Towards a new vocabulary of urbanisation processes: A comparative approach

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Abstract
Contemporary processes of urbanisation present major challenges for urban research and theory as urban areas expand and interweave. In this process, urban forms are constantly changing and new urban configurations are frequently evolving. An adequate understanding of urbanisation

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must derive its empirical and theoretical inspirations from the multitude of urban experiences across the various divides that shape the contemporary world. New concepts and terms are urgently required that would help, both analytically and cartographically, to decipher the differentiated and rapidly mutating landscapes of urbanisation that are being produced today. One of the key procedures to address these challenges is the application of comparative strategies. Based on postcolonial critiques of urban theory and on the epistemologies of planetary urbanisation, this paper introduces and discusses the theoretical and methodological framework of a collaborative comparative study of urbanisation processes in eight large metropolitan territories across the world: Tokyo, Hong Kong/Shenzhen/Dongguan, Kolkata, Istanbul, Lagos, Paris, Mexico City and Los Angeles. In order to approach these large territories, a specific methodological design is applied mainly based on qualitative methods and a newly developed method of mapping. After the presentation of the main lines of our theoretical and methodological approach we discuss some of the new comparative concepts that we developed through this process: popular urbanisation, plotting urbanism, multilayered patchwork urbanisation and the incorporation of urban differences.

摘要

随着城市地区的扩大和相互交织，当代城市化进程给城市研究和理论带来了重大挑战。在这个过程中，城市形态不断变化，新的城市形态在不断演进。要充分理解城市化，我们必须从塑造当代世界的大量纷纭歧出的城市经验中获得经验和理论层面的启发。如今正在产生的城市化格局千差万别，并迅速变化，我们迫切需要新的概念和术语，在分析层面和图解层面帮助破译这些格局。应对这些挑战的关键手段是应用比较策略。本文基于城市理论的后殖民批判和全域城市化的认识论，介绍并讨论了对世界八大都市圈城市化进程进行协同比较研究的理论和方法论框架，这八大都市圈是：东京、香港/深圳/东莞、加尔各答、伊斯坦布尔、拉各斯、巴黎、墨西哥城和洛杉矶。为着手探讨这些广大的都市圈，我们主要基于定性方法和新开发的测绘方法，应用了一套特定的方法论设计。在介绍了我们主要的理论和方法论进路之后，我们讨论了在这个过程中发展起来的一些新的比较概念：大众城市化、小块圈地式城市化、多层拼凑城市化以及城市差异的纳入。

Introduction

The urban world has fundamentally changed in the last few decades. A wide range of urbanisation processes is generating a multitude of urban outcomes, resulting in differentiated, complex and often surprising urban landscapes, which are deeply disturbing conventional understandings of the urban. This diversification of urban forms and outcomes demands a differentiated view on the dynamics of urbanisation. A new vocabulary of urbanisation is required that

would help to decipher these rapidly mutating urban landscapes and also to facilitate discussions and common understandings of urbanisation.

In the following, we will present some initial findings from our project 'Patterns and Pathways of Planetary Urbanization'.[1] With this comparative research we address the challenges of contemporary urban change by comparing urbanisation processes across the world and propose a series of new concepts in order to enrich the vocabulary of urbanisation. For this purpose we looked at eight large metropolitan areas, namely Tokyo, Hong Kong/Shenzhen/Dongguan, Kolkata, Istanbul, Lagos, Paris, Mexico City and Los Angeles as exemplary terrains for empirical research and as inspirations for theory production. Here we focus explicitly on processes of concentrated urbanisation, and in selecting our case studies we strived to include urban areas that are similar in terms of their sociospatial dimensions yet provide highly distinct urban contexts.[2] Our work is strongly inspired by postcolonial comparative urbanisms that seek to move beyond the established sites of theory building and compare urban experiences across the various divides that crisscross our planet, such as north/south, east/west or centre/periphery. This paper serves as an introduction to this project, and presents its first empirical results in brief.

The comparison, conducted between 2011 and 2017, is based on a collective, transdisciplinary and transductive research process applying a qualitative methodological design that combines a wide variety of sources and procedures. It resulted, besides other things, in several PhD theses analysing some of the individual urban territories and identifying various urbanisation processes in each of them (Hanakata, 2017; Kallenberger, 2018; Sawyer, 2017; Streule, 2016, 2018; Wong, 2017). In repeatedly bringing insights from these diverse contexts in conversation with

each other right from the outset of the project, it was possible to develop about a dozen comparative concepts of urbanisation that captured a number of common features and dynamics. We eventually elaborated and finalised nine of them: popular urbanisation, plotting urbanism, mass housing urbanisation, bypass urbanism, multilayered patchwork urbanisation, laminar urbanisation, industrial urbanisation, incorporation of urban differences and production of centralities.[3] This comparison and its resulting new concepts are by necessity incomplete and partial and form only one of many other possible starting points for the development of an enriched, enhanced and revisable urban vocabulary. In this sense, we offer our initial results and findings for a broader discussion.

In the following, we contextualise our comparative approach in the recent debates on planetary urbanisation and postcolonial urbanism. We then discuss the shortcomings and difficulties of extant concepts of urbanisation, especially focusing on the concepts of suburbanisation, gentrification and informal urbanisation. In a next step, we explore the most recent developments in comparative urban research, and examine especially its capacities for the generation of new concepts. This is followed by the presentation of the theoretical and methodological framework of our approach. To provide a glimpse of some of our conceptual experimentations, we finally introduce four of our new comparative concepts: popular urbanisation, plotting urbanism, multilayered patchwork urbanisation, and the incorporation of urban differences.

Contemporary challenges for urban research: Defining the problematic

Among the many phenomena characterising contemporary urbanisation, three aspects

are of uppermost importance: (1) the expanding scale and increasing complexity of urban areas leading to the planetary reach of urbanisation; (2) the emergence of a multitude of urban outcomes across a variety of contexts, urgently calling for the diversification of the paradigmatic examples of urban theory production; and (3) the necessity to analyse urbanisation processes and not only urban forms, in order to address the highly dynamic and innovative character of urban change.

Recently, the concept of *planetary urbanisation* has been introduced into critical urban theory in order to address a wide range of urban transformations that have put into question many of the fundamental assumptions and certainties of urban research. This includes various phenomena that are extending the territorial reach of the urban further and further into the seemingly 'non-urban' realm (Brenner and Schmid, 2014, 2015). These processes are producing constantly new geographies of uneven spatial development, while urban outcomes are becoming much more differentiated, polymorphic and multi-scalar. At the same time, the concept of planetary urbanisation expresses a new quality of the urban process: urban forms associated with relatively persistent human settlement spaces – often imagined as dots on a 'non-urban' background – are developing into highly heterogeneous and polymorphous extended urban landscapes that are characterised by multi-scalar superimpositions and entanglements of cores and peripheries (Merrifield, 2014). The perspective of planetary urbanisation thus questions not only the conventional analysis of areas located outside of the putatively urban realm, but also inherited understandings of urban core areas. This is expressed by the introduction of the related terms 'concentrated' and 'extended' urbanisation, which

indicate two basic modalities of the urban process (Brenner and Schmid, 2015).

It is important to mention that the term 'planetary urbanisation' does not mean that all urban areas are becoming similar, or that one overarching process of urbanisation is shaping the world. Rather the opposite is true: to grasp the complexity of planetary urbanisation, it is essential to consider the specificity of urban territories (Diener et al., 2015; Schmid, 2015) and hence to analyse concrete processes and manifestations of the urban on the ground. Basically, two central assumptions define this novel approach in urban theory: urbanisation today has a planetary reach, and a planetary perspective is necessary in order to grasp these new urban tendencies and phenomena. This approach thus implies a fundamental shift from a centric perspective which starts the analysis from a real or virtual centre of a 'city' and then stretches out in order to define its boundaries to identify the 'relevant' urban region or agglomeration; instead, it adopts a decentred perspective trying to understand the wider urban territory, and to identify the various urbanisation processes that are shaping this territory. Shifting the analytical perspective away from the centre enables a view on the production of urban territories from a different angle.

This decentring of the analytical perspective follows, and is in fact inspired by, another fundamental analytical move generated by the postcolonial turn in urban studies that so strongly challenged the deeply inscribed geographies, the persisting centres of gravity of theory production and the Anglo-American hegemony in urban studies. Already more than a decade ago, Robinson (2002) called for a diversification of the sources and the inspirations in urban theory, a call that has been reaffirmed since then many times (cf. e.g. Parnell and Oldfield,

2014; Roy, 2009; Sheppard et al., 2013). One important analytical and methodological starting point to address this challenge is to treat every urban area as an 'ordinary city' (Robinson, 2006) and thus as an equally relevant place for learning about contemporary urbanisation as well as a valuable starting point for theory generation, and conceptual innovation. Our own comparative project is strongly influenced by this call, and tries to take seriously the analytical and methodological consequences that it implies. To put this postcolonial move into a 'planetary' perspective means to assert that every point on the planet might be affected by urbanisation processes in one way or another and thus could enable important insights into the urban process. Robinson's recent call for 'making space for insights starting from anywhere' (2016: 5) again invites us to look for inspiration and new concepts to emerge from any place and thus, in a more radical move: from every point on the globe.

Another consequence of this decentring of urban research and urban theory is that the emergent patchwork of spatial unevenness can no longer be captured adequately through area models, with their typological differentiation between centre/periphery, rural/urban, metropolis/colony, North/South, or East/West. Indeed, the 'southern turn' of urban studies (see e.g. Rao, 2006), so strongly fostered through postcolonial approaches, paved the way towards a more encompassing view of the urban world, questioning the compartmentalisation inscribed and prescribed by inherited concepts that implicitly and explicitly structure theories as well as research and practice (see also Robinson, 2014; Simone, 2010).

In order to understand the rapidly changing universe of our urbanising worlds, we also have to fundamentally rethink the current conditions of urbanisation. Urban forms are constantly changing in the course of urban development; they can perhaps best

be understood as temporary moments in a wider urban process. Again, therefore, it is important to take a different analytical position: the challenge is not only to analyse the multitude of urban territories and forms, but also to focus on the various urbanisation processes that are transforming those territories and generating those forms. This also means that the spatial units of analysis – conventionally based on demographic, morphological or administrative criteria – have to be reconsidered. Urbanisation processes do not simply unfold within fixed or stable urban 'containers', but actively produce, unsettle and rework urban territories, and thus constantly engender new urban configurations. The essential task, therefore, is less to distinguish 'new' urban forms, than to investigate the historically and geographically specific dynamics of urbanisation processes.

The call to analyse urban processes is of course not novel and has been expressed in urban studies many times (see e.g. Harvey, 1985; Lefebvre, 2003/1970; Massey, 2005). However, to realise this call in concrete urban research in a thorough and consistent way has many consequences and faces various obstacles and difficulties. This becomes obvious in the current state of the scholarly production of concepts and theories. There are many new terms introduced into urban studies in the last two or three decades intended to designate various putatively 'new' urban phenomena (see e.g. Taylor and Lang, 2004). However, most of the energy has been spent to identify and label different types of 'cities' or urban regions based on emergent urban functions, forms and configurations (such as global cities, mega-cities or edge cities). Many of those once novel terms and concepts have already lost much of their explanatory force, as the 'new' urban forms that they tried to grasp and understand have changed profoundly. Much less has been achieved though in developing new concepts

for the understanding, analysis and definition of the various ways urban areas are being transformed. As a result, the field of urban studies is not well equipped with analytical tools to analyse urbanisation processes.

Concepts for the analysis of urbanisation

Many of the existing concepts for the analysis of urbanisation processes have some serious shortcomings. Generic terms such as 'urban restructuring' or 'urban transformation' indicate that some kind of urbanisation process is going on but do not distinguish between different qualities and rhythms of urbanisation. An evaluation of more specific concepts reveals some additional difficulties. First of all, there is only a very small number of well-established and clearly defined process-based concepts allowing for the analysis of urbanisation. By far the most widely applied and debated concepts are 'gentrification', 'suburbanisation' and 'informal urbanisation'. However, they form a very restricted and limited toolset for analysing and deciphering the wide variety and the heterogeneity of urban situations developing constantly all over the planet.

