The British Journal for the History of Science (2024), 1–2
doi:10.1017/S0007087424000657

BOOK REVIEW

Vera Keller, *The Interlopers: Early Stuart Projects and the Undisciplining of Knowledge*

Baltimore: Johns Hopkins University Press, 2023. Pp. 368. ISBN 978-1-4214-4592-2. $60.00 (hardcover).

Thomas Rossetter

Durham University

Vera Keller presents a compelling challenge to assumptions about the disciplining and civilizing of science and society classically held to have occurred in early seventeenth-century England. Rather than becoming more disciplined, Keller argues, the knowledge structures of medieval universities and guilds increasingly fragmented. Putative connections between science and civility, too, she emphasizes, are problematic in that early modern science was intimately tied to violence, slavery and colonialism. Keller constructs her account of the 'undisciplining' of knowledge through the lens of early Stuart projecting – roughly, invention or entrepreneurship – building on research by historians such as Joan Thirsk, Karen Ordahl Kupperman and Koji Yamamoto. Her focus is on a particular kind of individual involved in projecting: the titular 'interloper'. 'Interloping', Keller explains, is an early seventeenth-century English term derived from Dutch meaning 'to run or leap between' (p. 15). Interlopers moved between the strata of English society, opportunistically intervening in various crafts and professions to appropriate knowledge, purportedly in the service of industry and empire.

Following the introduction, Chapter 1 details several key characteristics of early modern projects and projectors, the kinds of argument used to promote and secure funding for projects, the relationship between projectors and the state, and the interloping practices in which projectors and others involved in projects engaged. Projects are described as ambitious, risky endeavours designed to exploit underutilized resources and justified principally in terms of their prospective contribution to the public good. They involved a hierarchy of actors from royals and social elites to unskilled, forced and slave labourers. Aside from the latter classes, the hierarchy was somewhat fluid, with those in the upper echelons of society appropriating tools from lower crafts – 'interloping from above' – and craftsmen asserting their authority in matters pertaining to their vocation – 'interloping from below'. The second chapter offers a series of biographical sketches of some of the period's projectors and interlopers, acquainting the reader with several figures who feature prominently in subsequent chapters, further illustrating the diverse range of social positions that projectors and interlopers occupied.

The following chapters present detailed case studies of a wide variety of projects. Chapter 3 focuses on a single interloper who has previously received little attention and who will undoubtedly be of considerable interest to historians of science and technology. Thomas Russell, an associate of Francis Bacon whom Samuel Hartlib dubbed 'the father of all projectors' (p. 91), engaged in numerous ambitious projects involving the production of alum, saltpetre and soap; silver mining; and a wine for alcohol-deprived English

settlers in Virginia. As Keller demonstrates, Russell and his various projects embody several of the characteristics of projectors and projects outlined in Chapter 1. He was, for example, not an expert in any particular field but rather a gentleman whose 'interloping downward' (p. 116) into the crafts of others combined with the social acumen required to secure patronage. His projects involved making use of unused or underutilized resources such as kelp for alum production and sassafras for wine. And his projects typically failed and often caused considerable harm both to the environment and to people.

The fourth chapter looks at the ways in which the Crown tried to marshal projects in pursuit of empire and global recognition, discussing a number of unrealized projects such as plans for extravagant gifts of cooling systems and municipal waterworks for the Mughal emperor designed to demonstrate England's technological prowess and the deployment of recently invented submarines for recovering shipwrecks and pearls in the Indian Ocean. Themes of global domination continue in Chapter 5 with an intriguing discussion of how pleasure gardens in London served as experimental grounds for an ill-fated sericulture project by the Virginia Company involving the forced displacement of labourers to the colony and Sir Nicholas Crispe's equally disturbing foray into the African slave trade. Chapters 6 and 7 return to London, initially examining a diverse range of educational projects and Charles I's technical workshop at Vauxhall before taking to the seas again with Charles's ship *Sovereign of the Seas* and Thomas James's search for a north-west passage through the Arctic. Appended to James's account of this unsuccessful expedition, Keller notes, was an essay extolling the virtues of ambitious, undisciplined philosophical exploration by the clergyman William Watts, one of the earliest-known users of the term 'experimental philosophy'.

Throughout the book, Keller argues convincingly for the influence of early Stuart projecting and interloping on the 'experimental philosophy' that would become the *raison d'être* of the Restoration Royal Society. An especially interesting section of the book for the historian of early modern science is the discussion of Francis Bacon that constitutes the larger share of the book's concluding chapter. Here Keller makes a compelling case for abandoning the familiar notion of a 'Baconian programme' and thinking instead in terms of a 'Baconian project', noting the striking similarities between Bacon's vision for experimental philosophy and the projects of his contemporaries, as well as dissimilarities between Baconianism and the seventeenth-century notion of a 'programme'.

The book connects intellectual, cultural, social, political, economic, colonial and military history and so will be of interest to a wide variety of readers. There is plenty to engage historians of science and technology. Keller's novel interpretation of early seventeenth-century experimental philosophy as a result of undisciplining will doubtless inspire lively debate in the field. The book contains numerous intriguing insights into specific areas – the details of Russell's alum and saltpetre experiments, for example, will fascinate historians of chemistry and chemical industry. And the discussion of papers relating to projects, several of which Keller quotes in full, will alert historians working on paper tools and technologies to a primary source which Keller notes has received little attention.

In the book's introduction and conclusion, Keller mentions her next monograph, due to be published later this year. Entitled *Curating the Enlightenment*, the book will explore how the undisciplined knowledge examined here became incorporated into new disciplines during the later seventeenth and eighteenth centuries. I look forward to reading it.

https://doi.org/10.1017/S0007087424000657 Published online by Cambridge University Press