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1. Introduction

Urban Political Ecology (UPE) emerged as a more or less coherent research field in the late 1990s to examine the production of urban nature. Almost twenty years after Erik Swyngedouw (1996, 67, emphasis added) pointed to ‘a possible avenue for exploring (...) a new *urban* political–ecological programme’, it has become clear that this programme went beyond expanding the geographical scope of a previously rural–oriented Political Ecology: The field now provides an innovative approach to urban studies and a novel perspective on cities. In Political Ecology, cities did not appear as more than sites of political–economic decision-making that affected environmental degradation, resource access and control in rural areas. UPE instead moved political–ecological concerns like questions on access to and politicisation of the environment to urban areas. It thus added to the literatures on urban sustainability, urban studies and industrial ecology that hitherto framed the urban environment (Keil 2003, 730). In contrast to these fields of enquiry, UPE seeks, as Loftus (2012, 3) puts it, ‘to disrupt the idea of the city as the antithesis of nature and to focus on the processes through which the city is constituted as a socio–natural assemblage’.

In their endeavour to examine cities through socio–ecological relationships, early UPE scholars drew from Marxist urban geography and Science and Technology Studies (Heynen 2014). UPE congealed quickly into a quite coherent body of literature centrally concerned with the metabolism of cities. Within this literature, cities are understood to be (re)produced through metabolic processes that involve circulation and flows. These processes are simultaneously political, social and discursive as well as material, biochemical and physical (Keil 2005; Wachsmuth 2012). Questions around this metabolism explore three main aspects: the process of its (re-)production through humans and non-human entities; its uneven character; and the ways it manifests and is mobilised by power relations. Recently, this conceptual and theoretical dominance has been criticised. A large number of publications have opened up UPE inquiries to address other concerns including post–structural and postcolonial interests in environmental knowledges¹, identities and discourses; questions of feminist political ecology regarding embodied experiences of urban ecologies; and the everyday dimensions of UPE (Gabriel 2014; Heynen 2014; Lawhon, Ernstson, and Silver 2013; Zimmer 2015).

¹ Knowledge is used here in the plural to flag the validity of “many forms of knowledge through which people actually know and engage the environment in social life” (Rademacher 2011, 28).

However, what is the 'urban', what is the 'city', what are 'urban processes' in UPE? This chapter aims to address these questions. UPE has so far not provided any explicit definition of the 'urban'. Also, the field has recently expanded rapidly, accompanied by a diversification of topics and theoretical perspectives. In fact, it is currently debated whether UPE is really a political ecology of the urban or rather a political ecology of cities as the two concepts are often collapsed or used interchangeably in UPE. Angelo and Wachsmuth (2014, 7) therefore state that UPE has scrutinised the 'naturalness' of cities to the detriment of explaining their 'urban-ness'. Definite answers to the above questions are therefore problematic. Rather, this chapter attempts to map different understandings of the 'urban' in UPE and to render these more explicit, while pushing the field for greater conceptual clarity.

In the following, we shed light on the question of how the different strands of UPE understand the 'urban': the traditional Marxist UPE as metabolic process shaped by power (section 2) and the more recent postcolonial perspectives as pluralised socio–natures that act as arenas for the everyday political (section 3). The chapter concludes with a brief summary and a call for a Political Ecology across the urban/rural divide that could engage more systematically in the question where the urban is located, as well as which and how processes of production of socio–nature are specific to the urban.

2. The 'Urban' in Marxist Urban Political Ecology: Process, Metabolism and Power to Control

2.1 The Urban as Process

Early UPE, as developed around the works of Erik Swyngedouw, Nik Heynen and Maria Kaika,² took inspiration from Marxist geography and their processual, and to some extent historical, analysis of the city and the urban (Loftus 2012). Harvey argued that the study of cities needs to be a study of urbanisation as a process. For him, cities *are* a process, produced through the social relations particular to capitalism (Harvey 1989; Harvey 1996a). Hence the focus of early UPE on the process of urbanisation and its characterisation as 'a process–based episteme' (Swyngedouw 1996, 74).