Postcolonial critiques highlight a second problem posed by the *origin* of these terms, and it is important to reflect on the conditions under which these concepts were developed, applied to other cases, gained widespread acceptance, and entered the canon of the scientific industry.

Despite the worldwide adoption of these concepts in recent years, it must be reiterated that they are nevertheless rooted in Western debates, experiences, inspirations and imaginations. Thus, 'gentrification' originally formed a relatively narrowly defined concept derived from the term 'gentry' that only exists in Britain and India, although with different connotations. And while various forms of suburbanisation already occurred in the 19th century, the most common understanding of the 'suburb' is still strongly influenced by North American debates from the 1960s. These debates designated a specific location, socio-economic situation and urban experience, mainly connected with middle-class families living in detached houses on the outskirts of (larger) agglomerations (see e.g. Gans, 1967 or Soja, 2010). These origins are still effective as mostly subliminal and unconscious connotations, widely disseminated through Hollywood's cinema and TV-series. Other possible terms for urban developments outside innercity areas, such as 'banlieue' or 'desakota', evoking very different – in certain respects even opposite – socio-spatial contexts and experiences (such as peripheral working-class neighbourhoods or the rural–urban interface) have either been treated as simple translations or relegated as 'unimportant' particularities. The term 'informality' also contains specific connotations: its origins lie in the designation of an 'informal' labour market for poor immigrant workers in Southern cities as opposed to the normalised, protected, 'modern' and Western way of formalised wage relations, put forward in the early 1970s especially by the International Labor Organization (AlSayyad, 2004; Souza and Tokman, 1976). This concept was subsequently extended to embrace an entire way of life and especially applied to neighbourhoods that were seemingly constructed outside of the regularised and formalised procedures of housing construction and urban planning. The term 'urban informality' is thus imbued from the outset with negative connotations, designating a kind of exception or deviation from the 'modern' model of urbanisation (Varley, 2013). Even if the concept changed its meaning in the course of various redefinitions, first in Latin America and later in a worldwide context, and was finally turned into a

positive term emphasising the transformative capacity of the urban poor evoking alternative pathways of urban development by subaltern and postcolonial studies (Hernández et al., 2010; Roy, 2005; Roy and AlSayyad, 2004), it still bears discernable pejorative traces from its origins.

A third shortcoming of these concepts is their *one-dimensional conception*, which privileges only one aspect or factor as decisive for their definition. Again, the example of informal urbanisation illustrates this point: the distinction between the 'formal' and the 'informal' tends to dominate the debate, and the resulting concept is inadequate in accounting for the spatialities and lived dimensions that encompass many different modes of producing urban spaces. Furthermore, examples of urban areas displaying certain aspects of informality abound and include very different urban configurations. We might indeed ask whether the shantytowns along the rail tracks in Kolkata, the relatively well-organised self-constructed neighbourhoods in Mexico City, the consolidated and normalised 'post-gecekondu' (Esen, 2011) areas in Istanbul, the rich residential areas in Belgrade constructed during the transition period between the socialist and the neoliberal regime (Diener et al., 2012) or even China's urbanised villages should all be called 'informal settlements', only because they fulfill certain aspects of informality in their production process. While the conceptual axis formality–informality still has great value for the understanding of urbanisation in general (e.g. as a 'mode of governing', see Roy, 2005) and can serve well for the analysis and definition of territorial regulation (see below), to use it as a characteristic and defining element for an urbanisation process is indeed questionable. As Mbembe and Nuttall (2008: 8–9) reaffirm regarding African urbanisms: '[…] rather than opposing the "formal" with the "informal" or the

"visible" with the "invisible", we need a more complex anthropology of things, forms, and signs in order to account for the life of the city in Africa. Analytically as well as in people's daily experience, simplistic oppositions between the formal and the informal are unhelpful'.

A fourth issue is the loss of precision and relevance through generalisation. A concept might originate in a specific experience linked to one place, and is then applied to more and more seemingly similar examples in other places. Through this tactic of *conceptual stretching* the original definition is relaxed to encompass more and more cases, until it becomes almost a generic label. The most prominent example is the term 'gentrification', which was originally coined to describe specific experiences in London in the 1960s highlighting the displacement of poor residents from central locations and their replacement by more affluent social groups accompanied by physical upgrading and increasing ground rents (Glass, 1964). In a further important conceptual reformulation gentrification was linked to the realisation of the rent gap as a key defining element (Smith, 1996). This concept was first fruitfully applied in Britain and North America and soon also in some European contexts; later it was reinterpreted as a global strategy (Smith, 2002). Very recently, even the term 'planetary gentrification' has been introduced, to discuss a wide variety of examples of gentrification understood in a very broad sense across the world (Lees et al., 2016; see also Slater, 2017). Through this strategy of conceptual stretching the definition of gentrification has reached a high level of generality and became almost a blanket term for any kind of urban upgrading and restructuring accompanied by some form of displacement of people and businesses. Processes such as neighbourhood upgrading in London or Berlin are now in the same rubric as the piecemeal process of

urban densification in Lagos, large-scale state-led urban renewal projects in Shanghai or Istanbul, condo developments in Jakarta or slum clearance strategies in Mumbai. Even if we acknowledge that the term gentrification can be applied in very productive ways to many situations and also has become an important concept underpinning many political struggles, we could nevertheless imagine a much more nuanced and rich vocabulary for the designation of the various emerging kinds of urban upgrading and restructuring, especially also reflecting varying local experiences (see e.g. Hanakata, 2017; Préteceille, 2007; Wu, 2016). As Ghertner (2015) observes, the most violent forms of displacement are taking place in situations in which public, common and customary land uses are being targeted by planetary trends of land privatisation, property formalisation and tenure regularisation. These situations, Ghertner argues, are not just variations of gentrification but constitute a different process. Analysing condo developments in Jakarta's former Kampung areas that could also be subsumed under the wide concept of gentrification Leitner and Sheppard (2017) proposed instead the term 'contested accumulation through displacement' thus provincialising David Harvey's concept of 'accumulation through dispossession'. Analysing real estate megaproject development in Asia driving conflict-ridden and sometimes violent displacements of residents and businesses, Shatkin (2017) develops a revised rent gap concept noticing that the specifics of current analyses of gentrification in the USA and Europe are of 'limited relevance in much of urban Asia' (Shatkin, 2017: 27).

The effects of homogenising strategies become especially clear with the concept of 'suburbanisation', which has become a kind of passepartout applied to all kinds of urban developments taking place beyond the confines of relatively dense urban core areas

(which then by default are defined as 'urban'). While it is indeed illuminating to learn that today the vast majority of urban populations is living outside of inner-city areas, it is another question whether it is useful to assemble a wide array of very different urban experiences under the conceptual umbrella of 'global suburbanisms' (Keil, 2013), embracing all sorts of urban territories, whether they have high or low income population, their morphology is high or low density, the areas are already well established or recently built, or are dominated by private developments, self-constructed settlements or mass housing. Moreover, processes that could be defined as 'gentrification' today affect many suburban areas. Thus, Lees et al. (2016: 211) recognise that suburbanisation and gentrification processes are increasingly blurred. If we take these observations seriously, we come to the conclusion that almost the entire contemporary urban world is now becoming 'suburban', while at the same time it is also getting fully 'gentrified'. We arrive here at a paradoxical situation: While these terms are stretched to encompass more and more 'cases' or 'singularities', they become at the same time fuzzy and lose much of their explanatory capacity. As Robinson (2016: 19) has aptly put it: much difference risks becoming unconceptualised, and we might be left with concepts without difference and difference without conceptualisation.

As a result of such standardising tendencies all sorts of urban constellations are straitjacketed by a few generally accepted concepts, leading to the reduction of complexity, the simplification of explanations, and finally to misleading interpretations of urban realities. Furthermore, these conventions restrict the imagination and reduce the inventiveness towards new terms in urban studies. There is indeed a series of conceptual experimentations and proposals from southern experiences that go in different

directions and enrich the urban vocabulary, such as 'rogue urbanism' (Pieterse and Simone, 2013), 'tenement urbanism' (Huchzermeyer, 2011), 'occupancy urbanism' (Benjamin, 2008) and 'peripheral urbanisation' (Caldeira, 2017). There is also a certain number of concepts addressing urban developments occurring 'beyond the suburbs', such as 'desakota', 'periurbanisation' or 'exurbanisation', mainly motivated by the development of various rural–urban constellations (see e.g. Andersson et al., 2009; McGee, 1991). All these contributions have strongly inspired our own study and could indeed be understood as outlining a broader agenda of conceptual differentiation.

Concept building through comparative strategies

As has become evident, new concepts and terms are urgently required in order to help to decipher the variegated and restlessly mutating landscapes of urbanisation that are currently being produced across the planet. It is necessary to diversify the sources in urban theory, and to enrich our language with a wider palette of terms better representing the manifold emerging urban situations and urban processes. The goal is of course not to develop a unifying language, but on the contrary to propose an enriched vocabulary that enables a differentiated view of the world, helps to better understand the dynamics of urbanisation and also to facilitate exchange and debates in an increasingly multilingual urban studies.

How to construct and develop such new concepts? How to grasp and conceptualise the variegated urbanisation processes emerging all over the planet? As the preceding discussion clearly showed, it is difficult and problematic to derive new concepts just from one specific case or singularity. One of the most prominent and promising strategies developed in the last years has therefore been the mobilising of a renewed epistemology of comparative urban research in order to have several starting points, which reflect a fuller range of urban experiences and thus more adequately address the proliferation of diverse patterns and pathways of urbanisation. What might be called 'new comparative urbanism' following Lees (2012) has become a significant resource for conceptual experimentations by encouraging open-ended comparisons transgressing some of the entrenched divisions in urban theory (McFarlane, 2010; Nijman, 2007; Robinson, 2006, 2011; Ward, 2010).

For a long time, comparative urban research has followed relatively pre-defined routes and procedures – it either tried to link comparison with established theoretical arguments or looked for variations in the outcomes of similar underlying processes (Tilly, 1984). Consequently, most of these studies focused on reasonably similar cases within certain regional boundaries – mostly within and across Europe and North America – excluding places that were seen as too different to compare (Robinson, 2011). This spatial imaginary corresponds to a temporal imaginary as well, as it concerns places that are not deemed to inhabit the same time in relation to the 'universal' time of the powerful, influential cities of the West (Sheppard et al., 2013). With the re-animation of debates on comparative urbanism, these tendencies within urban theory have been subject to thorough criticism.

The new comparative strategy stands in contrast to earlier comparative endeavours in advocating for a more open-ended and experimental approach, in which cities with diverse histories and across established borders of specialised area studies are compared in an effort to enable new theoretical framings. The new comparative sensitivities assert the ordinary and the mundane as equally relevant and constitutive of today's urban condition as the powerful and the

paradigmatic. Robinson (2011: 19) for instance argued for 'a revitalized and experimental international comparativism that will enable urban studies to stretch its resources for theory building across the world of cities'. She further introduced recently the distinction between genetic and generative comparative strategies (Robinson, 2016). While genetic comparisons trace how a specific (urban) outcome emerges, and through this engagement with its production draw it into conceptualisation, generative comparative strategies bring different 'singularities' or 'cases' into conversation by building all sorts of connections. In this understanding almost every question or problematic could be productively handled, and concepts would by principle stay open and revisable.

However, despite the convincing arguments in favour of a resurgent comparative urbanism, empirical studies are only starting slowly. As Peck (2015: 170) observes: 'Most corners of the urban studies field remain dominated by "lone scholar" models of enquiry and generally small-scale collaborations, which is sufficient for single-site studies or unidimensional comparisons across a few sites, but rarely much more'. However, AbdouMaliq Simone (2004, 2010) for example, is applying his ethnographical comparative theorisation in a very virtuosic and illuminating way, and Huchzermeyer (2011) shows how new concepts of urbanisation can be developed across very different urban contexts.

