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THEMATIC ESSAY

Reading History and Power in Urban Landscapes: The Lens of Urban Political Ecology

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1. INTRODUCTION

Urban nature is not given but produced. Whether in avenue trees or city parks, canals or drains or even in marshlands, lakes, and rivers, the natural is inextricably enmeshed with the social production of urban landscapes. There is clearly nothing primordial or pristine in these forms of urban nature. Conversely, to put it in Heynen's provocative words, 'there is truly nothing unnatural about urban ecosystems ...' (2014, 600).¹ Even oceans, so wild and seemingly autonomous, have been shifted and shaped at their interface with land by processes of urbanization. Chennai has, over the course of its formation, reshaped its coastline, unintentionally building for itself the generous expanse of sand that is today the Marina Beach. Until the late 19th century, the city's coastline comprised a series of dunes and ridges edged by a narrow strip of mud that teemed with mudskippers and was regularly inundated. The construction of the harbour in the northern part of the city in 1881 began a process of sand accretion to its south that, over time, pushed the ocean outward by up to 2.5 km, creating a wide sandy beach in the central section of the city, even as it ate away stretches of coastal land in the north.

Urban ecology, then, is not only an account of the interface between the city and its natures; it is about the co-production of urban nature and society or, in Swyngedouw's (1996) formulation, the production of

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Published by Indian Society for Ecological Economics (INSEE), c/o Institute of Economic Growth, University Enclave, North Campus, Delhi 110007.

ISSN: 2581-6152 (print); 2581-6101 (web).

DOI: <https://doi.org/10.37773/ees.v1i2.33>

¹ Here he draws on David Harvey's assertion that 'there is nothing *unnatural* about New York City' (Harvey 1996, 186; emphasis in original)

‘socio-natures’, a process that implicates history, technology, and power. While this process is at work in almost all ecological systems known to humans, as the field of political ecology has been pointing out since the 1980s (Blaikie and Brookfield 1987), there are some distinctive features of urban ecologies that demand new or different analytic categories, lenses, and methods. This essay sketches some of these features and their implications, employing five intersecting rubrics—hybrids, boundaries, histories, values, and peripheries. Together, these frames build an account of how the urban engine (or metabolism, in the language of urban political ecology), with its distinctive pace and drivers, assembles dynamic entities that defy easy categorization and carry powerful political stakes. The essay draws on a selection of empirical work across Indian cities (including my own writings on Chennai) and on the theoretical contributions of urban political ecology, to argue for a more complex understanding of urban nature as constituted through historical projects of urbanization, and of environmental sustainability as inseparable from questions of social justice.

2. HYBRIDS

Urban spaces and systems are deeply hybrid productions. They are assembled by, on the one hand, projects of socio-spatial engineering, capital accumulation, and advanced consumption, and on the other hand by nature, working in at least two separate registers, first as a relatively autonomous empirical force, and second as a complex of socially constructed values: resource, factor of production, or object of consumption. The new entities thus assembled challenge established boundaries and categories. At the cremation site of Nigambodh Ghat on the Yamuna River in Delhi, writes Baviskar (2014), urban pollution had sullied the holy river so thoroughly that water from the River Ganga was piped into the site by the Bharatiya Janata Party government in the late 1990s. Was the sacred river here then Jamna Ji or Ganga Ma? Plans to bring the Ganga to flow in/for the Yamuna are near finalization in other urban centres like Agra and Varanasi as well (VT Staff 2018).

Baviskar (2018) also describes two urban forests in/near Delhi that represent two distinctive socio-natural hybrids. First, the sacred grove of Mangarbani on the edge of the city—a stretch of dense, apparently undisturbed forest—emerges in legal terms as a collection of private plots poised to be sold to developers. Its past, as village commons parcelled out to landowners to prevent its use by landless dalit households, spells its imminent future of Gurgaon-style real estate urbanism, unless elite environmentalists from Gurgaon and Delhi can prevail. The threatened unmaking of this forest contrasts sharply with the official making of the

urban forest on the Delhi Ridge, where plantations of the imported thorn tree *Prosopis juliflora*, a legacy of colonial engineered greenery, alternate with manicured parks where urban walkers, joggers, and lovers can engage in leisure, exercise, or clandestine romance.

