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Extended Urbanisation. A Framework for Analysis

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The speed, scale, and scope of urbanisation have increased dramatically in recent decades. Urban research is confronted with urbanisation processes that are unfolding far beyond the realm of agglomerations, extended urban regions, and megaregions. Today, the entire planet is the site and arena of urbanisation processes. Novel patterns of excentric urbanisation are crystallising in agricultural areas, rain forests, and the oceans, challenging inherited conceptions of the urban as a bounded zone and a dense settlement type. However, we are poorly equipped with concepts and theories that allow us to grasp the planetary extension of urbanisation processes and understand the dramatic transformations affecting the most diverse landscapes and territories across the planet.

These observations have sparked fundamental debates about the specificity of the urban. They have catalysed the development of the conception of *planetary urbanisation* as a tool for better understanding the contemporary patterns and pathways of urbanisation. Its analytical core is the distinction between concentrated, extended, and differential urbanisation. While the term *concentrated urbanisation* denotes the formation and growth of agglomerations, resulting in dense urban areas, the term *extended urbanisation* invites us to look at what is seemingly outside of the urban and to study processes of urbanisation "beyond the city" that are transforming sparsely settled areas. The third term, *differential urbanisation*, expresses the potential of urbanisation to generate spaces for encounter and social interaction that create a different urban world. Processes of extended, concentrated, and differential urbanisation should be understood as vectors, not as territories. They may develop on the same territories at the same time, overlapping and permeating each other. In this sense, territories of extended urbanisation are not bounded areas, but territories that are dominated by processes of extended urbanisation, which are often simultaneously also transformed by processes of concentrated and differential urbanisation.

Processes of extended urbanisation are shaping the planet in unprecedented and

unpredictable ways, often positioning dynamic and depleting areas side by side. Consequently, territories of extended urbanisation are more varied and complex than might be expected. It is urgent to gain a more comprehensive picture and a systematic understanding of these processes that increasingly determine our planet's destiny. This chapter sheds light on the theoretical, conceptual, and empirical questions that the research on extended urbanisation addresses. It discusses some of these processes and territories that question conventional understandings and boundaries of the urban. It presents an overview of the current research on extended urbanisation and embeds the eight case studies published in this book in the wider context of the rapidly growing scientific literature.

This chapter is divided into four parts; the individual parts are articles in themselves and can be read independently of each other. Part I, "Planetary Urbanisation: An Epistemological Reorientation," outlines the basic arguments of a general theory of urbanisation. It presents a critique of city-centric conceptions, scrutinises the foundational figure in mainstream urban studies of the agglomeration and its hinterland, and sketches out a different conception of urbanisation. Part II, "The Urbanisation of the territory: A Three-Dimensional Framework," develops and explains the guiding principles of our approach to decentring urban analysis. This framework is based on earlier efforts to theorise urbanisation based on Henri Lefebvre's theory of the production of space and inspired by research projects of ETH Studio Basel.[1] The reflections on extended urbanisation result from the collective efforts of the entire research team assembled in this book to better understand extended urbanisation.[2] Part III, "From Concentrated to Extended Urbanisation: The Search for an Elusive Urban Boundary," focuses on the various conceptual attempts to bind the urban and to theoretically and conceptually perpetuate the classic distinction between city and country, which has been constantly destabilised and undermined by the relentless motion of the urbanisation process itself. It presents a critique of conventional conceptions in urban studies and urban design, which have created confusion about the very nature of urbanisation and allowed many processes to remain under the radar of urban analysis. In this situation, the concept of extended urbanisation offers a different approach and methodology for urban analysis and contributes to the development of an entirely new field of urban research. Part IV, "Processes of Extended Urbanisation: An Exploration," gives an overview of the different processes of extended urbanisation that we could detect during our research. Together, these four parts introduce the emerging study of extended urbanisation.

PART I

PLANETARY URBANISATION. AN EPISTEMOLOGICAL REORIENTATION

In recent decades, new urban phenomena emerging across the planet questioned and undermined the familiar canon of concepts and cartographies of the urban. The approach of planetary urbanisation has been developed to precisely address these radical transformations of patterns and pathways of urbanisation. It is based on the hypothesis that urbanisation has acquired a planetary reach and needs a planetary perspective to be adequately understood and analysed. Inspired by Henri Lefebvre's conception of a planetary "urban revolution," it proposes a fundamental epistemological reorientation of our understanding of the urban and urbanisation and demands a radical change of perspective towards a decentring of urban research.[3] At the beginning of the twenty-first century, Roberto Luís Monte-Mór analysed these new phenomena in the Brazilian Amazon and developed the first understanding of extended urbanisation referring to Lefebvre's analysis.[4] In the early 2010s, also directly inspired by Lefebvre's theory, Andy Merrifield, Neil Brenner, and Christian Schmid introduced the concept of planetary urbanisation to the discussion.[5] In the meantime, the concepts of planetary and extended urbanisation have been widely applied and further developed across divergent terrains globally. They also provoked some intense, sometimes highly polemical debates on the appropriate epistemology, conceptualisation, and methodology for urban research today.[6]

The core of the concept of planetary urbanisation is the proposal for an epistemological reorientation of the understanding of urbanisation that is outlined in Part I of this chapter. It starts with a *critique of city centrism* and, thus, a critique of the traditional vision of the city as a nodal, bounded, singular, and universally replicable settlement type that makes it impossible to grasp and understand some of the most pressing urban transformations of our time.[7] To develop an adequate conceptualisation of contemporary urbanisation processes, we have to abandon the classic figure of the urban agglomeration with its agrarian hinterland that has formed the foundations of contemporary urban theory and research. The key argument Brenner and Schmid brought forward is not that agglomerations no longer exist or are no longer central sites and expressions of urbanisation processes. On the contrary, the "power of agglomeration" has been a vital driver of urbanisation since the beginning of the industrial revolution and plays a dominant role in the formation and development of dense urban territories to this day. Instead, the problem is that contemporary approaches continue to focus exclusively on agglomeration processes and obfuscate the most dramatic transformations shaping our planet. Urbanisation encompasses a much broader set of territories, not only dense agglomerations, their proximate hinterlands, and their long-distance networks of connectivity, but also a great diversity of territories "beyond the city" that provide urban areas with labour, energy, food, water, infrastructure, and waste disposal.[8] Therefore, we have to move from an analysis of bounded settlement spaces and urban forms to an analysis of urbanisation processes producing and transforming these forms. For this purpose, Brenner and Schmid proposed a dialectical understanding that brings together three moments of urbanisation in a relational, dynamic, and dialectical framework, including processes of concentrated, extended, and differential urbanisation that are interrelated and mutually constitutive.

CITY CENTRISM: THE NON-CITY AS BLIND FIELD

For a long time, the analysis of urbanisation has been restrained by city-centric conceptions of the urban, focusing on the spatial concentration of population, production sites, infrastructure, and investment within a more or less clearly delineated spatial zone. Despite

seriously compromising our collective capacities to decipher and influence urbanisation processes unfolding beyond agglomerations, city centrism only recently attracted broader scrutiny. In their critique of mainstream urban discourses, Brenner and Schmid analyse the long history of city centrism that culminated in the postulation of an "urban age" when UN-Habitat declared that for the first time in history more than half of the world's population was now living in urban areas. This claim has been repeated in various contexts time and again.[9] The urban age discourse drew public attention to the problems and potentials of the growth of "cities" and cast into oblivion other kinds of urban developments in "other parts" of the world.

In a similar vein, Andy Merrifield criticises the concept of the "right to the city," which he considers obsolete in the face of the planetary extension of urbanisation. He asks, "Does it still make any sense to talk about right to *the* city, to the city that's mono-centric and clear-cut about what's inside and what's outside?"[10] Following this argument, Marcelo Lopez de Souza demands a "right to the planet" to address the profound spatial restructuring under capitalism.[11] On their part, Hillary Angelo and David Wachsmuth critique conventional approaches in urban political ecology for adopting a "methodological cityism," which is an overwhelming analytical and empirical focus on the traditional city, "instead of mobilising a Lefebvrian theoretical framework to trouble traditional distinctions between urban/rural and society/nature by exploring urbanization as a global process."[12] From an architectonic point of view, Stephen Cairns shows how city centricity is debilitating our capacities to act and develop alternatives to the dogma of dense, compact, accessible, and mixed-use settlement types.[13]

Despite these criticisms and the increasing difficulties in understanding and grasping contemporary urban phenomena, city centrism still constitutes a major tendency in urban studies and architecture. To this day, the idea that agglomerations represent the privileged or exclusive terrain of urban development remains a core assumption within both mainstream and critical traditions of urban studies. This is particularly evident in economic conceptions of the urban that are based on theories of agglomeration (see below). Demographic and statistical accounts followed this perspective by developing statistical methods to contain the exploding metropolis in an analytical city-centric framework.[14] In a similar way, classical sociological accounts also focused on urban concentration. Georg Simmel theorised the characteristics of the metropolis, contrasting it to small towns and rural life. Continuing this line of reasoning, Louis Wirth made the size of settlements a key criterion of urbanism, which necessarily implies and presupposes a bounding move. Both the Chicago School and later the Los Angeles School—the two most influential Western strands of urbanism—also looked at metropolises that they both epitomised in their books—*The City* (about Chicago) and *The City* (about Los Angeles)—despite their otherwise diverging perspectives.[15] In all these theories and concepts, the urban is seen as a phenomenon of concentration, and the main goal is to fathom the enigma of the effects and consequences of the agglomeration process. Even when urban areas continued to expand, and "urban sprawl" and the "exploding metropolis" became key topics in theoretical and conceptual efforts,[16] these dramatic urban changes were not reflected in new conceptualisations of the urban. Rather, they were addressed by the adjustment of the conceptual "container" of the urban and by extending the radius of the circle defining a "city region." Until recently, both "Western" and "Southern" urban theories evolved along the lines of city centrism, and in a kind of silent convention, the term "city" constituted a common key component of all sorts of new concepts ranging from global city and world city to edge city, megacity, generic city, Southern city, and many more.

Even Henri Lefebvre relied on the term "city" in his earlier texts, as evidenced in his seminal book *The Right to the City,* published in 1968. In one of the most spectacular epistemological shifts in urban studies, he strongly

criticised his own concept only two years later in *The Urban Revolution*, where he developed a radically different perspective based on his hypothesis of the complete urbanisation of society. Consequently, he heavily criticised the concept of the "city" as an ideological pseudo-concept and placed the process of urbanisation at the centre of his theory. He declared that the expansion of the urban phenomenon tends to transgress territorial borders and explicitly observed the "prodigious extension of the urban to the entire planet."[17]

In a parallel move, David Harvey, strongly inspired by Lefebvre, changed his focus from an analysis of the city to the theorisation of urbanisation. His ground-breaking book *Social Justice and the City* (1973) was still dominated by theorisations of the city, even though he presented a spectacular paradigm shift from liberal approaches towards a Marxist understanding of the urban. His ambitious theoretical project to introduce (urban) space into Marxist theory culminated in his book *Limits to Capital* (1982), which unfolds an encompassing analysis of the production of the built environment and the circulation of capital. In *Urbanization of Capital* and *Consciousness and the Urban Experience*, both published in 1985, he finally laid down the conceptual core for a fully developed analysis of urbanisation.

Despite these fundamental achievements and the fact that both Lefebvre and Harvey were widely read, discussed, and quoted in the following years and decades, city-centric approaches to the urban largely prevailed. Three core problems are emerging from such conceptions. First, they entail the often-implicit assumption that the urban is a bounded unit. This supposition severely constrains an adequate understanding of the variety of urbanisation processes that are dramatically and rapidly transforming the planet. Thus, the point is not to question specific claims about what happens at the "edge" of the city or discussions on how to define the "boundary of the urban." Instead, the problem is the intellectual act of bounding itself, which is reducing the urban to a territorially defined settlement type.[18]

The second problem is that such conceptions are constructing a contrast between the urban and a putatively non-urban outside that is variously called "rural," "countryside," or "wilderness."[19] We can define the limits of the urban realm in many ways, but we inevitably construct an inside and an outside. Consequently, what happens outside the urban remains under the radar of urban research simply because of the convention that it does not belong to the field of urban studies. As a result, many urbanisation processes shaping the world, often in dramatic ways, remain under-theorised or even unacknowledged. This does not postulate that there is no outside of the urban at all or that concepts of urbanisation must frame all spatial phenomena occurring on the surface of the Earth, as some critics are assuming.[20] Rather, the point is that in asserting an a priori outside of the urban, many urban phenomena are theoretically erased without any possibility to conceptualise them. The distinction between city and non-city not only neglects uneven urban development and the significant variation in the nature of the urban but also results in what Lefebvre called a "blind field." He understands this paradoxical combination of terms as neither a literary image nor a metaphor. It marks what is blinding and what is blinded, what knowledge misconceives and misrecognises. The term also encompasses the power of ideology and the power of language. Lefebvre, therefore, proposes to study the urban as a field of knowledge and as a possibility for action: "On the one hand a path is opened to exploration; on the other there is an enclosure to break out of, a consecration to transgress."[21]

The third problem of city centrism is that urban concentration and agglomeration are treated as one-directional processes that can be understood in isolation from any other processes of territorial transformation. Despite various calls to analyse the urban as a constellation of connections and relations—most famously by Doreen Massey and John Allen[22]—dominant understandings of the city and the urban are still mainly focused on processes of concentration. However, as I will argue in detail below, urban

concentration is not possible without an opposite movement of urban extension.

City-centric conceptions and definitions have serious implications and effects, not only in theory but also in practice. The agglomeration paradigm constitutes the basis for UN Habitat's calculation of "urban areas" and also informs its conception of urban sustainability in the *New Urban Agenda,* which does not adequately address urbanisation processes beyond the city.[23] Because of this, it considerably underestimates the degree to which urbanisation contributes to carbon emissions, and it also overlooks the devastating effects of various forms of land enclosures and rural dispossessions as preconditions for the unfolding of extended urbanisation.[24] Furthermore, these conceptions form the basis for the ideological narrative of the *Triumph of the Cit*y, which argues that people have to move to large metropolises in search of prosperity and success.[25] This kind of urban triumphalism engendered a "new metropolitan mainstream" that postulates and disseminates strategies of slum clearance and urban upgrading and imposes norms for urban lifestyles and ways of living, thus legitimising and even promoting strategies of dispossession.[26] This simultaneously entails a devaluation and disempowerment of people living in putatively non-metropolitan or non-urban territories, from peripheral and sparsely populated areas to economically stagnating industrial regions facing decreasing populations, economic decline, and peripheralisation. In the following two sections, I will first problematise the putative "inside" and the crucial concept of agglomeration and then discuss the "outside" and the pertinent but neglected hinterland question.

THE POWER OF AGGLOMERATION

The concept of agglomeration is one of the most fundamental theorems in economic geography and urban planning. It is often seen as a general principle that leads economic activities, people, and infrastructure to cluster in space during successive cycles of capitalist industrial development. Economic geographers Allen Scott and Michael Storper elevated this process to a kind of universal law: "All cities can be understood in terms of a theoretical framework that combines two main processes, namely, the dynamics of agglomeration/polarisation, and the unfolding of an associated nexus of locations, land uses, and human interactions."[27]

The first description of this process of agglomeration can be found in Friedrich Engels's *The Condition of the Working Class in England*. Here, he makes a clear connection between industrialisation and urbanisation by understanding the capitalist city as the result of the concentration of the means of production and labour power: "The greater the town, the greater its advantages. It offers roads, railroads, canals; the choice of skilled labour increases constantly, new establishments can be built more cheaply, because of the competition among machinists who are at hand, than in remote country districts, whither timber, machinery, builders, and operatives must be brought; it offers a market to which buyers crowd; communication with the markets supplying raw material or demanding finished goods. Hence the marvellously rapid growth of the great manufacturing towns."[28] To this day, this is an almost perfect definition mirrored in most versions of agglomeration economies in one way or another.

Karl Marx, in *Capital: Volume 1*, brought this process into a more general conceptualisation: "The conglomeration of workers, the assembly of different work processes, and the concentration of the means of production thus result simultaneously in a constriction of the spatial sphere (*Raumsphäre*) of labour and an extension of its sphere of effects (*Wirkungssphäre*), which saves a lot of incidental costs (*faux frais)*."[29] Marx postulated that the spatial concentration of the production process increases the productive forces. This idea became fundamental to Lefebvre's understanding of the city as a productive force.[30] We also find here that spatial concentration has not only internal effects, such as the increase in productivity and the reduction of production costs but also external effects by increasing the sphere of influence of agglomerations and industrial production zones.

Many decades later, geographer Alfred Weber called this phenomenon the "force of agglomeration" (*Agglomerationskraft*). He understood it as a process of concentration bringing together people, production processes, and resources, and he distinguished between proper agglomeration forces and incidental forms of agglomeration, such as the concentration of industries following the deposits of ore or coal.[31] His "law of agglomeration" stipulates that a concentration of production lowers production costs. In this context, Weber identified not only agglomerative but also "deglomerative" forces, such as congestion and, notably, increasing land prices in large agglomerations. From these thoughts follow the fundamental principle now known by the term "agglomeration economies."

The analytical figure of dense versus dispersed urban settlements was then used in mainstream economy to show that cities grow faster than non-cities, usually measured in terms of economic and demographic growth. Thus, agglomeration economies became a shorthand explanation for the economic "success" of cities. However, this "mysterious concept of agglomeration" presents considerable empirical and theoretical difficulties, as Pierre Veltz explained.[32] What are the powerful forces that are producing such spectacular changes in urban landscapes? What are the reasons for the concentration of people and economic activities in space leading to the relentless expansion of cities?

The economic literature has brought forward many good reasons for the economic advantages of agglomerations, such as reduced transaction costs, untraded interdependencies, the positive effects of urban governance and institutions, differentiated labour markets and diversified consumption, innovation processes, creativity, uncertainty reduction, and reflexivity.[33] This long list shows that the economic reasons for the power of agglomeration are very diverse, and, importantly, they are also strongly dependent on specific historical situations. While the effect of some agglomeration economies cannot be disputed empirically, they are always specific and elude theoretical attempts to elevate them to a general principle. Historically, very different patterns of urbanisation have developed, some more dispersed and others more concentrated, some monocentric, others polycentric, and, contrary to the dominant economic narrative, many of the less concentrated urban patterns proved to be highly economically successful, as the famous regions of the *Terza Italia* or southern Germany suggest.

Indeed, there are other reasons for the "growth of cities." In their aspirations to develop their capitals and support (global) command and control centres on their territories, nation-states often play key roles in the agglomeration process but are usually excluded from the analysis. Forced migrations resulting from political and economic crises, armed conflicts, and natural disasters also drive agglomeration processes. Furthermore, there are many examples of urban concentration without "proper" agglomeration economies, particularly in Africa and Asia, such as Lagos or Dongguan, discussed in this book. Why do cities grow? There is a great variety of reasons for the growth of economic activities and population in individual urban territories. Nevertheless, many of these reasons originate outside the economy of agglomeration, and serious questions remain about the systematic logic behind it.

Aside from these reservations about the mechanism of agglomeration economies, two strong theoretical arguments have been mostly excluded from the discussion so far: 1) the question of transport and connectivity and 2) the question of the urban boundary. As Weber recognised, transport costs play a key role in the agglomeration process. However, such costs are relational and take effect in both directions. If they decrease through the applications of new technologies or improvements in infrastructure, they may increase the force of agglomeration because they facilitate movements towards the centre. Although, they may also cause deglomerative effects as newly developed nodes in logistical networks attract activities from main centres. As a result, new centralities are formed that may become cores of agglomeration and concentrated urbanisation. The widely discussed

global production networks are not only generating global cities, as Saskia Sassen's famous hypothesis postulates, but also all sorts of new centralities that form, as Veltz has shown, "archipelago economies." Veltz, therefore, rejected the concept of agglomeration and replaced it with a sophisticated conceptualisation of centrality.[34] Furthermore, as I will discuss in Part II of this chapter, various forms of migration and short-term movements reinforce extended urbanisation processes and further blur the significance of agglomeration economies.

The second critical point in relation to the agglomeration paradigm is its one-sided analytical perspective. It constructs an inside and an outside of the agglomeration and thus is entirely dependent on the definition of an urban boundary, even if it is blurred and only vaguely outlined. The argument, brought forward by Scott and Storper, that "the city is to the space economy as a mountain is to the wider topography" misses the point.[35] From a relational perspective on the production of space, there are, by necessity, many relationships between the putative inside and outside these boundaries. Agglomerations cannot be treated in isolation, because they are embedded in a multitude of interactions and networks that stretch far beyond their catchment areas. From this perspective, the agglomeration paradigm seems paradoxical because agglomerations depend entirely on productive hinterlands and cannot even exist without "other" territories that support them.