Larger comparisons are logistically, financially, and also methodologically very complex and laborious projects, and they confront researchers with a difficult choice between either a small team travelling through a limited number of cases to elaborate a coherent account, or a larger but also much more heterogeneous team of researchers, which can handle a larger number of cases, but then face difficulties in coherence

and coordination. Whereas comparisons presenting basically a collection of individual case studies that are summarised in the introduction and linked together through some conclusions are common, comparative contributions that generate or compose new concepts are still rare. To go beyond such limitations demands researchers involved in a comparative project to adopt a shared methodological and theoretical perspective, to probe and test new concepts, and grasp the contours of a collaboratively defined problematic. Examples for such efforts are Roy and Ong (2012) on worlding cities, Pieterse and Simone (2013) on rogue urbanism, or Becker et al. (2013) on global prayers: these are more experimental approaches in the best sense, working with ethnographical methods, grounded theory and creative reflections.

The goal of our own comparative project was to detect and develop new concepts of urbanisation through the comparison of urbanisation processes, allowing a more nuanced and detailed analysis of urban territories. Addressing the difficulties of comparative urbanism discussed above, our own project tried a kind of a middle way to bring only a limited number of cases in conversation with each other, but nevertheless to represent enough difference in our sample. While strongly informed and inspired by postcolonial approaches and the new comparative urbanisms, our own comparative strategy was primarily guided by Lefebvre's theory of the production of space. This means right from the outset we started with a theoretical basis, and followed a methodological and analytical procedure driven by Lefebvre's three-dimensional dialectics (Schmid, 2008), at the same time applying the decentring and process-oriented epistemological perspective offered by planetary urbanisation.

Defining urbanisation processes

The most basic theoretical question of our project was how to conceptualise urbanisation processes. While 'urbanisation' can be understood as a general process, the concrete outcomes that are observable on the ground are always specific, because they are resulting from many different determinations, such as the pre-existing urban fabric, socio-spatial structures and territorial regulations (see Schmid, 2015). These specific urban outcomes or 'singularities' can be grouped in order to distinguish more systematically between different basic situations that share a common problematic. Thus, each of the three concepts discussed above – gentrification, suburbanisation and informal urbanisation – define in a more or less precise way a core problematic, such as forced relocation of inhabitants, geographical peripherality of neighbourhoods, precarity and/ or self-organisation of urban development. We could thus understand these concepts as expressing and defining particular moments of the general process of urbanisation. In other words: 'urbanisation' as a general and generic concept has to be specified by more narrowly defined concepts.

It has become evident in the preceding discussion that urbanisation processes should be understood as multi-dimensional and not just be defined by one single criterion, such as peripheral location or informality. They include many aspects of urban transformation that crystallise across the world at various spatial scales, with wide-ranging, often unpredictable consequences for inherited socio-spatial arrangements. We thus look at urbanisation as a multi-faceted emergent phenomenon, an ensemble of several interrelated dimensions that shape and transform urban territories. They are linked to abstract processes of capitalist accumulation, industrialisation and commodification, state strategies and broader social relations

at various spatial scales but at the same time they are always anchored in everyday life and realised through concrete constellations, struggles and tactics on the ground.

Following Lefebvre (1991/1974) we can distinguish three basic dimensions of the production of (urban) space (Schmid, 2005, 2008): (1) the production and transformation of material elements and structures (perceived space); (2) processes of territorial regulation and representation (conceived space); and (3) socialisation and learning processes (lived space). While we did not follow this triad in a formalistic manner, these interrelated moments of the production of space guided our field research, and the criteria by which we defined urban processes as a helpful framework to think across diverse urban contexts.

The first aspect is the *material transformation* of a territory. This transformation is directly related to spatial practices, implying all sorts of movements of people, crisscrossing of the urban territory, and is associated with concrete interactions. A more structural analysis will detect various networks of people, goods and information, and identify different centres and peripheries, related to each other in various constellations. As we could detect in the course of our project, the pattern of centralities and peripheries is indeed highly specific for each urban territory. All these movements and actions in urban space are facilitated, enabled and supported by short- and long-term investments into the built environment, starting from the erection of provisional shacks and incremental improvements to houses, and reaching up to the construction of large housing compounds, office blocks, new towns and all sorts of infrastructure. Together, they form the urban fabric, which defines the material framework of daily activities and routines, the constraints and options people have in daily life, and the access to all sorts of material and social resources.

Second, urban processes unfold under specific regimes of *territorial regulation* that include various forms of representation, models of urban governance (understood in a broad sense), and market- or state-led urban strategies on all possible scales (see Schmid, 2014). This includes all aspects and modes of ruling, including formal and informal, explicit and implicit, tacit and expressed, but also the different degree and form of access to power and decision-making processes for different social groups. However, as we clearly learned in the course of our research, these territorial regulations are not only very complex but also highly specific and therefore often extremely difficult to understand. Territorial regulation involves complex relationships between various groups, including tenants and landlords, land and property owners, and leads to complex constellations of regulatory dynamics such as market mechanisms, state regulations, long entrenched traditional and customary rules and various cooperative forms of negotiation. The most fundamental question here is the material and legal relationship to the land. Who has access to which land? How do various land ownership systems intersect? How can people achieve tenure security? What are the power relations between various state agents, institutions, and social networks in terms of rules and regulations? What conceptions and representations of space and what kinds of urban strategies dominate the debates and how does the practical implementation of planning proceed?

Finally, urban processes always entail the disruption, dislocation, and re-orientation of the inhabitants' *urban experiences and everyday lives*. This third dimension of the urbanisation process is anchored in everyday practices and driven by various experiences of collective action and struggle, lived solidarity, feelings of success, disappointment and failures, desires and all the dramas and pleasure of everyday life. Important aspects of the urban experience include symbolisms, meanings, and collective memories, which sometimes condense into taken-for-granted certainties. Key in this respect are questions of social composition and class relationships, the social and legal status of migrants, family life and gender relations, sexual life, etc. For our analysis, this third dimension played an important role, and, as we will show later, has indeed been decisive for the definition of certain urbanisation processes.

Considering the characteristics and inter-relationships of these three moments of the production of space, it is possible to analytically condense them and to proceed with an identification of urbanisation processes. This implies a moment of generalisation: to detect a bundling of characteristics, common underlying mechanisms, logics, regularities and common traits in the way urbanisation unfolds and proceeds, thus producing similar outcomes. Through an appropriate comparative procedure it is therefore possible to identify a common problematic across different 'cases' or 'singularities' and the various divides that separate them.

Patterns and pathways of urbanisation: A transductive research strategy

The challenge was thus to develop a comparative research project to apprehend the general tendencies of urbanisation and at the same time to address the specificities developing in each urban territory. This implies a strategy of comparison that neither starts with concrete individual case studies, nor with generalised concepts, but applies a transductive strategy maintaining a dialectical relationship between theory and empirical research:

This is an intellectual operation which can be methodically carried out and which differs from

classical induction, deduction and the construction of 'models', simulations as well as the simple statement of hypothesis. Transduction elaborates and constructs a theoretical object, a *possible* object from information related to reality and a problematic posed by this reality. Transduction assumes an incessant feed back between the conceptual framework used and empirical observations. Its theory (methodology) gives shape to certain spontaneous operations of the planner, the architect, the sociologist, the politician and the philosopher. It introduces rigor in invention and knowledge in utopia. (Lefebvre, 1996/1968: 151)

How can such a transductive research strategy be implemented? The fact that cities no longer constitute units that can be delimited in a clear and easy way, but are highly dynamic, multifaceted and complex, poses a significant methodological challenge for any urban comparative project. To solve this problem, two decisive moves are necessary: first the urban territory must be understood as a force field in which various processes of urbanisation collide and interweave, generating a specific urban topography; second the historical and path-dependent production process of this territory has to be analysed.

Our research thus adopts a twofold approach, beginning with a 'horizontal', or *synchronic analysis* of the patterns of urbanisation that seeks to grasp the present situation of a concrete urban territory. This synchronic analysis aims to develop a comprehensive understanding of the expansion and interweaving of urban processes, and to identify the resulting pattern of urban configurations. This intellectual operation freezes the urban process to discern its manifold constituents and thus examines the structure of an urban territory as it is at a given moment. While increasingly exact data and detailed methods are available for analysing the structure of urban configurations, precise mapping of spatial phenomena and distributions can only create an illusion of

exactness. As urbanisation is a complex process that is constantly changing, no representation can provide more than a snapshot at a given moment. Furthermore, urban realities comprise very diverse multi-scalar attributes that are superimposed in layers. Accordingly, many different lines of demarcation could be drawn, depending on the observer's perspective and heuristic interest.

In a second step, urban development has to be understood and reconstructed as a historical production process. This requires a 'vertical', or *diachronic analysis*. In order to understand urbanisation as a process, we have to follow the pathway of urbanisation. This analysis follows a Lefebvrian *regressive-progressive* procedure (Frehse, 2014; Schmid, 2015): It first descends into the past to identify the defining moments that have inscribed themselves into the territory as well as into the collective memory. Subsequently, the analysis must ascend in order to attempt to reconstruct the decisive lines of development of the urban area. The aim is to reveal the path dependency of the territory as well as the decisive interruptions and changes. This analysis does not simply aim to reconstruct the history of an urban configuration, but is intended to detect the ways in which history remains present in the contemporary situation and influences the future trajectory. It is only through a combination of horizontal and vertical analysis that we can grasp and analyse an urban territory in its specificity (see also Schmid, 2014).

As a next step it is necessary to combine the two analyses in order to identify the different urbanisation processes that are constantly transforming the territory and crystallising in various urban configurations. In such a dynamic perspective, any given urban territory can be understood as the materialisation of an ensemble of specific urbanisation processes that are articulated with each other. In this approach, we do not try to define the 'limits' of an urban space,

but analyse a succession and overlapping of various urbanisation processes. In that analysis urban areas do not end – it is just the analysis that stops. The 'outer boundary' thus marks the end of the analysis, not the end of the urban area as such.

This diachronic and synchronic analysis was done for each urban territory independently by individual researchers. At the same time, we brought the various urbanisation processes emerging through this analysis into conversation with each other through a collective comparative process. What we performed in our research therefore was not a comparison of 'cities' or territorial units but a comparison of urban processes across very different contexts.

Comparative moments: Methodological design

With this comparative project, then, we started from a well-defined theoretical base, but applied an empirically grounded procedure. The point was not only to find 'new' phenomena or to trace all sorts of possible connections, but also to use comparison for detecting and reconstructing new concepts of urbanisation that might relate in various ways with each other. Thus, these concepts required a great range of flexibility, and therefore we kept their definitions as open as possible. As a methodological principle, the urban processes to be compared and the criteria of comparison were thus not pre-given, and we sought to avoid a reliance on any kind of predefined concepts. The new concepts of urbanisation had to emerge during the research process, following certain methodological procedures developed and applied in grounded theory (Glaser and Strauss, 1967). These new concepts were thus the result of long and intense debates, which included the entire research team and occasionally also external colleagues. The main

steps of this procedure are briefly outlined in the following.

Our analysis was based on mobile and multi-sited ethnography (Falzon, 2009; Marcus, 1995; Streule, 2018). In a series of field trips each researcher applied this method, individually moving through the urban territory on foot, by public transport or private vehicle, taking pictures, and jotting notes in a diary. These observations were continuously complemented by semi-structured open-ended interviews (with users and producers of space, with inhabitants, activists, artists, policy makers, project developers, etc.). The geographical frame of analysis was left open to include the larger region extending into the interface of concentrated and extended urbanisation. These borders were not taken as limits of the urban region but rather as practical extents of analysis.

