Several images are particularly interesting for historians of early modern science. Consider the meticulously engraved and busy broadside *Scheme of the Necessity of Logic for Grasping Other Branches of Knowledge*, which emerged in Paris in 1622; it is reproduced as a foldout image in *The Art of Philosophy* and is available online through Princeton University's digital library. Designed by the Carmelite professor Jean Chéron and engraved by Léonard Gaultier, its upper reaches offered vignettes of the conventional incitements to philosophical discovery: ignorance, wonder, appetite, and experience. The first of these features a nobleman aiming a telescope at an abyss and a cleric with a biretta who manages without the new instrument. It is difficult not to see this scene either as a cautionary gesture to the condemnation of Copernicanism of 1616 or as an allusion to the escalating quarrel between Galileo and his Jesuit antagonists.

The backdrop provided for other images also explains certain rhetorical turns in the work of Galileo himself. As Berger notes, the 1606 *Scheme of Universal Logic*, its antecedents, and its successors were depicted as fortresses, the components of argumentation being figured as munitions, a helmeted captain and a band of figures with shields and spears, defensive ramparts, and the like. The overall effect of such schema—presumably of appeal to the captive audience of adolescent schoolboys—would have been juvenile, slightly archaic, and comic, a pictorial analogue of Don Quixote's contemporaneous fantasies of jousts, routs, and castles. This seems the context for certain extravagant figures in the third of Galileo's *Letters on the Sunspots*. The astronomer refers to astronomical arguments as "strongholds" and notes the impediment they pose for "those who reason with less than average ability"; he cautions his adversary that "so as not to be like that governor of a castle who, having to defend a fort with a small number of soldiers, in order to help that part which he sees assailed, rushes there with the entire force, while leaving other places open and defenseless, it is necessary that while we exert ourselves to defend the immutability of the heavens we do not forget the dangers to which other propositions, likewise necessary for the preservation of Peripatetic philosophy, might be exposed" (Galileo Galilei and Christoph Scheiner, *On Sunspots*, trans. with an introduction by Eileen Reeves and Albert Van Helden [Chicago, 2010], pp. 261, 291). The originality and wealth of information in *The Art of Philosophy* open up these and other territories.

Eileen Reeves

Eileen Reeves is Professor of Comparative Literature at Princeton University, where she is also an Associate Member of the Program in History of Science. Her principal area of interest is the relationship of early modern science, literature, and art.

Leslie Tomory. *The History of the London Water Industry, 1580–1820*. xiv + 314 pp., figs., tables, bibl., index. Baltimore: Johns Hopkins University Press, 2017. $54.95 (cloth). IBSN 9781421422046.

The case of the London water supply system is exceptional because of its early development into a sophisticated and integrated network managed by a series of profit-oriented companies. The story of this development, which begins as early as the end of the sixteenth century, is the subject of this deeply researched monograph. In the first three chapters, Leslie Tomory's approach is dominated by economic analysis. The normative background for the emergence of the companies, their internal structures, their capacity to accumulate capital, their institutional and political relations to the boards of the city and the court, and their methods for balancing investments with technological innovations are all subjects of this *longue durée* history. Its analytical framework is constituted by concepts such as "profit," "consumers' willingness," "competition," "disaffection," and "financial revolution."

The analysis then delves into the specifics. The fourth chapter is a long and detailed reconstruction of the interplay between management and the material supply network, focusing especially on the history of

what was then the leading company, the New River Company. The author examines how the company was able to increase significantly the number of tenants receiving water directly to their homes by improving the integration of the network at the same time they scaled it up. The investigation of the mechanisms that brought the board of the company from "increasing the supply network" to "planning the growth of the network" is a rare and excellent example that will certainly be used for further research dealing with material networks and their histories.

Among the further aspects considered, the reader will find a chapter dedicated to consumer habits and their taxonomy, as well as a chapter concerned with the issue of water purity. Tomory shows how concerns about the purity of water as a health determinant began to develop in the eighteenth century. It is particularly illuminating to understand the differences between the company's internal approach and the focus of the emerging public debate in terms of an "anthropology of pollution" (p. 224), as the author suggests.

The work concludes by demonstrating that a new era for the London water industry began in the nineteenth century, an era characterized by the replacement of wood with iron as the basic raw material for the pipe network. The author attributes this change to the growing price of wood at the beginning of the nineteenth century—and so ended the first glorious phase of the London water industry, which had lasted for about two and a half centuries.

While its primary focus is not on the technology of water supply, the book is extremely valuable from this perspective, too, especially for the period ranging from the end of the seventeenth to the beginning of the nineteenth century. The technology relevant to the origins of the industry, however, is investigated in less detail.

On a more abstract level, *The History of the London Water Industry, 1580–1820*, exhibits the fundamental (yet often neglected) relevance of economic history for understanding technological developments and their interplay with politics and culture. More concretely, the book provides an opportunity to enter British history from a fascinating and unusual angle. Moreover, for those well acquainted with the topography of London, it gives occasion to imagine those pipes, pumps, cisterns, and, later, steam engines at work in their exact locations, to revive incidents and robberies from the past, or to visit specific districts together with their assigned "turncocks."

Matteo Valleriani

Matteo Valleriani is Research Group Leader of Department I at the Max Planck Institute for the History of Science in Berlin and Honorary Professor at the Technische Universität of Berlin. He investigates the relation between diffusion processes of scientific knowledge, practical knowledge, and technological knowledge, as well as their economic and political preconditions.

Peter C. Mancall. *Nature and Culture in the Early Modern Atlantic*. (The Early Modern Americas.) xiv + 197 pp., figs., plates, notes, index. Philadelphia: University of Pennsylvania Press, 2017. $29.95 (cloth). ISBN 9780812249668.

Peter Mancall intends to explicate the relationship between nature and culture as it was understood by sixteenth-century European scientists and travelers, calling attention to the profound changes that occurred because of contact with the Americas in the early modern Atlantic basin.

In the preface, the author introduces his views about how to read visual material like maps, wooden panels, printed books, hand-painted codices, and manuscripts of the period, so as to perceive the shift in the ecological sensibilities of both Europeans and indigenous residents of the Western Hemisphere as they were confronted with new knowledge. In the first chapter, entitled "The Boundaries of Nature," Mancall presents a close reading of fourteenth-century painted wooden panels on the ceiling—about twelve feet