International Journal of
Urban and Regional Research

International Journal of Urban and Regional Research
DOI:10.1111/1468-2427.12115

URBAN WORLDS

# The 'Urban Age' in Question

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## Abstract

*Foreboding declarations about contemporary urban trends pervade early twenty-first century academic, political and journalistic discourse. Among the most widely recited is the claim that we now live in an 'urban age' because, for the first time in human history, more than half the world's population today purportedly lives within cities. Across otherwise diverse discursive, ideological and locational contexts, the urban age thesis has become a form of doxic common sense around which questions regarding the contemporary global urban condition are framed. This article argues that, despite its long history and its increasingly widespread influence, the urban age thesis is a flawed basis on which to conceptualize world urbanization patterns: it is empirically untenable (a statistical artifact) and theoretically incoherent (a chaotic conception). This critique is framed against the background of postwar attempts to measure the world's urban population, the main methodological and theoretical conundrums of which remain fundamentally unresolved in early twenty-first century urban age discourse. The article concludes by outlining a series of methodological perspectives for an alternative understanding of the contemporary global urban condition.*

## Introduction

Foreboding declarations about contemporary urban trends pervade early twenty-first century academic, political and journalistic discourse. Among the most widely recited is the claim that we now live in an 'urban age' because, for the first time in human history, more than half the world's population today purportedly lives within cities. Across otherwise diverse discursive, ideological and locational contexts, the urban age thesis has become a form of doxic common sense around which questions regarding the contemporary global urban condition are framed.

While thinkers as diverse as H.G. Wells, Patrick Geddes and Oswald Spengler had predicted the worldwide explosion of urbanization since the turn of the twentieth century (Madden, 2012), eminent demographer Kingsley Davis (1955) appears to have been the first scholar to predict, on strictly empirical grounds, the advent of an urban transition on

For critical comments and astute suggestions on this article we are extremely grateful to Nikos Katsikis, Jenny Robinson, Nathan Sayre and David Wachsmuth, as well as to IJURR's reviewers. Obviously, we assume full responsibility for any remaining blind spots, mistakes or omissions. We gratefully acknowledge the research assistance of Sky Milner, Hallie Chen, Travis Bost and Héctor Tarrido-Picart of the Harvard GSD and the generous research support of the Weatherhead Center for International Affairs, Harvard University.

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a world scale. Although urban historian Adna Weber (1899) had pioneered the statistical investigation of city population growth in diverse national contexts at the turn of the twentieth century, it was only in the 1940s that the size of the world's entire urban population became a topic of sustained research and debate among demographers, sociologists and historians (Davis, 1972). Louis Wirth (1969 [1937]: 144) opened his classic 1937 text on urbanism by speculating on this question, and Kingsley Davis devoted a major portion of his career over the next several decades to its systematic empirical exploration (Davis, 1945; 1955; 1959; 1965; 1969; 1972). Davis himself generally adopted a rigorously scientific tone, but his data, methods and analyses were quickly appropriated to frame speculations regarding the global urban predicament. In a typical example, in the inaugural issue of *Urban Affairs Quarterly*, architect and UN housing analyst Ernest Weissmann (1965) built upon Davis' demographic data to anticipate a *fin de siècle* world-scale urban transition. Adopting an apocalyptic tone that would soon become *de rigueur* in such projections, Weissmann argued that over 60% of the world's population would be urban as of 2000, that the resultant 'urban crisis in the world' would require a 'rate of construction . . . over 40 times that of the past', and that this situation would in turn 'harbor dangers for human progress no less frightening than atomic warfare' (Weissmann, 1965: 66, 69; *passim*).

UN research teams had been systematically tracking global population levels since 1951, and began to produce worldwide data coverage as of 1968 (Davis, 1972: 5). It was only from the mid-1980s onwards, however, that UN analysts began to anticipate a world-scale urban transition in their regular reports on human settlement trends. An issue of a UNESCO magazine from 1984 on 'The urban explosion' articulated an early version of this claim:

> The universalization of urbanism is a new fact. Before the year 2000, for the first time in the history of humanity, the world will have more town dwellers than country dwellers . . . This demographic and urban evolution is taking place in the context of an economic crisis and the imbalance in population distribution will be accompanied by an increasing gap in the distribution of wealth (Glissant, 1984: 24, 25).

During the following decade, this prediction was repeated within the UN's regular reports on *World Urbanization Prospects*, and by the mid-1990s it had become the framing observation around which the United Nations Center for Human Settlements (UN-Habitat) opened its second *Global Report on Human Settlements* (UN-Habitat, 1996: xxi). During the early 2000s, a series of UN studies declared the dawn of this 'urban age' to be imminent, and in 2007 two major UN agencies framed their yearly reports around the following dramatic assertions:

> In 2008 the world reaches an invisible but momentous milestone. For the first time in history, more than half its human population, 3.3 billion people, will be living in urban areas (UNFPA, 2007: 1).

> Sometimes it takes just one human being to tip the scales and change the course of history. In the year 2007, that human being will either move to a city or be born in one. Demographers watching urban trends will mark it as the moment in which the world entered a new millennium, a period in which, for the first time in history, the majority of the world's people will live in cities (UN-Habitat, 2007: 1).

Since the mid-2000s, the thesis of an urban age has also gained considerable international prominence and resonance through the work of The Urban Age Project, a multi-sited conference series and research initiative organized through the Cities Programme at the London School of Economics (LSE) and funded through a major grant from the Deutsche Bank's Alfred Herrhausen Society. The LSE-Deutsche Bank project has, to date, produced two graphically striking and widely distributed volumes, *The Endless City* and *Living in the Endless City* (Burdett and Sudjic, 2006; 2010) both of which are framed with direct reference to the UN agency demographers' assertions. Although the


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LSE-Deutsche Bank volumes contain a range of substantive arguments and place-specific narratives regarding the contemporary global urban condition, the overarching thesis of an urban age is its central framing device. As the volumes' editors explain:

> Given that more than half the world's population is now living in cities — a number that is likely to reach 75 percent by 2050, while it was only 10 percent in 1900 — . . . urban questions have become truly global ones, with significant consequences for the future of our planet (Burdett and Rode, 2006: 8).

The urban age thesis is also prominently represented on the cover images of both LSE-Deutsche Bank volumes through a series of numbers, percentages and symbols that highlight the 50% global urban population threshold that is claimed to have recently been crossed. These pictorial illustrations of the urban age thesis serve as powerful, accessible branding devices through which the LSE-Deutsche Bank project represents its perspective on global urban research and practice (see Figure 1).

But the urban age thesis is not only the province of UN demographers and the LSE-Deutsche Bank research team. Since the late 1990s it has been embraced with increasing frequency in international urban scholarship and policy research, often by influential thinkers and practitioners, as a convenient metanarrative for framing a wide variety of investigations within or about cities. Thus, in the early 2000s, Rem Koolhaas' Harvard research team opened its *Mutations* report with a page-sized, large-font rendition of the UN's urban age thesis (see Figure 2).

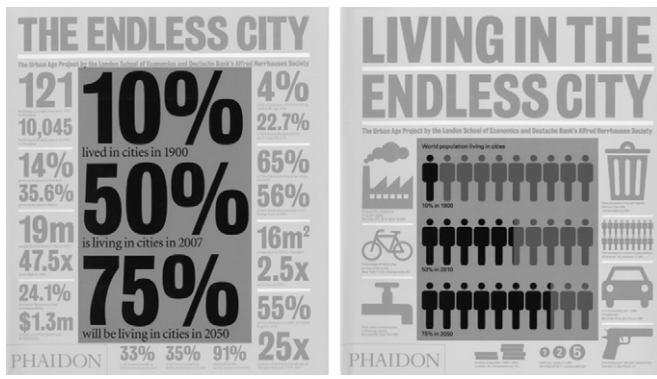


**Figure 1** The urban age as a branding device (*source*: Burdett and Sudjic, 2006; 2010: cover images, © Phaidon Press, reproduced by permission)

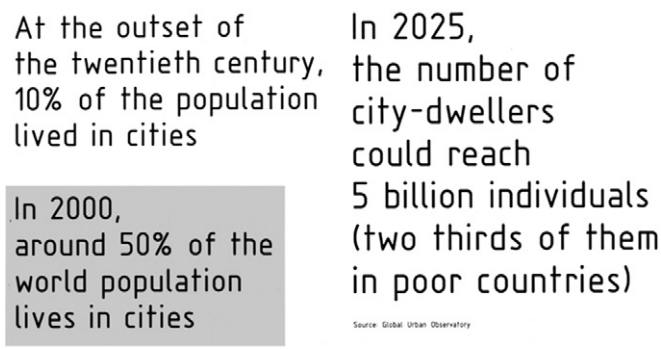


**Figure 2** The urban age as framing metanarrative (*source*: Koolhaas, 2000: 1–2, © Actar, reproduced by permission)


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Similarly, Manuel Castells (2002: ix) introduces a volume on urban inequality and community action in the developing world by suggesting that:

> Our blue planet is fast becoming a predominantly urban world. Probably around the time you are reading this book, we will be crossing the threshold of 50 percent of the world's population living in urban areas, up from 37 percent in 1970 . . . The forces behind this process of accelerated urbanization appear to be irreversible.

