



# Urban political ecology I: The urban century

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## Abstract

It has been over 15 years since the term ‘urban political ecology’ (UPE) was coined. While still often not incorporated into larger discussion of political ecology, its growing visibility in the published literature suggests that it has gone beyond an emerging theoretical lens to one that has fully emerged. This report characterizes the current literature that explicitly utilizes the language of UPE, discusses its theoretical evolution that is now seeing a second wave, as well as catalogs some of the new arenas through which the sub-field has offered novel insights into the socionatural unevenness of cities. A central contribution of this survey is to illustrate the myriad articulations of how urban environmental and social change co-determine each other and how these metabolic processes offer insights into creative pathways toward more democratic urban environmental politics.

## Keywords

cities, political ecology, urban geography, urban metabolism, urban political ecology (UPE)

## I Introduction: what do cities have to do with political ecology? Everything!

Despite the omnipresence of what Lefebvre (2003) prophetically saw as the urban revolution, many engaged in political ecology have failed to acknowledge the impact of cities within their framing of political ecology (see, for instance, Peet et al., 2011). This is both a function of the long tradition of social scientists being unwilling to comprehend the ‘city as natural’ (see Braun, 2005), but in political ecology it is also a function of the ‘rural Third World’ trap. At a time when some of the pre-eminent scholars central to the formation of ‘political ecology’ writ large have argued that UPE is one of the most important, provocative, and necessary intellectual terrains for understanding the future of socionatural relations (see Blaikie, 2008), it seems appropriate to

take stock of how UPE has evolved and where it is poised to go. Indeed, given the undeniable impact of the social production of urban nature across the globe, arguably setting the stage for the ‘urban century’ while at the same time directly shaping new geological epochs (‘the Anthropocene’), the language and logic of an explicitly *urban* political ecology seems more prescient than ever.

## II Urban political ecology redux

It has been over 15 years since Swyngedouw (1996) published his paper ‘The City as a hybrid: On nature, society and cyborg urbanization’ in

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*Capitalism Nature Socialism* which arguably coined the neologism ‘urban political ecology’. In that paper, Swyngedouw recognized the importance of past urbanist traditions while at the same time foreshadowing theoretical synergies between political economy, political ecology, and Science and Technology Studies (STS) by blending representational, discursive, ideological, material, and biochemical constellations of uneven power relations through the notion of urban metabolism. He wrote:

In the city, society and nature, representation and being are inseparable, integral to each other, infinitely bound-up, yet simultaneously this hybrid socio-natural ‘thing’ called the city is full of contradictions, tensions and conflicts ... Only over the past few years, a rapprochement has begun to assert itself between ecological thinking, political-economy, urban studies and critical social and cultural theory. This may provide the ferment from which a new and richer urban ecology or urban political-ecology may germinate. (Swyngedouw, 1996: 65–66)

The Marxist logic that led to the development of UPE comes not only from the work of David Harvey (1996) but also (and especially) from Neil Smith’s (2008) ‘production of nature’ thesis. As the rapidly growing literature demonstrates, a central contribution of UPE has been to urbanize discussions about ‘metabolism’ and, in turn, push toward a deeper understanding of how the metaphoric rendering of metabolization offers an ontological way through the all too stifling dualisms that have historically plagued the discussions of nature *and* society. However, UPE scholars have also taken seriously the egalitarian potential that is embedded within a robust conceptualization of urban metabolism; this is another distinguishing characteristic of this literature. In the foreword to a book I co-edited with Maria Kaika and Erik Swyngedouw, Neil Smith suggested:

The notion of metabolism set up the circulation of matter, value and representations as the

vortex of social nature. But, as the original German term, ‘Stoffwechsel’, better suggests, this is not simply a repetitive process of circulation through already established pathways. Habitual circulation there certainly is, but no sense of long-term or even necessarily short-term equilibrium. Rather, ‘Stoffwechsel’ expresses a sense of creativity ... The production of urban nature is deeply political but it has received far less scrutiny and seems far less visible, precisely because the arrangement of asphalt and concrete, water mains and garbage dumps, cars and subways seems so inimical to our intuitive sense of (external) nature. (Smith, 2006: xiii–xiv)

