

Tim Soens, Dieter Schott, Michael Toyka-Seid, and Bert De Munck (eds.), *Urbanizing Nature. Actors and Agency (Dis)connecting Cities and Nature since 1500* [Routledge Advances in Urban History.] (New York /London: Routledge, Taylor & Francis Group, 2019). 342 p. ISBN 9780367110864.

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In Search of William Cronon

The eighteen contributors to *Urbanizing Nature* investigate the historical relationship between European societies, city building, and the natural environment. They pursue three main lines of inquiry. Some examine changes over the long run since the 1500s in the scale of the city and its ‘metabolism’ of natural resources flowing in and waste products out. A second cluster illuminates changes in the geographical scale and shape of the city’s hinterlands from the local to the global. Another group focuses attention on changes in the ‘socio-natural’ relationship, giving equal weight in the creation of ‘urban nature’ to the agency of human actors and environmental forces such as flowing water, atmospheric conditions, and climate change. Ultimately, all of them seek to address the question of whether or not the evolution of human settlements has an ‘intrinsic logic’.

Perhaps the most useful contribution for urban and environmental studies is the introductory, historiographical essay by the four editors. They lay out a dense, albeit cogent roadmap to state-of-the-art concepts of the social-environmental relationship. Rejecting culture-nature dichotomies in favor of co-evolutionary hybridity, the editors show that urban metabolism is dependent upon the context of each place’s unique geography and history. The result is the need, they posit, for case studies and comparative methods. Concepts of modernization – premodern, modern, postmodern – are also problematized. These historians suggest an alternative approach of multi-layered transformations as opposed to the endless muddle over the timelines of the three epochs theory. In addition to case studies, then, they call for histories of important transitions, including demographic growth and epidemiological decline; urban technologies, networks, and hinterlands; and successive regimes of energy from wood, fossil fuels, and nuclear to renewable sources such as the wind and the sun. If urban nature is an ongoing interactive process between city dwellers and the material world, then the question of agency becomes central to current, non-organic concepts of metabolism. Indeed, ‘[u]ntraveling the actors... [to expose] who decides’ (p. 10) becomes one of eight guiding principles of their “Manifesto” for the history of urban nature’ (p. 19). More and less, the contributors follow them.

A strong group of essays take a long-term perspective on the nexus between

energy transitions of fuels, changing modes of daily life, and shifting cultural images of urban nature. For example, Paulo Charruadas and Chloe Deligne map three different zones of forest coverage and wood supply in the Southern Low Countries. Each imposed corresponding regimes of management and control to maintain this crucial natural resource. Casting a broader net, Dieter Schott reinforces their viewpoint on the pivotal importance of the mode and cost of transporting heavy, bulk materials: wood logs and lumps of coal. Until the coming of the railroad in the 1840s, cities located on navigable rivers and/or seaport harbors took advantage of expanded hinterlands of comparatively cheap wood supplies not only for keeping homes and shops warm, but also for fueling heat-intensive industries such as making glass and brewing beer. Stephane Frioux's analysis of air pollution in French towns and Heike Weber's exploration of the 'wastescapes... and the dumping grounds' (p. 261) of a consumer society in postwar Germany provide insight on the downside of urban metabolism.

Another impressive group of contributions shed light on a spectrum of interactions between cities and water. Christoph Bernhardt traces the draining and paving over of Berlin's site on a marshland, while Eva Jakobsson tells a fascinating tale of Stockholm, a city sitting between a vast inland lake and the sea on land that has been rising at a perceptible rate since the last Ice Age. Addressing the questions raised by the book's editors, Ric Janssens' and Tim Soens' examination of over 800 years of the water supply in the cities of the Low Countries lists a great variety of social arrangements and hybrid solutions. Consider that Bruges had water pumped into homes beginning in 1610, but most city dwellers depended on neighbourhood wells or fountains for another 250 years. Even after municipal governments assumed responsibility for drinking water supplies at this time to stem deadly, water-borne epidemics, these institutional fixtures and their communal rituals persisted into the twentieth century, often as a hybrid technology supplied with piped rather than groundwater. In separate pieces, furthermore, Christian Rohr and Michael Toyka-Seid discuss the changing relationship between cities and their waterfronts. Extralocal efforts to clean the Rhine and other rivers during the 1970s coincided with grassroots political demands for greening the cities. Results varied from success stories of industrial ruins turned into public parkways and recreational spaces to costly disasters caused by wishful denials that allowed new developments on former floodplains, which still posed a high risk of inundation during extreme weather events.

