012:173).

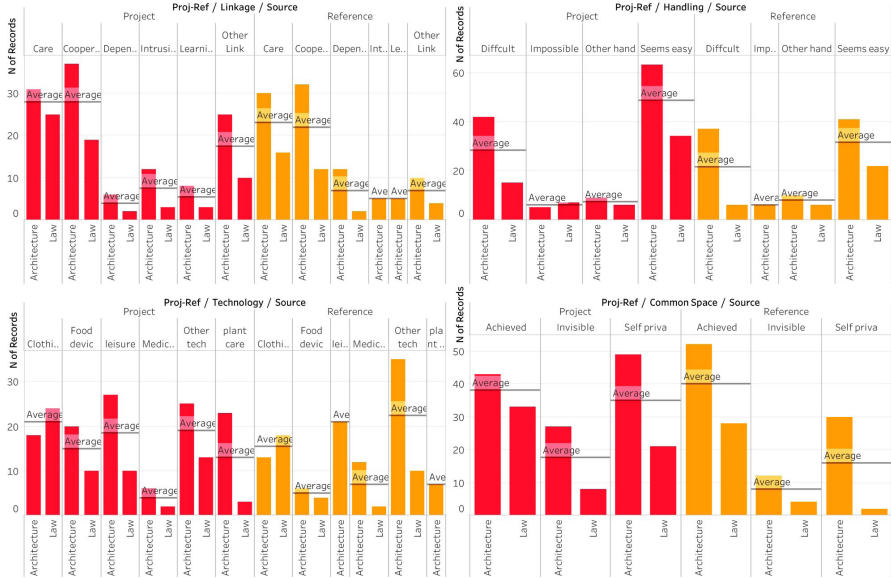


Figure 5. Bar charts for some evaluated parameters: Linkage, Handling, Technology and Common Space. Reference materials (orange) and production design (red) (source: author).

Differences regarding the educational background of the students were detected in the results, specifically whether they belonged to the faculty of architecture or law. In particular, law students were more likely than architecture students to tag one picture with the same values for every parameter. The results from architecture students tended to be more diverse, whereas law students selected the same tags for every picture, showing a higher perceptive cohesion. Furthermore, Figure 5 shows how each pair of bar graphs reveal a strong proportional relationship when observing the provenance of the pictures. This indicates that architecture students understood and included the materials presented as *References* at the beginning of the course, and incorporated their narratives and concepts when developing their own work (*Reference*: orange and *Design projects*: red).

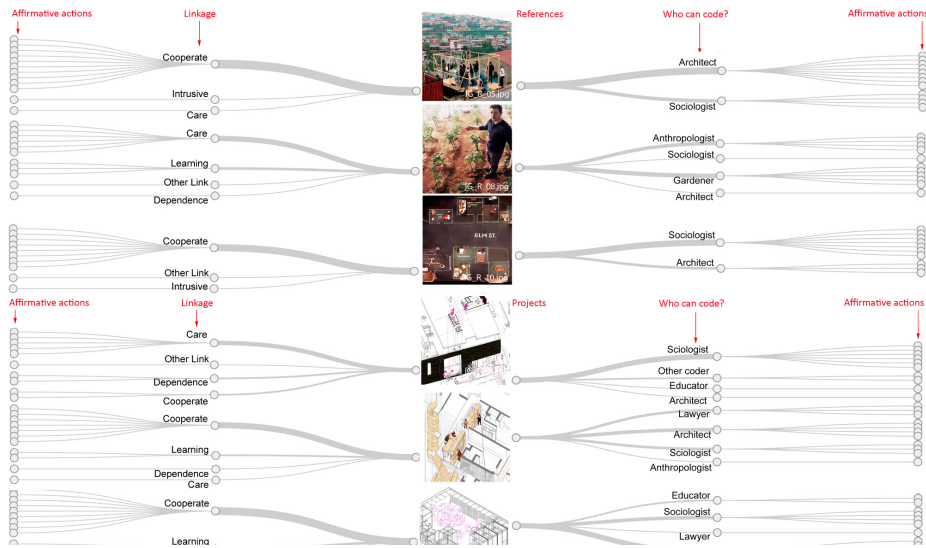


Figure 6. Sample of Tagger results through a horizontal dendrograph – *reference materials* (orange) + *production design* (red) (source: author).

A dendrograph visualization was extracted to represent clear topological links between parameters, using horizontal tree-like topologies (Figure 6). Subsequently, and moving up to a higher level of complexity in device design, a tree-like gearing physical graph (Figure 7) was used to illustrate further concept relations. One special focus was to consider how ethics of care have evolved towards new forms of cohesion and reciprocity for a specific situation: e.g. the sociability detected in *Princesas* (Leon de Aranoa & Roures 2005) taken as a framework in which one could observe ethics of care through decision-making for an interior design refurbishment of a building inhabited by elderly and young people. In this case, gears were the proper bearing to set small models expressing daily care technologies. Affective bonds across generations or between objects and humans – over disaffection or intrusion – were incorporated through modular technologies. Speculation regarding the arrangement of gears let the students practice different ways of explaining designs with a strong narrative and *performative* component.

After compiling and interpreting the results, it became clear that the tagging and gearing exercise in parallel with the design exercise helped to pinpoint the sociological and ecological possibilities of initial statements. Furthermore, statistical observations such as average values, tendencies and correspondences helped the students observe social variables from an applied-research perspective. By thinking in terms of categories and parameters (tags or gears), students were able to deconstruct underlying problems, decomposing these into elemental parts so that relevance on particular issues

could be highlighted as in a complex-systemic networked approach. The potential implementation of these methods with other social groups, in particular practitioners and stakeholders in participatory processes, could serve to *taxonomize* problems and provide a detailed, granular understanding of causes as well as the consequences of approaching them in different ways.

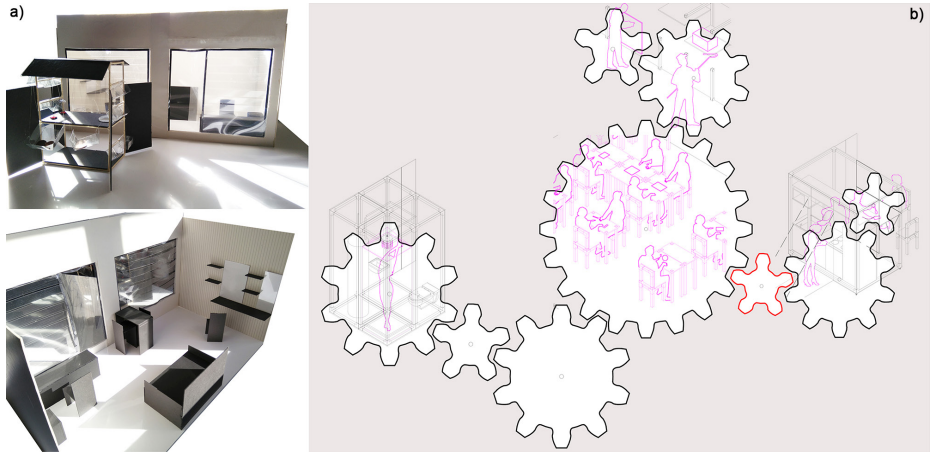


Figure 7. Gearing tool case study: refurbishment of an inter-generational dwelling (source: author).

Gearing depictions became samples of a non-representational methodology (Vannini 2015) since models portrayed complex relations with a stronger emotional and empathic component than Cartesian and Euclidean representations, thereby encompassing humans and non-humans such as things, objects, animals, physical forces and spiritual entities (Thrift 2008; Puig 2017) and proving that “life expands without any proper geometric definition” (Hasse 2011, p. 56) (Figure 8).

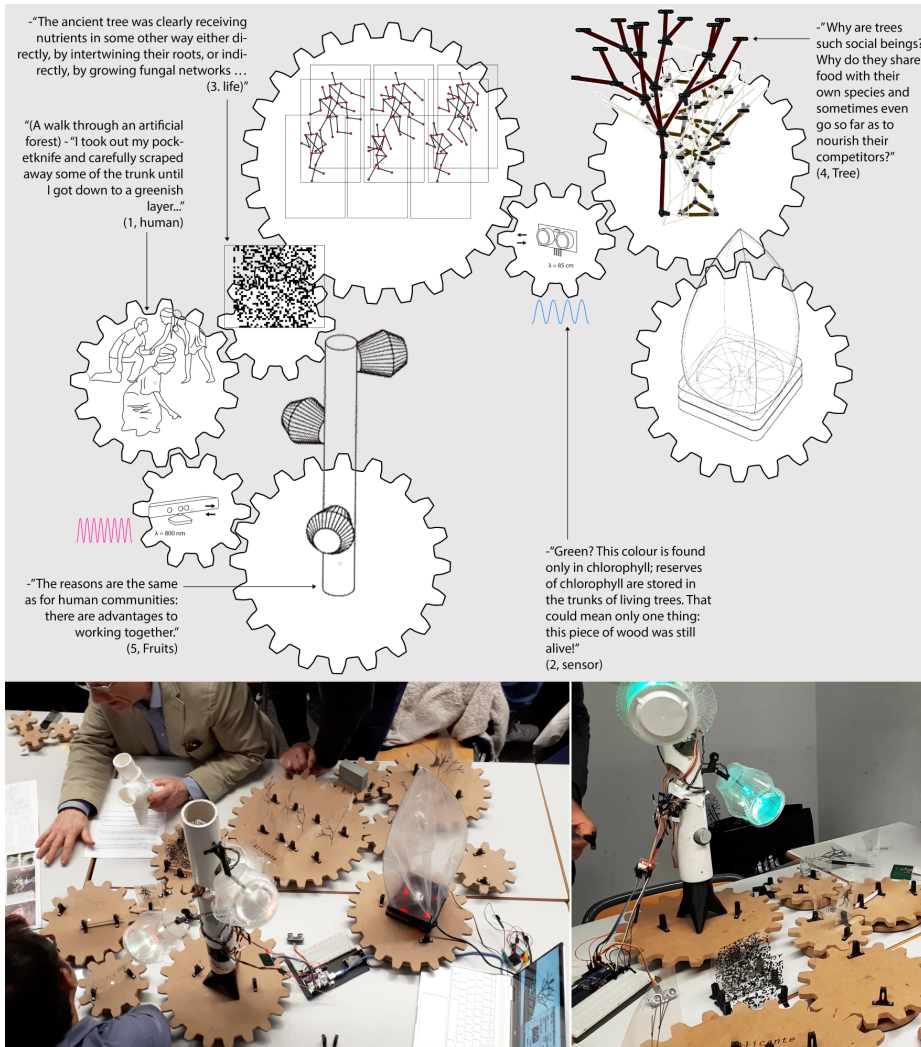


Figure 8. Gearing graph: *Landscape*. Synopsis: Trees communicate, share nutrients and protect themselves using symbiotic interactions. Fruit ripening has inputs such as pollination, human cares, wind & rain; and outputs such as texture, flavour or acidity. *Mise-en-scene* starts when a sensor detects visitors. Data is then taken to an interface where it is combined with a *game of life* model and produces a light & sound response; later, the physical component emulates how fruit ripens (created with the contribution of social anthropologist Tim Ingold, March 2018) (Gearing tool: José Carrasco, 2018).

5. Discussion and Conclusion

The two different research methodologies of participation and observation are compatible, fostering inclusiveness through the mapping of modern master solutions such as the Maison Medicale (Kroll) or the Diagoon (Hertzberger) in relation to concepts such as flexibility or adaptability (Ribot 2018). Furthermore, they are potentially compatible with other approaches such as engineering psychology dealing with the identification of design parameters by reading the spatial configuration through mobile eye tracking as a transversal and interdisciplinary approach combining technological, discursive and analytics skills.

Thanks to tagging and gearing devices, students could examine some possibilities of public and semi-public spaces to activate emotions and generate attachments (Till, Blundell & Petrescu 2005) using lists of items and models of representation rather than scale models, thereby highlighting equidistant and inclusive situations of coexistence between humans, non-humans and nature (Devish et al. 2019).

The representation-perception dichotomy helped us establish a framework according to which procedural decisions were taken. Manual tagging relies on interpretation, which involves a subjective component on the part of the researcher. In this work, a consistent method and training were implemented to reduce the research bias by establishing general criteria on the interpretation of pictures: parameters and variables were defined in advance, and each picture was tagged accordingly. This is commonly combined with a corpus of graphic content posted in public platforms such as social media, an approach often used in urban research under the umbrella of procedural urbanism with a greater social component. Following the post-modern discourse on cities as a set of individual perceptions, interactions and experiences (Lefebvre 1974; de Certeau 1984), social media data offers an up-to-date compilation of these in a manageable format (Manovich 2009).

The comparison of incomes (*References*) and the students' outcomes (*Design Projects*) performed through manual tagging emulated how machine-learning based image recognition is able to recognize content and classify images into categories. In our case, a human process required more time, manpower and expertise. Nevertheless, results from our manual tagging were more reliable than the mere identification of processed shapes by automated algorithms, since a human interpretation enabled the extraction of information on narratives, intentions and relations through the subjective interpretation of the person tagging.

During the work sessions, the tree-like gearing device became a dynamic tool to enhance conversation and discussion, helping to facilitate the "long-term engagements of users, citizens and participants" (Schoffelen, Huybrechts & Devisch 2019, p. 247). Its design generated a rather surprising move-

ment, which captured that attention of the participants.

These exercises have achieved transversal goals. Firstly, they proved the capacity of entity labeling, evocative and related to references, in the understanding that things are precise (referred to a place and time) and common (related to generic places, networks or events) (Anderson & Ash 2015). Secondly, they recognized that controversies can be plotted within boundaries to allow an ontological and spatial approach. Thirdly, they highlighted the importance of understanding the roles and degree of representation of the agents involved. Finally, they showed how representation is not merely textual or figural but a way of looking at minor entanglements in line with Probyn's approach, encapsulated as follows:

“The amazing, sometimes eventful, sometimes buoyant, sometimes endured, sometimes so sad, always a commonplace of becoming sentient to a world's work, bodies, rhythms, and ways of being in noise and light and space” (Probyn 2015, p. 73).

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Stroll'n'Draw, All Inclusive

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Let us embrace contingency to visualise and to reinforce the uniqueness of places

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Abstract

In this paper, I discuss the education of inclusive urbanism as the inclusion of the environmental awareness genesis, attitudes toward urban design, cognitive biases and the acceptance of contingency. How do places 'happen' to become what they are? What characterises their potentially unreducible singularity in light of general planning laws?

I suggest educating along a didactic triangle of rules, novelty and singularity in a spatialisable tabular fashion. In addition to using the methods presented here in teaching, these approaches can also be used to create more inclusion in urban development processes as a whole. With a 3D visualisation matrix of analogue, hybrid and digital methods, I proceed to four exemplary multi-methodological teaching modes to tackle the ever-bygone *status quo*, to introduce research methodology and, thereby, the defeasibility of both the premises and the conclusions in all-too traditional urban design.

I focus on abductive reasoning between the unique locality and the general space of possibility as trial acting and "plan-b thinking" to dialectically shuttle within didactic triangle and visualisation matrix. The curriculum allows for principal and exemplary multi-methodological cross-linkage. Open projects serve as stepping stones into the broad variety of non-algorithmic human occupations in 21st century urban planning. Let us understand our own multiple personal urbanites way beyond professional applicability.

KEYWORDS

visual studies, strollology, education, presentation and inclusion methods, contingency

“I do not know if things will become better if they change. Yet they have change in order for things to change for the better.”

Georg Christoph Lichtenberg¹

Western art, philosophy and literature differentiate between four attitudes towards nature (Fig. 1). The rather *passive flâneur* in the tradition of Charles Baudelaire in 19th-century France remotely ponders about the world in general by walking it by. The *flâneur* relies on the stone paved *trottoir* of Georges-Eugène Haussmann's Paris urban renewal programme. Previously, he would have sunk into the mud in bad weather. As city dweller, he transforms into a nonchalant customer as Poe (1846) observed. “He entered shop after shop, priced nothing, spoke no word, and looked at all objects with a wild and vacant stare.” (p. 225)

Throughout the 19th century, rather neutral artists romantically depict nature as lost and desirable beauty as passive criticism of the Industrial Revolution. Then, Futurism develops an enthusiastic aesthetic embrace of technology in the early 20th century. According to Radkau (2011), urbanisation pushes environmental awareness in time frames. First, romantic nature conservancy and city hygiene demands emerge between 1875 and 1914 (pp. 55–58). They are followed by ‘ecological revolutions’, culminating in the 1972 Club of Rome report on ‘Limits of Growth’ (pp. 124–133), as well as environmental concerns caused by the 1986 Chernobyl disaster and the 1992 ‘Rio de Janeiro Earth Summit’ on Environment and Development (pp. 488–498).

Urban planners follow the linear consequence of the Age of Enlightenment, as Pinker (2018) points out in reference to Nagel (1997): “Foremost is reason. Reason is non-negotiable” (p. 8). On the plus side, the Age of Enlightenment raises awareness of individual means of influence: Citizen, do care about your environment! On the minus side, reactionary ideologies want to freeze development, dream about the *status quo ante*, all the way to political Conservatism that ranges from liberal to authoritarian, from full throttle capitalism to climate change denial: Let us conquer other planets.

Parallel to the rise of rather *deliberate and reflective* environmental awareness, rather *opportunistic*, parachute-in-to-intervene-on-short-notice planners and developers in commercial urban design extend their vocabulary. A “super-creative core” (Florida, 2003, p. 8) creates a new surge for uncritical place branding. Whereas 20th century development was about general “International Style”, 21st century urban design aims at uniqueness and trade-

1 Lichtenberg (1994), p. 450: „Ich kann freilich nicht sagen, ob es besser werden wird, wenn es anders wird; aber so viel kann ich sagen, es muß anders werden, wenn es gut werden soll.“ Translation by the author.

mark architecture, “instagrammability”.

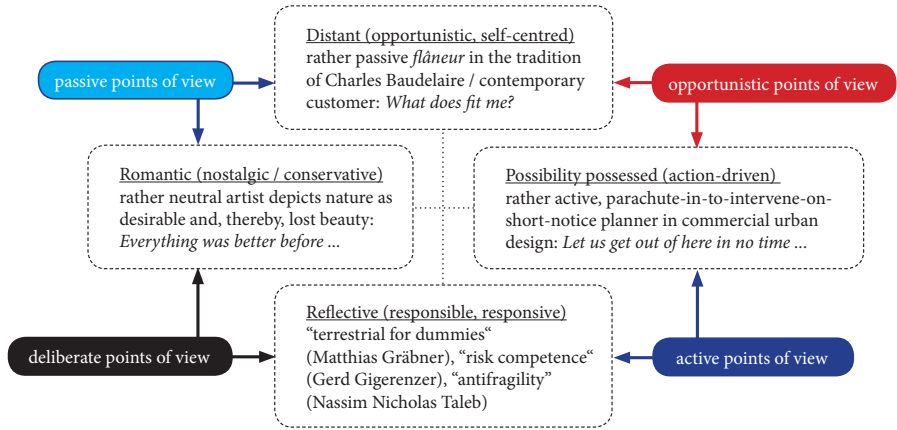


Figure 1. Four ambivalent attitudes to urban design in polar pairs: Distant (opportunistic / self-centred), possibility possessed (action-driven), reflective (responsible, responsive), romantic (nostalgic / conservative).

In between, two valuable bodies of work emerge. Lucius Burckhardt (2015) develops the “science of Strollology” as emphasis on the path to something at “the pace of thought” with the “mind at three miles an hour” (Solnit, 2000, p. 2 f. and p. 14):

“*Strollology examines the sequences in which a person perceives his surroundings. For it is not as if we find ourselves “beamed” all of a sudden to Piccadilly Circus or the Cancellaria; instead we find our way there, one way or another.*” (p. 225)

Hermann Knoflachner (2006) tackles the anti-urban impact of the automobile as a “virus” and their “story of destruction” to the city. He asks, “What if pedestrians needed the same space as cars?” He invents a wooden strip “walking tool” for pedestrians with the same footprint as a parked car (p. 394) to illustrate his quest for “restructuring parking provision.”

Two mental slides call for congruence: We have to understand our impact on earth, the “Anthropocene” (Paul J. Crutzen), and what Latour (2018) calls the „Terrestrial, with a capital T to emphasise that we are referring to a concept, and even specifying in advance where we are headed: the Terrestrial as a new political actor” (p. 40). He defines it as a “critical zone”, “a minuscule zone a few kilometres thick between the atmosphere and bedrock. A biofilm, a varnish, a skin, a few infinitely folded layers” (p. 78). We are stuck in a self-induced “metamorphosis of the world” (Beck, 2016) that requires, according to Lübbe (2005), a new „civilization ecumenism”. We do not objectify distant places; we plan ourselves.

2. Approach: Didactical Triangle of Rules, Novelty and Singularity

“Rule 10: We are breaking all the rules, even our own rules, and how do we do that? By leaving plenty of room for “x” qualities.”

John Cage (1967–68)

In order to advance to an inclusive urbanism, we shall object our subjectivism with its blind spots. Let us calculate our cognitive biases that evolution orchestrated for us and that propel us through life: We favour the current state of affairs (*status quo bias*). We assume that we are unswayable (*bias blind spot*). We indulge the *illusion of control* since it seems to allow us – a big trap for beginners entering any field of expertise – to sort the new and the arbitrary into our existing knowledge patterns at hand. We conclude what seems to make sense to us (*belief bias*) in conjunction to the *confirmation bias* that makes us reason, to select and to appreciate what seems to be believable.

What does that mean for education in urban design?

1. Let us be aware of the contemporaneity of challenges. Students in urban design, a mix of the four attitudes in itself, have to synchronise their individual *status quo* world and their cognitive biases with general planning routines that are *new* to them in order to proceed to a *site-specific* amalgam of ‘is’ and ‘shall be’. How, then, do we teach basic principles, case-study originality and the increasing quest for personal non-interchangeability (singularity) at the same time?

2. Let us be aware of the naturally amateurish part-time student cartography in urban design with subliminal presumptuousness. Whereas design in architecture relates to rather well-known scales of room, house and street, internalised throughout our upbringing, urban studies require scaling of distances and areas from a bird’s eye view that evolution has not imprinted on us.

3. Let us be aware of the error-prone Styrofoam crumb urban design studio “Lego” for grownups. Evolution told us “the bigger the more important” (the lion in front of me is scarier than one on the horizon). Urban studies – in their meta-scientific case study neutrality – propose an omnipotent, yet frightening, “Lego” for real mode. That *abstract* mode – gladly executed with *manageable* Styrofoam crumbs emblematising city blocks – extends into the effortless, if potentially erroneous *concretion* on high-resolution computer screens with infinitely scalable windows.

I suggest blending the four approaches towards the world – *flâneur*, artist, environmentalist and urban planner – into three inclusive urbanism patterns, a didactic triangle of rules, novelty and singularity with side effects (Fig. 2):

a. Ancient rule patterns. How do we understand urban beauty and grace?

Let us go out – on excursion! In the terrain, we see how contingency overrides (and thereby confirms) rules on beauty that in reality is usually surrounded by mediocracy and “the Architectural Uncanny” (Anthony Vidler). Thus, we learn how “architecture depends” and how “mess is the law” (Till, 2009, p. xi), full of “wicked problems” (Horst W. J. Rittel). We balance the “art of travel” (de Botton, 2002) in tradition of the 17th and 18th century “Grand Tour” with the clear understanding of “the importance of armchair travel” (Bayard, 2016) to foster fantasy.

b. Uniform novelty in the 20th century: Newness by following rules? 20th century Modernism broke with the paradigm ‘right or wrong?’ after the Age of Enlightenment discarded the ancient paradigm in terms of ‘what is an old truth interesting for?’ The success of 20th century Modernism petrified into an “International Style” (Hitchcock and Johnson, 1932) across continents and climate zones. Contemporary inclusive urbanism, like a fault detection device, should belly dance around the Modernist city to show how rigid and how outdated Modernist patterns have become and how to update them in view of urbanisation, demographic transition and global climate change.

c. The 21st century quest for “singularity” in the eponymous society (Reckwitz, 2017). Let us teach “rules for mavericks” (Beadle, 2017) like a new, yet to be formulated rule of the exception. De Wilt (2017) gives us permission “think like an artist” to pursue pure, uninhibited experimentation, all the way to the Old Italian saying “*Impara l’arte, e mettila da parte*” – “learn the craft, and then set it aside” (Csíkszentmihályi, 1996, p. 90). Let us see how the formerly “colliding worlds” of science and art can conjoin as “the coming of a third culture” (Miller, 2014) to visualise invisibility: “In fact, both artists and scientists have always been engaged in trying to fathom the reality beyond appearances, the world invisible to our eyes.” (p. 342)

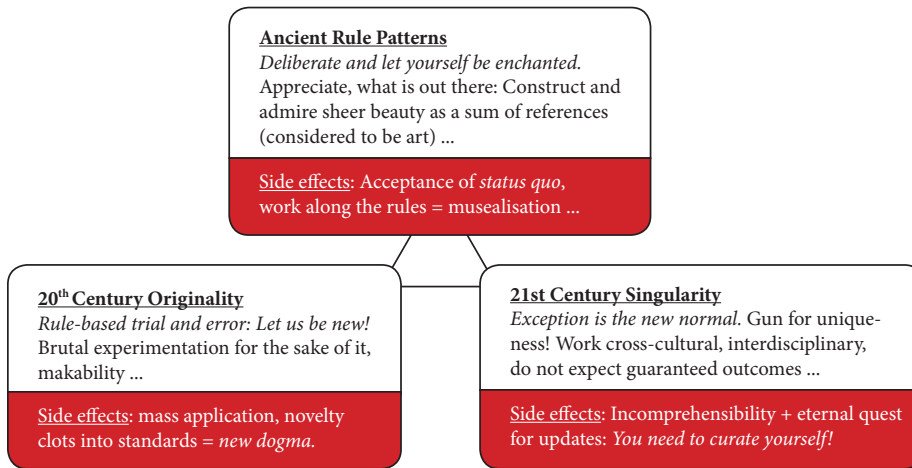


Figure 2. Didactical triangle of rules, novelty and singularity with side effects. Let us productively navigate a didactic ‘Bermuda Triangle’ consisting of status quo rules, new dogma and incomprehensibility: Excursion on beauty and contingency + permission to brutal experimentation in design case studies within set frameworks of rules + quest for incomprehensible uniqueness = the perfect “Hurricane Alley” for learning.

Is there a way to backlight urban design by augmented sustainability, a robust “antifragility” (Taleb, 2012) in order to prevent Latour’s “Terrestrial, with a capital T” to not fall apart at the current rate?

3. Discussion: Tackling the Ever-Bygone status quo in Joint Research Methodologies

“...sometimes I wonder how all those who do not write, compose, or paint can manage to escape the madness, melancholia, the panic and fear which is inherent in a human situation.”

Graham Greene (1980, p. 10)

I suggest teaching units that integrate the fundamentals of traditional nature studies and descriptive geometry via freehand drawing ready to go digital (Fritsche, 2012), with spatial design and visual communication to form a 3D visualisation matrix (Fig. 3).

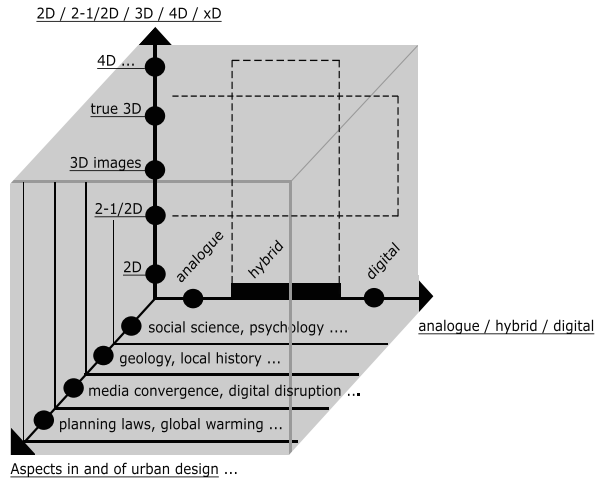


Figure 3. 3D visualisation matrix in urban design. The range between accuracy of plan drawings and the clearness of perspective drawings via isometric projections as the perfect combination defines a first axis between 2D and 3D. A second axis spreads between analogue and digital work with hybrids in-between. A third axis lists aspects of urban design, political science, local history, media convergence and contemporary drawing as it became an autonomous branch in the arts during the 1990s, a “vitamin D” as in “drawing” (Dexter, 2005).

