

URBAN WORLDS

Urbanizing Urban Political Ecology: A Critique of Methodological Cityism

HILLARY ANGELO and DAVID WACHSMUTH

Abstract

Urban political ecology (UPE), an offshoot of political ecology that emerged in the late 1990s, has had two major impacts on critical urban studies: it has introduced critical political ecology to urban settings, and it has provided a framework for retheorizing the city as a product of metabolic processes of socio-natural transformation. However, there was another goal in early UPE programmatic statements that has largely fallen by the wayside: to mobilize a Lefebvrian theoretical framework to trouble traditional distinctions between urban/rural and society/nature by exploring urbanization as a global process. Instead of following this potentially fruitful path, UPE has become bogged down in 'methodological cityism' — an overwhelming analytical and empirical focus on the traditional city to the exclusion of other aspects of contemporary urbanization processes. Thus UPE's Lefebvrian promise, of a research program that could work across traditional disciplinary divisions and provide insights into a new era of planetary urbanization, has remained unfulfilled. In this article we trace UPE's history to show how it arrived at its present predicament, and offer some thoughts on a research agenda for a political ecology not of the city but of urbanization.

Introduction: the green city in an urban world

At the dawn of what is being heralded as the 'urban millennium', the city has found a new 'wish image' (Benjamin, 1999). Urban areas expand relentlessly while fears of global warming and environmental catastrophe loom ever greater, and the 'green' or 'sustainable city' is taking a leading role in planning and policy discourse (UN-Habitat, 2006; UNFPA, 2007; UN-Habitat, 2011). From radical critique (Harvey, 2008) to technocratic reform (Bettencourt *et al.*, 2007; Glaeser, 2011), these two ideas have tripped along hand in hand: if more than half of the world is now urban, hopes for its future must rest on the shoulders of the green, sustainable city.

In one sense, the idea of the green city is nothing new: nature has long been prescribed as a cure for the city's social ills. Social reformers and utopians in late nineteenth-century Europe and early twentieth-century United States advocated for and engineered escape routes from dense, dirty urban slums, including weekends in the countryside, summer

The authors would like to thank Neil Brenner, Craig Calhoun, Eric Klinenberg, Harold Perkins, Anne Rademacher, Erik Swyngedouw, Esmé Webb, the participants in the NYLON workshop, and three anonymous IJURR reviewers for their helpful comments on earlier drafts of the article.

camps for children and large public parks. In another sense, though, the contemporary green city marks a significant change. An increasingly urban world seems to make escape-the-city solutions untenable — where to escape to? — and so it is not surprising that public policy and elite discourse across the world has increasingly turned instead to reimagining the city itself along greener, more sustainable lines (Keil and Graham, 1998).

In this context, it seems that urban political ecology (UPE) could not be more relevant, with its urbanized analysis of resource flows and environmental struggles. And while UPE has done an exemplary job of investigating environmental questions in cities, it has been curiously quiet on the very feature of the contemporary urban world that should make it so relevant: the dimensions of urbanization processes that exceed the confines of the traditional city. These dimensions are now considerable indeed, as recent scholarship on ‘planetary urbanization’ (Brenner, 2013; Merrifield, 2013; Wachsmuth, 2014), ‘worlding cities’ (Simone, 2001; Roy, 2009; Roy and Ong, 2011) and the ‘urban age’ (UN-Habitat, 2006; Soja and Kanai, 2007; Burdett and Sudjic, 2008; Brenner and Schmid, 2013) all attest — even if there is as yet no consensus on the precise character and scope of these new dimensions.

What is the role of urban political ecology in these debates on an increasingly urban planet? If we take the pervasiveness of urban sustainability discourses in contemporary elite policy circuits and the popular imagination to imply a corresponding pervasiveness of socationature within planetary urban processes, then urban political ecology has the potential to be more than merely the study of nature in the city; it could contribute to a new theory of urbanization that simultaneously foregrounds nature as it deemphasizes cities per se. Indeed, as we discuss below, this was one of the goals of UPE’s founding theorists, and a goal that is still attainable.

In this article we tell the story of UPE in the context of planetary urbanization — its premises, its promise, and where it went off track — and argue that these earlier ambitions need to be more substantively integrated into current research in the field. We recount the history of UPE as a project both of introducing political ecology to the city and of reinterpreting urbanization along constitutively socationatural lines; develop a Lefebvrian critique of UPE’s methodological cityism in its failure to live up to the second of these aspirations; and suggest how the field could reorient itself to being a political ecology of urbanization rather than a political ecology of cities.

The history: how political ecology came to the city

Why did it take political ecology so long to come to the city? If we look at Blaikie and Brookfield’s (1987: 17) classic definition of the field, after all, its urban dimension seems perfectly obvious in retrospect:

The phrase ‘political ecology’ combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself.

Society, land use, class: it is not a stretch to see these as urban questions, particularly for readers of this journal. And the contributions to ‘human ecology’ — one of the two fields that are generally understood to have spawned political ecology — of the Chicago-School urban sociologists are hardly insignificant. So it is perhaps because political ecology from its inception was understood by its practitioners to be above all concerned with the politics of environmental degradation and environmental rehabilitation (Paulson *et al.*, 2003) that it was a presumptively non-urban field. The city, as the very antithesis of ‘environment’ in the popular and scholarly imaginations (Trepl, 1996), might feature political struggles over land use and resources, but it is a site where nature was understood to be already subjugated to society — where no rehabilitation was

possible because there was no 'environment' left to be rehabilitated. In the present era of urban environmental crisis, what an unconvincing story this now appears. But how else should one explain this urban myopia?