Therefore, it is in the very nature of agglomeration processes that they generate processes of extension at the same time. What has been largely neglected in all of these concepts and theories is the fact that urbanisation simultaneously entails the transformation of the non-city. It is not possible to concentrate people, means of production, functions, and activities without bringing raw materials, energy, and food into urban areas. They have to be produced "somewhere"—often in regions that are caught in an entrenched spatial division of labour, such as former colonies and peripheral agricultural areas, as already discussed in the context of dependency theory and theories of uneven development.[36] In the same way, people migrating to urban centres are also coming from "somewhere." When they migrate, they do not disappear from their places of origin but instead establish relationships between their new place of everyday life and their place of origin, creating all sorts of connections between city and non-city. The agglomeration cannot exist without a "hinterland," which historically constituted the basic restriction for the growth of cities. We, therefore, have to examine the *question of the hinterland*.

FROM THE HINTERLAND QUESTION TO EXTENDED URBANISATION

The important historical role of the hinterland in the very existence of cities and agglomerations is discussed in many contributions.[37] For a long time in history, the development of a city depended crucially upon the qualities of its localised metabolic support system, particularly the agricultural productivity of its environs and the degree of political and economic control of a sufficiently large hinterland—only very favourable conditions allowed for the growth of cities beyond certain limits. The first problem was always the *metabolic restriction*: To feed an urban population, the generation of an agricultural surplus product is indispensable.[38] As David Harvey states, up until the sixteenth or seventeenth century, the growth of cities, in general, was limited by a very specific metabolic relation to their productive hinterlands: "No matter that certain towns and cities were centres of long-distance trade in luxuries or even that some basic goods, like grains, salt, hides and timber could be moved over long distances, the basic provisioning (feeding, watering and energy supply) of the city was always limited by the restricted productive capacity of a relatively confined hinterland."[39]

Thus, until the industrial revolution, most cities—even the important ones—were relatively small and rarely exceeded 30,000 inhabitants. There were larger cities, but they were either located in very productive environs, in the capitals of powerful empires, or in important global

trade centres. As Paul Bairoch calculated, at the end of the eighteenth century, there were less than 90 cities worldwide with more than 100,000 inhabitants.[40] In most cases, large cities were only possible through access to water transport, particularly seaports, for long distant trade but also for supporting the daily needs of a large population. In his epochal work on the Mediterranean, Fernand Braudel carefully analyses and exemplifies this relationship.[41]

The hinterland question was crucial to the flourishing of cities, and this question was treated already in the classic land use model drawn by Johann Heinrich von Thünen in 1826. In his work on the isolated state in relation to agriculture and the national economy, he analysed the differentiation of agrarian land uses in northern Germany in the early nineteenth century considering economic, environmental, and spatial conditions. He imagined a singular large town without access to a navigable river or canal located in the centre of a fertile plain. This central town must "supply the rural areas with all manufactured products, and in return, it will obtain all its provisions from the surrounding countryside."[42] Von Thünen proposed a relatively simple formula connecting land rent, yield per land unit, production expenses, market prices, and freight rates in order to determine the differentiation of land use zones according to their proximity to the town. Since vegetables, fruit, milk, and other dairy products must get to market quickly, they would be produced close to the city. Firewood and timber for fuel and building materials are heavy and difficult to transport and would be produced in the second ring. In the third, fourth, and fifth rings, field crops and livestock are produced in different combinations and intensities until the outer limit of the hinterland is reached. Under these assumptions, von Thünen explained the maximum distance of grain production for the town with a simple example: If the grain is transported by a horse carriage, the horses and drivers need food and will eat from the grain they carry. Once the grain is delivered to the town, there has to be a reserve for provisions on the way back, and there must also be a profit and land rents to pay. Under the conditions of northern Germany at his time, von Thünen calculated a maximum distance between the town and the agricultural land that serves this town of about 30 miles. Beyond this distance, only cattle could still be produced as the cows could walk on their own feet to the market.

However, von Thünen's ideal static model of the isolated state completely changes within a *dynamic perspective*. As soon as there is an agglomeration process and thus urban growth, this well-ordered hinterland with its radial zones will disintegrate. The hinterland cannot expand in tandem with the growing city, first because the expansion of the agglomeration will consume it and second because much more food and raw materials for the growing population would be needed. By necessity, this leads to the displacement of the hinterland function to distant territories that have to be linked to the growing agglomeration to deliver the necessary resources. In order to start urbanisation, firstly, the hinterland question has to be solved by organising more efficient transport systems and secondly, the agricultural production has to be increased, as these territories now have to serve not only the local economy but also the world market.

THE DISINTEGRATION OF HINTERLANDS

For the reasons explained above, cities remained small and decentralised all over the world until the beginning of the nineteenth century. This situation changed fundamentally with the industrial revolution, which allowed a massive increase in the scale of interactions and the transport of food, raw materials, and other products over larger distances. This loosened the dependency of urban areas on their immediate hinterlands. For this reason, the beginning of the urbanisation process is directly related to the industrial revolution. As an illustration, the population of Manchester, the paradigmatic example of a European industrial city, increased from about 20,000 to 300,000 between 1774 and 1841.[43] As we have seen,

Engels explained this spectacular growth through the advantages of agglomeration. But in fact, it was only the massive progress in transport technology, particularly the introduction of railways and steamboats, that made such growth possible. This concerned not only food, but also raw materials as Manchester's production system relied heavily on cotton produced in India and slave labour in North America. The rise of industrial capitalism was thus directly linked to colonialism and imperialism, and the procurement of resources and raw materials became a driver of urbanisation. During the late nineteenth and early twentieth centuries, the development of trading hubs and entrepôt economies in the colonies led to the rapid growth of urban centres, such as Hong Kong, Singapore, and Jakarta, and also centres of mining activities, such as Johannesburg.

But even if innovations and improvements in transport systems allow the supply of large urban territories with food and raw materials, there is still the problem that these products have to be produced for the world market. This requires a fundamental change in agricultural production to massively increase productivity and enable the export of the produced goods. The indispensable precondition for this process is arable land. But this land is not readily available. It must first be removed from the stable type of ownership based on collective or individual inheritance, often small farmers living in a subsistence economy. Thus, a crucial condition for the extension of large agglomerations is the enclosure and commodification of agricultural land.

Marx discussed this process of enclosure under the concept of *urspriüngliche Akkumulation*, which is usually translated as "primitive accumulation" but more precisely means "original accumulation." In chapter 24 of *Capital: Volume 1*, he describes the violent historical process of accumulation that divorces labourers from their means of production and thus creates the "free labourers," who are freed from their chains to the land and the feudal social order but also freed from any means of production of their own, and thus had no other option for survival than to sell their own labour. For Marx, the classical form of original accumulation, which created both the capitalist and the labourer, happened in the sixteenth century in England in the process of the "enclosure of the commons," through which the agricultural population was dispossessed of its land, its means of production, and its livelihoods.[44] As Goonewardena reminds us, there was a direct connection between enclosure in England at the time of the Industrial Revolution and the parallel developments in the colonies through deportations, the destruction of rural and traditional livelihoods, and the precarity of living conditions.[45] It also has to be stressed that at the same time, slave labour of African descent in the Americas played an essential role in the production of food and raw materials for the world market.

Enclosure and the separation of the farmers from their land was, and still is, a double-edged process, as analysed by Silvia Federici and Álvaro Sevilla-Buitrago.[46] It creates disposable labour on the one hand and the incorporation of land into capital circulation on the other. It also creates a double condition for urbanisation with a mobile labour force to fuel agglomeration and concentrated urbanisation and tradable land for capitalist exploitation. The forceful and often violent expulsion of peasant populations and the commodification and privatisation of land were thus necessary conditions for both capital accumulation and urbanisation. The enclosure of land set a process in motion that abolished the commons but at the same time also dissolved the hinterland of cities. Concomitantly, food, and other agricultural products were transformed into elements of variable capital and ceased to be means of subsistence. They were now commodities produced for the world market.[47]

Marx saw original accumulation as an initial phase of the accumulation process that would soon be replaced by the expanded reproduction of capital that he analysed in *Capital*. Rosa Luxemburg famously opposed Marx's view and insisted on the "other aspect" of capital accumulation: the capitalist exploitation of non-capitalist

economies through force, fraud, oppression, and looting. She considered these two sides as organically linked and insisted on the need to look at them together.[48] Returning to these classical debates that are ongoing to this day, David Harvey realised that this process could not be called "original" anymore and introduced the term "accumulation by dispossession" for contemporary processes of commodification and appropriation of surplus value.[49]

Enclosures and dispossession are as urgent as ever in the twenty-first century.[50] In the sense of Luxemburg, we could see various forms of land enclosure today as the "other side of urbanisation" that simultaneously enables and fuels both extended and concentrated forms of urbanisation. Enclosure is a necessary step for the creation of operational landscapes, new spaces of industrial production, and new centralities in the urban periphery (see below). This intrinsic connection underlies the capitalist principle of uneven urban development and the fundamental relationship between domination and dependency. Urbanisation cannot be separated from its other side, the dispossession and commodification of the land, nor the inherent power relations and forms of violence that these processes entail. In this way, an uneven spatial division of labour emerges, imposed and regulated by relations of domination and exploitation.

FROM CITY TO URBANISATION

This overview reveals that a double process was set in motion by the industrial revolution. On the one hand, there was the agglomeration of the means of production and labour power through industrialisation, and on the other was the dissolution of hinterlands via enclosure. From this, we can distinguish two main dynamics that dissolve the city as a bounded unit. First, the agglomeration process leads to the further extension of settlement areas; and second, this process necessitates the enclosure and disintegration of agricultural hinterlands, which are detached from the immediate surroundings of the city and dislocated to specific zones of production, which are linked to agglomerations by networks of information, transport, and logistics.

The starting point of a decentralised analysis is thus to focus on the process instead of the form and to conceptualise urbanisation instead of the city. But how to conceptualise urbanisation? First, we must acknowledge that urbanisation and related concepts such as the city, the urban, and many others are theoretical and not empirical concepts. As with all spatial concepts, or representations of space in Lefebvre's terms, they need a *definition*. Urbanisation, or "the urban" as such, cannot be "seen" without applying a concept that defines what has to be looked at. Urbanisation is a theoretical category, and accordingly, it can be defined in different ways.

It is revealing that the term "urbanisation" was coined at a critical moment in urban history when cities in various parts of the world started to expand beyond the limits imposed by the metabolic restriction discussed above. As Ross Exo Adams and Antonio Lopez de Aberasturi show in detail, it was Ildefonso Cerdà, Catalan engineer, architect, and the urban designer of nineteenth-century Barcelona, who created the neologism *urbanización* to mark the extension of urban spaces beyond the hitherto clearly defined and demarcated boundaries of cities.[51] At that very moment, when the form of the historic city exploded, Cerdà lacked a term to explain what he observed and what he also tried to conceive and design: the extension of cities. He was looking for a term that does not define the city as a political, cultural, or morphological unity but as a general process of extension. He, therefore, used the Latin term *urbe* in the most generic sense to simply designate an ensemble of buildings with no concrete relationship to its size or hierarchical position. He expressed the difference from the term *ciudad* (city), which is rooted in the Latin word *civis,* a citizen of Ancient Rome. The basic idea that urbanisation expresses extension is already embedded in the very first definition of the term urbanisation itself.

In his *Teoría general de la urbanización* from 1867, Cerdà conceived *urbanización*

as a double-edged process. On the one hand, it expresses the moment of an almost unlimited extension of settlement areas and the physical process in which the city extends potentially unhindered over the territory; on the other, he used this term to designate a universal model for the building of cities in design terms. What is fascinating in this conception is the fact that it conceives urbanisation as both an analytical term and a design strategy, imagining an almost endless extension of the built-up area. For Cerdà, *urbanización* includes both a passive and an active meaning. For instance, a territory might be urbanised, but an actor can also urbanise a territory. This term was soon imported into the French language and later also into English. In the Anglo-American scientific discourse, however, urbanisation came to mean movement to cities or growth of settlements, usually in terms of population.[52]

A hundred years later, when urbanisation was approaching the "critical point" in which the entire planet was potentially affected by urbanisation processes, Henri Lefebvre proposed his hypothesis of the complete urbanisation of society. He used the inspiring metaphor of "implosion–explosion," borrowed from atomic physics, to express the contradictory double process of concentration and extension that is transforming both rural and urban areas. With his intervention, he presented a new understanding of urbanisation and opened up a new field of inquiry. However, while he understood urbanisation as a total phenomenon and distinguished levels and dimensions of the urban, he left us without a further differentiation that would allow us to identify and analyse particular urbanisation processes.

A similar and related understanding was developed in Latin America, where, since the 1960s, debates on urbanisation have flourished. In parallel to Lefebvre, Peruvian sociologist Aníbal Quijano developed a broad understanding of urbanisation as a multidimensional and encompassing process of transformation across the entire society. In the Latin-American context, he also understood urbanisation as a process related to dependency on the capitalist world system. Brazilian geographer Milton Santos approached urbanisation from the perspective of the production of space. And in the 1980s, Roberto Luís Monte-Mór developed his concept of extended urbanisation based on Lefebvre's theory.[53]

David Harvey, for his part, although strongly influenced by Lefebvre's hypothesis, embedded urbanisation into Marx's theory of the circulation of capital and looked at it from the perspective of the process of the production of the built environment, that is to say, the construction of housing, production sites, and infrastructure with all the attendant social implications. Harvey concluded that increasing investments into the built environment lead to the "urbanisation of capital." This conceptualisation could be understood as a political-economist reformulation of Lefebvre's encompassing thesis of the complete urbanisation of society.

CONCENTRATION, EXTENSION, AND DIFFERENTIATION

While these contributions fundamentally changed our understanding of the urban and urbanisation, they did not allow us to approach and analyse urbanisation processes in detail. This was the motive and reason for a range of theoretical and methodological inventions that together formed the planetary urbanisation approach. The concept of planetary urbanisation understands urbanisation as a reciprocal process in which both the urban centres and the hinterlands change in tandem with each other. Urbanisation is seen as an interplay between three mutually constitutive moments: 1) concentrated urbanisation, 2) extended urbanisation, and 3) differential urbanisation. These three moments are dialectically interconnected and mutually constitutive; they are analytically distinguished to offer an epistemological basis for a reinvented conceptualisation that transcends the limitations and blind spots of mainstream concepts of urbanisation.[54]

The moment of concentrated urbanisation is directly related to agglomeration processes

through which people, economic activities, and infrastructure cluster together in space. Obviously, agglomerations remain central arenas and engines of urban transformation. However, we understand agglomeration in a different way than the economic mainstream sketched out above—not as a bounded territory but as an open process of concentrated urbanisation that is always related to extended and differential urbanisation. Urban concentration is not possible without extended urbanisation. Every urban centre inevitably has a hinterland. With the growth of agglomerations, this hinterland expands further outwards, drawing ever-more remote areas into the urban process. It is finally dissolved and dislocated to distant peripheries into specialised zones of production of food and raw materials. Urbanisation can therefore be understood as the simultaneity of processes of concentration and extension. Any form of urbanisation generates not only the spatial concentration of people, means of production, and infrastructure that leads to concentrated urbanisation but also inevitably and simultaneously causes a proliferation and expansion of the urban fabric, resulting in extended urbanisation.[55] Labour, food, water, energy, and raw materials must be brought to urban centres, requiring logistical systems ranging from transport to information networks. Conversely, areas that are characterised by extended urbanisation can also develop into new centralities and urban concentrations. Thus, concentration and extension are inextricably related, with each existing in a dialectical relationship to one another.

The dialectic of concentrated and extended urbanisation contains the intrinsic potential of differential urbanisation. In fact, the relentless transformation of the urban fabric opens up possibilities for creating a different urban world and potentially turns both concentrated and extended urbanisation processes into differential urbanisation. But whereas in territories of concentrated urbanisation, differences are often generated in direct encounters of people, this interaction does usually proceed in a more mediated way in territories of extended urbanisation. Here, differences are generated through movements of people that allow connectivity to distant places and to each other through various forms of migration and social, political, and cultural organisations and networks. In this way, new popular and self-organised centralities may come into existence.

This conceptualisation connects the three moments of urbanisation in a relational, dynamic, and dialectical framework that is not a one-sided and one-directional process but multi-dimensional and contradictory. This conception gives equal analytical emphasis to each term within the dialectics of concentrated, extended, and differential urbanisation, which results in a co-constitutive, mutually transforming dynamic. Urbanisation is thus conceived as an evolving force field in which the three moments of urbanisation continually interact to produce historically specific forms of socio-spatial organisation and uneven development. The modalities and characteristics of these three different vectors of urbanisation are analysed in Part II.

PART II

THE URBANISATION OF THE TERRITORY. A THREE-DIMENSIONAL FRAMEWORK

The study of processes of extended urbanisation is still at its beginning. For a long time, these processes were excluded from analysis by the constricted and one-sided representation of urban space and a selective acknowledgement of urban reality. As shown in Part I, the explicit or implicit dogma of the urban as a bounded settlement space has reached its limits. A decentring of the analytical perspective is needed. The concepts of extended, concentrated, and differential urbanisation avoid this bounding move and allow an open exploration and analysis of the multitude of urbanisation processes that are transforming the world. In light of this, we propose to shift the focus of analysis from urban territories to urbanisation processes and to grasp urbanisation as a process that is continuously reshaping these territories.

Decentring urban research has various consequences. It requires redirecting the view toward supposedly non-urban areas and examining how they have been affected by urbanisation processes. In other words, the investigation should not proceed from an urban centre and then slowly move "outwards" but rather examine the urban transformations of a territory, and in so doing, also include, from the very beginning, those areas usually designated as non-urban. It is important to note that this outside, the non-urban, is not always the "rural." It includes mountains, deserts, forests, and oceans. In this sense, Lefebvre's thesis of complete urbanisation was only a starting point for an encompassing analysis of urbanisation anywhere on the planet.

The concept of planetary urbanisation thus proposes a profound reorientation of urban analysis that not only concerns the analysis of extended urbanisation but also affects the analysis of concentrated and differential urbanisation. Instead of examining an urban territory, we have to focus on the production of this territory and identify and analyse particular urbanisation processes shaping this territory. While the analysis of concentrated urbanisation is presented in detail in the book *Vocabularies for an Urbanising Planet: Theory Building through Comparison*, edited by Christian Schmid and Monika Streule,[56] I look in this chapter particularly at processes of extended urbanisation. The following framework for analysis is based on Lefebvre's theory of the production of space and has been developed in the context of the project "Specificity" by ETH Studio Basel.[57] This framework has been further revised by the collective effort of the entire research team that created this book.[58]

THE CONCEPT OF EXTENDED URBANISATION

Processes of urban extension and the question of the outside of the urban have sparked scholarly debates in architecture and urban studies for years. They have been provoked by a plethora of empirical observations that generated disruptions, interferences, and obfuscations of city-centric conceptualisations and made it necessary to adapt theories and concepts, often by extending the perimeters of observation. Many city-centric approaches already expressed and conceptualised certain aspects and facets of extended urbanisation and tried to find ways to integrate them into more conventional understandings of the urban. However, a conceptual framework for analysing such processes and a broader understanding of extended urbanisation have been missing.

In the 1990s, Terry McGee coined the term *desakota* for densely populated agricultural zones outside large urban centres in Asian monsoon areas.[59] This term is derived from Indonesian *desa* (village) and *kota* (city) and is inspired by the typical Indonesian *kampungs* (villages) that are urbanised through intensification and extension by the people and can develop into lively urban neighbourhoods. As McGee observed in Indonesia, desakota zones form a patchwork of urbanised villages

and rice fields beyond the periurban zone more than 30 kilometres from the metropolitan core, often stretching along corridors between agglomerations. Desakota zones might then be followed by densely populated agricultural areas dominated by wet-rice production and sometimes also by sparsely populated "frontier regions." Starting from the example of Indonesia, McGee developed an entire typology of desakota regions in Japan, China, India, and South East Asia that was further elaborated in *The Extended Metropolis,* edited by Norton Ginsburg, Bruce Koppel, and Terry McGee.[60] This work resulted in the definition of the "extended metropolitan region." While this conceptualisation is still tied to a city-centric perspective, it tries to grasp and conceptualise important aspects of extended urbanisation.

