Whitehead argues that he "nuances our understanding of 'flesh-eating' through his detailed account of how and to whom body parts are distributed" (176). The "cannibal moment" in Staden, Whitehead writes, must be understood in the light of the "broader cultural politics of cannibalistic/Eucharistic ritual practice" (177) and attitudes toward anatomical dissection and "medicalized cannibalism," the latter of which persisted into the early twentieth century (179).

Andrew Hadfield's Afterword traces themes that link the essays and foregrounds the stereotype of the cannibal, but his appreciation seems most on-target when he observes the ways in which the authors have crossed academic borders and extended the inquiry into new territory. If, as a consequence, this collection is less unified than it might be, it seems an acceptable price to pay. Less acceptable are the number of typographical errors in the book. Some confuse momentarily ("ever aspect of life," 7) or result in bad grammar ("more then superficial," 7), but one obscures the name of a major figure: one of Jowitt's pirates is called both "Atkinson Clinton" and "Clinton Atkinson" (58, 58 n.28, 55 n.9 & n.12, 56, and 56 n.20). A collection as informative and ambitious as this one deserved better copy-editing.

Deborah Harkness. *The Jewel House. Elizabethan London and the Scientific Revolution.* New Haven and London: Yale University Press, 2007. xxii + 349 pp. + 20 b&w illus. $32.50. Review by Lesley B. Cormack, Simon Fraser University.

Historians of science have long had a love-hate relationship with the 'Scientific Revolution'. While early practitioners welcomed the term to denote the modern turn in epistemology and natural knowledge, more recent historians have either rejected the label or qualified it severely. Deborah Harkness, in her most recent book, *The Jewel House*, believes that the concept of the scientific revolution is worth saving, but with a very different focus. Instead of concentrating on the canonical figures, Harkness focused on the social history of London inhabitants, and by doing so she changes the shape of the scientific revolution completely. No longer was this an elite intellectual movement where university-educated philosophers created new

theories and epistemologies. Instead, a much larger community of people were interested in how nature worked, both for practical ends and for the love of such knowledge, and this new socio-economic group produced a new way of creating collaborative knowledge and new topics worthy to be investigated.

Using extensive and breathtaking archival research, Harkness has uncovered a collection of lively communities, whose members invested significant time in developing an understanding of nature in sixteenth-century London. These were apothecaries, instrument-makers, herbalists, midwives, alchemists, and merchants, among others. They formed an ever-changing, dynamic web of men and women, and Harkness argues that it is through their work and interests that we discover the teeming world of Elizabethan 'science'. (Harkness uses the term 'science' quite deliberately, showing that these practitioners used it themselves to talk about natural investigation and knowledge.) While these men and women may not have discovered the 'big theories', they developed new experimental methodologies, they painstakingly developed new knowledge of plants and processes, and they created a community of experts in which to test these ideas–all well before the creation of the Royal Society in the next century.

In other words, London during the sixteenth century was full of men and women, both English and strangers, who were interested in understanding nature, often for practical reasons. In a series of focused chapters, Harkness examines city communities interested in botany and natural history, medicine and surgery, and mathematics and instrument making. She shows that there were many more people involved in these investigations than previously thought. She also situates them geographically within London, showing that living and working in proximity to one another really mattered for their intellectual lives as well as their economic ones. For example, Harkness introduces us to a group of men, many of them Dutch émigrés and living in Lime Street, who were interested in the investigation of natural history. These naturalists corresponded with each other and with other interested naturalists on the Continent. They shared specimens, field trips, gardens, ideas, and theories. They identified plant varieties and families, established uses of a number of these plants, observed their growth and development and shared all this information within

their network. Given the volume and importance of their work, it is surprising that without Harkness's recovery, we would know nothing of these Lime Street naturalists. They have been silenced for posterity, partly because they did not publish (being a close community), and partly because their hard won knowledge was appropriated by a botanist largely unconnected with their group. John Gerard, whose *Herbal, or General historie of plantes* (1597) is now the most common way for modern scholars to approach sixteenth-century botany, was not part of this community. He used their knowledge and got his book in print in order to advance his career and status as part of a court-centered patronage community. His book was such a success that the Lime Street community has now essentially disappeared from the historical record.