While the idea of metabolism goes back to Marx within the realm of socionatural theory, the way in which this idea of creativity continues to be expressed through an increasing array of inter-related and interconnected socionatural urban processes, and their resulting uneven configurations, is a main contribution of UPE. UPE scholarship has been working, in sum, to articulate urban metabolism as a dynamic process by which new sociospatial formations, intertwinings of materials, and collaborative enmeshing of social nature emerge and present themselves and are explicitly created through human labor and non-human processes simultaneously. To this end, early discussions within UPE sprang out of the contestation of water to show the uneven socionatural production of urban hydroscapes, and this continues to be a dominant focus across the arc of this literature (see Bakker, 2013; Budds, 2009; Loftus, 2007; Smith, 2001; Swyngedouw, 1996, 1997, 1999, 2004; Swyngedouw et al., 2002). However, the churning and circulation inherent to uneven metabolic processes have begun to be interrogated through a host of other vectors, including: air pollution (Buzzelli, 2008; Véron, 2006); parks (Brownlow, 2006); urban forests (Heynen, 2006a); urban wildlife corridors (Evans, 2007); gentrification (Quastel, 2009); insects and pesticides (Biehler, 2009); gardens and food (Domene and Saurí, 2007;

McClintock, 2011; Parés et al., 2013; Shillington, 2013); explicitly organic food (Alkon, 2013); alcohol (Lawhon, 2013); hunger (Heynen, 2006b); and waterfront transformation (Bunce and Desfor, 2007; Hagerman, 2007). These investigations have added empirical heft, while at the same time expanding in axiomatic ways the notion that there is truly nothing unnatural about urban ecosystems and the socionatural processes that produce them.

Through a host of different historical-geographical UPE contexts, the ways in which urban environmental consumption, production, and exchange result in constant dialectical spatial reformation are helping to illustrate that urban metabolic force, propulsion, and agitation can never be seen as simply static circulations or simple recirculation. Likewise, UPE research has embarked in directions that challenge ideas of urban metabolism in productive ways, for instance by focusing on urban ecological security (Hodson and Marvin, 2009), urban infrastructures (Monstad, 2009), as well as social cohesion (Cook and Swyngedouw, 2012) and what problematically might be seen as its opposite, post-industrial ruin (Millington, 2013). Expanding UPE research away from ‘resource domains’ and into more traditional urban geographic themes has helped to enrich the socionatural insight that seems possible from an UPE approach, as well as readying it to take on the challenges of the ‘urban century’.

By continuing to break down dualistic thinking about urban nature in the first instance, UPE research has worked to show in stark terms what is politically at stake via the uneven, and often crippling, socionatural power relations at play through the urbanization of nature. At the same time, by working through new readings of urban nature in innovative ways – for instance, via the photography of ruin (Millington, 2013), links between individual buildings and eco-city master plans (Caprotti and Romanowicz, 2013), and ‘experiments’ into infrastructure networks ‘that require a reworking of the flows of

power, resources and materials through which infrastructure systems are sustained’ (Broto and Bulkeley, 2013) – scholars of UPE continue to complicate the binaries, boundaries, margins, and limits between urban *and* natural environments and *within* urban socionatural processes and politics. That urban metabolic processes unfold historically to produce both empowering and incapacitating socionatural conditions has been a staple insight from much UPE, but this literature is also starting to push deeper into this notion to show grounded visions of possibility and alternatives to uneven urbanism as usual.

Because urban environments are drenched in uneven power relations, this principle of creativity within metabolic processes, as envisaged by Smith (2006), makes legible the ever-changing interplay between people, cities, and things. This legibility not only helps to clarify the sorts of motivations at play within these interconnected and interrelated dynamics, but also helps to imagine where political points for intervention exist. Within the steady flow of original scholarship, there has only been one major new book length project that explicitly speaks the language of UPE and is the most daring in its efforts to show the creativity within metabolism, and within the Gramscian context of everyday praxis. Loftus’s (2012) *Everyday Environmentalism: Creating an Urban Political Ecology* serves as a major stepping stone in the codification of UPE through his mature theorizing and deep empirical grounding in South African hydro-struggles.

### III First and second waves

There is now a series of books and articles that today seem especially important as the foundation of UPE. These books include: Gandy’s (2002) *Concrete and Clay: Reworking Nature in New York City*; Kaika’s (2005) *City of Flows*; Keil and Desfor’s (2004) *Nature and the City: Making Environmental Policy in Toronto and Los Angeles*; Robbins’ (2007) *Lawn People:*

*How Grasses, Weeds, and Chemicals Make Us Who We Are*; and Swyngedouw's (2004) *Social Power and the Urbanization of Water: Flows of Power*. In addition to important review essays by Keil (2003, 2005), Braun's (2005) essay on 'Writing a more-than-human urban geography' in this journal gets referenced increasingly around questions of UPE, as does a paper that I co-authored with Swyngedouw (Swyngedouw and Heynen, 2003) and a book co-edited with Kaika and Swyngedouw (Heynen et al., 2006).