The claim is dutifully repeated by the editors of a 2008 special issue of the respected journal *Science*:

> Cities are now home to more than half the world's 6.6 billion humans. By 2030, nearly 5 billion people will live in cities (Ash *et al*., 2008: 739).

The trope is also repeated by researchers working for consulting firm McKinsey in a report on the economic role of cities:

> The world is in the throes of a sweeping population shift from the countryside to the city . . . for the first time in history, more than half of the world's population is now living in towns and cities (McKinsey Global Institute, 2011: 3).

Even the fiercely critical urbanist Mike Davis opens *Planet of Slums* (2006: 1) with his own formulation of the UN's declaration:

> Sometime in the next year or two, a woman will give birth in the Lagos slum of Ajegunle, a young man will flee his village in west Java for the bright lights of Jakarta, or a farmer will move his impoverished family into one of Lima's innumerable *pueblos jovenes*. The exact event is unimportant and it will pass entirely unnoticed. Nonetheless it will constitute a watershed in human history, comparable to the Neolithic or Industrial revolutions. For the first time the urban population of the earth will outnumber the rural.

As the above quotations indicate, the urban age thesis is today repeated with monotonous regularity across diverse discursive, institutional and political terrains, including by some of the most influential urban intellectuals of our time (Gleeson, 2012). Indeed, countless additional examples of this seemingly omnipresent discursive trope could be enumerated from international organizations (including the UN, the World Bank and the World Health Organization), research reports by governmental and non-governmental agencies, international scholarly journals, magazine and newspaper articles, as well as from planning, design and consultancy documents, conference dossiers and public presentations by politicians, developers, architects and urbanists around the world. The urban age appears, in short, to have become a *de rigueur* framing device or reference point for nearly anyone concerned to justify the importance of cities as sites of research, policy intervention, planning/design practice, investment or community activism. Much like the notion of modernization in the 1960s and that of globalization in the 1980s and 1990s, the thesis of an urban age appears to have become such an all-pervasive metanarrative that early twenty-first century readers and audiences can only nod in recognition as they are confronted with yet another incantation of its basic elements.

This article argues that, despite its long history in urban demography and its increasingly widespread influence in contemporary scholarly and policy discourse, the urban age thesis is a flawed basis on which to conceptualize contemporary world urbanization patterns: it is empirically untenable (a statistical artifact) and theoretically incoherent (a chaotic conception). This critique is framed against the background of postwar attempts to measure the world's urban population, the main methodological and theoretical conundrums of which remain fundamentally unresolved in early twenty-first century urban age discourse. The article concludes by outlining a series of methodological perspectives for an alternative understanding of the contemporary global urban condition.


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## Background: the postwar debate on urban population thresholds

Since the 1950s, when systematic research on the world's urban population was first attempted, analysts wrestled with a fundamental empirical and theoretical problem: how to determine the appropriate spatial boundaries of the areas whose populations were to be measured. Given the relentless dynamics of sociospatial restructuring that have continually reworked the boundaries, scale and morphology of urbanization since the nineteenth century, it would seem futile to impose statistical or analytical fixity upon any settlement space, urban or otherwise, for even the most basic demographic calculation. Yet is not precisely such a fixity required in order to measure the size of a population at any scale? Since the earliest attempts to measure the world's urban population, this thorny issue has been confronted through diverse methodological strategies, but it has never been adequately resolved. Demographic approaches attempt to solve this fundamentally spatial problem — where to draw the boundaries of an urban(izing) territory? — by converting it into a numerical one — how many inhabitants are required, within a *predefined* jurisdictional unit, to justify its classification as 'urban'? Thus emerged the debate on urban population thresholds (UPTs), which began in the 1930s and persists up to the present (Schnore, 1964; Bloom *et al*., 2010; Montgomery, 2010).

Kingsley Davis was one of the earliest contributors to such debates. In one of his most influential confrontations with this challenge, derived from his pioneering efforts to construct a World Urban Resources Index with his colleagues at Columbia University, he initially worked with a rather loose, contextually embedded notion of 'cities' as having substantially larger populations than smaller 'towns' and surrounding areas during a given historical period (Davis and Hertz Golden, 1954; Davis, 1955). While Davis suggested that the relevant UPT would vary historically, he ventured a definition of 'genuine urbanization' as a situation in which 'a substantial portion of the population lived in towns and cities' (Davis, 1955: 433). This notion was formalized as: '$U = P_c / P_t$' ($U$ = urbanization; $P_c$ = population of cities and $P_t$ = total population); the key insight was that urbanization rates could fluctuate 'independently of the absolute number of people living in cities' because they were contingent upon absolute (national) population size (Davis and Hertz Golden, 1954: 7). On this basis, reflecting on the period of capitalist modernization that ensued following the first industrial revolution, Davis introduced what is probably one of his better-known analytical maneuvers: he proposed a primary definition of cities as places containing a population of 100,000 or more, and a secondary one based on a smaller population threshold of 20,000. Based on this, in an adventurous foray into what was then largely uncharted statistical terrain, he and his colleagues produced some of the first estimations of world urban population since 1800, as well as some forecasts regarding future trends. A half century prior to the urban age declarations of UN-Habitat and the LSE-Deutsche Bank team, Davis (1955: 434) confidently proclaimed that 'the human species is moving rapidly in the direction of an almost exclusively urban existence'. A decade later, he was even more specific in his prediction: 'At the 1950–1960 rate the term "urbanized world" will be applicable well before the end of the century' (Davis, 1965: 52; see also Davis, 1972: 121).

But why a UPT of 100,000 and not a smaller or larger one? Davis offered no theoretical justification for his choice: he simply demonstrated what such a criterion, as well as his secondary one of 20,000, would entail in empirical terms for the urban measurements in question, both at a world scale and among the major world regions (Davis, 1955: 434, Figure 2). From the late 1950s and throughout the 1960s, along with his colleagues at Columbia's Bureau of Applied Social Research and Berkeley's Institute of International Studies, Davis intensified his efforts to fine-tune and deploy this scheme in the interest of creating a data set with basic units that would be suitable for cross-national comparisons. Despite several important technical and empirical modifications to the original formula, the specificity of such units was bracketed, or treated merely in passing. Their definition was understood primarily as a methodological challenge — as


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a 'problem of comparability' (Gibbs and Schnore, 1960: 160) resulting from a lack of standardized cross-national data and 'the technical problems presented by this deficiency' (Davis, 1959: 1–2).

And yet, even as Davis' statistical calculations appeared to reify the urban condition based on a relatively arbitrary UPT, he occasionally articulated a more nuanced understanding of the historical-geographical transformations that were unfolding around him. He thus concluded one of his early studies by insisting that 'one must guard against assuming that cities will retain their present form' (Davis, 1955: 437). In a speculative but prescient passage that pointed beyond the confines of a purely demographic approach, he succinctly outlined the dramatic processes of metropolitan expansion and dispersion that were already profoundly altering inherited urban and regional configurations during the early postwar period in which he was writing. In so doing, he considered the possibility that 'rurality' might disappear entirely in conjunction with the consolidation of a totally 'new kind of urban existence': 'At the periphery, it may well be that the metropolis and the countryside, as the one expands and the other shrinks, will merge together, until the boundaries of one sprawling conurbation will touch those of another, with no intervening pure countryside at all' (*ibid.*). In subsequent writings, Davis reiterated this acknowledgment with reference to intensifying 'suburbanization and fringe development' in the 'advanced societies', which he considered to cause 'the entire process of urbanization [to] become ambiguous' (Davis, 1965: 44). However, Davis left to others the task of reconciling such insights and predictions with his own, far more influential statistical estimations, the coherence of which hinged upon a tightly circumscribed, if not static, understanding of human settlement space.

The spatial essence of Davis' conceptualization was succinctly captured in a map produced by the UN's Division of Economic and Social Affairs, typical of several such maps produced by prominent urban social scientists during this time (for example, Berry, 1961: 580, Figure 1; Hoyt, 1966 [1962]: 329), which built extensively on Davis' data and methods (UN-DESA, 1969). Embedded within a text that repeatedly underscored the limitations of extant UN urban data in light of comparability problems as well as ongoing dynamics of sociospatial and demographic restructuring, the map nonetheless represented the state of knowledge on world urbanization by adopting a uniform UPT of 20,000 for all national data sets. Continental and subcontinental land masses were coded according to national urbanization levels as recorded in 1960 (see Figure 3).

