

What defines the urban? And can the non-urban necessarily always be classified as rural? **Neil Brenner**, Director of the UrbanTheory Lab at Harvard University Graduate School of Design, reflects on the lack of an overarching theory to describe these realms, and argues that what we call the countryside or the hinterland has become key to the process of capitalist urbanisation.

> Desert agro-industrial infrastructures, Saudi Arabia, 2012

For several decades, subterranean water wells supported a highly mechanised, rationalised system of agroindustrial land-use in the desert landscape of Saudi Arabia. Today, the aquifers are depleted, and Saudi Arabia's role in global wheat production is rapidly declining.

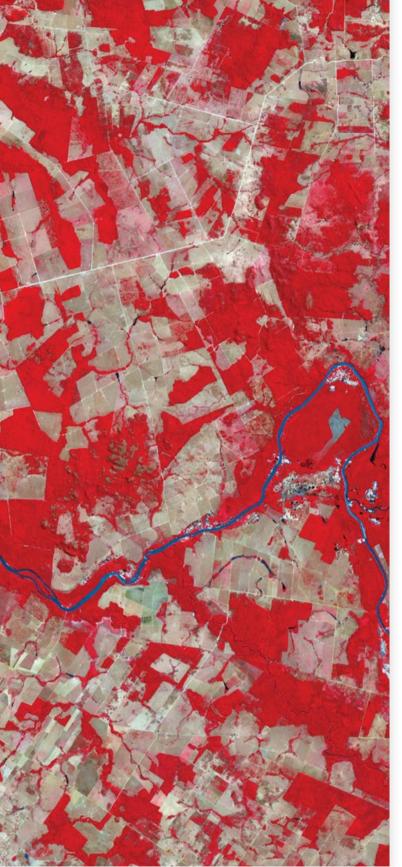
The lecture (it might also be a scholarly article, a research report, a policy brief, a design proposal or a grant application) opens with a familiar reminder of an apparently unassailable fact, delivered from a trusted source: in 2007 (or was it 2003?), United Nations (UN) statisticians had determined that more than 50 per cent of the world's population was now living within cities. Although its lineages can be traced to efforts to decipher the accelerated industrialisation of capital in 19th-century Euro-America, the notion of an urbanising world has today become a ubiquitous interpretive frame.¹ Because the starting point of the lecture is so familiar, you ignore the author's framing gesture. Your thoughts drift as you wait for the real argument to begin - about the role of cities in current global transformations; and about the ongoing restructuring of cities. The presentation soon turns to these questions, and a debate ensues - about cities. These, everyone appears to agree, represent the elementary spatial units of the contemporary urban age. To what else could the concept of the urban possibly refer?

The Urbanisation Problématique

The notion of urbanisation has long been used in strikingly atheoretical ways, as if it were a purely descriptive, empirical basis for referencing a natural tendency of human spatial organisation. Within this framework, as Ross Exo Adams explains: 'Much like the weather, urbanisation is something that exists "out there", a condition far too "complex" to present itself as an object to be examined in its own right and thus something which can only be mapped, monitored compared and catalogued.'2 This empiricist, naturalistic and quasi-environmental understanding of urbanisation persisted in various forms throughout the 20th century. In more recent decades, naturalistic models of urbanisation have acquired a powerful new lease of life in the science of 'big data', which tends to regard urban density as a condition that is basically akin to that of a closed biological system - subject to scientific laws, predictable and, thus, technically programmable.³

Contemporary UN declarations of a majority-urban world, and most major strands of mainstream global urban policy, planning and design discourse, likewise grasp the phenomenon of urbanisation via some version of this naturalistic, ahistorical and empiricist *dispositif.*⁴ Here, urbanisation is assumed to entail the simultaneous growth and spatial diffusion of cities, conceived as generic, universally replicable types of human settlement. Thus understood, the contemporary urban age represents an aggregation of trends that have cumulatively increased the populations of urban centres. In this way, the urban-age metanarrative has come to serve as a framework not only of interpretation, but of *justification*, for a huge assortment of spatial interventions designed to promote what geographer Terry McGee has classically labelled 'city dominance'.⁵ Around





the world, the shared goal of such urbanisation strategies is building the 'hypertrophic city' – whether by densifying and extending extant megacity areas; by creating new urban settlement zones *ex nihilo* in pockets of the erstwhile countryside or along major transportation corridors; or by orchestrating rural-to-urban migration flows through a noxious cocktail of structural adjustment programmes, land grabbing, agro-industrial consolidation and ecological plunder.⁶

> Deforestation, Mato Grosso, Brazil, 2006

Since the 1990s, major swathes of the Amazon have been cleared to facilitate industrial agriculture and expanded long-distance logistics infrastructures.