One way or another, political ecology developed in happy indifference to the urban world, and by the 1990s it had become a robust research program focused mainly on the politics of land use in non-urban (and non-Western) spaces. Not that it had not undergone its own internal transformations, the most significant being a broadly poststructuralist reassessment of Blaikie and Brookfield's (1987: 17) 'dialectic between society and land-based resources'. Scholars such as Arturo Escobar (1999) and Richard Peet and Michael Watts (2000) drew on concepts such as hybridity and social construction to challenge above all the stable category of 'nature' that had underlain mainstream political ecology from the beginning. For Escobar, the result of this exercise was to redefine political ecology such that it no longer relied on the concept, but instead helped account for its ongoing social construction: 'Political ecology can be defined as the study of the manifold articulations of history and biology and the cultural mediations through which such articulations are necessarily established' (Escobar, 1999: 4). The result of this and other allied interventions was an approach that had much in common with actor-network theory, as Latour (2004) himself explored.

It was in the midst of this poststructuralist reassessment of political ecology that Erik Swyngedouw (1996) made his initial call for an *urban* political ecology. There were two sides to his argument: first, an attempt to reconcile the society/nature and material/discursive binaries at work in political ecology through a novel approach to hybridity that he termed 'socionature'; and secondly, a proposal to extend the reach of political ecology into urban studies, in particular through the medium of water. Both were achieved through a retheorization of urbanization as 'a political-ecological process with water as the entry point; water that embodies, simultaneously and inseparably, bio-chemical and physical properties, cultural and symbolic meanings, and socio-economic characteristics' (*ibid.*: 76). This argument dovetailed with David Harvey's influential contention that 'there is nothing *unnatural* about New York City' (Harvey, 1996b: 186; emphasis in original), to produce a surge of new critical research into the production of urban socionatures, much of which was organized under the banner of urban political ecology.

So, from the beginning, urban political ecology had two related goals: to bring the methodology of political ecology into urban settings to which it had hitherto not been applied, and to retheorize urbanization itself as a process of socionatural and not only social transformation. Roger Keil, another of the field's founders, further extended the ambition of this latter goal by suggesting that UPE was particularly well suited to meet the theoretical and empirical challenges posed by what Lefebvre (2003) called 'urban society'. In a 2003 review of the field's burgeoning literature, he argued that 'to speak now about UPE as central to urban studies in general may be interpreted as responding to Lefebvre's challenge to create an urban science for an urban world' (Keil, 2003: 728–29).

The urban intervention in political ecology was long overdue. For all political ecology's 1990s' success at analyzing society and nature integrally, by training its analytical lens almost exclusively on the countryside or wilderness, it unreflexively reproduced one of the most enduring facets of the society-nature opposition: its spatial mapping onto town and country, respectively (Wachsmuth, 2012). It is no coincidence, then, that Swyngedouw's (1996) first elaboration of the need for an urban political ecology was simultaneously his major contribution to rethinking the society-nature opposition in general, through the portmanteau of 'socionature'. The city was the great, uncharted frontier for analyzing the co-production of the social and the natural.

This frontier had remained uncharted not only in political ecology. As an intervention in critical urban studies, Swyngedouw's early work on socionature and the elaborations that followed within UPE accomplished two simultaneous 'denaturings'. They

demolished what remained of the Chicago-School vision of cities as social worlds analogous to nature (obeying naturalized laws of development) and its blindness to the material ways in which nature, even in its most obvious green forms, was implicated in the production of these urban social worlds. Instead of seeing cities as social rather than natural, or urban injustice and inequality as natural rather than social, UPE made cities visible as political worlds, the politics of which are constitutively socionatural.

UPE helped bring to critical urban studies a new vision of the traditionally understood city: as a product of a global 'metabolic socio-environmental process that stretches from the immediate environment to the remotest corners of the globe' (Heynen *et al.*, 2006b: 5). It provided a lens through which to analyze both cities and things in cities as historical, material socionatural assemblages, and the transformation of nature in urban environments as bound up in broader processes of uneven development. Following Swyngedouw's (1996) programmatic statements, texts such as Matthew Gandy's (2003) *Concrete and Clay*, Maria Kaika's (2005) *City of Flows*, and the essays compiled in the edited volume *In the Nature of Cities* (Heynen *et al.*, 2006a) each helped crystallize the socionatural city.

In tandem with the greater ontological clarity afforded by this image, conceptions of urban socionatures also helped open up new avenues for urban theory and politics. As urban social movements increasingly framed their battles in ecological terms — most notably through the language of environmental justice — and specters of environmental disaster haunted the urban imaginary (Davis, 1999), UPE provided a language through which radical urban theory and politics could forge alliances with these movements. Connecting society and nature under the heading 'urbanization' not only clarified urbanists' understanding of the production of urban built environments, but, crucially, also enabled the critical reframing of urban environmental problems in broader economic, social and historical contexts. The political payoff of UPE's analytical focus on the production of nature has thus been the insistence that, to address problems of nature in cities such as environmental injustice and pollution, interventions must be made at the level of the social order, contrary to what planners and theorists of the 1850s — and the present moment! — argued: that it was the 'nature of the city and not that of society that needed to change' (Kaika, 2005: 17). UPE's framework, particularly in its Marxist strands (Heynen, 2006), at once provided (1) shields against liberal, anti-urban ideologies that continue to rely on false dualisms such as town/country, urban/rural and nature/culture as prescriptions for social problems — by preserving certain kinds of nature and providing access to it, or cleaning up dark, disorderly cities with planning interventions of the garden-city legacy; (2) arrows to penetrate and expose deep, structural economic and social injustices; and (3) language for cross-issue alliance building among social and environmental activists.

Based on early programmatic statements there has been a slow but steady uptake of research under the UPE rubric. Most subsequent work has filled in the analytical frame initially provided, with empirical case studies describing the production of urban socionatures or injustices of urban environmental conditions with increasing sophistication. One branch of recent literature in the family describes the processes of production of specific socionatural forms, often in relationship to the city as a whole (for example, Bunce and Desfor, 2007; Desfor and Vesalon, 2008; Cooke and Lewis, 2010). Another investigates the political economies of particular 'natural' resources, taking up questions of management, distribution and access by focusing on negative externalities, environmental justice and sustainability (for example, Domene and Saurí, 2007; Bickerstaff *et al.*, 2009; Aylett, 2010). Work on neoliberal natures has begun to describe specific forms and patterns under different urban political economic regimes (for example, Heynen *et al.*, 2007), while a few outliers include applications of UPE's framework to related theoretical issues (for example, Swyngedouw and Heynen, 2003; Neumann, 2009), settings — in particular suburbia and exurbs (Taylor, 2011) — and conceptions of politics (Swyngedouw, 2009).