From a contemporary point of view, three key aspects of this representation of world urbanization are particularly striking. First, the map contains no attempt to represent urban or rural areas, or even major cities. While the UN researchers considered the urban/rural divide to be a quantitative fact, demonstrable through hard demographic data, they appeared to consider the task of demarcating its precise spatial boundaries to be irrelevant, whether within or among states or continents. Consequently, the bulk of the world map is empty — the only lines of demarcation are national borders, subcontinental divisions and continental land masses. Second, the map articulates a vision of urbanization in which national territories and, through an aggregation technique, continents and subcontinents, are viewed as the natural scales of urbanization. In this manner, the UN researchers spatialized Davis' conceptualization of urbanization rates as a proportional measurement (city population growth as a proportion of national population growth). Within this framework, the geographical locations and spatial boundaries of cities and metropolitan regions were inconsequential; what mattered was their differential population sizes relative to those of larger units (national territories, subcontinents, continents). Third, although the map represents urbanization levels as an encompassing property of large-scale territories, its authors recognized that the 'urban' phenomena contained within the latter were, in practice, quite heterogeneous, even in purely demographic terms. Differences among cities whose populations exceeded the specified UPT of 20,000 were not captured in the map; nor were similarities among such putatively urban locations and those settlements that, owing to their lower population levels, were classified as non-urban or rural. In this way, the quest to code entire


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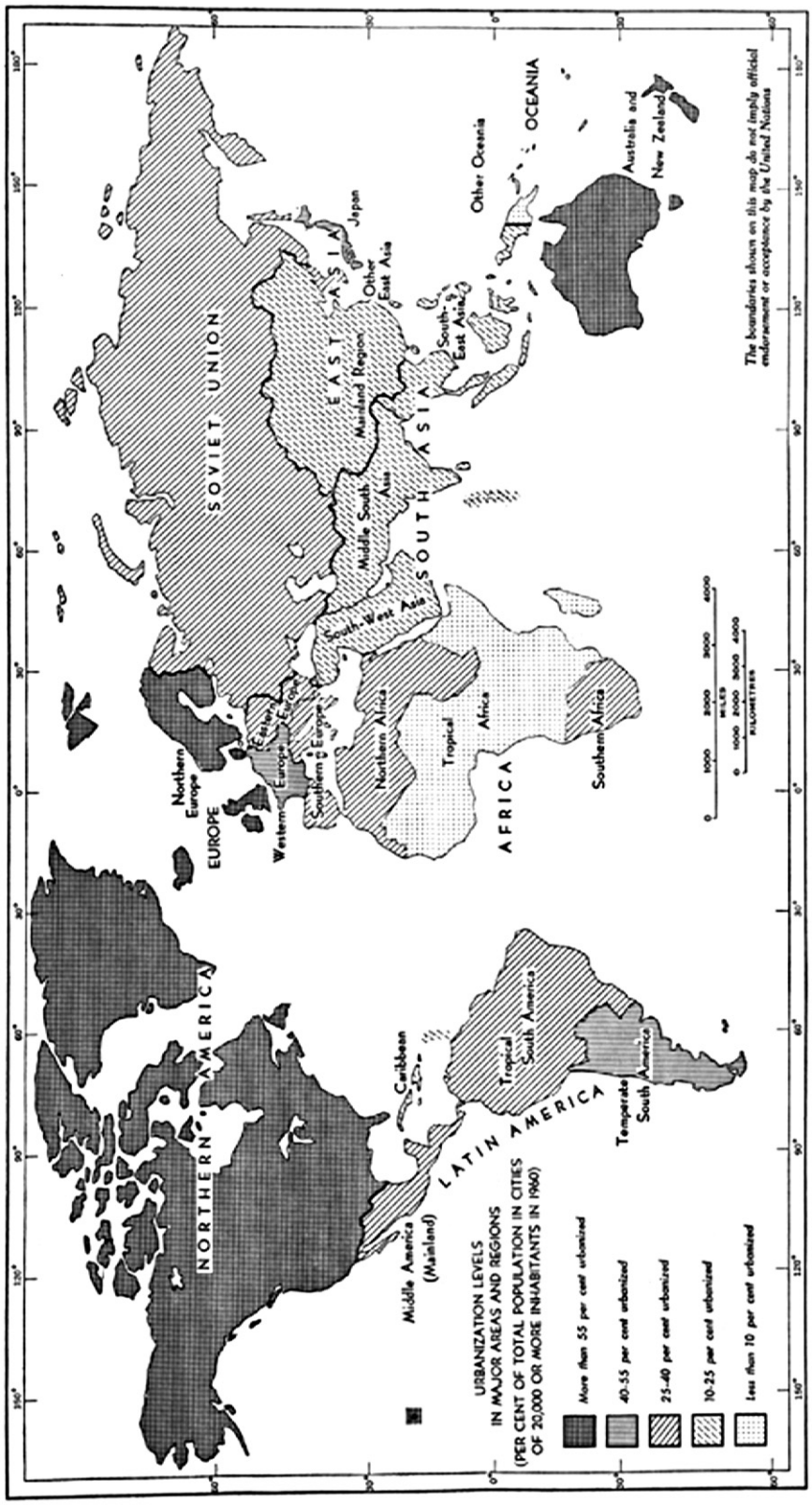


**Figure 3** The UN applies Kingsley Davis' territorialist approach to world urbanization (*source*: UN-DESA, 1969: 30, map 1)


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territories according to aggregate urbanization levels entailed a rather dramatic statistical and cartographic simplification of *de facto* patterns of internal sociospatial differentiation. However, for the UN-DESA research team, this homogenizing representation of national, subcontinental or continental territories was considered appropriate, given the need to grasp differential urbanization patterns on a *world* scale. While contemporary urban age metanarratives are grounded upon updated data, we argue below that they have reproduced in nearly identical form the underlying conceptual orientations, geographical imaginaries and representational strategies associated with this methodologically territorialist model of world urbanization from the 1960s.

## The theoretical imperative: postwar critiques of urban demography

In contrast to Kingsley Davis' empirical and methodological confrontation with the problem of defining the urban (population) unit, Louis Wirth (1969 [1937]) had insisted on its fundamentally theoretical character nearly two decades earlier. Even at that time, population-based definitions of cities had achieved such prominence among urban historians, sociologists and demographers that Wirth was motivated to open his major theoretical statement on urbanism with a frontal attack on them. In broad empirical terms, Wirth recognized the practical need for such definitions, but on a theoretical level he considered them ahistorical and indeterminate. Whether the relevant UPT was set at 2,500, 4,000, 8,000, 10,000, 25,000 or 100,000, Wirth maintained, a purely population-based definition of the urban condition was 'obviously arbitrary', since 'no definition of urbanism can hope to be satisfying if numbers are the sole criterion' (Wirth, 1969 [1937]: 145). In so far as UPT definitions always relied upon the boundaries of extant local and regional administrative units, they had to be viewed as artifacts of juridical convention rather than as indicators of sociologically meaningful circumstances.

Moreover, Wirth argued, given the constant flow of people across such boundaries, population-based definitions of urban areas provided no more than a rough, and often highly misleading, indication of urbanity. Ostensibly 'non-urban' settlement units located on the fringes of metropolitan centers often had more in common with the latter areas than with larger towns situated in more isolated regions. He thus curtly dismissed the demographers' apparent assumption that 'urban attributes abruptly ceased to be manifested beyond an arbitrary boundary line' (*ibid.*: 146). In a formulation that is strikingly reminiscent of Marx and Engels' (2000 [1848]: 248–9) characterization of the capitalist world economy in *The Communist Manifesto*, Wirth (1969 [1937]: 143–4) insisted that the twentieth-century urban condition had to be understood with reference to thickening webs of connectivity among dispersed, differentiated, expanding and unstable constellations of metropolitan social organization, and increasingly, to an emergent worldwide horizon towards which urbanization processes were radiating:

> The degree to which the contemporary world may be said to be 'urban' is not fully or accurately measured by the proportion of the total population living in cities. The influences which cities exert upon the social life of man [*sic*] are greater than the ratio of the urban population would indicate, for the city is . . . the initiating and controlling center of economic, political, and cultural life that has drawn the most remote parts of the world into its orbit and woven diverse areas, peoples, and activities into a cosmos.

However, despite Wirth's recognition of the spatially expansive, boundary-superseding dimensions of urbanization, his theory of urbanism was almost completely insulated from such insights, and from the largely uncharted analytical and empirical terrain they opened up (Brenner, 2012). His theory was instead premised on the assumption that social life continued to be — indeed, necessarily *is* — organized into coherently bounded spatial envelopes ('human settlements') that could be neatly


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typologized, and whose demographic properties (including his classic triad of size, density and heterogeneity) engendered distinctive forms of social behavior within those boundaries. In other words, even if UPTs could not be relied upon to classify the spatial unit in question, Wirth continued to presuppose that this unit would naturally be characterized by certain sociospatial properties — discreteness, coherence and boundedness. It is this element of Wirth's theory that has been canonized in twentieth-century urban sociology, but we shall see that his critique of urban demography and, more generally, his insistence on the fundamentally theoretical character of the urban question are far more relevant to contemporary discourse on the world urban condition.

The Marxian interventions of the young Manuel Castells (1977 [1972]) in the 1970s resonate in unexpected ways with Wirth's earlier critique of urban demography. Although he dismissively characterized Wirth's theory of urbanism as a culturalist account of intra-national spatial diffusion, Castells opened *The Urban Question* with a ferocious critique of urban demography that was essentially identical to that which the Chicago School sociologist had presented four decades previously. Surveying at some length the various UPTs that had been embraced by previous urban scholars, as well as by the United States Census Bureau and the European Conference of Statistics, Castells (*ibid*.: 10) bluntly rejected them as expressions of a 'statistical empiricism'. Like Wirth, Castells doubted the reliability of 'criteria of administrative practice' for analytical purposes, since they could not adequately capture 'the acceleration of the rhythm of urbanization throughout the world' (*ibid*.: 11, 15). Despite his otherwise sharp disagreements with Wirth, Castells (*ibid*.: 101–12) likewise insisted that the only viable delimitation of the urban unit would have to occur on theoretical grounds. Because of the 'almost complete lack of correspondence between [juridical and] political frontiers and the specificity of their social content' (*ibid*.: 235), as well as the constantly changing form and scale of urbanization processes under modern capitalism, Castells unwittingly concurred with Wirth that purely empirical and territorial definitions of the urban — including those associated with UPTs — would remain doomed to arbitrariness, inconsistency and nearly immediate obsolescence. While the influence of the young Castells' proposed theoretical solution to this problem has long since waned, his emphasis on the intrinsically theoretical character of the urban is, like that of his erstwhile sociological antagonist Wirth, a highly salient analytical reference point for contemporary urban studies, especially in relation to the urban age thesis.

