

## Book Reviews

Engel-Di Mauro, Salvatore. 2014. *Ecology, soils, and the left: an ecosocial approach*. New York, USA: Palgrave Macmillan. 232 pp. ISBN 978-1-137-35821-9; US\$100.

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Salvatore Engel-Di Mauro argues that although soils are formed and shaped by irreducibly social *and* ecological processes, scholarship consistently focuses on only one part of this dialectical relationship: soil scientists fail to recognize the political drivers of changes to soils and the practice of soil science itself. Meanwhile social scientists neglect the reality and richness of biophysical processes. Engel-Di Mauro sets for himself the ambitious task of developing a framework that is capable of comprehending soils in all their "ecosocial" complexity. His thesis is a compelling one.

The introduction to *Ecology, soils, and the left* elaborates the need for such an integrative approach by arguing for the centrality of soils, while emphasizing the inadequacy of critical and positivist approaches. Engel-Di Mauro also outlines a "general theory" of the relationship between soil degradation and the capitalist mode of production; the main argument being that "the soil-destructive tendencies of capitalist relations must not be confused for any necessarily terminal devastation because, among other reasons, soils entail far more numerous processes than social relations alone" (p.12). His emphasis (both here and throughout the text) is on the fact that capitalism does not entirely control the direction of ecological processes. Yet, while most readers of this journal will likely grant this to be true in the abstract, they may be skeptical of Engel-Di Mauro's conviction that this requires a thorough re-working of critical scholarship on soils. After all, as the author also emphasizes, the biophysical processes which constitute soils must be understood in the context of capitalism's severe limits.

The second and third chapter offer, among other things, insightful critiques of the biases and assumptions built into soil science. Written from the perspective of someone thoroughly trained in soil science, these chapters add depth to the critiques originating from political ecologists. Engel-Di Mauro emphasizes the limits imposed by a system of soil classification that originated to serve agriculture; and not just any agriculture of course, but an "industrialized, profit-oriented" system of production (p.45). Echoing the foundational work of Blaikie (1985) and other political ecologists, he also insists that notions of soil quality must be understood as historically and geographically situated: "To claim generically that soil quality is to be supportive of human habitation," as is common in the soil sciences, "is to pretend away societal difference and political questions about soil use" (p.48).

Engel-Di Mauro argues throughout the book that critical scholars have effectively ceded the study of soil to positivist scientists by offering only critique. Inspiringly, he insists that "a soil quality index or equation could be devised that accounts for context and political struggles over land use" (p.57). Despite the serious political and analytical barriers to developing such an alternative system of evaluation, Engel-Di Mauro argues that it is possible, and he initiates this task admirably. He suggests that, as a

...first approximation...one can redefine soil quality thus: The extent to which a soil, with given intrinsic properties, nonhuman organisms, and relative degree of human-induced alterations, enables the fulfillment of survival needs of every human being, understood both biophysically and socially. (p.57)

Engel-Di Mauro acknowledges the significant challenges that await those who aspire to put such an understanding into practice, yet he remains hopeful that it is possible.

The next two chapters examine soil degradation in a similar manner. Among other contributions, Engel-Di Mauro makes the important point that political ecologists have focused rather narrowly on soil erosion (or, to a lesser degree, fertility), while other forms of degradation - like soil compaction - remain under-analyzed. The final chapters offer a sweeping review of "leftist alternatives and failures" before moving on to sketch an "eco-social approach to environmental degradation". Engel-Di Mauro points out the subjective nature of the concept of "soil exhaustion" as well as the difficulty of actually proving it in current,

and especially historical, environments. He also critiques the idea of "peak soil" as a catastrophist ideology; points out the reliance of ecological Marxism on outdated notions of homeostasis and linearity; and generally challenges anthropocentrism in critical approaches to environmental degradation.

*Ecology, soils, and the left* is a provocative, timely, and ambitious work. Engel-Di Mauro describes the book as a provisional and initial effort, as is surely necessary for such a broad-reaching project. Hopefully readers of this journal will take up the call to return to soil, and will do so with Engel-Di Mauro's provocative work in hand. Though the institutional barriers to the kind of integrative approach that he outlines are many (training, time, funding, and more), the potential rewards are promising.

