

archives consulted permit) a highly politicized mode of international scientific collaboration led by a ‘developing’ country in its first decades of state formation. The measures taken by Chinese scientists and by the CCP to mobilize science and technology to transform and modernize an agrarian society, and to enroll politically sympathetic scientists from abroad in its national and global ambitions, remind us of the need to define carefully what we mean by science diplomacy. They also oblige us to situate science diplomacy in its temporal and geopolitical context, and to tease apart the specificities of its collaborative practices undertaken in the shadow of (sometimes determining) national political agendas.

doi:10.1017/S0007087422000504

Lydia Barnett, *After the Flood: Imagining the Global Environment in Early Modern Europe*

Baltimore: Johns Hopkins University Press, 2019. Pp. 264. ISBN 978-1-4214-2951-9. \$52.00 (hardback). ISBN 978-1-4214-4527-4. \$28.95 (paperback).

Alexander van Dijk

University of Cambridge

In this book, Lydia Barnett investigates early modern ideas of the reciprocal interaction between a global humanity and the global environment. These ideas oscillated around one ‘world-historical force’ – sin. Barnett demonstrates that the modern concept of the Anthropocene had early modern intimations, even if the conceptual language to frame the idea was radically different. Barnett places her investigation in the context of a number of adjacent literatures. While reference is made to Alexandra Walsham’s study of the Reformation landscape, the historiography of the (de)sacralization of early modern space is largely eschewed.

In the first chapter, Barnett examines the 1584 *Lettere di philosophia naturale*, by the Paduan apothecary Camilla Erculiani. Barnett presents the volume as the first in a tradition of works that use the event of the Flood as a locus for the examination of the ‘reciprocally destructive’ relationship between humanity and the environment. Barnett traces the translation of the Flood from the category of supernatural events, and therefore the subject of theology, biblical commentary and chronology, to that of natural events, and therefore the subject of the meteorological branch of natural philosophy.

In the second chapter, Barnett explores the uses of the Flood in the formation of the early modern global world-historical consciousness. In particular, she argues that the Flood became central in monogenist narratives about the origin of American Indians, which underwrote particular visions of world history and geopolitics. This was, in turn, expedient for evangelical and imperial aims. In the first section of the chapter, Barnett explores the debates about the way in which Indians had arrived on the American continent after the Flood. She demonstrates that there was a consensus between European scholars that the Indians arrived by land bridge rather than by sea, because of Europeans’ assumed superiority as seafarers. For missionaries, a postdiluvian land bridge also secured the monogenist origin of American Indians, and therefore their inheritance of original sin

and need for salvation. The importance of upholding the latter was precisely why theories of polygenism were heavily contested and condemned.

In the second section, Barnett examines the works of Antonio de la Calancha and Louis Bourguet in arguing that monogenist theories also underwrote both Catholic and Protestant imperial aims. Calancha and Bourguet both agreed that the postdiluvian land bridge had to be across the Pacific Ocean, rather than the Atlantic. A Pacific land bridge implied a monogenist kinship with Europeans, but also allowed for sufficient geographical and historical difference in order to justify empire both as a pursuit and as the implementation of colonial hierarchies. More specifically, the Augustinian friar Calancha argued that the American Indians shared Japhetic descent with several European and Eurasian peoples but postulating a Pacific land bridge allowed him to claim the Tartars, 'regarded by Europeans as primitive and barbaric' (p. 70), as the likely ancestors, thus balancing kinship and difference. Barnett concludes the chapter with a brief but important insight into the seeds of scientific racism in monogenist rhetorics. She demonstrates how invocations of universal family and brotherly affinity need to be understood in the context of early modern hierarchical conceptions of family kinship. One of these hierarchies was racial.

In the third chapter, Barnett examines the highly controversial *Sacred Theory of the Earth* (1690) by Thomas Burnet. This chapter is a valuable contribution to the limited existing literature on Burnet. Barnett places Burnet as a practitioner of Mosaic natural philosophy, who developed a sophisticated, even if inconsistent, theory of the interaction between sacred and natural history, thus implicitly inaugurating a concept of man-made global climate change. She demonstrates that Burnet was innovative in arguing that the Flood transformed virtually everything about the planet – from its position in space, to its topography, to its animal and human inhabitants. This divided history into an 'Edenocene' and a 'Falloocene'. Barnett convincingly shows how problems of scale reveal Burnet's Eurocentric partiality. Burnet's concern with decaying nature and humanity, Barnett argues, could be mirrored in contemporary climactic events such as the Little Ice Age, subject to further research.