The three axes allow exemplary multi-methodological cross-links, dialectical shuttling in urban design education as the main topic of my paper. In urban design education, cross-linking as applied visual logic should confront the three logical forms from the general to the specific (deduction), from the specific to the general (induction) and “generalising from the interactions between the specific and the general ...” in a way that Peirce (1966 [1901]) pragmatically called abductive reasoning and “abduction”:

“Accepting the conclusion that an explanation is needed when facts contrary to what we should expect emerge, it follows that the explanation must be such a proposition as would lead to the prediction of the observed facts, either as necessary consequences or at least as very probable under the circumstances. A hypothesis then, has to be adopted, which is likely in itself, and renders the facts likely. This step of adopting a hypothesis as being suggested by the facts, is what I call abduction.” (p. 121 f.)

Let us not so much aim for the likely explanation of observations but for pragmatic plausibility. In urban design, we want to find out by trial acting what might work before the design will ‘happen’. Bryman and Bell (2015) put it according to Peirce: “Abduction starts with a puzzle or surprise and then seeks to explain it” (p. 27). I want to rephrase that, by trial acting in design, we find out if our presumptions on novelty worked.

3.1 Height and depth: Spatial drawing discovery mode from the inside out and emptiness in-between

Let us start to stroll and draw rather small environmental motifs such as stairs, ramps, layers of depth and the differentiation of ‘old’ versus ‘new’ to facilitate fundamental confidence in 3D drawing skills and to detect urban issues. The key is spatial drawing of architectural features, i.e. a toolbox of prospective design patterns.

a. One example for the ‘from inside-out’ mode of drawing: The Parliament of the Free State of Saxony in Dresden, Germany. The entry stair arrangement in front of the public entrance quotes Mies van der Rohe’s Farnsworth House design and – less obvious – the Baroque reflecting basin. We augment the visible with rather invisible building history with its two chevrons: the 1920’s tax office turned House of Deputies and the diagonally mirrored 1993 extension for the new Parliament by Peter Kulka. We stroll and draw how the Kulka’s implementation triggered the doubling of the Dresden City waterfront in length with a new Congress Centre to form what now is called “New Terrace” in appreciation of the Baroque “Brühl’s Terrace”, nicknamed “The Balcony of Europe” (Fig. 4 a-c). Let us not forget the political ramifications: The Parliament decides on educational policy and university funding; thus affecting our students’ modes of studying.

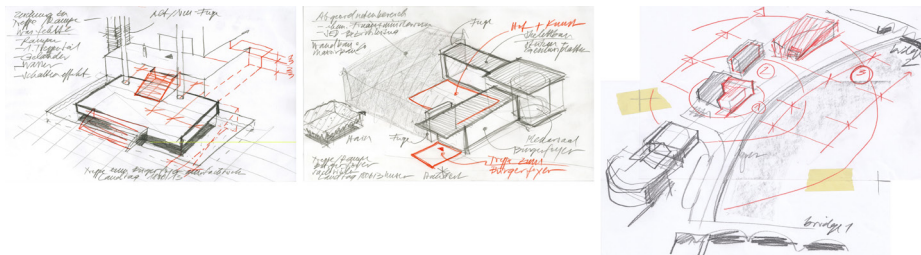


Figure 4 a-c. Introductory sketches to the “public entrance to the Parliament of the Free State of Saxony in Dresden” seminar. [a] The stairs mark the entry to the new chevron that consolidates a city block [b] that, in turn, serves as a trigger for the extension of the Dresden waterfront [c] while serving as a reminder that, and how, the policy that is decided here has impact on universities and their students, 2018. Pencil and coloured pencil on paper, 29,7 x 42 cm and multiples.

We emphasise the differentiation between drawings as a compositional undertaking from the ‘outside in’ and from the ‘inside-out’. Even children calculate (deduct) if and how their *general* painting surface (the sheet of paper) fits to depict what they want to draw *specifically* (Edwards, 1999, p. 67–81). In urban design, we usually project from the outside, the given field of land, in. We subdivide the planning area with a street grid in the within area. We define housing block characteristics within the city block. At the end, intend-

edly so, the way of living in any given domicile is a top-down logic, deduction, or subordination, from the overall scheme. The part (singular) signifies the whole (singular), *pars pro toto*, unequivocally.

Bohning (1981) differentiates between “autonomous architecture” and “participatory construction”. Drawing and designing from the outside in certainly apply to “autonomous” subdividing. “Participatory” adding outlines the opposite, to design from the inside out, *totum pro parte*. With the from-the-inside-out drawing and design mode, bottom-up parts (plural) constitute the whole(s). They become semi-autonomous, *abductively* independent while the parts remain related. Practically speaking: If you reach the edges of your sheet of paper, just tape a new one to it.

b. Depth layers in landscape architecture – see the proverbial tree groups in the middle of landscaped architecture. I introduce the concept of vistas in landscape(d) architecture, how plan(t)s are the result of the gardener’s imagination of views in time. How well does the characteristic silhouette in the rear define (reconfirm) where we are? We talk about image composition to frame the view with tree trunks in the foreground. The rather *empty* middle ground signifies the prospective panel of construction in architecture and the forest clearance in landscape architecture (Fig. 5 a-c).

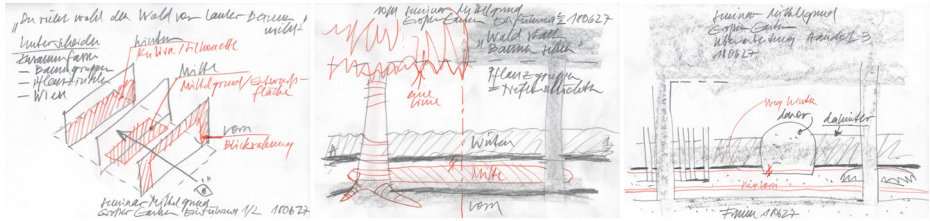


Figure 5 a-c. Introductory sketches to the “empty middle ground” seminar at the Great Garden in Dresden. Foreground, middle ground and distance can and have to be separated in order to combine image composition and recognisability of the prospective design, 2018. Pencil and coloured pencil on paper, 29,7 x 42 cm.

Let us consider the middle ground as a stepchild in urban planning and architecture ultimately worth extra parenting. It mysteriously withdraws from Western emphasis of substance-esteem (buildings), size appreciation (the bigger the better) and figure-ground duality (considered an academic sophistry). Therefore, the middle ground may turn out an ideal practice area for *abductively* generalising from the *specific* in terms of object(s) like houses and the *general* in terms of context(s) like the city.

3.2 Places and their multiple essences: Excursions on contingency

There are two fundamental, almost polar ways to educate in urban design. In the scientific open way, we build the foundations by *general* agreed-upon knowledge that is contingent on the terms of the prospective applicability. In the referential predetermined way, we teach great examples as a picture book of what people applaudably achieved under *specific* and obliging circumstances in the past, therefore contingent on the terms of prospective applicability as well.

Drawing excursions are a fantastic impromptu format to tackle general and referential contingencies. There are at least three ways to decide on where to go: Most commonly, we travel to places full of gorgeous references in close proximities. Also quite common are drawing excursion destinations where we aim for picturesque environments if not pure unbridled nature for the open, unbiased discovery of personal motifs. As a third way, I try to pick places of lesser “instagrammability” but areas *in transition*. I aim at a mixture of *open* motifs to discover and introduction-worthy second-tier *references*. Here, I briefly introduce three examples of joint research methodologies:

1. Endangerment of a river valley. Shall we, according to the scenarios of Anders and Fischer (2017), maintain, exploit, give up or alter the fifty-kilometre-long flood-prone marshy grounds of the Oder river valley on the border between Poland and Germany? Let us mind map and scrapbook the *per se* incomprehensible distance shared by two countries (Fig. 6 a) before we proceed to a “flipped classroom” project about confrontations, potentials, pushovers (games) and social criticism ...

2. Reorientation of a city. Ústí nad Labem in the Czech Republic with a rather torn political history less than 20 kilometres from the Czech-German border expects a new high-speed rail through the Ore Mountain Range. That calls for a new railway station with a fundamental reorientation of the T-shaped city. We start with a ‘we-can-move-through-our-own-picture’ image (Fig. 7 b, 20 b). Students proceed from pattern recognition to “flipped classroom” projects about new motives from ‘*what do I want to explore?*’ via ‘*what else would be conceivable?*’ to ‘*what I would like to pursue further.*’

3. Unheroic diversification. After 200 years of breath-taking urbanisation, coal mining stopped altogether in the Ruhr district, the largest urban area in Germany, in 2018. The district underwent a socially and structurally fairly successful transition from exploiting steam engine capitalism via Rhine capitalism (social market economy) to bipolar post-industrial diversification. That calls for transition metaphorsketches atop of word clouds and mind maps (Fig. 6 b) to isolate, to layer and to merge them.



Figure 6 a. Association and content collage based on a map, 2013: How to maintain, give up or alter the marshy ground of the Oder river valley on the border between Poland and Germany with extra consideration of intensive agriculture and excessive wind farming? Collage, 90 x 150 cm.

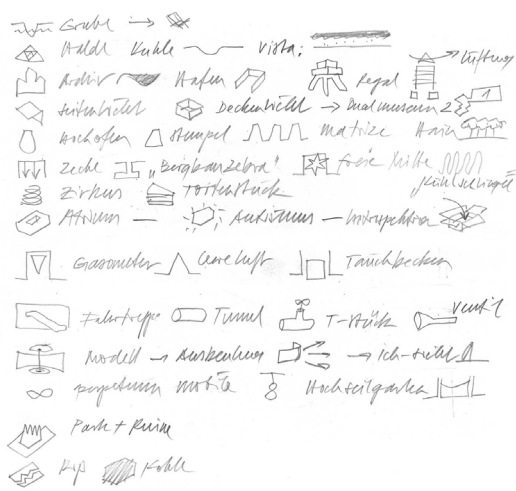


Figure 6 b. Visual and linguistic transition metaphors based on motifs, omissions, contingencies and contradictions, assembled during the Ruhr drawing excursion, 2018. Pencil on paper, detail, 38 x 42 cm.

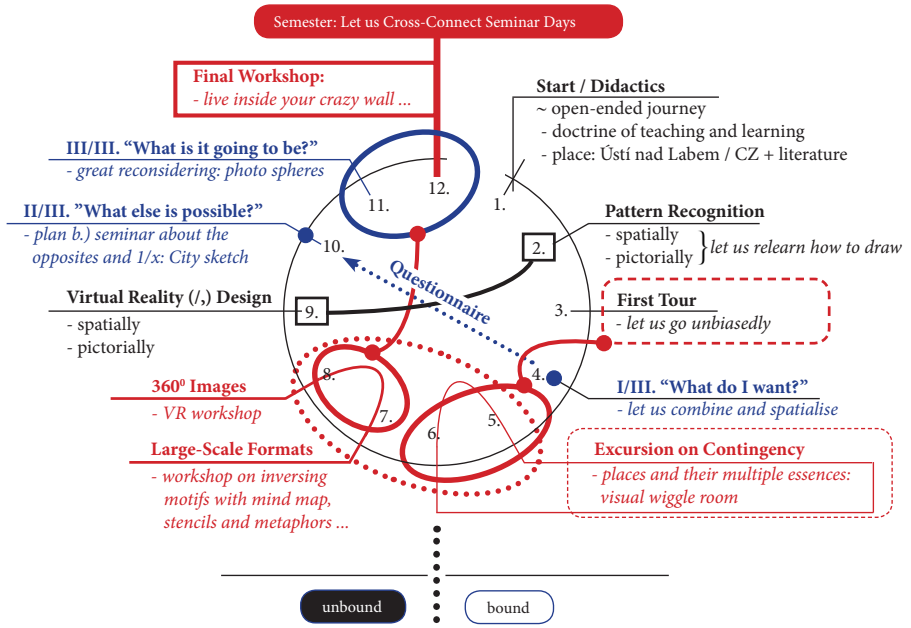


Figure 8. Ústí nad Labem excursion circular cross-connection scheme for the semester in 12 weeks: Clusters of consideration with the imperative to cross-connect as well as to go back and forth, 2017.

Layers of history crash into layers of concise communal planning and inward-looking private property. That allows thwarting all too primitive expectations on the future of simple rules in an altogether algorithmised urban planning while reinforcing Burckhardt's "Strollology" ("the sequences in which a person perceives his surroundings").

The role of the "private car use in cities in high-income nations" (Knoflacher) serves as another great subject area for abductive reasoning in terms of "Utopia for Realists" (Bregman, 2018) and crisp "plan-b" thinking: How should our living environment look without the excessive "private car use"? The same applies to city tree patterns in climate change scenarios, urban gardening and the urbanistic incentives for the "Do it yourself" (DIY) economy.

Within the 3D visualisation matrix (Fig. 3), we can link freehand drawing with virtual reality (Fig. 10 a-c) and hybrids thereof. With a 360-degree camera app, we produce panoramic data (Fig. 11 a, b) that can be drawn over, scanned (or photographed) in order to be reviewed as 3D images with a shared VR lens. From here, the unreal border between drawing the visible and designing the new becomes a low-threshold tool for visualising perspective images in an easy-to-do fashion: Pencil sketches and acrylic paint, analogue haptics altogether, become *work-in-progress* VR. Finally, an immersive view looks like a design to be worked on, a sharable process (Fig. 11 c).



a



b



c

Figure 11 a-c. [a] Oder River marsh excursion montage with the indications of dams, 2013. 17 x 67 cm.

[b] Freehand drawing turning augmented virtual reality: 360-degree images in 2D with the marvellous string of two lenses, forming the infinity symbol that transforms into an immersive 3D projection: Masaryk Lock at Střekov Castle, Ústí nad Labem, 2017. Photo by Tim Häring, 28 x 56 cm.

[c] 3D reflection word cloud / scrapbook on local metaphors based on the visit of "Gallery Armaturka" in Ústí nad Labem, 2017. Acrylic on paper, 70 x 100 cm.

Similarly, the Ruhr drawing excursion in 2018 allowed students to witness an ecological rollback: We can museumise some remnants of industrialisation like “Landschaftspark Duisburg-Nord” designed by Peter Latz (1989-99), where it is possible to climb an amazing blast furnace simply left standing. We, nevertheless, ask how an extensive post-industrial cityscape like The Ruhr district with an east to west extent of over 50 kilometres could look in the field for their inhabitants at close range.

3.3 Visual paragraphs in a row: The town hall presentation tool

In the 1970’s, a fundamental change in the perception of the future occurred. Ubiquitous “International Style” urban planning in deduction frenzy – celebrations of an unbiased, heavenly futuristic future for everybody everywhere – had crashed into Mitscherlich’s 1965 “inhospitality of our cities” of the present. According to Skog, Wimelius, Sandberg (2018), current “digital disruption dynamics” have added a widespread sense of insecurity. Together with a ‘*the customer is always right*’ attitude, new urban design proposals are met with a new, polarised public scrutiny, often resulting in hostile camp thinking (Fig. 12).

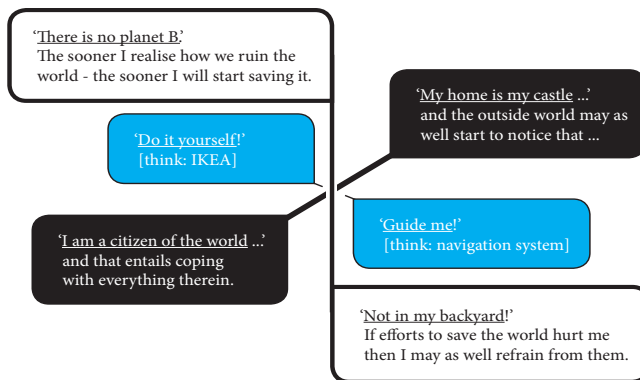


Figure 12. 3-axis polarisation in urban design: ‘I am a citizen of the world’ (at least when it comes to cruise ship travel arrangements) versus ‘my home is my castle’ (and the world may as well leave me alone). ‘Do it yourself!’ (“DIY”) attitude [think: IKEA] versus ‘Guide me’ [think: navigation system] and “There is no Planet B” [think: Greenpeace] versus “NIMBY!” (“Not in my backyard!”).

After witnessing various open councils with disastrous outcomes on a variety of urban topics – most infamous the de-listening of the Dresden Elbe river valley as a UNESCO World Heritage Site in 2009 – I developed a general presentation form slash method called “simultaneousness plan” as wall-size self-explanatory delineation of architectural and urban projects for public presentations (Fritsche, 2018). How do we *abductively* generate a presentation form that interacts between general public understanding level of planning

and map cognition with the specific sensitivities about the site at hand?

Let us delight the audience from anxious mayor via antsy planner to sceptical audience with a print out – visible from the typical town hall viewing distance – that carries the essential steps in consideration between *status quo*, concerns about it and design approaches with chances for improvement, side effects and consequences as well.

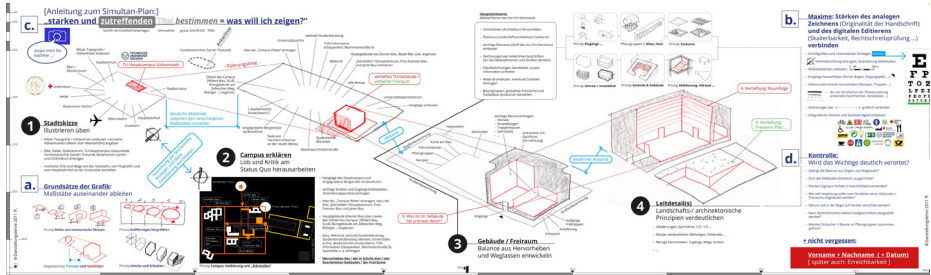


Figure 13. Didactic structure of a four-plus step simultaneousness plan: 1. City sketch: Where are we? 2. Explain site context: What context features do we rely on in our design? 3. New building and / or urban open space: Emphasise what you intend to do! 4. What design essences do you want people to keep in mind? A: Graphic principles. B: Hybrid between analogue and digital creation. C. Catchy title: What do I want to show? D: Monitoring: Did we highlight importance properly? Digital print, 145 x 490 cm (2017).

What do we have to keep in mind? Let us step back and judge for ourselves what works as “data-ink ratio”, “the non-erasable core of a graphic”, and what will be rendered “chartjunk” (Tufte, 2001, p. 93).

A central focus on the visual paragraphs is what I call “isometric Nollis Maps” (Fritsche, 2018): Let us recombine, as Giambattista Nolli did in 2D, the city map with X-ray vision of important (but not all of them) interior spaces with the add-on of verticality, the third dimension (Fig. 13). With the focus on first time viewer, the outer shape of a building is important for recognition, with the style of the roof and the entrances to what the visitor usually looks for in the first place as the main features. Therefore, highlight landscaped urban open space and arrival features such as bus stops, mark the selection of the most important (not just any) spaces, emphasise contour lines of architecture and plateaus in landscape architecture. It is crucial to outline the scope of change to be proposed.

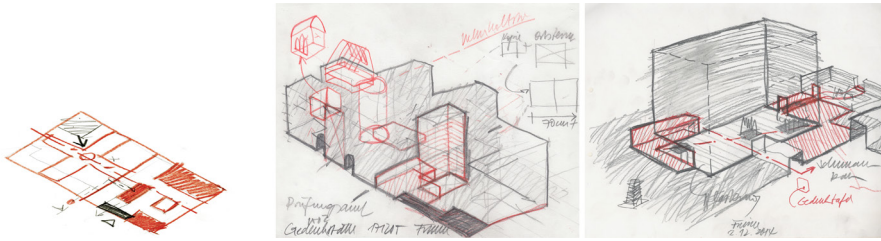


Figure 14 a-c. Simultaneousness Plan, introductory sketches to the TU Dresden Georg-Schumann-Bau campus building: Simplified footprint (left), “isometric Nolli Map” of the building complex (middle) and detail of the historical site “Münchener Platz Dresden Memorial” within the complex (right), 2015-18. Pencil and coloured pencil on paper, 29,7 x 42 cm.

The quest for simplification recoups the training of freehand drawing with *on-site* sketches and the help of *online* geodata with frequent *hybridisation* via trace paper (Fig. 15).



Figure 15. Simultaneousness plan dummy to illustrate how small on-site sketches can be photocopied, worked over, and inserted in desktop publishing and typesetting software applications, 2017-18. Pencil on paper, trace paper and photocopies, 125 x 300 cm.

I teach simultaneousness plans as a communication device in conjunction with the theming of the TU Dresden university campus in its entirety. Yet, we not only learn about university structure and history. Throughout evolution, humans memorised places of opportunity (where the berries grew last year), where danger looms (sabre-toothed tiger) and how to get from point ‘a’ to point ‘b’ with the previous two issues in mind. Now, crucially important for an unbiased posture in urban design, students stroll, map the campus and learn to look through walls (Fig. 14 a-c).

3.4 Intellectual wiggle room: Unruly singularity and dialectical shuttling between form, content and message

Based on the “triangle of meaning” (semiotic triangle) by Ogden and Richards (1923), I suggest a visual triangle of autonomies for open projects where form, content and message respectively work as interdependent companions and as stand-alone actors.

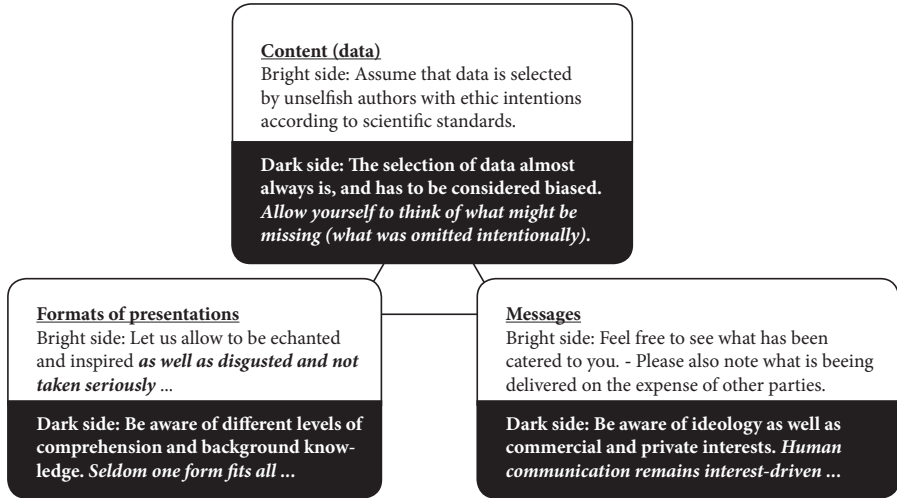


Figure 16. Open project visual triangle of rudimentarily autonomy: Dialectical shuttling between the bright and dark sides of presentation formats (effective self), content (data) and messages (understandability).

A corridor opens up. On the one flank, Ulrich Sonnemann coins the expression of the “tyranny of the eye” (Rötzer, 1987, p. 276) – dissecting Modern age fixation on, if not the obsession with, visuality. On the other side, the functionalistic underpinning of Modernism governs where form has to follow function according to Louis H. Sullivan, extending Tufte’s “data-ink ratio” imperative.

There are two new aspects: Firstly, we assume that images have “lives of their own” in urban design, as Mitchell (2005, p. 2) concluded for the arts:

“We can ask if a picture is a good or bad, living or dead specimen, but with an image, the question is, is it likely to go on and reproduce itself, increasing its population or evolving into surprising new forms? The life of images, therefore, is often connected with the life of a class or genre of representational practices –portraiture, landscape, still life, devotional icons – or with even larger classes such as media and cultural forms.” (p. 90)

Secondly it is new, that, by *abductively* trying out presentation formats, we allow, according to Bryman and Bell (2015), dialectical shuttling as a “hermeneutic circle”. Understanding, then, is a “continuous dialogue between the data and the researcher’s preunderstandings” (p. 27) as a productive opposition to the obsessiveness with rules and customs. That feeds back to the famous concept of the “reflective practitioner” (Schön, 1983).

1. Development vector: Let us accept and visualise the uniqueness of a place by comparison. Often, a first inventory delivers a lasting message. Let us put *status quo* (‘old’) and ‘new’ *simultaneously* next to each other from the beginning (Fig. 17 a). Alternatively, and in quotation of construction documents, the palimpsest, layers of trace paper in design, double exposures in modern photography and digital layering, we develop the story of design in layers on top of each other, *successively* discoverable by the audience, like a pile of carpets or pages of a large-scale coffee table book (Fig. 17 b). In the following – the great potential of this methodology becomes clear through the inclusion of citizens as part of the audience and in corresponding planning and urban design processes. The approach can increase curiosity, and encourages individuals to experience and participate in the planning process resulting in an inclusive atmosphere.

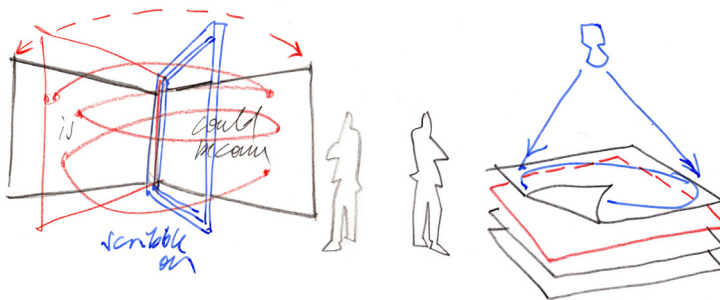


Figure 17 a,b. 1:1 comparison of ‘is’ (“old”) and ‘could be’ (“new”) with a movable “window of wishes” panel in-between (left). Layers drawings on top of each other in quotation of construction documents, the palimpsest, layers of trace paper in design, double exposures in modern photography and digital layering (right).

2. Divergence, convergence and overlaps: Let us visualize either-or, as-well-as and more-or-less arguments. On the fundament of mind map and morphological box, we compare divergent and convergent ways of thinking in a participatory fashion (Fig. 18 a). Let us separate *successive* variants of *simultaneous* categories as if we flip pages off from a tabular flip chart (Fig. 18 b) to switch from categorical *either-or* to rather incorporating *as well as* and *more-or-less* arguments, and, therewith, from deductive to inductive reasoning.

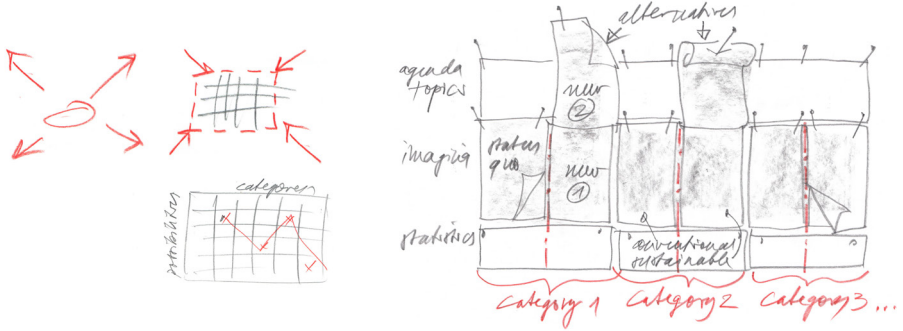


Figure 18 a,b. Mind Map and Morphological box to illustrate divergent and convergent ways of thinking in categories and possibilities (left). Flip chart with multiple columns that allows trying out parallel variants on landscape features such as the growth patterns of energy crops, wind and solar power installations as well as scenarios on possible catastrophes and avoidances thereof (right).

3. Rearrangability: Let us illustrate the equal rights of low and high key ideas. We present visual thought chapters via large-scale leporellos (zigzag walls) with front and rear sides, window effects and like shutters and turn windows inclusive. We scrapbook on door-size “book page” chapters on repositionable panels as a mix of time–distance diagram, mood board and visual Hypertext Markup Language. That counts as authentic work-in-progress exhibition, a borrowing of criminalistics mappings (“crazy walls”) and “Post-It Procedural” (Richard Benson) as process documentation like a construction site diary (Fig. 19).