The analysis was supported by exploratory mapping. This method was designed and developed especially for the purpose of identifying different urban configurations in a situation of scarcity of data. It was originally developed in a collaborative project on the urban development of Havana (Peña Díaz and Schmid, 2007), where we organised several mapping workshops. Experts in such workshops could include (and are not limited to) academics, urban planners, architects, and urban activists who are knowledgeable about the particular case study area. The purpose is to discuss and visually represent various areas of the urban territory in terms of their specific socio-economic and morphological characteristics and functions, ongoing transformations, and particularly also lived experiences. Thus the map on the table around which those discussions took place is at the same time a concrete support for the discussions but also an instrument that enables the synthesis of complex relationships. The setting involves a basic map of the territory (preferably a

topographic map for the sake of legibility, but also an areal view), tracing paper, coloured pens and a sound recorder. The interview, also possible with a small round of several people, usually starts with open-ended questions that are intentionally open to interpretation and further discussion. For instance the question 'Where is the centre?' is usually responded with the clarification question: 'which centre?' which tells us that there are various centralities to be taken into consideration. The discussion that follows allows for the identification of the qualities of different centralities, their various relationships to peripheries, and thus to the understanding of the basic structure of an urban territory. These workshops are repeated with different informants until a point of saturation is attained in terms of the information gathered.

The results of these mapping workshops were brought together with the findings of the multi-sited ethnography as well as with all sorts of additional sources of information, such as statistics, planning reports, secondary literature, etc. and are processed and synthesised by the method of triangulation (Denzin, 1978; Flick, 2011; Streule, 2018). This step results again in a map that identifies different urban configurations. The drafting of this map corresponds to *the first comparative moment* of the project, in which different parts of the same urban territory are compared with each other. The researcher – interacting with the entire research team – produces a synthesis map that displays different urban configurations. They are specific to the local context, and ideally bear names in the local language. These maps are deployed as heuristic working tools and integral parts of the research process. Despite its decisive benefits, this type of visualisation has its obvious limits. The presence of boundaries – no matter how gradual they are – gives the impression of abrupt transitions and homogenous

territories, whereas the regions under study are often highly heterogeneous, and bear the legacy of multiple layers of urbanisation processes. However, the subsequent steps of analysis address these shortcomings.

This synchronic analysis was complemented by the historical, diachronic analysis of the pathways of urbanisation. Here the temporal dimension becomes the organising principle of the analysis, with the aim to understand crucial turning points in the pathway of the territory and their aggregate impacts on the configurations as they stand today. Following the regressive-progressive method, the analysis descends into the past to identify the defining moments of the urbanisation of the territory and ascends again by reconstructing the decisive lines of development in order to elaborate a periodisation, which illuminates the respective dominant constellations of power and the most important fields of conflict. As in earlier steps, secondary literatures and, if needed, original archival sources are used to identify crucial moments in the restructuring of the material, regulatory and everyday dimensions of the urban process.

The synchronic and diachronic analyses thus not only enable detailed and wide-ranging accounts of each urban territory, they also provided the basis for the identification of the predominant urbanisation processes transforming them. The analyses were carried out in great detail and are elaborated as important parts of several PhD dissertations (Hanakata, 2017; Kallenberger, 2018; Sawyer, 2017; Streule, 2016, 2018; Wong, 2017).

Having identified urbanisation processes in each of our case studies, the most challenging and rewarding step of the research began, in which the collective dimension of the work and the transductive approach became crucial: to put specific urban processes from the different territories in conversation with each other. This analytical step corresponds to the *second comparative*

moment of the research. Its goal was to construct concepts, which strike a delicate balance between generality and specificity so as to enable meaningful comparisons between singularities. For this purpose we grouped processes across different cases that have commonalities in their trajectories and dynamics, and especially share a common problematic. Multiple iterations were necessary to properly test the adequacy of the concepts, to re-adjust their conceptual borders, and to find coherent definitions that delineate the process. Through this transductive procedure of collective conceptual experimentation and validation in the field, some new concepts were introduced while others were revised and some jettisoned. This was a truly collective process, achieved in regular and very intense meetings that we held for about two weeks every half a year over five years. All in all, the entire team spent about four months in discussion and feedback sessions. The presence of an efficient feedback mechanism between individual researches and periodic workshops that brought the entire team together is one of the unique strengths of this project.

This collective and comparative procedure resulted in a range of proposals for new concepts. In what follows we introduce four of these concepts so as to provide a glimpse of our conceptual experimentations: (1) popular urbanisation, (2) plotting urbanism; (3) multilayered patchwork urbanisation; (4) incorporation of urban differences. Three additional processes are introduced briefly during this discussion: laminar urbanisation, mass housing urbanisation and the production of centralities.[4] This selection represents almost the complete set of urbanisation processes we finalised so far and thus allows an overview of the entire project. All of these concepts will be elaborated in more detail in future publications.

Popular urbanisation

'Popular urbanisation' was the first concept we identified, and it serves as a good example of our comparative procedure. It became clear at the very beginning of our comparative sessions that a series of areas in Mexico City, Lagos, Istanbul and Kolkata were shaped by very similar dynamics. They all were at least initially low-income peripheral neighbourhoods with moments of self-production of urban space, strong political organisation, and incremental processes of construction, which in some cases developed a great capacity for adaptation to the needs of its inhabitants.

To develop the conceptual boundaries of this specific kind of urbanisation process, we first went through the terms currently in circulation. It immediately became clear that many of them fall short of grasping the collective processes of appropriation and the lived experiences involved in the self-production of these particular urban spaces that we identified as crucial aspect of this process. We first rejected the term 'slum', not only because of its negative bias and its frequent utilisation for 'slum clearance' strategies and 'slum-free' urban policies, but also because of its one-dimensionality since it is used to define and delineate an urban space on the basis of (precarious) living conditions. Furthermore, it is a concept that indicates a moment, a situation, and not a process. Other widely used terms such as 'self-built' or 'self-organised' proved to be misleading, because in our sample of urban territories, it was only in Mexico City that this was a common practice. Otherwise, constructers and users are usually separate, and in some cases there are even elaborate and highly commodified divisions of labour. The term 'incremental urbanism' already brought up in the 1960s (see e.g. Turner, 1976) and later revived (McFarlane, 2011) could have been

an option, but proved to be too broad and generic. Finally, the term 'informal urbanisation' was also excluded, for the reasons discussed above.

We eventually borrowed the term *urbanización popular* that was used frequently in Latin American debates (Azuela, 1993; Duhau and Giglia, 2008; Navarro and Moctezuma, 1989). However, in its original usage and definition this term is very close to 'informal urbanisation', and therefore our own definition of the term is quite different. In order to indicate this distance, we deliberately use the English translation 'popular urbanisation'. In our final definition, resulting from several rounds of discussion across the different case studies, popular urbanisation relates to the ways in which people establish themselves in the urban environment through collective processes of appropriation and production of space (Streule and Schmid, 2014). The multidimensionality of this specific urban process is key, and could be summarised by three main aspects: (1) the material transformation of the urban territory with strong participation of the inhabitants; (2) the access to the land and the capacity to fight and negotiate successfully for (relatively) favourable territorial regulations; and (3) collective experiences in everyday life and popular struggles for recognition.

In all four cases the strong immigration of people and the blatant lack of affordable housing have been key drivers of the process. In the absence of pro-active government interventions to provide affordable housing, communities started to produce seemingly spontaneous and makeshift settlements. Historically, we could understand popular urbanisation as an alternative pathway to the process of mass housing urbanisation that started for instance in Hong Kong and Paris about at the same time when popular urbanisation first emerged in Mexico City and Istanbul.

In all the cases, gaining access to the land involves various forms of collective mobilisation and struggle and usually concerns either state owned land, state protected land (such as wetlands or natural reservations), collective land or marginal land providing precarious conditions (such as marshy or shore land). In this context, we could understand popular urbanisation also as a specific urban strategy: acting through intricate webs of negotiation with state actors to secure incremental gains in tenure security, infrastructure and amenities.

The extent to which these settlements are able to 'take hold,' and consolidate into less precarious neighbourhoods that sometimes even develop strong urban qualities and an adaptability to the needs of its inhabitants, depends on collective mobilisation and the capacity to negotiate successfully with various state actors. In Istanbul and Mexico City, relatively rapid consolidation processes were able to be established, and popular settlements acquired a robust outlook with decent infrastructure and sanitation. The image of the shack so often evoked in popular as well as in scientific accounts and representations referred in fact only to brief episodes in both cases. On the other hand, in Kolkata and Lagos popular urbanisation has played only a limited role, mainly because the great majority of the land was either in private hands or embedded in complex ownership structures (see below), and it was not possible to develop enough pressure through political mobilisation.

In Istanbul, the first stages of popular urbanisation emerged in the second half of the 1940s. These settlements, called *gecekondu*, were largely constructed on state owned land in close proximity to factories. While they were initially treated as a 'social disaster' (Şenyapılı, 1998: 308), and their immediate demolition seemed to be the only viable option, given their rapidly increasing number, the need to house cheap labour

power for the growing industries, and the inability of the state to meet these needs, forced subsequent administrations to follow a policy of tolerance and regulation. *Gecekondu* residents organised themselves – in some cases under the influence of social-ist/revolutionary groups (Aslan, 2004) – and through clientele arrangements effectively leveraged their voting power to obtain tenure security. In many areas mafia-like groups, as well as communitarian networks, organised the parcelisation and trade of land. Following the tenure legalisation laws of the 1980s, many former *gecekondu* neigh-bourhoods rapidly transformed into dense urban neighbourhoods. Increasing tenure security went hand in hand with the commo-dification of informal land markets (Öncü, 1988). Thus, in the case of Istanbul the pro-cess of popular urbanisation largely mutated into a different process, that we named 'plot-ting urbanism' (see next section).

A similar situation developed in Mexico City where the state tolerated popular urba-nisation, and also sought to control and reg-ulate the process. When in 1954 the Federal District (the state that governs the central area of Mexico City, recently renamed CDMX) implemented restrictions on illegal subdivisions and trade of *ejido* lands (i.e. communal agricultural land), this strongly pushed the process of popular urbanisation in adjacent federal states. In the following decades, the process of popular urbanisation generated housing for millions of residents in once-remote places that today have become fairly central as a result of the mas-sive expansion of the urban region. Ciudad Nezahualcóyotl is a well-known example: in the 1980s it was presented in the media as the incarnation of all the horrors generated in Southern megacities, but today it is a well functioning neighbourhood with strong urban qualties and many public amenities well connected to the larger urban context (see Bassols and Espinosa, 2011; Montejano

Castillo, 2008). The process of regularisation of these neighbourhoods was strongly linked with social and political struggles. Mexico City, like many other Latin American cities, has a long history of grassroots organisa-tions. Neighbourhood associations led by charismatic leaders have been a crucial aspect of popular urbanisation, as they have organised the struggle for basic infrastruc-ture and services. Today, in the face of con-tinuing illegal subdivisions and land occupations local governments follow a selective policy of regularisation and evic-tion, especially to prevent encroachments on natural reservations. Moreover, since the early 2000s, the Mexican state started an important programme for subsidised mass housing production in the metropolitan per-iphery (Gilbert and De Jong, 2015).

In contrast to both Istanbul and Mexico City, the process of popular urbanisation in Lagos and Kolkata was always strongly restricted by very low tenure security. Contrasting with its common representation as the stereotypical 'city of slums', popular urbanisation in Lagos is the exception rather than the rule. Lagos' popular settlements, such as parts of Ajegunle or Makoko (the almost iconic settlement at a prominent spot on the water often pictured in the media), account for only a very small portion of the urbanised region. Our analysis has found that popular urbanisation has not been able to 'take hold' in Lagos due to the absence of accountability on the part of the state actors as they undertake demolitions and forced evictions (the most notorious case was the complete demolition of the large settlement of Maroko in 1990, see Simone, 2004: 195), the colluding role of customary landowners, and a lack of grassroots organising on the basis of a shared living space. There are some strong civil society organisations such as Lagos Market Men and Women's Association, Community Development Associations, and other organisations linked

to religious groups. However, in terms of issues linked to popular urbanisation, strategies of survival and claim-making are highly individualised. Thus, the process of 'plotting urbanism' dominates the majority of Lagos (see below).

