

Jason M. Kelly, Philip V. Scarpino, Helen Berry, James Syvitski and Michel Meybeck (eds.)

Rivers of the Anthropocene

Oakland: University of California Press, 2017

ISBN 978-05202-9502-5. (PB) \$34.95. 212pp

Paraphrasing a water engineering quip: God gave us rivers, but he forgot to equip them with dams for hydropower, with ports and water streets, with pumps for irrigation, and piers for recreation. Cities and trade flourish along rivers, but for this humans have to modify them. This puts rivers in a peculiar place in discussions of the Anthropocene. They are of great significance for life, and yet for this reason they have always been modified by humans. Accordingly, the Anthropocene topos of humans significantly modifying their environment appears to be somewhat less ‘newsworthy’ for water. Moreover, in view of the long and varied histories of living with rivers, the global focus of the Anthropocene seems ambitious to a degree that makes one feel dizzy. Does it produce a search for ‘global river systems’ that ignores place and particularity?

This volume tackles this challenge taking a transdisciplinary perspective. It is the first publication of the innovative ‘Rivers of the Anthropocene Network’, coordinated by historian Jason Kelly and uniting humanities, social and natural sciences, arts and policy in conferences and joint projects. The contributors tend to take specific rivers as a starting point for diverse and heterogeneous explorations of rivers in the Anthropocene. As the network is mainly based in the United States and the UK, the focus is mainly on rivers and cities in the United States and Europe, though there is also one chapter on the Blue Nile Basin and one on Singapore Island.

In his introductory chapter ‘Anthropocenes – A Fractured Picture’, Kelly helpfully introduces the Anthropocene discourse and the basic, deep challenge: ‘There is no such thing as the Anthropocene’ (p. 3). The book’s Part 1, ‘Methods’, starts with a discussion of ecosystem services. Andy Large, David Gilvear and Eleanor Starkey propose this approach to improve the informational basis on rivers of the Anthropocene, not least by drawing on mapping tools such as ‘Google Earth’ that can facilitate multi-stakeholder collaboration. Sina Marx presents a political ecology approach that studies global discourses via their manifestation in transboundary water management and the power relations between the various actors in the Blue Nile Basin. Celia Deane Drummond argues that ‘Anthropocene’ as a global narrative focused on a dangerous exodus from ‘safe Holocene’ invites resignation. A focus on drama and the interactions of actors in specific contexts would create space for agency, including for earth as a whole, she proposes. Kenneth Lubinski and Martin Thomas make the case for a transdisciplinary approach, which they suggest will require scholars to cede (some) control and engage with the public in favour of effective collaborations and learning.

In Part 2, ‘Histories’, Jan A. Zalasiewicz, Mark Williams and Dinah M. Smith turn to a geological transformation: the study of English fenlands, which like many peatlands around the world were drained during industrialisation and now release stored carbon – and in the case of English fenlands exhume formerly buried archaeological structures and palaeorivers. Next, Michel Meybeck and Laurence Lestel consider physical and chemical impacts of the

Seine in comparison to its pre-industrial state. This rich and detailed chapter concludes with a scheme for conceptualising material circulation in Anthropocene and pre-Anthropocene river systems. The part concludes with Philip V. Scarpino's historical examination of the soil that gave rise to 'Anthropocene' – for example, 'terraforming' in science fiction literature, and Paul Crutzen's early work on ozone in the atmosphere – and the implication of this examination for rivers and human agency: a need to carefully study human agency embedded in cultures and a natural environment on which humans continue to depend.

Part 3, 'Experiences', turns to human responses to the challenges of the Anthropocene. Helen Barry provides a micro-history of the great Tyne flood of 1771 and the response of the ruling elite that raised money and provided disaster relief out of self-interested and philanthropic motives – and that re-inscribed social inequality. Thus, the study suggests a lineage from 'early Anthropocene' to current philanthrocapitalism that likewise takes initiative where states seem to fail: from the Gates Foundation to Google Earth as a brilliant and 'free' mapping tool, yet one that is owned by one of the world's most powerful corporations. In the next chapter, Stephanie C. Kane turns to the island city-state of Singapore and its extraordinary ingenuity in creating an infrastructure for its growing consumption needs. If Biosphere 2 has failed, is the Singapore hydro-hub a success? Kane suggests we rather think of it as part of a larger puzzle, with huge economic and social costs and no guarantee of total control. The final two chapters turn to the artistic-recreational rediscovery of rivers in post-industrial societies. Mary Miss and Tim Carter present the 'City as a Living Laboratory' initiative that creatively invites citizens to re-discover the White River flowing through Indianapolis: its multiple functions, including as a place for collaboration. Mark Edgeworth and Jeff Benjamin explore the Chicago river on the canoe as a hyperobject: the trip leads them to something massively distributed in time and space, unruly even with respect to large river basins, beyond full grasp and control. Do the rivers of the Anthropocene invite a new sense of adventure, a frontier that cannot be conquered but that orients novel navigations?

This is a welcome collection that does not shy away from complexity. Its contributors jointly explore the Anthropocene discourse from their multiple starting points in arts and humanities, social and natural sciences. It demonstrates that the 'Anthropocene' brings people together. Or is it the rivers? There remains a sense that quite some chapter contributions would retain their interest without 'Anthropocene', and in this sense the analytic value of the Anthropocene calls for further exploration. In particular, it could be interesting to examine insights of this book in relation to the political economy of industrialisation, development and globalisation as likely candidates for the explanation of global patterns, and in relation to global modelling of Earth systems and planetary (freshwater) boundaries; to engage 'competition' and 'astronaut' perspectives, as Wolfgang Sachs once called it, with the 'home' perspectives and places that rivers so manifestly invite, and which this book richly documents.

RAFAEL ZIEGLER

Universität Greifswald, Greifswald