The term "extended urbanisation" was first introduced by Roberto Luís Monte-Mór in his seminal work on the urbanisation of the tropical rain forest in Amazonia, Brazil. He noted that this region was not a rural region or "pristine jungle" as it was often portrayed. Monte-Mór describes mining, agriculture, cattle ranching, and forest extraction activities not as rural activities. He instead uses the term extended urbanisation to indicate their profoundly urban nature, even in the face of unstable migrant populations and precarious urban infrastructures, small towns with muddy roads, and palm-tree huts popping up in farming and mining areas amidst the tropical forest.[61] For Monte-Mór, the concept of extended urbanisation expresses a particular social spatiality in which isolated areas are connected and rearticulated. Directly inspired by Lefebvre, he analyses the extension of socio-spatial relations as a dialectical unity of urban centres and the urban fabric. He observes how extended urbanisation penetrates along roads and highways, electric power lines, and communication networks into hitherto non-urbanised spaces, as well as into industrial regions and the islands of rural life in the hinterlands of the big metropolises. In this way, he identifies the extension of urban forms, processes, and practices far beyond cities and agglomerations, integrating rural into urban-industrial spaces. Thus, mining areas and timber industries, settlements and colonisation projects, and numerous concentrations of commerce and services spread over the territory, combining oppositional spaces—the jungle and the urban fabric—and linking these spaces directly to metropolitan centralities. "The urban phenomenon has reached Brazil's farthest and wildest frontier," Monte-Mór concludes.[62]

Independent of these efforts, Brenner and Schmid developed a similar concept of extended urbanisation without knowing about the ongoing Latin American discussion. Like Monte-Mór, Lefebvre inspired us and we introduced the term to designate forms of urbanisation unfolding beyond the "urban boundary," contributing to and resulting from agglomeration processes. And in a different but related way, we understood it as an analytical concept that is dialectically linked to processes of concentrated and differential urbanisation. In our dialectical conception, extended urbanisation includes the transformation of territories usually located far beyond dense population centres to support the everyday activities and socio-economic dynamics of urban agglomerations. This process results from the most basic socio-metabolic imperatives associated with urban growth—the procurement and circulation of food, water, energy, and construction materials; the processing and management of waste and pollution; and the mobilisation of labour power to support processes of extraction, production, circulation, and management. This involves the ongoing construction and reorganisation of relatively fixed and immobile infrastructures and the enclosure of land from established social uses in favour of privatised, exclusionary, and profit-oriented modes of appropriation for resource extraction, agribusiness, logistics functions, and other activities.[63]

In recent times, extended urbanisation has also been used as a generic umbrella term designating any kind of urban development beyond urban core areas, lumping together extended urbanisation with processes as different as suburbanisation, periurbanisation, and exurbanisation.[64] In other words, in this conception,

extended urbanisation designates all sorts of urbanisation processes outside of central urban areas, which blurs and obliterates all distinctions between these processes. This is not just a game of words, as concepts are central elements of analysis and theory, which need careful elaboration and clear definition. Thus, Brenner and Ghosh insist that extended urbanisation "cannot be reduced to the spillover of city-like spaces into peri-urban fringes or contiguous hinterlands."[65] As has become clear in Part I of this chapter, the concept of extended urbanisation was developed to express a qualitatively different process than the expansion of more or less dense settlement spaces, which are still part of concentrated urbanisation. It focuses on sociospatial transformations that underpin and enable agglomeration processes and their resulting wide-ranging, potentially devastating political-ecological impacts across the planet.

The introduction of the concepts of planetary and extended urbanisation has initiated a broad discussion and opened up the field of urban studies to analyses of the entire planet, thus following Lefebvre's call for a renewed urban research: "It is the analyst's responsibility to identify and describe the various forms of urbanisation and explain what happens to the forms, functions, and urban structures that are transformed by the breakup of the ancient city and the process of generalised urbanisation."[66] Along these lines of argumentation, various research efforts have applied the concept of extended urbanisation to investigate a wide variety of urbanisation processes and their economic, social, and political consequences.

DE-CENTRING URBAN ANALYSIS: METHODS, PROCEDURES, AND APPROACHES

Within traditional approaches to urban analysis, extended urbanisation is not discernible. Its recognition is excluded by definitional procedures that declare many forms of extended urbanisation as belonging to the rural or, more broadly, the non-urban realm. Thus, analysing extended urbanisation first requires reversing the dominant perspective in urban studies. The main goal is no longer to examine various forms of settlement space, spheres of influence, or catchment areas of large agglomerations but to take a comprehensive look at the (urban) transformation of the entire territory. This means decentring the focus of analysis, looking from an ex-centric position, one that starts anywhere and asks where to find traces of urbanisation. It is necessary to examine the diversity of urban manifestations that are inscribing themselves onto territories and turning them into urbanised landscapes. By taking this perspective, urban areas are no longer treated as bounded entities but as open zones: the entire area must be systematically scrutinised. A typical example of this decentred perspective is Marcel Meili's essay "Is the Matterhorn City?"[67]

What does it mean for urban research to epistemologically abandon the urban boundary? In order to examine such extended urban constellations, new methods and procedures of inquiry are needed, along with modes of analysis and mapping that are capable of tracing the multi-dimensional nature and plural determination of urban territories. This means carefully screening the territory to detect traces of urbanisation and trying to grasp changes in the patterns of urbanisation involving smooth transitions and abrupt fault lines, superimpositions, and entanglements of urbanisation processes. Exploring territories of extended urbanisation conveys a very specific kind of experience. Criss-crossing large areas and following the movements of people imposes a different way to orient yourself in the territory, which is unfamiliar for urban studies and full of surprises. Mapping becomes an indispensable method to cope with the large territories to be examined, and various methods of mobile and multi-sited ethnography can be applied, as described in the contributions to this book.[68]

Before the term extended urbanisation was coined, ETH Studio Basel developed a specific research approach to examine such extended urbanising territories. The project *Switzerland: An Urban Portrait* played a pioneering role in developing an appropriate methodology.

The involved research teams selected and analysed small sections of the Earth's surface with a specific set of qualitative methodologies. In a second step, they expanded these punctual insights to provide an encompassing analysis of the entire territory. Cartography played a central role in this task, making it possible to expand individual results to cover the entire surface area of the examined territory. Thus, in the Swiss portrait, it was possible to identify a range of areas that were located clearly outside agglomerations but nevertheless showed traces of various urbanisation processes. These areas were labelled "quiet zones" and "Alpine fallow lands," avoiding the terms rural and urban.[69]

In this way, ETH Studio Basel developed a territorial approach that not only examines how compact forms of the city dissipate through manifold processes and interrelationships within a regional configuration but aims to gain a comprehensive understanding of the urban transformation of the entire territory. Over several years, ETH Studio Basel analysed various forms of extended urbanisation, such as the subtle changes occurring in the still largely agrarian Nile Valley, the massive urban transformations generated by tourism on the Canary Islands, and the urbanisation of the area surrounding Mount Vesuvius near Naples. The following project "Territory" analysed large segments of Earth's surface stretching across several hundred kilometres in the mining region of Minas Gerais in Florida and the Italian Peninsula from Rome to the Adriatic, in the desert area around Muscat, and in the extended environs of Hanoi.[70]

In a similar and related project, Milica Topalović and her team examined the urbanisation of Singapore's hinterland. In the most radical move of decentring the analytical perspective, they engaged the metaphor of the "eclipse" by masking the entire territory of the city-state to make visible all those areas that were concealed so far by the "bright lights" of this global city. The team showed how a densely woven urban fabric came into existence around Singapore, forming a fragmented and splintered extended urban region. But beyond this still relatively compact regional urbanisation, an even larger region can be identified, comprising large parts of South East Asia, as supplying water, food, and sand for the various landfills, as well as cheap and heavily controlled (and gendered) labour. Finally, the planetary hinterland appears to supply all sorts of inputs, raw materials, and labour power.[71]

Nikos Katsikis comprehensively analysed the urbanisation of these global hinterlands, revealing the great variety of landscapes of extended urbanisation, and showed that they constitute most of the planet's surface and are inhabited by at least half of its human population.[72] In their analysis of the hinterlands of the Capitalocene, Brenner and Katsikis sketch out major transformations of non-city spaces to capture the relational interplay between agglomerations and the recomposition and dislocation of the former hinterlands that underpin urban expansion, as well as its wide-ranging, potentially devastating political-ecological impacts across the planet.[73]

Neil Brenner and the Urban Theory Lab tested the concept of extended urbanisation in the alternative mapping project *Extreme Territories of Urbanisation,* which investigates putative outsides, the zones that are commonly represented as rural, remote, wild, and/or untouched by human impact. They looked at regions such as the Amazon, the Arctic, the Gobi Desert, the Himalayas, the Pacific Ocean, the Sahara, Siberia, and even the urbanisation of Earth's atmosphere through satellite systems. The urbanisation of the oceans has already been analysed in more depth. The volume edited by Nancy Couling and Carola Hein explores and discusses the multi-layered process of the urbanisation of the North Sea, and the chapter by Nancy Couling in this book gives a detailed account of how the North Sea has become almost entirely urbanised. She shows how this process can be analysed with precisely the same theoretical and conceptual framework as other territories of extended urbanisation.[74]

In Latin America, Monte-Mór's analysis of the urbanisation of Amazonia marked the starting point for an in-depth analysis

of extended urbanisation, which generated a range of essential contributions. Rodrigo Castriota and João Tonucci explore and further develope the concept of extended urbanisation on the tracks of Monte-Mór's theorisation. Miguel Kanai shows how attempts to globalise Manaus in the midst of the Amazon rainforest precipitated territorial restructuring and socio-spatial change far beyond the city's boundaries. Japhy Wilson and Manuel Bayón analyse contested urbanisation processes in the Ecuadorian Amazon.[75] Another well-developed field of research is concerned with the operationalisation of resource extraction, pioneered by Martín Arboleda's analysis of the devastating effects of mining in the Atacama Desert and further developed in his subsequent texts on the planetary ramifications and consequences of the mining industry. Furthermore, the edited volumes *Beyond the Megacity* by Nadine Reis and Michael Lukas and *Emerging Urban Spaces* by Philipp Horn, Paola Alfaro d'Alençon, and Ana Claudia Duarte Cardoso show the great breadth of current research on extended urbanisation with a mainly postcolonial orientation.[76]

Political ecology is another important strand of the analysis of extended urbanisation. A classic in this field is Erik Swyngedouw's study on the urbanisation of water in Guayaquil, Ecuador. Starting from Angelo and Wachsmuth's critique of cityism, the concept of extended urbanisation has opened the field for further investigation of ecology and metabolism.[77] In their analysis of the political ecologies of emergent infectious disease, Brenner and Ghosh show how urbanisation processes have profoundly transformed the very bio-geophysical environments upon which the metabolism of urban life depends, often in destructive, even catastrophic ways, by creating more-than-human political ecologies. These high-intensity, agro-industrial, and extractive landscapes are being subsumed into global circuits of capital.[78] All these observations make it possible to further develop the concept of extended urbanisation and to present a more precise account and definition of various aspects of this process.

THEORISING EXTENDED URBANISATION

From a general point of view, urbanisation can be seen as an encompassing but uneven transformation of the Earth's surface. However, this is not to say that the traces of earlier phases completely disappear. Urbanisation is not—like a footprint in the sand—the direct expression of general social development. The territory is never "empty" or "primal." It is always already occupied by people with their social practices, and it bears material marks and remnants as well as fragments of social and political structures of earlier phases of development. Each successive round of urbanisation encounters the results of earlier phases of the production of space and transforms them anew. André Corboz uses the metaphor of a *palimpsest* to express this process of inscription: The territory is repeatedly worked and reworked, continually overwritten with a new texture until it resembles an old, perforated, and worn parchment.[79]

Lefebvre defines urbanisation as a comprehensive transformation of society that he analyses as a *total phenomenon*. Thus, urbanisation includes the construction of settlements, production sites, logistics facilities, and infrastructure and the development of economic, social, and cultural networks that span and permeate urban space. It is based on global financial, informational, technical, and logistical systems and networks and is thus embedded in the capitalist world system in one way or another. From a general perspective, Lefebvre understands urbanisation as a *process of abstraction*—a given space is transformed into a technologically determined, abstract space—a *second nature*. In this process, "nature" serves as raw material for the production of abstract space. In a society's interaction and confrontation with natural forces, a second nature is produced, which finally is accepted as a given and appears almost as a natural foundation of human activities, despite being determined by concrete social relations that materialised during the course of the urbanisation process. In this way, not only material structures, such

as settlements, road patterns, infrastructure grids, property boundaries, and centre-periphery relations, but also power relations are incorporated into the territory. The production of urban space incorporates social relations into the material surface of the planet—this is one of Lefebvre's central propositions on the production of space.[80]

This second nature produces *new scarcities* (*nouvelles raretés*), as Lefebvre calls them: Certain once scarce goods are becoming comparatively abundant due to industrial production, while once abundant "natural" goods, such as vegetation, air, light, and water, which previously had no value because they were not products, became scarce. Everything affected by scarcity has a close relationship to the Earth: the resources of the land (soil, water), those beneath the earth (petroleum, ore), and those above it (air, light), along with products that depend on these resources, such as plant and animal products and energies of various kinds. Since it is no longer possible to take them directly from the inexhaustible reservoir of nature, they now have to be produced and are increasingly drawn into the capitalist process of capital circulation. They become commodities themselves whose use must be paid for.[81] Jason W. Moore goes in a similar direction with his concept of "cheap nature," asserting that capitalism organises nature, including human nature, to create cheap labour, food, energy, and raw materials.[82] This line of thought is the starting point for the conceptualisation of extended urbanisation: The production of food and raw materials for a world market is a central aspect of the industrialisation and operationalisation of landscapes that lead to the consumption and (creative) destruction of nature, and thus also contributes to the contemporary planetary crises of climate, biodiversity, and food.

According to Lefebvre, the history of urbanisation can be understood as a history of socially produced abstraction, turning the *space of nature* (*espace nature*) into abstract space. In this process, space as such becomes a commodity. As Lefebvre explains, the *commodification of space* goes much further than simply selling space "bit by bit." The entire space, including the subsoil and the volumes above the ground and no longer just the land, becomes *exchange value*. This also includes the people living in this space and actually producing it—they become part and parcel of the space that is sold and bought. But exchange implies interchangeability; by becoming a commodity, social space assumes an apparently autonomous reality, made comparable to other things, such as a quantity of sugar or coal.[83] Today, the commodification of social space potentially encompasses the entire planet. This applies both to densely populated agglomerations that are developing into highly commodified and exclusive metropolises as well as to territories of extended urbanisation, which are being enclosed, commodified, and operationalised for agricultural production, the extraction of raw materials, and energy production, which are often degraded, depleted, and destroyed in the process (see Part IV of this chapter).

THE THREE-DIMENSIONAL PRODUCTION OF EXTENDED URBANISATION

These reflections on abstraction, second nature, and commodification of space relate to the general aspects of urbanisation. However, to grasp and analyse concrete, specific urban situations, we have to understand how abstract, general processes materialise in concrete places and form a concrete totality, a specific urban territory with its own features and specific patterns and pathways of urbanisation.

This poses the question of how the abstract and the concrete are related. As we have explained elsewhere, urbanisation (as well as the urban, the city, etc.) is not an empirical but a theoretical category; it is a theoretical abstraction based on general considerations.[84] But what we encounter on the ground are always concrete phenomena. In empirical research, we start from certain observations in specific locations and bring them into conceptualisation, which means that we construct a representation or a concept. As noted in Part I of this chapter,

the concept of urbanisation should not be reduced to simply the growth of cities but needs to be understood as a multidimensional process. As mentioned, Lefebvre did not develop a detailed theory of urbanisation that would allow us to further distinguish different urbanisation processes. But in *The Production of Space*, he presented a sophisticated theorisation of the dimensions of the production of space, expressed in a double triad. From a phenomenological point of view, this is perceived, conceived, and lived space; from a linguistic perspective, these are urban practices, representations of space and spaces of representation.[85] Slightly modifying this dialectical grid, we can distinguish three dimensions of urbanisation: 1) The material production of urban space, 2) the production of territorial regulations, and 3) the production of urban experiences in everyday life.[86]

Firstly, we can analyse how a spatial practice produces a *material territory* that can be perceived by the five senses. Spatial practice creates connections and a system of networks and leads to the formation of centres and peripheries. It produces an urban fabric that covers increasing parts of the territory and enables as well as hinders social actions. Because centrality generates privileged and potentially productive places, it is always contested.

Secondly, we can explore how urbanisation is conceived, planned, and controlled. This is directly related to the representation of urban space and, thus, to how urban units are defined and demarcated. We subsume these aspects under the term *territorial regulation*, which encompasses the rules that guide the production of the built environment, determine the use of the land, and also dictate what will be localised in which part of the territory. This trans-scalar process of territorial regulation is highly complex and dynamic because it brings together a wide variety of contradictory social forces and is, in most cases, highly contested.

Thirdly, we have to consider the question of lived space, or more precisely, the *experience of urban space* in everyday life. This depends on the social forces that create an urban space by initiating interactions and relationships between people and places. It is related to the production of meaning and generates spaces of representation that are linked to symbolisms and (collective) experiences. In this process, specific patterns of social, economic, and cultural differentiation evolve that can be seen as a main element of the specificity of an urban territory.

This three-dimensional conception of urbanisation resonates with David Harvey's approach that starts from a critical political economy of space and regards urbanisation as the process of the production of the built environment. However, as urbanisation unfolds, it is not only the space economy that changes but also the common understanding and the social meaning of the urban. Consequently, Harvey also analysed the urbanisation of consciousness and the production of an urban experience.[87]

THE MATERIAL PRODUCTION OF URBAN SPACE

The first dimension shaping urbanisation is the material transformation of the territory. The production of a specific territory starts with its appropriation through human activities that generate traces and artefacts, which initially are ephemeral but increasingly condense and solidify. More persistent material patterns develop over a long period of time, sometimes over centuries. In this way, what Lefebvre calls an "urban fabric" (*tissue urbain*) is formed. It gradually emerges, thickens, spreads out across the territory, and transforms both urban and rural areas. Lefebvre does not define this term clearly nor limit its meaning only to morphology. The urban fabric, he explains, forms the economic basis of urban society, the *material support* through which urban life pervades rural areas.[88]

This concept of the urban fabric initiated a broader understanding of planetary and extended urbanisation.[89] A whole urban system of material objects and infrastructure is realised as part of this fabric: roads, highways, train lines, canals, ports, shipping lanes, airports,

pipelines, high-voltage lines, and logistics, energy, and information systems.[90] The urban fabric is based on the microelectronic revolution, the introduction and expansion of the World Wide Web, the far-reaching effects of smartphones and social media increasing the mobility of people, the massive expansion of air traffic, and the introduction of intermodal containers, allowing for the direct transition from waterways to railways and roads. The building and maintenance of this logistical infrastructure require substantial long-term investments. Therefore, the full planetary extension of urbanisation only arrived with the globalisation of the international financial system. It also necessitates regulations and agreements allowing for the smooth and frictionless movement of goods, capital, information, and corresponding state policies. Only on this basis does the establishment of global production networks with sophisticated supply chains become possible.

The continuous expansion and thickening of the urban fabric make it possible to increase the scale of interactions and extend the metabolic support systems of urban areas. This loosens the dependency of agglomerations on their immediate hinterlands and advances the process of urbanisation until it reaches a planetary scale. Accordingly, territories of extended urbanisation are often affected by infrastructure-led developments; in this context, Miguel Kanai and Seth Schindler speak of an "infrastructure scramble"[91] (see Part IV of this chapter). These processes are exemplified in this book by the "highway revolution" in India that generates corridor urbanisation (Bathla) and the almost complete operationalisation of the North Sea through oil extraction, wind farms, and shipping lanes (Couling).

The extension of the urban fabric facilitates all kinds of *movements* of people that crisscross the territory and, in doing so, bind it together and create new forms of interaction. While concentrated urbanisation induces centripetal movements towards urban agglomeration nodes, territories of extended urbanisation are usually characterised by longer, more sporadic, and varied forms of mobility. Various practices of circular or temporary migration develop, whereby people only migrate for a certain time or follow a recurrent pattern of returning regularly to their places of departure. AbdouMaliq Simone understands movements in a very broad sense as a multifaceted strategy of urban survival, reflecting the increasing material unavailability of specific urban territories as platforms on which to constitute a stable and coherent social existence.[92]

Alice Hertzog's analysis of the West African Corridor in this book highlights the great variety of movements by people searching for opportunities, operating small businesses, crossing borders to take advantage of fluctuations in prices and exchange rates of currencies, connecting widely ramified social networks, and maintaining extended family ties. With these movements and their related activities, people create a polycentric and multi-scalar social reality, thus contributing to the generation of extended urban territories.

The urban fabric is more or less tightly woven, with smaller and larger interstices between the strands of its mesh. It contains hubs and nodes with intense interactions while interactions at the outer reaches fade. Therefore, one of the most important aspects of the urban condition is the *dialectic of centres and peripheries*: urban centres never exist without diverse peripheries that supply food and raw materials, water, and energy; they function as dumping grounds or provide recreational areas and serve for ideological and mental compensation. The periphery is not just a "natural space," "countryside," or "non-city," but a relational space that can be defined through its relationship with the centres that dominate it. In every territory, centres and peripheries form a specific pattern that manifests itself on any scale—from the neighbourhood to polycentric urban regions up to the global system of metropolises—thus creating multi-scalar realities.

