BOOK REVIEW
ELIZABETHAN LONDON AND SCIENTIFIC PRACTICE


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*The jewel house* is a nuanced analysis of the community of gardeners, instrument makers, engineers, alchemists and mathematics teachers in Elizabethan London whose empirical practices, Harkness argues, ‘set the stage for the Scientific Revolution’ via the practice of what she terms vernacular ‘science’. Although her employment of the term ‘science’ may seem an anachronism, she demonstrates that the word was in use by authors of the time and is more accurate than the alternative vocabulary of historians.

The work of these vernacular ‘scientists’ was not the theoretical and elite natural philosophy confined to those with a university education, but instead artisanal, empirical, practical. Harkness convincingly asserts that this ‘patchwork scientific community’, made of practitioners such as the virtuoso Sir Hugh Plat, the entomologist Thomas Moffett, and the alchemist and prisoner Clement Draper, anticipated many of the methods of Francis Bacon, particularly his inductivism and data gathering. Although Bacon had the power and the influence to help make this vernacular science bear fruit in the organized enterprise of the Royal Society, it seems that hundreds of London practitioners were already engaged in this work well before Bacon prescribed it.

The major strength of this book is Harkness’s painstaking archival research. In a recent conference at the Royal Society—‘Manuscript culture and the new philosophy 1600–1727’—the main points of discussion revolved around the different ways in which early natural philosophers engaged with manuscript culture, and to what extent manuscripts in early modern science are relatively underused by historians. *The jewel house* addresses and redresses both these issues very successfully. For instance, in her analysis of the notebooks of the alchemist Clement Draper, she cogently demonstrates to what extent humanist practices in notetaking and textual comparison informed experimental practice—in other words, ‘no accurate understanding of early modern science can be achieved by artificially separating reading and writing from additional forms of making and doing’ (p. 209). From her manuscript analysis, Harkness also created a relational database of nearly 1800 Elizabethans that revealed new insights about the practice of ‘science’. In a virtuoso display of ethnographic ‘thick description’, she demonstrated that an entire community of natural historians lived near St Dionysius Backchurch in Lime Street, London. The Dutch postmaster there forwarded their letters to foreign correspondents.
so that plant, animal and insect specimens could be exchanged and discussed. And all these relationships between natural historians were governed by a fascinating code of conduct that involved gifting, friendship albums and proper forms of address, an Elizabethan code of politeness that foreshadowed later social norms in the seventeenth-century Republic of Letters.

Harkness has wisely organized her book as a series of case studies to prevent her description of this complex world from getting too unwieldy. So, we learn how Gerard’s *Herbal* had to be edited by the previously unknown Mathias de L’Obel for its inaccuracies at the last minute before it went to press. We learn about the ‘simpling’ expeditions and collaborations between Thomas Penny and Thomas Moffett to create the *Insectorum Theatrum*, one of the first works of entomology (although I might gently point out that among historians of entomology and natural history, Penny is seen as much the better empiricist). Sir Hugh Plat, a neglected figure, also receives the attention he deserves for his attempts to share his experimental knowledge; he was not a mere writer of books of secrets but was one of the first authors to attempt to be ‘a public man of science’ (p. 240).

And, like a Baconian inductivist herself, Harkness also presents all her detailed observations and case studies before coming to her main historiographic conclusion in the coda of the book. Namely, she concludes that it is difficult to nail down what the term ‘the Scientific Revolution’ actually means. As Harkness clearly shows, it is not all about Bacon, it is not only about the intellectual transformations in physics and astronomy by the Kepler–Galileo–Newton trio, and it has something to do with the interaction between artisanal practice and natural knowledge. All of these conclusions are in line with current historiographic trends, which seem borne out by her archival evidence. As Elizabethans struggled to understand the complexities of nature, Harkness successfully struggles to understand ‘science’ itself in this thoughtful and well-written book.

**Note**