The vision of urbanisation as 'city' growth is, however, anything but self-evident. On a basic empirical level, the limitations of the UN's census-based data on urbanisation are well known. The simple, but still apparently intractable, problem, to which sociologist Kingsley Davis already devoted extensive critical attention in the 1950s,⁷ is that each national census bureau uses its own criteria for measuring urban conditions, leading to serious inconsistencies in comparative international data on urbanisation. In the current decade, for example, among those countries that demarcate urban settlement types based on a population size threshold (101 out of 232 UN member states), the criterion ranges from 200 to 50,000; no less than 23 countries opt for a threshold of 2,000, but 21 others specify the cutoff at 5,000.⁸

A host of comparability problems immediately follow, since 'urban' localities in one national jurisdiction may have little in common with those that are classified with the same label elsewhere. The use of various combinations of additional criteria in the other 131 member states administrative, density based, infrastructural and socioeconomic - adds several further layers of confusion to an already exceedingly heterogeneous international data set. Should certain administrative areas automatically be classified as urban? What population density criterion, if any, is appropriate? Should levels of non-agricultural employment figure into the definition of urban areas (as they do in India, albeit only for male residents)? In short, even this brief glimpse into the UN's data tables reveals that the notion of a majority-urban world is hardly a self-evident fact. It is, rather, a statistical artefact constructed through a rather crude aggregation of national census data derived from inconsistent definitions of the phenomenon being measured.

The urban-age metanarrative has come to serve as a framework not only of interpretation, but of *justification*, for a huge assortment of spatial interventions



Interiorising the Constitutive Outside

Here arises a deeper theoretical problem with contemporary urban-age discourse. Even if the specificity of 'city' growth relative to other forms of demographic, socioeconomic and spatial restructuring could somehow be coherently delineated (for instance, through consistently applied, geospatially enhanced indicators for agglomeration), the question remains: How to delineate the process of urbanisation in *conceptual* terms?⁹ Despite its pervasive representation as a neutral, generic background parameter within which spatial relations are situated, the process of urbanisation must itself be subjected to theoretical scrutiny. Doing so reveals at least two major epistemological fissures – logically unresolvable yet perpetually recurrent analytical problems – within the hegemonic *dispositif* of urban knowledge.

First, in the mainstream interpretive framework, urbanisation is said to entail the universal diffusion of 'cities' as the elementary units of human settlement. As is widely recognised, however, these supposedly universal units have assumed diverse morphological forms; they have been organised at a range of spatial scales; they have been mediated through a broad array of institutional, political, social, military and environmental forces; and they have been differentially articulated to their surrounding territories, landscapes and ecologies, as well as to other, more distant population centres. Given the de facto heterogeneity of agglomeration patterns, can a universal notion of 'the' city be maintained? And, if we do reject the hegemonic equation of cityness with singularity, must we not also abandon the vision of urbanisation as a universal process of spatial diffusion? Instead, heterogeneity, differentiation and variegation would have to be recognised, not simply

as unstructured empirical complexity, but as intrinsic, systemically produced properties of the urbanisation process itself.¹⁰

Second, in the hegemonic dispositif, urbanisation is defined as the growth of 'cities', which are in turn conceived as spatially bounded settlement units. This conceptual equation (urbanisation = city growth), coupled with the equally pervasive assumption of spatial boundedness, logically requires differentiating the city-like units in question from a putatively non-urban realm located outside them. However, the demarcation of a coherent urban/ non-urban divide has proven thoroughly problematic, particularly since the accelerated worldwide industrialisation of capital in the 19th century. Indeed, within the mainstream urban dispositif, the delineation of a non-urban 'constitutive outside' is at once necessary, since it is only on this basis that cities' distinctiveness as such can be demarcated, and *impossible,* since (a) there are no standardised criteria for differentiating urban from non-urban settlement 'types', and (b) the apparent boundaries between urban settlements and their putatively non-urban exterior have constantly been exploded and rewoven at all spatial scales.

Despite the persistent naturalisation of ahistorical settlement typologies (urban, suburban, rural, wilderness) in mainstream geographical discourse, the relentless territorial extension of large centres of agglomeration into their surrounding fringes and peripheries was widely recognised by 20th-century planners and designers. Indeed, although it tends to be marginalised in canonical historical narratives, the process of urban territorial extension was arguably one of the formative concerns in relation to which the modern discipline of urban planning was consolidated. The field, in other words, has long contained a reflexively territorial

The spaces of the non-city have been continuously operationalised in support of city-building processes throughout the global history of capitalist uneven development.