For this reason, Pierre Veltz has replacedthe concept of agglomeration with a relational conception of centrality.[93] As he shows, centres become increasingly interconnected and economically specialised as a result

of globalisation, thereby forming complex networks that are generating new centralities at nodes of transport networks, at places with certain economic, cultural, or scenic qualities, in emerging tourist regions, or even in favourably located peripheries, where, for example, special economic zones are created. Veltz calls these new territorial configurations "territories by networks," which replace the former "territories of networks." They are no longer clearly defined units within a nested hierarchy but interconnected condensation nuclei in an immense and indecipherable network on a planetary scale. In this sense, networks have a double effect: they increase both centrality and global connectivity. Therefore, networks are driving extended urbanisation. At the same time, they also push concentrated urbanisation, when nodes of networks develop into centralities and huge agglomerations. Depending on the situation, very different forms of the urban fabric evolve. Whatever the concrete pattern may be, the urban fabric has a dual character: It forms a structure that guides action and predefines further development, and it facilitates processes of interaction, but it also channels them and thus impedes and sometimes even precludes alternative options of development.

As David Harvey has shown the production of the urban fabric is determined by the *dialectics of fixity and motion*, the contradiction between the dynamics of urbanisation and the permanence, the persistence of the spatial structures it produces.[94] On the one hand, the urbanisation process tends to overcome all spatial barriers and create ever closer connections between more and more areas, thereby accelerating the exchange of people, goods, and information. On the other hand, the urban fabric is immobile and rigid, and its production requires massive long-term capital investments that need a long time to generate profits. This is one of the key reasons why urbanisation manifests such a high degree of path dependency. The built environment cannot be changed without causing massive destruction and devaluation of existing investments. Sooner or later, the built environment and, thus, the urban fabric will come into conflict with the ever-evolving dynamics of socio-economic and technological change.[95] This may have dramatic consequences when an existing urban fabric becomes obsolete and devalued, and once flourishing regions are left behind, facing decline and peripheralisation, as is the case in industrial areas that turn into brownfield sites. Technological innovations and automation can also devalue existing settlement structures, such as the rationalisation and operationalisation of extraction sites, causing a dramatic reduction of their labour force, thus devaluing material and social infrastructure, as is the case in the Carajás mine in Amazonia (see Castriota in this volume).

With the new centralities, new peripheries are formed in a reciprocal movement, and many previously agrarian and industrial areas sometimes face dramatic processes of *peripheralisation*. The transformation, commodification, and sometimes even complete destruction of centralities not only affect the residents and businesses of these places but directly or indirectly concern the entire population of an urban territory. As a result, a complex urban topography emerges, characterised by the simultaneity of processes of peripheralisation and centralisation. This dynamic particularly affects territories of extended urbanisation, as the discussion in Part IV of this chapter will show. While processes of extended urbanisation have an inherent tendency towards peripheralisation, the evacuation of social energies, the loss of population and jobs, and the homogenisation and reduction of social wealth, they also open up possibilities for the development of new connections and centralities. Lefebvre's call for a right to centrality in *The Urban Revolution* expresses these different moments; it demands the right of access to the material and immaterial resources of centrality, to the possibilities and opportunities an urban centre can offer—the right to a renewed urbanity. The struggle for the creation, maintenance, and defence of popular centralities created by the people plays an important role in both territories of concentrated and extended urbanisation.

THE PRODUCTION OF TERRITORIAL REGULATIONS

As has become evident in the preceding subsection, the urban fabric of a territory has a determining character. It guides social activities, suggests certain actions, hinders or prevents others, and can be understood as a material incorporation of instructions. This means that social relations inscribe themselves into a territory, solidifying and creating an urban fabric that, in turn, determines human actions by "allocating a space" to them by defining their possibilities and limitations in space and time. Although, crucially, it is not only materiality that is a determinant but also the rules that pertain to this materiality and the power that is protecting and enforcing those rules.[96] Power is thus incorporated into any territory in a wide variety of ways. This, in turn, raises the further question of how a territory is controlled and how urbanisation processes are guided and steered.

The rules and procedures that guide urbanisation arise from specific constellations of social forces, which generate and develop specific forms of *territorial regulation*. In the broadest sense, territorial regulations establish how a territory may be used and appropriated. This concept refers directly to the French regulation approach, which understands "regulation" as a set of explicit and implicit "rules of the game" that apply in a particular field.[97] Territorial regulations allocate places for activities and determine what people are allowed to do and where.[98] The framework of rules that constitutes territorial regulation is complex since it includes not only the formal and informal agreements and rules in the realms of construction and architecture, urban development and design, and spatial and urban planning; it also concerns the procedures and modalities of decision making and the social processes of negotiation that affect the use of the territory. Of central importance are rules regulating land and housing markets, patterns of ownership, and the various land rights regimes, but also the organisation of daily life and the use of public spaces. Territorial regulations result in norms and ideals determining how people should live, what is beautiful and what is ugly, and so on. Norms and rules are often applied subconsciously, and specific forms of problem-solving develop that people regularly return to.

Territorial regulations are not static but dynamic and often contested; rules are often being challenged and breached, the land is occupied, used and transformed, and various forms of informality and illegality may evolve. Thus, contradictory and complex arrangements of regulation may develop, and sometimes regimes of formal legislation coexist with traditional rules or customary rights.[99] The spectrum of forms of territorial regulation is vast, which is also one of the main reasons urban territories are so distinctive. As a consequence, territorial regulations can be very difficult to research and are generally hard to understand for people not familiar with the local context.

It turned out in our research that territories of extended urbanisation are particularly demarcated by a clash between designated rural and urban regulations. Territories that are defined as urban may be subjected to different rules than those designated as rural. Planning laws often limit land use of rural areas to agricultural production and related activities. This opens up all sorts of tactics to either evade or violate land use restrictions or to find ways to officially turn rural land into urban land, generating massive windfall profits as the rent on urban land is usually much higher. State actors often play vital roles in the land game. Such strategies and struggles play key roles in the urbanisation of China and India and are further discussed in the contributions by Kit Ping Wong and Nitin Bathla in this book.

In peripheral and sparsely settled zones, local and regional governments often lack resources, and thus the nation-state has much stronger leverage than in large agglomerations with strong city governments. Territories of extended urbanisation are often determined by national strategies, which aim to homogenise legislations and procedures and push the implementation of infrastructure and real estate projects. Because of this, extended urbanisation

is often shaped and enforced by a wide range of specific *state strategies.* These strategies seek to facilitate urbanisation by attacking traditional and collective land rights and promoting the financialisation of land, opening up vast territories for capital accumulation through enclosure and expropriation. This creates the conditions for continued urban expansion through massive investments into the urban fabric.[100] As Gavin Shatkin shows, such projects may generate enormous profits for national and international investors and also political and personal gains for state actors. Sai Balakrishnan calls areas along Indian urban corridors "zones of variegated sovereignty" because of the complexity of regulatory arrangements. And Rodrigo Castriota's contribution to this book on the mining projects in Carajás highlights the multiple roles of the state as owner, legislator, and controller.

Of particular importance to extended urbanisation are strategic infrastructural projects, such as high-speed railways, highway systems, and complex infrastructural initiatives that impose an overarching logic on the territory, such as the "Plan Puebla Panama," a cross-border infrastructure project for southern Mexico and Central America that was ultimately abandoned.[101] More recently, China's "One Belt, One Road" initiative became not only a driver for investment and political domination but also opened up vast territories for commodification and urbanisation.[102] Nitin Bathla shows how the Indian state launched an immense highway program that opens up huge areas across the country for extended urbanisation. In all these cases, extended urbanisation was not primarily generated through the spillover of agglomeration processes but through encompassing state strategies that are propelling the urbanisation of a territory. These processes of enclosure, expropriation, and dispossession are so violent that they often provoke fierce struggles and massive protest movements[103] (see Part IV of this chapter).

All these examples show that state actors play critical roles in the advancement of extended urbanisation. The planetary spread of urbanisation is only possible through the massive intervention of nation-states, their manifold infrastructure projects, and their regulatory control; nation-states often strongly support and push for the enclosure and commodification of land. In this context, Lefebvre argues that a new space has emerged on a planetary scale, which he calls "state space" (*espace étatique*). In this process, states became the agents that direct and monitor the production of space, control the national resources, the organisation and planning of the entire territory, and design, launch, and finance megaprojects and massive infrastructure systems—usually hand in hand with private capital and corporate investors. The state is not necessarily homogenous. It has different scales, origins, and actors with sometimes conflicting interests. In this way, state space is not a unified power but a contradictory and fragmented entity.[104]

In his book *New State Spaces,* Brenner further develops this concept and applies it to the analysis of emerging regional urban configurations.[105] In her contribution to this book, Kit Ping Wong details how the Chinese state decided and launched extended rural urbanisation in Dongguan, which was then implemented by local towns and village collectives in a contradictory and sometimes turbulent process. And Nancy Couling explains how ocean space has been turned from an open space and a vast commons into a territory of extended urbanisation through military, regulatory, and material interventions by several nation-states to possess and operationalise ocean space.

In Lefebvre's analysis, state space and particularly the worldwide system of state spaces—together with the world market—constitute a general level of social reality. He contrasts this far order or *general level* of social reality with the near order, the *private level* of everyday life. In between these two levels, Lefebvre places an intermediate, mediating one that he identifies as the *urban level.* His thesis is that in the wake of urbanisation, this intermediate urban level tends to be pulverised by the interaction of the private and the general levels. While the state attacks

from above and tries to control and plan the entire national territory and seeks to homogenise this territory and thus suppress the specificity of places and locations, corporate capital moves from below, from the private level, by commodifying, standardising, and fragmenting everyday life. In this process, the urban level tends to disappear, losing its mediating capacity.[106] In territories of extended urbanisation, this mediating level is usually particularly weak because of the fragmented character of the local political entities. Therefore, regional popular movements and organisations that can organise and mobilise networks of solidarity and support are of particular importance to the creation and defence of participation and self-determination in such areas.

THE PRODUCTION OF URBAN EXPERIENCES IN EVERYDAY LIFE

In Lefebvre's analysis, one of the main contradictions of urbanisation is the confrontation between *abstract* and *differential space*. While the production of a second nature includes a process of industrialisation and commodification and thus leads to homogenisation and abstract space, urbanisation also creates the conditions of a different space, a space of meeting and encounter, a differential space, where differences come to light and interact with each other. In such a space, separations and space-time distances are replaced by oppositions, contrasts, superimpositions, and the juxtaposition of disparate realities.[107] Urban space can be defined as a place where differences know, recognise, and explore each other and affirm or negate each other. However, difference as the generating force of the urban can only unfold when different people and activities come together. In other words, through centrality. But centrality requires social interaction and thus mediation so that it is accessible to all parts of society. Likewise, centrality as a place of meeting and encounter can also contribute to mediation. And finally, differences presuppose mediation so that they can flourish and enter into a productive exchange. In this sense, in Lefebvre's dialectics of the urban, difference, centrality, and mediation are mutually related and constitutive.

According to a widely shared assumption, these qualities can only develop in dense and diverse urban spaces. It seems that only in "cities" can differences unfold, centrality flourish, and mediation become effective. This assumption led Mark Davidson and Kurt Iveson, in their critique of planetary urbanisation, to ask: Can we give up the city as a political project?[108] But Lefebvre already gave a dialectical answer to this question half a century before when he explained that urbanisation could be a devastating, homogenising force, but it also has the inherent potential to disrupt borders and limitations, increase exchanges, give people access to material and immaterial resources, create new centralities, and enable differences to flourish. This potential is expressed with the concept of differential urbanisation. It is important to understand that differential urbanisation can result from both concentrated and extended urbanisation.

A closer look reveals that differences can develop in a twofold manner: On the one hand, they result from the totality of interactions and relationships between different people with their own histories, experiences, knowledge, abilities, and needs that are coming together in a specific place. On the other, differences can also be generated by networks. As urbanisation overcomes all kinds of borders, it can link previously distant and separate areas and connect and articulate different (near and far) places and situations. As Alice Hertzog shows in the example of the West African Corridor in this book, mobility and movements can create new centralities and places of encounter and thus foster difference and urbanity. The crucial question, however, is precisely how such urban experiences unfold and develop and how people adapt to or resist processes of extended urbanisation.

The Latin American discussion places great importance on this political aspect of extended urbanisation. Monte-Mór has shown that the development of urban practice accompanied extended urbanisation in Brazil.

The struggles for control of the collective means of reproduction and the claims for citizenship that emerged in the 1970s in the larger urban centres began to extend to more remote places in the 1980s. Today, urban social movements in Amazonia also include, among others, indigenous peoples, rubber tappers, and landless workers.[109] Similarly, in his research on operational landscapes of resource extraction in Colombia and Chile, Arboleda shows that these processes drive marginalisation and dispossession and enable opportunities for encounters between previously isolated communities or individuals, generating new centralities. The strong social mobilisations in many parts of Latin America against mining, agribusiness, logging, energy, and oil extraction projects also created new forms of solidarity between local communities and national and international advocacy networks, linking operational landscapes and large urban agglomerations in mutually transformative ways. Arboleda notes, "It is precisely in the opening of avenues for increased communication and interaction where the emancipatory promise of planetary urbanisation lies."[110] In the same vein, Stefan Kipfer shows how resistance by indigenous peoples to a pipeline project that connects a tar sand extraction site in the Canadian province of Alberta to global markets is able to also connect various struggles along the pipeline, from the production site to metropolitan and interstitial spaces. Wilson explains how the mere planning of the Plan Puebla Panamá (see above) sparked widespread local resistance, which in turn also forged new links between different groups and organisations, such as the movement fighting against airport development on the outskirts of Mexico City and the resistance against the Isthmus of Tehuantepec Megaproject in southern Mexico.[111] Several contributions to this book trace conflicts sparked by extended urbanisation: Castriota follows the struggle of mining workers who lost their jobs and used their knowledge of the area to squat land in the vicinity of the mine. Bertuzzo refers to the massive struggles against projects to construct new factories on the outskirts of Kolkata, in Nandigram and Singur, as an example of struggles against the transformation of agricultural land. And Bathla examines struggles against the completion of a highway project in Delhi. Many more struggles and also various forms of "quiet" resistance should be taken into consideration. However, we must be aware that examples of successful mobilisations have to be juxtaposed with many other moments in which processes of extended urbanisation are brutally enforced by politics, police, and military, leading to displacements, dispossession, and marginalisation.

TOWARDS A RELATIONAL UNDERSTANDING OF URBANISATION PROCESSES

The theoretical framework presented here allows us to draw some initial conclusions on the processes of extended urbanisation. The proliferation of the urban fabric and the production of planetary connectivity through the massive extension of transport and communication infrastructure is enabling all sorts of movements and connections that transform territories in various ways. State strategies actively promote, support, guide, and launch processes of extended urbanisation to open up new territories for commodification and capital accumulation. As a result, the urban fabric spreads further to cover increasingly remote places, whether agricultural land, rainforests, or sea spaces.

These developments spark struggles for the re-appropriation of land and livelihoods across the landscapes of extended urbanisation, which can thus be understood as struggles against the devastating forces of planetary urbanisation and abstract space and for self-organisation and self-determination. These struggles are demanding and realising differential space through their resistance and create alternative networks and popular centralities. In this sense, they are not demanding a "right to the city" anymore, but a "right to difference" or a "right to space" in Lefebvre's words, or a "right to the planet," as formulated by Marcelo Lopez de Souza. [112] These planetary

struggles for access to the material and immaterial resources and for recognition and self-determination in everyday life play out in very different ways.

All these processes and actions produce territories of extended urbanisation that are not bounded areas but open zones. They are often transformed by several overlapping and imbricating processes.

Territories of extended urbanisation are thus constituted by a wide range of urbanisation processes and result in a great variety of territories marked by different socio-spatial situations in everyday life. In Part IV of this book, I will have a closer look at the different processes of extended urbanisation we were able to identify in our case studies.

PART III

FROM CONCENTRATED TO EXTENDED URBANISATION. THE SEARCH FOR AN ELUSIVE URBAN BOUNDARY

The concept of extended urbanisation was developed to address urgent questions raised by the observation of a variety of new phenomena and processes that could not be explained by existing concepts in urban theory. Within classical approaches, extended urbanisation is not visible because it is excluded by the very definition of the city as a bounded unit. As a consequence, the question of the urban boundary has haunted urban research since its beginnings, as empirical findings continuously undermined and challenged traditional concepts of the city, indicating that some urbanisation processes extend beyond the supposed urban borders. This raised the question of how to grasp these processes and, consequently, how to theoretically delimit urban areas and define "the city." The goal of Part III is to discuss the range of explicit and implicit answers to this question in urban theory and research and to evaluate the conceptual limits of those answers. If we want to understand extended urbanisation, it is crucial to carefully analyse the problematic of the urban boundary because it gives us many hints on the modalities and the differences between extended and concentrated urbanisation.

The idea of the urban boundary has hampered the analysis of extended urbanisation in many ways and influenced how urban theory interpreted, named, and analysed urbanisation processes and urban forms. Notably, two binary conceptions have impeded the problematisation of the urban boundary: the urban-rural binary and the city-suburb binary. The question of city and countryside and the related difficulties of distinguishing rural and urban areas have sparked extensive debates in the histories of urban and rural studies, which are too extensive to analyse here in detail. However, it is

essential to note that the rural usually served as the defining criteria for the identification of the outer boundary of the urban, and this made it almost impossible to apprehend extended urbanisation. There were always processes of extended urbanisation, but these were obfuscated by this binary conception and thus not noticed nor further analysed.

The second important binary that impedes the recognition of extended urbanisation is the distinction between city and suburb or between urban centre and urban periphery. This binary has become an epistemological trap, as it has constructed two types of the urban—a kind of inner-city urban and a seemingly antagonistic outer-city urban. This construction had considerable, long-standing effects and structured the analysis of urban settlements. However, a closer look reveals that this dualism and the internal boundary that it involves are, in many cases, irrelevant or even do not exist. Contemporary urban territories are much too complex and differentiated just to divide them into two different parts. A further consequence of this conceptual binary is that it presupposes a third term: the rural. After all, if there is an inner and an outer city, or city and suburbia, there must also be something beyond—the non-city, the countryside. Both parts, the urban core and the urban periphery, are accordingly bound in the superordinate concept of agglomeration, and this binary leads, again, to the trap of city centrism.

However, the urbanisation of what is "outside" the urban continued to destabilise the very core of the concept of the city for many decades. The relentless extension of settlement areas and the increasing global connectivity led to various forms of urban sprawl. Migration processes, global production networks, metabolic relations, and all sorts of spillover effects transgressed the putative urban boundaries, and the urban and the rural became increasingly enmeshed in shared processes and activities. Throughout the history of urban studies, new concepts and terms have been created to grasp these emerging processes. They highlighted connections and interdependencies and identified catchment areas, commuter zones, labour markets, and production clusters to define various expanded urban units and city regions, such as functional urban regions and metropolitan regions. These definitions served different purposes and found a wide range of practical applications, and they can still be useful to a certain degree. However, they have to be inserted into the broader context of the urbanisation of the planet.

THE URBAN AND THE RURAL, THE CITY AND THE COUNTRYSIDE

Any analysis of urbanisation is confronted with an important theoretical obstacle—the concept of the rural. While the idea of the city as a bounded unit has haunted urban studies, the imagination of a rural-urban dichotomy has also severely limited the analysis of urbanisation. The two concepts are directly related: If the urban boundary demands a distinction between urban and non-urban areas, the non-urban is often regarded as the rural. It is indeed astonishing to see how persistent the reference to the rural has been in urban studies. It is still strongly present in current debates and often related to mythical images and simplifying preconceptions, and in many cases, it is also laden with strong ideological meaning. Most surprising, however, is the fact that the content of the rural is often taken for granted. The rural seems to be immediately understandable without requiring any further analysis or definition, to be applicable to all possible situations, a supposed universal constellation persisting since the beginning of human history.

However, if we look at territories or landscapes considered rural today, we are confronted with a disturbing variety of situations. These range from persisting subsistence economies to highly industrialised and operationalised zones of agricultural production, from peripheralised regions marked by emigration and shrinking economic activities to urban park landscapes in metropolitan areas, and from agricultural landscapes destroyed by enclosure and commodification to peri-urban zones affected

by gentrification and megaprojects. It is questionable what keeps such different situations together and whether it is useful to subsume them under the single category of "the rural."