Capitalist social relations do not only affect cities. Therefore, the urban–rural dichotomy, in Harvey's (1978) interpretation, is primarily an expression of the division of labour and both urban and rural spaces are expressions of larger processes of capitalism. More radically, Smith (1990, 110) suggests that the industrialisation of agriculture has led to the urbanization of the countryside now being an

² The only special issue on UPE was published in *Antipode* (Swyngedouw and Heynen, 2003) and the first edited book on UPE was edited jointly by the three scholars (Heynen, Kaika, and Swyngedouw 2006). Loftus (2012) is to our knowledge the only monograph dedicated to the research field. Sandberg et al. (2014) have recently published an edited book on the political ecology of urban forests. This book, however, has rather weak links with the UPE body of literature and refrains from discussing the term 'urban'.

'overwhelming reality'. Smith therefore emphasises that instead of speaking of the city one must consider the 'urban scale'. This scale is not related to a specific form or administrative boundary but to the local labour market and the limits of daily commute (Smith 1990). This argument chimes with Lefebvre (2003 [1970]), who asserted that the terms 'city' and 'urban' are no longer coterminous. For Lefebvre (2009 [1968], 70, *own translation*), the process we observe is in fact a double process of 'industrialization–urbanization'.³ As villages have become enfolded in the urban process of industrial production and consumption, we must not speak of cities but rather of the 'urban fabric' (Lefebvre 2003 [1970], 4) that gradually encompasses and remakes the 'erstwhile non–urban realm' (Brenner 2013, 17).

The insistence on the urbanisation process fosters an understanding in Marxist UPE of the urban that is not limited to the city; rather, it is defined as a process across scales (Swyngedouw and Heynen 2003). The category of the city is seen as the outcome of specific discursive practices that lacks ontological foundation (Swyngedouw 1996). Yet, scholars have studied this process of urbanisation – and in particular what Swyngedouw (1996, 79) has called the 'urbanisation of nature' – largely in cities.⁴ Angelo and Wachsmuth (2014) discuss this contradiction in their call for a return to the field's Lefebvrian roots. They claim that cities should become 'research object[s] to be explained' instead of containers for research (*ibid.*, 9–10). Similarly Gandy (2013) states that cities are just a form of urbanization, and must be understood as dynamically evolving sites, arenas and outcomes of broader processes of socio–spatial and socio–ecological transformation. Marxist UPE is therefore currently pushed to elaborate its understanding of the 'urban' further.

2.2 *The Urban as Metabolism*

In Marxist UPE, cities have been understood as 'second nature'⁵ (Lefebvre 1976, 15 in: Swyngedouw & Heynen 2003, 908), a socially produced space. UPE scholars borrow from Harvey's (1996b, 186) understanding that there is 'nothing unnatural' about cities, and more importantly from Smith's (1990, 49) thesis of the 'production of nature' to understand cities as a socio–natural process (Loftus 2012).

³ Yet, in the current, late stage of capitalism he contends that "we can consider industrialization as a stage of urbanization" (Lefebvre 2003 [1970], 139).

⁴ An exception is Kitchen (2013) who bases his studies on an industrial forest explicitly in a "hybrid of urban and rural (...) the *Zwischenstadt*: the in-between city" (p. 6).

⁵ "Second nature" is used by Lefebvre here to designate a space created through human activity within the complex network of social relations. Following Smith (1990, 67–8), however, Marx used the term "second nature" to refer to the realm of human institutions – nature altered by human activity and introduced into the abstract sphere of exchange values. Smith holds that "The distinction between a first and second nature is (...) increasingly obsolete. (...)The production of first nature from within and as a second nature makes the production of nature, not first or second nature in themselves, the dominant reality." (p. 82-3)

To study this socio–natural process, UPE employs the concept of the metabolism, with the methodology suggested being an ‘archaeology of (...) [cities’] metabolism’ (Swyngedouw 1996, 74). This archaeology (Dreyfus and Rabinow 1986) often draws primarily on in-depth reading of historical documents.

The understanding of the metabolism of cities in Marxist UPE is distinct from that in human ecology or in industrial ecology, where this term was used first. UPE places human labour at the centre of metabolism (Wachsmuth 2012). It is taken as a material or energetic exchange, but this exchange is seen as a historical and political product (Smith 1990). It remains, however, to be elaborated by Marxist UPE what makes this urban metabolism particular and different from a non-urban or rural metabolism.