Phosphate mining pits, Central Florida, 1986

opposite:

Phosphate, an essential component of the fertiliser used in industrial agriculture, is mined through the construction of an extensively infrastructuralised regional landscape in which deposits can be extracted, processed and transported, generally with huge environmental impacts.



above:

As this image of salt production and shellfish farming infrastructures illustrates, the spatial fabric of industrial urbanisation involves the rationalisation of spatial organisation not only along coastlines, but across the fluid interface between land and ocean. orientation, rather than being focused simply upon conditions within dense, bounded settlement units.¹¹

Just as importantly, the developmental pathways of capitalist agglomerations have always been intimately intertwined with large-scale transformations of non-city spaces, often located at a considerable distance from the major centres of capital, labour and commerce. Mumford described this relation as an interplay between 'up-building' (vertical, horizontal and subterranean industrial-infrastructural clustering), and 'un-building' (Abbau), the degradation of surrounding landscapes through their intensifying role in supplying cities with fuel, materials, water and food, and in managing their waste products.¹² From the original dispossession of erstwhile rural populations through territorial enclosure to the intensification of land use, the construction of largescale infrastructural investments and the progressive industrialisation of hinterland economies to support extraction, cultivation, production and circulation, the growth of the city has been directly facilitated through colossal, if unevenly developed industrial and environmental upheavals across the planet. In this sense, the rural, the countryside and the hinterland have never been reducible to a mere backstage 'ghost acreage' that supports the putatively front-stage operations of large population centres. Whatever their demographic composition, from the dense town networks of the Ganges Plain or Java to the barren wastelands of Siberia or the Gobi desert steppe, the spaces of the non-city have been continuously operationalised in support of city-building processes throughout the global history of capitalist uneven development. Such spaces are, therefore, as strategically central to the processes of creative destruction that



underpin the 'urbanisation of capital' as are the large, dense urban centres that have long monopolised the attention of urbanists.¹³

Faced with the relentless interplay between the upbuilding and un-building of spatial arrangements, along with the perpetual explosion of urban conditions across the variegated landscapes of global capitalism, can a settlementbased conception of urbanisation be maintained? Can the urban 'phenomenon' still be anchored exclusively within, and confined to, the city?¹⁴ In fact, once the rigid analytical constraints imposed by such pointillist assumptions are relaxed, the static dualisms of mainstream urban theory (city/countryside, urban/rural, interior/exterior, society/ nature) can be swiftly superseded. New analytical horizons thereby open: the geographies of urbanisation can be productively reconceptualised in ways that illuminate not only the variegated patterns and pathways of agglomeration, but the continuous production and transformation of an unevenly woven urban fabric across the many terrains of industrial activity (agriculture, extraction, forestry, logistics and tourism) that are today still being misclassified on the basis of inherited notions of the countryside, the rural, the hinterland and the wilderness.

Given the totalisations, blind spots and blind fields associated with the inherited *dispositif* of urban knowledge, perhaps an urban theory *without an outside* may be wellpositioned to wrest open some productive new perspectives for both research and action on emergent landscapes of planetary urbanisation?¹⁵

> Industrialised agriculture, Minnesota, 2009

Through the widespread adoption of precision farming across the US Midwest, industrial planting, fertilisation and harvesting technologies have been customised to locational conditions at the scale of individual fields, rather than being applied uniformly across a farm or region.

The capitalist form of urbanisation continues to produce contextually specific patterns of agglomeration, but it also relentlessly transforms non-city spaces into zones of high-intensity, large-scale industrial infrastructure – operational landscapes.