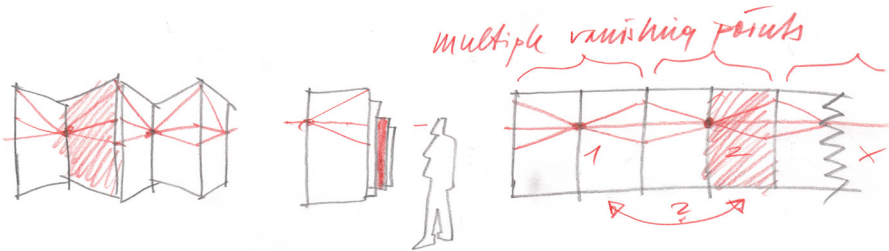


Figure 19. Leporello (zigzag presentation) (left). Separate door-size “book pages”, forming a potentially two-sided wall like a proof copy that allows altering number and sequence of boards with a system of vanishing point projections to illustrate parallel histories of things to come on the respective left and right side pages (right).

4. **Imply! Leave things to the audience for discovery.** Do we want to stage-design as model messages that can be unfolded like an Advent calendar or a wrapped present (Fig. 20 a)? You do not always have to display everything at once: Sometimes the recoiled roll of paper tells a story of a long story in itself like an urban design scroll (Fig. 20 b). Once again, this methodology greatly increases interest among participants and results in creativity in participation, which in turn clearly promotes inclusion in planning and decision-making processes.

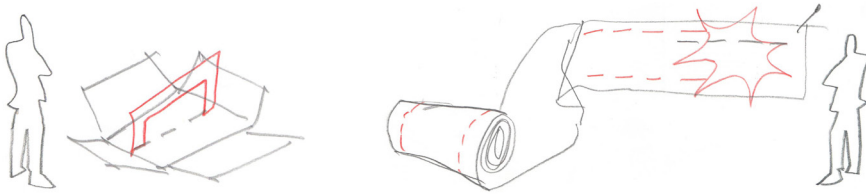


Figure 20 a,b. Game design: Stage-design like surprise box puppet show for layering of vistas and plug play referring to the depth layers in landscape architecture (left). Pathetic endlessness: Partially recoiled printouts to mark absurdities in urban design such as energy balances and land waste (right).

5. **Stage design / art fair booth: Let us offer immersion to the environment in question, analogue and digital.** How about two-sided circular presentations with a first wall of information on the outside to be augmented on the inside, perhaps with punctures, tunnels and windows between both sides (Fig. 21 a)? We are about to get used to the enormous bandwidth of real-time 3D inputs. Let's expose us and the audience to ever more intriguing yet at least partially self-explanatory virtual and augmented realities, all the way into semi-automatic, view controlled and data driven BIM complexity (Fig. 21 b).

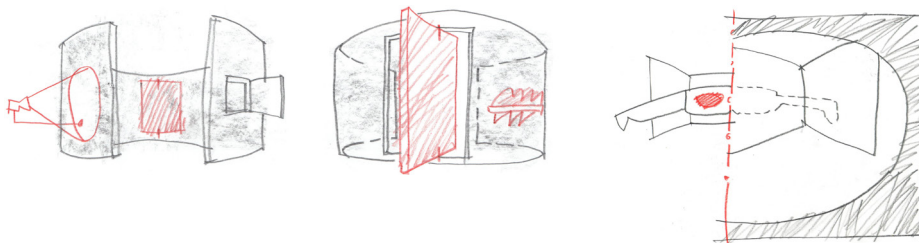


Figure 21 a,b. Immersive presentations: Suddenly, a thesis has an inside and an outside. People proverbially move in and out including pivot doors and Advent calendar windows (left). Anaglyph images and sophisticated just-in-time VR projection with head-mounted displays (right).

Let us declare an imperative of experimentation in visual studies. Again, a wide corridor of visual tactics opens up. On the one side, Edward R. Tufte *deducts* general rules for the “the non-erasable core of a graphic” including the avoidance of “chart junk”. Marshall McLuhan (1964) concludes *inductively* “the medium is the message” with rather untested consequences. The “medium” works by itself in real-time, whereas a Tufte’s “data-ink ratio” offers us an instruction manual for calculable outcomes in the future, elsewhere. Let us lay out new fairways.

4. Conclusion: We no longer Objectify Distant Places. Let Us Plan Our Own Global Backyard with the Help of Our Personal “Flipped City Classroom” ...

“Truth clashes with the rule book. The rule book !sn’t !in-terested !n !t.”

Phil Beadle (2017, p. 37)

Inclusive urbanism in education has to shine a light on digitalisation according to Bunz (2013): a “silent revolution” that “transforms knowledge, work, journalism and politics without making too much noise.” Assessments like the worldwide Programme for International Student Assessment (PISA) on “school pupils’ scholastic performance on mathematics, reading and science” as well as the European Bologna Process to ensure “comparability in the standards and quality of higher-education qualifications” aim at inductively compiled *status quo* table summaries. Beyond the approaches for teaching, the presented methods of representation also show the great potential in the context of citizen participation in urban design and planning processes. The presentation and design methods can also be used to a considerable extent for the more involved inclusion of citizens within urban decision-making processes.

Let us challenge these studies from a variety of angles. Digitalisation does not only stands for the measurable (*inducible*) content of work, what people do and what people will work with in the next generation. It also outlines that those jobs with low thresholds on pattern and problem recognition – *deductible* and *inducible* capabilities – are easiest algorithmisable and, therefore, may gradually disappear from the job market.

Moreover, what a market it is! We have to panic, according to Greta Thunberg, the environmental activist on climate change. Our world house is on fire, indeed. Let us yell “Extinction Rebellion”! In the Anthropocene, we will have to review, redesign and convert most urban structures due to the necessity to cleverly intensifying sustainability in contrast to extensive

growth in the 20th century. Complying with the rulebooks will become redundant. Graeber (2018) named well paid but frustrating employment “bullshit jobs” that we do not want to perform if we aim for non-material fulfilment. “Why do we as a society not object to the growth of pointless employment?” (p. 193). What education shall we provide for our students on the edge of potentially total algorithmisation? Bregman (2019) asks:

“Which knowledge and skills do we want our children to have in 2030? Then, instead of anticipating and adapting, we’d be focusing on steering and creating. Instead of wondering what we need to do to make a living in this or that bullshit job, we could ponder how we want to make a living. This is a question no trend watcher can answer. How could they? They only follow the trends, they don’t make them. That part is up to us.” (p. 171)

In light of urbanisation, demographic transition and global climate change everybody should start to research their unique local environments respectively. What will such research turn out to be? Supposedly as a fluid mix of regularities and contingencies, a low-threshold form of applied philosophy. We have to put the screws on algorithmisation in terms of what will be reasonably left over to humans in what Harari (2017) calls “the great decoupling” between “ethics and economics” (p. 360).

Therefore, I augment methods to teach, simultaneously, strolling the site sturdiness, drawing and design, acquisition of context knowledge and ethic reflection. I envision a flipped city classroom model to rescue education from testable feeding of facts to a renaissance of students’ personal interests in urban studies, their curiosity. Focus shifts to dialogue-open presentation forms and methods for two reasons: Since it has to be intellectually overt, not goal-bounded, flipped classrooms constantly feedback and from their visualisations by abductive reasoning: We learn about directions by trial, as Cheshire Cat famously confirms to Alice in Wonderland by Carroll (1866):

“Alice: Would you tell me, please, which way I ought to go from here? The Cheshire Cat: That depends a good deal on where you want to get to. Alice: I don’t much care where. The Cheshire Cat: Then it doesn’t much matter which way you go. Alice: ...So long as I get somewhere. The Cheshire Cat: Oh, you’re sure to do that, if only you walk long enough.” (p. 89)

Second: quoting Marshall McLuhan’s 1964 “the medium is the message”, urban studies could to shift from the across-the-board task fulfilments in terms of a singular design proposal to ‘do we understand the singularity of the very piece of the world under investigation?’ as pluralistic, downright relative, if not productively contingent, process.

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PRACTICE

“More Than Fruits and Vegetables”

Community garden experiences from the Global North to foster green development of informal areas in Sao Paulo, Brazil

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Abstract

Urban gardening contributes to society in various ways such as by enhancing communities, ensuring food security, improving health, providing places for recreation as well as by raising environmental awareness. Although urban gardening initiatives have been spreading, the challenge remains to include vulnerable communities, especially in developing countries, which face manifold infrastructural, environmental and social pressures, thereby helping achieve the United Nations Sustainable Development Goal (SDG) 11 (Make cities and human settlements inclusive, safe, resilient and sustainable) and foster urban inclusiveness.

The study evaluated the performance of urban community gardens in order to verify their potential for implementation in the slums of Sao Paulo, Brazil. Significant assets and drawbacks were analyzed from existing studies and categorized into social, spatial, economic and environmental factors. Additionally, qualitative interviews on societal and motivational issues were conducted with contributors to a community garden in Dresden, Germany.

The results highlight the potential of urban gardening to counteract spatial pressures in informal areas by creating green spaces, improving food quality, raising environmental awareness and, in general, ensuring a higher quality of life. On the other hand, some obstacles remain to be overcome, such as soil pollution, the high probability of further contamination as well as a lack of basic infrastructure. A top-down implementation of urban gardens within slums is considered feasible if the projects are designed in partnership with the community, and a long-term adaptive management model is applied. Under these conditions, urban gardening will make a significant contribution to 'inclusive urbanism'.

KEYWORDS

urban agriculture, community garden, slum, informal settlement, inclusive urbanism

1. Introduction

The ongoing process of urbanization around the world, especially in developing countries like Brazil, is bringing fresh challenges to urban areas, whether regarding limited infrastructure, food security, environmental damage, the negative impact of climate change or the problem of segregated, non-inclusive urban structures.

Due to a lack of formal and affordable housing options in Brazil, residents are forced into informal housing, leading to the expansion of slum¹ (Lall 2006). The ‘favelas’ and the ‘loteamentos irregulares’² are the most common types of slum in the country. Censuses from 2000 to 2010 show that 24% of the absolute increase in the number of houses in Sao Paulo (Brazilian biggest city) were new dwellings in favelas (Pasternak & D’Ottaviano, 2016).

Sao Paulo has a total of 11,253,503 inhabitants (Instituto Brasileiro de Geografia e Estatística 2010). Its 4,116 slums³ (‘loteamentos irregulares’ and ‘favelas’) are mostly located within the city borders. 4,404.63 ha of Sao Paulo area is occupied by favelas, where 11.38% of the urban population resides, resulting in very high densities (Pasternak and D’Ottaviano 2016).

While the population density in Sao Paulo city is 80 inhabitants per hectare, in the favelas, the figure is 300 inhabitants per hectare. These high densities are reflected in a lack of space between the houses (around 84% of the dwellings there is no open space) and the increasing number of families living in the same plot (Pasternak and D’Ottaviano 2016).

1 “A slum household as one in which the inhabitants suffer one or more of the following ‘household deprivations’: lack of access to improved water source, lack of access to improved sanitation facilities, lack of sufficient living area, lack of housing durability and lack of security of tenure” (UN-Habitat 2016).

2 “Favelas are precarious human settlements resulting from the invasion of both public and private urban areas”. “They lack in almost every element of urban infrastructure and collective equipment” (Lall 2006).

Loteamentos irregulares “ are in precarious technical conditions, and not registered in the public registry office”. “They differ from favelas, since the occupiers have bought their plots from whoever presented themselves as landowners, and in most of the cases paid all due taxes” (Lall 2006).

Infrastructure problems of ‘favelas’ and the ‘loteamentos irregulares’ in Sao Paulo are: lack of regular access to water, electricity, waste collection, sewage, drainage and street pavement and lightning. Water and electricity are obtained irregularly by the residents from the formal networks. Sewage and garbage are discarded on streets and streams. Land parcelling does not follow legal regulations, so streets have usually inappropriate dimensions, and there is no space reserved for green and public facilities. Landslides and floods are frequent due to improper soil conditions and settlement implementation. Dwellings usually have smaller dimensions than formal constructions, are mostly made of bricks and have one restroom per dwelling, characteristics that differentiate them from other slums in the world.

Both in ‘favelas’ and the ‘loteamentos irregulares’, residents have no formal ownership of the land, but diverse legislation recognizes residents rights (through a long and complicated process of regularization), which also differentiate them from slums in other countries.

3 <http://www.habitasampa.inf.br/habitacao/> in 24/05/18.

Considering the general fact that “the proportion of green space per person diminishes as population density increases” (Gasperi et al. 2016), open and green areas are becoming ever rarer in these informal areas. Sufficient open and green space is essential to facilitate social interactions, thereby helping to establish ‘inclusive’ activities between the local populations (Espino 2015).

The ‘loteamentos irregulares’ are usually large glebes, irregularly subdivided, sold to low-income people. The land regularization law permits that these areas become regular, designating fewer open areas to public green areas and facilities than the regular parcelling (the goal is to secure ownership of low-income people who bought the land informally). As the designated green areas and the public facilities are usually not established in the short term, many are transformed into ‘favelas’.

Sao Paulo is thus suffering from a vicious circle of informal expansion, whereby vacant land is consumed in an unplanned way, leading to a lack of open and green space as well as poorly integrated areas. There is an urgent need for strategies to improve the quality of life in Sao Paulo’s periphery, and to establish land uses to encourage the community and create a local sense of ownership to take care of the land.

Urban and peri-urban agriculture (UPA) “has become a key part of strategies for reducing cities ecological footprint, recycling urban wastes, containing urban sprawl, protecting biodiversity, building resilience to climate change, stimulating regional economies, and reducing dependency on the global food market” (Food and Agriculture Organization of the United Nations 2014).

For the Food and Agriculture Organization of the United Nations (FAO), UPA is defined as “the growing of plants and the raising of animals within and around cities”. This definition encompasses a range of diverse crops, animals or non-food products such as herbs, ornamental plants and tree products.⁴

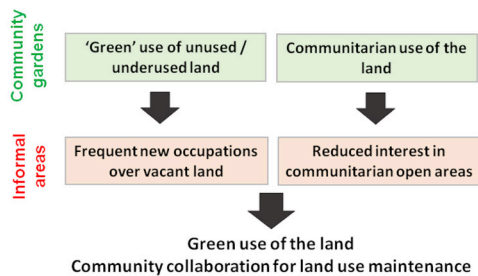


Figure 1. Potential benefits of urban community gardens in preventing the expansion of informal areas and encouraging communitarian and green land use

⁴ www.fao.org/urban-agriculture/en/, in 27/06/18.

Urban agriculture is aligned with the Sustainable Development Goals (SDGs) and the New Urban Agenda/Habitat III, as it can contribute to reduce poverty (SDG 1⁵) and hunger alleviation (SDG 2⁶) in low-income communities, through “improving urban food security and providing entrepreneurship opportunities”; boosting sustainable food patterns (SDG 12⁷) by reducing “climate change-related greenhouse gas emissions through reducing food production and distribution inputs” and promoting sustainable and environmental measures (SDG 15⁸) in urban development, such as “incorporating waste management, nutrient recycling and energy recycling” (Game & Primus 2015). Considering the most of vulnerable population in Sao Paulo lives in the slums, a contribution for poverty and hunger alleviation (SDGs 1 and 2) are incredibly relevant in these areas. The lack of infrastructure and actions on environment and consumption awareness lead to different sources of pollution in informal areas, which makes contributions on SDGs 12 and 15 very important.

Reducing the proportion of global urban population living in slums and improving quality of life of human settlements are actions to comply with the SDG 11⁹ (United Nations, 2016). At the same time, the communitarian use of gardens as green public spaces can be part of a strategy for inclusive management of urban land use. “Cities should experiment with more cohesive cross-sectoral partnerships and civil society networks to support inclusive and pro-poor adaptation plans” (Chu et al. 2017). SDG 11 achievement requires the integration of various policy fields, such as the environment, infrastructure, social housing and urban development.

The contribution to the mentioned SDGs leads to the question of how urban agriculture could contribute to face Sao Paulo slums challenges and which possible problems must be considered in an implementation project, considering these areas characteristics. These answers are relevant to orient a broader policy, able to take the advantages from the benefits of this practice.

5 Goal 1: End poverty in all its forms everywhere (United Nations 2016).

6 Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture (United Nations, 2016).

7 Goal 12: Ensure sustainable consumption and production patterns (United Nations 2016).

8 Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss (United Nations 2016).

9 Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable (United Nations, 2016).

This paper investigates the success of community gardens¹⁰ and their potential for social and urban inclusivity in slums and its surroundings, as one strategy to ensure the green usage of vacant land in the periphery, thereby safeguarding the land from informal expansion and addressing several issues in slums through the creation of communitarian areas (Fig. 1).

We adopt the definition of the community garden as “a land managed by a public or nonprofit organization, or a group of individuals, used to grow plants and harvest food or ornamental crops from them, for donation or for use by those cultivating the land and their households” (Goldstein et al. 2011). Further: “In English *sensu stricto*, community gardens are focused on ideas of community-building, while ‘urban garden’ designates a garden with an urban location” (Ernwein 2014).

2. Method

This paper is part of a more prominent research that aims to establish the potential of communitarian gardens for informal areas. The goal is to investigate different scales and territories of contribution: Global North, Global South, country (Brazil), and city (Sao Paulo). Literature review from these territories has been investigated, and a case study from each one has been selected. Case studies are related to specific subjects as shown in Fig. 2.

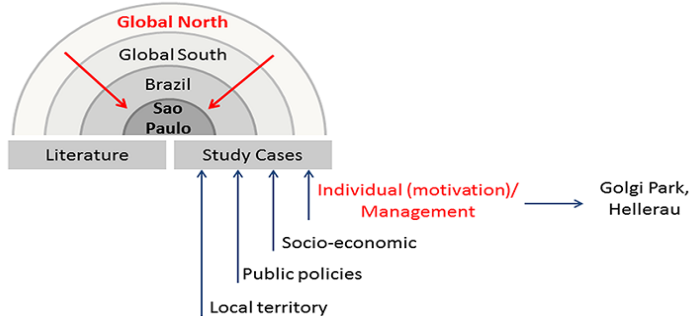


Figure 2. Full research steps: in this paper, the contribution from Global North and the case study on individual and motivational aspects

¹⁰UPA can be implemented in vacant lots, community gardens, balconies, rooftops, indoor farms, as well as greenhouses (Game & Primus, 2015). There exist various categories of gardens, namely “community gardens, commercial gardens, community-supported agriculture, farmers’ markets, personal gardens, and urban farms” (Goldstein et al. 2011).

This paper presents the results from the Global North. A literature review of publications from the period 2010–2018 (as reported in Artmann and Sartison, 2018) aimed to identify the benefits and problems of urban gardening in the region. Issues affecting Brazilian slums were related to benefits from community gardens found in the literature. The problems in establishing urban gardens from the literature were combined with findings in the interviews conducted at Golgi Park Intercultural Garden in the Hellerau district of Dresden, Germany, allowing us to draw the first recommendations for an initial project implementation in informal areas (Fig. 3).

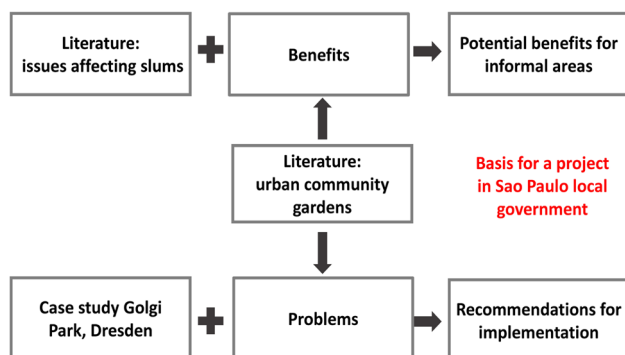


Figure 3. Paper research steps: By combining issues affecting slums and the benefits of urban gardening with the German case study and problems of urban gardening, the aim was to identify potential benefits for informal areas as well as to formulate recommendations for implementation in informal and segregated, non-inclusive areas

Having in mind the different context of most of the cases from Global North literature, compared to Sao Paulo periphery, the focus of the case study in this territory was ‘the individuals’. The interviews at the case study focused on motivation aspects, looking for finding what motivates people to join into the community garden and what were the management actions that influenced it. The goal was to select a case study with conditions utterly different from São Paulo periphery. The question was ‘if socio-economic and quality of life aspects are available, and other green and communitarian spaces are offered in the city, what really motivates people to join such communitarian gardening initiative?’ The idea was to investigate a completely different economic, political, social and even environmental scenario to figure out what makes a top-down community garden initiative succeed. Choosing a case study in a place with similar conditions could lead to results that are consequences of socio-economic difficulties. Dresden was selected on detriment to a metropolis in order to guarantee equity and minor social and economic problems.

The criterium to select the garden in Dresden was finding a top-down initiative with a focus on social inclusion. Golgi Park is a top-down initiative of the HELLERAU – European Centre for the Arts, a theatre. The park’s initial goal was to benefit vulnerable social groups, especially refugees.

The interviews, to investigate motivational aspects as well as management and technical issues facing such a top-down project, were conducted as open questions, in a voluntary basis, on detriment to complex qualitative ones, with the goal of given voice to people. This choice, as well as the existence of other case studies in the whole project, made us to opt for a small amount of interviews, which could be reported (Chapter 3.3) with the details presented by the two gardeners and two managers.

The following questions were formulated to gardeners:

- What motivates you to join the garden?
- What could demotivate you?
- Which benefits do you think this project offer you? (Why have you chosen Golgi Park and not another community garden?)
- Which initiative do you think could avoid vandalism and the theft of crops and equipment?

The following questions were formulated to managers:

- What are the critical aspects of making people join the garden?
- How do you invite people?
- Is the Hellerau neighborhood invited? Do they use the garden?
- How do you finance the events in the garden?
- What are the main achievements of the project, in your opinion?
- What is the importance of the funding to the project succeeding?
- Do you have vandalism problems? How to avoid it?

3. Results and Discussion

3.1 Issues affecting Brazilian slums

UN-Habitat estimates that one in eight of the world’s population currently lives in slums. Despite many efforts, slums continue to grow in developing countries, thereby “excluding fellow humans and citizens from the benefits of urbanisation and from fair and equal opportunities to attain individual and collective progress and prosperity” (UN-Habitat 2016).

Usually created in violation of land and building regulations, slums often lack public services and infrastructure. In Brazil’s largest cities, they are strongly linked to environmental degradation. Informal expansion due to the lack of housing alternatives for a low-income population is threatening a significant proportion of environmentally-protected areas (Maricato 2003). In the country’s southeast (including the cities of Sao Paulo and Rio de Janeiro), around

20,000 precarious informal houses are located in environmental conservation areas (Pasternak and D'Ottaviano 2016; data from 2010 census). While the entire urban population is affected by this process of informal expansion, the main burden falls on low-income and segregated groups (Maricato 2003). Dwellings are constructed on unsecured hillsides, around and sometimes over streams as well as in environmentally sensitive areas. Such areas are highly vulnerable to natural disasters (Ferreira and Whitaker 2012).

Generally, slums lack healthcare and educational facilities (Lall 2006). In addition, there are few jobs in or near slums, and transport connections to the central urban areas are poor (Ferreira and Whitaker 2012). "Public transport is insufficient and expensive, and the quality of life in slums is deficient" (Lall 2006).

In 2010, 61% of favela residents were black people, even though blacks made up only 37% of the total urban population (Pasternak and D'Ottaviano 2016). Further, the average income of Brazil's black population is around 57% lower than the white population (Georges and Maia 2017).

Many favela residents drop out of school early. The average of schooling in Brazil is 7.45 years¹¹. The causes of this poor attendance can be the need to find paid work, the long commute from the house to school as well as learning difficulties (Silva, Pelissari, and Steimbach 2013).

Low incomes and a reduced educational level have a direct impact on patterns of food consumption. Qualitative research on the eating habits of obese women in one favela of Rio de Janeiro showed the price to be the most significant factor influencing food purchases. Further, the women ate few vegetables apart from potatoes and pumpkins. Salads and fruits were almost entirely absent from their diet. Lunch usually consisted of rice, beans and chicken (the cheapest meat). There was also a marked preference for fatty meats and sugary desserts. Time for physical and leisure activities was rare due to the many daily work activities as well as housekeeping and childcare tasks (Ferreira and Magalhães 2005).

Another study of a favela in Pernambuco state showed that 13% of the 508 children registered at the local health centre were overweight. The leading causes were found to be an excessive calorie intake, the consumption of artificially sweetened drinks as well as sedentary lifestyles. 61% of the mothers of the overweight children had attended school for eight years or less (Siqueira, Alves, and Figueiroa 2009).

Violence is high in informal areas due to the lack of state and police authority (Ferreira and Whitaker 2012), with drug dealers battling over their respective turfs in the favelas. Some young people become involved in the drug trade as one way of gaining money and respect, yet they often face a life of violence or end up in prison or face punishment from the drug dealers (Meirelles and Gomez 2009).

11 <https://www.cuponation.com.br/tempo-de-estudo-outros-paises>, in 24/05/18.

3.2 Potential benefits of urban gardening for issues affecting slums

In Sao Paulo, slums usually have a high population density, since the access to land is expensive (even those poorly served by facilities) and usually, more than one family live in the same dwelling. Plots are entirely constructed, and 3 to 5 floors are standard in some areas (Fig. 4 and 5). Generally, there is little space for open, green areas to foster communal activities; also, they lack sufficient public facilities.



Figure 4. High density in a Sao Paulo slum (Cabuçu de Cima): few and green open spaces
Source: Photo from Fabio Knoll

Studies have shown that urban gardening can provide access to collective green areas (Saporito 2017), create opportunities for community recreation (Kremer, Hamstead, and Mcphearson 2013), stimulate social cohesion (Roth et al. 2015), reactivate cooperation and solidarity (Gasperi et al. 2016), promote multicultural integration (Saporito 2017) and, potentially, establish a location to cement social bonds and offer mutual support (Kato, Passidomo, and Harvey 2014). Urban gardening acts as a tool for social transformation (Kato, Passidomo, and Harvey 2014) while stimulating civic engagement (Gasperi et al. 2016). Further, “the collective care of an urban garden means taking care of the community to which the gardeners belong to and generates a symbolic community” (Gasperi et al. 2016). In conclusion, urban gardening provides all the prerequisites for inclusive urbanism.



Figure 5. Cabuçu de Cima slum: power line, a remaining empty space that can be used for gardening
Source: Photo from Fabio Knoll

In informal areas, people face a range of social problems from low educational attainment to violence associated with the drug trade. Urban gardening offers residents a way to acquire new knowledge and skills (Russo, Tomaselli, and Pappalardo 2014), for example, through education in vegetable growing (Yoo 2016). Gardening has been found to reduce crime (Russo, Tomaselli, and Pappalardo 2014) and decrease violence (Kato, Passidomo, and Harvey 2014), thereby remedying some of the problems faced by residents in informal areas.

The low quality of life in these areas can be improved by therapeutic gardening (Saporito 2017) or only by providing contact with nature (Gasperi et al. 2016) and encourage participants to rethink urban space (Kato, Passidomo, and Harvey 2014). Awareness of ecological sustainability can be stimulated by recycling biodegradable waste for compost and the use of wastewater to irrigate urban gardens (Russo, Tomaselli, and Pappalardo 2014). Here, environmental educational activities, especially with children and university students (Saporito 2017), can make a useful contribution.

In regard to improved urban planning, the frequently damaged environment found in the informal areas can be regenerated by creating gardens, green pathway and park systems. This not only lets cities breathe but can also help reduce building densities (Russo, Tomaselli, and Pappalardo 2014). Another useful measure is to restore local biodiversity, e.g. by growing old cultivars within the city (Roth et al. 2015).

Urban gardening can provide a temporary or permanent use for vacant land. Turning vacant plots into urban gardens can help lower maintenance costs (Morckel 2015), reduce the stock of vacant, unproductive urban land (Defoe et al. 2014) and, most importantly, avoid the expansion of new informal areas over the few remaining vacant plots. Of course, at the same time, it is vital to ensure that sufficient alternative housing is available (Lall 2006). In many countries, spatial planners attempt to steer the development of vacant plots (Kremer, Hamstead, and Mcphearson 2013), (Morckel 2015), (Gasperi et al. 2016). In the ideal case, this should include an analysis of land availability (i.e. the identification of plots and registration of ownership) as well as management of the short and long-term development.