Methodological cityism

Yet, as we find the terrain of socio-nature and urban environmental injustice increasingly well mapped, it is hard not to notice that UPE's success has been rather one-sided. The above has shown that UPE's theorization of urbanization had two major ambitions: first, its socio-natural moment, an explicit attempt to rethink urbanization as 'a social process of transforming and reconfiguring nature' (Swyngedouw, 2006: 35), and secondly, a Lefebvrian moment; as Keil (2003: 725) puts it, 'the realization that what we call "the urban" is a complex, multiscale and multidimensional process where the general and specific aspects of the human condition meet', and thus that the object of analysis in the study of contemporary urbanization must be 'urban society' rather than the city per se (see also Heynen *et al.*, 2006b: 5). It is the first, socio-natural moment that has been best elaborated theoretically and substantiated empirically: UPE has succeeded in bringing political ecology to the city. The Lefebvrian moment in its theorization of the urban, meanwhile, remains an ambition as yet unfulfilled.

But should we be surprised by this outcome? For all the early UPE texts' rhetorical appeals to a Lefebvrian conception of urbanization, the implications of such an understanding for the study of urban socio-natures were rarely if ever substantively articulated, either theoretically or through the selection of empirical research sites. Beyond its banner statements, UPE did not systematically elaborate a distinctive concept of — or research program for — urbanization as a set of processes that are not reducible to the city. Suggestively, Swyngedouw himself uses the terms 'urbanization' and 'city' interchangeably, as if the former is simply the spread of the latter. In his initial formulation of the idea of urban political ecology he refers to the project on one page as 'the political ecology of the city' and on the next as 'the political ecology of the urbanization process' (Swyngedouw, 1996: 74–75). More recently he has asserted, '*Modern urbanization or the city* can be articulated as a process of geographically arranged socio-environmental metabolisms' (Swyngedouw, 2006: 35; emphasis added). Which is it: urbanization or the city? One is a process, the other a site that is one (but not the only) outcome of that process. Surely they are not the same thing.

Moreover, it is precisely the relationship between them — the city as a specific although variegated socio-natural form and urbanization as a global socio-natural process — which Lefebvre calls on us to re-evaluate, and which UPE seemed so well positioned to do. The early theorization of urban political ecology by Swyngedouw, echoed by Keil (2003), was not only an attempt to insert nature into the production of cities, but also an attempt to assert the centrality of urbanization to broader socio-natural processes that political ecologists studied. Yet, not only has political ecology itself continued to stubbornly exclude the city from its analysis, but the bulk of empirical research in urban political ecology has been tethered exclusively to the city, in both its site selection and analytical framework. The global socio-natural dimensions of urbanization that span city and countryside, and whose insufficient investigation was apparently one of the main motivations behind the research program in the first place, have, in practice, remained largely unexplored.

Thus we find actually-existing UPE guilty of methodological cityism. The city is its near-exclusive analytical lens for studying contemporary processes of urban social transformation that are not limited to the city. Here we build upon previous discussions of methodological nationalism (Agnew, 1994; Wimmer and Glick Schiller, 2002) and methodological localism (Brenner, 2009), while departing from the scalar analytic that motivates this scholarship. Methodological localism, for instance, refers to a privileging, an isolation and perhaps a naturalization of the local scale in situations where supralocal scales are also significant. By contrast, within urban political ecology in particular and urban studies in general, methodological cityism would refer to an analytical privileging, isolation and perhaps naturalization of the city in studies of urban processes where the non-city may also be significant.

Methodological cityism is rampant in UPE, where, in contrast to the more speculative pronouncements in self-consciously understood theoretical texts, the dominant implicit concept of urbanization in the literature to date is the city as an outcome of diverse socio-natural processes. This theoretical and methodological frame then self-evidently offers up the city as its empirical research site. Though UPE understands the uneven production of urban environments — spatially, socio-naturally, politically — as a global process, the uneven ‘urban environments’ that are produced continue to be understood as discrete, bounded cities, both in the strands of research that describe the production of urban socio-natures and in those that focus on environmental injustice. To use the excellent edited volume *In the Nature of Cities* (Heynen *et al.*, 2006a) as an example, the overwhelming majority of its case studies are analyses of the social production of nature within cities. Only one piece, David Pellow’s (2006) connection of high-tech consumerism in Western cities to the environmental devastation that accompanies computer recycling operations in the global South, systematically takes up Keil’s (2003: 725) call to investigate urbanization as a ‘complex, multiscale and multidimensional process’, by examining the different forms the urbanization process takes, or what effects it has, in different locations and at different scales.

While there is certainly nothing problematic *per se* about urban research being conducted in cities, when such research takes as its methodological premise the city as a site as opposed to urbanization as a process, the result is the failed Lefebvrian promise we have documented. Methodological cityism does not in this case entail an *a priori* or ontological denial of the non-city aspects of urban processes, but it has resulted in the absence of substantive engagement with them, and it has naturalized the city as the sole analytical terrain of urban analysis. Much as methodological nationalism incorporates an understanding of global political-economic processes into what remains a nation-state-centric analytic (Wimmer and Glick Schiller, 2002), methodological cityism here peaceably coexists with a sophisticated theoretical understanding of region-, nation- or planet-spanning urbanization processes. And indeed, UPE’s analyses of cities as products of global socio-natural processes are unparalleled, as the march of empirical cases in its second generation (described above) demonstrates. With titles such as *An Urban Political Ecology of* ____, bridges, sewer systems and other city assemblages become illustrations of the relationship between the social and the natural, of transformation, circulation, distribution, and metabolism. But outside the city — silence.

