much to learn from other civilizations, still, when it comes to Renaissance science and the rise of modern science, refuse even to contemplate that Renaissance science ever owed anything to anyone else. On this matter they seem to take an ideological stance, as though it would threaten their identity if they did not claim pure and full ownership of that science.

Part of the reason why this is the case lies in the small number of studies that detail the intercultural dependence of European scientists on works of other cultures, as well as the mind-set that defines influences only in traceable texts from non-European cultures whose Latin translations are still extant. Not many people have sprung free of that mind-set and acquainted themselves with the more complicated routes of influence sophisticated Renaissance scientists followed by learning foreign languages, when possible, in order to acquire the sciences they needed from those languages. Just one example: many people have yet to read the last section of Vesalius's *Fabrica*, where he explicitly says that in order to give a full list of the bones in the human body he called on the services of his distinguished friend Lazarus the Hebrew, from Frigeis, who helped him recover those names from the Hebrew translations of Avicenna's Arabic works. Such "disease" Bala intends to cure.

In both books, and this new one in particular, Bala should be understood as wishing to deepen the study of European science itself, by raising questions that could not be answered epistemologically from within that science; he is not someone who simply begs his hegemonic Eurocentric colleagues to abandon their ideological prejudice and for enlightenment's sake look at the rest of the world, which was historically always part and parcel of the European worldview.

Asia, Europe, and the Emergence of Modern Science makes for very easy reading; it is free from jargon, and the chapters are short enough to make one point at a time. As such, it is eminently within the reach of students and anyone else who knows how to read and wishes to examine new ideas they never contemplated before.

GEORGE SALIBA

Timothy McCall; Sean Roberts; Giancarlo Fiorenza (Editors). *Visual Cultures of Secrecy in Early Modern Europe*. (Early Modern Studies Series, 11.) x + 238 pp., illus., bibl., index. Kirksville, Mo.: Truman State University Press, 2013. $49.95 (paper).

Following the work of William Eamon (*Science and the Secrets of Nature* [Princeton, 1994]), secrecy and secrets have become central topics of investigation in the study of early modern science and medicine. A recent collection of essays, compiled by Elaine Leong and Alisha Rankin, *Secrets and Knowledge in Medicine and Science, 1500–1800* (Ashgate, 2011), testifies to the productive and fruitful study of secrets to further our understanding of the functioning of early modern cultures of knowledge. The book under review brings together nine essays on secrecy that are, in comparison to Leong and Rankin's book, considerably more interdisciplinary in their scope. Nevertheless, art history and visual culture studies are definitely the dominant themes in the selected pieces. The editors defend giving prominence to art history by arguing that secrets often functioned visually; the mechanisms of the occlusion and revelation of secrets, which are the central issues scrutinized here, are in the first instance visual processes, and their study demands the expertise of art historians.

However, the central idea of *Visual Cultures of Secrecy in Early Modern Europe* will be relevant to a much wider readership than art historians alone. The book looks at secrets as communicative acts. The core issue, according to the editors, is not so much the content of secrets but, rather, the performance of secrecy, the acts and means of the disguising and revealing of secrets. Stressing the performative nature of secrets, the collection asks why certain materials were hidden and kept secret—and indeed from whom—and by what means secrets were utilized or even divulged. The volume is at its strongest where the authors uncover the rules and rhetorics of the performance of secrecy. Secrets fashioned particular audiences: the authors emphasize how processes of occlusion and revelation demonstrate how access to and exclusion from networks and communities was materially and visually regulated by the performance of secrets. The social functioning of secrets is nicely illustrated in Maria Ruvoldt's chapter, "Michelangelo's Open Secrets." Ruvoldt shows that Michelangelo's methods of keeping his homosexual relationship with the young Roman nobleman Tommaso de' Cavalieri secret, while advertising it to a select group of friends, served several functions: "they defined the relationship as respectable, reinforced bonds of friendship and intimacy in Michelangelo's own circle, and allowed Michelangelo's control over his inventions and communications when he himself had become a desirable commodity" (p. 105). In perhaps the most fascinat-

ing essay in the volume, one of the editors, Timothy McCall, investigates the sociability of secrecy by focusing on the mechanisms of hiding and revealing performed in and around the corretto, a closed structure of intarsiated wood that promised its users a separation from other participants in court rituals and masses in Torrechiara castle. Investigating the space in terms of power and authority, McCall argues that for its seignorial patron, Pier Maria Rossi of Parma, "occupying the corretto located within the larger chapel might not be considered merely a private withdrawal, but rather a public or conspicuously visible exercise of status, sovereignty, and piety" (p. 98).