Most importantly, UPE uses the concept of metabolism to firmly integrate non-human (or ‘natural’) agency with human agency in the analysis of urban processes (Robbins and Sharp 2006). It is indispensable to briefly refer to Latour, whom Swyngedouw (1996, 66) relies on to conceptualise cities as ‘hybrid socio–natural “thing[s]”’. Hybrids are defined by Latour (2004, 24) as tangled beings, assemblages of different entities that cannot be categorised as either ‘natural’ or ‘social’. Following this, cities are considered to be ‘simultaneously local and global, human and physical, cultural and organic’ (Swyngedouw and Heynen 2003, 899) processes. Urbanization in consequence designates ‘a process by which new and more complex relationships of society and nature are created’ (Keil 2003, 729).

Despite its intentions to chart the socio–*ecological* process that urbanisation is understood to be, UPE primarily investigates the ways humans control the urban metabolism according to their interests. Several authors have thus criticised recently that the attention to non-human agency has been very limited so far (Gabriel 2014; Holifield 2009). The metabolism is seen by Marxist UPE as the result of specific ‘drives, desires, [and] imaginations’ (Swyngedouw 2006, 24) and the product of specific historic struggles (Wachsmuth 2012). Urban metabolism and urbanisation are seen as shaped by unequal power relations, leading to exploitation, domination, exclusion and marginalisation (Swyngedouw 1996; Swyngedouw and Heynen 2003). The urban represents a landscape of power.

2.3 Power to Control the Urban Metabolism

Within this strand of literature, power is understood as social, cultural, political and economic; it is entangled in a ‘power/money/water nexus’ (Swyngedouw 2004, 2); or, formulated more generally, in a power/money/urbanised nature nexus. Power seems to be something certain actors have (or actors occupy certain ‘positions of social power’, *ibid.*, 37), which allows them access to and control over resources such as water. As Swyngedouw and Heynen (2003, 900) explain: ‘All of these processes [of

urbanisation of nature] occur in the realms of power in which social actors strive to defend and create their own environments in a context of class, ethnic, racialised and/or gender conflicts and power struggles.' Power is intimately tied up with 'mechanisms of domination and subordination' and thus with struggles 'along class, gender, and ethnic cleavages' (Swyngedouw 2004, 2). This is based on the understanding of the city as being produced through flows of capital that are shaped by processes of appropriation and exploitation (Harvey 1988). The city is a product which 'embodies and expresses, produces and reproduces, the very injustices out of which it also is made' (Loftus 2012, 3).

Relations of power are equated with a 'geometry' (Swyngedouw 2004, e.g. 41; 114), which in turn is reflected in circulations of capital and urbanised nature. At the same time, power relations are described as engaged in a 'choreography' (ibid.) that aims at changing or maintaining these circulations. With this understanding of power at its basis, the concept of the urban metabolism has helped to analyse the way certain flows have been prioritised or marginalised (Castán Broto, Allen, and Rapoport 2012).

3. The 'Urban' in Postcolonial Urban Political Ecology: Plural Socio–Natures and the Everyday Political

Though a number of early works of UPE dealt with cities in the global South (Pelling 1999; Swyngedouw 2004; Véron 2006), a majority of subsequent studies analysed urban political ecologies of Northern agglomerations. In 2010, Zimmer (2010) stated that it was high time for UPE to explore cities in the global South in more depth, which might lead to epistemologically new approaches. This was felt by numerous scholars around the world, so that a great number of new publications have appeared since then that theorise UPE from the South (Lawhon, Ernstson, and Silver 2013; Zimmer 2015).

3.1 The Urban as Pluralised Socio–Natures

Postcolonial UPE acknowledges the 'parallel existence of different cityscapes' that is reflected in a 'plurality of Urban Political Ecologies' (Zimmer 2010, 350). This plurality, which leads various authors to using the term 'urban natures', is understood as the result of an 'extreme cultural and environmental diversity through which urbanization unfolds as a sociomaterial or socioecological phenomenon' (Ernstson 2014). A 'multiplicity of forces' (Gabriel 2014, 40) co-produce the urban. Postcolonial UPE aims at documenting and analysing this multiplicity.