The sharply critical epithets launched by Wirth in the 1930s and redeployed by Castells in the 1970s against the use of UPTs in the study of urbanization — *arbitrary*, *empiricist*, *ahistorical* — apply with striking accuracy to contemporary versions of the urban age thesis. Accordingly, in what follows, we subject early twenty-first century urban age discourse to a contemporary critique. This critique is intended to apply to the broad constellation of urban age references, discourses, metanarratives and projects that were surveyed at the outset of this article. However, because the UN's collection of urban data continues to be treated by 'end-users . . . as if it is absolute truth' (Cohen, 2004: 25) and remains the authoritative bibliographical reference for contemporary proclamations of an urban age, it is given specific attention here.[1]

1 The UN has regularly updated its data and, to a lesser extent, its methods of data collection in various ways since the late 1960s (for an overview see Champion, 2004). The most recent collection of UN urban data is available in the 2011 revision of its series *World Urbanization Prospects* (UN-DESA-PD, 2012); an online version of the report provides the raw data files as well as a variety of maps and graphs based on the latter. While this discussion subjects several key aspects of the UN's approach to severe criticism, it should be acknowledged that the organization's long-term commitment to the collection of worldwide urban data has contributed a valuable starting point for analyses of planetary urbanization patterns. Despite the problems discussed below, the most recent version of *World Urbanization Prospects* includes useful data on city-size distributions and city population levels for some of the world's largest metropolitan regions since the 1970s. The


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## Urban age as statistical artifact

Before returning to the theoretical critiques of urban demography developed by Wirth and Castells, some major empirical problems with the urban age thesis require attention. Foremost among these is the continued lack of agreement on what needs to be measured, and at what spatial scale, in analyses of world urbanization. Across national contexts, including in the UN's data sets, there is no standardized definition of the urban unit on the basis of which population size, density or other proposed indicators of urbanization levels are to be measured. In effect, the same problems of data compatibility and boundary demarcation that vexed Kingsley Davis and his colleagues in the 1950s and 1960s remain completely unresolved in the urban data sets that have been assembled regularly by the UN Population Division from the early 1970s through to the most recent revision of *World Urbanization Prospects* in 2011 (UN-DESA-PD, 2012).

The problem has been discussed extensively among UN demographers and statisticians since the 1950s, leading the organization to issue and regularly update general guidelines regarding the appropriate means to delineate localities (for a detailed overview, see Champion, 2004). Nonetheless, UN researchers have recurrently concluded that national statistical offices are best positioned to determine how the 'urban/rural boundary' should be demarcated. The UN's continued reliance on such 'state-istics' for its supposedly global urban analyses is unsurprising since, as Peter J. Taylor (2002: 1) notes, 'large-scale data collection on human activities has its origins in state needs and continues to be dominated by states'. To the degree that the UN has proposed a technical resolution to this conundrum, its recommendations resonate closely with those introduced by Kingsley Davis in the mature phase of his work on the topic in the late 1960s at Berkeley — namely, the combination of population size indicators with subsidiary ones pertaining to density, labor market structure and infrastructural outlays.[2] But even if implemented consistently, such strategies would still hinge on data resolved at the scale of (subnational) state administrative units, albeit now recombined in an effort to account for *de facto* patterns of agglomeration and land use within adjacent juridical units. In practice, however, even these modest proposals for enhancing cross-national data compatibility have proven impossible to implement owing to the persistence of nationally specific census practices and the UN's continued reliance on such state-centric data for its analysis of urbanization. Consequently, as Champion (2004: 41) concludes, 'the bottom line is that the world's major source of published international comparative statistics on urban population — the United Nations — is still using essentially the same "spectacles" as it adopted half a century ago'.

Those weathered 'spectacles' have generated an extremely blurry vision of the global urban condition. In particular, the wildly divergent criteria of urbanity used by national census bureaus — whether administrative, population-based or otherwise — have profoundly skewed the UN's estimations of the world urban population. Evidence of these problems is readily available in the UN's own data tables and analytical reports,

challenge, we argue, is to devise new methods of data collection and analysis that more effectively illuminate the long-term trajectory of sociospatial restructuring under capitalism. Confronting this challenge entails a significant labor of *(re)conceptualization* in relation to the fundamental nature of urbanization itself (Lefebvre, 2003 [1970]; Diener *et al*., 2006; Schmid, 2006; Brenner and Schmid, 2011; Schmid, 2012; Brenner, 2013). To the degree that influential authors and organizations appropriate the UN's data and analyses uncritically, as though they were offering an unmediated window into 'raw facts' of the global urban condition, the need for this labor of reconceptualization is obscured.

2 In the late 1960s, researchers from the UN Population Division appear to have directly appropriated the new measurement techniques that were being developed in Kingsley Davis' research lab during this time. In a terse footnote to the book-length culmination of his decades-long investigation, Davis (1972: 6, note 6) indicates as much, suggesting that UN statisticians had adopted his Berkeley research team's methodological innovations without proper attribution after several visits by high-ranking UN officials to his lab.


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and they have also been examined extensively by critical demographers (Bocquier, 2004; Champion, 2004; Champion and Hugo, 2004; Cohen, 2004; Satterthwaite, 2007; Montgomery, 2010; Satterthwaite, 2010). As of the 2001 revision of *World Urbanization Prospects* (UN-DESA-PD, 2002), 109 UN member countries (38%) used administrative criteria as the sole or primary basis for their urban definitions. This meant that some municipalities or localities were declared to be urban regardless of population size or other indicators, while others, often large and densely settled, were excluded by administrative fiat. This also meant that significant population clusters located on the peri-urban fringes of large metropolitan settlements, but positioned outside the city's official administrative borders, were often classified as 'non-urban'. In the same data sample, population size was used as the sole or primary criterion for 98 national urban classifications (34%) — but UPTs varied quite widely across national contexts, from as little as 100 in Uganda, 200 in Iceland and Sweden, or 400 in Albania up to 2,000 in Angola and Cuba, 5,000 in Botswana and Zambia, and 10,000 in Benin and Italy (Brockerhoff, 2000: 6; Cohen, 2004: 26; Bloom *et al*., 2010: 22–3; Uchida and Nelson, 2010: 41).[3]

These problems have been further intensified in so far as many countries frequently change their official urban classifications, whether with reference to individual city boundaries or more general settlement typologies. Such definitional recalibrations may produce dramatic fluctuations in national and — in highly populous countries such as China, India, Brazil or Nigeria — *world* urban population levels entirely as a result of classificatory modifications. An equally serious problem relates to the timing of census data collection, which varies considerably across national states. Consequently, the population data used in the UN's urban analyses are often derived from divergent years. No less than 38% of the data used in the UN's 2001 *World Urbanization Prospects* were more than 8 years old (this figure was 56% for African countries); 43% of the global urban data were between 3 and 8 years old (Cohen, 2004: 27). The use of such varied indicators and classificatory schemata has generated some counterintuitive statistical outcomes. In a detailed overview, Satterthwaite (2010: 84, 85) lists several typical examples:

> Mexico can be said to be 74 or 67 per cent urban in 2000, depending on whether urban centres are all settlements with 2,500 or more inhabitants or all settlements with 15,000 or more inhabitants. China's level of urbanization in 1999 could have been 24%, 31% or 73% depending on which of three official definitions of urban populations was used . . . [I]n 1996, 18 per cent of Egypt's population lived in settlements with between 10,000 and 20,000 inhabitants and that had many urban characteristics including significant non-agricultural economies and occupational structures. These were not classified as urban types — although they would have been in most other nations. If they were considered urban, this would mean that Egypt was much more urbanized, causing major changes to urban growth rates.

The case of India adds an additional layer to the confusion: its national census bureau neglects to classify a huge number of small- and medium-sized towns with populations exceeding 5,000 as urban; if it were to do so, the country's urban population would instantly exceed the fabled 50% threshold (Satterthwaite, 2010: 84). Many additional examples could be enumerated, but the basic problem is evident: '[T]he units in which city populations are expressed can vary across all of the relevant dimensions: across countries, within countries and over time for a given city' (Montgomery and Balk, 2011: 93). Consequently, 'the scale of the world's urban population is strongly influenced by the urban criteria used within the largest population nations' (Satterthwaite, 2010: 85).

Given these systemic problems of data comparability within the UN's 'state-istics', is there any salvageable *empirical* content to the notion of an urban age? Clearly,

3 The remaining 28% of countries used economic criteria, other criteria, or failed to list their basis for classification (Champion, 2004: 34–35; Bloom *et al*., 2010: 23).