Chennai's famed Pallikaranai Marsh is another urban hybrid. Once a vast and wild expanse of freshwater swamp on the southern edges of Chennai, it is today a thoroughly socialized element of the city's urban landscape, intertwined with the information technology corridor, slum resettlement colonies, and other projects of the city's southward expansion. Over the course of 30 years it has been transformed from a dynamic 14,000-acre complex of water sinks and drainages—lakes, swamps, inlet and outflow channels—to a scattered patchwork of marshy plots spread over 1,500 acres where birds still roost, trapped between luxury residential and commercial complexes, golf courses, garbage dumps, railway stations, and road corridors.

Like other cities, Chennai has periodically made and unmade water in the landscape. The city's celebrated Buckingham Canal, for instance, is an engineered waterway that was cut through tracts of coastal land in the 19th century for navigation purposes. In the 1960s, after navigation on the canal had decisively failed, city managers proposed closing it and reclaiming its land for roads (see Krishnamurthy 1964). And in the 1980s an elevated urban railway was built into and along its course, turning half its width into land in its central city segments. Somehow still surviving, the canal is today hailed as an important 'natural' drainage channel for the city (Sridhar 2015).

Acknowledging the socionatural hybridity of urban forms implies recognizing the agency of the natural, technological, and, in the language of urban political ecology, 'more-than-human' dimensions of urban ecologies. Drawing from Latour's actor network theory, urban political ecology draws attention to the actions of non-human actants—from dogs and drains to effluents and embankments—in the assemblages that fuel urban metabolism and produce effects of power in the landscape.

3. BOUNDARIES

A second important facet of urban ecology is an ongoing drawing and redrawing of boundaries and categories of its component entities. The casting of specific geographies, demographies, or economies as urban often involves defining or dissolving boundaries based on norms, criteria, and cut-offs that differ across contexts. (For a discussion of different metrics that are or can be employed to define urban centres in India, and the dramatically different profiles of urbanization that they yield, see Jana

(2016)). But the process of urbanization also entails sionatural transformations that remake categories of land and water in line with shifting rationalities and drivers.

In Chennai, numerous centuries-old engineered tanks and lakes known as *eri*—seasonal water bodies that, along with their interconnecting channels, created and established an irrigation-cum- drainage system for the region—were eliminated from the 1960s on by processes of urban expansion through in-filling. Significant actors here were state agencies like the Madras Metropolitan Development Authority and Tamil Nadu Housing Board, which drew up formal schemes to enhance the supply of land for housing, infrastructure, and institutions through filling vast expanses of these waterbodies, often at considerable cost. When one such scheme was challenged in court in 1993 by an environmental non-governmental organization, the government’s defence was to claim that the lakes in question were defunct, ‘abandoned and useless for groundwater recharge’ (TNHB 1993).

Such re-inscriptions of water as land, or the denial of water, have led to the destruction or disappearance of water bodies across urban centres in India. The urban eye on nature, sharply interested and interventionist, sees like the state, in categorical metrics (Scott 1998). Waterlines are notoriously smudgy, with the demarcation of water from land on shorelines, lake edges, riverbanks, or floodplains being more a shifting seasonal zone than a line (D’Souza 2006). But urbanization processes have classically proceeded through authoritatively asserting the categories of land and water on these reluctant interfaces, and reinforcing the boundaries with signboards, concrete, projects, and finance. Baviskar (2011) and Follman (2016) document how large tracts of the River Yamuna’s floodplains in New Delhi were handed over against the protests of environmental groups for construction of the Commonwealth Games Village by a Supreme Court judgement that simply declared that ‘the site in question is neither a “floodplain” nor a “riverbed”’ (Supreme Court of India 2005, cited in Follman 2016). These erasures are also sometimes signalled preemptively. Jayaraman (2016) writes of a signboard standing up in the middle of a marshland, proclaiming ‘this land is the property of Kamarajar Port’—indicating the intent to reinvent the tract of water as land. Urban political ecology, then, trains attention on the construction of ecological entities through acts of boundary assertion and recategorization.