In particular, “public bodies might pay attention to establishing a transparent and participatory planning regulation framework guiding the potential use and the requalification processes of vacant areas” (Gasperi et al. 2016). With forethought and care, urban green spaces can serve many functions, including increasing the level of attractiveness (Morckel 2015), improving the public image of neighbourhoods (Defoe et al. 2014) and creating new functions and values of space within them (Foo et al. 2014).

In areas of slum upgrading, where urban regeneration processes are expected, community gardens can also contribute to maintaining community-building dynamics (Demailly and Darly 2017).

Informal areas suffer from inadequate access to healthy food, which is often unaffordable, as well as a lack of education regarding healthy eating. Together, these result in widespread obesity, which is associated with several chronic diseases. Gardening can provide low-income groups with healthy food that is either free or cheap (Roth et al. 2015). It can contribute to the improved nutrition of residents. In addition to a better diet, individual health is enhanced due to the mental and physical benefits of gardening (Gasperi et al. 2016).

Economic inclusiveness can boost the integration of urban agriculture with urban resilience (Dieleman 2016). Bearing in mind the low incomes of slum residents, urban gardeners can find it financially profitable to cultivate particular crops on small plots (Thomas and Lavkulich 2015). Agricultural products can be used for own consumption or sold at markets to supplement the family budget (Kato, Passidomo, and Harvey 2014).

Figure 6 gives an overview of how urban gardening can contribute to face some common challenges in the slums, showing diverse aspects can be explored through communitarian gardening.

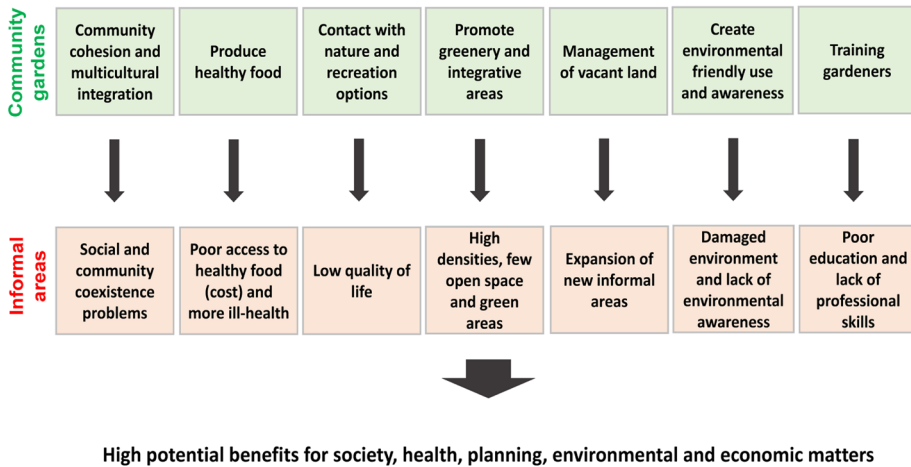


Figure 6. How community gardening can help solve everyday problems in/around slums

3.3 Case study – Golgi Park Intercultural Garden Hellerau

Table 1 provides an overview of Golgi Park Intercultural Garden. It is located behind the ‘Festspielhaus Hellerau’ (festival theatre) in Hellerau neighbourhood, city of Dresden.

Area	3,200m ²
Ownership	Festspielhaus Hellerau
Project start	May 2015
Number of participants	Around 25
Nationality of participants	German, Syrian, Tunisian, Moroccan, Eritrean and others
Number of managers	3
Target group	Refugees, local citizens, employees from the Festspielhaus Hellerau, volunteers from the wider Dresden area, school classes, visitors to the Festspielhaus, interested gardeners and anyone interested in such a joint project
Project funding	Cultural Foundation of the Free State of Saxony, the Heidehof Foundation and the Stiftungsgemeinschaftanstiftung&ertomis
Meetings	From 4 pm on Tuesdays

Table 1. Details of the Golgi Park Garden

Source: Dresden Garden Network (Garten-Netzwerk Dresden)



Figure 7. Features of the Golgi Park garden
 Source: Image from Google Maps



Figure 8. Raised beds in Golgi Park garden along with some participants
 Source: own photos

In 1911, there was a school of Rhythmic in the site. In the 1930s, the area served as a military camp and between 1945 and 1991 the Soviet army occupied it. From 2009, it is the Festival Theatre¹². Figure 7 provides details of the garden's structure and its essential features. Considering the history of the site and its high potential of soil contamination, the gardening is made in raised beds, as shown in Figure 8. The interviews results are related as follows.

GARDENERS

The two interviewed gardeners had no previous experience in gardening. They travel to the garden by car accompanied by family members. Their motivations for joining the Golgi Park garden are:

- interest in plant cultivation;
- lack of space for cultivating at home;
- an interest in learning about the plants;
- a desire for their children to play in green space;
- access to open space, with fresh air and green surroundings.

The following factors were mentioned as demotivational:

- having problems with other people;
- having an allergic reaction to plants or getting ill;
- a lack of time;
- “if I am not welcome anymore”.

The main benefits of the garden were described as:

- meeting different people;
- have a supply of fresh and tasty vegetables;
- spending time with the family in green surroundings and enjoying the gardening space.

For the first interviewed gardener, the most crucial aspect of Golgi Park was the opportunity to make things together: “what is special here is that you have materials, and if you have ideas, you can construct things.” The second gardener highlighted the importance of the requisite infrastructure and administrative aspects: “with the project (funding), we can get everything we need – soil, water, seeds and people with knowledge to bring ideas and make the garden more attractive.”

In reducing vandalism and the theft of crops and equipment, both interviewed gardeners suggested some solutions while insisting that the garden should remain open to everyone: “I do not believe in fences – they can always be climbed or destroyed. It is not a solution for the community”; “One solution could be to make the garden visible from the street, so people can see

¹² <http://www.hellerau.org/golgi-park-info>, in 24/05/18.

if something happens” or “Maybe writing something like ‘Take part, do not steal’ could be one way to reach people.”

In regard to implementing an urban garden in the slum surroundings of a city such as Sao Paulo, the Golgi Park gardeners pointed out the necessity of:

- having an expert to help participants with planting;
- finding people in the community interested in gardening;
- making sure that participants feel welcome;
- having sufficient material resources to enable participants to construct the garden; and
- making the garden visible and striving to attract all residents in order to create an inclusive atmosphere and thereby avoid vandalism.

MANAGERS

A team of three managers is responsible for administrating and organizing the Golgi Park garden (one working 20 hours a week and the others 12 hours a week). Two of the managers are current students (of social work and horticulture, respectively).

For the two interviewed managers, the key to getting residents involved is to adapt the garden to their needs; “It is important to know people’s needs and wishes, and to discuss with them how the garden (or part of the garden) could fulfil their wishes.”; “What you can do is, from the beginning, show them what is possible in the garden.”

The managers stated that the garden is no longer actively publicized amongst refugee groups. While some refugees still use the garden for various purposes, the current group of active gardeners is rather diverse. Social media posts and printed material encourage local people to take part in gardening activities and “If people get in touch and start gardening, we noticed that they soon bring other acquaintances to the garden.”

The Hellerau neighbourhood is invited to use the garden and take part in events through invitation letters delivered to their homes; however, few locals join in gardening activities, perhaps due to the number of private gardens in this neighbourhood. “People here do not really use the garden for gardening; but some people from Hellerau spend some free time here, bring their kids, come for a walk, look at the beds and ask what happens here or just come to enjoy the sun.” This shows the potential to foster inclusivity, i.e. by bringing refugees (non-Germans) into contact with local citizens (mostly Germans).

The events are highly diverse, receiving funding from diverse sources. Partners are invited for workshops or to fund specific activities.

The managers see the integration of different generations in the garden as an achievement. Another positive aspect is that the garden functions as a meeting place for the exchange of ideas and to get to know different realities,

thereby helping to create an inclusive atmosphere amongst the local citizens.

External funding is needed in order not to burden participants with administrative tasks. The salaries of the managers have to be paid (responsible for the garden organization and maintenance) as well as general expenses such as water, soil, materials, etc.

It is not difficult to keep the Golgi Park garden safe from vandalism and theft, “maybe because it is behind the theatre, which provides some sense of security and makes it a respected place”.

The managers agree that involving local people is the best way to safeguard the garden from willful damage: “Make the place a people’s place, make them care about the plants and the garden”. Asked how to do this, the response was “Invite them, even if they do not come. Invite the neighbourhood, because usually who makes this are people living locally”.

The closing remark of one manager was “If you have a plan for a garden, talk about it with people; ask what they want and what should be changed” (in the proposal). Regarding the establishment of a community garden in slum surroundings such as in Sao Paulo, the Golgi Park managers point out the necessity of:

- constructing the garden according to people’s wishes;
- providing social media posts and printed material to encourage the participation of local people;
- inviting and welcoming the entire neighbourhood;
- establishing partners for the promotion of events;
- welcoming diverse social groups in an inclusive atmosphere;
- encouraging users to bring other people;
- providing funding for materials and a minimal staff so as not to burden participants with administrative tasks;
- locating the garden close to some public facility and inviting people for every activity in order to avoid vandalism.

3.4 Possible problems facing community gardens in slums and its surroundings

Some basic factors that can hinder the implementation of community gardens in informal areas are: a possible lack of interest in gardening; soil contamination; the vulnerability of the gardens to theft; and the short-term support of top-down initiatives.

The possible lack of interest in gardening could be attributed to many factors in informal areas.

First, people generally lack access to essential services and infrastructure and consequently face a range of problems such as disease, landslides, floods, etc. Land tenure is also a concern, i.e. the assurance that they can remain in these areas. Without essential services and land tenure, residents can hardly

be expected to have an awareness of environmental concerns or the importance of healthy diets or to recognize the benefits of more communitarian and green spaces. In this regard, strength the social housing programmes, according to the existing housing plans¹³ and legal regulations are a premise. Like the previous governments, the current local government has goals for slum upgrading, land regularization and social housing building, to face the problem.¹⁴ It is a long term action, for what more political priority should be given.

Second, their days are filled with (often informal) work and the long commute to their workplaces – public transport is insufficient (Lall 2006) – which are usually located outside the peripheral slums. Women also have to do household childcare tasks, further reducing their free time. Clearly, it is a challenge under such conditions to get working-age people involved in communitarian work. Of course, unemployed or retired persons should also be encouraged to get involved in urban gardening. However, the community gardens should not place additional pressures on people (interviews with Golgi Park managers); on the contrary, in a top-down initiative, they should offer some socialization and enjoyment.

Various forms of human activity serve to alter soil properties. For example, the demolition of buildings and vehicle emissions pollute the environment with lead (Knight et al. 2013). Soil contamination is a crucial factor to be considered when creating gardens in and around slums, because:

- these areas are often subject to regular flooding (dwellings may be constructed on the banks of watercourses);
- the watercourses are usually polluted by waste flows from residential areas, which are not connected to municipal sewage systems, as well as by solid waste illegally dumped into watercourses;
- waste accumulates in the streets or on unsealed areas due to missing or infrequent waste collection;
- vacant plots are usually associated with waste accumulation;
- waste products from construction sites are often improperly discarded;
- there is usually heavy vehicle traffic.

All of these factors increase the likelihood of soil contamination. Clearly, this topic should be given priority before establishing an urban garden in order to avoid future health risks to local people.

The vulnerability of gardens to theft is undoubtedly high due to the lack of security in such areas. For example, electric cables or maintenance hole

13 For more information about Sao Paulo housing master plans see:

http://www.favelasaopaulomedellin.fau.usp.br/wp-content/uploads/2016/09/pmh_2009-2024.pdf; in 03/09/19. <http://www.habitasampa.inf.br/files/CadernoPMH.pdf>; in 03/09/19.

14 Goals from 2017-2020: slum upgrading for 27,500 dwellings (in a total estimated in 830,000), land regularization of 210,000 dwellings (in 850,000) and build 25,000 social housing apartments. http://planejasampa.prefeitura.sp.gov.br/assets/Programa-de-Metas_2017-2020_Final.pdf, in 04/09/19.

covers are often stolen. At the same time, the community gardens must strive to remain public spaces, open to the neighbourhood and any interested persons.

The short-term nature of the support given to top-down initiatives can become a problem for such community gardens. After the 4-yearly¹⁵ local government elections, there is always the risk that a new administration will cancel financial support. Long term political willpower and stable policies are needed to ensure inclusive and sustainable practices (Park 2017). Key to this process is adequate policymaking that assures government commitment as well as inclusive governance able to strengthen public participation and avoid undesired outcomes (Buijs et al. 2017).

An extraordinary commitment must be provided to temporary community gardens. When temporary community gardens are transferred into a different land-use, then the availability of another area for gardening is mandatory. This limited time-scale must be made clear to all the participants from the project's inception so that suitable alternatives can be planned in advance.

3.5 Recommendations for implementation of urban gardening

The following recommendations are designed to tackle the key problems faced when implementing community gardens in slums and its surroundings, in the case of a top-down initiative.

Recommendations to generate interest in gardening and to foster inclusivity

- Consult people about their interest in joining the project.
- Advertise the project and invite people to build it together, designing the project in accordance with people's interests (interviews with Golgi Park gardeners and managers).
- Provide materials and qualified people to advice on plant cultivation (interviews with Golgi Park gardeners).
- Identify and attract a group of people in the target community interested in gardening (Mcivor 2016 and interviews with Golgi Park gardeners).
- Welcome the whole neighbourhood, in the sense of a community meeting place; it is vital to gain the support of the local community, even those who do not intend to take part in gardening work (Mcivor 2016 and interviews with Golgi Park gardeners and managers).
- Welcome diverse social groups in an inclusive atmosphere and encourage users to bring along other people (interviews with Golgi Park managers).
- Organize diverse activities in the garden such as special events, festivals, targeted activities (for children, the elderly, women, etc.) and establish dedi-

¹⁵ Elections for the local government in São Paulo occur every four years. The current one: 2017 - 2020.

cated partners for this (interviews with Golgi Park managers).

- Involve other social organizations (Saporito 2017), (Roth et al. 2015) such as local churches, schools and NGOs, in order to help diversify the activities.
- Promote the idea of gardening in schools (Roth et al. 2015).
- Create dedicated strategies to attract participants such as a communication plan (Saporito 2017); provide social media posts and printed material to encourage people to get involved (interviews with Golgi Park managers); organize events to promote the project (Gasperi et al. 2016).

Recommendations on how to tackle soil contamination

- Be aware of the sources and risks of soil contamination; investigate the history of the site. If there is potential contamination from the previous land uses, do not plant directly in the soil (use raised beds instead) or promote chemical monitoring and “perform soil remediation activities in case of risk” (Gasperi et al. 2016).
- Locate the garden far from main roads and sources of pollution. Russo et al. (2014) suggest locating gardens at a distance of 250m from roads carrying more than 5,000 cars per day in order to reduce the risk of polluted soil.
- Be aware when choosing crops for planting that some vegetables are more resistant to the effects of contamination than others.
- Analyze the various components of compost before adding it into the soil, as these may increase the levels of contaminants.

Recommendations to safeguard the gardens against theft

- Involve the community in keeping the garden secure (including equipment and crops). “Make the garden a people’s place; make them care about the plants and the site” (interviews with Golgi Park managers).
- Chose a highly visible, easily accessible location for the garden so that possible disturbances can be quickly noticed (Mcivor 2016 and interviews with Golgi Park gardeners and managers).
- If possible, locate the garden close to a public facility (interviews with Golgi Park gardeners).

Recommendations for the short-term support of top-down initiatives

- Ensure that the project enjoys high recognition.
- Create a municipal public policy that supports urban agriculture.
- Integrate existing policies (environment, social inclusion and food security) to urban agriculture projects.
- Consider the long-term perspective of programmes and plans in order to foster the participation of residents (Gasperi et al. 2016).
- Get residents involved as market customers, community gardeners or volunteers (Kato, Passidomo, and Harvey 2014).

–“Establish sustainable actor networks” (Roth et al. 2015) in order to support activities as well as to integrate citizens, the private sector and interested professionals.

4. Conclusion

The benefits and problems of community gardens have been explored using state-of-the-art scientific knowledge from Global North and complemented by case study interviews. The case study was oriented to investigate what motivates people and which management strategies can promote the individual interest of participating in such initiative. The collected data from the interviews corroborated with diverse findings from the literature, showing relevant contribution. The primary aim was to collect and transfer the benefits of communitarian gardening for application in the most sensitive territory in Sao Paulo, where informality prevails, as a strategy to promote inclusiveness. The results show that community gardens can be an effective option to help ensure food security and improve the natural, social and business environments as well as to provide healthy food in the slums of Sao Paulo. The residents of such informal areas face different problems ranging from high population densities and lack of green space to poor access to healthy food and low quality of life.

This paper provided a matrix of possible problems with recommendations to avoid them in implementing community gardens in slums and its surroundings. Their top-down implementation can be successful if the initiatives are designed together with the community, and if a long-term adaptive management model is applied. Further, many barriers to implementation must be overcome in partnership with the community, for example, the issues related to participation, soil pollution and garden security. Integration of stakeholders, political will and priority, and population engagement are vital factors to put it into practice in the way to meet the Agenda 2030.

The community gardens can be a strategy for curbing urban sprawl and at the same time improving diverse aspects in the most vulnerable territories in the cities, especially in areas facing significant social and environmental problems. Adopting urban gardens in planning and policies can be a strategy for promoting inclusiveness in cities. The recommendations offered here are intended to encourage local stakeholders to assist in establishing community gardens in informal neighbourhoods, which can happen before or together with slum upgrading projects. Bearing in mind, slums are a dynamic problem, with social, environmental and urban consequences, that tends to be increased in crisis periods, political priority and budget increments are demanded in housing programmes, as well as integrated policies.

It is important to mention this paper is part of a most prominent work that will provide a broader panorama about the topic in different scales and

territories, including Global South and the local contributions, looking for different aspects like socio-economic, political and territorial in other case studies. Further works are demanded on evaluating the quantity, types and needs of existing local initiatives of urban agriculture, to propose a policy able to support and expand them. Examples of inter-sector integration are also welcome, once urban agriculture can involve diverse sectors, usually operating separately with different goals and actions in the city.

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Towards the Co- production of Urban Space for Increased Inclusiveness

Case study: Holzmarkt
Berlin

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Abstract

Increasingly, civil society is demanding greater participation and involvement in urban development. For this reason, planning processes have become more openly structured in recent years, offering a wider range of opportunities for participation. In order to enable such participation not only in planning but also in producing the city itself, structures for the co-production of urban space have now established themselves. The co-productive city is being made reality by civil society and local actors, whose goal is to create a long-term and sustainable value creation chain. As a counter-model to the neoliberal city, co-productive urban development requires alternative financial and organizational structures. Here our primary focus is the community-based and inclusive production of space that also redefines the role of the planner.

KEYWORDS

co-productive city, open planning processes, Holzmarkt Berlin, on-site participation, co-creation in planning, inclusive urbanism, strategic urban design

1. Introduction

This article describes the conditions, structures and planning processes for co-productive urban planning as an alternative and inclusive development model for the city. Risks, opportunities and new roles in co-productive urban planning are examined by discussing a real-world project in Berlin.

Today it is unimaginable to engage in spatial planning without the participation of the urban population, whether in the form of urban safaris, ideation workshops or online dialogues. Impulses for more participation in planning processes come not only from city and municipal authorities but also, increasingly, an active civil society, interested initiatives and cooperative organizations looking to boost the general welfare. These new actors in urbanism are distinguished, first and foremost, by a refreshing level of pragmatism, self-organization and inventive funding models.

With their diverse projects in the production of urban space, the new actors make it possible for themselves and others to participate directly in urban development processes. In the face of an increasingly unrestrained property market, the co-production of urban spaces is establishing itself as a stabilizing model for sustainable, inclusive and socially-just urbanism. The aim is to achieve long-term goals based on a sustainable value system instead of serving short-term economic interests. In this perspective, urban development is borne by the many instead of the few, and local cycles take the place of global market interests.

At the same time, the co-production of urban space challenges conventional planning processes, development paths and traditional roles in planning. To better understand the motivation, implementation and new roles within these planning processes, we examine the following three questions:

- Who is involved in co-production and why?
- How does co-production work?
- How does co-production change our understanding of the role of planners in practice and in teaching?

2. Who is involved in co-production and why?

Local stakeholders acting at the interface between civil society and urbanism are increasingly important co-producers of urban space. Indeed, there is a wave of new opportunities for co-productive and user-based urbanism and project development in which local stakeholders not only play a role as users but are also involved in the long term as initiators and supporters of urban processes (Buttenberg & Overmeyer 2014).

The concept of the co-production of urban space goes beyond that of mere temporary appropriation. A return to the exploitation of local on-site resources is being tied to the aim of sustainable, long-term use. User-supported projects are increasingly playing a role in contemporary urbanism,

specifically at places where classic project development and marketing strategies have proved ineffective. However, they are also gaining a foothold in locations where urban spaces with open scope for development, mixed utilizations and different value-creation models are emerging to take the place of monofunctionally-oriented office and residential districts.

If, in the case of temporary utilization, a clear distinction is made between temporary and planned long-term use, the co-producers of urban spaces themselves become initiators and supporters of long-term urban processes. In this way they are emancipated from their role as short-term users to assume that of long-term developers, implying a transformation from urban consumers to urban producers (Oswalt, Overmeyer & Misselwitz 2013). Co-production and co-investment give rise to new values and opportunities for inclusiveness and active co-design, setting a pathway towards a future-viable, sustainable city.

In the following, the evolution and progress of co-productive urban development processes are illustrated by a project in Berlin that the author supported in her role as urban planner and urban researcher from 2010–2018. The so-called *Holzmarkt* (Timber Market) is a new cooperative building project in the city centre, covering an area of around 13,000 m², offering space for cultural activities, restaurants and bars, small businesses, social infrastructure, gardening and community spaces. Since the beginning of construction in 2014, the site has undergone continual development. The history of the *Holzmarkt*, however, stretches back to Berlin of the late 1990s, when many large open spaces and wasteland areas were located within the city centre. The expected speedy development of the city following the collapse of the Berlin Wall, which envisioned it becoming a hub between east and west Europe, had failed to take place and the ambitious plans to create the “Global City Berlin” had been gathering dust in city administration drawers for years. However, this planning without development was confronted by a vibrant process of development without planning. Temporary utilizations and interim users began to revitalize wastelands and unoccupied buildings, in the process creating the fertile ground and networks for the explosive growth in Berlin’s art and creative economy of the 2000s. Areas of land alongside the River Spree where the Berlin Wall formerly ran were also being settled by vibrant users and converted by people referred to as “pioneers of urban space” (Oswalt, Overmeyer & Misselwitz 2013). Profiting from favourable conditions, they ran businesses on these spaces, generally in temporary structures. In the year 2005 the so-called “Bar 25” was set up on the plot later occupied by the *Holzmarkt* project, quickly becoming one of Berlin’s best-known meeting places in the city’s club culture and music scene. What started out as a small beach bar grew, 10 years later, into a medium-sized enterprise with more than 50 employees (*Holzmarkt plus eG* 2013).

Due to rising property prices (which had initially stagnated after the fall of the Berlin Wall), the plot of land occupied by “Bar 25” was put up for sale to the highest bidder in 2011. This prompted a largely informal group of users to assume a formal role, becoming an organization with legal capacity (Holzmarkt plus eG 2013). When the land was successfully purchased by a swiss foundation for the Holzmarkt plus eG, the management and planning skills of the team also had to be expanded. The basic qualifications of the users, representing an assorted group of professions (e.g. chefs, joiners, educators and photographers), were no longer adequate from this point on to cope with the financial and planning-related demands of the project. In fact, a recurring characteristic of co-production is the acquisition and expansion of skills by the core team in order to realize an alternative form of property development.



Figure 1. Holzmarkt Berlin. Credits: Holzmarkt Berlin

The co-production of urban spaces rests on the efforts of members of local projects and initiatives who are often not professionals in the field of urbanism or the property sector and yet present themselves as do-it-yourself project developers. On their own initiative, they appropriate spaces to implement their visions for use, developing their project and ideas step-by-step. In so doing, they generate added value for the city and the district. Motivated by their own desires, their development spirit and their connection to the local area, they not only transform the utilized space but also create something

that would otherwise not have arisen in that form through the efforts of external developers and investments. As they are novices in the property sector, and thus unable to rely on learned and tested procedures, they open up new pathways in project development, pose unorthodox questions and identify gaps in the usual marketing processes, which can then be exploited.

The requisite professional know-how is gained in the course of the project autodidactically and with the help of consultants. Development and financing strategies are aimed at acquiring land, ensuring stable rent and lease agreements, and establishing cooperative or hereditary leasehold models. As the project proceeds, their status changes from users to owners, administrators and operators. In the process, they bring life to, use and combine dormant resources. This ranges from the recycling, upgrading or indeed upcycling of existing physical stock as well as non-material resources such as personal commitments of work and time. Thus another resource of user-based urbanism can be described as the social capital invested by the actors involved.



Figure 2. On Site Participation Steintorplatz, Hannover. Credits by Landeshauptstadt Hannover / Urban Catalyst

In their projects, these new actors not only develop new cultures of participation in the respective spaces but also formulate questions about the future of the locality. These are questions concerning coliving, the community and self-organization as well as the contemporary and stable design/use

of spaces, sustainability, involvement, the direct economy and local cycles. Co-productive urbanism stands as an exemplary model for a city of actors in which societal topics and fundamental issues (“How do we want to live in the future?”) can be brought together with specific projects pertaining to the local space.

In case of the Holzmarkt, for example, the project initiators had a vision of co-productive urban development which, replacing top-down planning process that negated existing uses and local needs, aimed to secure inclusiveness and integrate goals directed at the common welfare.

As such, instead of a three-metre-wide riverside pathway, green and open spaces of width 25 metres were planned to run alongside the riverbank. Instead of office buildings and tower blocks, small-scale structures were designed to provide space for a creative and cultural scene or for local tradespeople such as bakers or hairdressers. Larger units were to be used as indoor markets, event spaces or rehearsal rooms for artists, while social infrastructure such as kindergartens were also planned to be built on the area (Holzmarkt plus eG 2013).

Current efforts to redesign cities generally take greater account of local actors and the way in which they can activate spaces. However, the trend towards more involvement is often not reflected in formal participatory procedures but rather through the initiation and implementation of own informal projects. Involvement is linked to direct commitment and the chance to realize own visions in concrete projects.

As such, co-productive projects often stem from a social movement that is critical of governmental policies or the practices of public authorities (Watson 2014) and aims to reveal alternative development pathways.

Therefore, involvement from the top down is undesired; the emphasis is on people doing things themselves, on self-determination as well as the opportunity for personal, practical and spatial participation in developing urban spaces and public spaces. In short, it is about the co-production of the city itself.

3. How does the co-production of urban space work?

Deterministic master plans are oriented towards an extrapolated future with a fixed end state and some specific economic goal. Construction plots and building dimensions are defined precisely and the development phases laid down in detail.

Even if planning processes are designed to be participative, they are greatly influenced by the planning professional and his/her understanding of design and space (Mahaffey & Wolf 2016). To successfully realize the co-productive process, users must be involved as equal partners in the creation of knowledge about a place, the role of knowledge in design, and design itself (ibid.).

While the actors in co-productive urbanism also follow a plan, this is much less focused and more open than the classic master plan for urban development. Co-production needs time to take shape and offers the chance to experiment and explore possibilities for alternative use. It does not pursue an expansive spatial model aimed at increasing usable space; instead, the emphasis is placed on strengthening existing resources and consolidating these in a stable and economically viable structure of use. Once this idea has become rooted at the location in question, additional plots of land and new buildings can be developed.

This type of development contradicts the classic planning model whereby planners, acting at the behest of a city or private investor, design an overall structure with roads, public spaces, development zones and building volumes. Generally, the planning offices are located outside of the area to be developed; on-site experiences matter less than criteria such as efficient development, the relationship between private and public spaces, connectivity to neighbouring areas, the spatial programme as well as urban qualities and specifications concerning density.