It is important to note that *Ecology, soils, and the left* is in many ways classical political ecology: it takes environmental degradation as its object of analysis and employs a critical realist epistemology. While such an approach to soil has been highly instructive, and continues to offer great promise, there remains a need to pursue other research agendas as well. Rather than focusing on the anthropogenic origins of degradation, the political ecology of soil could focus, for instance, on the role of soil science in racialized territorial violence, and if so it might find post-structural epistemologies useful. Engel-Di Mauro would probably be supportive of this, for it reinforces his broadest argument: soils are inherently social and ecological, and the field of political ecology can benefit from and contribute to integrative studies that are based on this recognition. As such, *Ecology, soils, and the left* offers important challenges to both soil scientists and political ecologists, and lays out several promising directions for future research.

## References

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Gandy, Matthew. 2014. *The fabric of space: water, modernity, and the urban imagination*. Cambridge USA: The MIT Press. 351 pp. ISBN 978-0-262-02825-7; US\$30.

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In this book Matthew Gandy examines the ways through which city and nature dialectically co-construct each other in a process traversed with cultural, historic, economic and political features. Using archives, interviews, and ethnographic observations, the author establishes data about six metropolises – Paris, Berlin, London, Lagos, Mumbai, and Los Angeles – each chapter focusing exclusively on one of these cities. The author builds upon a triple conceptual axis formed by water, modernity and urban imagination.

The idea of water as set of processes, practices, and meanings is essential to the entrenchment of political ecology as a disciplinary field. Indeed, Gandy defines political ecology as a theoretical synthesis between political economy and the "hydro-social cycle" (p.5). This means that what is known as urban infrastructure stems from negotiations between political actors, ideological struggles, and power relations that result in the uneven distribution of natural resources and environmental hazards related to water.

As paradoxical as it may seem, the excess and the absence of water in the Global South are not only coincidental, but also complementary. Flooding as well as water shortages are connected in cities like Mumbai and Lagos, where illegal dwellings constitute the ultimate example of how the absence of metabolic services are related to the lack of settlement policies that should prevent the occupation of flood-prone areas. Gandy states that these cases point to the extent to which the constitution of the "hydrological subject" should be a measure of urban citizenship in different social-environmental contexts (p.221).

Throughout the book, "modernity" is acknowledged and discussed at different scales of analysis. At a first look, the author's definition of modernity is in dialogue with what Norbert Elias (1978) refers to as the "civilizing process," a set of transformations in the behavior within the sensorial realm and an increase in the individual capacity for self-regulation. For example, this process takes place in nineteenth-century Paris where changes in the tolerance to body odors led to the popularization of individual baths and bathrooms in dwellings. The increasing flow of water from households influenced the reformulation of Paris sewer system that reached only 20% of the city at the time (p.38). The same biases about hygiene and the rationalization of space also oriented the debates among Parisian sanitation authorities regarding the possibility of closing household cesspools and redirecting wastewater to the newly created sewer network.

Even though these notions of modernity do not sidestep Norbert Elias' influence, the following chapters draw this concept closer to other works in urban political ecology. The first chapters have an emphasis on sensibilities and in hydric imaginaries related to hygiene in Paris and recreation in Berlin, but then further discussions present a more politically-oriented approach which takes into account modernity as a "promethean project" (Kaika, 2005). Gandy's treatment of modernity's "promethean project" appears in his analysis of swamp drainage projects in Lagos, and in the rationalization of water distribution in Mumbai. Those projects are based on ideals of civilization that manage the separation between nature and culture in order to exert control over nature through technology and capital investment. Rather than being restricted to the European colonial project, these types of technocratic models of intervention can also be observed in the channelization of the Los Angeles River and in the creation of a complex flood defense system in London.

Imagination is the third theoretical pivot supporting Gandy's accounts. It bridges the gap between the concepts of "water" and "modernity" and also incorporates the method employed by the author. This method consists of the use of all kinds of works of art, literature, and photography to discuss modernity as a historic and geographic form of the relationship between water and urban infrastructure. Throughout the book, imagination also acquires different meanings that suit distinct analytical purposes.

First, urban imagination is understood as "public imagination" (p.181). Cities are depicted in paintings, movies, literature, and common sense. Gandy intertwines these elements with urban policies, showing that they are mutually constituted and self-referenced over time. In chapter 2 Gandy outlines the role of Félix Nadar's nineteenth-century photographs in articulating visible and invisible features in the making of urban space, offering fresh contributions to the already sizeable discussions about Haussmanian Paris. His analysis of the *imagination* of Paris sewers focuses on the shift from symbols associating sewers with death,

disease, and darkness to ones which emphasize progress and cleanliness and thus enhance the status of the underground realm of the City of Lights.