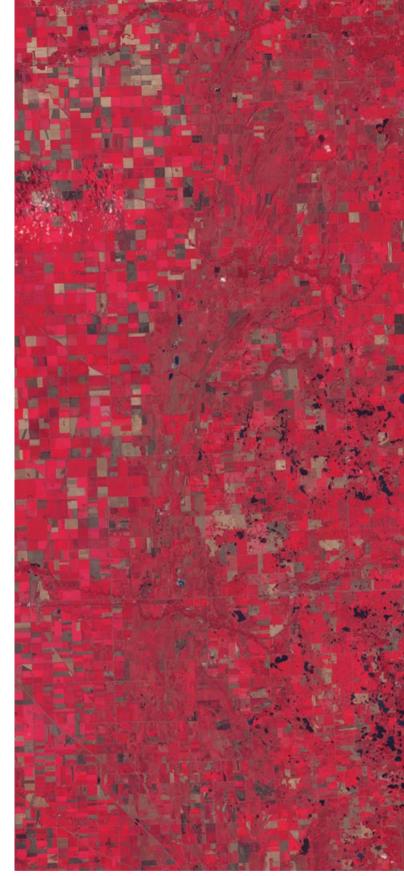
Designing Other Urbanisations

The theoretical manoeuvres proposed here are intended not simply to permit the recognition of concrete, empirical complexity within, among and beyond urban centres, but as an epistemic basis for reconceptualising the essential properties of the process under investigation, and thereby for opening up new horizons for understanding and influencing contemporary urbanisation. As has been argued at length elsewhere, the epistemic fissures within contemporary urban discourse and practice can be transcended only through a radical break from the inherited urban dispositif, and from the one-sided vision of the urban condition that it anchors.¹⁶ In any field of thought and action, new *dispositifs* of interpretation can only emerge when historical conditions destabilise inherited, doxic frameworks and engender an intensive search for an alternative basis for understanding and transforming the world. As evidenced in the recent escalation of epistemological debates among critically oriented urbanists, the field of urban theory presently appears to be in the throes of such a search.

Against this background, the current revival of interest in the rural, the countryside and the hinterland among many architects, landscape theorists and designers represents a salient, if still rather indeterminate development. Will such engagements simply entail a change of venue for the operations of design – a strategic shift 'back to the land' by architects in search of interesting new sites for their creative energies? Alternatively, might an architecturally grounded exploration of the world's non-city spaces help animate the project of developing new analyses, visualisations and designs of our emergent planetary urban fabric? Two concluding propositions may offer some orientation for such an endeavour.

First, inherited vocabularies for describing non-city spaces – rural, countryside, hinterland – are locked into an externalist framework that attempts to distinguish them, analytically and spatially, from the city. Today, however, we need new ways of interpreting and mapping the planet's variegated territories, landscapes and ecologies of urbanisation that are not opposed binaristically to the city, and that do not devalue their operational significance based upon a fetish of demographic criteria. The non-city is no longer exterior to the urban; it has become a strategically essential terrain of capitalist urbanisation.

Second, the capitalist form of urbanisation continues to produce contextually specific patterns of agglomeration, but it also relentlessly transforms non-city spaces into zones of high-intensity, large-scale industrial infrastructure – operational landscapes. In contrast to historically inherited hinterlands, in which various 'free gifts' of nature embedded in the land (materials, energy, labour, food, water) are appropriated to produce primary commodities, operational





Chuquicamata copper mine, Northern Chile, 2016

All forms of industrial resource extraction, such as copper mining, entail the construction of colossal, high-technology industrial infrastructures at the earth's surface and underground to supply essential materials and minerals to the world's megacities.

landscapes involve the industrial redesign of agricultural, extractive and logistical activities to engineer the most optimal social, institutional, infrastructural, biological and ecological conditions for (generally export-oriented) capital accumulation. Whereas hinterlands merely 'host' primary commodity production within an inherited terrain, operational landscapes are consolidated through the active production of colossal urban-industrial spatial configurations that have been reflexively designed to accelerate and intensify the accumulation of capital on the world market.

The implications of these ideas for architectural and design interventions in the world's variegated non-city spaces remain to be elaborated. At minimum, they raise doubts about any approach that aspires to create fortified retreats or privatised enclaves (whether for ecosystem services, luxury consumption, private enjoyment or specialised industrial export activity) in the erstwhile countryside. Instead, they underscore the challenge of establishing politically negotiated, democratically coordinated, environmentally sane and socially meaningful modes of connectivity between the various places, regions, territories and ecologies upon which humans collectively depend for our common planetary life. As they mobilise their capacities to shape this emergent terrain of intervention, designers confront an important ethical choice – to help produce maximally profitable operational landscapes for capital accumulation; or alternatively, to explore new ways of appropriating and reorganising the non-city geographies of urbanisation for collective uses and for the common good.

The perspective outlined here is oriented towards a counter-ideological project, one to which designers working in and on non-city terrains are particularly well positioned to contribute. How can we visualise, and thereby politicise, the encompassing but generally invisible webs of connection that link our urban way of life to the silent violence of accumulation by dispossession and environmental destruction in the world's hinterlands and operational landscapes? Insofar as designers bring distinctive forms of spatial intelligence and visualisation capacities to the sites in which they are engaged, they have an invaluable role to play in constructing new cognitive maps of the planet's unevenly woven urban fabric. Such maps may, in turn, provide much-needed orientation for all who aspire to redesign that fabric in more socially progressive, politically inclusive, egalitarian and ecological ways.