Clearly, we are dealing with two entirely different methodologies. If co-productive urbanism is to be fostered within neighbourhoods and new urban districts, then traditional planning practices must become more inclusive, less deterministic and reoriented towards maximizing the community's potential for utilization rather than the profits of individuals. At the same time, the embedding of projects within larger development areas demands greater courage by all parties to create overarching associations as well as to closely examine and perhaps revise planning strategies, organizational models and value-creation models.

There exists a long tradition of open forms of planning aimed at reconciling user interests and higher-level planning. These efforts have been made both by the state and society (Hillier & Healey 2008).

Some approaches have aimed to “include the users in the construction process; others make efforts to enable the further development and conversion of existing built structures for not yet foreseeable growth; a third group (...) looks for building types that can be changed” (Fezer 2013). These methods have either focused on promoting bottom-up activities or explored ways to render rigid top-down planning more flexible.

For years the notion of “strategic planning” has shaped the debate in the field of international planning studies (Kühn 2009). Strategic planning links guiding concepts with the implementation of concrete innovative projects at the level of both spatial planning and urbanism. These concepts and projects do not arise in strict succession but are “developed iteratively in continuous interplay”. Strategic planning is a learning process. The constant feedback between long-term concepts and real-world projects leads to a continuous

adaptation of planning documents and the planned measure itself. At the level of governance processes, strategic planning is characterized by the interplay between administration-driven activities, flexible organizational structures and networks of private stakeholders, in particular users.

The planning strategy approach has a number of points of contact to user-based and co-productive urbanism. These include:

- a public planning process in which the planning objective and the actual development are subject to continuous mutual feedback and revision;
- vagueness of the specifications together with a concentration on strategic places and realistic projects; as well as
- the growing importance of evolutionary organizational processes (Otto & Speck 2011).

To date, these approaches have been largely ignored in praxis in urban development projects. However, three central areas of action can be pinpointed if we are aiming for a new understanding of urbanism. Currently, there are no patent remedies to deal with the respective issues. Rather, these three areas of action give rise to questions that must be dealt with in a way specific to the respective location.

3.1 Organization and developing use

Generally, actors in co-productive urbanism organize themselves in informal groupings within network-like structures. Yet when the decision has been taken to initiate a co-productive development process, even the most informal user group has to deal with the formal organizational structures of the development companies and administration. In most cases, this is an unexpected and key moment for both sides. The on-site users first become aware of potential threats to their location from new plans, and appreciate the need to join forces and get organized. This is the only way they can assume the role of a negotiation partner to be taken seriously in the next phase. In comparison, the project organizers are often unsure how to communicate with actors outside of their circle, including property experts, project managers, architects, investors and the public administration.

The actors usually organize themselves in several steps (Otto & Fleischmann 2014). An association is formed out of a loose grouping of several users, bringing together under one umbrella the users' various commitments in order to create a common vision. Once it assumes greater responsibilities for buying, leasing or developing a piece of land, the association usually takes the legal form of, for example, a (non-profit) limited liability company or a cooperative. Formalizing the organizational structure in this way often goes hand in hand with a debate about the desired types of utilization. Two vital questions are how the organizational form adopted by those producing the space

is integrated into the overall development as well as what decision-making powers this entails.

In case of the Holzmarkt project, the organizational structure and decision-making culture are designed so that future users, the neighbourhood and the interests of the community are given equal weight or even take precedence over the interests of the financing bodies in decision-making processes. This means that people and parties that do not have access to capital resources but can still make non-monetary contributions to the project must enjoy voting rights. As such, the neighbourhood garden “Mörchenpark e.V.”, for example, is represented with a voting right in the Holzmarkt cooperative. Decisions about the area’s development in terms of the utilization mix, design and investments are taken by a non-profit cooperative and not the investing cooperative.

When users become co-producers, a suitable organizational form has to be developed. Above all, flexibility and time are required to successfully manage non-linear development processes and different user interests.

3.2 Economics and value creation

In the first years after World War II, urban development was marked by holistic and comprehensive expectations. The idea was to produce good living conditions for the entire population. This paternalistic planning model of the state as primary provider entered a state of crisis in the 1970s, which worsened over time, before being replaced by the concept of the “entrepreneurial city” (Oswalt, Overmeyer & Misselwitz 2013). As a result, tasks that were originally the responsibility of the state, such as municipal housing, were taken over by public-private ownership models. In the countries of western European, the processes of negotiation between the market and the state in urban development policy were shaped by two related factors: first, by the provision of housing being largely left to the marketplace; and, second, the requirement of private owners and investors, in return, to contribute some of their profits to the financing of public projects such as new infrastructure, the construction of public spaces and also, to some extent, social housing. For example, in 1994 the city of Munich introduced the model of “socially-just land use” whereby those who profited from planning processes in the form of increased land value due to construction planning and the building of public infrastructures had to pay up to two-thirds of their gains to the city (City of Munich 2017).

Here we can ask: What position is occupied by co-productive urban development in this conflicting field of public and private interests? Co-production generally obeys the laws of the market economy, meaning that projects, investments and any work performed must be refinanced. At the same time, it also aims to release land and buildings from marketplace speculation

in order to enable the development of non-profitable uses, mostly with the support of municipalities or civic trusts. Essential questions for co-producers are: Which values are invested, which are reinvested and which can be skimmed off?

Funding for the Holzmarkt project is mainly acquired by means of the hereditary leasehold model. As such, land for the Holzmarkt project was purchased in 2015 by a Swiss foundation whose stated objective is the sustainable development of cities. The building, on the other hand, was financed by a cooperative that set itself the goal of providing low-cost spaces for skilled tradespeople as well as individuals working in the creative sector. A long-term development perspective, which is essential for the co-production of urban spaces, was guaranteed by the leasehold guarantee from the foundation for a period of 75 years with the option of an extension.

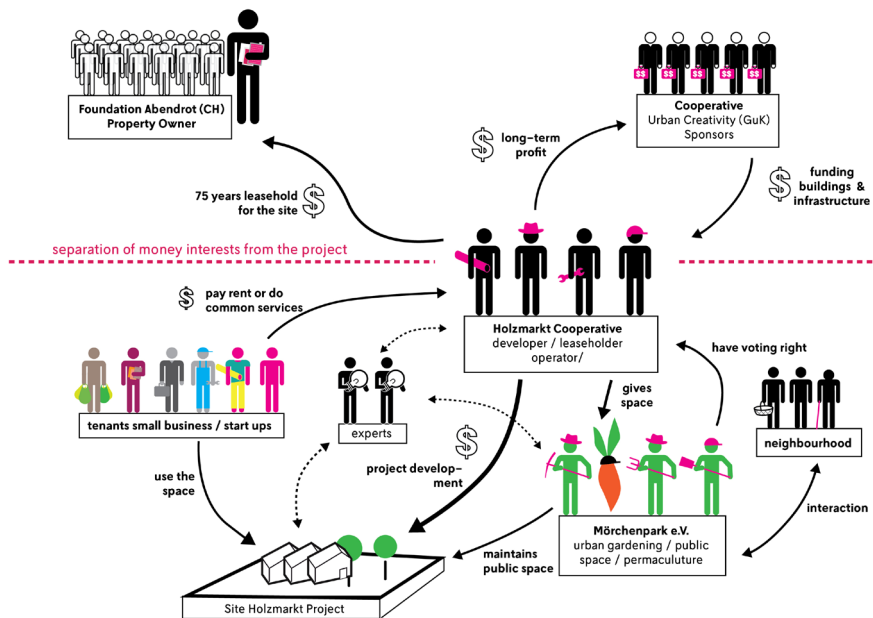


Figure 3. Holzmarkt organigram. Credits: M.Humann

The benefit to the public authorities is obvious: co-production creates space for civil-society projects, integrates actors with little capital, promotes own initiatives and social networks, creates space for an experimental mix of uses and generates new public places. Many cities have now come to recognize the value of such projects and provide public properties to user-based and co-productive projects at special conditions or are co-financing such projects using public funds. The challenge for cities, however, is to weigh up

the benefits of the projects for the community against the self-interests of a limited group.

3.3 Strategies for spatial development

As mentioned at the outset, there exist manifold strategies for developing spaces in a collaborative way. These strategies differ in the approach to dealing with existing stocks, the form of targeted construction intervention, as well as how the design process is co-created or indeed in the processuality.

In co-productive processes at the level of urban development, approaches to strategic planning play a decisive role in terms of spatial interventions and concepts of use.

“Moving forward in small steps with perspective” was Karl Ganser’s credo for the Emscherpark International Building Exhibition (Ganser, Siebel & Sieverts 1993). The planning strategies for this IBE propagated the idea of “incrementalism with perspective”, which encompassed among other things renouncing comprehensive realization, intertwining informal with regulatory planning, as well as vertical and horizontal cooperation between actors (ibid.). Of course, the regional orientation of the IBE cannot be compared with the urban development scale of developing city districts. If the perspectives of a building exhibition refer to a quality model for a conurbation and the “small steps” are taken to refer to a number of individual self-contained projects, then urban development projects deal with planning underpinned by area sizes, design and utilization specifications and the step-by-step realization of the concept on defined construction fields. The strategically iterative approach does not become relevant until the provision of spaces for processes of appropriation or self-organization has been negotiated or when strategies for the renaturation, activation of existing stocks have been tied to new designs in specific sites.

The Holzmarkt is a particularly outstanding example of the co-produced city due to the high percentage of its surface area that has been redeveloped. By the end of 2018, about 13,000 m² of new construction surface and one hectare of public community space had been built, influenced to a great extent by the needs of the community utilizations of that space.

Here four design principles could be observed:

– Small, privately usable units were favoured over larger units for shared use. The architecture was based on the spatial principle of “halls and huts”. The latter are small affordable spaces for individual people. With a maximum floor space of 50 m², they are suitable for use as workshops, small stores, studios or offices. The four “halls” are intended for artists, events, markets and large workshops, and can be rented as needed. The larger units are devoted to public uses.

- The grounds are open to the public round the clock. Buildings and accessways are designed in such a way that private areas and the riverbank cannot be permanently sealed off. The dense network of pathways is not entirely barrier-free.
- The grounds have extended open and green areas. These are self-created and maintained by a gardening association.
- Step-by-step development is possible. The building structure is designed in such a way that construction work can be done gradually, and development completed in clusters. Built units can be supplemented by temporary units to ensure a flexible and dynamic development.



Figure 4. Holzmarkt facades. Credits: Eyecandy Berlin / Holzmarkt

Two important questions have to be answered in this process: How do the bottom-up strategies from the initial conversion phase relate to the construction of new buildings, landscaped open spaces or new access roads? And who is responsible for the maintenance, security and upkeep of the surface areas? While the state of “incompleteness” is both a prerequisite for and the special quality of user-based developments, this runs against the determinism of planning. In the tug-of-war between determination and openness, those approaches survive that define small-scale zones within an overall concept, for which rules of play can be agreed upon between those involved and external experts, and then set down in planning law (Schmidt-Eichstaedt 2010).

It is vital in such projects to tie the rules of play to the “allotment” of individual zones and the time schedule for development. This is not only true for standard urban development parameters such as density and the creation of sufficient access and public spaces in a zone, but above all for the soft factors of the location. Which spaces are suitable for extending existing uses? Where is noise protection needed and which places need to be radically opened up to the neighbourhood? Which areas are laboratory spaces for the testing of different utilizations for a limited period and where should new buildings be constructed to give impulses to the space? Which atmospheres, public groups and milieus for potential uses distinguish the zones? Ensuring a more dynamic time schedule for the planning process and the rules of play will create greater flexibility. By stretching the decision-making process across a longer period in this way, current developments and planning can be coordinated with one another on a continuous basis. For example, it might be agreed via the rules of play that an existing asphalted surface be made available for multifunctional use for a specified time over a period of years both as a space for public events, as an outdoor space for ground floor activities or as a car park. Depending on which way the development process evolves, it can be decided after expiry of the agreed time period whether the space should be redesigned as a public space with a strong functional structure or whether it should continue to function in its previous form. Of course, it is necessary to clarify which form these decision-making processes are to take, especially in cases of opposing interests, as well as who ultimately bears the responsibility for these decisions.

The design of public spaces and buildings in user-based and co-productive developments is closely linked to the issues of organizational form and economy as discussed above.

4. How does co-production change our understanding of the role of planners in praxis and in teaching?

Urban development has always been a multi-layered, discursive and complex process. The phenomenon of co-production brings a new level to the planning process, namely that of self-organized participation in urban development. Self-organization implies that solutions to complex issues of urban space must be sought in an inclusive and agile manner, and increasingly by means of social consensus.

In practical terms, this means that we will increasingly require planning processes offering diverse actors sufficient room to act, and that we must take into consideration public needs and ensure a more flexible adaptation to changing framework conditions. In terms of teaching, the question arises as to how this new understanding can find its way into planning and whether, to make this happen, we have to expand not only the methods but also the

locations where we teach and learn (Humann 2019).

The role of design in co-production is also to present an alternative model, one that resists the unequal developments taking place in urban production at the present time. In the spirit of Henri Lefebvre’s “right to the city”, the open planning process of co-production can, for example, lead to the desired new points of access and to a self-management of resources and production surpluses (Harvey 2012). In this way, the abstract space is no longer established and controlled by urban planners and architects alone (Lefebvre 1991) but also by users and initiatives. Within this process, we have to ensure that planners do not consolidate existing power structures while making it appear as if processes have become participative. If we are to resist hegemonic processes, it is necessary to recognize “other spaces of knowledge production... to enfranchise other spatial rationalities” (Lu 2012) as well as to transform the role of the professional planner into one who designs infrastructure “into which citizens literally add their own programmes, labour, materials, and aesthetics. Here, high and low taste-cultures, static and dynamic processes, professionals and laymen all mix to produce a complex yet highly organized landscape” (Salomon 2012 in Mahaffey & Wolf 2016).

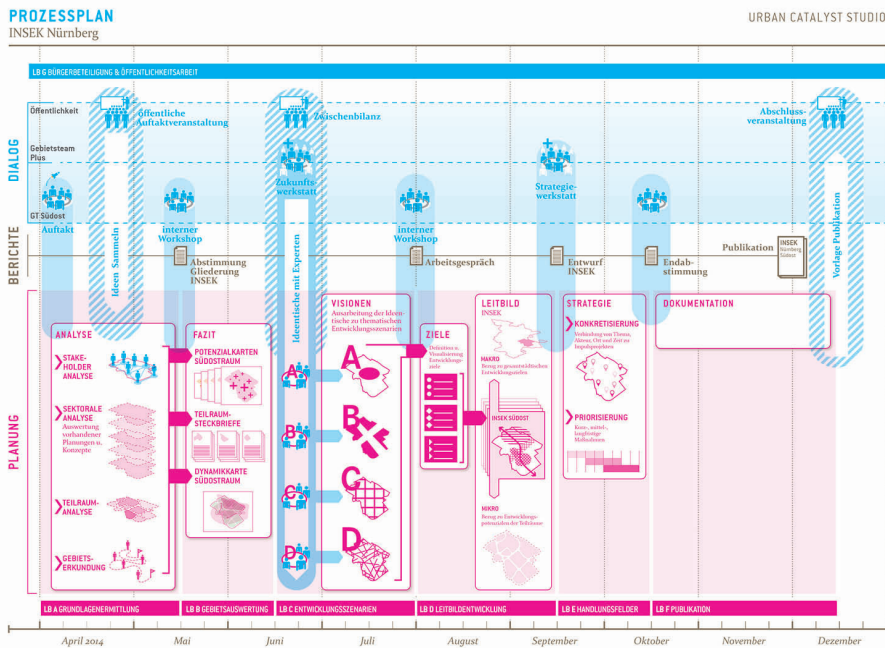


Figure 5. Planning process design with participation. Credits by Urban Catalyst

The new understanding of the shared “making of the city” and the co-production of urban spaces also brings forth the initial question of whether and how actors without a background in professional planning can “express their voice”, as it were, in terms of the spaces to be developed. Here the spotlight turns to the co-creative design approach. This implies the shared development of spatial situations in teams made up of planners and urban residents, owners and other stakeholders. The term “co-creation” originally described a form of collaborative management in which companies directly involved their customers in product development and design (Bhalla Gaurav, 2011). Regarding urban development as a task to be resolved by society as a whole, this approach can be seen as an opportunity to include actors in urban development processes. In this case, planners are accorded the additional role of broker. Co-creation is not based on author-centred, urban development design work; rather, it is essential to translate dialogue and negotiation processes into the spatial dimension of the city.

Co-creative processes begin with the shared search to formulate the right questions for the respective location. As a quantitative approach using rigid planning specifications, e.g. spatial planning programmes and specifications for building volumes and open spaces, cannot uncover vital factors required for the production of a space, co-creative planning works with questions such as:

Who actually “produces” the city? How can the interests of users be identified and included in the process? And who controls and maintains the city of the future? Jointly worked-out goals and values for the development of spaces can serve as guidelines for co-creative processes, as does the process design itself. Creative components are linked to public events and formal planning processes as a part of this.

Urban developments are often marked by strong individual interests. Therefore, co-creative and co-productive approaches can also (unintentionally) support tendencies towards a one-sided, interest-based preference for individual applications or ideas, particularly when interest groups have the means or opportunities at their disposal to present their concerns with a loud voice or are able to make an impression on the public. To ensure that public interests and the needs of underrepresented groups do not fall by the wayside in this jockeying of individual interests, planners must draw attention to and represent these wider interests. In so doing, according to Lucius Burkhardt, they assume the mantle of a “professional serving society” (Burckhardt 2005). This also helps us understand the key role played by the “spatial translator” in co-creative processes. As spatial experts, planners are assuming greater responsibility by encouraging and shaping the interaction between people and spaces. This gives rise, above all, to interesting questions for teaching practice: How can the subjective perception of a space be presented and com-

municated to others? How can planners acquire knowledge about the everyday experiences of protagonists in the space they respectively occupy? How can planning expertise be shared? Are there suitable tools to facilitate collaborative work on urban settlements?

In some cities and universities, the co-creative approach has already been tested and developed as a reaction to people's increased interest in actively changing their living environment. This runs from city walking tours during which people tell planners about local places to dialogue-oriented planning instruments. The latter encompass walk-in urban development models at scale 1:50 to provide a better understanding of planned construction interventions, or 1:1 prototypes in the urban space that enable the direct on-site exchange of information and ideas, as well as digital tools that give a simulated look into the future and provide access to spatial dimensions in urban development for "non-planners".



Figure 6. Co-creation Tool: Oversize Model 1-4. Credits by Urban Catalyst

It is precisely in the field of teaching that these new tools for the shared "making of the city" can be further developed, tested and questioned. Here is the ideal setting for an increasing number of user-based co-productive planning processes and projects to explore transdisciplinary teaching under real conditions. The co-production and co-creation of urban space will become the culture of inclusive planning.

5. Conclusion

The transformation taking place in planning as it moves from a closed to an open and transparent process involving a wide range of actors is visible above all in co-productive urban development projects.

Co-production goes beyond formal and informal instances of top-down participation in planning processes; instead, an invigorated civil society is playing an authoritative role in the long-term planning and production of space. Co-producers of urban spaces are themselves becoming initiators and funders of long-term transformative processes. In their projects, these new actors are developing cultures of spatial participation while exploring the issues of tomorrow. The focus is on living together, the community and self-organization, design and space utilization, sustainability, participation, the direct economy and local cycles (Buttenberg & Overmeyer 2014).

Co-production often develops due to pressures from civil society, in particular activists, and is certainly also a process that has the potential for conflict. Consequently, the negotiation and planning processes are not always harmonious (Watson 2014).



Figure 7. Cocreation: On-site Participation “Platzstation” in Cologne Chorweiler.
Credits by Urban Catalyst

It is important to remember that the approach of co-production, which can be described as inclusive due to its stronger involvement and emancipation of actors in the planning process, carries the risk of an unintended form of exclusion. The considerable skills and the know-how needed to establish and self-manage urban projects as well as the funding and time requirements

conspire to greatly restrict the groups of people who can manage co-production without outside help.

For this reason, it is not enough to redefine the role of the state, civil society, the public administration and planners; the framework conditions in which co-production takes place must also be redrawn to take into account the resources of the disparate groups of actors.

In the case of the Holzmarkt, we note that the declared goals of the actors to create utilizations geared towards the general welfare, such as a weekly market, large open spaces on the riverbank or a kindergarten, can only be realized within the framework of the project budget. This leads to a situation, for example, where the pressure to finance spaces that are accessible to the public at all times necessitates the establishment of profit-driven businesses offering food and drink.

Despite these contradictions, which require further investigation, co-produced spaces demonstrate how an active role of civil society in new partnerships can make urban development more democratic, more accountable and more transparent. If they act strategically and make effective use of networks, civil society actors can thus become a transformative movement in urban planning and urban development.

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Strasbourg's Inclusive Policies for Migrants and the IBA Urban Developmental Paradigm

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Abstract

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RUS 6: INCLUSIVE URBANISM

The issue of limiting motorized traffic can sometimes generate unexpected problems. For example, the city centre of Strasbourg is crossed by a major motorway, which is constantly congested and polluted. This source of irritation is now at the heart of debates on urban planning. The public authorities wish to transform the route into a boulevard as well as to develop surrounding areas. Currently, the numerous vacant spaces around the transport infrastructure are used by various associations, whose right of residency is relatively unsettled. An increasing number of small illegal settlements can also be found here as well as in adjacent neighbourhoods. While the city council is implementing inclusive policies towards migrants, how can these issues be translated locally into urban planning tools?

Strasbourg is an important transit point for migrants between France and Germany. Further, due to its border location, the city has always been an important hub for the exchange of ideas; in particular, new concepts of urban planning find fertile ground here. In order to transform the motorway, the public authorities intend to implement the German urban development tool known as the International Building Exhibition (German: Internationale Bauausstellung or IBA). In the following, we examine the IBAs of Hamburg and Berlin in order to try to identify good practices which could inspire French town planners and elected officials. This study is conducted through the prism of Henri Lefebvre's book *The Right to the City* (1968).

KEYWORDS

IBA, Strasbourg, inclusive policies, migrants

1. Introduction

According to the Commission on Social Inclusion, Participatory Democracy and Human Rights of the United Cities and Local Governments organization (*Towards a World of Inclusive Cities 2013*)¹: “inclusion policies must guarantee universal access to basic services and the safeguarding of citizens’ rights; they must be oriented towards the transformation of the social reality as dictated by the values of equity, solidarity and respect for differences.” This organization defends the interests of local governments internationally by advancing a vision of urban development based on the principle of the *right to the city* while reconciling the “recognition of differences with the promotion of a coexistence based on common civic values.”² In France, this concept appeared almost 50 years ago when Henri Lefebvre, who taught sociology in Strasbourg from 1962 to 1965, published his book *Le droit à la ville* (1968). Today we are witnessing renewed interest in this work as the paradigm of the neo-liberal city asserts itself. Of course, the world has changed a great deal since the 1960s, and urban planning is no longer solely the business of powerful public authorities; yet many of the questions raised in this famous essay are still highly relevant. Indeed, some specialists such as Laurence Costes invite us to re-read this work. In an article published in 2010 in the journal *Espace et Sociétés* entitled “Le Droit à la ville de Henri Lefebvre: quel héritage politique et scientifique?”, she asserts that Lefebvre’s work delivers an anticipatory vision. Indeed, the great sociologist developed an analysis that has on occasion proved perfectly correct. Firstly, he rigorously asserted that socio-spatial segregation would increase and cities would experience the growth of marginalized sectors. Secondly, he expected that new urban projects, and especially public spaces, would increasingly reflect standardized and codified uses. To face these challenges, the French philosopher and sociologist argued in favour of three rights. The first is the *right to difference*, meaning that several populations with disparate social and geographical origins can cohabit within the same neighbourhoods. Their presence, which should not be questioned by others, will necessarily lead to the mutual recognition of groups and balanced participation in public debate. Secondly, all inhabitants should enjoy a right to centrality. This means that everyone, especially individuals from the most deprived groups, has equal access to places of social, professional and intellectual opportunity. Here the main objective is the emancipation rather than the homogenization of society as well as to ensure that no one is subject to alienation. Thirdly, the author argues that we must challenge the understanding of urban planning as a matter for specialists, elected officials and special interest groups. This implies a *right to participate* in the debate on

1 United Cities and Local Governments (2013), *Towards a World of Inclusive Cities*, UCLG Committee on Social Inclusion, Participatory Democracy and Human Rights, p. 11.

2 *ibid.*

the future of cities, in parallel with the development of a science of the city. Everyone must be able to get involved in the future of the city. In his theory, the author considers this right to be inseparable from the two previous ones.

Situations of confinement can be observed if these principles are not respected: some inhabitants find themselves trapped not only in their local neighbourhood but also by their social condition. Such conditions have been exacerbated in recent years as European countries have faced an influx of migrants, particularly into urban areas. Reception facilities have been overwhelmed, and the necessary conditions for development and emancipation are rarely met. While some local and regional authorities have endeavoured to assert their own humanist values, their actions have at times been complicated or even countermanded by other political decisions. Through the study of a practical case of the exclusion of migrant populations in Strasbourg, we will try to understand elements of this phenomenon. Just what are the dynamics of evolution, the risks and opportunities that make the city more inclusive for its new and marginalized inhabitants?

On 25 March 2019, some fifty years after the publication of *The Right to the City*, the City Council of Strasbourg adopted a “Manifesto for a dignified reception of vulnerable migrants”. In so doing, this official seat of the European parliament wished to draw attention to an important issue. For the past few years, the city’s ambition has been to embody the role of a “capital for human rights”. The World Summit on Democracy is one of the spearheads of this ambition, reflecting the presence in the city of the European Court of Human Rights. Currently, the EU is facing major difficulties due to increased migratory pressures, exacerbated by the rise of far-right political parties. While some politicians seem to prefer to build walls, various cities leaders have affirmed their willingness to do the opposite. But just which concrete actions can be taken in the field of urban planning to realize these good intentions?

Today, there are a number of illegal migrant camps near the central motorway of the Strasbourg conurbation. In the medium term, it is planned to transform this transport route into a boulevard and to develop its surroundings into parks and new residential districts. Here, the important question is: How can we transform these marginalized sectors in an ethical and inclusive way? The municipal authorities are considering implementing project methods inspired by Germany’s tradition of IBAs (International Building Exhibitions). But how can this urban planning tool be aligned with the desire to function as a European capital of human rights? Further, to what extent and how can the local authorities draw inspiration from previous IBAs for their own needs? In the following, we first discuss the challenges and actions undertaken by the city of Strasbourg in its policies towards disadvantaged migrant populations. We then consider the extent to which the project to set up an international building exhibition questions initiatives in favour of an

inclusive city. Then we will try to identify which types of feedback (IBA Berlin and IBA Hamburg) could potentially be useful to Strasbourg. As the studied topic is at an early stage of development, we finally ask ourselves: what are the prospects for the city of Strasbourg?



Figure 1. Image on the walls of the so-called “city of human rights”; rue St-Michel (own picture)

2. Strasbourg: portrait of an ambition to realize inclusive policies for migrants in precarious situations

At first glance, Strasbourg can be considered a city with many assets. It is one of the administrative hubs of the European Union and is integrated into the famous urban corridor known as the “blue banana” megalopolis. Many positive indicators confirm a burgeoning local economy. In addition, it is one of the main French regions “for jobs created by foreign investment”. The university is also recognized as the “second in France for the attractiveness of foreign researchers and scientific publications.”³ However, if we take a closer look, we see that this European capital is not free of the phenomena of exclusion. Indeed, an important issue is the marginalization of migrant populations.