Similarly, the process of popular urbanisation only plays a minor role in Kolkata, famous for its large proportion of 'slums'. Large parts of the areas officially designated as slums are in fact *bustees* (see e.g. CMDA, 2005). The Urdu term *bustee* (or *basti*) means slum indeed, but in most of the cases areas designated as *bustees* are a specific form of tenement settlement, legal urban entities based on a three-tiered tenancy system: first, the landowner; second the hut-owner (*thika* tenant who has taken a lease from the landowner) and, third, the *bustee* dweller to whom the hut has been let (Sengupta, 2010). Thus, areas of popular urbanisation according to our definition only occurred in a limited number of areas in Kolkata, such as in the south, where predominantly Hindu refugees from East Bengal settled down after the partition of India in 1947, or in certain peripheral areas in the eastern fringe, close to or even inside the wetlands (see e.g. Roy, 2004). Additionally, shantytowns have been constructed by very poor people as toehold settlements on state land, e.g. along roads, railway lines and channels.

Plotting urbanism

In the course of our research, we identified another urbanisation process, which at first sight displays very similar characteristics to popular urbanisation, and just like the latter is often subsumed under the rubric of informality, incremental urban development, or slum. However, closer examination reveals fundamentally different dynamics and internal contradictions. This comparative concept that we called 'plotting

urbanism' brings a surprising combination of cases into conversation, namely Istanbul, Kolkata, Lagos and Shenzhen. We, in fact, needed quite some time to first accept plotting urbanism as a common process and then to elaborate a more precise and convincing definition that we could use productively across the cases.

In distinction to popular urbanisation, in which collective action, political organisation and self-help play decisive roles, plotting urbanism is mainly defined by three different characteristics: first, the relationship to the land is based on a territorial compromise that allows for the conflict-ridden co-presence of multiple systems and scales of regulation and land ownership regimes. Second, market mechanisms and commercialisation intervene into the process in a fundamental way, which also creates specific social relationships between landlords or rentiers, who often still live in the area, and their tenants. Finally, the process proceeds in a piecemeal and incremental way, plot by plot without overarching planning, which creates a great variety of local situations. We therefore called this process 'plotting urbanism' in order to stress the fundamental role of the plot, but also allowing some allusions to the strategic and dubious inferences of 'plotting' in the sense of scheming for individual gain.

Plotting urbanism refers first to the piecemeal and speculative land development or densification of extant settlement areas. In the case of Istanbul it is often the result of the consolidation, intensification and increasing commodification in 'post-gece-kondu' areas (c.f. Esen, 2011). In Kolkata, it designates old *bustee* areas that have been undergoing dramatic redevelopment and verticalisation. In Shenzhen, it comprises the emergence of 'urbanised villages' in the context of state-driven urban development. In Lagos, plotting is so dominant that it has to

be seen as just the ordinary way of urban development in its ever-expanding, and densifying urban peripheries.

Plotting urbanism occurs often in the presence of conflicting multiple claims to land, which are a source of contradictions that are circumvented and exploited by landlords and various authorities in the pursuit of largely individual gain. It can be understood as a kind of a territorial compromise that articulates entrenched, customary, collective, or just illegal rules and regulations with formal and/or state land regimes. Thus, individual landowners, land mafias, religious communities, village communities or big landowning families have considerable power in the negotiations of access to and trade of land. With the term plotting we seek to capture both the plot-by-plot logic of development (as different from urban renewal, or wholesale (re)development), and its informal modalities.

Plotting accommodates rapid population increase, and usually results in highly dense spaces with low architectural and urban qualities. Because of its piecemeal and uncoordinated character and the prioritisation of individual gain over public good, the resulting living environment is often deficient in common facilities and public spaces, even if there might be a vibrant public life.

As a major contrast with popular urbanisation, the production of housing for rent plays a key role in plotting urbanism. In fact, plotting often realises the potential rent gap in the area. Here modifying Neil Smith's (1996) original definition we define rent gap as the difference between actual rent of an area, and the potential rent that could be captured through intensification and marketisation (see also Özdemir, 1999). The rent gap itself is produced and realised through a certain stabilisation of a land regime, which potentially turns dwelling units with very low realised exchange value into assets that can be developed for the market. As a consequence the landlord–tenant relationship shapes the social relations in significant ways.

Signs of commercialisation were already present in the very beginning of popular urbanisation in Istanbul. Settlers often had to pay fees to dubious gatekeepers and owners, and individual houses could be sold in the informal market as well. With increasing tenure security, tendencies for commercialisation intensified in the late 1970s. With the formal amnesties of the 1980s, which not only regularised land tenure but also openly encouraged densification (Ekinci, 1998), old *gecekondu* neighbourhoods underwent a dramatic transformation. This ushered in a period of fervent construction activity across Istanbul, and marked the shift from popular urbanisation to plotting urbanism. Plotting was not only visible in the form of replacement of existing *gecekondu* structures with multi-storey apartment buildings. In peripheral areas across Istanbul, agricultural land was illegally subdivided by their owners and sold for apartment construction without the required permits (Yonder, 1987). In both cases the resulting built environment was very dense and of inferior quality, because of substandard construction techniques and materials, and inefficient land use allocation. While it allowed many residents to achieve upward mobility through rent accumulation (Boratav, 1994: 28; Işık and Pınarcıoğlu, 2001), a major downside of the process has been the entrenchment of exploitative relations within informal land markets and the emergence of rentier ethics amongst the urban poor (Işık and Pınarcıoğlu, 2001). Plotting in Istanbul slowed down significantly in the 2000s with the introduction of an urban renewal agenda. In the last few years however, it has surged in some peripheral areas such as Alibeyköy, Gaziosmanpasa, and Esenyurt.

In Lagos, plotting could be seen as the rule rather than the exception. Successive colonial and national governments have had little effect in regulating Lagos' land market. Even the Land Use Act of 1978, which putatively transferred all lands in Lagos under the control of the governor, has contributed to rather than resolved land disputes. Owing to the complicated and costly procedures involved in securing formal land titles, and lack of enforcement on the part of the governments, most plot-owners have not sought formalisation. Lack of formal security did not however prevent a highly dynamic and expanding land market overseen by indigenous landowning families, which act as surveyors and regulators. What results is an ambiguous status quo formed of unspoken tolerance from the state, the continuing legitimation of customary authority over land, and the individualised actions of plot owners and tenants. While established migrants are able to afford plots, new migrants join the system as tenants. Previously peripheral but now highly central areas such as Itire and Ajegunle have developed into dense residential areas through plotting. Some plot owners in central areas are selling their now precious plots to embark on a second round of plotting in more peripheral yet rapidly developing areas such as Ikorodu, where they can afford more land. Similarly the tenants – who make up the majority of the population of plotted areas – save with the hopes of becoming plot owners themselves. After buying the land from the indigenous owners, the plot owners build incrementally as money becomes available (through savings schemes). The owners mostly rent out units as they are finished to fund the rest of the construction.

The formation of 'urbanised villages' (alternatively 'village-in-the-city', or *chengzhongcun*) in Shenzhen is marked by conflicting interests between the city government, which followed the imperative to integrate the dual rural/urban land system and to propel rapid urban development on the one hand, and the village collectives, whose farmlands have been expropriated by the city government for urban expansion on the other. With the new territorial regime established in Shenzhen collective landownership ('rural land' status) changed to state ownership ('urban land'). Thus, landownership of the village collectives was systematically converted into a kind of leasehold conceding only the right to use the land. In the course of successive rounds of large-scale state acquisition of their farmland, a land exchange policy granted construction land to village collectives to build houses and factories, whilst village households found an alternative source of income by riding the wave of urbanisation in their own terms, namely by building higher and denser (Bach, 2010; Hsing, 2012). The city government attempted to incorporate these spaces into the city administrative system and turn village collectives into shareholding companies; however, this incorporation process instead strengthened the bargaining power of the villages (Song and Zenou, 2012) as they were allowed to carry out new construction, effectively conducting their own rental property business. The superimposition of the city territorial regime on the former village collective system triggered villagers' contestation to defend their land and properties and created interstices in which a very particular form of territorial regulation evolved. The process of plotting urbanism emerged through this specific contradiction, leading to the typology of urbanised villages, which attracted migrants in search for cheap housing (Wu et al., 2013). Owing to the lack of effective measures against illegal construction, the urban spaces produced by plotting are generally marked by varied, dense and often unhygienic living conditions. However, the generic ground-floor

layout of the multi-storey houses offers ample possibilities for installing shops, small businesses, workshops and markets and hence there is often a lively street life in these urbanised villages. Additionally, a range of public facilities was established by the shareholding companies of the villages as well as by the city government. The most recent phase of plotting urbanism in Shenzhen has been dominated by a policy of urban renewal, in which most of the existing urban fabric has been demolished and replaced by condominium and business towers, which marks the transition towards a different urban process in Shenzhen.

The process of plotting urbanism in Kolkata is a stunning development which first emerged in Howrah, a neglected and overlooked territory with about three million inhabitants located on the west bank of the Hooghly river, on the 'other side' to the City of Kolkata. Howrah bridge connects the central bazaar area of Kolkata to Howrah and particularly to Howrah station, one of the two major railway stations of the region, which links Kolkata to the western part of India. Since the mid 2000s, concrete constructions with up to six floors and only poor sanitation have popped up in the midst of the traditional *bustee* areas characterised by one-storey buildings with small courtyards and narrow alleys between the houses. These new buildings are not only precarious but also partly illegal; they are tolerated by a weak local state in a situation of extreme housing scarcity. Detailed analysis shows that the specific constellation of the three-tier *bustee* system (see above) allowed the landowners to undertake this massive intensification. Original tenants were relocated to the upper (illegal) floors of the new houses, ground floors are used as storage space for the nearby bazaars, and new spaces for

mostly lower middle-class residents were created in the second and third floors. This kind of densification and verticalisation soon developed into a widespread model, and today large parts of the central areas of Howrah, as well as parts of the *bustee* areas in the harbour area, have been transformed into this unusual urban typology that only aggravates the precarious conditions in areas officially designated as 'slums'. We call this typology 'post-bustee', in analogy to Istanbul's 'post-gecekondu' areas discussed above (Kallenberger, 2018).

As has been illustrated with these four examples, plotting urbanism can have very different starting points and show a great variety of possible pathways. In Lagos what we understand as plotting has been the dominant urban process for decades, but has been little discussed in academic, planning and policy literatures and thus has not yet been understood as a specific process. In Shenzhen plotting urbanism represents a historical phase of the urban development that was indispensable for the extremely fast construction of this new metropolis completely from scratch, but was then normalised and is disappearing in a process whereby the plotted settlements themselves are being almost completely removed. Similarly, in Istanbul areas that developed through plotting are now under pressure for further rounds of redevelopment or large-scale urban renewal. Their trajectories point towards further incorporation of these spaces into the larger urban context, and the blurring of boundaries between plotted areas versus areas that developed 'formally'. Kolkata presents yet another case, as plotting arrives almost 'spontaneously' in tenement areas. Thus, plotting can take very different shapes and trajectories, but what keeps all these examples together is a very specific problematic, resulting from the combination of a

piecemeal urban development, a specific territorial compromise and the experience of the commodification of housing.

Multilayered patchwork urbanisation (Mulapa)

A quite different urbanisation process emerged in some of the outskirts of Paris, Los Angeles, Tokyo and Hong Kong.[5] The comparison of the 'suburban areas' of those four metropolises provided us first of all with an interesting finding: depending on concrete conditions, quite varied urban configurations might develop in the peripheries of the same urban region. We even found a typology that conforms to the classic conception of the 'suburb' as a middle-class neighbourhood with single-family houses. However, we found this type of urbanisation only in two urban territories, in Los Angeles and Tokyo (which is not really astonishing given the common understanding of both cities as almost paradigmatic examples for metropolises consisting mainly of suburbs). We finally called this specific process 'laminar urbanisation'; it emerges only under specific socio-economical, geographical and historical conditions, when the urban territory can expand almost unhindered into the surrounding hinterland, covering the territory like a carpet or laminated flooring.