Alternately, when UPE authors examine urban environmental injustice — not the production of parks and sewer systems, but who has access to them, who is left out, and who suffers — they have similarly, overwhelmingly, restricted themselves to the city (for example, Gandy, 2003; Sze, 2006). Some research is banging at the walls of this unnecessary box — Paul Robbins’ (2007) work on lawns moves fluently between city, suburb and beyond, as does Keil’s more recent work on global suburbanisms and exurban spaces (for example, Keil and Young, 2009). But still: is strip mining in the Appalachian mountains any less a case of urban environmental injustice than polluted rivers from sewage treatment plants in the Bronx? If it is, why? And if it isn’t, why doesn’t UPE study it?

An urban political ecology that moves beyond methodological cityism could answer such questions — and is in fact very well poised to do so — by investigating urbanization processes in their totality. William Cronon’s *Nature’s Metropolis* (1991), a study of the co-production of town and country in Chicago and its hinterland, is one example of this kind of investigation, albeit one that is less attentive to the questions of power and politics that motivate UPE; another similarly insightful contribution, and more politically attuned, is Henderson’s study of the settling of California (1999). In fact, Cronon was an early inspiration to UPE. Swyngedouw (1996) approvingly cites Cronon, as does Kaika in *City of Flows* (2005). But the contrast on this point between *Nature’s Metropolis* and *City of Flows* is instructive. Kaika contextualizes her study of Athens’ sewer system in a framework of urbanization in which ‘the world’ is defined as ‘a historical geographical process of perpetual metabolism in which “social” and “natural” processes combine in a

historical geographical “production process of socio nature”’ (2005: 22). Her own analysis stretches well beyond Athens’ municipal boundaries, but Kaika pulls her Lefebvrian punch by citing Cronon as an example — alongside Gandy in New York, Davis in Los Angeles, and Harvey in New York City — of an effort to account for the socionatural production of a city. His work is invoked not, as it might be, to highlight how Athens’ aqueducts can’t be understood outside their broader regional context, but to show us that ‘cities are dense networks of interwoven socio-spatial processes’, and to help us imagine a thing such as *London* as socionatural (2005: 22, original emphasis). She is correct, of course, and yes, we must focus on the distinct forms of particular socionatures. But here again we are retelling Harvey’s story: that there is nothing unnatural about New York. Or Chicago, or Athens, or Los Angeles, or London, ad infinitum.

The question left unanswered is not ‘in what way are these cities natural?’, but ‘in what way are they urban?’ If the socionatural processes that produced Cronon’s Chicago — the city — equally actively produced the Great West as an agricultural region of which Chicago was a hub, then what makes Chicago more distinctly urban than its superficially greener neighbor? Chicago’s stockyards are urban, but aren’t equally its hogs and grain — and these at their moments of production, long before their physical arrival downtown? Though Lefebvre’s provocative rethinking of urbanization as a process that encompasses town and country, city and wilderness, is approvingly cited by Swyngedouw *et al.*, it is rarely elaborated through UPE’s socionatural lens, theoretically or empirically. Instead, as Roger Keil notes:

most research [in UPE] while recognizing the globalized societal relationships with nature that constitute urban life today, and the complex governance processes that regulate them, has looked at individual or comparative case studies, not at the networked matrix itself on which urban-nature relations are made and unmade (Keil, 2011: 716).

To be sure, sometimes a city lens is methodologically appropriate. For example, research on urban social movements and community activism — an important focus of the environmental-justice wing of UPE — is often rightly contained within a single city (or entails a comparison among multiple discrete cities) to the extent that these movements are place-bound. And even when process-focused urban research is the more suitable methodological choice, it can be challenging to undertake, not least on logistical grounds, since it may involve physically disparate sites with ambiguous geographical boundaries. Methodologically, cityist studies have at least the virtue of research design simplicity, but that simplicity is not always (or often) compatible with their objects of inquiry.

In tandem with UPE’s methodological cityism comes the fact that it and political ecology persist as two solitudes. Indeed, the degree to which political ecology, including its most critical wing, has almost completely ignored its urban counterpart is astonishing. Two recent magisterial surveys of critical political ecology (Forsyth, 2003; Robbins, 2004) and a special issue of *Human Organization* (2003) devote between them not one word to UPE as a research program and no more than a few words to urbanization as a problematic relevant to the broader discipline. This is not necessarily a problem for political ecologists, few of whom presumably hold to a Lefebvrian analysis of urbanization as the emerging dominant mode of global social change. But for urban political ecologists, many of whom presumably do hold to such an analysis, the disciplinary divide is problematic indeed. We argue — and suspect Swyngedouw *et al.* would agree — that strip mining is no less an ‘urban’ political ecological problem than urban agriculture. What about political ecology’s ‘amenity migrants’, those city expatriates who increase rural or exurban property values in their search for spiritual renewal and authentic culture (Moss, 2006)? Are they any less urban?

The disciplinary divide is drawn between what we might call the political ecology of cities and the political ecology of the countryside, and the methodological focus of the

former helps widen the divide. It is time, we suggest, for UPE to return to its Lefebvrian roots and take up again its motivating urban themes, by challenging us to move beyond the city to develop a political ecology of urbanization.

A political ecology of urbanization

A fruitful place to begin such a project is to return to Lefebvre's (2003: 57) contention that 'the city no longer corresponds to a real social object', and that the proper object of analysis for urban studies would soon have to become a worldwide urban society exploding out of the historical space of the city. After the metropolitanization of medieval European cities in the eighteenth and nineteenth centuries sharpened the qualitative differences between town and country, Lefebvre argued, postwar decentralization undermined these differences, rendering the town-country opposition an insufficient basis for understanding urban change (Kipfer *et al.*, 2013: 119). Urbanization processes would thus have to be traced far beyond the physical boundaries of cities, and increasingly analyzed as global or planetary phenomena (Brenner, 2013), while cities themselves would need to be analyzed as phenomenological or even ideological phenomena (Wachsmuth, 2014).