The fourth chapter is a social history of early modern scholarly practice. Barnett argues that the popularity of the Flood as a locus of discourse was made possible by the forum in which this discourse was held – the Republic of Letters. The collaborative need for information on a global scale, the opportunity to communicate across religious divides, as well as the introduction of an empirical dimension to the debate, that of fossils, made debating the Flood an important enabler of the gift economy with which the republic functioned and grew.

In the last chapter, Barnett argues that pious and nationalist concerns made it possible for the Flood to disappear from early modern Catholic scholarship. In his 1721 work *Of Marine Bodies Found in the Mountains*, the Italian naturalist Antonio Vallisneri rejected British claims that the Flood changed the natural environment. Non-human nature was not responsible for the sin of humanity, and therefore only human nature was permanently damaged. This, in turn, created a problem of orthodoxy. It became possible to argue in an equally orthodox way that the Flood was not a relevant episode in human history after all, and that the real starting point of human decline was the Fall. The orthodoxy of both the Flood and the Fall in sacred history placed scholars of earth history in a theological bind. Ambivalence about the Flood was also, as Barnett meticulously demonstrates, an effect of the particularities of the northern Italian corner of the Republic of Letters. In an effort to preserve the 'transnational intellectual sociability' (p. 187) of the republic, Vallisneri and followers introduced a secularising trend in earth history.

By way of conclusion, Barnett gives a short outline of how, with the revival of Aristotelian and Stoic traditions of meteorology, the Universal Deluge disappeared as a turning point in earth history. Catholic Enlightenment scholars nationalized earth histories, presenting ancient (non-miraculous) local floods as sacred processes which gave birth

to isolated cities and kingdoms. All in all, *After the Flood* is a significant contribution to the history of the Anthropocene.

doi:10.1017/S0007087422000516

Nanna Katrine Lüders Kaalund, *Explorations in the Icy North: How Travel Narratives Shaped Arctic Science in the Nineteenth Century*

Pittsburgh: University of Pittsburgh Press, 2021. Pp. 230. ISBN 978-0-8229-4659-5. \$40.00 (hardback).

Daniella McCahey

Texas Tech University

In her 2021 monograph *Explorations in the Icy North*, Nanna Katrine Lüders Kaalund examines various Arctic travel narratives to show how such texts shaped popular understandings of science in this region. Although the historiography of nineteenth-century Arctic expeditions is vast, Kaalund's study, which takes a transnational approach, is an original and welcome entry to the field. Through her analysis of various British, American, Canadian and Danish travel narratives, she shows the Arctic to be a liminal space, where the veracity and credibility of writers were closely connected to their reputations, the perceived success of the expeditions, and the imperial and national circumstances of the expedition.

Her first chapter focuses on the British searches for the north-west passage, the open polar sea and the magnetic north pole, in the context of John Ross and John Franklin's early expeditions to Antarctica. These were major naval operations, seeking the imperial prestige which would come from these geographical discoveries. But they also involved as much scientific research as possible. In contrast, the Danish expedition of Wilhelm August Graah, organized in conjunction with the Kongelige Grønlandske Handel (Royal Greenland Trading Department), was smaller in scale and had a different overall goal: to find a lost Nordic settlement in Greenland. This too was an imperial project which would justify Denmark's colonization of the region.

The second chapter addresses accounts from non-governmental expeditions in the region – those funded through private patronage, trade companies like the Hudson Bay Company and religious missions. She describes the later expeditions of John Ross. However, Ross's eventual published narrative detracted from his credibility since he clearly intended financial gain from this work. In contrast, Danish missionaries, figures who rarely fit the mental cast of polar explorers, also produced accounts of life in Greenland. While missionaries, a group that could include European women, problematized the traditional image of the heroic and masculine explorer, their narratives helped shape perceptions of Arctic peoples and landscapes. However, like Ross, if missionary narratives were too transparent in their efforts to raise money for their missions, they too were delegitimized. Finally, expeditions funded by the companies, such as the Dease Simpson expedition, funded by the Hudson Bay Company, revealed the priorities of the expedition backers. Despite the paucity of scientific results and personal hardships among the men, it was deemed a success due to comprehensive geographical survey work, reflecting the company's commercial interests.