there should be a warning, lest anyone be deceived by the picture" (p. 119).

Like Fuchs, Vesalius also aimed to create "complete" images that would help to restore ancient learning and, in Vesalius's case, establish a canonical body for the study of human anatomy. Kusukawa demonstrates that the dramatic "flayed" figures of *De fabrica* emerged from Vesalius's experiences dissecting corpses and teaching anatomy and his immersion in the learned culture of argument and debate. As with Fuchs, an earlier publication reveals the roots of Vesalius's attitude toward visual images. In his *Epistola* of 1539 Vesalius entered into a bloodletting controversy, which hinged on the question of the location of the azygos vein in relation to the heart. Introducing a picture to clarify his ideas, Vesalius stated that his intention was to use the image to tackle the question "in the manner of the mathematicians" (p. 192). Kusukawa uses this intriguing example to show that while the image necessarily had to retain a relationship to the physical world, it also functioned in a way similar to a diagram in Euclidean geometry in its aspiration to universal abstraction.

Kusukawa's book presents important insights about the conceptual underpinnings of the relationship between images and learned texts. These could be fruitfully extended into other areas, such as exploring the ways that an image's capacity to provoke wonder and pleasure may have functioned in learned settings. An extensive selection of original drawings from Conrad Gessner's collections form a counterpoint to the printed images by Fuchs and Vesalius; through an impressive and skillful examination of inscriptions on drawings and books, Kusukawa shows how Gessner used drawings to form and solve research questions. But Gessner's own drawings of plants are also exquisitely beautiful images, conveying delicate structures with subtle shading and vivid color. For some contemporaries, especially those who collected drawings and illustrated books, such images were connected to social, cultural, and religious contexts in which the intellectual content may have been secondary. Thoughtfully designed and generously illustrated with high-quality color photographs (the print version's images were far superior to the digital images in an electronic edition of the book I consulted), *Picturing the Book of Nature* is an essential contribution to the study of nature in early modern Europe.

JANICE NERI

Alina Payne. *The Telescope and the Compass: Teofilo Gallaccini and the Dialogue between Architecture and Science in the Age of Galileo.* (Biblioteca dell' Archivum Romanicum, Ser. 1: Storia, Letteratura, Paleografia, 393.) xx + 242 pp., illus., index. Florence: Leo S. Olschki, 2012. €30 (paper).

Alina Payne (Editor). *Teofilo Gallaccini: Selected Writings and Library*. With a contribution by **Giovanni Maria Fara**. (Biblioteca dell' Archivum Romanicum, Ser. 1: Storia, Letteratura, Paleografia, 394.) x + 414 pp., illus., index. Florence: Leo S. Olschki, 2012. €45 (paper).

Teofilo Gallaccini (1564–1641) introduced himself as a "Physician, Philosopher, and Public Lecturer of Mathematics in the Study of Siena, and known among Academics as The Defective ['il Difettuoso']." A contemporary, Isidoro Ugurgieri Azzolini, described him more colorfully: "overcome by some scarcity of fortune, or restrained by weakness of spirit, he did not dare to publish any work, although he knew a lot, and wrote a lot on almost every science and profession" (*The Telescope and the Compass*, p. 93 n 22). Alina Payne's volumes, one of which includes a contribution by Giovanni Maria Fara, are dedicated to the work of this singular physician from Siena. They fill a gap in studies on the arts and sciences between the sixteenth and seventeenth centuries. The books were conceived as a single publication, "but publishing imperatives separated them into two distinct books" (*ibid.*, p. xi). The last part of the *The Telescope and the Compass* ("Documents") contains the transcriptions of a few short handwritten notes, two letters (one of which, addressed to Giulio Mancini, was recently identified by Michele Maccherini), Gallaccini's will, and two biographical profiles (written by Giovan Girolamo Carli and Pietro Ferroni). The second volume collects works edited by Gallaccini and is introduced by a detailed analysis—by Fara—of the books collected in his library, often accompanied by interesting side notes.