Secondly, imagination appears as "creative imagination" (Durand, 2008) which is characterized as the production of knowledge necessary to create new technical solutions to environmental problems. The chapter on London offers a compelling example of the existing linkages between literary representations and flood control policies. The dystopian, inundated London in J. G. Ballard's science fiction novel *Drowned World* is a sharp expression of the constant fear of a flooded city. Gandy explains that this fear is a long-term experience for London inhabitants and administrative boards, fed by predictions that eventually the Thames Barrier will not be capable of avoiding water encroachment. These "hydrological uncertainties" (p.203) reveal the incoherence of massive capital investments in technocratic solutions that sooner or later will become obsolete. Hence, when modernity's "promethean project" reaches its limits, imagination can help overcome the fear of inundation, opening the path to alternative paradigms of interaction with water.

Regarding "creative imagination" it is essential to mention the quality of Gandy's photographs throughout the book. The richness of the photographs lies not only in their use to reinforce the written content, but also in the abundance of meaning that evokes broader social contexts beyond those found in the text itself. Gandy's photos of Mumbai, for example, are far from mere illustrations. On page 127 we are given a shot of Mumbai slums that could also be seen in Latin-American cityscapes, where vast urban infrastructure projects also provide ground for environmental degradation and the reproduction of inequalities. By showing the huge pipes that carry water to the middle class neighborhoods by tearing through shantytowns with no water supply, the picture itself denotes the sharp urban contrasts materialized in the lack of access to water in the Global South.

The pictures supporting the chapter on the Los Angeles River reveal the complexity between the extraordinary and the paradigmatic in the city's drainage infrastructure. While the author points to the uniqueness of the relationship between the city and its waters in that specific context, photographs help us engage with the universality of certain models of urban drainage and flood control during the Twentieth Century. Just as in Mumbai, the photos of the Los Angeles River bring together local and the global experiences, tracing a path between the individual example and the technocratic paradigm.

In addition to valuable information about six distinct urban experiences, the book is an insightful read thanks to Gandy's outstanding talent in managing multiple sources of data to address the modernization process. This skill enables the author to bridge the gaps between different epistemological realms such as public discourse, scientific knowledge, and individual creativity.

Viewed through an anthropological lens, it seems that Matthew Gandy's modernity approach is lacking a critical examination of the tensions between the western intellectual constructions that separate culture from nature and the everyday practices that constantly reconfigure the thresholds between these two ontological realms. Gandy doesn't overcome his own definitions of culture and nature which are embedded in a European reflexive tradition. Even so, he is quite aware of the utilization of technocratic models that replicate the same kind of partition between nature and culture, and criticizes the indiscriminate adoption of such measures regardless of sociological and historic specificities. His sensitive accounts of the effects of European colonial projects in places such as Lagos and Mumbai are still relevant, especially in the wake of various recent development projects in Global South cities.

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**Hung, Po-Yi. 2015. *Tea production, land use politics and ethnic minorities struggling over dilemmas in China's southwest frontier*. New York: Palgrave Macmillan. 205pp. ISBN 978-1-137-49407-8; US\$91.**

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Po-Yi Hung's book is based on his dissertation research in Yunnan Province, China. The book is an interesting examination of the dilemmas that China's ethnic minorities face in adjusting to the global market economy; in this case the international tea trade. The author examines the shifting assemblages of tradition, modernity, nature and development in the production and reproduction of place in the tea forests of China's southwest frontier. It is an ethnography that identifies the incompatible desires, changing moralities and cultural renovations that constitute embodied practices of harvesting, processing and selling tea. It is divided into topics including property, quality, hierarchy, landscape and ritual. These are used to analyse the contestations, negotiations and (re)articulations with tea production among the state, the market and the engagement of the local ethnic group, the Bulang people.

Theoretically, Hung combines assemblage theory with a governmentality approach, in line with Tania Li's (2007a) work on community forest management in Indonesia. In part one, the author conducts a genealogy of changing ownership rights in the tea fields of Mangjing. Historical examination of land reforms reveal the incompatible desires of the Chinese state to maintain control over the frontier border regions that are populated by the ethnic minorities that have historically resisted Han domination, while simultaneously expanding a privatised tea industry in Mangjing. The book shows the incompatible desires of tea entrepreneurs and Bulang villagers that emerge to construct meanings of tea production, engendered by the global tea market that fuels contestations of land and property rights in the tea fields of Mangjing.

Hung explores the effects of reconfiguring this global market and its effects on improved tea production and the moral order. *Suzhi* as a discursive tool is commonly applied analytically to examine the effects of neoliberalisation on discourses of inferiority and the marginalisation of ethnic minorities. Hung explains tea entrepreneurs from outside the region used *suzhi* to downgrade the Bulang people; labelling them 'backward' and 'uncivilised.' A lack of 'tea culture' among the villagers is used to justify labelling them with low *suzhi* status. The outsiders were able to reconfigure a moral order in Mangjing that supports the production of tea for a competitive global market, while simultaneously solidifying their position of superiority within that moral order.

