Inga Elmqvist Söderlund. *Taking Possession of Astronomy: Frontispieces and Illustrated Title Pages in 17th-Century Books on Astronomy.*The Center for History of Science. Stockholm: The Royal Swedish Academy of Sciences, 2010. 400 pp. index. append. illus. bibl. 150 SKr. ISBN: 978–91–7190–137–8.

Inge Söderlund surveys the images that accompanied a burgeoning printed literature deriving from astronomical observation. She argues that these images worked to invite a far larger audience to the findings of these books than participated in actual astronomical observation by confirming the role of astronomy as a science and art. Söderlund, a librarian at Stockholm's observatory trained in art history, expanded her inventory of the library's astronomical books to study "pictorial references to celestial phenomena" in over 90% of the many frontispieces she has examined (105). She asserts the cultural "importance of the

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illustration" to the books of "mixed mathematics with emphasis on astronomy," from meteorology to optics to natural history, "in regions all over Europe regardless of country or confession" (32–33).

Söderlund constructs a typology from frontispieces' prominent inclusion of instruments, allegorical figures, depictions of the heavens, imagined architectural settings, and emblematics, to survey the conventions by which they served "to market the book [as] learned and profound" (311). The visual content of the frontispiece provides a way to place books of astronomy in an economy of "works of art or monuments" or "paratexts" that addressed readers by their inventive construction. Many of these images are unsigned, and constitute a vast genre of anonymous illustration (ninety-one out of 291 [91]). But she unpacks their content to classify each as an informational image, whose architectural design and personifications provided guides to the consumption of astronomical descriptions and the social status of the field. There is limited evidence that writers of such books designed the frontispieces or title pages or that their artists enjoyed direct access to their authors; the absence of "direct dialogue between the artist and author" is striking (93). Several astronomers ran their own presses, like Regiomontanus, and others, like Kepler, commissioned poems to carefully orient different audiences of readers to their work, revealing their investment in the material creation of the book. Direct involvement in the design or explication of a frontispiece rarely exists. But the author is less interested in situating images in the careers or patronage of astronomers than in the intersection between science and art.

By considering the genre of the frontispiece as an invitation to the books' contents, she argues that motifs such as gardens, symbolic and allegorical figures, and beckoning angels invited readers to consider the book of nature. She argues that they often linked astronomical investigations to art, and underscored the operations of measurement and transcription, but devotes less time to explain the content or context of books of optics, mathematics, astronomy, or navigation, or distinguishing those written for a court or university setting. Her interest in the frontispiece as an intermediate space that used art to pique interest in topics from prognostics to comets to navigation by linking astronomy and the visual arts. But the survey's breadth, often as overwhelming as a Google Images search, limits its conclusions.

Söderlund's art-historical training reflects her interest in relations of these frontispieces and contemporary painted images, and the image of the geographer and astronomer in early modern life. Her decision to reserve discussion of the relation of ekphrasis to the frontispiece to the end of her dramatic visual survey blunts her examination of their rhetorical power or their inventive claims. Her argument also risks equating the implicit promises in title pages and frontispieces made to the potential readers and consumers of the book with the epistemological legitimacy accorded celestial observations, viewing consumption of books as the prime rationality for their design. Although Söderlund frames her study among works on the rhetoric of the frontispiece and the consumption of knowledge, the lack of specificity of her analysis leads her to move quickly past such well-known

images as Stefano della Bella's 1632 frontispiece to Galileo's *Dialogue of the Two World Systems* or Kepler's 1627 *Tabulae Rudolphinae* (described on p. 208), and situate them within a larger cultural context of artistic engraving, but rarely as explicitly tied to cultures or milieux of artistic practice. The individual astronomer recedes, save for those few who, as Kepler, actively described frontispiece to their work.

The book raises many questions. One wonders how different the status of the description and deciphering of celestial observations was to other works in natural history, the physical sciences, or the interest in optics that astronomers and artists shared. The elegance of these images raises interesting questions — often raised between the relation between artists and astronomical investigation. Although a range of prominent artists and painters were involved in drafting astronomical frontispieces, from Bernini to Rubens, this study fails to suggest artists' interest in astronomical research — and both how astronomers relied on artistic skill as supports for their competence and metaphors for practice, as Eileen Reeves has shown, and how seventeenth-century artists advanced cosmological debates. One might desire to situate the input of the printer or engraver in court, church, or university settings. Some images inevitably beg for further discussion. Söderlund takes the association of astronomy with female allegorical figures at face value, associating them with "delight" that skirts questions of gender and science, as images that "invite the beholder to appreciate the stars and the planets as natural phenomena" (54); her observation "Naked flesh is a good way of attracting attention" (223) is gratuitous, as gestures to the "voyeuristic" nature of celestial observation (226).

Her study raises questions as to the specificity of such artifice to the use of optical instruments in astronomical studies. Although many frontispieces evoke astronomers' claims for mastery over the legibility of the heavens, their relation to religion is not plumbed. Nor are the cultural claims of these illustrations — many of which could provoke whole chapters in and of themselves — fully contextualized. Söderlund addresses how the frontispieces situate celestial inquiry in the public sphere or realm of letters in a somewhat superficial way, noting how some images that emphasized the non-heretical nature of astronomy a "Christian virtue," as much as reconciling reason and revelation in a religious worldview (177-85). She notes how projects of celestial observation intersected the cosmographic symbols of early modern rulers, often linking astronomy and iconography by the "conspicuous position" of heraldry in fully one-third of the images examined (251). She illuminates the frontispiece as conversation piece, but moves briskly through several examples, in reference to court connections or court ceremony and "intellectual kinship" (273, 289). The iconographic cleverness of such theatrical and often enigmatic images of mastery over nature, often rich with mythological content and allegorical personifications, seems to recapitulate the degree of artifice required to transcribe, interpret, and investigate the celestial sphere.

The book stimulates questions about frontispiece illustration in the culture of early modern science of interest to art historians and historians of the book. It

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surpasses an analytic bibliography by indicating how these images engaged in a sustained invitation to reexamine the expertise of decoding the heavens for a variety of uses.

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