Harkness also looks at the development of 'big' projects in sixteenth-century London, using an interpretive framework derived from the study of twentieth-century 'Big Science'. These were projects that involved substantial government and/or private investing, designed to bring riches, fame, and technological advances to the English. She discusses, for example, the curious case of Martin Frobisher's fool's gold, a story of investors sponsoring competing alchemists in the hope that private investors and the State could replenish their empty coffers. Using a potentially anachronistic model, Harkness is able to show that science interested a number of influential men and associations, that they were willing to back big projects, and that there was a belief that the knowledge and manipulation of nature had great potential for wealth and the commonweal. By the end of the sixteenth century, these hopes and beliefs had faded, since most projects resulted in serious loss of funds; Elizabeth, her ministers, and London companies became much less likely to invest in such risky ventures and Elizabethan 'Big Science' ground to a halt.

One of the areas of burgeoning interest in London during this time was mathematics and instrumentation. Harkness shows that between 1570 and 1600 the number of vernacular mathematics books increased dramatically, and at the same time, many shops appeared selling the latest in mathematical instruments. She does a wonderful job of tracing this explosion, from Dee and Billingsley's English Euclid of 1572 to the many West-end shops selling instruments by 1600. While

I do have some concern that Harkness sees a larger and more robust market for these books and instruments than we have evidence for, it is definitely the case that this was a new and important industry in London by the end of the century. Harkness also demonstrates that a direct result of this market-driven mathematics was the claim by mathematical practitioners that for most people, instruments could take the place of philosophical mathematical training, or any hard calculations. This was a particular technological thrust to English mathematics, which we might see as continuing in the seventeenth century with Napier's logarithms.

This is not just a book about specific interest communities or investment in big projects, however. Harkness is particularly interested in how people in sixteenth-century London thought about and studied science, and how those methodologies would affect later scientific development (e.g. the 'scientific revolution'). In order to do this, she looks at the intellectual journey of one particular Londoner, Clement Draper. Draper was imprisoned in the King's Bench Prison for debt during the 1580s and 1590s. During that time, he kept a notebook, largely devoted to his investigations of nature. These notebooks are a treasure-trove of information about how a non university-based student of nature set about this study. Draper read and borrowed books; he talked to others and noted their conversations; he conducted his own experiments and asked leading questions. What these notebooks show is that someone like Draper was part of a community of likeminded individuals, constantly circulating a mixture of reading, writing, doing, and thinking, with feedback among all these different vectors. In other words, Harkness argues, a 'new' interest in experimentation (sometimes seen as the 'New Philosophy') happened in conjunction with older humanistic methods. Practice and theory, seeing by doing and knowing through authorities, were all intertwined. Here is the scientific revolution in practice.

This is an amazing project. Deborah Harkness has taken on the task of finding science in the social, something that many scholars before her would have said was impossible. She has painstakingly gone through archives untouched by historians of science and in doing so she has found a vibrant culture of inquiry into nature. It could of course be argued that the evidence she finds does not finally prove the

importance of these subjects to communities larger than the people she has identified. How typical was Clement Draper? The Lime Street naturalists? Thomas Hood and other mathematical practitioners? Research into the social life of science in this early modern period must always be to a certain extent speculative. But this book and this research open a window to a completely new world, and one that is every bit as important to changing ideas about nature as the Royal Society would be.

But is this book really about the scientific revolution, as the title suggests? Not exactly. The vibrant story of sixteenth-century London tells us that many of the characteristics of the scientific revolution–experimentation, communities of thinkers, practicality, and, above all, the model of Francis Bacon's Salomon's House, were present in this teeming and vital city. Harkness shows that Bacon did not create some new organization of knowledge collection, but rather was describing a structure already in place in London–and described in a far more egalitarian guise in the first place by Hugh Platt. Mercantile London did not, of itself, however create the 'new science'. It added a necessary component to the structure, but not a sufficient one. The more canonical thinkers still have their place in this story, but, as Harkness herself says, our conception of the Scientific Revolution should now include both Newton *and* London.

David Armitage, ed. *British Political Thought in History, Literature and Theory, 1500-1800*. Cambridge: Cambridge University Press, 2006. xi + 326 pp. $90.00. Review by Simon Kow, University of King's College.

This volume is a collection of papers which in earlier versions were presented at a conference held by the Centre for the History of British Political Thought at the Folger Shakespeare Library. As such, the contributions are largely devoted to the so-called "Cambridge school" approach to the study of political thought. The authors are mostly in agreement in their commitment to a contextualist approach to the study of political thought, though there is some debate concerning the object and scope of British political thought in the early