³ According to Eric Pilarczyk (2015), *Strasbourg, capitale européenne*, City of Strasbourg URL : <https://www.strasbourg.eu/documents/976405/1066267/0/2d9e9172-e58d-7564-ae0b-ba0d41718bff>

Located at the border to Germany, Strasbourg is a major entry point to France.⁴ While there has always been a certain number of asylum seekers here, the metropolitan region saw a significant increase in the number of asylum applications in the period 2014–2018.⁵ Some official figures show an increase from 1,800 per year to 4,000. Recent data for the metropolitan region of Strasbourg (Département du Bas-Rhin) showed nearly 3,462 refugees⁶ being cared for by state services⁷, most often in hotels or emergency accommodation. It should be noted that the city is confronted with the growth in informal settlements and migrant squats on its territory. Two new sites arose in the 2019, one of which is a migrant camp for eastern Europeans located in the Cronembourg district (see Figure 2), where 190 people (including more than 60 children) found refuge in less than a month.⁸ To relieve pressures on such sites, the state services carry out periodical evacuations. However, this is only possible if alternative accommodation is available. One such evacuation took place in October 2019⁹, after which the processing of asylum applications continued. In general, some people are escorted back to the border, while others are placed in detention centres before being evicted. For those who can stay, it is often the beginning of a long administrative process, and a succession of relocations. More recently, another phenomenon has appeared,

4 Before continuing, it is necessary to give a definition of the term “migrant”. According to the United Nations, this is “any person who has resided in a foreign country for more than one year, regardless of the causes, voluntary or involuntary, of the movement, and regardless of the means, regular or irregular, used to migrate.” (United Nations website <https://refugeesmigrants.un.org/fr/d%C3%A9finitions>) There exist some particularities in the French case. While the government issues estimates of the number of people without a residency permit as well as the number of naturalized persons, it has been strictly prohibited since the end of the Second World War to gather statistics on the basis of ethnicity.

5 Figures provided by regional TV broadcaster FR3 on its website, Marie-Christine Lang, 02/10/2019, URL: <https://france3-regions.francetvinfo.fr/grand-est/bas-rhin/strasbourg-0/strasbourg-campements-migrants-se-multiplient-hebergement-urgence-ne-suit-pas-1731081.html>.

6 In 2019, the state allocated more than 23 million euros to help migrants; Communiqué de la préfecture du Bas-Rhin (22 /10/2019), *Strasbourg: le campement des Ducs d'Alsace démantelé, la préfecture promet des solutions adaptées à chaque personne*, DNA, URL : <https://www.dna.fr/actualite/2019/10/22/strasbourg-le-camp-des-ducs-d-alsace-a-nouveau-demantele>.

7 Alongside the different public services, there also exists: Direction départementale de la cohésion sociale (DDCS) and the Office Français de l'Immigration et de l'Intégration (OFII). The different roles are to “take care of the integration of migrants during the first 5 years of their stay in France. The OFII's other tasks include managing professional and family immigration procedures, managing the national reception system for asylum seekers, providing return and reintegration assistance as part of solidarity development, and combating illegal work.” OFII website URL : <http://www.ofii.fr/qui-sommes-nous/nos-missions>.

8 Marie-Christine Lang, *Strasbourg : les campements de migrants se multiplient, l'hébergement d'urgence ne suit pas*, FR3 Alsace, 02/10/2019, URL : <https://france3-regions.francetvinfo.fr/grand-est/bas-rhin/strasbourg-0/strasbourg-campements-migrants-se-multiplient-hebergement-urgence-ne-suit-pas-1731081.html>.

9 *ibid.* Communiqué de la préfecture du Bas-Rhin (22 /10/2019).

namely citizen's initiatives providing assistance to migrants. Activists have illegally occupied buildings (often abandoned for several years), thereby confronting the city authorities with the issue of squatting. For instance, we can mention a case study concerning the former Grüber breweries. After these buildings were purchased by the city to provide public services, construction work was delayed. In the Koenigshoffen district, a non-registered charity transformed one former brewery building into a reception centre that also provides some services.¹⁰ The site, which offers accommodation to homeless people, is regularly targeted by racist slogans on the walls. In addition to the provision of public services, the city of Strasbourg is not passive in the face of these various challenges. Many NGOs and public institutions are working together to welcome and integrate migrant populations. For example, the university is helping to teach the French language in order to facilitate the immigration process. Nevertheless, the large number of partner structures is significant. For the city, the overall management of the migrant population is complex. It is necessary to coordinate many different activities. In order to try to improve the collaborative work of 36 different actors¹¹, the municipality decided to implement a common charter of values and an action plan for public services. In addition to the passage of migratory flows, the city is also a place of settlement. In this regard, the municipality has decided to consolidate all its actions aimed at welcoming vulnerable migrant groups. When the Manifesto presented to the Strasbourg City Council in March 2019 was adopted, a number of points were discussed. The Charter is organized along several axes, including commitments to meet basic needs (food, housing and health) as well as to raise awareness among residents of the challenges of migration such as the dangers of illicit border crossing. The keyword of this strategy is social inclusion, which constitutes a major pillar of urban policy. According to the European Commission, social inclusion is a process "enabling people at risk of poverty and social exclusion to benefit from the opportunities and resources necessary to participate in economic and social life, enjoying a lifestyle considered normal in the society in which they live."¹² To achieve this objective, a series of concrete measures are being taken. In particular, the city is committed to ensuring that non-French speakers have a dedicated interpreter in order to promote access to legal assistance and food as well as to provide information on hygiene and health. Several actors are involved, for example *Médecins du Monde* and *Migrations Santé Alsace* for healthcare, the *Service Intégré d'Accueil et d'Orientation* for shelters and the *Cimade*, which provides legal assistance to foreign refugees. In addition, the city wishes to

10Hélène Janovec, (31/07/2019), *La vie s'organise au nouveau squat Gruber*, Rue 89 Strasbourg, URL: <https://www.rue89strasbourg.com/la-vie-sorganise-au-nouveau-squat-gruber-deja-complet-158391>.

11City of Strasbourg (March 2019), *Manifeste pour un accueil digne des migrants vulnérables Strasbourg, ville-hôpitalière*, p. 13.

12Idem. p. 7.

promote the social and professional inclusion of migrants (*Migreval* project) by offering university scholarships to young people without diplomas as well as to provide civic education. A further action is to implement measures to raise the general awareness among ordinary citizens of the problems faced by these vulnerable groups. Another interesting measure can be mentioned, namely a call for projects aimed at encouraging bottom-up initiatives. Here the term “bottom-up” implies that such initiatives are not implemented by public authorities. Projects can be eligible to receive funds of up to 50,000 euros.¹³ Particular measures are, for example, a project to improve refugee accommodation with the support of associative actors and hosted by a landlord.

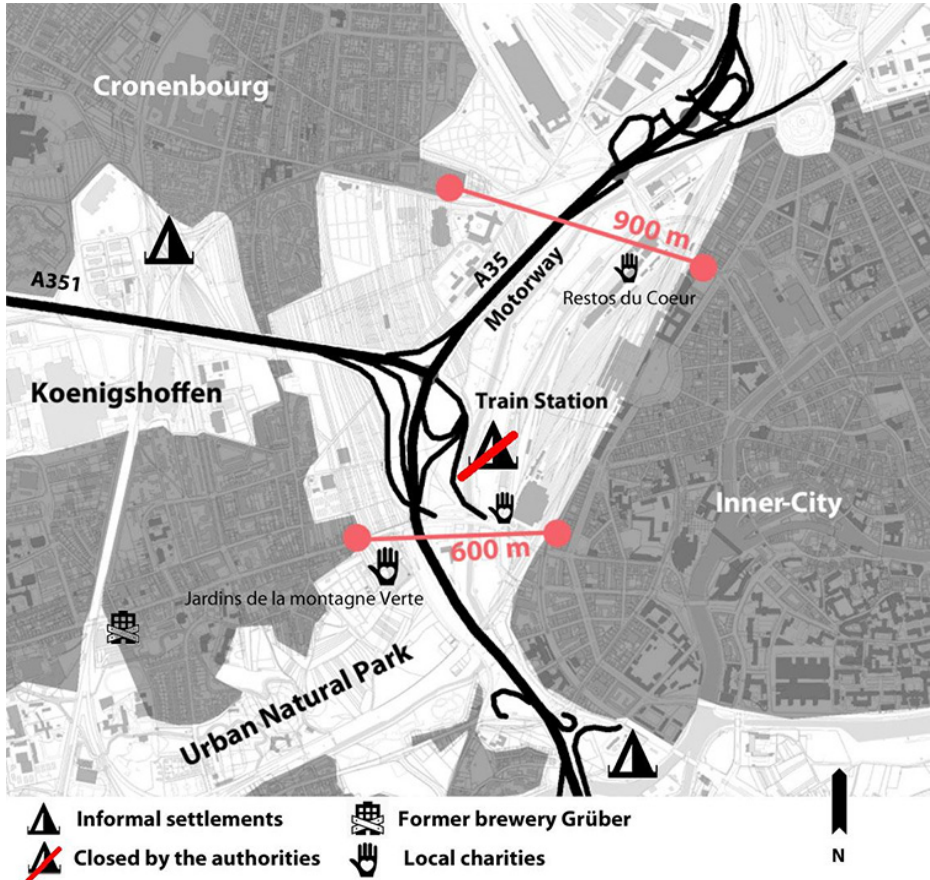


Figure 2. Around the motorways, i.e. between the city centre and district of Koenigshoffen, important vacant spaces are served by a “charity cluster” composed of a network of associative structures (own map).

¹³City of Strasbourg, DIAIR, (2019), *Appel à projets “Mobilisation citoyenne pour valoriser la place des personnes bénéficiaires d’une protection internationale dans la Ville de Strasbourg”*, p. 5.

In a similar vein, the city wishes to promote volunteer work by Strasbourg residents. A further aspect is the implementation of inclusive measures to encourage professional, artistic and sporting encounters between residents and refugees. As this process is recent, there is as yet no assessment on the efficiency of the realized actions. However, in the following we will try to understand how these could influence other areas of public action. As an example, we take planning processes for urban projects. The actions taken by the city of Strasbourg are commendable in creating a welcoming city for migrants. However, it must be understood that the question of Lefebvre's *right to the city* goes further.¹⁴ It is not just about organizing calls for projects and public consultations; fundamental is also the ability of the most vulnerable people to grasp the issues at stake in the public debate. We will investigate the phenomena of marginalization near Strasbourg city centre and determine which potential resources and non-governmental actors could provide a basis for an inclusive strategy aimed at integrating migrants.

3. The surroundings of the urban motorways: areas of marginalization or of opportunity?

In addition to discussing the policies carried out by the city authorities, it is first necessary to comprehend the location of migrant camps and squats as well as the places where the homeless gather, all of which are located near Strasbourg's various urban motorways (see Figure 2). These sectors and surrounding neighbourhoods host a large number of migrants, both legally and illegally. Due to its status as a border city (formerly surrounded by medieval ramparts), many interstitial zones long remained unbuildable in Strasbourg. A series of motorways was built in these vacant spaces from the 1960s onwards. In addition to creating a physical barrier between inner-city neighbourhoods, these developments generated many residual spaces in the immediate vicinity of the city centre. According to researcher Catherine Sélimonovski, such transport routes are markers of exclusion. In an article entitled *La frontière de la pauvreté à Strasbourg*¹⁵ published in 2004, the geographer already highlighted the significant income disparities between residents in the core urban area and those in peripheral sectors. In particular, it is possible to superimpose the location of the previous fortifications (replaced by the A35) onto maps showing differences in income and access to jobs. Lower-class districts close to the transport infrastructure are "landlocked" and suffer high levels of pollution. However, the existence of such residual spaces also brings some benefits. Specifically, they constitute resources for a more inclusive city, encour-

¹⁴Note that while migrants were certainly not central to the demands in the 1960s when Lefebvre formulated his thesis, today they can be assimilated to vulnerable populations.

¹⁵Sélimonovski C. (December 2004), *La frontière de la pauvreté à Strasbourg* (The border of poverty in Strasbourg). In: *Bulletin de l'Association de géographes français*, 81e année. Les frontières dans la ville / Problématique urbaine en Suisse, sous la direction de Jean-Luc Piermay et Rita Schneider-Sliwa. pp. 498-508, DOI : <https://doi.org/10.3406/bagf.2004.241>

aging local charities to settle due to the practical location near the inner-city. The most attractive feature, however, is the low rents of these public plots of land (mostly owned by municipality). Here we can find charitable restaurants (such as *Resto du Cœur*) as well as housing for the homeless. Another important example is the urban agricultural association *Jardins de la Montagne Verte*, which employs people who are marginalized and excluded from the labour market; these are often migrants, hired for the market gardening of organic fruit and vegetables in the city as well as for canning and carpentry. Over one decade, around 1,800 people have benefited from an integration contract.¹⁶ At the same time, the financial situation of such associations is not easy: in 2010 a major social movement (of about 1,000 to 1,500 people) expressed dissatisfaction with the decline in state subsidies¹⁷; many members of local associations were present. For the past few years the situation has changed. In particular, there is now a general appreciation of the need to transform the motorways in order to reduce the level of pollution and traffic as well as to bridge the gaps between the various districts of the Alsatian metropolis. Every day 160,000 vehicles cross the city via the motorway system.¹⁸ Because of frequent urban congestion, the metropolitan council members wish to reduce the traffic load by turning the motorway into a metropolitan boulevard.¹⁹ Beyond the problems of pollution and traffic jams, the A35 acts as a barrier between the different parts of the urban settlement. One possible (negative) repercussion of improving living conditions in those sectors would be to encourage the process of gentrification. Will the poor inhabitants of these neighbourhoods, especially the homeless and migrants, be chased away by rising land prices? Such transformative processes could potentially have huge impacts on such areas of the city. The main question is to determine whether associations can continue their work to integrate people suffering exclusion. The sale of their premises, which are very close to the city centre, could potentially offset the cost of infrastructure transformation. Clearly, this important aspect should not be ignored in the inclusive policies already drawn up by local decision-makers. While this project is still in the exploratory phase (and

¹⁶Poure, C. Ruiz Suri, V. Biehler, C. (29/06/2013), *Les Jardins de la Montagne Verte : 10 ans au service de l'insertion*, FR3 Alsace, <https://france3-regions.francetvinfo.fr/grand-est/2013/06/29/10-ans-de-reinsertion-aux-jardins-de-la-montagne-verte-279621.html>.

¹⁷W. p (01/12/10), *Des chantiers d'insertion échaudés par le gel des aides*, 20 Minutes.

¹⁸The expressways are twenty minutes' walk from the cathedral spire. Website of the local newspaper www.dna.fr, 1 March 2013, URL: <https://www.dna.fr/economie/2013/03/01/l-a-35-a-strasbourg-160-000-vehicules-par-jour-10-de-poids-lourds>.

¹⁹The main topic of this initiative is to turn Strasbourg's main motorway, the A35, into a boulevard. This project aims to reduce the level of fine particles in the atmosphere, which is substantial in the city and its periphery due to the large flow of trucks crossing Alsace every day. Following the construction of a controversial road bypass, the municipality also intends to explore other ways of reducing the flow of private traffic. As the project is very complex, it will be subject to widespread consultation with all the stakeholders.

in any case will only be implemented after the 2020 elections), it is timely to investigate the implications for specific areas in the metropolis.



Figure 3. Areas near the motorway that formerly hosted illegal camps are now fenced off to prevent new settlements (own picture).

4. An IBA to transform the motorways and their surroundings?

It is important to consider which methods the city will use to transform the transport infrastructure and surrounding areas. In 2017 a budget of nearly 204,350 euros was approved²⁰ to finance a study on the accompanying measures required to transform the A35 into a boulevard. According to the city council's decision of 3 March 2017, the purpose of this urban development study is to "reflect on the proposed project to transform this infrastructure in order to facilitate its urban integration and limit its disturbance in terms of noise and pollution." This financial commitment also officially marks the launch of a period of reflection on the opportunity to implement a multi-year urban process inspired by Germany's IBAs (International BauAusstellung). Widely known in Germany, the urban development tool of the IBA has drawn attention around the world. As town planning practitioners around the country face calls for change, Strasbourg is not the only French city to be inter-

²⁰Budget agreed by the *Deliberation at the Eurometropole Council* held in Strasbourg on 3 March 2017; the sum includes an expected 50% subsidy from the national government.

ested in establishing an IBA. In the context of decentralization, some local authorities have been inspired by federal countries such as Germany to set in motion a reform agenda aimed at fostering sustainable development. For example, the DGALN²¹ set up the EcoCités programme (originally a government initiative that arose within the “Grenelle de l’environnement” multi-party debate). Here the aim was to promote and subsidize the implementation of sustainable development strategies in French urban areas by setting up exemplary ecodistrict projects. While these initiatives are still mostly ecological projects, a social dimension is not excluded. According to the urban planner Bruno Yvin, we can go further and “draw a parallel with the German International Building Exhibition (IBA), which is also an instrument for financing innovative projects within a strategic framework similar to that of EcoCités.”²²

It should be said that this idea of setting up an IBA is not completely new. At least a decade ago the idea of a potential implementation became increasingly attractive for some urban planning theorists and practitioners. One of the first articles on this topic was published during international consultations for the major development project *Le Grand Paris* (Lecroart, Palisse & Beltrando 2009).²³ The limited time for action was particularly highlighted. Furthermore, the authors extolled the idea of coordinating diverse projects driven by the same philosophy. In their report, the urban planners also mentioned that it would help French cities to stimulate their local dynamic forces. The aim is to build, step by step, a vision of the city’s future that could be shared with a wide group of political decision-makers. On the one hand, the timelimited steering structure may be viewed as a guarantee of independence from the usual structures of urban planning. IBAs can ensure a kind of “escape from monotony” (in German: *Flucht aus dem Alltag*) by avoiding conventional ways of conducting town planning. The call for proposals for an IBA is the perfect opportunity to set up an independent office to oversee the entire process of selecting, qualifying and supporting projects from the original idea through to implementation. It is expected that this will also generate innovative and creative solutions by means of, for example, forums, safety audits and urban planning workshops. In addition, this process can enable and support horizontal management for the city. Indeed, decision-making in most IBAs is run collectively with actors and research planners from other countries or regions. This guarantees a certain neutrality for arbitrations. Moreover, the executive staff of the IBA office can play a mediating role between the different actors to help ensure better coordination between institutional

21 The (National) Directorate of Housing, Town Planning and Landscapes. There is a partnership with the German Ministry of Construction to promote the exchange of experience and the tool of the IBA.

22 EcoCité official website (July 2018), *Préfiguration d’une approche IBA pour les EcoCité*; retrieved from URL: <http://www.ecocites.logement.gouv.fr/prefiguration-d-une-approche-iba-pour-les-ecocites-a171.html>

23 Lecroart, P. Palisse J-P. Beltrando, Y. (July 2009), *Initier des projets métropolitains: l’IBA, une pratique féconde*, Note rapide, n° 478, IAU îdF.

structures and citizen associations. This can prove highly beneficial by taking account of broader themes such as urban planning, art, architecture, the environment, the economy, and social concerns.

To conclude this point, we can ask: What are the opportunities and good practices that could be implemented in this territory? What strategies could be put in place to strengthen the city's action on inclusive policies? In the case of Strasbourg, the initiative to transform the motorway presents challenges to the provision of services for vulnerable migrant populations. To better understand these challenges, we will attempt a forward-looking comparison. As the project of implementing an IBA in Strasbourg is still at the study stage, there are no concrete results to fall back on; rather, we must consider whether the choice of method could potentially bring added value to existing processes. So just what are the good practices that could inspire Strasbourg? What can we learn from Germany?

5. Learning from Germany: what are the good practices for an inclusive city project in Strasbourg?

In his book *Le droit à la ville* (1968), Lefebvre claimed that the proletariat would become engaged in urban planning issues and challenge the principles of territorial segregation. Yet, according to Laurence Costes (2010), social demands have subsequently been more concerned with the employment conditions of the working classes, such as expressed during the protests of May 1968. Nevertheless, many social experiments emerged in the decades that followed. The processes implemented in West Berlin from 1979 to 1987 in the framework of an IBA are of particular interest due to the scale of the intervention, the number of implemented measures and the large group of actors involved.

For a better understanding, let us consider the origin of these multiyear urban development processes. The very first IBA was launched in the city of Darmstadt back in 1901. While these innovative urban renewal projects were for many years restricted to Germany, today they are gaining popularity elsewhere; for example, there have been IBAs in countries such as Austria (Vienna), Switzerland (Basel) and the Netherlands (Maastricht). More than an architecture biennale, the IBA is truly a tool for cities and regional authorities to promote and experiment with new kinds of architectural and urban design.

The workings of an IBA are interesting because everyone involved develops their own strategies and ways of sourcing funding. Every management strategy, site selection process and implementation process is unique. Some piloting structures for IBAs are run by associations, for example in Basel; in Hamburg and in the Ruhr, on the other hand, we find a public Urban Development Company (GmbH). In the first case, an assistance and consulting structure for project management helps to raise funds for the implementation of

architectural projects as well as to suggest potential partnerships; in the latter, an urban developer is directly (and financially) involved in the process. These differences are not driven by chance. Rather, the working methodology is set by a precise political agenda. The main idea is not to *replace* existing planning structures but to make them work *more efficiently*. Most importantly, decision-makers should be inspired to imagine more suitable governance structures and tools to transform urban development. When cities or shareholders in metropolitan regions choose to declare themselves initiators of an IBA, the underlying motivation may be to increase their prestige. Indeed, there is currently a fad surrounding this kind of process, which can be viewed as a form of marketing. The risk here is of making IBAs less substantive and innovative.

It must be noted that IBAs have evolved a great deal over the course of the past century and, in particular, since the West Berlin IBA that concluded in 1987. During this exhibition, important debates were conducted by planners about the right way to rebuild a city still suffering from the devastation of WWII and reeling under the impact of the Berlin Wall. It is sometimes forgotten how critical the situation was in West Berlin at the end of the 1970s. Due to its physical isolation and a lack of investment, many homes were dilapidated and even abandoned by their owners. In fact, marginalized inhabitants, particularly Turkish migrants, had illegally occupied squats in Kreuzberg; they risked losing everything if their homes were destroyed. Facing a lack of resources, the city urgently sought solutions. An innovative strategy was developed under the leadership of the Berlin architect and urban planner Hardt-Walther Hämer. In parallel with more traditional forms of reconstruction, the principles of “soft urban planning” were formulated (Elodie Vittu 2005).²⁴ These aimed to keep residents in their own flats by developing forms of funding to allow them to restore their homes. It is interesting to note that a number of tools implemented in the 1980s as part of the *IBA Altbau* are still useful today. In particular, we can mention 12 principles of a “soft urban renewal” that were adopted by the West Berlin Senate in 1983. Some of these could be usefully introduced as amendments to the provisions of the Strasbourg Charter to help foster an open city. Two principles are of particular note. The first is that decisions concerning urban renewal in West Berlin were drawn up within the framework of a procedure open to inhabitants, including informal settlers. And secondly, there was a recognized right to housing as well as efforts to encourage alternative forms of habitation and co-living. Some other principles such as the definition of transformation and relocation schedules are also interesting. Perhaps the most striking element in the IBA is its mediating role between public authorities, owners and illegal occupants.

²⁴Vittu, E. (2005), *L'aménagement d'une place en zone de réhabilitation „Helmholtzplatz“, une place pour tous?* IFU, DESS Urbanisme et Aménagement, p 60.

Of course, the situation is somewhat different in the city of Strasbourg. Here the number of illegal occupants and squatters is lower than in West Berlin of the 1980s. Many homeless people and migrants²⁵ are already taken care of by various public agencies and private associations in a “charity cluster” (see Figure 2). Nevertheless, as we have already seen, some actors feel threatened by the motorway project. The objective must be to avoid stressful situations with regard to deadlines and hazardous relocations, as these could disrupt structures fostering the inclusion of migrants. In this case it would be helpful if a neutral structure were established in Strasbourg to play a mediating role. Marginalization is not only a question of material resources but also temporal indecision. An uncertain future is a source of anxiety. In this respect, it would be advisable, before launching the IBA, to involve local charities as well as residents in discussions.



Figure 4. A joke on a billboard: “From the motorway to the boulevard metropolitan nightmare” (own photograph).

The more recent IBA held in Hamburg between 2006 and 2013 is also an instructive example of the renovation of a marginalized housing area in a highly cosmopolitan city. This German city initiated collaborative efforts with inhabitants while also making use of studies by local historians. A set of recommendations was produced as a framework for the launch of urban planning and architecture competitions.²⁶ Despite these efforts, however, the

²⁵Reminder: 3,000 people in the whole city.

²⁶Lecroart, P. (October 2011) *IBA Hamburg 2013: cinquante projets pour fabriquer la métropole*, Note rapide N° 578, IAU IdF.

project did not always succeed in achieving unanimity. The protest campaign *IBA? nigs da!* was partly successful in mobilizing various inhabitants.²⁷ In particular, activists highlighted the risk of gentrification due to new green buildings constructed for the elite.

As we saw, Strasbourg is caught between contradictory aims, namely the wish to transform the motorway area vs. local policies concerning migrants. The decommissioning of the motorway calls into question the proximity of marginalized groups and local structures that assist them in the city centre. This can be viewed as a stumbling block to Lefebvre's theory, which claims the *right to centrality*. However, it has to be pointed out that these are not irreconcilable challenges in terms of territorial foresight and respect for commitments to creating a welcoming city for migrants. The possibility of setting up an IBA like that of Berlin in the 1980s allows us to imagine the creation of a flexible "space for action". One of the other lessons from the IBA Berlin is to understand the importance of the *right to difference*. Indeed, the work conducted in the western part of the formerly divided German capital is highly relevant. For Strasbourg, the particular aim is to give voice to associations that help the inclusion of migrants and enable them to express their point of view in future challenges for urban planning.

Further, in his book *The Right to the City*, Lefebvre also argued for the implementation of a "science of the city" to encourage public and democratic debate on settlement development. Departing from classical planning tools, the IBA-facilitated urban planning can create the right conditions for experimentation and debate. Similarly, the use of scientific committees to accompany the process can be a useful initiative. But the question remains: Will the Strasbourg conurbation be able to seize this opportunity?

²⁷Schirg O. (16.6.2013) *Gentrifizierungsdebatte: Wilhelmsburg als Vorbild?* Hamburger Abendblatt.

6. Conclusion

Between Strasbourg's city centre and its neighbourhoods to the west, railways tracks and motorways constitute a major barrier: they divide the city. The planned decommissioning of the motorway can be seen as an opportunity to develop a strategy for a more welcoming environment for migrants. At the same time, the metropolitan area of Strasbourg faces great challenges in terms of transportation and inclusion issues. Here it is necessary to innovate and take control of one's destiny. The city must experiment in new ways of conducting urbanism. The IBA in Strasbourg would provide a chance to explore issues of the *right to the city* and help to integrate actors who are often voiceless in the design processes of urban projects. In particular, certain practices should be adopted across sectors to address various social issues. The German methodology seems promising because it apparently facilitates ambitious projects while ensuring better coordination of diverse site-based policies. Furthermore, the "event strategy" of the IBA fosters experimental approaches outside the usual framework of urban planning, revealing solutions to new problems for which conventional tools are ineffective. Strasbourg's charter for the reception of migrants could also be strengthened through the inspiration of an IBA. Clearly, a major highway transformation project raises questions about the inclusive city. Although the implementation process of the IBA Strasbourg has been launched, it is still at a preliminary stage. For this reason, little empirical data is as yet available for analysis.

While an IBA can bring innovative problem-solving to daily working routines, it seems that this tool may be less formalized and rigid in its application in France compared to previous instances. But will it be possible for urban-planning practitioners to extricate themselves from administrative burdens and stimulate local initiatives in an exemplary way? Do the principles of "event strategies", labelling and limited time approaches imply a more participatory and creative output than traditional methods? The IBA will be considered a success insofar as it constitutes more than just a marketing ploy. However, we must view the current popularity of this tool with a healthy degree of scepticism. As an aid to urban planning, it still has to prove its usefulness in resolving the planning challenges of Strasbourg. Certainly, the IBA must be reconciled with the city's strategies of inclusion, which are not only vital for the interest of the community but also to promote the image and reputation of this so-called "European capital of human rights".