However, the situations at the geographical peripheries of urban regions are usually far more complex. The starting point for another comparative concept became Paris, where large parts of the outer parts of the *banlieue* developed into a bewildering patchwork of all sorts of uses and functions in the last decades. This is the result of a succession of different patterns of urbanisation over time that were not extinguished, but rather superimposed on each other. Therefore, the agricultural period of the 18th century is still visible, with the inherited narrow street pattern in the former villages, the concentrically

arranged allées, the manor houses, and the huge feudal estates that sometimes were transformed into public parks. The process of urban extension beyond the city of Paris in the late 19th century was mainly marked by the construction of *pavillons*, usually small, sometimes even self-constructed working-class or lower middle-class detached houses stretching out into the surrounding rural areas mainly along train lines. During the period of French Fordism the interstices and meshes of the urban fabric were filled in with massive prefab housing blocks; the famous *grands ensembles*, as well as shopping malls, and all sorts of infrastructure, including the airports Orly in the south and later Charles de Gaulle in the north of Paris. In the 1970s a new phase began with the construction of a series of *villes nouvelles*, state-planned new towns with their own urban centres, meant to restructure and redefine the urban periphery. Because of strong densification outside the perimeter of those new towns, and a heterogenisation of urban functions, a gigantic polycentric urban patchwork emerged, in which large parts of the *villes nouvelles* have been merged with their surroundings and become just one additional layer of the encompassing urban patchwork. In order to characterise these areas, we introduced the term 'multilayered patchwork urbanisation' (Mulapa).

Starting from this observation, we found an astonishing correlation with Los Angeles, more specifically with the area of Orange County located south of Los Angeles. Just as in Paris, the decisive factors here are the dispersed centralities structuring and restructuring the territory. Despite the fact that Los Angeles is often seen as the most paradigmatic example of a polycentric metropolis, we detected that these centralities are distributed unevenly over the urban territory. They are in fact almost completely concentrated in two zones: one zone that we called 'cosmopolitan urban', stretches out from the

Hollywood Hills in the North to South Central in the South, and from Pasadena in the East to Santa Monica in the West. The other zone with a high number of centralities is Orange County, the once paradigmatic and highly discussed example of (postmodern) 'exopolis' (Soja, 1992). In reconstructing this development, we realised that Orange County is actually characterised by several layers, from suburban railway lines, some entrenched urban centres, the densely knitted network of freeways, industrial and logistics hubs, an airport, and a wide range of cultural and consumer facilities including, amongst other things, stadiums, amusement parks (such as Disneyland), a concert hall, a fashion centre, the largest shopping mall of the entire region, and even some important beach resorts. This situation contrasts strongly with other huge peripheral areas in which almost no such centralities and facilities exist. It was thus possible to identify two distinct types of 'suburban' areas in Los Angeles, namely Mulapa and laminar urbanisation.

In Hong Kong, a comparable urban configuration emerged in the area of the New Territories. For a long time completely peripheral, located at the frontier between the colonial and the Chinese territorial regimes that conditioned the production of a territory according to colonial and customary laws (Tang, 2014), the New Territories were dominated by agricultural land, villages, and mass housing, which was concentred in so called new towns. This situation changed radically with the handover of Hong Kong to China in 1997, the implementation of China's opening policy after 1978 and the rapid development of the main urban centralities of the metropolis of Shenzhen located immediately beyond the border. Thus, the area of the New Territories that once formed the edge of Hong Kong was suddenly located inbetween the two main centralities of the Eastern Pearl River Delta,

leading to a fundamental reterritorialisation. Today, this zone is marked by a patchwork of wetlands, urbanised villages, regional market town centres, large-scale mass housing, condo towers, farmlands, brownfields, and new cross-border infrastructure such as high-speed railway, highways and metro lines. At the same time, its development is highly contested between large-scale development strategies aiming at regional integration and various forms of resistance against demolitions and evictions. As in Los Angeles, the area we designate as Mulapa covers only a relatively small part of the entire territory of Hong Kong.

What distinguishes Mulapa from other urbanisation processes is first of all the simultaneous presence of multiple logics that are determining the urbanisation of the territory, whereby no single logic becomes dominant, resulting in a complex patchwork of more or less disjointed urban fragments. This situation is usually generated through the historical succession of different models of urbanisation through which layer after layer of the urban fabric is produced and superimposed, without erasing earlier layers. This leads to an overlapping of historical patterns of urbanisation, and a multiplicity of spatial orientations and temporal rhythms. Such territories are therefore characterised by a strong functional, social, and spatial heterogeneity that can be best approached by a typical experience: if you are traversing such territories (necessarily by car, because of their huge dimensions) you never know what might come at the next crossing – it could be almost anything.

These areas are strongly influenced by the conjoint processes of concentrated and extended urbanisation and are often linked to various processes of industrialisation. The massive construction of transport infrastructure plays a key role in the development of these areas. The agricultural origins are often still visible as traces inscribed into the

territory (farm houses, village cores, or the wiggly patterns of streets). This type of urban development is usually the result of strong spillover effects from central areas towards the urban periphery and of several rounds of urban transformation. In this process, the already existing urban fragments are not demolished and replaced, but persist and are complemented by additional urban elements. As a result, the 'edges' and the 'meshes' in the urban fabric (as agricultural land, *terrains vagues*, or industrial brownfield areas) are filled in and reterritorialised successively by new rounds of urban development.

Through massive urban expansion, these erstwhile peripheral areas have been integrated into vast urban regions. They have been re-structured in the last decades by the production of new urban cores and centralities, giving these areas a strong polycentric and even ex-centric orientation. These forms are either planned (such as the *villes nouvelles* in Paris), or emergent, especially when close to infrastructural nodes (such as in Los Angeles). Such new centralities have been labeled as 'edge cities', 'outer cities' or 'in-between cities'; however, these terms do not address the strong dynamics of *Mulapa*, because these 'new urban forms' are simply moments in the maelstrom of long-term urban restructuring and are therefore constantly changing in response to wider regional territorial dynamics. They should not be analysed in isolation, but must be understood as elements of a more encompassing urbanisation process.

Incorporation of urban differences

The processes discussed so far are located mainly in the 'urban periphery' – even if this periphery massively changed in recent years. This raises the question about the development of seemingly classical 'urban areas' with their intrinsic 'urban qualities' so strongly emphasised and even praised by many recent mainstream concepts, such as 'urban renaissance', 'creative city', or 'urban age'. These concepts indicate a fundamental change in the social, cultural but also economic relevance of the urban. At the same time, as they celebrate and propagate those qualities they also advance its further transformation into a product that can be sold, bought and consumed. Seen from a broader perspective, this process can be understood as the commodification of urban space. This process encompasses not only the sale of parcels of land, and the reservation of exclusive locations for certain privileged population groups, but as Lefebvre noted, social space itself becomes a commodity and is bought and sold. As a consequence, urban space becomes the very general object of production, and hence of the formation of surplus value (Lefebvre, 2003/1970: 154). In that process, urban life itself is tied into the commodification process. This means that the social qualities of urban space − difference, encounter, creativity − become part of the economic logic of systematic exploitation. The entire space becomes a commodity− including the people living in it, as well as the social resources and the economic effects produced by them (see Schmid, 2012). As a result, most of these lively urban areas, full of different people and uses, often but not exclusively located in central inner-city areas, have changed tremendously in the last two decades.

A revealing example for this process is the dramatic long-term transformation of Shimokitazawa – a centrality located to the southwest of central Tokyo. The area started to develop with the expansion of the first commuter train lines in the 1920s. Like many other areas of Tokyo, Shimokitazawa quickly became a densely built district of single-family houses. Located outside the main centralities whose development was strongly influenced by state strategies,

Shimokitazawa gradually developed into an alternative meeting place for young people with theatres, music venues, bars and shops in the postwar era. In the 1980s the popularity of this area grew rapidly, and magazines and TV shows promoted its unique atmosphere. Particularly from the early 2000s onwards, local shop owners and residents actively sought to benefit from this increased popularity and participated in the promotion of Shimokitazawa as an alternative entertainment centre for a leisure-seeking audience. Some homeowners even converted their living spaces into commercial zones. In addition to the small cafes (including Starbucks), and slow food restaurants, a strong increase in the number of second-hand shops occurred. Thus Shimokitazawa finally turned into a mainstream consumption space for a 'different lifestyle', and was gradually deprived of its place-specific qualities as a space of encounter, exchange and innovation. However, displacement of original residents and socio-economic transformations have been very limited, largely because of the fact that homeownership is so widespread (in almost all parts of Tokyo), the small size of plots, the scarcity of land, and a strong attachment to private property. In the classical sense therefore, this urban transformation does not fit the definition of gentrification. Instead, it is pointing towards a different process that we sought to grasp with the term 'incorporation of urban differences'.

This process refers to the production of differences as a key element of urbanisation, as discussed by Simmel and Lefebvre: the specific quality of urban space results from the simultaneous presence of differences, people with different historical, ethnic, cultural, and economic background, of activities, functions, and ideas that meet in an urban space, interact and generate all sorts of social inventions. Urban space establishes the possibility of bringing many different elements of a society together and making them dynamic. The urban thus turns into a productive force, continuously destabilising existing modes of coexistence and innovating new ones (Lefebvre, 1991/1974; Schmid, 2012). This process, however, does not go without a contradictory dialectical movement: the commodification and incorporation of urban differences, whereby differences become integrated into dominant market and state logics and are gradually homogenised, thereby fundamentally altering everyday life and urban experience.

The state often plays a key role in this process; in many cases it not only supports the process through all sorts of policies and measures to upgrade, control and police such places, but even advances and guides it in order to transform the entire urban area into a more mainstream place. In reference to Raymond Williams, we could call this process 'incorporation' (Williams, 1977, see in detail Shmuely, 2008). *Incorporation of urban differences* thus designates the commodification and domestication of place specific social, cultural, material and symbolic elements. Different actors involved in the production of space initiate this process and it is implemented through various combinations of market mechanisms and state interventions. It is a multi-dimensional process that includes more than the generation and appropriation of land rent, the material transformation of urban space, and the social 'upgrading' of neighbourhoods. The vital point here is that social space as such is commodified and thus place specific urban qualities themselves are brought into the fold of urbanisation-led accumulation. In our samples, we could detect such processes in almost all of our urban territories, especially in Hong Kong, Los Angeles, Paris, but also in Lagos. However, we present here only two more cases, Mexico City and Istanbul.

The *Centro Histórico* of Mexico City was until recently a major commercial centre for

popular classes of the entire urban region. Around one million visitors came each day for shopping and exchange; thousands of street vendors sold a great variety of mainly low-price goods including household items, clothing and electronics. The historic centre had already lost much of its residential population because of a devastating earthquake in 1985. Also important CBD functions moved out between the 1950s and the 1990s because of a combination of disinvestment and land use changes. Since the beginning of the 1990s, following UNESCO's declaration of certain sections of the *Centro* as world heritage sites, several mayors have implemented policies of urban regeneration (Delgadillo, 2009). With the classical arguments of 'rescuing *Centro Histórico* from decay' and 'conserving its colonial heritage', successive city governments – in partnership with private investors, most notably billionaire Carlos Slim – have implemented a multi-faceted programme of revitalisation, beautification, and security measures (Streule, 2008). Street vending was banned in 2007, after several unavailing earlier attempts (Crossa, 2009). Consequently large parts of *Centro Histórico* have been fundamentally transformed with the conversion of warehouses into lofts, the opening of new cafés, bars and arts galleries, the influx of young professionals, entrepreneurs and artists. What used to be a crowded, dense, busy and popular urban space has been transformed into a commodified and strongly policed shopping, leisure and tourist zone closely monitored by hundreds of surveillance cameras.

As this example clearly shows, the process of the incorporation of urban differences includes a highly political moment. It refers to the incorporation of unique – and potentially subversive – elements into spaces of hegemonic power and thus also touches the very core of recent civil protest occurring in urban centres all over the globe. The June 2013 uprisings in Istanbul were sparked by precisely such a project of incorporation of differences. The project – imposed personally by then prime minister Erdoğan – aimed at the conversion of Gezi Park, the most centrally located public park of Istanbul, into a commercial complex including shops, a museum and a hotel, as part of a larger redevelopment scheme. This can clearly be understood as a political project to rid central Istanbul of activist groups and other 'undesirable elements', and to transform it into a 'safe' zone for tourist consumption (Erensü and Karaman, 2017). In that sense, the fight for Gezi Park was also a fight about who has access to the main centrality of this metropolis and points towards the fight for difference and for the urban as a political project.