As Harvey (1996a) has argued and Brenner (2013) recently affirmed, a long legacy of city-focused urban studies has thus failed to do justice to the complexity of contemporary urban reality. The urban is a process, not a site:

Urbanization must then be understood not in terms of some socio-organizational entity called 'the city' (the theoretical object that so many geographers, demographers and sociologists erroneously presume) but as the production of specific and quite heterogeneous spatio-temporal forms embedded within different kinds of social action (Harvey, 1996a: 52).

In the contemporary context, the processual dimensions of planetary urbanization take (a minimum of) two broad forms. First, 'urbanism as a way of life' (Wirth, 1938) is no longer coterminous with the city as a form of settlement space (if indeed it ever was). Economic globalization, the information and communications technology revolution, and related socio-cultural transformations have scrambled inherited spatial divisions of labor and of consumption in ways that make a mockery of the city-countryside division. Secondly, urban systems are being rearticulated at a range of scales, from the enormous megaregions emerging within both the global North and South (Castells, 2000; Ross, 2009; Harrison and Hoyler, forthcoming) to networks of migration and policy that connect North and South and indeed blur the lines separating them (McCann and Ward, 2011). And though these new urban geographies are constituted at ever-larger — even planetary — scales, they are constitutively uneven, connecting some spaces as they disconnect others. The result is that the city, as a signifier of or a way of experiencing complex urbanization processes (Sayer, 1984), stands in an increasingly problematic relationship to these processes (Wachsmuth, 2014) and is not necessarily a methodologically sound frame for studying them. An urban studies that is (city) site rather than (urban-)process focused thus risks ignoring much of what is distinctive about the contemporary urban world.

To say that UPE's current research program does not systematically address these dimensions of urbanization is not to say that they have gone unnoticed. Gestures in the direction of a process-oriented urban studies have been visible at least since the original publication of *The Urban Revolution* (Lefebvre, 2003 [1970]), both in and outside the bounds of self-consciously urban research (see Ultramari and Firmino, 2010). Sociospatial transformations of the past half-century have troubled a range of modernist binaries, and cyborgs, artificial natures and information and communication technologies have prompted new analytical tools for exploring the relationship between society and nature as well as interconnectivity between places (Castells, 1989; Haraway, 1991;

Castells, 2000). New geographies of global production and international finance in the 1980s and 1990s highlighted a changing relationship between an increasingly urbanized world and cities as territorial objects (Friedmann and Wolff, 1982; Sassen, 2001). The possibilities of new electronically mediated environments prompted parallel questions in cultural studies and the humanities about non-linear narratives and spaces (Calvino, 1974; Auster, 1987; Skeates, 1997; Crang, 2000), and contemporary social theory continues to grapple with the relationship between changing city forms and forms of citizenship, community and governance (Healey, 2002; Coward, 2012). Among political scientists, Timothy Luke (2003), in his work on 'global' cities — with emphasis on the word 'global' as scope and process, rather than 'global' cities as particular places where such forces 'burrow' (2003: 16) — explicitly defines urbanization in processual terms and discusses its effects on natural resources and social inequality outside the limits of a particular city. Most recently in urban studies, two of the most vibrant approaches to thinking across the crumbling boundaries of the formally bounded city have been the study of networked infrastructure (Graham and Marvin, 2001) and 'assemblage' urbanism (Fariás and Bender, 2010; Brenner *et al.*, 2011; McFarlane, 2011). While otherwise springing from different intellectual sources, both chart urban processes that incorporate nature and extend beyond the boundaries of the traditional city.

We could go on: a wide range of research has, from a variety of disciplinary perspectives, demonstrated that the relationship between cities as sites and global urban processes is an increasingly complex one. Topics as diverse as finance, epistemology, governance, material infrastructure and vulnerability have pulled the focus from place to process, begged a wider view from city to world and produced research that treads the connections and ruptures between 'cities' as particular places and the networks, systems, people and problems that increasingly connect them. Layered together, such work begins to bring a densely connected but unevenly differentiated urban fabric into focus; cities as research objects fade into the background, giving way to the multiple processes, materials and networks that constitute them. But such efforts are the exception rather than the rule. More to the point for UPE, they generally proceed without directly taking up questions about the nature of urbanization itself, and when they do, for the most part they eschew the language of urban political ecology. For example, in a symposium in *Capitalism Nature Socialism* (Heynen and Robbins, 2005), Heynen, Robbins, Perkins and Swyngedouw themselves turn to concepts such as neoliberalization and privatization — rather than 'urbanization' — to describe what we might think of as 'urban' transformations of the governance, enclosure and valuation of nature in a range of city and non-city sites.

Regardless of the reasons, *and in spite of the programmatic statements of UPE's founders*, actually-existing UPE is mainly a research program into the politics of nature within cities. But if scholars of broader questions of urbanization are content to answer them without drawing on UPE's insights, and UPE's practitioners are content to focus on the city to the exclusion of the broader questions, what is the problem? Isn't everyone content? The problem is a lost opportunity: UPE could — should, even — be at the forefront of current scholarship that deals with exactly these questions of the relationship between the city as an artifact and processes of urban transformation. But in fact it has been marginal. And this, we argue, is the practical consequence of a methodological cityist research program in which the city has remained the privileged lens for studying contemporary processes of urban transformation that are not limited to the city.

