Meehan, Katie, Naho Mirumachi, Alex Loftus, and Majed Akhter. 2023. *Water: a critical introduction*. New Jersey: John Wiley & Sons. ISBN 9781119315216. $31.00.

Reviewed by David Linville. Email: davidlinville "at" ucsb.edu

In *Water: A critical introduction*, authors Meehan, Mirumachi, Loftus, and Akhtar provide a comprehensive and critical analysis of how people are rethinking the materialization of nature while developing a deeper understanding of the sociopolitical implications of water. The book disrupts quotidian notions of water as a product of an apolitical and naturally-driven cycle. Jeremy Schmidt (2017) calls this reification "normal water," just as there are other homogenized abstractions like the hydrologic cycle (Horton 1931) and molecular H_2O. The authors engage with a reworking of water that emphasizes its relationality, including the various patternings of contemporary capitalism that encircle (and enclose) it. In doing so, they establish a new and refreshing discourse on the multiple productions of water and its social importance that ontologically move differently to the biological, economic, and molecular understandings of it. In short, water is inseparable from society. Water shapes—and is shaped by—social practices and geometries of power (p. 23). The hydrosocial cycle as a conceptual framework, often attributed to cultural geographers Karen Bakker (2002) and Eric Swyngedouw (2004), becomes a thematic device that helps the authors unpack the relationships and hierarchies of power often hidden in mainstream accounts of water. As a result, the social composition of water becomes a primary lens that provides critical analysis and insight, lending a deeper understanding to its irreplaceable ecological and social features.

In chapter one, the authors introduce the hydrosocial cycle as a view of water as "the product of social, spatial, and ecological relations—a point of view that positions us (people) as *internal* to the production of the thing we call 'water'" (p. 4). This includes ideas about how scarcity is manufactured by social and political discourses, law and policymaking, and those wielding institutional power. The language of how water is understood and (re)produced thereby generates a hierarchy enforced by a network of experts, one that extends beyond the state and extends into the corporation, NGOs, think tanks, state agencies, and the media—across the global North and South (p. 14). The political nature of these networks and the maintenance of power and distribution that circulates within the hydrosocial cycle stands apart from the hydrologic cycle and other mechanical conceptualizations of water and nature, viewed in the book as overly deterministic and abstracting too far from lived experience.

A deeper dive into the hydrosocial relations of power is taken in chapter two. The reader is provided with a useful, contextual glimpse into the history of water enclosure; the chapter shows the impact enclosure had directly on Western settler expansion, while still including relevant global examples that draw on various gradations of power, agency, and knowledge production. Thus, the authors lay out a historical materialization of water that articulates ongoing dialectical relationships between and within social groups. Emphasizing the role of water in building empires allows the audience to envision the social dynamics of water at settler frontiers, and to redefine the boundaries of western expansion, imperial space, and property relations. The early chapters set the table for a more critical understanding of the nodes of power that live within the law, water agencies, and the process of financialization. In doing so, the authors show how large water projects can be built without state support and how the operational control of water is often decentralized by political design.

Chapters three and four speak to the complicated interpretations of 'legal waters' and the difficulties of tracing power into the private spheres of water procurement and investment. Importantly, the authors also situate the historical significance of *laissez faire*, free-market models of governing water (Bakker, 2010). They arrived there via a discussion of Milton Friedman, who advised Augusto Pinochet early in his regime in 1975, and the Chilean economists known as the Chicago Boys. The regime separated water rights from land rights which created market space where rights could be traded and priced. This would become an instrumental tool for a new water apparatus and in mobilizing a new order of operations that redefined water as a fungible commodity to become financialized and thus tradeable as capital in a water market. The authors do well in disrupting the assumption that the laws, rights, and the daily quotidian social practices of water deliver equal access and opportunities. After all, someone must pay for (and receive benefit from) the pipes, canals, dams, and other infrastructure that delivers water. Meehan *et al*. show how these beneficiaries operate within both public and

private realms, indicating that how infrastructure is funded can denote a weak or strong state. Without maintaining a majority of interest in water, the state loses its voice in determining how it is used, and ultimately how development will occur.