*Suzhi* similarly reconfigured the social order within the Bulang community itself. By introducing new standards for tea production, the tea traders also created a new social hierarchy. Hung explores how a moral code of trust signifies high *suzhi* status; individual villagers are respected for the integrity of their tea harvest. Similarly the application of advanced processing technologies that improve the quality of tea produced, can elevate a villager's place in the social order. The transformation of the social order in Mangjing exemplifies how the Chinese state governs the ethnic minorities from a distance through the international global tea market, and through tea entrepreneurs.

Hung then turns to analysis of changing landscapes to understand the dilemmas of development on China's ethnic minority frontier. A desire for market success drives the state's incompatible desires for advancement and tradition. There are, therefore, shifting assemblages of tradition, modernity, science and nature. Contradictions emerge between the market value of ecological tea, which is produced and marketed as part of traditional Bulang culture, and the need for scientifically managed organic tea that only the state and tea entrepreneurs can provide. The emergent assemblage becomes fertile ground for further downgrading of the Bulang villagers status inherent in the *suzhi* discourse. The 'ambiguity of modernity' is that the state constructs tradition within modernity, to meet the demands of the global tea trade. This in turn reinforces the inferior status of the Bulang minority with respect to the Han majority.

Through ethnology, Hung examines the response of the Bulang villagers to the low *suzhi* status they have been accorded. They undergo a cultural renovation in order to rearticulate their Bulang identity after a caterpillar infestation threatens the annual harvest. The villagers' relationship with their ancient tea forest has been challenged through the dilemmas over modernisation and the incompatible desires of the state, markets and science. The Bulang rearticulate their relationship to the ancient tea forest through performing 'worm worship.' An assemblage of science, market and cultural tradition emerge through this ritual to redefine

meanings of place and the caterpillar disaster. Meanwhile, scientists define place through a scientific epistemology that explains the worm infestation, and subsequently offers remedies. State officials define the disaster in terms of market risk and potential lost revenue. In response the villagers produce their own emergent construct of place and the event, incorporating the constructs of the state and scientists to redefine place through the 'spirit of the mountain' who is teaching the Bulang people of the consequences of neglecting their traditional rituals, and not respecting the tea forest and the natural environment.

Preparation for the 'Tea Ancestor Worship' reveals the constant conflict over place making that occurs on the frontier. In renovating tea rituals and rearticulating Bulang identity, the villagers attract further state intervention through market opportunities for tourism and sales of the high quality 'authentic' Pu'er tea harvested specifically for the ceremony. This time the villagers negotiate space for the market and their traditions by holding separate ceremonies for the tourists and for villagers. The villagers negotiate control over their culture by using the state ceremony as an opportunity to narrate their own tea culture to outsiders, without losing communication rights to state or market actors. Even though the Bulang people have had to incorporate market risks and opportunities into their tea rituals, their traditional meanings have been preserved.

In conclusion, the author uses Tania Li's (2007a) version of assemblage theory effectively, in order to analyse the dilemmas experienced through the complex, messy and situated process of place-making occurring on the Chinese frontier. Hung argues that dilemmas between tradition and modernity, and nature and development, rather than resistance or collaboration, define the place making process. Incompatible desires produce a continual process of disassembling and reassembling incoherent elements to "make place." Li's (2007b) critique of the Foucauldian subject making process is used to explain the failings of government: in this case the incomplete process of *suzhi* building to reconstruct place through moral reordering in its advancement of market objectives. Hung concludes with Dovey (2010), reconceptualizing assemblage as a two-fold process, in which a mix of elements and approaches are needed to analyse place-making on the Chinese frontier. The author avoids, therefore, setting up a dialectical relationship between embodied concepts such as global/local, tradition/modernity or primitiveness/civilization.

Research into the effects of *suzhi* in China is robust, but evidence of these neoliberal subject-making processes in the ethnic minority regions of the country are rare, making Hung's contribution a meaningful one. The rich ethnographic data collected during fieldwork is insightful. The addition of the two-fold analysis, identifying the simultaneous presence of contradictory elements which form dilemmas, is a welcome departure from analysis of dialectical relationships. Hung contributes to our understanding of the dilemmas ethnic minorities face as a result of the state's attempt to transform the "frontier as China's national margin" to "frontier as China's connected space between tradition and modernity."

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