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populations are growing and changing around the world; their distribution across the sociospatial landscape is constantly being reshuffled; and so too is the territorial morphology and demographic composition of politico-administrative units across the world interstate system. Thus, even if its precise contours and timing may be difficult to measure, might a world urban transition nonetheless be unfolding, signaling some qualitative shift in the 'way of life' experienced by most people on the planet? Or, is the UN's famous prediction that a 50% global urban threshold has been crossed merely an artifact of inadequate 'state-istical' procedures that assimilate fundamentally heterogeneous conditions under a crudely simplistic classificatory scheme?

From a strictly empirical point of view, there are two main strategies for confronting these questions. The first involves recognizing the limits of extant UN data collection techniques, abandoning the notion of a rigid 50% global UPT, and postulating a broad *trajectory* of rural-to-urban sociospatial reorganization across all or most states in the world system, thus yielding aggregate evidence of an ongoing world-scale transition. Satterthwaite (2010: 85) suggests such a resolution as follows:

> [T]he world's level of urbanization is best understood not as a precise figure (50 per cent in 2008) but as being between 45 and 55 per cent, depending on the criteria used to define urban areas. It might be that the much-discussed transition to more than half the world's population living in urban areas actually took place some years ago, with its recognition delayed by various governments deliberately understating their urban populations by classifying most small urban centres as rural.

In this approach, the notion of a worldwide rural-to-urban transition is preserved, but its precise timing and sociospatial expressions are considered to be more fluid than in official UN analyses — it is, in effect, understood as a long-term, world-scale secular trend rather than as a conjunctural transformation. However, as in UN documentation, the urban/rural distinction and the notion of a discrete urban 'unit' are perpetuated. The main modification here is a greater level of reflexivity and flexibility in interpreting the heterogeneous forms of data that are subsumed under the urban age postulate.

A second, potentially more radical strategy involves abandoning the UN's approach to data collection with its dependence on state-centric sources, and elaborating new, spatially disaggregating approaches based on remote sensing techniques (Potere and Schneider, 2007; Potere *et al*., 2009; Montgomery and Balk, 2011). Such satellite-based data sources have been under development since the early 1990s and are now being mobilized with increasing technical sophistication in several US and European labs, research institutes and universities, including Columbia University's Earth Institute, the Oak Ridge National Lab and the European Environmental Agency. Major initiatives along these lines include, among others, the generation of nighttime lights satellite data by the National Oceanic and Atmospheric Administration (NOAA) and other government agencies, the development of new forms of georeferenced population data (the Global Rural-Urban-Mapping Project [GRUMP], the Gridded Population of the World [GPW] and the Landscan Global Population Database), and the elaboration of georeferenced data sets on global land cover (for instance, CORINE Land Cover and MODIS Urban Land Cover). The major attraction of such approaches is that they permit the investigation of changing patterns of agglomeration, population distribution, land cover and land use that are no longer completely reliant on national census data. The new array of mapping possibilities that flow from such techniques are productively complicating the representation of planetary urbanization processes (Potere and Schneider, 2007; Angel, 2011).

Whether recent developments in remote sensing might facilitate theoretically innovative interpretations of the global urban condition is a question that requires more sustained exploration elsewhere (Brenner and Katsikis, 2013). Here our concern is less to evaluate the empirical viability of the aforementioned two strategies than to suggest that both must be subjected to the same standard of theoretical reflexivity upon which


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Wirth and Castells had so forcefully insisted in their critical assessments of mainstream twentieth-century urban demography. From this point of view, the limitations of the contemporary urban age thesis cannot be effectively transcended by means of empirical maneuvers alone, be it through creative reinterpretations of the UN's census-based data or through the construction of georeferenced mappings of key indicators such as population density, land cover or nighttime light patterns. Like both Wirth and Castells, we contend that an intractable theoretical problem is hidden 'behind false evidence' (Castells, 1977 [1972]: 234) within any purely data-based approach to urban research — namely, the *qualitative* significance of the label 'urban' as an analytical basis for demarcating and interpreting sociospatial transformations. In the absence of theoretical reflexivity regarding this fundamental question, even the most sophisticated forms of urban data, georeferenced or otherwise, represent no more than inchoate heaps of information — in effect, early twenty-first century forms of the 'statistical empiricism' that Castells (1977 [1972]: 10) had so ferociously decried four decades ago.

## Urban age as chaotic conception

If the empirical edifice of the urban age thesis is unstable, its theoretical foundations are obsolescent, having been eroded through the dramatic forward-motion and geographical reorganization of the urbanization process which the thesis purports to be documenting. The basic problem is the *de facto* sociospatial fluidity and relentless dynamism of the urban phenomenon under modern capitalism: its endemic tendency to explode inherited morphologies of urbanism at all spatial scales; to create new, rescaled formations of urbanized territorial organization; and, as Wirth (1969 [1937]: 143–4) presciently recognized, to promote the 'urbanization of the world' by intensifying sociospatial independencies across places, territories and scales. The resultant, unevenly woven urban fabric (Lefebvre, 2003 [1970]) is today assuming extremely complex, polycentric forms that no longer remotely approximate the concentric rings and linear density gradients associated with the relatively bounded industrial city of the nineteenth century, the metropolitan forms of urban development that were consolidated during the opening decades of the twentieth century or, for that matter, the tendentially decentralizing, nationalized urban systems that crystallized across the global North under Fordist-Keynesian capitalism (Hall and Pain, 2006; Schmid, 2006; Soja and Kanai, 2006; Soja, 2010; Brenner and Schmid, 2011; Merrifield, 2011; Schmid, 2012; Brenner, 2013). As Soja and Kanai (2006: 59) explain:

> urbanism as a way of life, once confined to the historical central city, has been spreading outwards, creating urban densities and new 'outer' and 'edge' cities in what were formerly suburban fringes and green field or rural sites. In some areas, urbanization has expanded on even larger regional scales, creating giant urban galaxies with population sizes and degrees of polycentricity far beyond anything imagined only a few decades ago . . . [I]n some cases city regions are coalescing into even larger agglomerations in a process that can be called 'extended regional urbanization'.

Merrifield (2011: 468–9) characterizes the transformation in closely analogous terms:

> The urbanization of the world is a kind of exteriorization of the inside as well as interiorization of the outside: the urban *unfolds* into the countryside just as the countryside *folds* back into the city . . . Yet the fault-lines between these two worlds aren't defined by any simple urban-rural divide, nor by anything North-South; instead, centers and peripheries are *immanent* within the accumulation of capital itself . . . Absorbed and obliterated by vaster units, rural places have become an integral part of post-industrial production and financial speculation, swallowed up by an 'urban fabric' continually extending its borders, ceaselessly corroding the residue of agrarian life, gobbling up everything and everywhere in order to increase surplus value and accumulate capital.


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Kingsley Davis (1955: 437) explicitly recognized these powerful tendencies towards expanded urbanization and 'shrinking rurality' already in the 1950s, but continued to conceptualize the 'city' (or, eventually, the metropolitan region) as the basic unit within which the demographic dynamics of urbanization were contained, both analytically and geographically. Concomitantly, like most postwar social scientists, Davis persisted in labeling the inchoate realm located 'outside' or 'beyond' the expanding city using the traditional notion of the rural, even though he clearly recognized that its coherence and discreetness were being steadily compromised through metropolitanization, suburbanization, megalopolis formation and various forms of industrial, residential and infrastructural decentralization. Remarkably, contemporary declarations of an urban age replicate this methodological opposition by embracing the identical conceptual framework and geographical imaginary that Davis had relied upon — in particular, the core assumption that global settlement space can and must be divided neatly into urban or rural containers. On this basis, the thesis posits an ineluctable shift of population, in both relative and absolute terms, to the urban side of this dualism.

While urban age discourse is usually put forward as a set of empirical claims regarding demographic and social trends, the latter are premised upon an underlying theoretical and cartographic framework whose core assumptions, once excavated and scrutinized, are deeply problematic. Figure 4 presents a stylized overview of the key elements within this framework and their links to broader methodological tendencies in nineteenth- and twentieth-century urban social science (see Figure 4).

Urban age discourse is articulated in diverse methodological forms and ideological guises, but the elements presented in this figure can be viewed as its theoretical foundation. First (A), the theory is methodologically territorialist in so far as, like many entrenched traditions of twentieth-century social science, it assumes the territorial boundedness, coherence and discreteness of the spatial units in which social relations unfold (Taylor, 1994; Brenner, 2004). Methodologically territorialist approaches presuppose rather than examine or explain the historical construction and reconstitution of territorial boundaries at any spatial scale; they ignore the historical specificity and political instrumentalities of territory as a form of sociospatial organization (Elden, 2010); and they often bracket the role of non-territorial sociospatial processes such as place-making, networking and rescaling that likewise figure crucially in the structuration of political-economic relations (Jessop *et al*., 2008). Second (B), urban age theory conceptualizes urbanization primarily or exclusively with reference to the concentration of population within cities or urban settlements. While this conceptualization is fairly standard within most major twentieth-century traditions of urban studies (Soja, 2000; Gans, 2009), it can be argued that such understandings bracket the ways in which the formation of cities and urban zones is premised upon and in turn triggers a range of large-scale, long-term sociospatial transformations beyond the agglomeration itself, across less densely settled places, territories and scales (Berger, 2006; Soja, 2010; Brenner and Schmid, 2012; Brenner, 2013). The aforementioned intellectual influences have impacted diverse strands of twentieth-century social-science and urban studies, but in the contemporary notion of an urban age they have converged to form a particularly obfuscatory vision of the global urban condition.