As argued above, it has to be considered that the rural, like the urban, is a theoretical concept, which is always based on explicit or implicit definitions and assumptions. A closer look reveals that these definitions vary enormously over time and space. It is thus crucial to remind ourselves that depending on the situation and theory, quite different definitions of the city and the urban exist and coexist. The same applies to the rural and the countryside. For the field of *rural studies*, as Keith H. Halfacree shows, the definition of the rural has been in dispute since the beginning of the twentieth century.[113] Criteria used for its definition vary widely and include the dominance of agricultural production, low population density, the absence of large cities, a certain way of life or cultural form, the prevalence of certain traditions, lifestyles and forms of socialisation, the relative autonomy of rural communities, as well as many more. Already half a century ago, Henri Mendras highlighted the paradox that such criteria refer directly to the urban: "The peasant is defined in relation to the city. If there is no city there is no peasant, and if the society is entirely urbanized there is no peasant either."[114]

Other approaches focus on identity and define the rural as a representation of space framing social life. Nevertheless, such definitions postulate a rupture between the perceived and the lived, or the material and the imaginary, and sometimes implicitly admit that there might be a material process of urbanisation that is imagined or represented as "rural."[115] The rural is also an important category of national, regional, and urban planning, thus linked to territorial regulation. In this case, the rural-urban distinction has direct consequences for land use, forms of governance, strategies of spatial development, the availability of subsidies, and the organisation of social reproduction. This is particularly of great relevance in China and India (as expounded by Wong and Bertuzzo in this volume).

In contrast, in the field of *urban studies,* the rural is often simply defined as the non-city. In fact, many approaches only define the city and relegate all the rest of the inhabited territory to the category of the rural. Many scholarly writings do not even offer any definition of the rural, and it is therefore highly unclear what they understand by urban and rural at all. Accordingly, it remains equally nebulous what the urban-rural relationship might be, which is, like the rural itself, often treated as universal and conceptualised as *the* urban-rural relation or contradiction. This contradiction, however, is not universal but differs fundamentally in different societies. As Marx and Engels analysed, the relationship between town and country changed fundamentally from Western antiquity to the European Middle Ages and then again with emerging capitalism.[116] Lefebvre built on this periodisation and identified the surprising sublation (*Aufhebung*) of the rural-urban contradiction in his thesis on complete urbanisation. Wingshing Tang criticised Lefebvre's generalisation and pointed out that the rural-urban relationship in contemporary China fundamentally differs from Lefebvre's account. There, relations between rural and urban are strongly related to China's specific power relations and institutional forms of territorial control.[117] A closer examination reveals that the relationship between urban and rural areas—if we want to keep this binary conception at all—depends on concrete situations and circumstances, conditions and constellations, traditions, forms of land ownership and territorial regulations, and political and ideological orientations. It is not universal but inevitably specific.

Further problems are generated by the imbrication of urban and rural realms. Maintaining notions of separate urban and rural lifeworlds is highly doubtful since these are effectively interconnected in many ways. The "classic" migration from rural to urban areas alone, which still accounts for much of the growth of agglomerations, establishes long-lasting relationships between the places of origin and the destinations of migration.[118] Moreover, in large parts of the world, processes

of circular and temporary migration have long established close ties and relationships between rural and urban areas, which are now multiplied and further differentiated by the creation of planetary connectivity through revolutions in transport and communication (see Part IV of this chapter).

Finally, we have to look at the consequences of urbanisation processes that transgress all sorts of borders, transforming both the rural and the urban. In this process, the rural is integrated and inscribed into the urban, but the urban is also inscribed into the rural. Despite his hypothesis of the complete urbanisation of society, Lefebvre insisted that the transformation of the rural-urban contradiction does not mean that the rural reality completely disappears. On the contrary, the rural continues in many ways, even intensifies, and is incorporated into urban life as material reality, as a social form, as a representation of space, as a political instrument, or ideological concept.[119]

Indeed, imprints of the rural in urban territories are well-known and experienced in everyday life. For instance, the specific land regime of indigenous villages has strongly influenced the high-rise development of Hong Kong. The narrow, winding street patterns originating from rural land use are still a nuisance for daily contemporary life in the outer boroughs of London or the banlieues of Paris. The persisting village structure, as well as entrenched political power relations dating back to the Middle Ages, are determining recent urbanisation processes in the extended region of Zurich. Customary rural rights are strongly influencing the urban development of Lagos, and the Kampungs that turned from rural to urban villages play a key role in Jakarta, to give just some examples.[120] This shows that the rural enters urbanisation in many ways; it is inscribed and incorporated through legal regulations, land rights, plot boundaries, customs, traditions, and all sorts of material structures and artefacts. But we should not characterise these phenomena as an amalgamation of the rural and the urban. They are, in fact, part of how the production of space proceeds, namely by incorporating and thus preserving spaces produced under preceding social formations (as seen in Part II of this chapter).

On the other hand, urbanisation is also radically transforming rural areas, a fact that is widely acknowledged today in rural studies. As early as 1967, in his widely discussed book *The Vanishing Peasant*, Henri Mendras observed the industrialisation and urbanisation of agriculture in France. Three decades later, Farshad Araghi presented a history of global depeasantisation and deruralisation as part of the political history of capitalism.[121] And today, we are discussing the operationalisation of agricultural landscapes on a planetary scale. The concept of the rural is not really helpful in understanding these processes; instead, a turn towards the *agricultural question* may open the way to extended urbanisation. We will look at the relationship between agricultural landscapes and urbanisation at the beginning of Part IV.

SUBURB AND URBAN PERIPHERY

The analysis of extended urbanisation is confronted with a second theoretical obstacle arising from another binary conception: The distinctions between city and suburb or the urban centre and the urban periphery. Cerdà distinguished between *urbe* and *suburbe* in his famous text, and like the term urbanisation, "suburbanisation" was adopted in Anglo-American literature. In the North American context, the paradigmatic "suburb," as it developed after the Second World War, used to be a monofunctional accumulation of middle-class detached houses with front and backyards as the material support of a "suburban way of life." However, the city-suburb distinction poses considerable difficulties on conceptual grounds and in empirical research. Suburbs can be defined politically as municipalities beyond the central city; geographically as being located at the edge; morphologically as less dense than the urban core; socially as relatively homogenous; and functionally as lacking central facilities and activities. Suburbs are also defined as places with a lifestyle that is clearly different

from an urban lifestyle. Many of those criteria are, of course, dubious assumptions or stereotypes. In fact, the suburb was never the universal model that Anglo-American urban studies were pretending. The volume *What's in a Name?* edited by Richard Harris and Charlotte Vorms, and Christian Topalov's summary of the project of a multilingual dictionary of urban concepts present a wide range of terms for urban configurations at urban peripheries ranging from *banlieue*, *borgata*, *reparto*, *barrio, favela*, and many more.[122] Yimin Zhao reflects on improper urban vocabularies and insufficient translations at the example of the urban periphery of Beijing.[123] The large research project "global suburbanisms" led by Roger Keil gives an illuminating impression of the multitude of urban forms and the great diversity of patterns and pathways of urbanisation developing in urban peripheries all over the world.[124] Unsurprisingly, attempts to use the terms "suburbanisation" and "suburbanism" as umbrella terms for all possible processes and urban forms beyond the urban core have posed major problems and received various criticisms. On the one hand, these terms construct a dualism or even a contradiction between city and suburb. On the other, they subsume the wide variation of urban forms and urbanisation processes evolving worldwide in peripheral urban areas under one Western concept.[125]

The city-suburb binary was further destabilised when researchers detected a range of "new urban phenomena" in the 1980s that questioned the "familiar" Western forms and shapes of the urban. New business districts and centralities emerged, called variously urban villages, outer cities, or edge cities,[126] driven by neoliberal politics and the massive extension of transport and information networks, allowing for more flexible production of urban space and a much higher variability of land use patterns. Furthermore, parts of the urban periphery were soon engulfed by the constantly expanding urban areas and thus not located at the edge of agglomerations anymore. These urban transformations led to a paradigm shift in Western urban studies, which foregrounded the emergence of new polycentric urban forms, ex-centric urban developments, and political and social fragmentation, turning the metropolis inside out and outside in and thus generating an urban form famously called *exopolis* by Edward W. Soja.[127] At the same time, the urban periphery densified and became more diverse, with more "urban" characteristics and features, such as attractive public spaces, public transport, and even processes of gentrification and displacement of low-income people; these processes were labelled with terms like "post-suburbanisation" or "urban intensification."[128] Furthermore, as a result of the ongoing urban explosion, new urban fragments popped up across all continents, and new towns, technopoles, export processing zones, megaprojects, and bypass urbanisms emerged in various urban peripheries.[129]

Recently, a very different understanding of the urban periphery has been introduced into the Anglo-American discourse through translations of older texts and new interventions from Latin America. As Michael Lukas and Nadine Reis reconstructed, in the 1950s, when massive urbanisation in Latin America began in earnest, the term *peripheral urbanisation* was introduced in scholarly debates.[130] This term was originally linked to the dependency theory and thus to uneven socioeconomic development on a global scale. Thus, the term periphery had a double meaning: dependent on Western countries and located at the periphery of urban centres. In this way, Aníbal Quijano analysed the urbanisation of the economic structure of Latin America and the marginalisation of rural migrants in the peripheries of the dependently industrialised urban centres—this was conceptualised at the time as the "periphery of the periphery."[131]

The concept of peripheral urbanisation has been recently revived by a new discussion initiated by Theresa Caldeira. She uses this term in a different sense, namely as a metaphor to characterise pervasive urban spaces in the global South that are produced differently than those of North Atlantic urbanisms. She looks particularly at spaces that are inherently unstable and contingent, produced mainly

through auto construction and unfolding transversally in relation to official logics. Caldeira explicitly does not understand periphery as a spatial category because it "does not simply refer to a spatial location in the city … but rather to a way of producing space that can be anywhere."[132] This conception is gaining traction in global urban studies, and further destabilises ideas of an urban-suburban binary. It also illustrates the impossible mission of finding any kind of coherence in the conceptualisation of urbanisation processes in urban peripheries across the world.

It is important to understand that all these forms of urbanisation, whether they are called suburbanisation or peripheral urbanisation, are processes of concentrated urbanisation because they lead to the agglomeration of people (residents, migrant workers, visitors etc.), jobs, investments, infrastructure, functions, and activities. The identification and delimitation of these agglomerations did not pose major analytical problems as long as urban areas were still morphologically demarcated from their surroundings in relatively clear ways—even if the surrounding areas were not necessarily non-urban. The concept of agglomeration in this classical sense also played a central role in critical urban studies. Manuel Castells regarded the agglomeration as the basic unit of the reproduction of labour power, and David Harvey defined the unit of the urban by the work day, and thus by the agglomeration defined as the maximal extension of the daily commuter zone.[133]

Still today, most concepts and definitions of the urban are strongly influenced by this form of agglomeration, which is commonly treated as the primary unit of urban analysis. In order to contain the multiple and contradictory developments at the urban periphery described above, the concept of agglomeration was stretched and finally replaced by the concept of the urban region, based on the analysis of overarching catchment areas. According to Richard Forman, a functional urban region could be vaguely defined as an urban centre's area of influence or as the area of active interactions between a centre and its surroundings, whereby a significant drop in the rate of flows and movements could determine its outer boundary, which leads us back to the discussion of Scott and Storper's definition of agglomeration in Part I of this book.[134] As we have seen, the main problem is not finding a pragmatic solution for identifying the urban boundary but the *idée fixe* of the urban boundary as such.

THE URBANISATION OF THE PERIPHERY

With the worldwide urban explosion during the long 1980s, urbanisation processes began spreading beyond agglomerations and urban regions, stretching further and further out to remote territories. Thus, new terms and concepts were developed, reflecting a wide variety of situations and observations. The most generic term to designate this process is "periurbanisation." In distinction to the "urban periphery," which means the periphery of the urban, periurbanisation designates the (gradual) urbanisation of the periphery, and thus, in contrast to the suburban, which is often fully built up, the periurban still shows the strong influence of agricultural production and village life. In the late 1970s, the term *périurbanisation* was introduced in France to precisely designate areas beyond the relatively dense and compact banlieues. It focused on the dispersed settlements scattered over the territory as extensions of villages and towns, often inhabited by low-income or middle-class people that were looking for access to affordable single-family homes. They settled in predominantly agricultural areas, attracted by lower land prices, a "green" environment, and improved road connections while commuting to central urban areas. These newcomers first changed the socioeconomic composition of these areas and soon also the settlement patterns themselves. Today, periurban areas often contain all sorts of infrastructure and facilities, from energy production, storage and logistics to recreation areas and golf courses. In North America, similar processes have been analysed under the rubric of "exurbanisation." Here, poor and wealthy people migrate from large agglomerations to often sparsely populated

areas beyond the "urban frontier" in search of cheap land and "nature."[135] In Africa and Asia, the term periurbanisation has been used since the 1990s, applying a wide range of definitions, including criteria such as topography, demography, land use, and economic and social dynamics. The main focus of the studies was on processes and conflicts related to access, control, and use of land-based resources.[136]

Around the turn of the twentieth century, the use of the terms periurban and periurbanisation in scientific publications grew exponentially, reflecting the massive transformation of these zones, particularly in Africa and Asia, which had become strongly affected by all sorts of urban extensions, from popular settlements to urban megaprojects and large-scale infrastructure developments. John Friedmann summarised the periurban as "encounters of an ever-expanding urban" with the rural surrounding of large cities.[137] These processes are often highly dynamic and sometimes change rapidly, making it even more difficult to isolate and define specific situations at a given time. In a very detailed recent study, Alexander Follmann analyses the analytical confusion that these processes create, shows the difficulty of using periurbanisation as an umbrella term for the wide spectrum of emergent urban situations across the globe, and calls for the development of much more specific conceptualisations and terms.[138] Exactly along this line of thought, the team of Paula Meth, Tom Goodfellow, Alison Todes, and Sarah Charlton made a fascinating comparison of peripheral urban areas in four African territories and developed a typology of five logics grasping very different situations that stretch out clearly into territories of extended urbanisation.[139]

The proliferation of these peripheral urbanisation processes has resulted in the development of increasingly heterogeneous urbanised landscapes across the planet, with centres and peripheries scattered over the territory. Thus, in architecture and urban design, an old question resurfaced: What is the new form of the city? In a very general way, cultural anthropologist Marc Augé observed the proliferation of "non-places" (*non-lieux)*, places without proper identities, relations, and histories, and architect Rem Koolhaas provoked heated debates about the "generic city."[140] More specifically, the new form of urbanising territories is well illustrated by the concept of the "100 mile city" by architecture critic Deyan Sudjic, who tries to grasp the almost endless conglomeration of urban fragments, and the "in-between city" (*Zwischenstadt*) brought forward by urban designer Tom Sieverts, describing a zone characterised by a state between "place and world, space and time, city and country."[141] Architectural historian André Corboz identified the new urban form as *ville-territoire* (city-territory) that no longer forms a de-limitable unit but rather a sprawling, polycentric urban region where the old city centres lose their historical functions, and the peripheries take on new meaning. What evolves in this process is an encompassing form of the city, a place of the discontinuous, the heterogeneous, the fragmentary, being in constant transformation.[142] Similar ideas can also be found in the concept of the *città diffusa* inspired by the dispersed settlement patterns emerging in northern Italy, particularly in the Veneto and in Milan.[143] Influenced by both concepts, urbanist Paola Viganò developed the concept of a "horizontal metropolis," which she particularly understands as a concept that can be applied to find new design solutions for urban settlements offering an alternative to concepts of the compact city and strategies of urban densification.[144]

We can clearly understand these new urban forms as the result of the complex interaction of various urbanisation processes, in which both vectors, concentration and extension, interweave and overlap. Most of these periurban configurations have aspects of hinterlands, providing agricultural production and water supply and containing all sorts of infrastructure. At the same time, they function as spillover basins for the further extension of agglomerations. However, the crucial point is that many concepts still presume a vast field of non-urban areas beyond these periurban territories, which they not further treat and illuminate in their

analysis. So, even if the urban boundary does not play an important role in these accounts anymore, it is still present as an invisible and unexpressed condition for the urban.

THE EXTRA-LARGE SCALE: MEGALOPOLIS, MEGAREGION AND METROPOLISATION

What happens when urbanisation processes stretch even further, connecting several neighbouring agglomerations and extended urban regions? In this last section of Part III, we look at urban configurations on an even larger scale, when extensively urbanised interdependencies are being consolidated within extremely large, polynucleated megaregions that often traverse multiple national boundaries. Such mega-scaled urban constellations have been recognised for over a century within the field of architecture and urban studies, from Patrick Geddes to Jean Gottmann and Constantinos Doxiadis. Historically, they were mainly produced through massive and fast industrialisation in certain core regions of capitalism. In 1915, planner Patrick Geddes identified large polycentric urbanised regions, which he called "conurbations."[145] He coined this term to describe the emerging spatial entity constituted by the coalescence of several industrial towns and cities in the United Kingdom. According to his analysis, this is mainly the result of large coal deposits that offered a cheap energy supply resulting in the clustering of factories. As Alfred Weber had already recognised, it was advantageous to place steel factories close to coal mines because it is much cheaper to use coal, which is fully consumed in the process, on the spot, instead of transporting it to another location. The heavily industrialised German Ruhr area offers another example of this relationship.

Half a century later, French geographer Jean Gottmann analysed the then-largest urban zone of the world along the East Coast of the United States between Boston and Washington—the famous BosWash—that he labelled "megalopolis."[146] This name directly refers to the ancient Greek town at the foothills of Arcadia that was named *Megalopoli*, a "very large city" by their founders, in the hope it would become the largest of the Greek cities (see also Markaki in this volume). As Gottmann observed, large industrial plants had long left the BosWash area, which subsequently specialised in urban economies dominated by urban and suburban modes of life and land occupations. This gave Gottmann the idea that this megalopolis represented early signs of a new urban global order shaped by urbanisation: "The long accepted opposition between town and country has therefore evolved toward a new opposition between *urban regions*, of which Megalopolis is certainly the most obvious and advanced case, and *agricultural regions*, the largest and most typical of which is found in the grain-growing Great Plains."[147] The corn and soy belt in the North American Midwest—currently the world's largest zone of operationalised agricultural production—is analysed by Katsikis in this volume.

Architect and town planner Constantinos Doxiadis developed an even more encompassing approach.[148] In the 1960s, he began with a systematic investigation of megalopolitan configurations across the world. He concluded that centripetal forces of agglomerations and centrifugal forces of major transportation corridors, economic clusters, and topographical features such as coastal areas combine to create a large-scale, mesh-like urbanisation pattern that could be developed to cover the foremost habitable areas of the world. If well planned, he believed it could become a successful "Ecumenopolis," a fusion of different megalopolises. As Katsikis argues, this utopian analysis could be interpreted as the first formulation of planetary urbanisation, which also imagines a possible urbanistic project.[149]

Since the long 1980s, similar extra-large urban formations have been developing with unprecedented speed across the planet, particularly in Asia, but also in Latin America and Africa. Urban regions are interweaving, networked through processes of globalisation and metropolisation, forming polycentric,

multi-layered, and multi-scalar landscapes with overlapping catchment areas often stretching over multiple regional and national boundaries. In recent years, the term "megaregion" has become an umbrella term to mark such developments.[150] Many names have been proposed for these configurations, and similar to the other urbanisation processes and urban forms discussed above, the scientific debates are very confusing. Often, research focuses only on the physical extension of such extended urban landscapes. A widely quoted but strongly simplified version was presented by Richard Florida and his team using satellite night light images to identify contiguous large-scale urban zones without even analysing their internal functional connections.[151] However, the superficial observation that urban areas are clustered together in physical proximity does not necessarily imply that they are tied together by intense interactions and functional relationships. Thus, such concepts are often generated through extrapolation and generalisation of limited data and the selective use of parameters and characteristics.

A different conceptualisation of large-scale urban developments was introduced in France with the term *metropolisation.* This concept looks not at agglomerations but focuses instead on centralities as defining elements of new urban formations. Consequently, it is less interested in boundaries but much more in connections. Pierre Veltz summarises the basic figure of this concept: The globalised economy is organised in encompassing networks of production and consumption, which coalesce in metropolitan nodes generating specific regional effects of agglomeration and multiplication of centralities and multi-scalar urban realities. This leads to uneven spatial development between well-connected city cores and "inner peripheries."[152] In the ambitious comparative project *The Polycentric Metropolis* led by Peter Hall and Kathy Pain, several research teams explored such networked areas in Europe, in which multiple nodes are linked together and coalesced to form large metropolitan territories comprising dense patterns of overlapping networks that radiate globally as well as regionally.[153] In this analysis, the outer border of the urban area is less important than the inner structure, the connections, and the nodes. In their edited volume *Post-Metropolitan Territories*, Alessandro Balducci, Valeria Fedeli and Francesco Curci present the results of an ambitious research project analysing very different examples of multi-scalar regional urbanisation in Italy, based on the territorial approach to urbanisation.

To conclude this discussion, it must be emphasised that whatever the definition of such megaregions may be, they always imply and incorporate all sorts of peripheries and areas of extended urbanisation. Once located at the edge of the urban, these peripheries might now be "in-between" amid complex urban territories in which "outside" and "inside" are entangled and enmeshed.