While the earliest work explicitly to use the language of UPE was primarily Marxist, the roots of actor-network theory (ANT), post-humanism, and broader theoretical connective language that Swyngedouw initially used in 1996 left the door open for other productive cross-fertilization within UPE. A substantial proportion of newer UPE scholarship has argued against the early framing of UPE such that a second wave of UPE is clearly beginning to present itself. The ability of a subliterate to mature to the point of having internal debates strikes me as an especially good sign of vibrancy and future growth potential.

Two important critiques that are central to a second wave of UPE scholarship include post-humanist perspectives as well as looming methodological questions. Drawing on Latour, Holifield (2009) has argued that actor-network approaches to UPE, as opposed to Marxist approaches, have a different, and potentially broader, reach for asking socionaturally oriented questions. Holifield (2009) argues:

instead of explaining inequalities by contextualizing and situating them, actor network approaches turn our attention to the forms and standards that make it possible to circulate new associations of entities, to generalize social orders, and to situate actors within a social context – that is, to socialize them in particular ways. (Holifield, 2009: 639)

Gandy (2012) has echoed Holifield's sentiments by suggesting that 'the "first wave" of

urban political ecology included an overly deterministic emphasis on the production and meaning of urban nature, and in some cases, weakly conceptualized readings of nature itself' (p. 735). Gandy draws on Gissen (2009), Perkins (2007), and Zitouni (2010) to illustrate how first-wave shortcomings have been somewhat addressed through an engagement with post-humanist ontological approaches. So too has Grove (2009: 209), based largely on Escobar (1998: 64), contributed to this line of debate by suggesting that earlier UPE works that 'remain impervious' to broader cultural dynamics inherent in nature can, and perhaps should, be seen as explicitly political. He says: 'Such a rethinking of culture, environment, and politics has been a hallmark of post-structural and feminist approaches to political ecology' (Grove, 2009: 209).

While interested in bigger questions about the future of critical urban theory, Brenner et al. (2011: 232) offer a slightly different reading of these arguments by suggesting that UPE productively uses the concept of metabolism and selected logics from ANT 'to build upon and reformulate the treatment of socionatures within critical urban political economy'. They go on to suggest that 'the concept of metabolism serves simultaneously as a way to characterize objects of inquiry (particularly urban socio-natural networks) and also as an explanatory and theoretical device' (p. 232).

Another new and interesting critique of first-wave UPE posits a core methodological disjuncture between a narrow focus on small 'c' cities, while simultaneously suggesting big 'g' global ramifications of urban ecological issues. As Wachsmuth (2012) discusses the main focus of Angelo and Wachsmuth's forthcoming *IJURR* essay (2013), he suggests:

there are still some gaps in the UPE project ... [m]ost notably, there is a contradiction between the most influential UPE theorizations of urbanization – which stress its

planetary dimensions and its juxtaposition of the global and the local (Swyngedouw 1996; Keil 2003; Heynen et al. 2006) – and the nearly exclusive empirical focus on cities, traditionally understood (but see Pellow [2006] for an insightful exception). (Wachsmuth, 2012: 518)

Wachsmuth goes on to say, provocatively, that ‘this is “methodological cityism”’: the city is taken to be the privileged analytical lens for studying contemporary processes of urban social transformation that are not necessarily limited to the city’.

#### IV Toward a more embodied UPE

My task here has been to report on some of the innovations that seem to be driving the development of UPE. The continued evolution of theoretical, empirical, and methodological parameters of UPE requires consideration and continued rearticulation to keep up with the bewildering pace of the ‘urban century’ ahead. Issues that were not discussed in this report include efforts made toward better incorporating feminist, racialized, and queer positionalities within UPE, as well as other interlocking power relations. I suggest more work is necessary to continue building upon and expanding from the Marxist origins of the field in order for the political relevance of UPE also to continue growing. In the next two reports, I will embrace the notion of creativity within Smith’s articulation of metabolism in order first to push the ways UPE has incorporated discussions of racialization and postcoloniality. Then, to finish, I will report on the explicit synergies between UPE and feminist political ecology as well as queer ecologies. As a theoretical lens, UPE provides an integrated and relational approach that helps to untangle the interconnected economic, political, social, and ecological processes that together go to form highly uneven urban landscapes. Given this, surely broadening the sorts of political subjectivities who both suffer and benefit from the

uneven production of urban nature is an important task that requires more intellectual, as well as political, attention.

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