4. HISTORIES

The urban ecological lens also reveals historically shifting frameworks through which urban nature is conceived and valorized. From the late 1990s, as discourses of environmental governance and ecological management became part of world-class projects in Indian cities, the era of turning water into land in Chennai was succeeded by one of restoring and reclaiming water under ‘eco-restoration’ schemes. Lakes, rivers, and tanks became transformed in the eyes of urban society from nuisances to assets (Coelho and Raman 2013). As urban river waters remained intractably diminished in flow or inseparable from sewage or effluent, it was the ‘waterfront’—the land, rather than the water—that came into focus. In this era, then, eco-restoration projects were framed around goals of beautification, greening, and real estate enhancement (Baviskar 2011; Mathur 2012; Coelho and Raman 2013).

Many histories, some long and many short, are implicated in the production of urban sociocultures. The everyday urban eye is innocent of history; it takes the landscape at face value. However, the distinctive temporalities of the urban—and its accelerated pace of change or transformation—produces a rapid overwriting of spaces and histories where older land uses, settlements, and spaces are demolished, built over, and sooner or later forgotten as the new forms acquire a life of their own. The negotiations and struggles that were part of this appropriation are smoothed over by the everyday working of the new form. Histories of the urban are thus as much about violent erasures and forgetting as about creation and transformation. The green park rolling pleasantly alongside the river conceals a recent past as a dense hub of auto repair and body workshops where hundreds of urban workers made their livelihoods. The massive CitiCenter Mall standing entrenched on the banks of the Buckingham Canal in Chennai carries no hints of the violent demolitions that cleared the land for its construction. The crowds of young customers and moviegoers streaming in and out of it are serenely unaware that only slightly over two decades ago, hundreds of families watched bulldozers reduce to rubble homes that embodied decades of slow investments in taming the wilderness of the canal banks and making it habitable. Although the past protrudes through the concrete in the form of an old shrine or an aquatic shrub missed by the bulldozer, it takes less than a generation to wipe these pasts out of memory. Traces of erased waterbodies sometimes live on in the urban landscape, if only in the form of street names like ‘Lakeview’ or ‘Lock Street’ found in the midst of arid concrete jungles.

5. VALUE

The machine of urban metabolism generates value and produces waste. In the process, it not only engages and transforms land, water, and human and non-human entities, it also dialectically shifts the categories and meanings of value and waste. Values of urban forms and spaces are not only differentially distributed across territories but remain unstable over time.

As seen above, shifting values of urban nature disrupt or dismantle certain histories and legacies of urbanization. As the concept of ‘ecological value’ has taken on a specific meaning in contemporary Indian urbanism, associated with projects of beautification and the manufacture of ‘usable nature’ for recreation and aesthetics (Baviskar 2011, 2018; Coelho and Raman 2013), neglected backyards along rivers, creeks and canals—long invisible to capital and sidelined by the state—are propelled into prominence as frontage or high value real estate (Baviskar 2011, 2018; Coelho and Raman 2013).

Some hybrid socionatural infrastructure like urban canals, bridges, or drains—designed and built at specific historical junctures for specific purposes—may survive awkwardly in the shifting course of urban history long after their original values—techno-functional, ecological, aesthetic, or social—have declined. Chennai’s Buckingham Canal is one such complex. As its navigation function declined through the early 1900s to the mid-1900s and it slowly degenerated into a dysfunctional urban drain, its banks became a hinterland in the city’s landscape. Concomitantly, they also became the site of stealthy urbanization by subaltern groups in the shadow of the formal city, over time producing some of the most fecund hubs of small-scale industrial and commercial livelihoods and affordable housing in the city (Coelho 2017). Yet, since the 2000s, as the canal has been inserted into new imaginaries of elevated roadways, walking and cycling paths, and waterfront parks, along with a growing discourse about its drainage functions, many of these spaces have been, or are under imminent threat of being, demolished.

The contemporary revalorization of urban waterways has everywhere dislodged or destroyed ecologies of livelihoods and subaltern settlement. A distinguishing feature of the current era of eco-restoration projects in Indian cities, whether in Delhi, Ahmedabad, or Chennai, is that they are increasingly motivated by and overtly designed around the eviction of urban poor settlements from the banks, selectively targeting them as encroachers and polluters (Mathur 2012; Baviskar 2011; Coelho *et al.* 2010, 2013). Eco-restoration projects thus emerge today as sites of enormous human tragedy, among the most exclusionary interventions in contemporary urban transformation.