As Figure 4 indicates, the intellectual core of the urban age thesis is (1) the methodologically territorialist assumption that the world is divided into discrete types of settlement, the classification of which facilitates understanding of major demographic and socioeconomic trends. On this basis, (2) the urban/rural opposition is presented as the analytical foundation for such classifications, an assumption that in turn hinges upon the largely uninterrogated claim (B) that certain unique social conditions obtain within cities or agglomerations that do not exist elsewhere. In most urban age discourse, this opposition is understood in zero-sum terms: all of settlement space must be classified as either urban or rural; the extension of the former thus entails the shrinkage of the latter. Although this conceptualization is most commonly traced to Wirth's (1969 [1937]) influential theory of urbanism, his analysis was in fact, as noted above, reflexively


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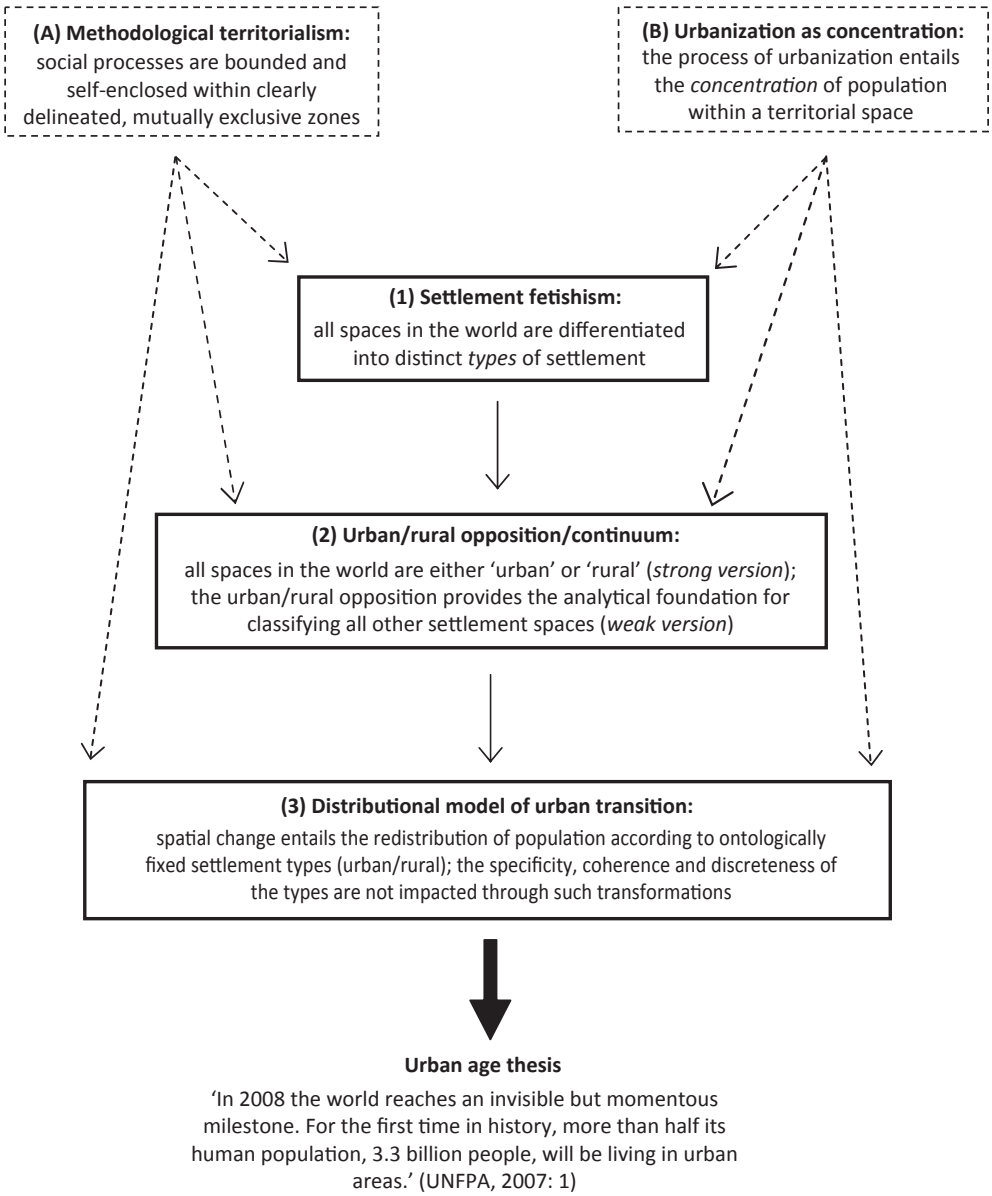


Note: Dashed lines and arrows indicate a contributing influence; bold lines and arrows indicate a core theoretical assumption.

**Figure 4** Conceptual architecture of the urban age thesis

attuned to the role of urbanization in intensifying interspatial interdependencies and reorganizing territorial organization across the world. Occasionally, urban age arguments are grounded upon weaker versions of this assumption, with the urban/rural opposition used to demarcate a continuum of settlement types rather than being presented as an either/or ontological choice (see UN-DESA, 1969: 66). But even within this more differentiated approach, the urban/rural opposition serves as an epistemological anchor for the exercise of classifying purportedly distinct types of settlement space. Whether presented as a dualism or as a continuum, this model engenders (3) a distributional notion of urban transition in which sociospatial change is said to occur through the


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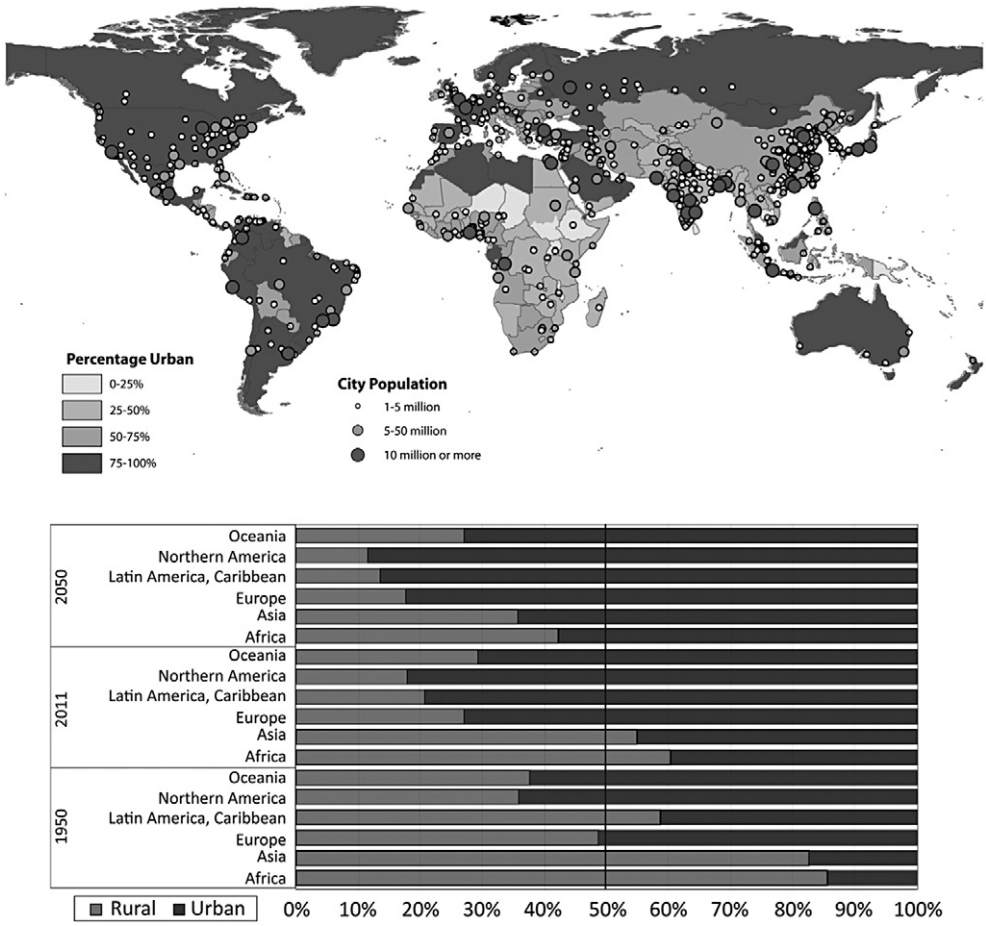


**Figure 5** The ontological division of settlement space into urban and rural zones in recent UN data and images (*source*: redrawn from UN-DESA-PD, 2012: http://esa.un.org/unpd/wup/Analytical-Figures/Fig_2.htm and http://esa.un.org/unpd/wup/Maps/maps_urban_2011.htm, accessed 14 June 2012)

reapportionment of populations from rural to urban settlement types. The possibility that these entrenched envelopes of settlement space might themselves be deconstructed or transformed through the process of sociospatial restructuring is thereby excluded from consideration by definitional fiat.