In this endeavour, some authors are indebted to postcolonial urban studies and urban anthropology; others draw on Foucauldian notions of governmentality, knowledge and subjectivity, feminist political

ecology or queer theory to widen the scope of UPE. These works are searching for ways to pluralise theoretical approaches while allowing new geographical contexts to speak to theory building. Several scholars make use of more ethnographic and participative methodologies like participant observation, participative mapping and photography. This broadened theoretical, methodological and geographical approach does not always break with the underlying Marxist assumptions of the production of urban space through the social relations of capitalism.⁶ Many, however, find an exclusively Marxist framing analytically stifling.

Much of the related empirical work is situated in the global South and aims at 'provincialising' UPE (Chakrabarty 2000; Lawhon, Ernstson, and Silver 2013). Scholars insist that research is situated in and related to place. It is therefore necessary for UPE to develop its theoretical body from multiple geographical contexts and diverse positions. Postcolonial UPE is thus largely sympathetic to attempts to rewrite urban theory from the South (Edensor and Jayne 2012a; Mbembe and Nuttall 2004; Myers 2014; Robinson 2006; Roy 2009; Simone 2001). With this, the understanding of the 'urban' within UPE also gets pluralised.⁷

This pluralism defies any simple categorizations of the meaning of the 'urban' in what we have labelled postcolonial UPE. Indeed, much of the postcolonial UPE literature remains silent about their understanding of the urban. Yet the phenomenon of the urban is implicitly located in cities, so that this is a 'political ecology *in* the city' (Cook and Swyngedouw 2012, 1974; emphasis in original). But even if the urban means city-ness: What does that mean? What is a city?

Postcolonial UPE bases its conceptualisation of cities on postcolonial and urban anthropological studies that stress the fundamental connectedness of all cities to, and their embeddedness in, 'multiple elsewheres' (Mbembe and Nuttall 2004, 348). Cities are conceived as spaces of flow, inherently 'in motion' (Mehrotra 2008, 206) and in this constant change, they are always contested (Edensor and Jayne 2012b). Moreover, cities are made up of a multiplicity of overlapping spaces that are 'opaque' (Benjamin 2010, 7), heterogeneous and partly disconnected (Amin and Graham 1997; Simone 2012). As a result, cityscapes may be contradictory and complex. This makes the urban a privileged arena for the performance of social differentiation (Leonard 2012; Doshi 2013; Truelove 2011) and contestations around multiple environmental knowledges (Birkenholtz 2008; Ernstson and Sörlin 2009; Follmann 2014; Gabriel 2014; Rademacher 2011).

⁶ See for example Loftus (2012) for a combination of feminist theory and Marxist UPE.

⁷ Ernstson (2014) notes that while provincialising is inscribed in a clearly postcolonial academic tradition, "to pluralize (...) is to allow for more ways of achieving a similar thing, and the word leaves open for debate what methods or intellectual traditions are better than others."

In an attempt to excavate the theoretical underpinnings of the meaning the 'urban' takes in postcolonial UPE studies we draw on some newer publications in the next section. Therein we focus on works that seem to share common assumptions about the 'urban', centred on the 'everyday city'.

3.2 The Urban as the Everyday Political

The theoretical influences of urban anthropology on postcolonial UPE seem to converge on a conceptualisation of what we might call, in a first attempt, the 'micro-political city', or the 'everyday city' (see also Whitehead 2009, 664). This interest in the everyday stems from the identification of a lacuna in Marxist UPE. As Truelove (2011, 143) states:

While urban political ecological (UPE) analyses have given attention to the socio-environmental processes that produce (...) inequality in the city, such studies have been more inclined towards analyzing the production of class and distributional dimensions of inequality on a city-wide scale rather than illuminating how multiple social differences are (re)produced in and through everyday (...) practices.

Authors have opted for a focus on such everyday practices to understand how inequalities in urban space are produced at multiple scales (Shillington 2012); to question the production of uneven urban ecologies through practices of everyday governance (Zimmer 2012); and to identify challenges and opportunities for everyday environmental justice (Whitehead 2009) .