The objects investigated in this volume are highly diverse, including, for example, the *tamburi*, special containers that were used to collect anonymous denunciations in fifteenth-century Florence. I will single out here the three essays most directly relevant to the history of science and technology. William Eamon contrasts the charlatan's performance of secrets in the open, public space of the piazza with the closed, official space of established medicine. Similarly, investigating Johann Remmelin's *Catoptrum microcosmicum*, Lyle Massey shows how its anatomical flap sheets straddled the line between high learning and folk wisdom and embodied the sharing of secrets with an exclusive and distinguished audience. Sean Roberts's analysis of the rhetoric of secrecy that developed around fifteenth-century techniques of engraving deserves a final mention. Roberts reveals what made the deployment of this rhetoric possible and, especially, what functions it served, such as avoiding the risk of competitors mimicking other engravers' works through reverse engineering. Engraving techniques were jealously guarded trade secrets.

This book stands out for the diversity of secrets it investigates. Yet, in all this diversity, its focus on the performance of secrecy and the sociability of secrets lends it coherence. This is a worthy addition to the growing literature on secrecy in early modern cultures of knowledge.

SVEN DUPRÉ

Sabine Anagnostou. *Missionspharmazie: Konzepte, Praxis, Organisation und wissenschaftliche Ausstrahlung*. (Sudhoffs Archiv, 60.) 465 pp., illus., bibl., index. Stuttgart: Franz Steiner Verlag, 2011. €68 (paper).

The aim of Sabine Anagnostou's book is to reconstruct a distinct type of pharmacy, which she terms "*Missionspharmazie*" or "missionary pharmacy" and which must be distinguished from monastic medicine or medical missions. From the sixteenth to the eighteenth century missionaries, notably Jesuits, established new pharmaceutical knowledge and new therapies. *Materiae medicae* worldwide have been deeply influenced by this productive use of plants. Anagnostou, a historian of pharmacy from the Marburg school, provides a remarkable compendium of the use of medicinal plants in the colonies, though her treatment has some profound historiographical defects.

The structure of the study is simple and reflects the author's interest in collecting and preserving the knowledge missionaries established over a period of three centuries. The first chapter, more than a hundred pages long, straightforwardly recapitulates the basics of the history of missions and missionary orders in the early modern period, with a focus on contemporary pharmaceutical and medical knowledge. The second chapter functions as a register of pharmaceutical writings produced by missionaries in Paraguay, Mexico, the Philippines, and the Spanish colonial empire in general, while the third chapter deals with pharmacies in the colonies and, most interesting, with an international transfer system for remedies. In the short last chapter, which runs under the title "Excursion," Anagnostou leaves the narrow context of Catholic missions to compare them with Protestant missions and the situation in North America.

The main principles characterizing missionary pharmacy, according to Anagnostou, were the theological-spiritual ethics of care (*caritas*) and the precarious—Anagnostou uses the term "*erbärmlich*" ("miserable")—medical-pharmaceutical situations in the missions. It was part of the conception of the mission—at least for the Jesuits—to establish and secure health care for the indigenous population. This spiritual motivation explains the exceptional engagement, especially, of the Jesuits with healing and with the healing plants they brought from Europe or found in the colonies. Medical care therefore ranged from simple forms of domestic remedies to the use of pharmaceuticals from the medicinal plant gardens in the mission grounds. The Catholic missionaries in this regard secured the medical-pharmaceutical provisioning in the colonies. The description of the cultivation of European and American healing plants and their use in cures is one of the highlights of Anagnostou's study. In some respects *Missionspharmazie* is a textbook on textbooks. The main part consists of