CONCLUSION: THE QUESTION OF THE OUTSIDE (OF THE URBAN)

Urbanisation has produced many different urban forms across the world, including the spread of built-up areas in peripheral territories, the proliferation of settlements along transport axes, and the creation of new centralities and megaprojects in remote places. Furthermore, the incessant increase of planetary connectivity is leading to heterogeneous territories comprising villages, dense new settlements, and large agricultural zones. In such territories, processes of concentrated, extended, and differential urbanisation may proceed at the same time, forming new complex landscapes with varied characteristics. Therefore, some concepts discussed above include aspects of extended urbanisation.

However, many of these concepts still presume that urbanisation is a spatially confined phenomenon and that a vast non-urban realm extends beyond urban territories—a realm that is usually not further illuminated by urban analysis. Thus, during the course of the history of urban studies, many new urban forms have been identified that are marked by various combinations of concentrated and extended processes of urbanisation. But their analysis has

been trapped by the city-centric perspective and the prevailing concepts of concentration and boundedness of the urban. Whether highlighting monocentric or polycentric forms, they still share the attempt to delimit the units of the urban universe. In this sense, territories of extended urbanisation are often not "new" territories or landscapes but the result of long-standing developments. However, they can be recognised and distinguished only by a different, de-centring analytical perspective on these landscapes.

The question of the outside of the urban that was raised by the concept of planetary urbanisation and the call for an "urban theory without an outside" put forward by Brenner has led to lengthy debates, bringing up all sorts of more or less sophisticated philosophical reflections about the basic problem of the "outside" in general, and the question as to whether everything should be called urban today.[154] Neglected and concealed in these debates is the very practical need for a decentred perspective on the urban. Therefore, it is crucial to go one step further, to cross the "urban boundary" and gain a comprehensive understanding of the urban transformation of the entire territory. In one of his latest articles, Edward W. Soja, who was so strongly engaged in the discovery of new urban forms and constellations, concluded: "Today, it can be argued that every square inch of the world is urbanised to some degree."[155]

PART IV

PROCESSES OF EXTENDED URBANISATION. AN EXPLORATION

One of the key findings of the project which we are reporting in this book is that territories of extended urbanisation are very diverse and often highly differentiated, with contradictory or even paradoxical processes developing side by side. These territories are often highly dynamic and may take divergent pathways to urbanisation. While some develop towards peripheralisation, others become centralities and agglomerations themselves. They could become fully operationalised landscapes hollowed out and emptied of social activities, facing the loss of jobs, population, and social energies, or they could densify, intensify, and turn into polycentric metropolitan landscapes.

Following the analytical framework presented in Part II, I focus here not on entire territories but on urbanisation processes. The concept of urbanisation processes is analysed in detail in the volume *Vocabularies for an Urbanising Planet*, edited by Schmid and Streule, which presents a series of concepts for processes of *concentrated urbanisation*. This Part IV engages now with processes of *extended urbanisation*. Our own research presented in this book yielded a great wealth of insights into the modalities, patterns, and pathways of extended urbanisation. The rapidly increasing number of other research efforts contributed additional important findings. Together they allow us to propose a series of processes of extended urbanisation. This list is not exhaustive; it contains a selection of possible processes that proved useful for our own research and revealed important parallels between seemingly dissimilar territories. It partly overlaps with a preliminary list of phenomena of planetary urbanisation sketched out by Brenner and Schmid.[156]

The first group of processes presented here is related to the *agrarian question*. Processes of extended urbanisation are often transforming

areas of agricultural production; however, as I have explained in Part III, the rural-urban binary is not a useful conceptualisation for understanding urbanisation processes. Instead, as is well known in rural studies, the agrarian question offers a much more productive perspective for analysing the dramatic transformations of huge territories which are not directly related to agglomerations and commuting processes. These transformations result from various processes of migration and movements facilitated by increased connectivity and improved transport infrastructure, enabling decentralised forms of wealth creation and income.

A widespread process of extended urbanisation is *extended industrial urbanisation.* This process existed already at the beginning of industrialisation in the late eighteenth century. Today, various forms of peripheral industrialisation are initiated by state strategies that promote special economic zones and export processing zones or support global sweatshop regions, back-office locations, data processing facilities, and intermodal logistics terminals. These processes are often located in periurban areas near large agglomerations, along main transportation corridors, and close to logistics hubs.

Another process, *extended urbanisation through infrastructure production* is leading to various forms of de- and reterritorialisation, such as processes of corridor urbanisation and the disintegration of hinterlands. Along motorways and around intersections, countless urban fragments are mushrooming extensively, if unevenly, across large territories, generating an irregular and haphazard urban fabric, which is being at once expanded and blurred.

The precondition for many processes of extended urbanisation is commodifiable land. This land has to be produced through often violent processes of *land enclosure*, which include dispossession and destroy traditional forms of land tenure and subsistence economy. While land enclosure can result from other processes of extended urbanisation like corridor urbanisation or extended industrial urbanisation, we understand land enclosure here as an urbanisation process in itself.

The concept of the *operationalisation of landscapes* brings together the rationalisation and automation of agricultural production, extractivism, energy production, and infrastructure development, which belong to the most dramatic processes of extended urbanisation. The production of operational landscapes results from the most basic socio-metabolic imperatives associated with urban growth—the procurement and circulation of food, water, energy, and construction materials; the processing and management of waste and pollution; and the mobilisation of labour power in support of these various processes of extraction, production, circulation, and management.[157]

The operationalisation of landscapes is often accompanied by extreme forms of rationalisation, which strongly reduces the necessary labour force and thus results in processes of *extended peripheralisation*. In a similar way, deindustrialisation and uneven development may also induce the loss and relocation of economic activities, leading to selective emigration and depopulation. As a result, permanent settlements are eroding and seasonal or sporadic movements of people to and from central urban areas are becoming more pronounced.

On a general level, extended urbanisation always implies the restructuring of centre-periphery relationships. With the multiplication of various forms of centrality and their related peripheries over the planet, large-scale, highly dynamic, and heterogeneous *polynucleated metropolitan zones* are emerging, bringing a wide range of concentrated, extended, and differential urbanisation processes together.

These different urbanisation processes obviously overlap and reinforce one another. They are also mediated through contextually specific regulatory-institutional arrangements, state and corporate strategies, everyday practices, and socio-political struggles.

URBANISATION AND THE AGRARIAN QUESTION

Any analysis of extended urbanisation inevitably involves an engagement with the complex relationship between urbanisation and

agricultural areas. Agricultural land has undergone a wide variety of urban transformations since the industrial revolution. Long neglected, these transformations have received increasing attention in both urban and rural studies in recent years and have sparked a wide range of discussions. Consequently, a number of critical *urban scholars*, such as Shubhra Gururani, Sai Balakrishnan, Swarnabh Gosh, and Ayan Meer, have called for greater engagement with the agrarian question in urban studies, explicitly linking critical agrarian studies with extended urbanisation.[158] Conversely, scholars of *rural studies* have given more attention to extended urbanisation processes, as Kasia Paprocki discusses in detail.[159] This makes revisiting the rural-urban relationship discussed in Part III indispensable, with a focus this time on the agrarian question.

The distinction between the rural and the agrarian question has sparked various debates, which it is not possible to explore here in detail. Suffice it to mention that the discussion of the agrarian question has a long history, starting with the famous texts by Karl Kautsky and Vladimir Lenin, who discussed and promoted the industrialisation of agricultural production, going all the way to recent discussions about whether the agrarian question is still relevant in times of globalisation and urbanisation, or more precisely, which aspects of this question are still relevant.[160] While Henry Bernstein looks at the question of labour and observes a crisis of reproduction because peasants and rural workers are increasingly struggling for their means of livelihood, Philip McMichael focuses on the global corporate food regime and the struggle for food sovereignty, and Martín Arboleda investigates the sphere of circulation and asks who controls the way agriculture is produced.[161] As we will see, all of these three perspectives are highly relevant for extended urbanisation. In this context, the agricultural question particularly appears in 1) the operationalisation of agricultural territories, 2) the enclosure (and thus erasure) of agricultural land, and 3) the extension of urban settlements into areas of agricultural production. While the first two points are discussed in the following subsections, here I will illuminate the third point, the development of settlement spaces in agricultural territories.

Basically, urban transformations of agrarian landscapes can be approached from two different perspectives: If we look from the *centre* of an agglomeration, we detect processes of concentrated urbanisation radiating centrifugally towards the outskirts and gradually fading with greater distance from the centre. If we look from a *de-centred* perspective, we detect other, less obvious forms of urban transformation that often seem to be spontaneous. The question arises whether these territories, in which extended and concentrated urbanisation processes overlap and intermingle, are still rural, already urban, or even something else.

I discussed the first city-centric perspective in Part III with terms like peri- and exurban territories. These territories manifest the strong influence of agglomeration processes, while agricultural production still plays a dominant role. They are also crucial for water and energy supply, waste disposal, recreation, and tourism. At the same time, they are becoming places of residence for diverse high- and low-income groups commuting to central areas; furthermore, they are increasingly used for all sorts of infrastructural facilities and urban megaprojects. Thus, they are hybrid territories transformed by overlapping processes of concentrated and extended urbanisation and are often framed as transition zones, as rural-urban or urban-rural interfaces. The most common assumption is that they are both spatial and temporal transition zones that will become "fully" urbanised sooner or later. However, this might be a premature assumption, as the balance between agricultural and urban uses is sometimes quite stable and lasting. For such zones, Terry McGee has introduced the term desakota, discussed in Part II. In his research on Indonesia, Stephen Cairns proposes the term "urban-rural hybrid" to avoid developmentalist assumptions that see rural areas on the fringes of agglomerations inevitably giving way to urbanisation that is "fully formed." His project is to explore and support strategies

that could protect and preserve "non-urban conditions" in these areas.[162] With similar concerns, Shubhra Gururani has chosen the term "agrarian urbanism" to express situations in which agrarian and urban dynamics sustain and coproduce each other.[163]

A second perspective on such territories reveals a very different picture: If we approach them from an ex-centric position, we detect underlying processes of extended urbanisation, which are masked by concentric processes of concentrated urbanisation and are, therefore, often overlooked. In the research project "Territory," the team of ETH Studio Basel investigated various remote areas far away from agglomerations. It observed in the densely settled Nile Valley a slow, gradual, and initially almost unnoticeable transformation of villages and small towns generated by the everyday mobility of local people.[164] Other territories in the Red River Delta around Hanoi and on the peripheries of Minas Gerais in Brazil—located beyond the commuter distance to urban centres and thus not or only weakly related to agglomeration processes—showed urbanisation processes through the solidification and extension and the construction of new buildings that have an urban appearance. A similar observation is described by Yu Zhu for the eastern coastal region of China with high population densities and improved transport and communication conditions far from agglomerations and not related to rural-urban migration. She calls this form of urbanisation that is produced by the people themselves, to accommodate manufacturing and other non-agricultural activities "in situ urbanisation."[165] It could also be discussed under the rubric of extended industrial urbanisation (see the next section).

Likewise, the team of Robbin van Duijne, Jan Nijman, and Chetan Choithani observed in Bihar and West Bengal dispersed emergent urban formations that result from densification, expansion, and amalgamation of built-up environments in the absence of significant local agglomeration. These areas are marked by a rapidly declining agricultural sector and the emergence of a consumption-oriented local economy. A closer analysis revealed that the wealth enabling these transformations is created by circular labour migration that however no longer relates to the seasonal agricultural cycle, from which livelihoods have become almost entirely divorced. The team introduced the concept of *injected urbanism* to denote a form of urbanisation that is exogenously generated through remittances and thus depends on economic activities elsewhere, abroad and domestically.[166] For instance, this "elsewhere" could be a tenement town located in an urban corridor close to Delhi, where temporary labour migrants from Bihar are kept in a state of permanent insecurity, precarity, and exploitation, as analysed by Nitin Bathla.[167] This example illustrates in a shocking way how two very different forms of extended urbanisation are directly related and how corridor urbanisation in Delhi fuels injected urbanism in Bihar through sporadic and precarious labour migration.

This example points to a process that is well-known but has been neglected for a long time in urban studies: the urbanising effect of migration. On the one hand, remittances from rural-urban migration, and often also circular and other forms of temporary migration, are invested in the place of origin of the migrants. These processes, which developed in many agrarian areas across the world, have been researched for a long time in rural studies. Deborah Potts provides an exemplary analysis of rural-urban linkages to secure livelihoods for Sub-Saharan Africa.[168] In her ethnographic fieldwork, Elisa Bertuzzo followed migrant labourers from West Bengal to southern India and described different forms of sporadic migrations that she calls "translocalisation."[169] Kasia Paprocki goes in a similar direction in proposing an alternative reading of urbanisation resulting from multiple local and translocal social movements that fight for livelihoods and futures that could persist independently of relationships with large cities. She advocates counter-hegemonic political imaginaries that are developed in agrarian communities in the search for other political visions.[170]

On a much broader scale, the extensive research project on *subaltern urbanisation* by Partha Mukhopadhyay, Marie-Hélène Zérah, and Eric Denis explored and defined urbanisation processes beyond urban agglomerations in India.[171] They used the term "subaltern urbanisation" to highlight the multiple local and translocal flows that are shaping urbanisation processes that could exist independently of relationships with large cities. This concept highlights the contribution made by the people on their own that is independent of the elite, resulting in diffuse forms of urbanisation. It brings together quite different situations that are systematised in a typology: "The influenced town" is located close to metropolitan centres; the "micropolis" is a conglomeration of entrepreneurial small towns outside the direct influence of large centres; small "market towns" are usually statutory towns catering to the needs of agricultural areas. The fourth category, "emerging small towns," describes rapidly urbanising villages that are developing towards larger settlements, whose workforce is moving away from the agrarian sector.

This ongoing discussion highlights the great diversity of extended urbanisation in agricultural territories. It indicates that a detailed differentiation of the involved processes is necessary and that we have to clarify which processes are addressed by our conceptualisations. There is first the process of *the production of urban space* and its various modalities, which can be examined from different angles: subaltern urbanisation highlights the role of the people; in situ urbanisation focuses on the absence of agglomeration effects; and injected urbanism looks at the origin of the resources fuelling the urban transformation and thus considers the variation of migration processes. Further urbanisation processes will be analysed in the remainder of this chapter: the *process of enclosure* of agricultural land and the related mechanisms, pointing to power relations, territorial regulations, and land rights; and finally, the *agrarian question* in the proper sense as a social production process that is facing commodification and operationalisation.

EXTENDED INDUSTRIAL URBANISATION

An often-overlooked process of extended urbanisation is related to the industrialisation of areas located outside agglomerations. As is well known, industrialisation historically not only affected cities, but also followed the availability of energy, raw materials, and cheap labour, thereby often stimulating decentralised pathways of urbanisation. Thus, in eighteenth-century Europe, the so-called "domestic system" combined home work with agricultural production in predominantly poor, rural areas, tapping the availability of cheap labour. Early industrialisation in parts of Europe, particularly in alpine regions and Scandinavia, followed water courses in peripheral areas, leading to a much more decentralised urbanisation pattern than the classic Manchester model suggests.[172]

In the twentieth century, industrial rural urbanisation was often induced by state developmental strategies, which tried to promote economic growth in relatively poor peripheral regions. Tellingly, the starting point of Lefebvre's engagement with the urban question was not the transformation of the Paris region that he would analyse in detail later but the state-led construction of the new town of Mourenx close to his hometown Naverrenx. Following the discovery of a natural gas deposit amidst the French Pyrenees, a gas-processing and aluminium plant, along with several chemical factories, were constructed together with an entire town consisting of working-class neighbourhoods and houses for the managers. This industrial town never developed into a major agglomeration and is still a small settlement with about 7,000 inhabitants today. But the building of such a new town *ex nihilo* in a rural socioeconomic context came as a shock to Lefebvre and served him as a paradigmatic example of the fundamental transformation caused by urbanisation.[173]

Today, forms of peripheral industrialisation are initiated on much larger scales by state strategies that define special economic zones and export processing zones or support global sweatshop regions, back-office locations,

data-processing facilities, and intermodal logistics terminals. They are often located in periurban areas in the vicinity of large agglomerations, but sometimes also along main transportation corridors and close to logistics hubs. These forms of industrialisation are often detached from direct agglomeration effects and show certain similarities to urbanisation through resource extraction (see below). Basic conditions for such zones are usually a certain degree of connectivity and the availability of cheap labour, land, and capital. However, capital is mobile, and labour power can also be found in distant villages (often female workers) and through various forms of temporary migration, which developed on a massive scale in China and India. During further development, some of these zones are transforming into areas of concentrated urbanisation or becoming integrated into metropolitan regions.

In the 1990s, Gillian Hart researched the formation of globally linked industrial districts in former Bantustan areas of South Africa and traced the continuing salience of agrarian histories there in a process that she called "rural industrialisation." In a comparative analysis, she found similar developments in East Asia, particularly South Korea. In this context, she criticised the "core-centric" contemporary literature on industrial restructuring that was not able to address the divergent local trajectories of peripheral industrialisation and their related histories of dispossession.[174]

One of the most extreme examples of large-scale rural industrialisation is Dongguan, a county in the middle of the Pearl River Delta, presented by Kit Ping Wong in this book. Until the early 1980s, Dongguan was a classical agrarian hinterland of Guangzhou (the former Canton). As Wong shows, the rapid extended industrialisation and urbanisation of the entire county was not the result of agglomeration or spillover processes but a complex progression of extended urbanisation launched by the Chinese state and implemented by the interplay of the county government, the town governments, and the village collectives.[175] This process started in the 1980s and was driven by the Chinese economic strategy of industrialisation and urbanisation initiated by Deng Xiaoping. In this process, an entire rural county was converted into an "urban" territorial system. In 1988, the county was declared a prefecture city, and town governments and village collectives were given their own administrative jurisdictions and collective land. In a contradictory and conflictual interplay with state strategies, the villages attracted investors and mobile-migrant labourers and started a spectacular process of export-led industrialisation that created the famous Chinese "world factory." Rural characteristics were embedded into the urbanisation process, generating highly scattered and fragmented urban spaces. This extended form of urbanisation finally turned into concentrated urbanisation, consuming and transforming most of Dongguan's agricultural land. As if in a time-lapse, this example illustrates the pathway of extended urbanisation in a rural county towards concentrated urbanisation and finally to the complete urbanisation of the entire territory in only three decades.

EXTENDED URBANISATION THROUGH INFRASTRUCTURE PRODUCTION

One of the main drivers of extended urbanisation is the massive increase of connectivity on all territorial scales. Urban theorists have long recognised transport-based urban development patterns, but in the last decades, these patterns reached a new level in that the historically unprecedented production of planetary connectivity involves the almost endless proliferation of infrastructural spaces, connecting metropolitan regions with each other and with zones of extraction and primary production.

This infrastructure boom is generating unexpected impacts. Along motorways and around intersections, countless urban fragments are mushrooming extensively, if unevenly, across large territories, generating an irregular and haphazard urban fabric, which is being at once expanded and blurred. This leads to the juxtaposition of often disjointed urban elements, as

very different urban fragments might be located side by side without being functionally linked. This results in a dysfunctional socio-spatial structure with unprecedented dimensions, creating all sorts of disturbances and negative effects. Under such conditions, agglomeration economies are only partially effective because the various economic functions and activities are often thrown together in a wild mélange and thus develop only tenuous synergies and interrelationships.

Miguel Kanai and Seth Schindler show how a global development policy consensus to foster economic growth in peripheral regions through infrastructure-led developments has generated an "infrastructure scramble." Numerous state actors and global agencies make massive investments in infrastructure connectivity, often linking resource frontiers and urban systems—often across national borders—to articulate value chains geared toward extracting resources, logistical integration, and industrial production. These investments have grave effects because, on the one hand, the new roads often bypass existing areas and thus foster peripheralisation, and on the other, they generate all sorts of novel urbanisation processes.[176] Typical outcomes are urban corridors developing along large-scale infrastructure developments. Sai Balakrishnan analyses in detail India's first economic corridor along the Mumbai–Pune Expressway that functions as a spine along which special economic zones, smart cities, and other "zones of variegated sovereignty" develop. In this process, volatile conflicts have erupted over land reallocation from agricultural to industrial and urban use in economic corridors and their attendant new towns.[177]

An extreme form of this kind of extended urbanisation by infrastructure production is the devastating outcome of India's national highway program, which is analysed in this book by Nitin Bathla. Similar to the programmes in Western countries before and after the Second World War, but in much more extensive dimensions, India's highway network stretches over the entire subcontinent. Bathla shows how this programme unleashes a cascade of effects, such as the enclosure of all sorts of land, from the fertile agricultural belt around Delhi to protected nature reserves, forests, and tribal lands. The highway programme redirects entire settlement systems towards a decentralised and haphazard form of urban development. With the evolution of this process, extended urbanisation has become an instrument for the enclosure of non-urban land, fuelling the rapid, decentralised urbanisation of India.