Some version of this constellation of assumptions is presupposed in all contemporary versions of the urban age thesis, but they are on display in a particularly pure form in Figure 5, which is drawn from the most recent edition of the United Nations publication *World Urbanization Prospects* (UN-DESA-PD, 2012).

These visualizations of the UN's most recent set of urban data embody, paradigmatically, the theoretical and cartographic framework associated with the notion of an urban age. The bottom portion of Figure 5 represents the evolution of global population geography through the application of a binary urban/rural classification to each global region in 1950, 2011 and 2050, respectively. In this understanding, the distribution of global population may shift, like the sands in an hourglass, but the containers in which populations are located remain ontologically fixed. The urban/rural opposition is thus conceived as a constant, unchanging feature of global settlement space, one that applies universally across social formations and time periods. The top


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portion of Figure 5 spatializes this set of assumptions in the form of a world map depicting urbanization levels in all national territories. Despite its updated data and its slightly modified visualization technique, this map is analytically identical to that produced by UN researchers in 1969 (see Figure 3 above; UN-DESA, 1969). As in the 1960s, urbanization is still represented as a property of national territories, which are once again graphically coded according to their respective percentage levels of urban (non-rural) population. While the top portion of Figure 5 also depicts the locations and population levels of some of the world's largest cities, its main purpose is to classify national territories using the dualistic urban/rural cartography outlined above.[4]

In the 1950s, the urban/rural dualism offered a conceptual reference point for empirically oriented UN demographers concerned with understanding observed differentials in infant mortality and fertility rates among populations in different settlement types (Champion and Hugo, 2004: 5). Today, however, this dualism and the broader concept of an urban age to which it has been attached have come to serve a broader academic and sociocultural purpose. The sense that cities are changing and growing with unprecedented speed and intensity; that more of the world's habitable territory is becoming 'urban'; that the erstwhile countryside is being eroded or degraded and that these tendencies represent something of a milestone in global human development — these sweeping generalizations, however simplistic, appear to offer a workable 'cognitive map' (Jameson, 1988) for navigating a rapidly restructuring worldwide sociospatial landscape defined by turbulence, uncertainty and rampant crisis tendencies, at once social, spatial and environmental. Consequently, the popularity of the urban age thesis, whether in scholarly, political and corporate discourse or in everyday life, would appear to be connected to the ways in which, however crudely, it gestures towards naming and beginning to interpret what are indeed widely experienced as profound, even epochal, transformations of urban sociospatial organization around the world.

Our claim, however, is that this cognitive map obfuscates much more than it reveals about contemporary urbanization processes. Particularly in light of the wide-ranging and disruptive sociospatial transformations outlined by Soja and Kanai (2006) and Merrifield (2011) in the passages quoted above, the theoretical cartography associated with the notion of an urban age functions as a chaotic conception, in the precise technical sense defined by Sayer (1992: 138): it 'divides the indivisible and/or lumps together the unrelated and the inessential, thereby "carving up" the object of study with little or no regard for its structure and form'.

First, the urban age thesis *divides the indivisible* in so far as it treats urban and rural zones as fundamentally distinct, thereby ignoring the pervasive imprint of urbanization processes on settlement spaces that, whether based on criteria of population size, administrative classification or otherwise, are officially categorized as rural. The invocation of an analytical or ontological divide among these purportedly distinct types of spaces prevents exploration of their structuration by some of the same political-economic processes, including capital accumulation, state regulation, the privatization of common resources (including land), financialization, migration and socioenvironmental degradation/transformation. Once such an analysis is undertaken, the use of the designation 'rural' becomes highly problematic (Halfacree, 2004), at least as a category of social scientific analysis. Increasingly, the urbanization process has become a global condition rather than simply a 'way of life' that is confined to certain types of settlement space as opposed to others (Lefebvre, 2003 [1970]; Soja, 2010; Merrifield, 2011). This emergent planetary formation of urbanization is deeply uneven and variegated, and emergent patterns and pathways of sociospatial differentiation within and across this worldwide urban fabric surely require sustained investigation at various geographic

4 Formally identical recent visualizations of the UN's urban population data include a time-series approach produced by UNICEF (2012) and a color-coded mapping by a journalist from *The Guardian* (Scruton, 2007).


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scales (Schmid, 2006; 2012). However, because of its reliance on a long outdated urban/rural dualism, the notion of an urban age is a crude instrument for this purpose.

Secondly, the urban age thesis *lumps together the unrelated and the inessential* owing to its inadequate specification of what specific phenomena are meant to be contained within each term of the urban/rural dualism. As used within urban age discourse, both of these categories are generalized to the point of meaninglessness; each refers to extremely heterogeneous conditions within and among national territories. For the most part, the notion of the rural used within urban age discourse is simply a 'black box': it refers to the residual zones of settlement that are purportedly 'not urban', but this is done without specifying what features these spaces might share across contexts, whether in terms of population size, density or composition, land use, labor markets, or any other indicators. More problematically still, in contrast to this pervasive black-boxing of the rural, the notion of the urban used within urban age discourse is radically *over*specified. The concept of the urban associated with the urban age thesis is used to refer to so many divergent conditions of population, infrastructure and administrative organization that it loses any semblance of analytical coherence. While the notion of an urban age is generally meant to imply a worldwide shift towards an encompassing, worldwide urban condition, its evidentiary base encompasses a vast spectrum of settlement conditions, ranging from small- and medium-sized towns to regional centers, metropolitan cores, large city-regions and sprawling megacities with populations exceeding 10 million (Montgomery, 2010). Yet there 'is little in common between small market towns in areas with stagnant economies in (say) Argentina, China and India and Buenos Aires, Shanghai and Delhi' (Satterthwaite, 2010: 96). Given the sweeping heterogeneity of settlement configurations and transformative processes that are subsumed under the notion of an urban age, it is highly questionable whether any meaningful theoretical content can be ascribed to it.

We thus return to the theoretically reflexive orientation towards the urban question emphasized by both Wirth and Castells many decades ago. As both authors insisted, without reflexive theoretical specification, the concept of the urban will remain an empty abstraction devoid of substantive analytical content and thus a blunt tool for deciphering or illuminating the nature of the conditions, processes and transformations to which it is applied. Unless the proponents of the urban age thesis can explicate what specific phenomena — sociospatial, demographic, administrative or otherwise — unify the ostensibly unrelated or inessentially connected zones of settlement that obtain with its sweepingly vague categorization of settlement space, then this crucial methodological condition has not been met; the term will remain no more than an empty abstraction.

## Conclusion: towards an investigation of planetary urbanization

Even when they are grounded upon chaotic conceptions, hegemonic understandings of major social processes may have wide-ranging impacts, for they mediate expert and popular discourse, representation, imagination and practice in relation to matters of considerable consequence for the organization of political-economic relations. Accordingly, as Wachsmuth (forthcoming) argues, the ideological dimension of urbanization requires sustained analysis and deconstruction by critical urban theorists, especially under conditions in which entrenched formations of sociospatial organization are radically reorganized to produce new landscapes of urbanization whose contours remain blurry, volatile and confusing, and are therefore particularly subject to fetishized forms of narration, representation and visualization (see also Goonewardena, 2005).

It would be extremely valuable, therefore, to track the ways in which the notion of an urban age has been disseminated and naturalized among powerful actors and institutions across the world urban system, and has, by consequence, influenced any number of


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policies related to the global urban condition.[5] For instance, Satterthwaite (2010: 95–6) suggests that the skewed data associated with the urban age thesis have had particularly problematic ramifications in policy debates related to urban poverty, public health and greenhouse emissions in the global South. One could also readily envision a range of related policy areas, including labor markets, housing, education, transportation, infrastructure development and energy provision, in which the theoretical precepts associated with this thesis (and, indeed, any other model that delineates a rigid urban/rural divide) have engendered distorted, confused and misleading understandings of the multiscalar forces shaping contemporary urbanization patterns around the world (McGee, 2008).

A more wide-ranging analysis of the practical effectivities of the urban age thesis would be of considerable interest and import at every conceivable spatial scale, not least for those committed to promoting more socially just and ecologically viable forms of urbanization in both North and South. For the moment, however, such an endeavor has only just begun to be pursued in relation to specific places and policy regimes in which the urban age thesis has garnered explicit attention among policymakers, for instance, owing to the intense local publicity generated through the LSE-Deutsche Bank's traveling conference initiatives in Southern megacities (Anand and Rademacher, 2011).

Can an alternative cognitive map of emergent urbanizing formations be constructed, one that supersedes the manifold limitations and blind spots associated with urban age discourse and other contemporary ideologies of urbanization? The urgency of this task is blunted by the entrenched empiricism that dominates so much of contemporary urban social science and policy discourse, leading researchers to emphasize concrete investigations and associated visualizations rather than interrogating the underlying conceptual assumptions and cartographic frameworks around which they are organized. This problem has been long recognized by radical spatial theorists, but it continues to impede theoretical innovation in early twenty-first century urban studies owing to the persistence of stubbornly entrenched spatial ideologies that treat the urban as a pregiven, self-evident formation to be investigated or manipulated. However, as Ananya Roy (2009: 820) has argued in a powerful critique of the hegemony of Euro-American urban theories: 'It is time to blast open theoretical geographies, to produce a new set of concepts in the crucible of a new repertoire of cities'. In a similar vein, Jennifer Robinson (2011: 19) has recently called for a 'rich and fragmented array of ongoing conversations across the world of cities' that will serve to unsettle parochially defined theoretical certainties. We strongly support these calls to supersede inherited urban epistemologies, but wish to connect them, in particular, to a new conceptualization of urbanization processes both within and beyond those settlement spaces that are demarcated as 'cities'.