The term ‘encroachment’ is a keyword of the contemporary moment, indexing a selective stigmatization of property-less subaltern settlers on the edges of urban water bodies while implicitly sanctioning more egregious appropriations of these spaces by elites who have obtained illegal title documents through means at their disposal. This framing is endorsed by sections of the urban middle classes who have become increasingly hostile toward the presence of ‘slums’ in the city, seeing them as aesthetic disturbances or eyesores (Baviskar 2004; Coelho and Raman 2010). Economic and ecological visions of development converge in world-class cities where both clean rivers and slum-free cities are ushered in through the single solution of removing slum dwellers en masse to ghettos outside the city.

The framework of urban ecology thus illuminates the production of hierarchy and discrimination in urban landscapes. The contributions of urban political ecology have been particularly important in demonstrating how flows and circulations of capital, nature, discourses, and social processes systematically work to differentially value places and people. Urban metabolic processes and their hybrid productions create an uneven geography of value, designating certain people and places as ‘waste’ (Gidwani and Maringanti 2016), which in turn allows for particular types of violence—neglect, discrimination, or appropriation—to be perpetrated on them. The marking of people and places as waste, they argue, is and has always been crucial for the expansion of capital, both justifying and enabling its appropriation of spaces and its abjection of peoples. They show how the waste-recycling hub of Bholakpur in Hyderabad—framed in public discourse as contaminated, squalid, and marginal—is nevertheless critical to the reproduction of the urban economy. Bholakpur and places like it are ‘toxic sinks, where the waste generated as part and parcel of a capitalist space economy is interred by stigmatized bodies who frequently hail from historically vulnerable groups’ (2016, 114). But again, ‘wasting’ and valuing proceed in dialectic fashion: ‘Capitalist economies produce places like Bholakpur as receptacles of waste, only to cannibalize them at a later moment when land values rise, shifting the imperative to inter waste to other locations’ (114).

6. PERIPHERIES

These dialectics of devalorization and revalorization underpin, and are also unleashed by, urban expansion to newer territories. Urban peripheries have received considerable attention in recent scholarship as complex, dynamic spaces where the distinctive forms and features of southern urbanisms are unfolding. On metropolitan edges, undeveloped tracts with low market

value, typically in ecologically fragile or hazardous locations like wetlands or floodplains, become attractive to capital at some point in its search for new frontiers of accumulation. Here, then, capital, land, water, and state policy are engaged to create a zone of speculative expansion. To put it in the words of Ranganathan (2015), ‘Wetlands are a form of land with high consequences for capital’s becoming/being.’ Peripheries are thus spaces of radical diversity, where zones of relegation—dumping grounds for all kinds of waste and devalued bodies, human and non-human—are closely juxtaposed with zones of promise where capital prowls for speculative profits in deregulated and flexibly governed territories. Urban peripheries have been characterized as a seam connecting “natural” and built space, the authorized and unauthorized city, the accomplished city and the city-yet-to-come. These frontiers are where the workings of urban ecologies are most evident, where circulations of capital, state action, and social meanings shape the boundaries between land and water, the values of built space and social categories—all these creating assemblages of vulnerability to various socionatural risks, including water stress and flooding, air pollution, and traffic accidents. Ranganathan (2015), for example, maps the uneven production of flood risk in Bangalore’s peripheries by analysing storm drains as socionatural assemblages, historically produced through interlocked human and non-human action, including state engineering projects, flows, and fixities of real estate capital, and informal developments in wetlands. Ranganathan (2015, 1305) argues that ‘The intensifying relationship between capital and storm drains in the new millennium has enabled a new and dangerous agency to storm flows’.

Meanwhile, the mushrooming of large slum resettlement ghettos on the peripheries of most metropolitan cities of India is giving rise to a new urban social geography, a spatial apartheid which renders the urban working classes fringe inhabitants of urban centres that they helped to build and continue to service. This is also a geography of caste, as these peripheral settlements are found to have large concentrations of Scheduled Caste (SC) families. These resettlement sites display an exceptional vulnerability to floods through a combination of factors acting in concert, including state action and inaction, infrastructures built and not built, projects of large capital, permissions that violate plans, and outright illegalities (Coelho *et al.* 2013). All these cohere around a politics of value which configures certain lands, ecologies, and people as of lower worth than others.