Chapter five details the significance of water to food production and how often the lion's share of water is used to grow food. One of the overarching themes speaks to who gets the water and why. The authors color the relationship between cheap food and unsustainable water use by asking 'how much water do we eat?' The answer may surprise, but the question provides a useful backdrop to critique the artificial scarcities produced by agribusiness as well as questioning the relationship to enclosure, the over-extraction of rivers, and thirsty aquifers in need of recharge.

Chapter six underscores the significance of dams as the default ideology for water infrastructure development. The authors show how dams have historically offered a rational intervention to utilize nature and become a vital component of regional and economic development. Prime examples used in the book speak to the spatial, social, and political transformation of the Tennessee Valley. The symbolic mastery of nature is a prerequisite ideology to this type of development regime, further exemplified by the construction of the Hoover Dam and the harnessing of the Columbia River. But the authors push back on this romanticization by highlighting the differences in how marginalized groups experience 'development' as disruption, displacement, and diaspora. Despite dam fever still spreading in certain parts of the world like China, newer trends have emerged that seek to remove dams and restore damaged riparian ecologies caused by the obstructions. As such, "dams reflect the broader trends in development, decolonization, nationalism, and social and spatial inequality" (p. 145).

The remaining chapters, seven through ten, are grounded in philosophical and ideological quandaries, but are no less consequential to the trajectory of the book. Chapter 7 offers a new assessment of transboundary relations between states, financiers, and constituents, while providing critical examples of cooperation and conflict that humans continue to grapple with under always-changing conditions. Denoting both conflict and cooperation, the crisis of water scarcity is shown as being firmly embedded into late-capitalist society. The authors thereby push the limits of collaborative water management, while simultaneously pushing back on the myth of water wars—engaging instead with a more critical understanding of water rights between unequal groups and analyzing the successes and failures of applying rights to non-human entities. Finally, in chapter 10, the authors underscore "technofix" adaptations that attempt to solve drought and social instability in a world with less water available. The authors outline the most common fixes as desalination, the transportation of water from where it exists to where it is most needed, and to nature-based solutions like "green" infrastructure, new agro-ecological techniques, and increased reflexivity in water harvesting practices (p. 227).

The book opens up the conversation as to what water actually is, beyond mere abstraction. The authors articulate its physical, social, and material properties. Because the book is global in scale it connects particular problems in separate regions of the world to each other, to reframe the problems and solutions that we all must collectively embrace to preserve life on this planet.

While the book uses ethnographic descriptions and techniques, it focuses primarily on systemic understandings of water. This approach has more strengths then weaknesses. There is no way to tell a complete story about the sociopolitical relationality of water to biological and social life. But the diverse array of global examples suffices as a stand-in for the many problems surrounding the complex role of water to life and the hierarchies subsumed within their politics. One potential blind spot, however, is the affective joy of experiencing water firsthand and the replenishment of body and soul that occurs by splashing around in it, or sharing it with human and non-human others. We all viscerally experience water in one way or another and this is not always political in nature. Emotional political ecology makes an important contribution and could have been addressed. In the same vein, missing are in-depth accounts predicated on witnessing the physical world (not associated with large farms and municipalities) wither from neglect and water misappropriation. Importantly, the focus of the book is not solely on the politico-economic power held by the state. But its narrative successfully confronts contemporary threads of (neo)colonialism while seeking areas for change and (infra)structural improvement.

.

References

Bakker, K. (2002). From State to Market? Water *mercantilización* in Spain. *Environment and Planning A: Economy and Space*, 34(5), 767–790. https://doi.org/10.1068/a3425

Bakker, K. (2010). *Privatizing Water: Governance failure and the world's urban water crisis*. Cornell University Press.

Horton, R. E. (1931). The field, scope, and status of the science of hydrology. *Transactions, American Geophysical Union*, 12(1), 189. https://doi.org/10.1029/TR012i001p00189-2

Schmidt, J. J. (2017). *Water: Abundance, scarcity, and security in the age of humanity*. New York University Press.

Swyngedouw, E. (2004). *Social power and the urbanization of water: Flows of power*. Oxford University Press. https://doi.org/10.1093/oso/9780198233916.001.0001

***

David Linville is a Ph.D. student at the University of California, Santa Barbara. He studies environmental anthropology with a focus on water infrastructure and Californian water politics.