There are at least two avenues along which a refocused UPE could fulfill its Lefebvrian promise and contribute to a planetary, ecological, political understanding of contemporary urbanization. The first would be to investigate processes of socio-natural transformation that systematically differentiate, within specific regions or at larger scales, city from non-city — in other words, to show how urbanization produces, materially or representationally, spaces understood as urban or rural, or materials understood as natural or social. Such studies could dislodge the city from its current role as the container for research that calls itself urban political ecology and reposition it as

a research object to be explained, alongside its non-city counterparts such as the ‘countryside’, ‘wilderness’ and ‘nature’. Some of these studies would remain focused on or within urban areas; in addition to the above-mentioned studies of urban social movements, one good example is Paul Robbins’ (2007) political ecology of lawns. Obviously lawns are ‘green’ in a superficial sense, but Robbins shows how this greenness is implicated in the production of contemporary American urbanism. Research such as this could make explicit the link between how contemporary understandings of ‘nature’ take specific shape in particular urban contexts and their role in subsequent urban transformation, and could in principle be conducted at a diverse range of scales, from the body to the region. Extended to social theory such an understanding of the interaction between urban processes and experiential selectivities of particular environments could also elucidate important aspects of social and political life (Bell, 1995; Angelo, 2013). Other studies might involve confronting the morphological differences between sites, for example, reassessing rural and wilderness areas — the traditional sites of political ecology — in order to consider how socionatural processes spanning city and countryside differentiate the two at the same time as they connect them.

The second avenue along which UPE could follow urbanization out of the city would be to more rigorously interrogate its global uneven development, tracing features of the urban world across the planet and integrating those that rarely if ever appear in cities. In effect, urban political ecology could apply the insights of commodity-chain analysis (Bair and Werner, 2011), simultaneously de-fetishizing economy and territory, to distinctive aspects of urban society. David Pellow (2006) does this by showing the global ecological dimensions to the Western consumption of high-tech devices, thereby implicitly elaborating an urban metabolism that neither relegates nature to an asocial role nor reifies the city as the privileged domain of agency and politics for urban environmental questions. Similar strategies could be pursued to connect urbanisms outside the Anglo-American world (Robinson, 2002; Simone, 2004; McFarlane, 2008) to the global socionatural processes of which they are part.

Conclusion

Encouragingly, recent research — much of it by young scholars — has begun prodding UPE in this direction by selecting research sites that venture beyond the boundaries of the traditional city while still using ‘urban’ tools for analysis. Darling (2005) has reflexively studied the production of ‘rural’ nature as analogous to ‘urban’ phenomena, while Perkins’ (2006) study of a Minnesota watershed area implies the same by using UPE literature for what is not explicitly identified as an ‘urban’ site. Two recent articles in this journal have likewise challenged methodological cityism in UPE: Parés *et al.* (2012) counterposing ‘suburban’ and urban natures, and Kitchen (2012) using Sieverts’ (2003) concept of the *Zwischenstadt* to help reconcile his implicit understanding of UPE’s account of the ‘urban forest’ (forests located in cities) with South Wales’ apparently non-urban geography. This direction is encouraging. But alongside the selection of non-city research sites that implicitly challenge inherited assumptions in urban studies, we continue to require methodologically adventurous, explicit theoretical challenges to these assumptions. Thus we have written this article as a provocation. As much of the world’s collective gaze is turning towards an apparently green and urban horizon, we challenge urban political ecology to return to its Lefebvrian roots: to help us understand the present and, critically, to participate in imagining the urban future.

Hillary Angelo (hillary.angelo@nyu.edu) and **David Wachsmuth** (david.wachsmuth@nyu.edu), Department of Sociology, New York University, 295 Lafayette Street, 4th Floor, New York, NY 10012, USA.

References

- Agnew, J. (1994) The territorial trap: the geographical assumptions of international relations theory. *Review of International Political Economy* 1.1, 53–80.
- Angelo, H. (2013) Bird in hand: how experience makes nature. *Theory and Society* 42.4, 351–68.
- Auster, P. (1987) *City of glass*. Penguin, New York, NY.
- Aylett, A. (2010) Conflict, collaboration and climate change: participatory democracy and urban environmental struggles in Durban, South Africa. *International Journal of Urban and Regional Research* 34.3, 478–95.
- Bair, J. and M. Werner (2011) Commodity chains and the uneven geographies of global capitalism: a disarticulation perspective. *Environment and Planning A* 43.5, 988–97.
- Bell, M.M. (1995) *Childerley: nature and morality in a country village*. University of Chicago Press, Chicago, IL.
- Benjamin, W. (1999) Paris, the capital of the nineteenth century. In R. Tiedemann (ed.), *The Arcades Project*, Belknap Press, Cambridge, MA.
- Bettencourt, L.M.A., J. Lobo, D. Helbing, C. Kühnert and G.B. West (2007) Growth, innovation, scaling, and the pace of life in cities. *Proceedings of the National Academy of Sciences* 104.17, 7301–306.
- Bickerstaff, K., H. Bulkeley and J. Painter (2009) Justice, nature and the city. *International Journal of Urban and Regional Research* 33.3, 591–600.
- Blaikie, P. and H. Brookfield (eds.) (1987) *Land degradation and society*. Methuen, London.
- Brenner, N. (2009) Is there a politics of ‘urban’ development? Reflections on the US case. In R. Dilworth (ed.), *The city in American political development*, Routledge, New York, NY and London.
- Brenner, N. (2013) Theses on urbanization. *Public Culture* 25.1, 85–114.
- Brenner, N. and C. Schmid (2013) The ‘urban age’ in question. *International Journal of Urban and Regional Research* published in Early View, DOI: 10.1111/1468-2427.12115.
- Brenner, N., D.J. Madden and D. Wachsmuth (2011) Assemblage urbanism and the challenges of critical urban theory. *City* 15.2, 225–40.
- Bunce, S. and G. Desfor (2007) Introduction to ‘political ecologies of urban waterfront transformations’. *Cities* 24.4, 251–58.
- Burdett, R. and D. Sudjic (eds.) (2008) *The endless city: the Urban Age project by the London School of Economics and Deutsche Bank’s Alfred Herrhausen Society*. Phaidon, London.
- Calvino, I. (1974) *Invisible cities*. Translated by W. Weaver, Harcourt, New York, NY.
- Castells, M. (1989) *The informational city: information technology, economic restructuring, and urban-regional process*. Blackwell, Oxford.
- Castells, M. (2000) *The rise of the network society: the information age, volume 1*. Second edition, Blackwell, Malden, MA.
- Cooke, J. and R. Lewis (2010) The nature of circulation: the urban political ecology of Chicago’s Michigan Avenue Bridge, 1909–1930. *Urban Geography* 31.3, 348–68.
- Coward, M. (2012) Between us in the city: materiality, subjectivity, and community in the era of global urbanization. *Environment and Planning D: Society and Space* 30.3, 468–81.
- Crang, M. (2000) Urban morphology and the shaping of the transmissible city. *City* 4.3, 303–15.
- Cronon, W. (1991) *Nature’s metropolis: Chicago and the Great West*. W.W. Norton & Co., New York, NY.
- Darling, E. (2005) The city in the country: wilderness gentrification and the rent gap. *Environment and Planning A* 37.6, 1015–32.
- Davis, M. (1999) *Ecology of fear: Los Angeles and the imagination of disaster*. Vintage Books, New York, NY.
- Desfor, G. and L. Vesalon (2008) Urban expansion and industrial nature: a political ecology of Toronto’s port industrial district. *International Journal of Urban and Regional Research* 32.3, 586–603.
- Domene, E. and D. Saurí (2007) Urbanization and class-produced natures: vegetable gardens in the Barcelona metropolitan region. *Geoforum* 38.2, 287–98.
- Escobar, A. (1999) After nature: steps to an antiessentialist political ecology. *Current Anthropology* 40.1, 1–30.
- Fariás, I. and T. Bender (eds.) (2010) *Urban assemblages: how actor-network theory*