Gallaccini, who became famous after the posthumous publication of his *Trattato sopra gli errori degli architetti* (*Treatise on the Mistakes of Architects*) (Venice, 1767), left over forty unpublished manuscripts (a single work was published when he was alive, the *De rerum amore* [Siena, 1596]) devoted to four main themes—astronomy, mathematics and mechanics, anatomy, and architecture—around which Payne and Fara develop their analysis. Gallac-

cini's work is marked by his academic activities at the University of Siena and within the Academy of the Philomaths (*Filomati*) and the Academy of the Stunned (*Intronati*). The themes follow the opportunities offered by the vacancy of a chair, the programs established by the university deputies, the solicitations of friends and patrons (most of his scientific writings are texts of university lectures). The heterogeneity of the topics dealt with by Gallaccini promotes the study of analogies between disciplines, according to a curious *imitatio* between the economy of the intellect and the economy of nature, from mechanics to anatomy, from medicine to astronomy. In this context, architecture—for which Gallaccini is especially renowned—plays an important but not exclusive role. The authors convincingly show that the aspects of greatest interest lie in the connections that Gallaccini establishes between areas of research seemingly distant from one another. Moreover, the connections with the works of Leon Battista Alberti, Albrecht Dürer, Sebastiano Serlio, Niccolò Tartaglia, John Dee, and Galileo Galilei, as well as the constant attention to sensible mathematics and sensible demonstrations, are fundamental.

Gallaccini is described by Alina Payne as "a 'go-between'" between disciplines "rather than a major figure in any one of them" (*Telescope and the Compass*, p. xix). The most direct reference in this regard—repeatedly cited in the notes—is to Andreas Höfele and Werner von Koppenfels's edited volume *Renaissance Go-Betweens: Cultural Exchange in Early Modern Europe* (De Gruyter, 2005). The contributions collected in *Early Modern Science* (*Cambridge History of Science*, Vol. 3 [Cambridge, 2006]), edited by Lorraine Daston and Katharine Park, are often cited by Payne as important for defining the keys to interpreting a scientific career of the "second rank"; in the case of Gallaccini, this less exalted status is precisely what offers the opportunity to examine carefully the relationship between architecture and science, far from the anomalies of "genius."

Much important information contained in the two volumes has to be sought between the lines, in particular in the notes. The authors do not provide a bibliography or a detailed list of the manuscripts. Also missing is a synopsis of what could be called the "Gallaccini Project." This project has reached an important milestone with the publication of these two volumes. They do not, however, exhaust the work of the project, even though they contribute to it in a decisive way. For example, it is necessary to read note 67 on page 37 of *Teofilo Gallaccini: Selected Writings and Library* to learn that transcriptions of some of the manuscripts are available at the online site Bivio: Biblioteca virtuale online (http://bivio.filosofia.sns.it) in the section "Corpus Gallaccini," edited by Giovanni Maria Fara and Simonetta Bassi. The same can be said of the work *Perigonia*, which is available on the site ECHO (http://echo.mpiwg-berlin.mpg.de) and was studied by Annalisa Simi. Furthermore, it is surprising that only fleeting mention is made of research directions that could lead to useful comparisons with the work of Mutio Oddi (Alexander Marr, *Between Raphael and Galileo: Mutio Oddi and the Mathematical Culture of Late Renaissance Italy* [Chicago, 2011]) and Bernardino Baldi (Alfredo Serrai, *Bernardino Baldi: La vita, le opere, la biblioteca* [Milan, 2002]), both contemporaries of Gallaccini and interested in similar research themes. The Gallaccini Project deserves further attention. The two volumes under review will be of use as a reliable guide to coordinating new research on Gallaccini.

ANTONIO BECCHI

Matthias Schemmel. *The English Galileo: Thomas Harriot's Work on Motion as an Example of Preclassical Mechanics*. Volume 1: *Interpretation*. Volume 2: *Sources.* (Boston Studies in the Philosophy of Science, 268.) Dordrecht: Springer, 2008. xx + 388 + 371 pp. £153 (cloth), £149 (eBook).

In a review of a collection of essays on Thomas Harriot (1560–1621) as an "Elizabethan man of science" published in 2000 (*Albion*, 2002, *34*: 305–306), Peter Dear asked why so many of its contributors had assumed, rather than justified, the intrinsic significance of Harriot as a scientific figure. Matthias Schemmel's excellent book on Harriot's mathematical and experimental work on motion gives us a comprehensive answer to Dear's provocative question. Although most of Harriot's work remains unpublished, and could therefore be seen as a "dead end in the history of science" (p. 4; the two volumes are numbered consecutively), Schemmel argues that his manuscripts are of immense significance when viewed from the perspective of "historical epistemology" (pp. 5, 232). This approach is less concerned with individual contributions to scientific knowledge, focusing instead on the "shared knowledge" of mathematical practitioners in early modern Europe and how it facilitated the shift from preclassical to classical mechanics (p. 5). From this viewpoint, while "major" figures like Galileo retain their significance, the work of "lesser known contemporaries" (like Har-