Not only the construction but also the planning of such corridors and large infrastructure projects can have tremendous influences on urbanisation processes and are often used as a vehicle for massive transformations through extended urbanisation. Examples of this are the Plan Puebla Panama and the Manta-Manaus multi-modal transport corridor analysed by Wilson and Bayón.[178] On a much larger scale, China's Belt and Road initiative, launched at the end of 2013 by Chinese President Xi Jinping, has unleashed countless urbanisation processes in various parts of the world and also in China and has been widely researched and discussed in several disciplines.[179]

ENCLOSURE AS AN URBANISATION PROCESS

One of the crucial preconditions and consequences of these and many other processes of extended urbanisation is to prepare and open up agricultural land for commercial use. This process of enclosure often provokes fierce resistance from small farmers fighting for their land. In Part I of this chapter, land enclosure stood historically at the very beginning of both capitalism *and* urbanisation. Marx treated the enclosure of the commons in the context of original accumulation and saw it as the initial process of the accumulation of capital that would soon be replaced by the extended reproduction of capital. However, as we have seen, enclosure continues to play an important role in the development of capitalism, and to this day, it is a crucial precondition for the mobilisation and commodification of land, whether for resource extraction, agribusiness, logistics

functions, or otherwise. In generating commodifiable land and disposable labour, enclosure destroys traditional forms of land tenure and subsistence economy and enables production for the (world) market. More than ever, migrant labourers play a key role in all sorts of urban economies driving both concentrated and extended urbanisation.

It could thus be argued that the enclosure of agricultural land is itself a process of extended urbanisation. Sevilla Buitraga developed exactly this thesis. He follows the historical moment of parliamentary enclosure in England and shows that it was deploying a new spatial rationality that mobilised the reorganisation of the territory as an instrument for the production of a new social order. In this process, the relationship between the city, the countryside, and international networks was radically reconfigured. State action played a key role in this process.[180]

The way in which land is enclosed, commodified, and opened up for various urbanisation processes is, of course, today very different from the model of parliamentary enclosure in England described by Marx. As Silvia Federici states, a process of "new enclosures" started in the late 1970s and early 1980s as a result of China's economic transition and the imposition of structural adjustment programs by the World Bank and the IMF on large parts of the former colonial world in the wake of the "Third World" debt crisis.[181] The role of state actors is crucial in gathering large swathes of land through expropriation and various forms of dispossession. Particularly in China and India, the transformation of rural into urban land has become a general strategy of state-driven urbanisation. Gururani traces the recent round of land enclosure in India back to the 1980s, when the urbanisation of agrarian land became a key strategy to bolster economic growth and attract foreign direct investment in metropolitan commodification and de-agrarisation.[182] Michael Levien developed the concept of "regimes of dispossession" to better understand the different modalities of dispossession during historical development. While the postcolonial Indian state dispossessed land mostly for public-sector industry and infrastructure, the adoption of neoliberal economic policies in the early 1990s prompted state governments to become land brokers for private real estate capital, and particularly for the creation of special economic zones. The enclosure of land often sparks fierce opposition and what Levien calls "land wars" that erupt across India, with farmers resisting the state's forcible transfer of their land to capitalists.[183]

The process of land enclosure is confronted with highly uneven agrarian land markets and a great variation of land ownership. Thus, Balakrishnan, who analysed the transition of agrarian land markets to real estate development in the context of the Mumbai-Pune corridor, discovered that primary agricultural cooperatives had been reorganised into real estate companies by agrarian elites as an entry point into an urbanising economy. She calls this process "recombinant urbanisation"; this concept focuses on the institutional mechanisms through which differentiated agrarian property regimes combine with neoliberal reforms to produce new geographies of uneven development. In this process, "collisions and collusions" between landed property and urban real estate occur that can turn into fierce struggles. This complex process does not necessarily lead to marginalisation, precarisation, and displacement; it can also enrich villagers and rural populations.[184] A similar situation developed in China, where villagers also became shareholders of real estate companies, as explained by Kit Ping Wong in this book. A very illuminating overview of land dispossession in China and India can be found in a special issue of the *Journal of Peasant Studies*.[185]

The modalities of land enclosure are highly influenced by the dominant mode of territorial regulation. In many countries, agricultural land is protected by national planning laws that do not allow its transformation to industrial or urban uses. This opens up multiple options for illegal land transformations or bypassing existing rules and regulations. As Gavin Shatkin has shown in his analysis of Asian urban megaprojects,

turning officially designated rural land into urban land generates huge windfall profits for developers and political and personal gains for state actors.[186] This leads to various forms of "bypass urbanism," an urbanisation process that cuts short or circumvents existing territorial regulations and planning procedures and takes advantage of certain "flexibilities" and legal "grey spaces" in regulatory systems, often including direct and indirect forms of corruption.[187]

Thus, to this day, enclosure plays a key role in urban development and agricultural land transformation. Farshad Araghi directly links "the great global enclosure of our times" and global depeasantisation. He identifies a global strategy of enclosure-induced "accumulation by displacement," which results in global deruralisation on the one hand and, on the other, peripheral urban expansion fuelled by the deproletarianised and homeless surplus labour populations produced in this process.[188]

OPERATIONALISATION OF LANDSCAPES

Once the land is privatised and commodified, it can become further functionalised and operationalised for all sorts of production processes. In this way, industrial production zones and urban corridors may develop, as shown above. Other territories, often located far beyond dense population centres, are transformed into specialised zones of primary commodity production and large-scale logistical infrastructure. The term "operationalisation of landscapes" has been introduced by Nikos Katsikis and Neil Brenner to designate a process in which territories are subsumed under the logic of capital accumulation for the production of energy, raw materials, all sorts of agricultural outputs, and for infrastructure and waste disposal. These zones are embedded into transnational production networks and intermeshed within the planetary logistical space mediated through the abstract space of the world market.

These "hinterlands of the capitalocene," as Brenner and Katsikis call them, are no longer staging grounds for specific urban regions. They are spatially dissociated and functionally decoupled from direct links with the metropolitan areas and serve as metabolic support systems and processing zones for the global metropolitan network as a whole. The capital-intensive process of operationalisation usually goes hand in hand with thorough rationalisation and automation, thus dramatically reducing the necessary labour power for the production process. The operationalisation of landscapes is therefore marked by the decrease of the organic composition of capital, as living labour is replaced by machines, equipment, and infrastructure. In this process, the territory becomes completely industrialised and functionalised to form large-scale, territorialised ecological machinery or "horizontal factories," as Katsikis calls them in his contribution to this volume.[189]

Sandro Mezzadra and Brett Neilson developed an interesting conceptualisation of "operations of capital." Drawing from a wide range of theoretical sources, they understand the contemporary capitalist world as constituted by a web of operations, particularly finance, logistics, and extraction operations. Each of these operations is predicated on a set of conditions that it cannot produce itself since operations necessarily involve the labour of subjects that cannot be reduced to capital. At the same time, these operations impinge on extant human and nonhuman environments.[190] If we speak of the operationalisation of landscapes, then we look precisely at the way in which these environments are functionalised to serve as "material support" (in the Lefebvrian sense) for various types of operation. Accordingly, we can distinguish several forms of operationalisation that are often difficult to separate: the operationalisation of landscapes for agricultural production, resource extraction, energy production, and logistical operations.

The *operationalisation of agricultural production* results in the production of food and feed to all sorts of raw materials, from bio-fuel to inputs for various industrial processes. In his contribution to this book, Nikos Katsikis shows the long operationalisation process of North America's largest agricultural zone, the corn

and soy belt in the Midwest. He follows the transformation of a landscape, once associated with the iconic image of endless prairies and huge bison flocks, now a fully operationalised zone of agrarian, industrial production, so devoid of people and animals that even the insects are systematically extinct in these landscapes. This extreme form of agro-industrial transformation has resulted in an entire production system that delivers energy, fertilisers, pesticides, genetically modified seeds, machinery, materials, transport, and logistics. Katsikis shows how this entire system is constantly driven towards further rationalisation and automation until it becomes a huge factory-like material device combining a great variety of operations that spread out over a huge surface of the earth. At the same time, this system is reducing the input of labour power to the point where living labour is almost entirely replaced by machinery. This, in turn, destroys the livelihoods of a large part of the local population, which causes the lasting emigration of people and the degradation of basic social infrastructures and thus leads to the peripheralisation of the entire region. Furthermore, the operationalisation of agricultural production has accelerated the exhaustion and depletion of soil fertility and thus adds to the current environmental, food, and biodiversity crisis.[191]

This development finally results in a complete decoupling of the production process from urban life. This is quite different from William Cronon's analysis of *Nature's Metropolis*. He documents how at the very moment when agricultural production began to transform, the prairies and the Midwest were ruralised, and Chicago became an urban centre. In his book, he presents one common history of the metropolis and its vast extended hinterland. The output of this hinterland was transported to Chicago, that functioned as a logistics hub, an industrial processing zone with its infamous meat factories, the famous Pullman factory to produce railroad cars, the Chicago Board of Trade, one of the world's oldest futures and options exchanges, and the related financial activities.[192] Today, this direct relationship between the metropolis and its hinterland is dissolved, as the production system of the Midwest is directly linked to global markets.

Research on the operationalisation of agricultural production has illuminated ever-new aspects of this process in recent years. Thus, Gastón Gordillo looks at the operationalisation of genetically engineered soybean production in Argentina's Gran Chaco region through the lens of the metropolitan infrastructure, which reveals the imperialistic nature of this kind of extended urbanisation. Kasia Paprocki shows how the introduction of shrimp aquacultures as an anticipatory adaptation strategy to climate change in Bangladesh's delta region has led to ecological degradation and the dispossession of local rice farmers. It has produced an operational landscape that literally causes the ruination of the practices of production and social reproduction through which communities in this region have historically sustained themselves.[193] Milica Topalović and Hans Hortig analyse the transformation of tropical forests and agrarian land into operationalised territories of industrial palm oil production in South East Asia and explore how architects, urban designers, and landscape architects can address the challenges arising from agro-industrial production.[194]

The operationalisation of food production on a planetary scale could not work without the development of a global system of agro-industrial production and circulation. This necessitates the implementation and enforcement of market rules about what kind of food has to be produced and also the standardisation of food consumption through global rules, state regulations, and subsidies. On the basis of regulation theory, Harriet Friedmann and Philip McMichael developed the concept of the "food regime," which links international relations of food production and consumption to historical forms of accumulation.[195] The current global corporate industrial regime of "cheap food" has eroded smallholder economies, advanced global depeasantisation, and triggered the struggle for food sovereignty that has become a broad and lasting planetary movement.[196]

Finally, Arboleda turns to the sphere of exchange and examines the role that investment banks, pension funds, logistics companies, supermarkets, consumers, and laboratories have in the organisation of agro-food systems, highlighting the supply chain capitalism that dominates today's global production networks. With the example of Walmart Chile, he shows how large retail chains directly influence agricultural production. He also shows how new formations of political struggle have emerged in Chile that target ports, warehouses, roads, and other infrastructures of connectivity to influence primary-commodity production.

The relationship between operationalisation and global production networks also applies to energy production. Carola Hein reconstructs the emergence of a "palimpsestic global petroleumscape" in which corporate and public actors have built the physical and financial flows of petroleum into encompassing material and representational landscapes that became essential parts of modern society and everyday lives.[197] Hajar Ahmad Chusaini, Imam Buchori, and Jawoto Sih Setyono apply this concept to their analysis of the transformation of the urban fabric in the Cepu region in Indonesia.[198] In a touching essay, Japhy Wilson tells the inside story of an otherwise unreported revolt on a remote extractive frontier in the Ecuadorian Amazon in 2017, in which mestizo, Afro-descendant, and indigenous workers and communities confronted the combined forces of a multinational oil company and a militarised state. The evolving battle bears witness "to the fleeting emergence of an insurgent form of political universality" by subaltern subjects.[199] Today, energy landscapes rapidly extend towards desert, mountain, and ocean spaces to produce "green energy" in extensive wind farms and solar plants.

In a similar way, *operationalisation through extractivism* is covering ever larger proportions of the planet's surface, leaving behind natural and social wastelands. From a historical perspective, the extraction of raw materials was often a strong driver of processes of concentrated urbanisation. Mining used to be very labour-intensive and, therefore, often led to the formation of huge agglomerations. Famous examples are the industrial belts along coal deposits that became core agglomerations of the industrial revolution in Europe and North America and mining places that developed into large metropolises, such as Johannesburg or Belo Horizonte. However, as Rodrigo Castriota shows in this book, this relationship between extractivism and urban development has changed radically in the last decades. Rationalisation and automation made places of resource extraction, which are largely devoid of human labour, leaving workers without jobs and turning mining boom towns into ghost-like peripheries.

In his book *Planetary Mine*, Arboleda places this process of resource extraction in the context of planetary connectivity and analyses the sprawling infrastructural systems that connect sites of extraction to factories in export processing zones, precarious migrants and industrial workers, metropolitan consumer markets, and financial circuits and reflects on the possibility of revolutionary subjectivity.

In parallel, the *operationalisation of transports and logistics* is needed to produce planetary connectivity. This involves constructing airports, motorway networks, and high-speed trains and particularly the introduction of the intermodal container, as Nancy Couling shows in this book. This has enabled the efficient and smooth transport of materials and products across different modes of transportation, easily changing from ship to rail and truck.

This led not only to the operational landscapes of global transportation but also to the automation of harbours. Once the most important generators of urban agglomerations, huge transfer sites and cosmopolitan meeting places connecting people, information, and goods, harbours have become operational landscapes.[200] One of the most striking examples is the new deep-water container port on an island south of Shanghai, which was expected to fuel the Lingang New Town planned nearby with new activities and functions. It was initially believed that the port would promote the

development of a port-related economy, bringing about clusters of maritime business services and industries, logistics, as well as a resident population. As part of Shanghai's New Town program, a port city was therefore proposed to be constructed in Nanhui. The idea was known as "the port works for the city, the city prospers for the port."[201] To the great astonishment of planners and politicians, this fully automated harbour with less than a hundred workers created almost nothing more than traffic jams of container trucks, and the plans had to be completely revised.

In her chapter on the operationalisation of the North Sea in this book, Nancy Couling analyses the overlapping and entanglement of different forms of operationalisation, from transport and logistics to resource extraction, energy production, and fishing, to examine how almost the entire North Sea became a fully operationalised space not only on its surface but affecting the entire volume of the sea. The transformation of a huge commons into an operationalised space can be seen as the ultimate commodification of space, the maximal homogenisation and destruction of pre-existing differences and qualities that leaves almost no spaces for social processes but results in the complete evacuation of the social. The alliance of capital and state space leaves nothing else than empty landscapes, what Couling describes as the loss of sea, loss of commons, and finally, loss of social life and "nature."

EXTENDED PERIPHERALISATION

As we have seen, urbanisation is characterised by uneven development and trans-scalar centre-periphery relationships. Therefore, it not only increases land use pressure and urban extension but may also generate adverse effects when more remote areas are bypassed by economic development or the operationalisation of landscapes dramatically reduces employment. In many ways, peripheralisation thus represents the "reverse side" of urbanisation, resulting in strong and lasting emigration, which is often highly selective, the stagnation or relocation of economic functions, the draining of social activities, the loss of livelihoods, and the degradation of social, cultural, and economic networks, often setting in motion a self-reinforcing process of decline.

While the theorisation of centre-periphery relationships has a long history and was extensively discussed in the 1960s and 1970s in the context of the debate on the capitalist world system and dependency theory, the concept of peripheralisation was only recently applied in wider contexts. It shifts the focus from a structural analysis of centre-periphery relations towards a dynamic conceptualisation of urbanisation. It was used in the context of deindustrialisation processes, particularly for the analysis of declining industrial regions in Europe and North America and of sparsely populated areas in Eastern and Southern Europe.[202] Other forms of peripheralisation are emerging in urban territories, particularly in post-proletarian areas, similarly marked by deindustrialisation and economic crisis.[203]

Processes of peripheralisation are also a widespread feature of extended urbanisation. They affect very different situations and occur on the large as well as the small scale. They emerge in "meshes" in the urban fabric, as "in-between spaces" and pockets of poverty, but also as extended "fallow lands" and double (or multiple) peripheries that are decoupled from centralities.[204] Paradoxically, peripheralisation can also be a consequence of operationalisation, as shown above for the corn and soy belt in the North American Midwest. Nancy Couling describes this process as the evacuation of social activities in the North Sea. New transport connections can also lead to bypassing and peripheralisation of entire regions, as Kanai and da Silva Oliveira show for Roraima in Brazil's extreme north.[205]

Our example in this book is Arcadia, the idealised landscape in the Peloponnese treated as a rural periphery by national politics. Metaxia Markaki analyses the long-standing emigration towards Athens that resulted in the almost complete depopulation of parts of this mountainous area. Long left behind and neglected by the nation-state, new state strategies have

started to intervene in recent years. As Markaki shows, a far-reaching administrative reform particularly targeted Greek peripheries and considerably accelerated peripheralisation, installing a state space of low resolution, low governance, and low cost and preparing peripheralised regions to become operationalised for "green" energy production. However, accounts of "emptiness" are often strongly influenced by static perspectives regarding territories as given containers. A dynamic perspective reveals that these landscapes are not empty but animated by manifold activities as people have kept strong ties to their place of origin and thus maintain connections between the dominating capital, Athens, and its periphery. Furthermore, peripheralised areas have a strong potential for appropriation and reappropriation by very different social groups and practices.

THE PRODUCTION OF POLYNUCLEATED METROPOLITAN ZONES

Finally, as discussed in Part III, the question of the large scale returns to the foreground with examples of conurbations, megalopolises, and megaregions. Yet, these concepts are mainly defined by the sheer size of the territories observed and the extension of the urban boundary, not by their dynamics and internal structure. In contrast, we are focusing here on particular polycentric multi-scalar constellations that are integrating several global and regional centres, their catchment areas, and various peripheries in their spheres of influence. While new centralities are emerging in parts of these territories, they also expand outwards, integrating existing centralities, such as smaller cities and towns, into the metropolitan networks. These zones often cross national and regional borders and are thus generating urban differentials through cross-border dynamics. This creates all sorts of movements crisscrossing the zone that lead to the formation of complex multi-scalar centre-periphery relationships. While connections between centres are consolidated and intensified, processes of peripheralisation are also occurring in areas that are left behind and in emerging in-between spaces that are bypassed by high-speed transportation and are experiencing a decrease in connectivity.

By far, the largest of these urban constellations is the Pearl River Delta, with the entrenched centre of Guangzhou (Kanton) and the former colony of Hong Kong as historical cores. As Wong shows in her overview, the People's Republic of China launched an unprecedented industrialisation of the entire region as part of its political opening and economic transition at the end of the 1970s. While China was developing rapidly growing city-territories—with Shenzhen and Dongguan the most prominent of them—it also took control over the financial global centre of Hong Kong in 1997, thus advancing a strong process of cross-border metropolisation.[206]

The Gauteng City-Region in South Africa, nearly 200 kilometres in diameter, is another paradigmatic example of this kind of extended urbanisation. Lindsay Howe examines the "spatiality of poverty" that is created by the dynamics between main urban centralities such as Johannesburg and Pretoria and regional-scale peripheries established by the legacy of mining and apartheid. Today, a large number of people reside on the extreme peripheries of this region, which are so geographically remote that transit dominates everyday life. Howe sheds light on various forms of popular agency, as people negotiate both local and regional-scale spaces in pursuit of opportunities and create new "popular centralities" as they exercise their agency to move across the region and produce alternative forms of space.

The case study in our book illustrates these processes with the example of the West African Corridor. Despite its name, it is not a corridor, but a 1,000-kilometre extended zone, that stretches over five countries between Lagos and Abidjan, with its main axis along the coast, connecting the main centralities of Accra, Lomé, and Cotonou, and extending far towards the north into the Sahel, integrating rural areas in various ways into the urban fabric. Armelle Choplin analyses this process in her book

Concrete City through the lens of the production, circulation, and consumption of cement, which is literally and metaphorically binding this huge region together. She follows the itinerary of cement bags from the production plant to the plot and observes the actors involved in the cement chain, showing how state actors are launching large-scale projects, global cement companies are investing in promising markets, and local people are developing their personal construction sites. In a complementary analysis presented in this book, Alice Hertzog explores the emerging metropolitan condition along this corridor by following the circulation of people and goods. She analyses the complex relationships that emerge through mobilities and movements that are producing entirely new urban configurations across borders and localities, bridging urban and rural areas and enabling the often-surprising experience of urbanity in everyday life.