- changes urban research*. Routledge, New York, NY and London.
- Forsyth, T. (2003) *Critical political ecology*. Routledge, New York, NY and London.
- Friedmann, J. and Wolff, G. (1982) World city formation: an agenda for research and action. *International Journal of Urban and Regional Research* 6.2, 319–44.
- Gandy, M. (2003) *Concrete and clay: reworking nature in New York city*. MIT Press, Cambridge, MA and London.
- Glaeser, E.L. (2011) *Triumph of the city: how our greatest invention makes us richer, smarter, greener, healthier, and happier*. Penguin, New York, NY.
- Graham, S. and S. Marvin (2001) *Splintering urbanism: networked infrastructures, technological mobilities and the urban condition*. Routledge, New York, NY and London.
- Haraway, D. (1991) A cyborg manifesto: science, technology, and socialist-feminism in the late twentieth century. In D. Haraway, *Simians, cyborgs and women: the reinvention of nature*, Routledge, New York, NY and London.
- Harrison, J. and M. Hoyler (eds.) (forthcoming) *Megaregions: globalization's new urban form?* Edward Elgar, Cheltenham, UK and Northampton, MA.
- Harvey, D. (1996a) Cities or urbanization? *City* 1.1–2, 38–61.
- Harvey, D. (1996b) *Justice, nature and the geography of difference*. Blackwell, Malden, MA.
- Harvey, D. (2008) The right to the city. *New Left Review* 53, 23–40.
- Healey, P. (2002) On creating the 'city' as a collective resource. *Urban Studies* 39.10, 1777–92.
- Henderson, G.L. (1999) *California and the fictions of capital*. Temple University Press, Philadelphia, PA.
- Heynen, N. (2006) Green urban political ecologies: toward a better understanding of inner-city environmental change. *Environment and Planning A* 38.3, 499–516.
- Heynen, N. and P. Robbins (eds.) (2005) The neoliberalization of nature: governance, privatization, enclosure and valuation (symposium). *Capitalism Nature Socialism* 16.1, 5–8.
- Heynen, N., M. Kaika and E. Swyngedouw (eds.) (2006a) *In the nature of cities: urban political ecology and the politics of urban metabolism*. Routledge, New York, NY and London.
- Heynen, N., M. Kaika and E. Swyngedouw (eds.) (2006b) Urban political ecology: politicizing the production of urban natures. In N. Heynen, M. Kaika and E. Swyngedouw (eds.), *In the nature of cities: urban political ecology and the politics of urban metabolism*, Routledge, New York, NY and London.
- Heynen, N., J. McCarthy, S. Prudham and P. Robbins (eds.) (2007) *Neoliberal environments: false promises and unnatural consequences*. Routledge, New York, NY and London.
- Human Organization* (2003) Locating the political in political ecology. *Human Organization* 62.3 (special issue).
- Kaika, M. (2005) *City of flows*. Routledge, New York, NY and London.
- Keil, R. (2003) Progress report: urban political ecology. *Urban Geography* 24.8, 723–38.
- Keil, R. (2011) Transnational urban political ecology: health and infrastructure in the unbounded city. In G. Bridge and S. Watson (eds.), *The new Blackwell companion to the city*, Blackwell, Oxford.
- Keil, R. and J. Graham (1998) Reasserting nature: constructing urban environments after Fordism. In B. Braun and N. Castree (eds.), *Remaking reality: nature at the millennium*, Routledge, New York, NY and London.
- Keil, R. and D. Young (2009) Fringe explosions: risk and vulnerability in Canada's new in-between urban landscape. *Canadian Geographer/Le Géographe canadien* 53.4, 488–99.
- Kipfer, S., P. Saberi and T. Wieditz (2013) Henri Lefebvre: debates and controversies. *Progress in Human Geography* 37.1, 115–34.
- Kitchen, L. (2012) Are trees always 'good?' Urban political ecology and environmental justice in the valleys of South Wales. *International Journal of Urban and Regional Research* 37.6, 1968–83.
- Latour, B. (2004) *Politics of nature: how to bring the sciences into democracy*. Harvard University Press, Cambridge, MA.
- Lefebvre, H. (2003 [1970]) *The urban revolution*. Translated by R. Bononno, University of Minnesota Press, Minneapolis, MN and London.