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Participatory Workshops as a Tool for Building Inclusivity in New Towns in Africa

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Abstract

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RUS 6: INCLUSIVE URBANISM

Africa is currently the fastest-urbanizing continent in the world. As part of this rapid growth, New Towns are increasingly employed by private developers as a means of providing well-serviced urban environments to middle- and upper-income groups. These comprehensively-planned New Towns are often seen in contrast to the perceived 'chaos' and 'congestion' of large African cities. As a result, two urban forms, the highly controlled New Towns and the unregulated settlements at their edges, engage in complex social and economic exchanges, but remain spatially segregated and socially exclusive. Current research points to the need for an alternative approach to top-down New Town planning in Africa.

Participatory workshops are one alternative that can offer planners access to local knowledge that is otherwise difficult to access. This paper explores the potential of short-term reflective, design, and serious gaming workshops by reflecting on the experiences of the authors in four recent workshops. The paper evaluates the effectiveness of these workshops as useful tools to increase inclusivity in African New Towns by bringing together stakeholders with competing agendas and supporting open discussion, negotiation, and informed decision-making. The paper concludes that participation from stakeholder groups that would normally be marginalized from the planning process (such as current residents, temporary users, and residents of adjacent unregulated communities), can offer new insights to planning bodies and inform more inclusive New Towns across the continent.

KEYWORDS

African cities, inclusive urbanization, New Towns, participatory workshops, stakeholder participation

1. Introduction

Since being introduced as an urgent research topic in 2013, contemporary African New Towns have attracted an increasing amount of attention among researchers (Watson, 2013). In the years since this first investigation, such New Towns have proven to be fertile ground for researchers focused on aspects such as inclusivity (Bhan, 2013; van Noorloos and Kloosterboer, 2017; Côté-Roy and Moser, 2018; Marcinkowski, 2017), housing (Alaya, van Eerd, and Geurts, 2019), economic significance (Murray, 2015b), and governance (Murray 2015a) in African New Towns. Many of these studies look to specific case studies or take a comparative approach, while other studies take an overarching, continental perspective (Grant, 2015; van Noorloos and Kloosterboer, 2017; Keeton and Provoost, 2019).

Distinguishing between New Towns developed by national governments and those led by private developers, these studies build a profound critique of contemporary, privately-developed New Towns across Africa as isolated, exclusive pockets of infrastructure and services. This is seen as partially the result of the top-down planning processes that characterize most privately-developed New Towns in Africa (van Noorloos and Kloosterboer, 2017; Keeton and Provoost, 2019). However, there is growing consensus among researchers that neither exclusively top-down nor exclusively bottom-up development can succeed in the long-term (Grant, 2015; Keare, D.H., 2001; Provoost, n.d.).

Recent literature points to the need for alternatives to the current New Town planning paradigm; alternatives that bring previously marginalized stakeholder into the planning process (Grant, 2015; Keeton and Provoost, 2019). This paper argues that participatory workshops that bring together diverse stakeholders can be useful tools to stimulate negotiation among groups, thereby not only increasing the diversity of voices in the planning process, but also building empathy and understanding between groups with conflicting priorities. By creating multi-stakeholder forums that support access to different types of information, “different interest groups can be brought together to successfully collaborate on planning for and managing cities, and more appropriate local strategies and projects can be developed and implemented” (Smit, 2018: 77).

Using four examples of recent, experimental workshops aimed at influencing the planning of contemporary African New Towns, this paper is a reflection by the workshop organizers on the experiences and outcomes of these workshops. As discussed in section 4.1., Workshop A was organized by Rachel Keeton at TU Delft, the Netherlands, with a group of international, multidisciplinary participants. Workshop B (see section 4.2.) was organized by the International New Town Institute in Tatu City, Kenya, bringing together local planners with a team of Dutch planners and architects. The third workshop, discussed in section 4.3., was organized by Play the City, a private game de-

velopment company, and took place in Khayalitsha, South Africa with a group of local and regional participants. Workshop D (see section 4.4.) was organized by faculty from TU Delft and executed in Rotterdam, the Netherlands.

Although much has been written on the individual subjects of participatory planning and New Towns, there is not yet much available literature that brings together these two streams. This article aims to do so by first describing the theoretical background of these concepts, focusing on interactive workshops as tools to facilitate participatory planning. The main research question is: ‘what issues influence the effectiveness of participatory workshops on African New Town planning?’ Following this, the article discusses the setup, ambitions and experiences of four workshops that aimed to promote public participation in the development of African New Towns. Finally, the article concludes by offering recommendations for future research and summarizing the conclusions made in this paper.

2. Participatory planning alternatives for New Towns in Africa?

New Towns can be understood as new, planned urban developments built on previously undeveloped (greenfield) sites. Keeton and Provoost define contemporary African New Towns as comprehensively planned, mixed-use, intended for more than 10,000 residents and displaying some degree of political autonomy (2019). In different parts of Africa, comprehensively-planned cities that meet this criteria have been deployed as an urbanization strategy since ancient times (although these remain exceptional and smaller villages were a much more common form of development) (Smith, 2007; Ozo, 2009; Ross and Bigon, 2018). There is a lack of data available on the planning processes used in these earliest New Towns, but in their analysis of twentieth-century planned capital cities in Africa, Abubakar and Doan write: “Each of these new towns was designed and implemented by foreign consultants with little involvement of the local community. This is not surprising because the modernist model is top-down, context-independent and based on scientific but not local knowledge” (2017). In contemporary examples, this modernist approach continues to be employed, although the design results may stray significantly from the functionalist models associated with modernist urban design.

2.1 A top-down project is not a city

The latest generation of New Towns in Africa repeats the top-down modernist development model, although the majority of contemporary New Town development in Africa is now initiated and led by private developers rather than national governments (Keeton and Provoost, 2019). Unlike government bodies who maintain long-term management of new urban developments, private developers may see their role in the development process as more

limited and temporary. Because of this, many private developers tend to look at New Town development as the creation of a finite product, or a project to complete and then sell. This approach does not sufficiently allow for flexibility or adaptation over time, and does not accommodate the needs of a pluralistic society.

As Chris Marcinkowski writes, “What is at issue with this particular format [private New Towns] is that much of the housing being produced is simply inaccessible to the general population from a financial point of view without substantial government subsidies that many of these countries simply cannot afford to provide” (Marcinkowski, 2017). Indeed, UN-Habitat estimates that over half (61.7%) of the urban population of Africa is made up of slum-dwellers (2012). Developers and decision-makers commonly see the urban poor and unregulated settlements as a reflection on the failure of urban policies, when comparing their cities with international standards. With this in mind, they may lean towards eviction and slum clearance or prohibition rather than looking for new ways to integrate the urban poor into the planned city (Klopp, 2008). However, researchers point to the need for more participatory planning processes in order to create New Towns and cities that are more inclusive and reflective of local realities (Scott, 1998; Myers, 2011; Abubakar and Doan, 2017). As Warren Smit argues, the urban governance landscape in Africa is complex and often difficult to navigate: “Key urban governance stakeholders... need to be brought together in collaborative processes to jointly develop and implement new strategies that are based on a broader range of interests and meet a broader range of needs” (Smit, 2018).

2.2 Academia versus practice

Rendeavour is currently one of the largest private developers of New Towns in Africa, with projects in five different countries. Tim Beighton, Head of Marketing & Communications for Rendeavour, calls African New Towns an “academia-defying subject” (personal communication 11 April 2018). His critique reflects the view that academic literature on this topic tends to vilify private New Town development without acknowledging the complexities developers face in the drawn-out process of attempting to secure land, commissioning various studies and master plans, and finally contracting construction companies. While academics may be guilty of simplifying the challenges of implementation, their critique of contemporary New Towns across Africa as exclusive enclaves deserves acknowledgement. Many developers are unwilling to address this issue with any real commitment, excusing their developments as housing that meets market demand.

Despite this disconnect between academia and practitioners, there are opportunities for researchers to engage directly with developers. Short term workshops are one way to create a forum in which different voices can be

heard. This has benefits for all participants, as it may be the first time they are brought into contact with each other and (perceived) power differentials may be temporarily reduced or removed, allowing for real negotiation. In the context of contemporary African New Towns, this form of direct participation may help address the problem of top-down development that prioritizes one form of urban development over the needs of the majority. As Richard Grant concludes: “The core ideas of these opposing camps [academics and developers] are the antithesis of each other. A more productive way forward is to pursue a dual track that allows for showcase and iconic new urban projects while focusing special attention on slum urbanism and creative thinking that links the two approaches and situates urban projects within a sustainable development paradigm.” (2014: 294).

2.3 Participatory workshops as planning tools

Since the term ‘design participation’ was introduced fifty years ago at the 1971 Design Research Society conference in Manchester, participatory planning and design have gained traction as accepted working methods (Cross, 1972). In their book *Routledge International Handbook of Participatory Design* (2013), editors Jesper Simonsen and Toni Robertson connect the shift towards collaborative design processes to the collective actions and civil rights movements of the 1960s and 1970s (2013: 2). Today, participation in the planning process is increasingly seen as a requirement by both private industries and public bodies engaged with planning and development. Jenkins (2006) even refers to a ‘participatory culture’ of the current climate, as illustrated by new types of media and social engagement through digital forums. In this context, short-term, multi-stakeholder workshops are widely acknowledged as a participatory tool in the ‘design participation’ toolbox to catalyze stakeholder communication and negotiation.

As planning tools, workshops have the potential to create environments of democratic decision-making and transparency that can achieve results that other planning tools cannot. By giving stakeholders ‘equal’ voices in the design or decision-making process, a workshop may be able to bring new ideas, connections, needs, desires, and networks to the foreground. At their best, such participatory approaches can “enable collaboration, negotiation and the coconstruction of knowledge” (Wynne-Jones, S., North, P., and Routledge, P. 2015: 218).

Despite their current popularity, however, participatory workshops face considerable threats. Because they are a function of interpersonal communication and relationships, there is no way to fully control these events. Researchers have pointed to highly subjective tensions such as trust, loyalty, guilt and discomfort as “complicating ingredients” in participatory design (Wynne-Jones, S., North, P., and Routledge, P. 2015: 219). For workshop or-

ganizers operating outside of a familiar cultural context, complications can quickly multiply.

3. Methodology

The analysis of the workshops in Section 4 is based on the first-hand participation and organizational experiences of the authors, as well as their extensive experience with African cities and planning process. To make this assessment, the authors have compiled and analyzed reports of the workshops, reviewed empirical evidence, interviewed workshop participants, and evaluated published results from secondary data such as newspaper articles, Press Releases and participant websites.

The scope of this analysis is limited to four workshops in which the authors were involved, all of which took place between 2014–2019 with the stated ambition of improving participatory planning in African New Towns. The four workshops were also selected to illustrate a diversity of organization, intention and outcomes.

Public participation events generally occur because planning bodies or decision-makers lack knowledge, capacity or resources (Fung, 2018). Deciding who participates in workshops has a direct impact on whether these deficiencies will be appropriately redressed, and requires consideration of workshop goals as well as workshop constraints. One may ask, “Are [the participants] appropriately representative of the relevant population or the general public? Are important interests or perspectives excluded? Do they possess the information and competence to make good judgments and decisions? Are participants responsive and accountable to those who do not participate?” (Fung, 2006:67). Designing a successful workshop therefore begins with matching participant selection to established goals. As elaborated in Section 4, Workshop A was organized with *selectively-recruited participants* based on individual expertise, while Workshop B was organized with *professional stakeholders*. Workshop C brought together *lay stakeholders* and *professional stakeholders*, while Workshop D allowed for *self-selected participants* among attendees of a larger international conference on future African cities.

In his seminal article “Varieties of participation in complex governance”, Fung outlines three dimensions along which mechanisms of participation vary: “[1] who participates, [2] how participants communicate with one another and make decisions together, and [3] how discussions are linked with policy or public action” (Fung, 2006). Short, intensive workshops can be a useful way to bring together diverse stakeholders (whether selectively recruited or self-selected), structure the interaction and communication between these groups to achieve specific goals, and move the planning process forward efficiently. As a precursor to workshop organization, stakeholder analysis should be done in order to establish the ambitions, resources, and

interdependencies of various groups (Freeman, 1984; Bryson, 2004).

The goal of a workshop may vary. Examples in Section 4 include Workshop A, which attempts to translate the expertise and opinions of 21 multidisciplinary experts into a single, coherent set of planning principles for African New Towns, and Workshop B, which attempts to bring together professional planning experts to contribute to an existing master plan design. In both cases, the workshops were designed to achieve maximum cooperative potential and to reduce threats of obstruction (Fung, 2006).

4. Reflective, design, and serious gaming workshops for African cities

This section describes four workshops that share the central aim of contributing to more socially and environmentally sustainable New Towns in Africa. As described in the first example in this section, reflective workshops may be used to refine existing proposals or specific aspects of plans among a multidisciplinary group of experts, providing an expert review. Design workshops may be used to evaluate or develop an alternative to an existing design. In the second example in this section, a design workshop was used to give an alternative perspective on an existing master plan for a New Town. Reflective and design workshops are more practical in nature, while serious gaming workshops are informed by a more robust theoretical background, as illustrated in the final two examples.

Serious gaming has developed a rich theoretical underpinning over the last decades and can provide a systematic and collaborative approach to problem-solving that meets the needs of different city makers, whether designers, politicians or other relevant agents (Dorner et al., 2016). ‘City gaming’ is a specific form of serious gaming that encompasses application to urban issues. In city gaming, participants come together in environments designed to minimize the obstructions, opposing values, or power differentials that may inform communication outside of the game. This environment, which is designed by the game developer, allows participants to exchange institutional and individual knowledge, strategize and (sometimes) come to collective agreements. “By transforming serious issues into a playful and engaging (although no less serious) experience, city gaming unlocks difficult conversations and helps to build communities in the long term. The urban design, policy and action plans generated collaboratively through gaming will increase social coherence and local agency, as well as cutting costs and time in urban development processes” (Tan, 2014). City games thus function as a tool to support the integration of top-down and bottom-up ambitions.

4.1 Workshop A: “Urban Lab: Imagining adaptive planning for African New Towns” by TU Delft (2017)

The “Urban Lab: Imagining Adaptive Planning for African New Towns” took place on 8 June 2017 at TU Delft. This event was organized by Rachel Keeton in collaboration with the International New Town Institute and with financial support from the Delft Global Initiative. The workshop was a parallel event within the Urban Thinkers Campus on Education at TU Delft from 7–9 June 2017. The twenty-one workshop participants were selectively recruited experts from a range of backgrounds, including academia, urban planning, government, and environmental analysis.



Figure 1. Workshop participants discuss and evaluate the proposed planning principles to reach consensus during the *Urban Thinkers Campus* in Delft, the Netherlands. Image © Rachel Keeton 2017.

The aim of the workshop was for participants to critically examine a proposed set of planning principles from multidisciplinary perspectives, and ultimately build a set of coherent adaptive planning principles that meet the diverse criteria brought into discussion during the workshop. By employing deliberation and negotiation mechanisms, and taking a holistic view of the urban challenges related to African New Towns, the participants collectively arrived at an equitable set of principles (crossing traditional disciplinary boundaries) to drive inclusive, adaptive planning forward through effective urban design. Application of these principles and their spatial implications was explored in later workshops. The workshop was successful in achieving

the goals of the organizers partly because the invited experts were engaged in the topic and acknowledged the urgency to challenge the current planning paradigm (Keeton, 2017).

4.2 Workshop B: “New Town Lab: Tatu City” by the International New Town Institute (2018)

The New Town Lab at Tatu City, Kenya, was co-organized by the International New Town Institute, a “think and do tank” based in the Netherlands, and KUWA, a Nairobi-based research and urban planning office, at the request of Rendeavour, the private developer behind Tatu City. A New Town Lab is a rapid planning workshop in which a selected group of international and local experts work together for one week with the aim of finding a convincing and innovative concept for urgent planning issues. The Lab took place from 9–14 September 2018 and brought together Dutch experts on urban planning, water management, circular economy and spatial design, staff from Rendeavour including Kenya Country Head, Senior Development Manager, Urban Infrastructure Manager, Head of Development Control, and Community Lead, among others. Additional Kenya-based professionals and local residents also participated in the workshop.



Figure 2. Area chiefs reflect on the local needs of residents near the New Town development of Tatu City, Kenya. Image © Christine Waithera 2018, used with permission.

In Tatu City, the workshop addressed the main question: “How can we create a connected network of green and blue spaces that acts as a sustainable and resilient backbone for Tatu City?” The workshop built on previous site research conducted by KUWA that provided valuable insights into the social, economic, spatial and ecological aspects of the surrounding context. Workshop participants spent the first part of the week gaining a deeper understanding of the New Town and its context, while the second part was spent designing an alternative vision for the green and blue network in Tatu City’s existing master plan. Finally, a public presentation of the results was made and participants discussed potential ways forward. According to Rendeavour Head of Country Nick Langford, the results of the workshop supported a main goal of the Tatu City team: “We are keen to focus on building a cohesive city that embraces not just our residents’ use of public space, but also the use by communities living around Tatu City” (Rendeavour, 2018).

4.3 Workshop C: “Play Khayelitsha” by Play the City (2014)

In February 2014, The City of Cape Town’s planning office met with Play the City to discuss a city gaming approach that would help bring new ideas to the table for the centre of Cape Town’s second-largest township. Adapting Play the City’s established methodology to the local goals and context, the game design team created a prototype to be tested during the ‘Department of Design’ (a three-week co-creation event) in July 2014.

The first iteration of the game attracted about 60 players, including members of the Cape Town municipality, VPUU, and residents of Khayelitsha from various backgrounds. By playing the prototype, Play the City was able to gain feedback and insights that allowed for improvement to the game.

The second iteration was played by informal traders, local entrepreneurs, and government representatives. Primarily, the goal of the game was to help local traders who have worked in the centre for decades to compose a future vision for their township. “Play Khayelitsha” addressed the area’s acute infrastructural, governance and programmatic needs through a negotiation game designed to help transform the township centre into a more inclusive public space.

One unexpected result was the local traders’ expression of their long-term interest in land ownership. Many of the government representatives and others around the table had never heard of this desire, which ultimately became a major point of negotiation throughout the rest of the game. The idea of setting up a ‘Traders’ Co-operative’ emerged from discussions during the game as a way of increasing the traders’ bargaining power by collectivizing their interests. This outcome was further explored through spatial designs that would support such the new organization. The game was therefore successful in achieving the goal of supporting long-term transformation of

Khayelitsha’s urban centre by catalyzing discussion and negotiation among different stakeholders.

4.4 Workshop D: “Afropolis” by TU Delft (2019)

“Afropolis: Co-creating Sustainable Solutions for Affordable Housing in Africa” was held on 8 April 2019 at the Van Nelle Fabriek, in Rotterdam. This workshop was organised by Nelson Mota, Brook Teklehaimanot, Sophie Oostelbos, and Gonzalo Zylberman (TU Delft) and included in the programme of the 2019 *Africa Works!* Conference, organized by the Netherlands–Africa Business Council. Afropolis was one among fourteen workshops and round-tables offered to the attendees of the conference. The workshop was organised twice, with one occurrence in the morning and another in the afternoon. In the morning session, there were six self-selected participants and in the afternoon session fourteen. In both cases, there was a wide range of backgrounds, including academic researchers, teachers, corporate individuals (e.g. working for developers, contractors and banks), members of NGOs, as well as design and planning professionals.



Figure 3. Participants ‘play’ the serious game *Afropolis* as a side event at ‘Africa Works! 2019’ conference in Rotterdam, the Netherlands. Image © Nelson Mota 2019.

The initial set-up of “Afropolis” was inspired by the “Jogo do Estatuto da Cidade” (Game of the Statute of the City), developed in Brazil in 2002 by Renato Cymbalista, Raquel Rolnik, Paula Santoro, and Uirá Kayano Nóbrega (Cymbalista et al., 2002). These authors created a role-play game to raise awareness of people’s civic and legal rights safeguarded in Brazil’s “Statute of the City”, a federal law passed in 2001 to promote fair and equitable cities.

Using the format of a board game, the participants of “Afropolis” used a toolkit based on two components: “Actors” and “Urban Elements”, to solve the “Case”. The “Case” was a hypothetical housing project to be developed in a district of a fictional African city, materialised in a 100x100cm aerial view photograph at the scale 1:1000. Each participant performed the role of one of the “Actors”, a typical stakeholder in slum upgrading/redevelopment (e.g. Local politician, Developer, Architect, Slum Dweller). The group of different actors was encouraged to implement their fictional agendas (both open and hidden) while simultaneously creating synergies to reach consensus in the design-decisions necessary to develop the project. To simulate their planning strategy, the players had scale models of three different “Urban Elements” at their disposal: (1) Housing Types: (isolated houses, row-houses, slabs, tower blocks); (2) Amenities (resource centre, kindergarten, temple, commercial block); (3) Open Spaces (playground, garden, square, sports field).

The goal of “Afropolis” was to raise awareness of the spatial and societal implications inherent in design-decisions related to the production of housing. The use of scale models reproducing familiar housing typologies and amenities allowed both design professionals and lay(wo)men to be aware of the social and spatial consequences of their planning strategies. Manipulating the scale models on the aerial view depicting an urban district created tangible scenarios of the consequences brought about by the different design-decisions.

The workshop aimed to illustrate the creative potential of conflicts in participatory design. As the game evolved, participants gradually realised the need to engage in a process of co-creation, to achieve a win-win situation where the different actors’ agendas could be negotiated and conciliated to solve the “Case”, rather than dominating the other players (win-lose situation). The workshop achieved its main goal of raising awareness of the importance of design-decisions in tackling the pervasive housing challenges in African cities. It demonstrated that while governance and management are important aspects in the implementation of housing programmes, design cannot be overlooked if the goal is to create solutions for inclusive and sustainable development.

5. Analysis

Whether such a workshop achieves the goals laid out by its organizers can be influenced by the decisions the organizers take long before the workshop beings. In this section, a qualitative assessment of the effectiveness of the workshops described in Section 4 addresses four influential factors identified by the authors and workshop organizers. These include: workshop location (Section 5.1), participant selection (Section 5.2), workshop organizer (Section 5.3), and workshop goal (Section 5.4). As elaborated in this section, analysis of these individual factors indicates that the effectiveness of a workshop in achieving its goals is the result of an interrelated and hybrid network of factors that may receive varying levels of attention from workshop organizers.

5.1 Where is the workshop?

Two of the workshops discussed in the previous section took place in the Netherlands (Workshops A and D), while three took place in African contexts (Workshops B and C). The location of a workshop can have a major impact on the effectiveness of a workshop. For workshop organizers working in cultural contexts different to their own, the geographic location may limit the participant pool, complicate logistics, or create language and cultural barriers or misunderstandings (Unemoto 2001).

These considerations must be taken into account whether a workshop is organized locally or remotely. Workshop A, for example, was able to effectively bring together multidisciplinary and international experts by combining the workshop with a larger event (Urban Thinkers Conference at TU Delft), and having the budgetary possibility to cover travel costs for participants from abroad.

Not only geographic location, but also the workshop venue itself can influence the effectiveness of a workshop. In Workshop B, the weeklong workshop was held in the Rendevour offices, which allowed for both formal and informal exchanges among participants and fostered interpersonal interactions that benefited the design process. Alternatively, a venue that reinforces perceived hierarchies may stifle open exchanges among participants.

5.2 Who participates in the workshop?

In all four workshops described in Section 4, participant selection played a major role in the effectiveness of the workshops. Participant selection is closely related to the goal of the workshop. In Workshop D, for example, all participants were attendees of a conference (Africa Works! 2019). The workshop was one of many side events that were open to all conference attendees and as a result the participants were voluntarily self-selecting. Workshop D was run twice during the conference, with very different results. The workshop organizers attribute this to the varying backgrounds of the participants

and the number of ‘players’ engaged in the serious game.

As short term workshops related to New Town development in Africa, the choice of ‘who participates’ may proceed from different ideological approaches. An inclusive approach may seek to invite a diverse range of participants including representatives of marginalized groups as well as recognized decision-makers. A ‘bottom-up’ approach may prioritize (future) resident engagement over powerful institutions. Partnering with local institutions can help workshop organizers gain access to groups whose participation is desired.

5.3 Who organizes the workshop?

In the workshop examples discussed in section 4, two of the workshops were designed and organized by academics (Workshops A and D), one was developed by a non-profit institute for a private developer (Workshop B), and one was developed by a private company for a public body (Workshop C). Based on these experiences, the organizers may influence the effectiveness of the workshop when organizers are unable to connect with the participant group, or when co-organizing groups exhibit different or competing interests. Public and private organizing bodies may also prioritize different values, which may compromise the workshop’s ability to meet its goals. In Workshop B, for example, the International New Town Institute (INTI, a non-profit ‘think and do tank’), was invited to organize a ‘New Town Lab’ for Rendeavour (a private New Town developer). This combination resulted in differing expectations for the workshop results, which may have contributed to the lack of follow-up between the partners.

5.4 What is the goal of the workshop?

The goal of a short term workshop must match the duration of the workshop, the capacities of the workshop participants and organizers, and the location of the workshop. The goal, or goals must also be clearly communicated to the participants. In Workshop C, for example, the primary goal of the serious game was to support and facilitate local traders in composing a future vision for their township. During “Play Khayelitsha” the idea of a ‘Traders’ Co-operative’ emerged and was further explored through spatial design experimentation during the game. In this way, the game was successful in achieving the goal of enabling transformation of Khayelitsha’s urban centre by triggering discussion and negotiation among the workshop participants.

5.5 Conclusion

A number of factors determine whether a workshop is able to effectively meet the goals set out by organizers. From the examples discussed in section 4, the authors and workshop organizers identified four factors with perceived influence on the workshop's effectiveness: location, participant selection, organizers and goals. While these factors may individually impact the effectiveness of a workshop, they are also related to each other in complex ways. A workshop that effectively meets the goals set out by the organizers must therefore appropriately address these factors while the workshop is in the planning stages. Failing to adequately consider any of the four factors elaborated in this section can threaten the workshop's effectiveness.

6. Conclusions and recommendations

In their book "To Build a City in Africa: A History and a Manual", Keeton and Provoost build the case that contemporary African New Towns are generally planned in a top-down way, whether by public or private bodies (2019). Especially in the case of private New Town development, the current planning paradigm is not inclusive, and tends to forego participatory processes in favor of streamlined production. This approach may fail to give voice to marginalized stakeholder groups, and may insufficiently incorporate local knowledge, capacities, cultures, and heritages (De Satge and Watson 2018).

There is general agreement among researchers that this approach does not result in inclusive cities, and there is a need for participatory alternatives (Watson, 2013; Grant, 2015; Marcinkowski, 2017; Abubakar and Doan, 2017; Keeton and Provoost, 2019). As Smit concludes: "Collaborative governance can be messy and conflictual, but only through facilitating engagement and collaboration between different urban governance actors can urban challenges in Africa be effectively addressed" (Smit, W., 2018).

One alternative approach is incorporating participatory workshops into the planning process. Through four recent examples that specifically address African New Towns, this paper has shown that such workshops can be a useful tool to stimulate negotiation among stakeholder groups, thereby increasing diversity, sharing knowledge, and building empathy during the planning process. However, as Sun, Tai and Yen (2019) point out, planning training *before* the actual workshop would increase non-experts' understanding of planning-related concepts and potentially increase their ability to productively contribute to short term workshops.

Some limitations of this study are the small size of the sample, and the lack of quantitative evaluation techniques to measure their effectiveness. While Workshop A succeeds in achieving its goal of bringing together disparate viewpoints into a single document, it is unknown whether the design results of Workshop B will be implemented or have any real effect on the ex-

isting master plan for Tatu City. Workshop C was seen as an effective as a tool for forging new alliances and negotiations, while Workshop D allowed for knowledge-sharing and built empathy, but did not have any discernable effect on African cities. These conclusions are interpretations by the authors and workshop organizers based on qualitative analysis of the workshop results.

Future scholarship should develop workshops as tools for participatory planning in African New Towns by including quantitative measures of their effectiveness and focusing on implementation of their results. The authors have been invited to test this new direction by co-organizing a serious gaming workshop in Zanzibar in September 2019. The Zanzibar Department of Urban and Regional Planning (DoURP) needs new alternative methods to engage relevant stakeholders in planning decision-making process, and hearing of Workshop B at the Future of the African City conference in Leiden, the Netherlands, approached the lead author to organize a similar workshop locally. The workshop in Zanzibar brings together the serious gaming methodology developed by “Play the City” and illustrated by Workshop C with the planning principles developed during Workshop A.