As in Marxist UPE, the urban is thus conceived as a highly political space. Whitehead (2009, 667) employs the notion of the everyday elaborated by Lefebvre with the aim to 'multiply the possible spaces of metropolitan contestation and who (or what) can occupy the arena of the political.' Loftus (2012, 117) points out that for Lefebvre the everyday is 'the concrete terrain over which revolutionary possibilities might be realized (...);] the space and agency of (...) transformation and critique' of daily life. He therefore locates revolutionary politics in this mundane realm and the 'everyday subjectivities' (ibid., xvii) that people form. It is in the everyday that 'conditions of possibility' (ibid., 112) exist that allow humans to become conscious of current processes of production of socio-nature – and thus to imagine and live political alternatives. Inspired by Lefebvre, but going beyond him, he contends that everyday life can become an artistic praxis where new relationships with human and non-human entities can be forged to produce the socio-natural entity of the city.

Politicised as they are, urban landscapes are landscapes of power for postcolonial UPE, too. Yet, power seems to take a different meaning here than in Marxist UPE. Lawhon et al. (2013, 12) formulate: 'Following postcolonial, poststructuralist and feminist critiques,(...) we suggest power is understood as diffuse, residing nowhere but enacted everywhere.' This allows tracing two intellectual links. First, Ernstson and Sörlin (2009) use a framework of Actor-Network-Theory to locate power and agency

diffusely in a network. Second, Ernstson (2013, 3) refers to Foucault to define that power (or rather, empowerment) is 'the ability to act and change the order of things'. Foucault's notion of governmental power and his insistence on governing as a practice of 'establishing relations' (Foucault 2007, 97) can form a basis for widening the Marxist notion of power: 'relations' are much more encompassing than control and access. They include questions of how actors produce urban natures through everyday practices, shape their subjectivities or identities in relationship to their environment and attempt to govern each other's relationship with the environment.

4. Conclusions

This chapter has attempted to define the urban in UPE. The two main strands within the field of UPE, Marxist UPE and a newer postcolonial UPE, provide multiple but often rather implicit conceptualisations of the urban. Furthermore, they tend to conflate the terms 'urban' and 'city'. Especially Marxist UPE is therefore currently dynamised by the debate whether the 'urban' should refer to cities or to a global process of capitalist industrialisation that can be found outside cities as well.

For both Marxist and postcolonial UPE the 'urban' designates landscapes of power. However, their understanding differs regarding how these landscapes are produced, and how power should be conceptualised. In the Marxist perspective, the urban is understood as a socio-natural process of metabolism in which nature gets urbanised. This process is highly political, and produces an uneven and power-laden landscape, where power means the ability to control and/or access urban nature.

Postcolonial approaches to UPE are more interested in studying cities as sites of the everyday – without however foreclosing other readings of urbanity. Especially the emphasis on a situated UPE has to be taken seriously when looking at a definition of the 'urban'. The question is whether the complexity of diverse geographical contexts can do with a single notion of the urban or rather needs to provincialise the understanding of this category of social science as well.

Nevertheless, the focus on the everyday (drawing especially on Lefebvre) means that in postcolonial UPE the urban is highly political and understood as a landscape of power. Yet, adopting Foucault's understanding of power results in more encompassing power relations than in Marxist UPE.

Within both strands the links between urban and rural Political Ecology have not been problematised – even though the new fields of interest within UPE seem to reflect earlier shifts in Political Ecology more generally (Grove 2009). Rocheleau (2008, 722) stated a 'new emphasis on multiple identity, situated knowledge, positionality of multiple actors (including researchers), and complexity and contingency in social and ecological relations of power' within a poststructural and feminist political

ecology. She thus identified an emerging 'situated science' based on 'seeing multiple' (ibid., 724). Kim et al. (2012) push for a postcolonial approach to research and theory-building in Political Ecology. Newer developments in UPE could therefore work towards strengthening a dialogue across the wide gap that seems to still divide urban from 'rural' political ecology (Angelo and Wachsmuth 2014). Such research across urban/rural divides and the spectrum in between might help in addressing two questions relevant for UPE. First, how – and if – the debated processes of production of socio–natural landscapes are particular to the urban or have particular characteristics in urban spaces. Second, whether or not it makes sense to uphold a definition of urban-ness that is located in cities.

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