As has become obvious, these processes of incorporation of difference go far beyond gentrification. They not only concern questions of (revanchist) social cleansing, urban renewal and upgrading, the realisation of potential rent gaps, and the displacement and relocation of low income people but also and foremost they challenge the role of urban places for exchange, interaction, meeting and encounter. Often, such places are not replaceable, they vanish and with them the social qualities they embodied. With the concept of the production and incorporation of differences we would like to direct attention to precisely these aspects so crucial for every urban area. Centrality is always ambivalent in this context, since on the one hand it creates possibilities for unexpected encounters, while conversely it is also susceptible to economic exploitation. It thus touches on the very core of the urban.

Towards a new vocabulary of urbanisation

This paper has argued for opening up the field of urban studies to conceptual

experimentation so as to respond to various challenges posed by contemporary urbanisation. A revitalised vocabulary of urbanisation is urgently required to enable urban scholars to decipher – both analytically and cartographically – the differentiated and dynamic urban landscapes emerging around the planet. This requires a shift from a longstanding emphasis on urban form to urban process, as well as an approach in which every urban context is regarded as theoretically generative and relevant.

What are the results of our comparative experiment? Through an examination of eight large metropolitan territories we could identify, develop and define a range of urbanisation processes that were not conceptualised so far in this specific way. These new comparative concepts still constitute hypotheses or proposals. More work is needed to stabilise their definitions, to bring them to fruition, and to see where, how and in what ways they might illuminate urbanisation processes in different places. We are well aware that the construction of new concepts has to go through a thorough phase of testing and discussion, and some of the concepts might fade away in the course of this process.

We see three significant advantages of these comparative concepts. First of all, these concepts are *multidimensional*. They are not defined by one single criterion, but include the material production of the urban fabric, the exchange relations, regulatory rules and customs that guide the urban process, and the transformations of rhythms and routines of everyday life implied in this processes. As has become evident, this multidimensional definition allowed for discerning differences between urbanisation processes which otherwise would have passed unnoticed. Thus, *popular urbanisation* and *plotting urbanism* could be defined as two distinct processes, despite the fact that both are marked by some kind of informality. While popular urbanisation is strongly marked by the collective production of urban space, plotting urbanism is much more determined by various forms of commodification and tenant–owner relationships. Likewise, the process of *incorporation of differences* shares some similarities with *plotting urbanism*, such as some kind of intensification of the urban fabric and change in demographic composition, but the underlying logics of the two concepts are clearly different from each other. Whereas the incorporation of differences emerges from the transformation and marketisation of specific urban qualities strongly tied and related to centralities, *plotting urbanism* is mainly linked to regulatory ambiguities and territorial compromises.

Second, these concepts are *multi-relational*; the conceptual boundaries of each individual concept are drawn with reference to all the other concepts we developed concomitantly. Thus, *plotting urbanism* is a process that might follow from *popular urbanisation* (as was the case in Istanbul), and could be replaced by a fully formalised and commodified urbanisation process (as in the case of Shenzhen). These concepts can also be understood as a set of options in a given moment, and thus we might detect alternative pathways of urban development, such as in the case of Mexico City, where *popular urbanisation* presents an alternative to state led *mass housing urbanisation;* therefore it is also possible to analyse the advantages and disadvantages of the two processes. In a similar way, the concepts of *Mulapa* and of *laminar urbanisation* might occur in the same urban region, and thus reflect the strong differentiation developing in 'suburban' areas. The entire set of multi-relational concepts enables not only a general comparison of urbanisation processes, but it can also be used for a more thorough

analysis of urban transformations within a single urban territory, by regarding it as a specific combination of distinct urbanisation processes.

Third, these concepts result from a *comparative procedure* and are therefore not derived from the generalisation of singular paradigmatic experiences but from several examples across very diverse urban contexts. They highlight difference and go beyond an idiosyncratic focus on individual 'cases' or 'singularities'. It is obvious that such a comparative methodology also has its limits: our analysis is based on a specific cross-section of large metropolitan territories and could only detect those processes that were present in the respective places at the particular time of observation. It will be important to test whether these conceptual experimentations have relevance for a wider variety of urban contexts. Furthermore, we had to restrict our analysis to processes of concentrated urbanisation. It would be interesting to go further and analyse also periurban areas or rural–urban interfaces, and even to analyse more remote territories of extended urbanisation. Thus, other comparative endeavours are in progress and more might follow, not only across the divides of North and South or East and West, but also across the putatively urban/non-urban divide.

This project also illustrates the potential of a comparative approach that is mobilised for the generation of new concepts and not only for exploring the variations of already defined concepts. It shows one possible way for theory construction to derive new concepts from the confrontation of different urban experiences, informed by various urban territories around the globe. It is a qualitative and collaborative approach that required the invention of a series of methodological tools, especially specific versions of qualitative mapping, multi-sited ethnography and common comparative workshops. These methods will need more detailed discussions in further texts, but we could show that this methodological design enables the identification of the patterns and pathways of urbanisation even for very large urban territories and the development of new comparative concepts.

Furthermore, this comparative project employs a *transductive procedure* and is thus directly linked to theory. The concrete empirical research is embedded in a theoretical framework derived from Lefebvre's open ended theory of the production of space, oriented by the decentring perspective offered by the concept of planetary urbanisation, and inspired by the imaginations and sensitivities of postcolonial approaches. As this project illustrates these different approaches are not mutually exclusive, but on the contrary might reinforce each other and stimulate a theoretically guided and at the same time empirically grounded research. While the resulting comparative concepts of urbanisation can be applied independently of the theoretical context of the concept generation, they are most productively combined with a dynamic perspective on urbanisation: to analyse an urban territory as an overlapping and intermingling of various urbanisation processes. Or, seen from the other side: to deconstruct an urban territory into several urban configurations and to reconstruct the urbanisation processes that produced them.

From a more general perspective this project highlights and confirms the necessity to develop a differentiated view of urbanisation. The reduction of the concept of urbanisation to some universal principles or mechanisms cannot suffice to productively address the diversity and richness of the contemporary urban universe. By identifying variegated processes of urbanisation as constitutive elements of an urbanising planet this project suggests an analysis that goes beyond the seeming contradiction between universalising and particularising research strategies.

To develop a more global and differentiated vocabulary of urbanisation is of course a collective project. It can only be successful if there is a common understanding on the need and the usefulness of such new concepts. Our project is therefore meant as a proposal and an invitation for further debate, reflection and conceptual experimentation.

Notes

1. This project was carried out by the ETH Future Cities Laboratory Singapore (FCL) and the Chair of Sociology, Department of Architecture at ETH Zurich.
2. A project on 'Territories of Extended Urbanization' with a very different selection of case studies is currently on the way in the framework of the ETH Future Cities Laboratory Singapore.
3. A series of articles on these urbanisation processes and a book are in progress.
4. *Laminar urbanisation* occurs, when urban settlements expand almost unhindered into the surrounding hinterland, covering the territory like a carpet or laminated flooring; usually the settlements are composed of detached houses for middle class families, and are lacking major centralities. With the concept of *mass housing urbanisation* we not only refer to the production of state-owned rental housing for the poor, but also to the large scale production of housing for private ownership initiated either directly by the state or through various forms of public-private partnerships. *Production of centralities* addresses the transformation and expansion of existing centres as well as the creation of new concentrations of specific activities and functions.
5. This process also could be identified in Zurich, see Nüssli and Schmid (2016).

References

AlSayyad N (2004) Urban Informality as a 'new' way of life. In: Roy A and AlSayyad N (eds) *Urban Informality*. Lanham: Lexington Books, pp. 7–30.

Andersson K, Eklund E, Lethola M, et al. (eds) (2009) *Beyond the Rural–Urban Divide: Cross-continental Perspectives on the Differentiated Countryside and Its Regulation*. Bingley: Emerald.

Aslan Ş (2004) *1 Mayıs Mahallesi: 1980 Öncesi Toplumsal Mücadeleler ve Kent*. Istanbul: İletişim Yayınları.

Azuela A (ed.) (1993) *La urbanización popular y el orden jurídico en América Latina*. UNAM: Mexico City.

Bach J (2010) They come in peasants and leave citizens: Urban villages and the making of Shenzhen, China. *Cultural Anthropology* 25(3): 421–458.

Bassols MR and Espinosa M (2011) Construcción social del espacio urbano. Ecatepecy Nezahualcóyotl. Dos gigantes del oriente. *Polis* 7(2): 181–212.

Becker J, Klingan K, Lanz S, et al. (eds) (2013) *Global Prayers: Contemporary Manifestations of the Religious in the City*. Zürich: Lars Müller Publishers.

Benjamin S (2008) Occupancy urbanism: Radicalizing politics and economy beyond policy and programs. *International Journal of Urban and Regional Research* 32(3): 719–729.

Boratav K (1994) *Istanbul'da ve Anadolu'da Sınıf Profilleri*. Istanbul: Tarih Vakfı Yurt Yayınları.

Brenner N and Schmid C (2014) The 'urban age' in question. *International Journal of Urban and Regional Research* 38(3): 731–755.

Brenner N and Schmid C (2015) Towards a new epistemology of the urban? *City* 19(2–3): 151–182.

Calcutta Metropolitan Development Authority (CMDA) (2005) *Vision 2025 Perspective Plan of Calcutta Metropolitan Area*. Final Report. Calcutta: CMDA Publisher.

Caldeira T (2017) Peripheral urbanization: Auto-construction, transversal logics, and politics in cities of the Global South. *Environment and Planning D: Society and Space* 35(1): 3–20.

Crossa V (2009) Resisting the entrepreneurial city: Street vendors' struggle in Mexico City's historic center. *International Journal of Urban and Regional Research* 33(1): 43–63.

Delgadillo V (2009) Patrimonio urbano y turismo cultural en la ciudad de México. *Andamios* 6(12): 69–94.

Denzin N (1978) *The Research Act: A Theoretical Introduction to Sociological Methods*. New York: McGraw-Hill.

Diener R, et al. (2012) *Belgrade. Formal Informal*. Zürich: Park Books.

Diener R, et al. (2015) *The Inevitable Specificity of Cities*. Zürich: ETH Studio Basel/Lars Müller Publishers.

Duhau E and Giglia A (2008) *Las reglas del desorden. Habitar la metrópoli*. Mexico City: Siglo XXI.

Ekinci O (1998) Kaçak yapılaşma ve arazi spekülasyonu. In: Sey Y and Özkan D (eds) *75 Yılda Değişen Kent ve Mimarlık*. Istanbul: Tarih Vakfı, pp. 191–198.

Erensü S and Karaman O (2017) The work of a few trees: Gezi, politics and space. *International Journal of Urban and Regional Research* 41(1): 19–36.

Esen O (2011) Istanbul'dan öğrenmek In: Köse Y (ed.) *İstanbul - İmparatorluk Başkentinden Megakente*. Istanbul: Kitap Yayınevi, pp. 461–494.

Falzon M-A (2009) *Contours of the Field(s). Multisited Ethnography as a Theory-driven Research Strategy for Sociology*. Farnham: Ashgate.

Flick U (2011) *Triangulation: Eine Einführung*. Wiesbaden: VS Verlag.

Frehse F (2014) For difference 'in and through' São Paulo: The regressive-progressive method. In: Stanek Ł, Schmid C and Moravánszky Á (eds) *Urban Revolution Now: Henri Lefebvre in Social Research and Architecture*. Farnham: Ashgate, pp. 243–263.

Gans HJ (1967) *The Levittowners: Ways of Life and Politics in a New Suburban Community*. London: Penguin.

Ghertner DA (2015) Why gentrification theory fails in 'much of the world'. *City* 19(4): 552–563.