While it is clear that more public participation is necessary to foster inclusivity in African New Towns, it is not always obvious which forms of participation can best achieve the specific goals of planners or decision-makers. Participatory workshops can be one way to bring together diverse stakeholders in the planning process. As Fung reminds us, “specifying and crafting appropriate roles for participation... demands forward-looking empirical sensitivity and theoretical imagination” (Fung, 2006: 74). As workshops become more common practice in New Town planning, it will become possible to evaluate the impact of these short-term events on the spatial results. Until then, they remain a useful tool to catalyze negotiations, build consensus and share information – critical aspects of any New Town planning process.

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Collective City Making

How commoning
practices foster
inclusivity

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Abstract

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RIUS 6: INCLUSIVE URBANISM

The article addresses the concept of urban commons, specifically the ways in which it can contribute to inclusive urbanism. We consider how communities appropriate urban spaces, how commons mediate participation in urban development as well as the role of the physical configuration in fostering inclusiveness. The “PLATZprojekt” in Hanover, Germany, is taken as a case study.

A container village of about 3,000 m², the PLATZprojekt is understood as an experiment in offering people a self-organized space, one they can actively shape, a space to implement their ideas and to provoke discussion about their city. Initiated by a group of young skateboarders, it was funded by the BBSR (Federal Institute for Research on Building, Urban Affairs and Spatial Development). Situated on a vacant lot in an industrial zone relatively close to the inner city, the PLATZprojekt seeks to provide space for projects and ideas that cannot be realised within the gentrified neighbourhoods of dense and commodified European metropolises.

We analyse the PLATZprojekt as a permanent “commoning process” that encompasses different levels of accessibility and represents a positive example of inclusive urbanism while at the same time revealing various limitations.

KEYWORDS

urban commons, inclusive urbanism, PLATZprojekt, citizen participation, spatial practice

1. Introduction & Research Questions

Since 2017 the senate administration of Berlin has been working on specific guidelines for citizen participation in urban development. This reflects the increasing demand for the right of co-determination in this field, as displayed by the initiative “Stadtneudenken”, which fights the sale of public properties. Furthermore, the guidelines explicitly name social groups that are often neglected in the participation process such as the disabled, migrants or children suffering from urban processes of exclusion and with few possibilities to express their needs. This exclusivity can concern various rights. For example, a good education still seems to depend on where in the city and under what economic conditions children grow up. Further, the right to living space in cities is restricted for homeless people and refugees, or indeed for wider social groups, due to high rents. Hitherto, the struggle to acquire these rights has frequently taken place within public space, sometimes leading to its appropriation, e.g. the long-term occupation by camped protesters. On the other hand, private land or wasteland can also be transformed into a commonly owned part of the city. Here there may be different goals, whether to make that place accessible or usable for more people, or to realise a common dream or vision such as urban gardening, or simply to satisfy the daily needs of a particular group of people. These appropriation processes or projects can be called “commons” and exemplify the senate’s guidelines: Commons projects offer a high level of participation and thus involve a certain idea of inclusiveness. At the same time, however, they can also be seen as rather exclusive, as they often consist of a self-determined group of people.

In this article we would like to discuss the conditions under which a “bottom-up” commoning practice can lead to a more “inclusive urbanism” as well as the constraints on this process. As architects and planners, we are especially interested in determining how the physical-spatial configuration of a commons resource influences its inclusiveness. In our field research we have visited several such projects in major cities in Germany, Belgium and the Netherlands, analysing these in regard to the above-mentioned correlation.

Based on this research, we claim that commons can help to increase inclusive urbanism on several different levels. The degree and form of inclusion depend on the spatial and organisational structure of the commons. Bottom-up initiatives are more likely to tackle problems that city administrations often fail to perceive. Urban commons are, therefore, stopgaps in urban development and consequently an important tool for more inclusive cities, which cannot be simply replaced by new guidelines.

Hence our article should make interesting reading for planners in urban administrations or the free market, for commoners as well as scientists by raising awareness of both subjects, commons and inclusive urbanism, as well as the link between them. We hope to provide some new insights on this dependence, which has not been sufficiently investigated in the scientific discourse.

In the following, we would first like to briefly define the terms “commons” and “inclusiveness” as applied to the urban studies discourse. This is followed by a presentation of our case study, the PLATZprojekt in Hanover, in which we discuss the different levels of inclusiveness in this specific commons project and consider briefly where transferability can be observed outside the German context. A short conclusion provides a summary of our results.

2. Defining Commons

The concept of the commons or the commoning process itself in an urban (or rural) context (Ostrom 2011) is an increasingly popular topic in scientific discourse and in practice among activists as well as planners and city administrators. Following Elinor Ostrom’s groundbreaking “Governing the Commons” (Ostrom 2011), similar publications have appeared in different scientific fields. Within urban studies, the discussion on commons is focused around questions of what “urban” commons are (Dellenbaugh et al. 2015), how to map spatial commons (Pelger et al. 2016), commons in architecture (Avermaete 2018) and various other topics.

Adopting the proposal of Kip et al. (2015, p. 13), we define commons as consisting of three elements: 1) common resources – here the physical space, although resources can also be objects or immaterial things such as knowledge; 2) the institutions, i.e. the process of negotiation and the rules of appropriation; and 3) the community, i.e. a self-determined group of people using the resources and producing the commons, who are also called commoners. A happening or a place can be understood as a “commons” if all three parts interact. For example, while a public space itself is not a form of commons, if people use the public space commonly and define rules for its use, this process can be called a “commoning practice”.

However, we have to keep in mind that there is often an inherent trade-off for some common resources, so that once a free space in the city is used by one group of commoners e.g. for urban gardening, it cannot be appropriated by others, e.g. for a housing project. In addition, some resources within the commons are not durable, e.g. the apples in the urban garden might not be sufficient to feed all participating gardeners. This so-called “tragedy of the commons” (Hardin 2008) can be avoided through the introduction of regulations, which may include some restrictions and thus, in certain cases, lead to

forms of exclusion.

Furthermore, if the commoners (e.g. people in a co-housing project) pursue different aims in line with their disparate backgrounds, this can undermine the success of the commons project as no decisions will be made and no common drive will develop.

However, if the community works well together and regulations help to define access and use, the exploitation of the commons can be an exemplary bottom-up practice characterised by diverse participation processes. This can contribute to a more inclusive urban development by fostering self-empowerment, in particular civil society's shaping of the city. Notions of this interdependence of the commons and the inclusiveness of cities can already be found in the "right to the city" debate of the 1970s: "The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization." (Harvey 2008)

3. Inclusiveness within urban studies

The Cambridge Dictionary defines inclusiveness as a quality of including many different types of people and treating them all fairly and equally. In urban planning the term "inclusiveness" often concerns physical access. The accessibility of public space and public transport is very much discussed, especially for disabled or elderly people but also for parents with baby buggies. Cities still have a long way to go before they can be said to offer an urban design for all.

Inclusive urbanism aims to create a city where everyone has equal rights regardless of race, faith, ability, gender or sexual orientation. But again this kind of inclusiveness is far from being a reality in most cities. For example, most public buildings provide only gendered public toilets, while discrimination against apparent foreigners (so-called "racial profiling") or homeless people can be observed in public spaces on a daily basis. Furthermore, an inclusive city should ensure a safe environment for every road user and a certain level of security so that everyone can enjoy public spaces as a place to stay temporarily, for leisure or recreation. Inclusiveness in cities can also mean that there is enough living space for all, with no social group excluded due to their lower income or any of the other factors already mentioned. Finally, as stated by Stren (2001): "Inclusive cities (or socially sustainable cities) are therefore cities in which all citizens are incorporated in decisions and policies." Consequently, inclusive urbanism involves local residents in the design and use of the city itself, which means encouraging participation in planning processes.

4. Inclusive urbanism by commoning?

The commons can variously contribute to an inclusive city, depending on the levels at which each project and process is accessible. Hereby inclusiveness is reflected in the way that the commons can offer and co-produce collectively-used resources (in our case physical places). Rejecting economic interests, the aim is to present opportunities of participation and appropriation of space for people whose interests are not taken into account by the state.

Consequently, not every commons project is inclusive in the same way, but each has its own strengths and particular approach to fostering a diverse and inclusive city.

In his essay “The City as Commons”, the Athenian architect and researcher Stavros Stavrides envisions a shared city that constantly involves all residents and is thus totally inclusive. For Stavrides, the role of commons within this vision is that institutions of commoning must remain permanently open and inviting to newcomers in order to prevent the accumulation of power. He also describes the interrelation between this openness and the process of a common space which “is always in the making” (Stavrides 2016).

There have been previous attempts to describe the inclusivity of public spaces through the various factors of access such as physical access, social access, access to activities or discussions and access to information (Akker 2005). Commons are generally places accessible to all commoners, where residents have the right to participate in the process of formation and where they are allowed to determine the regulations of use. Hence, inclusiveness in regard to the commons concerns, first, accessibility to the physical resource, second, the socio-spatial accessibility of the group of commoners, and third, accessibility to the participation process and regulations of the resource, namely the common institutions. More precisely, inclusiveness exists on several levels, as outlined in Table 1.

Accessibility of the common resource	Geographical location within the city	Central, easy access by public transport
	Physical accessibility	Barrier-free, no gates, spatial openness
	Spatial design	Inviting co-design through common places and open structures, open-to-use design
Accessibility of the community	Social affiliation	Sense of belonging, age, social and educational background
	Geographical spatial proximity	Living or working close to the resource and to each other
Accessibility of the common institutions	Communication	Digital platforms, language, face-to-face meetings
	Organizational structure	Possible appropriation, right of co-determination, taking part in a participation process
	Regulations	Opening hours, rights to use and change

Table 1: Levels of accessibility within the commons concept

Referring to the spatial condition of the resource, levels of accessibility are the geographical location of the common resource within the city, the physical accessibility of the space and the way the resource is designed. The research on spatial commons conducted by Pelger et al. (2016) describes different spatial qualities such as density, porosity, ambiguity, the relationship to the built environment, stability, flexibility, and positioning within the overall system of the city. These are the conditions that an urban space within its context has to fulfil in order to be potentially transformed into a common resource. With regard to the inclusiveness of spatial commons, some of these qualities such as porosity and flexibility can also be interpreted as conditions for a common resource to be an inclusive space.

Concerning the participation process, accessibility is characterised both by the way communication takes place and the organisational structure or hierarchy. Regarding the group of commoners, the governing factors are social affiliation and proximity. Furthermore, the common resource itself can have an impact on the official planning culture by being integrated into the municipal planning process.

5. Case Study: PLATZprojekt, Hanover

To investigate and test these different aspects and levels of accessibility within the commons concept, we chose as our case study the PLATZprojekt in Hanover, Germany.¹

PLATZprojekt is an experimental project aimed at offering people a self-organized space which they can actively shape and where they can implement their ideas and initiate discussions about their city.

The story of PLATZprojekt started with a group of skateboarders looking for space to skate and to create their own self-made skate park. For this purpose they squatted an empty plot in the industrial zone “Lindener Hafen”, formerly used as a parking lot, and started to build their skate park there. Wishing to use the site on a long-term basis, they contacted the Metro Group, a wholesale and retail company who owned the plot. Fortunately, the responsible agent had himself skated in his youth and was receptive to the project’s ideas. The association founded by the skaters, 2er Skate e.V., subsequently obtained a temporary lease agreement in 2005 to use the site. The group decided to share their experience and give more young people the space and opportunity to test and realise projects and ideas that are normally impossible within urban settings due to economic constraints.

1 All the information in the following sections is drawn from field research (spatial mapping, participatory observation, user counting) carried out by students of the Leibniz University of Hanover in 2018, from interviews with the founders, from a lecture by the founders and literature about the project. As the project changes continuously the information about uses refers to the time of writing the text.

To this end, the group worked out a concept and applied for funding to create a container village on the site next to the skate park, whose realisation can be seen on the aerial photograph of the PLATZprojekt (see Figure 1). Funding for their project was granted within the research campaign “Jugend. Stadt.Labor”, run by the BBSR. This enabled the project to install the first container as a base station in 2014.



Figure 1. Aerial photograph of the PLATZprojekt, © PLATZprojekt Hannover

Today the project is run by the association PLATZprojekt e.V., which has about 30 active members from a total membership of 130. The non-profit container village occupies an area of 3,000 m² and comprises approximately 50–60 containers offering space for start-ups as well as common spaces. The hugely diverse range of activities and services include a café, a wood workshop, a sewing workshop, a bicycle workshop, a skate and surfboard manufacturer, a studio for audio-visual digital art, a tattoo studio, a hotel-container as well as a stage for music- and theatre performances. There are also several non-profit organizations such as the initiative “Du bist willkommen”², which offers sponsorships for refugees or “Hanover Voids”, a group of architecture

² “You are welcome” (authors’ translation) is a project within the association contRa e.V. (Contra Rasmus).

students who map unused spaces in the city that could potentially be utilized.

The spatial arrangement of the containers determines the functioning of the site: A central space with community facilities – the “village square” – has been created to encourage people to come together, as can be seen in the photo of the so-called “Central Place” in Figure 2.



Figure 2. Central Place © PLATZprojekt Hannover

The first container to be implemented on site hosts a common room with a bar. This is the central element of the project. The founders of the PLATZprojekt describe it as follows: “A base which can be co-designed as a central meeting point, to network and get to know each other at eye level, is an essential success factor. In the village it would be the church or the corner pub where people chat and make plans”³. A second community element is the “PlatzWERK”, located in the southern part of the site, which consists of seven containers assembled to form one building. This hosts a workshop area,

3 PLATZprojekt (authors’ translation)

a co-working space and studios for artistic residencies. Smaller spaces and niches are created by gaps and offsets between the containers. These spaces are understood as a connecting element, creating added value for the community. Used in various ways such as to create an urban garden (PLATZgarten) with a beehive or a grove featuring a hammock, they allow social withdrawal and appropriation at the same time. Due to the different types of space (the “village square”, in-between-spaces) and the mix of uses (café, garden, workshops, playground) the project has become an autonomous “Microquarter” with a characteristic atmosphere. Events, collective activities and parties are regularly organised by the group.



Figure 3. Map of Hanover © Julia Köpper

6. Levels of accessibility

Regarding the *resource* of the PLATZprojekt, we can state that the location has both advantages and disadvantages. A map of Hanover in Figure 3 shows how the project, located within an industrial and commercial zone, is largely surrounded by superstores and diverse buildings such as used by the chemical and recycling industries. While there are few casual visitors, this is still a central location in the city of Hanover, which can be easily reached by public

transport. On the one hand, there are a couple of benefits to being “off the beaten track”: There is a lot of room for appropriation without disturbing other users and less attention must be paid to regulations concerning noise and the configuration of the containers. Alongside these advantages of the industrial surroundings, the project profits from the physical proximity to the neighbourhood “Linden”, where a lot of potential users of the PLATZprojekt live, i.e. students and young people. On the negative side, this form of “protection” of being out of everyone’s view also means that the project is less accessible to the general public. Visitors only come if they already know about PLATZprojekt and only certain sections of society will be informed about what is happening there. Subsequently, the project has a particular target group, which is also determined by the location.

At the same time, for those who know about the project and are interested in dropping by, the PLATZprojekt is accessible to the public at any time of the day. Figure 4 shows the entrance to the site, where the lack of gates confirms the open access to the project and to most of the containers. The entrance is barrier-free and the group is currently working on barrier-free access to all parts of the site, which is maintained by the members of the association, some volunteers and the tenants of the containers.



Figure 4. Entrance to the PLATZprojekt © Frederike Jansen

The design and spatial organisation of the “container village” is highly inclusive to its users and every visitor: It offers flexibility, allows appropriation and makes clear visually that the project is under constant development. Whenever the given space is no longer sufficient due to new containers arriving on site, a crane is hired and the whole spatial set up is modified to integrate the new containers, as can be seen in Figure 5. If necessary, a new layer of containers can be set up. In addition to these planned changes in the space by tenants, visitors can also spontaneously appropriate space. In this way we can say that the spatial design is never “finished”. However, the appropriation of land by tenants can also create invisible barriers when, for example, the adjacent space around a container is transformed into a terrace or “front garden” that seems to belong only to that container.



Figure 5. Model to explain spatial flexibility of the PLATZprojekt © PLATZprojekt Hannover

The *community* and “driving force” of the PLATZprojekt basically consists of a group of people aged 22–45 years.⁴ Initiated by young students, the project is primarily aimed at their friends or friends of friends. Most of these are well-educated and have creative backgrounds. The two founders, Benjamin Grudzinski and Robin Höning, for example, studied architecture at the local Leibniz University. This training gave them the requisite knowledge and self-confidence to take part in a competition for public funding. Other young people without this background would probably not have been motivated to take part in such a competition.

There exists a core group of about 30 commoners actively involved in the project. Some of these run their own project or company within the PLATZprojekt, while others are directly working to support the project. Interviews with the founders and several field trips revealed that the core group is quite homogeneous. Although the members would probably never exclude anyone because of his or her abilities or education, the project itself is constituted in such a way as to attract only a certain section of society. While there have been attempts to integrate refugees or people from different social backgrounds into the project, the group soon discovered that this is a dedicated task for someone who explicitly cares about integration and who is willing to assist others in implementing their projects. This task proved impossible for them to realise within the existing project structure.

Although the core group of commoners is quite homogeneous, people of different ages are keen to visit the PLATZprojekt. According to the project founders, teenagers come to hang out or elderly people drop by for a coffee while out for a stroll (see Figure 6).⁵



Figure 6. People meeting at the PLATZprojekt © Janna Putzke

4 Interview with Benjamin Grudzinski / Robin Höning.

5 Ibid.

Concerning the *institution*, PLATZprojekt determined its regulations for access to the site and for participation by means of a democratic process. As there are no official opening hours or any control mechanisms, the site can be accessed at all hours. There are several options for involvement in the project: As a guest or visitor, by participating in events, by becoming a member of the association to support and take part in the further co-creation of the project, or by taking over a container pitch to start your own project. Generally, the association is open to everyone. The membership fee is only €1 a month. Monthly planning meetings are open to members and non-members alike, and everyone who attends these meetings can participate. The meetings are used to make decisions and delegate collective tasks, for instance to maintain the site or organise events. The association is organised non-hierarchically and constantly experiments with different decision-making methods. In general, it is essential to be present on site, at project events and to participate in activities in order to be entitled to vote and co-decide. This principle is called “Do-ocracy”, i.e. the one who acts is the one who decides (BBSR 2016). This norm ensures that the evolution of the project is always defined by the people who are currently active.

To obtain a container pitch, it is necessary to present an idea for a project at a monthly group meeting. The group decides together if and where to implement the new project idea, taking into account the collective guidelines for selection. These guidelines state that the use of a container space must be either for common/social usage or, if it is a commercial project, this must have an innovative character and must not compete with any other commercial enterprise within the city (to exclude any commercial or competitive advantage). The container itself has to be organised and equipped by the future users. The rent for the pitch is €60 a month (plus water and electricity charges) as well as a “pay what you can” contribution to show solidarity with the project’s aims.⁶ All tenants should identify with the philosophy of PLATZprojekt and must contribute in some way to the community as well as to the infrastructure (although they are considered economically independent within their own corporate structure). In order to keep the project permanently open to new ideas, the right to use a container pitch has to be renewed after one year.

Communication and information are important elements within the organisation. Information about the project, the process and possibilities to participate can be found on the project’s website in German and English. A “welcome letter” available for download describes the vision behind the project, its goals as well as the criteria to obtain a container pitch. Figure 7 shows an on-site blackboard used to announce diverse news and meeting times. The

⁶ The project uses the rent from the container pitches to finance the site lease, maintain the common spaces and areas, pay insurance and provide internet.

commoners regularly organise open days (one in spring and one in autumn) and offer guided tours aimed at attracting and informing interested citizens, neighbours and potential new project pioneers to the site.



Figure 7. Blackboard for announcements at the PLATZprojekt © Frederike Jansen

7. PLATZprojekt – a commons project to foster inclusive urbanism?

If we rely on the definition that inclusiveness means “including many different types of people”, it can be questioned how inclusive the investigated project really is. As we have already said, although the project is open to all, it attracts only a certain section of society. In this way the *community* is not completely inclusive in the sense of encompassing many different types of people. While many members have different professions or study in different fields, they share similar *educational backgrounds* or belong to the creative scene. However, additional projects taking part in the Platzprojekt such as “Du bist willkommen” may integrate a more diverse group of commoners over the long term. From a geographical perspective, the commoners come from all over the city of Hanover; the site can be easily reached on foot or by bike, public transport and even car, as there is plenty of parking space. Therefore, if we refer to the understanding that the inclusiveness of a common space depends on the accessibility of the *common resource*, then the

container village can be defined as quite inclusive, also in view of its inviting appearance without gates and its offer of round-the-clock access.

Regarding the *institution* of the PLATZprojekt, it can be described as exceedingly inclusive, as it is open to newcomers and to constant *negotiation*. Its dynamic nature is expressed through the spatial setting as well as the regulations (renewal of rent after one year to foster the establishment of new projects) and the assembly of the commoners. The project developed in a democratic process from an idea to an institution that – due to its framework – inherently changes and evolves. The project is characterized by the do-it-yourself approach of the skateboarders who initially used the adjacent site, even though the group of commoners has changed constantly over time and now a third generation is running the project. All commoners have the right of co-determination and play a decisive role in shaping the project.

In the municipal planning context, the PLATZprojekt plays a special role within the city of Hanover. The local administration tolerates and supports the on-going development of the project, viewing it as an important contribution to an experimental creative culture within the city even though there are sometimes questions about the legality of its operations (e.g. the piled-up container structures contravening building law regulations). The project is even promoted as a best-practice example for user-based city planning by the municipality (BBSR 2016) and was nominated for the “German Neighbourhood Prize 2019” by the “nebenan foundation” in the category “Aiding self-help/Fostering civic engagement and inclusion”, thereby underlining its inclusive character.

Summarizing, we can state that the PLATZprojekt has created a unique location within the city of Hanover, turning a previously abandoned site into a common resource accessible to all and which gives the opportunity to use and design this part of the city in a special and inclusive way.

8. Transferability of the analysis

Every project and every common resource has its own specific character that can foster inclusivity to a higher or lesser degree in different ways. The characteristics of one project can never simply be transferred one-on-one to another project. Yet the described accessibility levels of elements inherent to urban commons can be found in different contexts, regardless of the cultural background, the type of commons or the size of the city in which it is located.

Several “transferable” insights of the PLATZprojekt can thus be applied to commoning projects that we have visited within our field research in other cities, also in the international context.

Spatial openness is a quality that applies to commoning projects located in public space or wastelands turned into commons. Such spaces are often

visible and accessible from public streets, are not completely fenced in and can therefore be accessed at any time of the day. One example we can mention here is Driemaster Park in Ghent, a former plot of fallow land currently used as a neighbourhood garden. The park is a self-managed green space appropriated by and for the inhabitants of the neighbourhood for plant cultivation and leisure activities. It is located next to residential housing and a factory in a mixed-use neighbourhood outside the city centre. The *open-to-use design* of the park is a common feature of such urban gardening projects. On site activities are clearly visible: the growing of vegetables and fruits, some animal husbandry, self-made playgrounds for children and seating opportunities. The principle of *being present to be involved* can also be seen in Driemaster Park. The group of commoners consists of people from the neighbourhood who organise themselves via a Facebook group and by chance meetings on the street or on site.

The processual nature of the formation of the *organisational structure* is inherent to projects that originate in bottom-up processes, leading to self-determined administration in the form of associations or foundations. This is the case, for instance, in NDSM Kunststad in Amsterdam, an autonomous art space created from an old shipbuilding warehouse on the former NDSM wharf. The project was developed in a bottom-up process initiated by local artists in negotiation with the municipal authorities. While the aim of the municipality was to redevelop the former industrial zone, the aim of the artists was to create economically affordable studio spaces co-owned and co-managed by the tenants. Here the process is also reflected in the *spatial configuration* of NDSM Kunststad, two-storey stacked units within the warehouse itself, allowing users to build and design their own working spaces. Today the project is run by the foundation “Kinetisch Noord”, which holds a leasehold contract with the city.

9. Conclusion

The various levels of accessibility elaborated in this article show, first, the extent to which commons can be seen as inclusive, and second, how the parameters of inclusiveness have many different aspects, such as geographical location within the city, physical accessibility, spatial design, social affiliation, spatial proximity, communication, organisational structure and regulations. Each aspect has its own legitimacy and effect on the inclusiveness of the common resource, and thus on its users. Analysing these can help to classify and scrutinize urban commons concerning their inclusiveness, thereby identifying deficiencies and needs.

In summary, we would like to state that the physical-spatial configuration of a common resource strongly influences its inclusiveness: The barrier-free, open access to a space helps as a first step towards inclusion (in con-

trast to commons with restricted or controlled access). Further, the activities have to be visible and comprehensible to newcomers. If people do not understand what is happening and why, they will not feel encouraged to participate if they happen to drop by. Consequently, it is also important to communicate visibly on site how to participate. Hence the commons project must be created or even designed in such a way as to operate with a low barrier threshold. Access to the community is the most critical part of the studied accessibility of the commons, and greatly influences the degree of (real or felt) inclusiveness. This depends very much on the composition of the group of commoners and the type of commons. Certainly, it is vital to avoid the exclusive use of a commons resource by any one community, a situation which may unintentionally occur due to social affiliations or because of restricted capacity (e.g. in cooperative housing projects). Yet as previously pointed out, this kind of exclusiveness may sometimes help the commons to function properly, as individuals harbouring the same goals may foster useful dynamics.

Regulations are an important part of the commoning process. These are usually determined by all commoners in a democratic way, adding to our understanding of the inherent inclusivity of the concept of the commons, and also providing a model for city administrations, as shown in the example given at the beginning. Furthermore, a space which is less accessible due to fencing can still be welcoming to many different people if the activities and opening hours are well-communicated.

Finally, we can state that no single commoning project will probably ever be inclusive at all levels of accessibility. The best way to achieve inclusive urbanism is thus to foster a great variety and number of commons within one city, thereby reaching a large number of diverse groups. Consequently, city authorities must provide spatial and structural opportunities (open spaces in the urban fabric) which can be turned into a commons resource. This also applies to the international context: The discussed European cases show how cities already profit in many ways from commons, not only by making a common resource usable, but also, for example, by making the city famous for the idea of commons (Driemaster Park, Gent), by assuming the responsibilities of city governments such as offering cultural activities (NDSM Warf, Amsterdam), by self-organised financing and the building of infrastructure (Luchtsingel, Rotterdam), by activating an entire neighbourhood or by introducing new forms of participation to standard processes of urban planning (Van Beuningen Plan, Amsterdam).

In conclusion, we can state that if cities are successful in hosting several disparate common projects and are able to integrate some of the exemplified participatory processes, they will move down the path towards inclusive urbanism.

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Inclusive Urbanism: Advances in research, education and practice

Responding to the United Nations' Sustainable Development Goal No. 11 to 'make cities and human settlements inclusive, safe, resilient and sustainable', *Inclusive Urbanism* reveals a wide variety of approaches to promoting social inclusion. Questions of architecture and urbanism are considered alongside those of landscape design, urban geography and city planning.

As the title suggests, the content is divided into three parts: research, education and practice. A conceptual framework is offered in the opening part along with a theoretical embedding of the term 'inclusiveness'. Here the discussion also encompasses the latest results of urban planning research. In the second part, the focus turns to university teaching. Do we need new teaching formats, and if so, how can these be designed to ease students into the topic of 'inclusive urbanism'? The third part of the book offers diverse examples of spatial design, urban laboratories, planning and co-production processes, all presented with their respective possibilities for boosting inclusion. Consciously international in outlook, the book identifies practices in both the Global North and Global South.

Inclusive Urbanism brings together selected contributions presented at an international conference on 'Urban Studies' held at the TU Dresden in November 2018. The conference was jointly organized by the TU Dresden, the TU Delft, the Leibniz Institute of Ecological Urban and Regional Development in Dresden, the Czech Technical University of Prague and the Wrocław University of Science and Technology.

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