But peripheries are not found only outside the city. Caldeira’s analytic framework of ‘peripheral urbanization’ (2016) refers not only to spatial location, and not necessarily or mainly to marginality—it refers to a mode of production of space distinguished by ‘auto-construction’ (where spaces are built from the ground up by their occupants as opposed to being

consumed as ready-made commodities); a transversal rather than direct engagement with official logics of capital, property, and law (as they are typically excluded from formal circuits); and the generation of new kinds of politics and citizenship claims. Peripheral urbanization, as Caldeira shows, produces highly heterogeneous spaces marked by inequality and precarity. These spaces are subject to constant, if sometimes slow-paced, change, both in the form of incremental improvements and enhancement of the quality of built space and, consequent to this, an almost inevitable displacement, as the improved spaces are taken over by external actors—state or market—followed by a reproduction of the peripheral urbanization process elsewhere.

Finally, taking the periphery as key to understanding how urban ecologies are formed brings us to reconsidering our definitions of the urban itself. Recent scholarship (e.g. Brenner and Schmid 2015) challenges us to drop the spatially bounded city as an object of analysis in favour of the urban as an ongoing and ever-widening process of transformation of nature, economies, and social relations through the workings of capital. Angelo and Wachsmudt (2012) argue that a ‘methodological cityism’ which privileges the city as the site of urbanization obscures much of what is distinctive about the contemporary urban world. Arguments that posit a spillover or generalization of urbanization processes beyond cities (as in ‘planetary urbanization’ or ‘urban age’ theses) appear to be borne out in the current Indian context. Factories, power plants, refineries, and even ports move out of cities, transforming the pace and thickening the flows of capital and communications across non-contiguous spaces and, sometimes, creating counter-flows of labour from urban to rural areas (Chandrashekar 2011; Coelho and Vijayabaskar 2014). New elite residential or educational enclaves spring up in rural areas, bringing urban consumption cultures with them. Corridors between cities see a rise in land prices and a spread of urban forms along their length. The framework of urban ecology encompasses these diverse axes of circulation and transformation, best captured in the term ‘urban metabolism’, even in spaces that are not the city.

7. CONCLUSIONS

Why urban political ecology? What do we gain from this framework? What implications does it carry for urban practice, politics, or governance? Discourses of green, eco-smart, sustainable cities have been smoothly incorporated into global circulations of capitalist urbanization as manifested in multilaterally funded multimillion-dollar projects such as the Ganga Action Plan and various river restoration projects across Indian cities. Yet

these projects continue to fail, both on social and environmental fronts, leaving us on one hand with recidivist dirty rivers and on the other with low-income urban communities denied decent drainage even as they suffer the most severe effects of river pollution. Environmental and social values are pitted against each other rather, rendering just and inclusive eco-restoration an impossibility.

Urban political ecology can intervene in this context to demonstrate the inseparability of nature, history, and politics in processes of urbanization. Adopting the lens of urban political ecology should lead us to question purist claims that privilege ‘natural’ entities in urban landscapes as *a priori* or given, while simultaneously urging us to recognize how nature and non-human actors inevitably shape the outcomes of human interventions. Recognizing the limits of state policy and social engineering, and the relatively autonomous agency of natural and non-human actors, may be a first step in building humility and reducing hubris in the march of urbanization.

In practical terms, an urban political ecology approach would dictate that any ecological intervention in the urban context, whether restoring a lake or a river, building a home, factory, bridge or drainage system, by state agencies, firms, non-profits or local residents, requires a rigorous analysis of the range and complexity of socio-natural relations embedded in the landscape, and the potential discriminatory effects and differential values that the intervention would produce.

And finally, by highlighting histories of urban production, urban political ecology can not only help to assert non-property claims on urban space in terms that still carry some legitimacy (such as customary or grandfathered rights), but can also draw attention to the value of the investments and stocks built up over time in these incremental productions. Urban political ecology can educate the urban eye.

ACKNOWLEDGEMENT

I thank Nityanand Jayaraman and Pradeep Kuttuva who read and commented on drafts of this article.

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