Insofar as these arguments challenge the dogma of the hypertrophic city – the prevalent assumption



Soya-bean production landscape, Cordoba Province, Argentina, 2016

Transnational corporations have expanded industrial soya-bean production in key agricultural regions of Argentina, contributing to an infrastructural standardisation of the landscape, as well as to a major public health crisis due to their use of agrochemicals.

that ever-larger cities represent humanity's inevitable future - they also open up a horizon for imagining a different form of urbanisation, an alter-urbanisation. Many urbanisations are, in fact, possible. Rather than being preordained through technological laws or economic necessity, urbanisation projects are collective political choices, a medium and product of power, imagination, struggle and experimentation. Can we imagine, for example, a form of urbanisation in which multiple settlement patterns and differentiated infrastructural arrangements are cultivated within a holistic framework of territorial development, balanced resource management and ecological stewardship? And can we envision a form of urbanisation in which households and communities that choose to remain rooted in less densely settled or remote zones will enjoy access to viable public infrastructures, sustainable livelihoods and some measure of political control over the basic conditions shaping their everyday lives? Perhaps the agency of design in the world's non-city spaces is precisely to facilitate the imagination and production of these and many other alter-urbanisations.

Notes

1. Neil Brenner and Christian Schmid, 'The 'Urban Age' in Question', International Journal of Urban and Regional Research, 38 (3), 2014, pp 731–55. For the relevant UN data, see http://esa.un.org/ unpd/wup/.

 Ross Exo Adams, 'The Burden of the Present: On the Concept of Urbanisation', Society and Space, 11 February 2014: http://societyandspace.com/2014/02/11/ross-exo-adams-the-burden-of-thepresent-on-the-concept-of-urbanisation/.

3. Brendan Gleeson, 'What Role for Social Science in the 'Urban Age'?', International Journal of Urban and Regional Research, 37 (5), 2013, pp 1839–51.

4. Brenner and Schmid, op cit.

5. Terry McGee, The Urbanization Process in the Third World, Bell & Sons (London), 1971.

6. Max Ajl, 'The Hypertrophic City Versus the Planet of Fields', in Neil Brenner (ed), *Implosions/ Explosions: Towards a Study of Planetary Urbanization*, Jovis (Berlin), 2014, pp 533–50, and Mike Davis, *Planet of Slums*, Verso (London), 2006.

7. Kingsley Davis, 'The Origins and Growth of Urbanization in the World', *American Journal of Sociology*, 60 (5), 1955, pp 429–37.

8. Chandan Deuskar, 'What Does Urban Mean?', World Bank Sustainable Cities blog, 2 June 2015: http://blogs.worldbank.org/sustainablecities/what-does-urban-mean.

 Neil Brenner and Christian Schmid, 'Towards a New Epistemology of the Urban', CITY, 19 (2–3), 2015, pp 151–82, and Neil Brenner, 'Theses on Urbanization', Public Culture, 25 (1), 2013, pp 86–114.
See Jenny Robinson, 'Cities in a World of Cities: the Comparative Gesture', International Journal of Urban and Regional Research, 51 (1), 2011, pp 1–23, and Ananya Roy, 'The 21st Century

Metropolis: New Geographies of Theory', *Regional Studies*, 43 (6), 2009, pp 819–30. 11. See John Friedmann and Clyde Weaver, *Territory and Function*, University of California Press

(Berkeley, CA), 1979. In contrast, Peter Hall's *Cities of Tomorrow*, Blackwell (Cambridge, MA), 2002, embodies a resolutely city-centric approach to urban planning history.

Lewis Mumford, *The City in History*, Harcourt, Brace and World (New York), 1961, pp 446–81.
David Harvey, *The Urbanization of Capital*, Johns Hopkins University Press (Baltimore, MD), 1985.

14. Henri Lefebvre, *The Urban Revolution*, trans R Bononno, University of Minnesota Press (Minneapolis, MN), 2003 (first published in 1970); and Brenner and Schmid, 'Towards a New Epistemology', *op cit*.

Neil Brenner, 'Urban Theory Without an Outside', in *Implosions/Explosions, op cit*, pp 14–35.
Brenner and Schmid, 'Towards a New Epistemology, *op cit*.

Text © 2016 Neil Brenner. Images: pp 118-21, 123-5 Photos NASA; p 122 Image: US Geological Survey; p 126 Image Google Earth, Image © 2016 DigitalGlobe; p 127 Image: Google Earth, Image © 2016 CNES / Astrium, Image @ 2016 DigitalGlobe