CONCLUSION: HOW URBANISATION CHANGES THE PLANET

The overview of the recent scholarly literature presented in this section testifies to the breadth of analyses of extended urbanisation. They form a quickly expanding field of study that goes far beyond the classic understanding of urban studies, crossing borders to various other fields and disciplines, thus offering openings in different directions. The focus of the analysis presented here is on the identification and conceptualisation of different *urbanisation processes*, which resulted in a necessarily incomplete and still preliminary list of processes: urbanisation of agricultural areas; extended industrial urbanisation; extended urbanisation through infrastructure production; enclosure as urbanisation process; operationalisation of landscapes; extended peripheralisation; and production of polynucleated metropolitan zones. The identification of these processes can help to grasp the quite diffuse and disruptive phenomenon of extended urbanisation.

In order to better understand the full dynamics of contemporary urbanisation, we have to think about the different urbanisation processes in their relationships to each other. Urban territories are often dominated and transformed by specific combinations of urbanisation processes. Processes of concentrated, extended and differential urbanisation are not mutually exclusive and may exist side by side. It is, therefore, important to maintain a dynamic view of urbanisation. In this way, it is possible to analyse the sometimes highly volatile dynamics of urbanisation processes in their mutual interactions.

At the same time, it is also important to problematise the devastating effects that extended urbanisation may generate. These processes are often accompanied by massive and brutal interruptions of people's everyday lives and livelihoods, leading to violent displacements and dispossessions. They are usually aimed at the commodification of space, resulting in the production of an abstract space. As processes of enclosure, operationalisation, and peripheralisation show, abstraction is a real, material process with concrete effects and consequences, such as the homogenising and standardising of everyday life and the evacuation of the social. At the same time, many processes of extended urbanisation are devastating our planet, aggravating the most dramatic and existential threats, from the climate crisis to the biodiversity and the food crisis. The de-centring analytical perspective of planetary urbanisation reveals the full dimensions of extended urbanisation, often resulting in the most unsustainable way to develop urban spaces. For example, the cement industry is one of the world's largest emitters of greenhouse gases, and the unregulated and scattered distribution of industrial plants, real estate projects, and all sorts of facilities along urban corridors and across disintegrated hinterlands multiply energy consumption for private transportation. These observations suggest that city-centric approaches not only become instruments for creating allegedly sustainable urban islands of prosperity for the rich, but also shield this other side of urbanisation from view.

This situation urgently demands the development of alternatives to these kinds

of urbanisation processes. Many struggles at very different places and on different levels and scales have been arising against extended urbanisation in recent times, struggles by Indigenous people, peasants, workers, and migrants, for land, food, jobs, and livelihoods. There are countless acts of resistance against large-scale projects, blocking streets and occupying land, but also unspectacular everyday struggles, such as creating facts on the ground by constructing houses to defend the land. The production of settlements and neighbourhoods is often the work of the subaltern in both central and peripheral areas, and the demand for self-determination is universal. Many of these struggles have long been generating connections and networks between peripheries and metropoles, creating popular centralities, places for meeting and encounter, advancing difference and communality. It is urgent to go beyond the urban and non-urban binary and to link these still often separated struggles with each other in the fight for a different planet.

ENDNOTES

1 Schmid, *Henri Lefebvre and the Theory of the Production of Space,* and "Specificity;" Diener et al., *The Inevitable Specificity of Cities.*
2 For an earlier version of this part see Schmid, "Analysing Extended Urbanisation."
3 Lefebvre, *Urban Revolution.*
4 Monte-Mór, "What is the Urban in the Contemporary World?"
5 Merrifield, *The New Urban Question;* Brenner and Schmid, "Planetary Urbanization"; Brenner and Schmid, "Towards a New Epistemology"; Brenner, *Implosions/Explosions*; Schmid, "Journeys through Planetary Urbanization."
6 For critiques of the concept of planetary urbanisation see Scott and Storper, "The Nature of Cities"; Peake et al., "Placing Planetary Urbanisation in Other Fields of Vision"; Davidson and Iveson, "Beyond City Limits." For illuminating insights into different aspects of the planetary urbanisation debate, see Buckley and Strauss, "With, Against and Beyond Lefebvre"; Angelo and Goh, "Out in Space"; Goonewardena, "Planetary Urbanization and Totality"; Addie, "Stuck Inside the Urban."
7 Brenner and Schmid, "Urban Age in Question."
8 Brenner and Schmid, "Towards a New Epistemology."
9 Brenner and Schmid, "Urban Age in Question"; UN Habitat, *World Cities Report.*
10 Merrifield, "The Right to the City," 475.
11 Lopes de Souza, "Right to the Planet."
12 Angelo and Wachsmuth, "Urbanizing Urban Political Ecology," 16.
13 Cairns, "Debilitating City-Centricity," 115.
14 Brenner and Schmid, "Urban Age in Question."
15 Park et al., *The City*; Scott and Soja, *The City.*
16 Whyte, *The Exploding Metropolis.*
17 Lefebvre, *Urban Revolution*, 169.
18 Brenner and Schmid, "The Urban Age in Question."
19 Brenner, "Introduction."
20 Roy, "What Is Urban about Critical Urban Theory?"; Jazeel, "Urban Theory with an Outside."
21 Lefebvre, *Urban Revolution*, 30.
22 Massey, *Space, Place and Gender*; Allen, *Lost Geographies of Power.*
23 UN-Habitat, *New Urban Agenda.*

24 See e.g. Angelo and Wachsmuth, "Why Does Everyone Think Cities Can Save the Planet?"
25 Glaeser, *Triumph of the City;* Brugmann*, Welcome to the Urban Revolution.*
26 Schmid, "Henri Lefebvre, Right to the City."
27 Scott and Storper, "The Nature of Cities," 1.
28 Engels, *The Condition of the Working Class in England*, 326.
29 Marx, *Capital*, Vol. 1, 446. Translation by author from MEW 23, 348.
30 See Schmid, *Henri Lefebvre and the Theory of the Production of Space,* 410–414.
31 Weber, *Theory of the Location of Industries.*
32 Veltz, *L'économie d'archipel,* 74.
33 Scott, *Regions and the World Economy*; Storper, *The Regional World;* Amin and Thrift, "Neo-Marshallian Nodes in Global Networks"; Phelps and Ozawa, "Contrasts in Agglomeration"; Krätke, *The Creative Capital of Cities.*
34 Veltz, *L'économie d'archipel.*
35 Scott and Storper, "The Nature of Cities," 7.
36 Amin, *Accumulation on a World Scale*; Quijano, "The Urbanization of Latin American Society". Friedmann, "The Future of Urbanization in Latin America"; Massey, *Spatial Divisions of Labour*; Smith, *Uneven Development*.
37 See e.g. Braudel, *The Mediterranean;* Cronon, *Nature's Metropolis.*
38 This is a fact that is affirmed by Scott and Storper. See "The Nature of Cities," 5.
39 Harvey, "Cities or Urbanisation?" 44.
40 Bairoch, 11.
41 Braudel, *The Mediterranean.*
42 Thünen von, *The Isolated State.*
43 Schmidtgall, *Friedrich Engels*, 88.
44 Marx, *Capital Vol. 1*, 741–744.
45 Goonewardena, "The Country and the City."
46 Federici, *Re-enchanting the World;* Sevilla-Buitrago, "Urbs in Rure."
47 Marx, *Capital Vol. 1*, 761, 773–774.
48 Luxemburg, *The Accumulation of Capital*, 452–453.
49 Harvey, *The New Imperialism.*
50 See e.g. Hart, "Denaturalizing Dispossession".
51 Cerdá, *General Theory of Urbanization 1867;* Adams, "Natura Urbans, Natura Urbanata"; Lopez de Aberasturi, "Pour une lecture de Cerdá."
52 Brenner and Schmid, "Urban Age in Question."
53 Quijano, "The Urbanization of Latin American Society"; Santos, *The Nature of Space;* Monte-Mór, "Modernities in the Jungle." See also Vegliò, "Postcolonizing Planetary Urbanization"; Lukas and Reis, "Old and New Dimensions of Peripheral Urbanization."
54 For this section, see Brenner and Schmid, "Towards a New Epistemology."
55 Brenner and Schmid, "Towards a New Epistemology," 154.
56 Schmid and Streule, *Vocabularies for an Urbanising Planet*.
57 Schmid, *Henri Lefebvre and the Theory of the Production of Space* and "Specificity;" Diener et al., *The Inevitable Specificity of Cities*.
58 An earlier version of this Part II is published in Schmid, "Analysing Extended Urbanisation."
59 McGee, "The Emergence of Desakota Regions in Asia."
60 Ginsburg et al., *The Extended Metropolis*.
61 Monte-Mór, *Modernities in the Jungle*, 6–7, 13.
62 Monte-Mór, *Modernities in the Jungle*, 7.
63 Brenner and Schmid, "Towards a New Epistemology," 167.
64 See e.g. Connolly et al., "Extended Urbanisation and the Spatialities of Infectious Disease."
65 Brenner and Ghosh, "Between the Colossal and the Catastrophic," 881.
66 Lefebvre, *The Urban Revolution*, 17.
67 Meili, "Is the Matterhorn City?" See also Schmid, "Travelling Warrior and Complete Urbanization in Switzerland".
68 Streule, "Doing Mobile Ethnography."
69 Diener et al., *Switzerland: An Urban Portrait.*
70 Diener et al., *The Inevitable Specificity of Cities*; Diener et al., *Territory.*
71 Topalović, *Hinterland: Singapore Beyond the Border.*
72 Katsikis, "From Hinterland to Hinterglobe."
73 Brenner and Katsikis, "Operational Landscapes,"; Brenner and Katsikis, "Is the Mediterranean Urban?"
74 Couling and Hein, *Urbanisation of the Sea.*
75 Arboleda, "In the Nature of the Non-city," "Spaces of Extraction, Metropolitan Explosions," and *Planetary Mine.*
76 Monte-Mór and Castriota, "Extended Urbanization"; Castriota and Tonucci, "Extended Urbanization in and from Brazil"; Kanai, "Capital of the Amazon Rainforest," and "On the Peripheries of Planetary Urbanization"; Wilson and Bayón, "Concrete Jungle," and "Black Hole Capitalism"; Wilson, *Reality of Dreams.*
77 Swyngedouw, *Social Power and the Urbanization of Water;* Angelo and Wachsmuth, "Urbanizing Urban Political Ecology"; Kaika et al., *Turning up the Heat.*
78 Brenner and Ghosh, "Between the Colossal and the Catastrophic."
79 Corboz, "The Land as Palimpsest."
80 Lefebvre, *Production of Space*, 84, 123, 128, 334, 409.
81 Lefebvre, *Production of Space*, 329; see also Lefebvre, *Urban Revolution,* 151, 161.
82 Moore, *Capitalism in the Web of Life.*
83 Lefebvre, *Urban Revolution*, 155; Lefebvre, *Production of Space*, 336–337.
84 Brenner and Schmid, "Towards a New Epistemology"; Schmid, *Henri Lefebvre and the Theory of the Production of Space..*
85 See Schmid, "Henri Lefebvre's Theory of the Production of Space."
86 Lefebvre, *Production of Space.*
87 Harvey, *Consciousness and the Urban Experience.*
88 Lefebvre, *Right to the City*, 71.
89 See for examples Brenner, *New Urban Spaces*; Merrifield, *The New Urban Question*.
90 Lefebvre, *Production of Space,* 402–403.
91 Kanai and Schindler, "Infrastructure-led Development."
92 Simone, *For the City Yet to Come,* 118.
93 Veltz, *L'économie d'archipel.*
94 Harvey, *Limits to Capital*; see also Brenner, "Between Fixity and Motion" and Brenner, *New Urban Spaces*.
95 Harvey, *Limits to Capital,* xvi, 422.
96 Lefebvre, *The Production of Space*, 57, 120.
97 Lipietz, "Accumulation, Crises, and Ways Out"; Leborgne and Lipietz, "New Technologies, New Modes of Regulation."
98 DuPasquier and Marco, *Régulation Fordiste et post-Fordiste en Suisse*; Schmid, "Specificity and Urbanization."
99 This is particularly visible in the process of plotting urbanism. See Karaman et al., "Plot by Plot."

100 Brenner, *New Urban Spaces.*
101 Wilson, "Plan Puebla Panama."
102 Sidaway and Woon, "Chinese Narratives on One Belt, One Road."
103 Levien, *Dispossession Without Development.*
104 Lefebvre, *State, Space, World,* 223–253.
105 Brenner, *New State Spaces.* See also Brenner, *New Urban Spaces.*
106 Lefebvre, *Urban Revolution*, 97–98.
107 Lefebvre, *The Urban Revolution,* 96, 125, 173–174.
108 Davidson and Iveson, "Beyond City Limits."
109 Monte-Mór, *Modernities in the Jungle.*
110 Arboleda, "Spaces of Extraction, Metropolitan Explosions," 107.
111 Wilson, "Plan Puebla Panama."
112 Lopes de Souza, "Right to the Planet."
113 Halfacree, "Locality and Social Representation."
114 Mendras, *The Vanishing Peasant*, 7.
115 Phillips et al., "The Gentrification of a Post-industrial English Rural Village."
116 Marx and Engels, *The German Ideology*, 64.
117 Tang, "Town-Country Relations in China "; see also Wong, in this volume.
118 See e.g. Potts, *Circular Migration.*
119 Lefebvre, *Urban Revolution*, 103; Lefebvre, *Right to the City*, 71–72, 120.
120 Tang, "Where Lefebvre Meets the East"; Schmid, "Planetary Urbanization in Zürich"; Karaman et al., "Plot by Plot"; Simone, Jakarta: *Drawing the City Near.*
121 Araghi, "Global Depeasantisation."
122 Harris and Vorms, *What's in a Name?*; Topalov, "The Naming Process."
123 Zhao, "Jiehebu or suburb?"
124 See e.g. Keil and Wu, *After Suburbia.*
125 See e.g. Schmid et al., "Towards a New Vocabulary of Urbanisation Processes"; Bartels et al., "Towards Situated Analyses of Uneven Peri-Urbanisation."
126 See e.g. Garreau, *Edge City.*
127 Soja, *Thirdspace.*
128 See e.g. Teaford, *Post-Suburbia*; Nüssli and Schmid, "Beyond the Urban-Suburban Divide."
129 Datta and Shaban, *Mega-urbanization in the Global South*; Murray, *Urbanism of Exception*; Sawyer et al., "Bypass Urbanism."
130 Lukas and Reis, "Old and New Dimensions of Peripheral Urbanization."
131 Quijano, "The Urbanization of Latin American Society"; see also Vegliò, "Postcolonizing Planetary Urbanization."
132 Caldeira, "Peripheral Urbanization," 4.
133 Castells, *The Urban Question*; Harvey, *Urbanization of Capital.*
134 Forman, *Urban Regions,* 6; Scott and Storper, "The Nature of Cities."
135 See e.g. Taylor and Hurley, *A Comparative Political Ecology of Exurbia.*
136 Mbiba and Huchzermeyer, "Contentious Development: Peri-Urban Studies in Sub-Saharan Africa."
137 Friedmann, "Becoming Urban"; see also Friedmann and Sorensen, "City Unbound: Emerging Mega-conurbations in Asia."
138 Follmann, "Geographies of Peri-Urbanization in the Global South."
139 Meth et al., "Conceptualizing African Urban Peripheries."
140 Augé, *Non-Place*; Koolhaas, "Generic City."
141 Sudjic, *100 Mile City*; Sieverts, *Cities Without Cities.*
142 Corboz, *Vers la ville-territoire.*
143 Indovina, *La Città diffusa.*
144 Viganò et al., *The Horizontal Metropolis.*
145 Geddes, *Cities in Evolution,* 25.
146 Gottmann, *Megalopolis*, 4.
147 Gottmann, *Megalopolis*, 215.
148 Doxiadis, *Ekistics: An Introduction to the Science of Human Settlements*; Doxiadis and Papaioannou, *Ecumenopolis: The Inevitable City of the Future.*
149 For a thorough analysis of the concepts of Gottmann and Doxiadis, see Katsikis, "From Hinterland to Hinterglobe."
150 Harrison and Hoyler, *Megaregions*; Friedmann and Sorensen, "City Unbound: Emerging Mega-conurbations in Asia."
151 Florida et al., "The Rise of the Mega-Region."
152 Ascher, Veltz, *L'économie d'archipel.*
153 Hall and Pain, *The Polycentric Metropolis.*
154 Brenner, "Introduction: Urban Theory Without an Outside"; Roy, "What is Urban about Critical Urban Theory?"; Jazeel, "Urban Theory With an Outside."
155 Soja, "Regional Urbanization and the End of the Metropolis Era," 285.
156 Brenner and Schmid, "Planetary Urbanization" and"Towards a New Epistemology."
157 Brenner and Schmid, "Towards a New Epistemology," 167.
158 Balakrishna and Gururani, "New Terrains of Agrarian–Urban Studies"; Gosh and Meer, "Extended Urbanisation and the Agrarian Question."
159 Paprocki, "The Climate Change of Your Desires."
160 Kautsky, *On the Agrarian Question.*
161 Bernstein, "Is There an Agrarian Question in the 21st Century?"; McMichael, "Historicizing Food Sovereignty;" Arboleda, "Towards an Agrarian Question of Circulation."
162 Cairns, "Debilitating City-Centricity."
163 Gururani, "Cities in a World of Villages."
164 Diener et al., *Territory.*
165 Zhu, "Beyond Large-City-Centred Urbanisation"; Zhu, "In Situ Urbanization in China."
166 van Duijne et al., "Injected Urbanism?"; van Duijne and Nijman, "India's Emergent Urban Formations."
167 Bathla, "Planned Illegality."
168 Potts, *Circular Migration.*
169 Bertuzzo, *Archipelagos: From Urbanisation to Translocalisation.*
170 Paprocki, "The Climate Change of Your Desires."
171 Denis and Zérah, *Subaltern Urbanisation in India*; Mukhopadhyay et al., "Subaltern Urbanisation."
172 See e.g. Schmid, "Planetary Urbanization in Zürich."
173 Lefebvre, "Les nouveaux ensembles urbains"; Stanek, *Henri Lefebvre on Space,* 106–116.
174 Hart, "Multiple Trajectories", and "Denaturalizing Dispossession."
175 See also Wong, "Territorially-Nested Urbanization in China."
176 Kanai and Schindler, "Infrastructure-led Development" and "Peri-urban Promises of Connectivity."
177 Balakrishnan, "Recombinant Urbanization" and *Shareholder Cities.*
178 Wilson, "Plan Puebla Panama"; Wilson and Bayón, "Fantastical Materialisations."
179 See for example, Safina et al., "Rescaling the Belt and Road Initiative in Urban China."
180 Sevilla-Buitrago, "Urbs in Rure," 240.
181 Federici, *Re-enchanting the World.*
182 Gururani, "Cities in a World of Villages."
183 Levien, "Politics of Dispossession"; Levien, "From Primitive Accumulation to Regimes of Dispossession"; Levien, *Dispossession Without Development.*

184 Balakrishnan, "Recombinant Urbanization"; Balakrishnan, *Shareholder Cities.*
185 Joel Andreas et al., "Rural Land Dispossession in China and India."
186 Shatkin, *Cities for Profit.*
187 See for example, Sawyer et al., "Bypass Urbanism."
188 Araghi, "Accumulation by Displacement"; see also Ghosh and Meer, "Extended Urbanisation and the Agrarian Question," 1108.
189 Brenner and Katsikis, "Operational Landscapes: Hinterlands of the Capitalocene."
190 Mezzadra and Neilson, *The Politics of Operations,* 67.
191 Moore, *Capitalism in the Web of Life.*
192 Cronon, *Nature's Metropolis.*
193 Cordillo, "The Metropolis"; Paprocki, "All That Is Solid Melts into the Bay."
194 Topalović, "Palm Oil"; Hortig "Plantation Technologies"; Pratama et al., "Extended Urbanization through Capital Centralization."
195 Friedmann and McMichael, "Agriculture and the State System."
196 For more details on this broad and widely discussed field, see McMichael, "Historicizing Food Sovereignty"; Patel, "Food Sovereignty"; Gosh and Meer, "Extended Urbanisation and the Agrarian Question."
197 Hein, *Oil Spaces.*
198 Chusaini et al., "Petroleumscapes and the Urban Fabric."
199 Wilson, "We Are All Indigenous!"; Wilson, *Extractivism and Universality.*
200 Braudel, *The Mediterranean;* Hesse, *The City as a Terminal*; Hein, "Oil Spaces."
201 This account is reported as part of a comparative research project on Johannesburg, Shanghai, and London, see Robinson et al., "Financing Urban Development, Three Business Models."
202 See for instance, Fischer-Tahir and Naumann, *Peripheralization*; Kühn and Bernt, "Peripheralization and Power."
203 See for instance, Kockelkorn et al., "Peripheralization through Mass Housing Urbanization."
204 Diener et al., *Switzerland.*
205 Kanai and da Silva Oliveira, "Paving (through) Amazonia."
206 Wong, "Hong Kong, Shenzhen and Dongguan: Cross-border Urbanisation."

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