While it is not possible here to elaborate our alternative approach to such an endeavor in detail, we conclude by outlining a series of epistemological guidelines that follow from the preceding critique of the urban age thesis. Our own current work on planetary urbanization is grounded upon these precepts, but we believe they could productively inform a variety of heterodox engagements with the urban question under early twenty-first century conditions.

- *The urban and urbanization are theoretical categories.* The urban is not a pregiven, self-evident reality, condition or form — its specificity can only be delineated in theoretical terms, through an interpretation of its core properties, expressions or dynamics. It is essential, therefore, that twenty-first century debates on urban questions reflexively embrace the need for conceptual abstractions related to the changing form and geography of urbanization processes. Without this recursive work of theory, the field of urban studies will be poorly equipped to decipher the nature and

5 For a brilliant example of how to track this process of interspatial policy transfer and mutation across scales and territories in the context of contemporary neoliberalization tendencies, see Peck and Theodore (2010) and Theodore and Peck (2012).


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implications of the complex, multiscalar transformations they aspire to understand. Urban age discourse represents a particularly egregious expression of the latter tendency and its associated intellectual and cartographic hazards.

- *The urban is not a universal form but a historical process.* In contrast to inherited concepts of the urban as a definitionally fixed unit or static form, its meanings and expressions must be understood to evolve historically in relation to broader patterns and pathways of global capitalist development. Thus conceived, urbanization is a process of continual sociospatial transformation, a relentless 'churning' of settlement types and morphologies that encompasses entire territories and not only isolated 'points' or 'zones' within them. As Lefebvre (1970 [2003]) insisted, the study of urban forms must be superseded by the investigation of urbanization *processes* at all spatial scales.

- *The sociospatial dimensions of urbanization are polymorphic, variable and dynamic.* Much of twentieth-century urban studies embraced a methodologically territorialist cartography in which the urban was treated as a distinct, relatively bounded settlement type, assumed to be separate from purported non-urban zones located beyond or outside it. Urban age discourse represents only the most recent, influential exemplar of this long entrenched methodological tendency. Such territorialist and settlement-based understandings of cityness had a basis in the morphologies of industrial and metropolitan urbanization during the nineteenth and twentieth centuries, but even then they represented only partial, one-sided depictions of a polymorphic, variable and relentlessly dynamic landscape of urbanization. However, given the accelerated differentiation of urban landscapes across the world since the 1980s (Brenner and Schmid, 2011; Schmid, 2012), it is clear that settlement-based understandings of the urban condition have now become obsolete. The urban cannot be plausibly understood as a bounded, enclosed site of social relations that is to be contrasted with non-urban zones or conditions. It is time, therefore, to explode our inherited assumptions regarding the morphologies, territorializations and sociospatial dynamics of the urban condition.

- *Urbanization involves both concentration and extension.* Once urbanization is seen as a process that transforms diverse zones of the world, another entrenched methodological tendency must be superseded, namely the exclusive or primary focus of urban scholars on agglomerations, the densely settled zones (cities, metropolitan regions, megacity regions, and so forth) in which population, economic activities and infrastructural systems are clustered. In this model, which underpins not only the urban age thesis but much of twentieth-century urban theory, the non-urban realm is interpreted simply as an empty field, as an indeterminate outside that serves to demarcate the urban condition from its purportedly exurban or rural 'other'. However, throughout the history of modern capitalism, this terrain has been neither empty nor disconnected from the process of agglomeration; it has actually evolved dynamically through a complex, constantly thickening web of economic, social and ecological connections to the heartlands of urban concentration across every zone of the world economy. Though largely ignored or relegated to the analytic background by urban theorists, such transformations — materialized in densely tangled circuits of labor, commodities, cultural forms, energy, raw materials and nutrients — simultaneously radiate outwards from the immediate zone of agglomeration and implode back into it as the urbanization process unfolds. Within this extended, increasingly worldwide field of urban development and infrastructural equipment, agglomerations form, expand, shrink and morph continuously, but always via dense webs of relations to other places, whose historical patterns and developmental pathways are in turn mediated ever more directly through their modes of connection/disconnection to the hegemonic zones of urban concentration. These observations suggest a


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methodological starting point for a radically reinvented approach to (capitalist) urbanization: the development of the concept of *extended urbanization* to complement and reposition the emphasis on agglomeration processes that has long underpinned urban research.[6] Such a concept, we believe, has major implications for periodizations of urbanization since the emergence of industrial capitalism, and it also has considerable potential to guide research on the early twenty-first century urban condition.

- *Urbanization has become a planetary phenomenon.* Today, urbanization is a process that affects the whole territory of the world and not only isolated parts of it. The urban represents an increasingly worldwide, if unevenly woven, fabric in which the sociocultural and political-economic relations of capitalism are enmeshed. This situation of planetary urbanization means that even sociospatial arrangements and infrastructural networks that lie well beyond traditional city cores, metropolitan regions, urban peripheries and peri-urban zones have become integral parts of a worldwide urban condition.[7] Concomitantly, the urban/rural opposition that has long underpinned the epistemology of urban concepts has been profoundly destabilized, at once in social science, planning practice and in everyday life. There is, in short, no longer any *outside* to the urban world; the non-urban has been largely internalized within an uneven yet planetary process of urbanization. Under these conditions, the urban/rural binarism is an increasingly obfuscatory basis for deciphering the morphologies, contours and dynamics of sociospatial restructuring under early twenty-first century capitalism.

- *Urbanization constantly produces new differentiations.* Urbanization is a process of constant transformation and leads continuously to the production of new urban configurations and constellations. Zones of urbanization, and the urban condition more generally, should not be treated as homogeneous — neither in the contemporary era nor during earlier historical periods. Rather, urbanization processes produce a wide range of sociospatial conditions across the world that require contextually specific analysis and theorization. As discussed above, the urban age thesis encloses each side of the urban/rural divide within an analytical black box. It focuses on the distribution of population among the two boxes rather than exploring their substantive contents, conditions of emergence or developmental pathways. As such, each term within the dualism is no more than an empty abstraction since neither is adequately attuned to the massive patterns of differentiation and variegation that characterize urbanization processes. Consequently, and rather urgently, these black boxes must now be opened, and their contents explored. Today's planetary urban universe reveals a wide variety of differentiated and polarized situations, conditions and contestations that require contextually specific yet theoretically reflexive investigation.

- *A new vocabulary of urbanization is needed.* Inherited analytical vocabularies and cartographic methods do not adequately capture the changing nature of urbanization processes, and their intensely variegated expressions, across the contemporary world.

6 The term 'extended urbanization' was introduced by Monte-Mór (2004; 2005) and has been more recently deployed by Soja (2010). While we draw upon their vocabulary, our conceptualization is specific to the theoretical framework developed here and elsewhere for investigating the *problematique* of planetary urbanization. For a more detailed account see Brenner and Schmid (2012).

7 We have begun to explore this proposition through a series of investigations of several 'extreme territories' of urbanization — the Amazon, the Arctic, the Himalayas, the Gobi desert, the Pacific Ocean, the Sahara desert, Siberia and the atmosphere — in the Urban Theory Lab at the Harvard GSD. This work, which combines spatialized political economy, critical cartography and geo-comparative analysis, is intended at once to illuminate ongoing transformations in these remote zones of the world economy *and* to forge new theoretical categories for the study of urbanization.


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> Emergent patterns and pathways of planetary urbanization therefore require the development of new analytical approaches, methods and concepts, including experimental and speculative ones, as well as new visualizations of evolving sociospatial and sociometabolic conditions. In short, a new lexicon of urbanization processes and forms of territorial differentiation is required in order to grasp the unstable, rapidly changing geographies of early twenty-first century capitalism.[8]

The analytic maneuvers proposed here are no doubt contentious, and they surely require further, more detailed elaboration elsewhere. While many readers may object to the admittedly radical methodological consequences we have derived from our critique of urban age discourse, we hope that our proposals will help stimulate a wider debate regarding how best to conceptualize the contemporary global urban condition. From our point of view, such a debate is long overdue not only among urbanists, but among all scholars, practitioners and activists concerned with understanding, and thereby reshaping, the sociospatial fabric of our shared planetary existence.

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8 Several projects to develop such a vocabulary are under way; these build upon the concepts, methods and cartographic strategies developed in an earlier investigation of the urban fabric of Switzerland produced by ETH Studio Basel (Diener *et al*., 2006). More recently, the research project on 'Patterns and pathways of planetary urbanization', organized through the ETH Future Cities Laboratory Singapore, is comparing urbanization processes in nine large urban areas (Tokyo, Hong Kong/Shenzhen, Singapore, Kolkata, Istanbul, Lagos, Paris, Mexico City and Los Angeles). By exploring the wide variety of contemporary urbanization processes, this project is intended to destabilize inherited concepts of the urban and to productively expand our urban imagination (see Schmid, 2012).


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