- Luke, T. (2003) Global cities vs. 'global cities': rethinking contemporary urbanism as public ecology. *Studies in Political Economy* 70 (spring), 11–32.
- McCann, E. and K. Ward (eds.) (2011) *Mobile urbanism: cities and policymaking in the global age*. University of Minnesota Press, Minneapolis, MN.
- McFarlane, C. (2008) Sanitation in Mumbai's informal settlements: state, 'slum' and infrastructure. *Environment and Planning A* 40.1, 88–107.
- McFarlane, C. (2011) Assemblage and critical urbanism. *City* 15.2, 204–24.
- Merrifield, A. (2013) The urban question under planetary urbanization. *International Journal of Urban and Regional Research* 37.3, 909–22.
- Moss, L. (2006) *The amenity migrants: seeking and sustaining mountains and their cultures*. CABI, Wallingford.
- Neumann, R.P. (2009) Political ecology: theorizing scale. *Progress in Human Geography* 33.3, 398–406.
- Parés, M., H. March and D. Saurí (2012) Atlantic gardens in Mediterranean climates: understanding the production of suburban natures in Barcelona. *International Journal of Urban and Regional Research* 37.1, 328–47.
- Paulson, S., L.L. Gezon and M. Watts (2003) Locating the political in political ecology: an introduction. *Human Organization* 62.3, 205–17.
- Peet, R. and M. Watts (2000) *Liberation ecologies: environment, development, social movements*. Routledge, New York, NY and London.
- Pellow, D.N. (2006) Transnational alliances and global politics: new geographies of urban environmental justice struggles. In N. Heynen, M. Kaika and E. Swyngedouw (eds.), *In the nature of cities: urban political ecology and the politics of urban metabolism*, Routledge, New York, NY and London.
- Perkins, H.A. (2006) Manifestations of contradiction: lakes within the production/consumption dialectic. *Antipode* 38.1, 128–49.
- Robbins, P. (2004) *Political ecology: a critical introduction*. Blackwell, Cambridge, MA and Oxford.
- Robbins, P. (2007) *Lawn people: how grasses, weeds, and chemicals make us who we are*. Temple University Press, Philadelphia, PA.
- Robinson, J. (2002) Global and world cities: a view from off the map. *International Journal of Urban and Regional Research* 26.3, 531–54.
- Ross, C.L. (ed.) (2009) *Megaregions: planning for global competitiveness*. Island Press, Washington, DC.
- Roy, A. (2009) The 21st-century metropolis: new geographies of theory. *Regional Studies* 43.6, 819–30.
- Roy, A. and A. Ong (eds.) (2011) *Worlding cities: Asian experiments and the art of being global*. Studies in Urban and Social Change, Blackwell, Malden, MA.
- Sassen, S. (2001) *The global city: New York, London, Tokyo*. Second edition, Princeton University Press, Princeton, NJ.
- Sayer, A. (1984) Defining the urban. *Geojournal* 9.3, 279–85.
- Sieverts, T. (2003) Cities without cities: an interpretation of the *Zwischenstadt*. Routledge, New York, NY and London.
- Simone, A. (2001) On the worlding of African cities. *African Studies Review* 44.2, 15–41.
- Simone, A. (2004) People as infrastructure: intersecting fragments in Johannesburg. *Public Culture* 16.3, 407–29.
- Skeates, R. (1997) The infinite city. *City* 2.8, 6–20.
- Soja, E. and M. Kanai (2007) The urbanization of the world: putting cities first. In R. Burdett and D. Sudjic (eds.), *The endless city: the Urban Age project by the London School of Economics and Deutsche Bank's Alfred Herrhausen Society*, Phaidon, London.
- Swyngedouw, E. (1996) The city as hybrid: on nature, society, and cyborg urbanization. *Capitalism Nature Socialism* 7.2, 65–80.
- Swyngedouw, E. (2006) Metabolic urbanization: the making of cyborg cities. In N. Heynen, M. Kaika and E. Swyngedouw (eds.), *In the nature of cities: urban political ecology and the politics of urban metabolism*, Routledge, New York, NY and London.
- Swyngedouw, E. (2009) The antinomies of the postpolitical city: in search of a democratic politics of environmental production. *International Journal of Urban and Regional Research* 33.3, 601–20.
- Swyngedouw, E. and N. Heynen (2003) Urban political ecology, justice and the politics of scale. *Antipode* 35.5, 898–918.

- Sze, J. (2006) *Noxious New York: the racial politics of urban health and environmental justice*. MIT Press, Cambridge, MA.
- Taylor, L. (2011) No boundaries: exurbia and the study of contemporary urban dispersion. *Geojournal* 76.4, 323–39.
- Trepl, L. (1996) City and ecology. *Capitalism Nature Socialism* 7.2, 85–94.
- Ultramari, C. and R.J. Firmino (2010) Urban beings or city dwellers? The complementary concepts of ‘urban’ and ‘city’. *City & Time* 4.30, published online.
- UNFPA (United Nations Population Fund) (2007) *State of world population 2007: unleashing the potential of urban growth*. UNFPA, New York, NY.
- UN-Habitat (2006) *State of the world’s cities 2006/2007: 30 years of shaping the Habitat agenda*. Earthscan, London.
- UN-Habitat (2011) *State of the world’s cities 2010/2011: bridging the urban divide*. Earthscan, London.
- Wachsmuth, D. (2012) Three ecologies: urban metabolism and the society-nature opposition. *The Sociological Quarterly* 53.4, 506–23.
- Wachsmuth, D. (2014) City as ideology: reconciling the explosion of the city form with the tenacity of the city concept. *Environment and Planning D: Society and Space* 32.1, 75–90.
- Wimmer, A. and N. Glick Schiller (2002) Methodological nationalism and beyond: nation-state building, migration and the social sciences. *Global Networks* 2.4, 301–34.
- Wirth, L. (1938) Urbanism as a way of life. *American Journal of Sociology* 44.1, 1–24.