Like virtually all collected works, *Urbanizing Nature* achieves only partial success in reaching its goals as announced in its manifesto. There is no shortage of case studies and comparisons, especially multiple accounts of energy transitions and interactions between cities and water. Rather, there are gaps in essential components of the cities' metabolism in addition to a lack of consideration given to

them as dense living spaces, ecosystems packed with humans, animals, plants, insects, and microorganisms. Although the seminal works of William Cronon are the starting point of the volume, are evident in all of the essays, and are specifically cited in five of them, his basic lessons are insufficiently acknowledged. Missing, for example, is any account of the energy metabolism of the food supply for people, their horses, and backyard animals. Chicago's commercialization, capitalization, and commodification of the prairie's land and crops was central to his *Nature's Metropolis* (1991). In Europe, the agricultural revolution of the eighteenth century was a prerequisite to feed a demographic transition to exploding populations and cities. In turn, the single most important urbanization of nature was a vast expansion of land and labor devoted to raising food, fiber, and domestic animals for the city that stretched into a worldwide web of colonial empires and commodity flows. Unfortunately only one essay, by Karel Davids, explores these distant hinterlands in the age before steam-powered ships and railroads. He compares the failed attempts of Europe's hydraulic experts to impose the water management techniques of their homelands on totally alien ecologies such as Spanish, Mexico City, Mexico, and Dutch, Batavia, Java.

In his earlier *Changes in the Land* (1983), moreover, Cronon shows how the deforestation of New England during the colonial period of the seventeenth and eighteenth centuries had significant environmental impacts, including raising temperatures in summer, and increasing storm runoff that caused soil erosion and river silting. Yet, none of the essays on the city's wooded hinterlands shed light on either long-term climate change since the 1500s or contemporary understanding of the interrelationships between the weather, flood control, and woodland management. A final missing piece in this survey of urban environmental history is giving agency to nature in the political mobilization of city dwellers to demand reforms to save it. Consider that it was the regeneration of the Rhine's underwater world of plants, fish, and other organisms as well as the related return of nesting birds on its banks that inspired these popular movements, not just the cleaner water. In effect, a reciprocal interplay between society and nature transformed this sacrifice zone of a passing industrial era into an urban amenity for outdoor sports, recreation, and leisure. As the river's ecosystem improved, people took notice and wanted to undertake even further reforms towards the creation of so-called smart cities and sustainable metropolitan regions.

Despite its shortcomings, this book advances the research agenda of urban environmental history. It should appeal to a wide audience because it lays out not only an up-to-date analysis of theory and method, but also a broad range of case studies and comparisons. Several essays, moreover, suggest new ways to use archival sources such as maps and photographs in future research projects. In fact, the gaps in this survey open even more, additional opportunities for historical in-

vestigation. While oriented towards academics and professionals, especially those interested in Europe, *Urbanizing Nature* should also attract the interest of environmental activists everywhere. Both its long-term perspectives and its discourse on agency contribute to a better understanding of our increasingly urbanized planet.

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Dagomar Degroot, *The Frigid Golden Age. Climate Change, the Little Ice Age, and the Dutch Republic, 1560-1720* (New York: Cambridge University Press, 2018). 364 p. ISBN 9781108410410.

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Degroot's timely work explores the role that a changing climate played during the Dutch Golden Age. While much of the literature focusing on the Little Ice Age, especially the 'Global Crisis' of the seventeenth century, emphasizes disaster and decline, Degroot explores how the Dutch adapted to climatic variability during this period to become the model economic power in Europe by the mid-seventeenth century.

The introduction and first chapter provide a brief overview to climate change during the early modern period and walks non-climate specialists through 'natural' archives, or paleoclimatic sources utilized in reconstructing past climates. Degroot carefully avoids overstating the role of weather and climate in influencing human events, speaking in terms of probability and likelihood to create scenarios more or less likely to influence human affairs (p. 15-17). The first chapter also sets the parameters for the rest of the work by highlighting three periods of climatic variability circa 1560-1720: a colder phase of the Grindelwald Fluctuation (1560-1628), a less variable and warmer intermediate phase, and a colder and variable period during the Maunder Minimum (1645-1720).

The rest of the work is split into three parts exploring how Dutch responses to weather events and climatic variability shaped the Dutch Golden Age. The first part develops the interconnections between climatic variability, exploration, and commerce. Case studies focusing on Dutch explorations into the Arctic show how cooler temperatures and greater sea ice prevented Dutch navigators from finding a northeast passage to Asia. This failure created opportunities for significant environmental changes as the newly explored and mapped Arctic region opened to Dutch commercial expansion, like whaling. Degroot also posits that changes in wind direction decreased the amount of travel time for Dutch ships (VOC) heading to Batavia and other Dutch East Indies ports. Although, those changes benefitted