Gilbert L and De Jong F (2015) Entanglements of periphery and informality in Mexico City. *International Journal of Urban and Regional Research* 39(3): 518–532.

Glaser B and Strauss A (1967) *The Discovery of Grounded Theory*. New York: de Gruyter.

Glass R (1964) *London: Aspects of Change*. London: MacGibbon and Kee.

Hanakata N (2017) *The production of differences in the Tokyo metropolitan complex*. PhD thesis, ETH Zürich.

Harvey D (1985) *The Urbanization of Capital*. Baltimore, MD: John Hopkins University Press.

Hernández F, Kellett P and Allen LK (eds) (2010) *Rethinking the Informal City: Critical Perspectives from Latin America*. New York: Berghahn Books.

Hsing Y (2012) *The Great Urban Transformation: Politics of Land and Property in China*. Oxford: Oxford University Press.

Huchzermeyer M (2011) *Tenement Cities: from 19th Century Berlin to 21st Century Nairobi*. Trenton, NJ: Africa World Press.

Işık O and Pınarcıoğlu MM (2001) *Nöbetleşe Yoksulluk Gecekondulaşma ve Kent Yoksulları, Sultanbeyli Örneği*. Istanbul: İletişim

Kallenberger P (2018) *Patterns and pathways of urbanization in Kolkata*. PhD thesis, ETH Zürich.

Keil R (ed.) (2013) *Suburban Constellations*. Berlin: Jovis.

Lees L (2012) The geography of gentrification: Thinking through comparative urbanism. *Progress in Human Geography* 36(2): 155–171.

Lees L, Shin H and Lopez-Morales E (2016) *Planetary Gentrification*. Cambridge: Polity Press.

Lefebvre H (1991/1974) *The Production of Space*. Cambridge: Blackwell.

Lefebvre H (1996/1968) *The Right to the City*. In: Kofman E and Lebas E (eds) *Writings on Cities by Henri Lefebvre*. Oxford: Blackwell, pp. 63–182.

Lefebvre H (2003/1970) *The Urban Revolution*. Minneapolis, MN: University of Minnesota Press.

Leitner H and Sheppard E (2017) From Kampungs to Condos? Contested accumulations through displacement in Jakarta. *Environment and Planning* Epub ahead of print 16 May 2017: 1–20. DOI: 10.1177/0308518X17709279.

McFarlane C (2010) The comparative city: Knowledge, learning, urbanism. *International Journal of Urban and Regional Research* 34(4): 725–742.

McFarlane C (2011) *Learning the City: Knowledge and Translocal Assemblage*. Chichester: Wiley-Blackwell.

McGee T (1991) The emergence of desakota regions in Asia: Expanding a hypothesis. In: Ginsburg N, Koppel B and McGee T (eds) *The Extended Metropolis: Settlement Transition in Asia*. Honolulu: University of Hawaii Press, pp. 3–25.

Marcus G (1995) Ethnography in/of the World System. The emergence of multi-sited ethnography. *Annual Review of Anthropology* 24(1): 95–117.

Massey D (2005) *For Space*. London: SAGE Publications Ltd.

Mbembe A and Nuttall S (2008) Introduction: Afropolis. In: Nuttall S and Mbembe A (eds) *Johannesburg: the Elusive Metropolis*. Durham, NC: Duke University Press, pp. 1–36.

Merrifield A (2014) *The New Urban Question*. London: Pluto Press.

Montejano Castillo M (2008) *Processes of Consolidation and Differentiation of Informal Settlements. Case study Ciudad Nezahualcóyotl, Mexico City*. Stuttgart: Universität Stuttgart.

Navarro B and Moctezuma P (1989) *La urbanización popular en la ciudad de México*. IIE-UNAM & Editorial Nuestro Tiempo, S. A.: Mexico City.

Nijman J (2007) Introduction – Comparative urbanism. *Urban Geography* 28(1): 1–6.

Nüssli R and Schmid C (2016) Beyond the urban–suburban divide: Urbanization and the production of the urban in Zurich North. *International Journal of Urban and Regional Research* 40(3): 679–701.

Öncü A (1988) Politics of the urban land market in Turkey: 1950–80. *International Journal of Urban and Regional Research* 12(1): 38–64.

Özdemir N (1999) *The transformation of squatter settlements into authorised apartment blocks: A case study of Ankara, Turkey*. PhD Thesis, University of Kent at Canterbury.

Parnell S and Oldfield S (eds) (2014) *The Routledge Handbook on Cities of the Global South*. New York: Routledge.

Peck J (2015) Cities beyond compare? *Regional Studies* 49(1): 160–182.

Peña Díaz J and Schmid C (2007) Mapeando La Habana. *Planificación física Cuba* 12: 46–52.

Pieterse E and Simone A (eds) (2013) *Rogue Urbanism: Emergent African Cities*. Auckland Park: Jacana Media.

Préteceille E (2007) Is gentrification a useful paradigm to analyse social changes in the Paris Metropolis? *Environment and Planning A* 39(1): 10–31.

Rao V (2006) Slum as theory: The South/Asian city and globalization. *International Journal of Urban and Regional Research* 30(1): 225–232.

Robinson J (2002) Global and world cities: A view from off the map. *International Journal of Urban and Regional Research* 26(3): 531–554.

Robinson J (2006) *Ordinary Cities: Between Modernity and Development*. London: Routledge.

Robinson J (2011) Cities in a world of cities: The comparative gesture. *International Journal of Urban and Regional Research* 35(1): 1–23.

Robinson J (2014) New geographies of theorizing the urban: Putting comparison to work for

global urban studies. In: Parnell S and Oldfield S (eds) *The Routledge Handbook on Cities of the Global South*. New York: Routledge, pp. 57–70.

Robinson J (2016) Thinking cities through elsewhere: Comparative tactics for a more global urban studies. *Progress in Human Geography* 40(1): 3–29.

Roy A (2004) The gentleman's city: Urban informality in the Calcutta of New Communism. In: Roy A and AlSayyad N (eds) *Urban Informality*. Lanham, MD: Lexington Books, pp. 147–170.

Roy A (2005) Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association* 71(2): 147–158.

Roy A (2009) The 21st century metropolis: New geographies of theory. *Regional Studies* 43(6): 819–830.

Roy A and AlSayyad N (eds) (2004) *Urban Informality: Transnational Perspectives from the Middle East, Latin America and South Asia*. Lanham, MD: Lexington Books.

Roy A and Ong A (eds) (2012) *Worlding Cities: Asian Experiments and the Art of Being Global*. Oxford: Wiley-Blackwell.

Sawyer L (2017) *Plotting: The prevalent but undertheorized residential areas of Lagos*. PhD thesis, ETH Zürich.

Schmid C (2005) *Stadt, Raum und Gesellschaft – Henri Lefebvre und die Theorie der Produktion des Raumes*. Stuttgart: Steiner.

Schmid C (2008) Henri Lefebvre's theory of the production of space: Towards a three-dimensional dialectic. In: Goonewardena K, Kipfer S, Milgrom R, et al. (eds) *Space, Difference, Everyday Life: Reading Henri Lefebvre*. London: Routledge, pp. 27–45.

Schmid C (2012) Henri Lefebvre, the right to the city, and the new metropolitan mainstream. In: Brenner N, Marcuse P and Mayer M (eds) *Cities for People, Not for Profit: Critical Urban Theory and the Right to the City*. New York: Routledge, pp. 42–62.

Schmid C (2014) Patterns and pathways of global urbanization: Towards comparative analysis. In: Brenner N (ed.) *Implosions / Explosions: Towards a Study of Planetary Urbanization*. Berlin: Jovis, pp. 203–217.

Schmid C (2015) Specificity and urbanization: A theoretical outlook. In: Basel ES, Diener R, Herzog J, et al. (eds) *The Inevitable Specificity of Cities*. Zürich: Lars Müller Publishers, pp. 287–307.

Sengupta U (2010) The hindered self-help: Housing policies, politics and poverty in Kolkata, India. *Habitat International* 34: 323–331.

Şenyapılı T (1998) Cumhuriyet'in 75. yılı, gecekondunun 50. Yılı. In: Sey Y and Özkan D (eds) *75 Yılda Değişen Kent ve Mimarlık*. Istanbul: Tarih Vakfı, pp. 301–316.

Shatkin G (2017) *Cities for Profit: The Real Estate Turn in Asia's Urban Politics*. Ithaca, NY: Cornell University Press.

Sheppard E, Leitner H and Maringanti A (2013) Provincializing global urbanism: A manifesto. *Urban Geography* 34(7): 893–900.

Shmuely A (2008) Totality, hegemony, difference: Henri Lefebvre and Raymond Williams. In: Goonewardena K, Kipfer S, Milgrom R, et al. (eds) *Space, Difference, Everyday Life: Reading Henri Lefebvre*. London: Routledge, pp. 212–230.

Simone A (2004) *For the City Yet to Come: Changing African Life in Four Cities*. Durham, NC: Duke University Press.

Simone A (2010) *City Life from Jakarta to Dakar: Movements at the Crossroads*. New York: Routledge.

Slater T (2017) Planetary rent gaps. *Antipode* 49(S1): 114–137.

Smith N (1996) *The New Urban Frontier: Gentrification and the Revanchist City*. London: Routledge.

Smith N (2002) New globalism, new urbanism: Gentrification as global urban strategy. *Antipode* 34(3): 427–450.

Soja E (1992) Inside Exopolis: scenes from Orange County. In: Sorkin M (ed.) *Variations on a Theme Park: Scenes from the New American City and the End of Public Space*. New York: Hill and Wang, pp. 94–122.

Soja EW (2010) Beyond postmetropolis. *Urban Geography* 32(4): 451–469.

Song Y and Zenou Y (2012) Urban villages and housing values in China. *Regional Science and Urban Economics* 42(3): 495–505.

Souza R and Tokman VE (1976) The informal urban sector in Latin America. *International Labour Review* 114(3): 355–365.

Streule M (2008) La festivalización de los centros históricos. *Ciudades* 79: 36–43.

Streule M (2016) *Ethnography of urban territories: A transdisciplinary analysis of metropolitan urbanization processes in Mexico City*. PhD thesis, ETH Zürich.

Streule M (2018) *Ethnografie urbaner Territorien. Metropolitane Urbanisierungsprozesse von Mexiko-Stadt*. Münster: Westfälisches Dampfboot.

Streule M and Schmid C (2014) Popular urbanization: A comparative concept in urban studies. *Yearbook 2014, Department of Architecture, ETH Zürich*. Zürich: gta Verlag, pp. 213–215.

Tang WS (2014) Where Lefebvre meets the East: Urbanization in Hong Kong. In: Stanek Ł, Schmid C and Moravánszky Á (eds) *Urban Revolution Now: Henri Lefebvre in Social Research and Architecture*. Farnham: Ashgate, pp. 71–91.

Taylor PJ and Lang RE (2004) The shock of the new: 100 concepts describing recent urban change. *Environment and Planning A* 36: 951–958.

Tilly C (1984) *Big Structures, Large Processes, Huge Comparisons*. New York: Russell Sage Foundation.

Turner J (1976) *Housing by People: Towards Autonomy in Building Environments*. New York: Pantheon Books.

Varley A (2013) Postcolonialising informality? *Environment and Planning D: Society and Space* 31(1): 4–22.

Ward K (2010) Towards a relational comparative approach to the study of cities. *Progress in Human Geography* 34(4): 471–487.

Williams R (1977) *Marxism and Literature, Vol. I.* Oxford: Oxford University Press.

Wong KP (2017) *Cross-border territory of urbanization: Hong Kong, Shenzhen and Dongguan*. PhD thesis, ETH Zürich.

Wu F (2016) State dominance in urban redevelopment: Beyond gentrification in urban China. *Urban Affairs Review* 52(5): 631–658.

Wu F, Zhang F and Webster C (eds) (2013) *Rural Migrants in Urban China: Enclaves and Transient Urbanism*. London: Routledge.

Yonder A (1987) Informal land and housing markets: The case of Istanbul, Turkey. *Journal of the American Planning Association* 53(2): 213–219.