

that were factual commonplaces even in the chaotic years following the breakup of the Roman Empire and were bequeathed to the Middle Ages. Obrist blames the lack of scientific progress not on Christian obscurantism but on the decline of cities, for it takes a “certain numerical concentration of people and books, as well as a certain level of institutionalization,” for theoretical science to thrive (p. 27). The institution that dominated intellectual life in the early medieval period was the monastery, and Cassiodorus’s establishment at Vivarium in Italy (ca. 540), with its book collection and his recommended course of study, is a turning point in intellectual history. Clerical scholars were, however, less interested in abstract ideas of mathematical astronomy than they were in more practical issues, such as the timekeeping needed for correct performance of the night offices and the refinements of the calendar that would enable the proper celebration of Easter and its attendant feasts. These concerns generated books with illustrations of the constellations as well as a collection of texts and images explaining the motions of the sun and moon.

The link between ancient and medieval science was the late antique encyclopedia, a type of manual adapted to the common reader rather than the advanced scholar. In addition to Macrobius’s elaboration of Cicero’s work, there was Calcidius’s commentary on Plato’s *Timaieus* (fourth–fifth centuries), Martianus Capella’s survey of the liberal arts (*The Marriage of Mercury and Philology*, early fifth century), and eventually the works of Isidore of Seville (*Etymologies* and *De natura rerum*, early seventh century) and Bede (*De natura rerum*, early eighth century). Each of these came with a set of illustrations, presenting the argument of the text in visual form.

Obrist’s work covers the ancient period up to the time immediately before the Carolingian Renaissance around 800. This is Volume 1. She intends to continue her analysis of text and image into the fertile period of the Carolingians, when there was a veritable explosion of images—geometric figures, diagrammatic schemas, representations of the constellations, maps, and celestial globes. Many of these images were derived, however, from the patient, even heroic, preservation and copying of ancient manuscripts during the difficult days of the early Middle Ages.

EVELYN EDSON

Charles van den Heuvel. “*De Huysbou*”: A Reconstruction of an Unfinished Treatise on Ar-

chitecture, Town Planning, and Civil Engineering by Simon Stevin. (History of Science and Scholarship in the Netherlands, 7.) x + 544 pp., illus., figs., bibl., index. Amsterdam: Edita, 2005. €89 (cloth).

The estate of Simon Stevin (1548–1620) contains more or less elaborated materials—from almost finished pieces to short notes or simply key words—for a treatise on civil architecture, which Stevin intended to publish under the title *De Huysbou*. Except among a few experts, these materials are almost unknown to historians of architecture as well as of science. H.-W. Krufft, in his *History of Architectural Theory* (Zwemmer, 1994), seems unaware of the existence of such materials, and the same holds for M. Minnaert in his article on Stevin in the *Dictionary of Scientific Biography*. This lack of awareness is partly due to the fact that up to now the *Huysbou* materials were difficult to access. The selection of these materials that Stevin’s son Hendrick published in 1649 is practically inaccessible and almost forgotten. It is not even mentioned in *The Principal Works of Simon Stevin* (Swets & Zeitlinger, 1955–1966). Rather, a footnote gives the slightly misleading information that the *Huysbou* treatise was “never published and the MS seems to be lost” (Vol. 2, p. 801). Another reason for the obscurity of these materials, however, is historians’ helplessness as to what to do with them. E. Dijksterhuis, for instance, in his famous monograph on Stevin, identified the main value of the civil architectural writings as “contribut[ing] to our mental picture of the writer’s personality.” He added that it is “impossible to estimate the influence” these writings “might have had on contemporary architecture if they had been published within his lifetime” (*Simon Stevin: Science in the Netherlands around 1600* [Nijhoff, 1970], p. 111).

Yet *De Huysbou* would have been so peculiar an architectural treatise that its possible reception is hardly predictable. It does not fit the categories we have for early modern books on architecture. Neither would it have been the sort of essay on construction statics that one might expect from such an excellent theoretician of mechanics, particularly in an age when the need for such statics was very much felt—as the First Day of Galileo’s *Discourse* proves. Nor would it, probably less surprisingly, have been an architectural book in the tradition of Renaissance Vitruvianism. The issue of column orders, for instance—a central topic for Sebastiano Serlio or Andrea Palladio—is not dealt with by Stevin, even though he is clearly indebted to the classi-

cal inheritance: the types of private houses found in Greek and Roman antiquity constitute the starting point of his ideas on domestic architecture. And *De Huysbou* certainly would not have been a practitioners' book; it is no sober, practically minded Dutch counterpart to the splendid Italian treatises that focus on the aesthetics of architectural design. Stevin does not give instructions about the various techniques employed in the construction of houses—and rightly so, since he was no architect and had to learn rather than teach those techniques.

Stevin's *De Huysbou* would have been a unique architectural treatise, discussing various issues pertaining to bourgeois private houses and city planning. The extant materials are the building blocks for an essay on civil architecture that reflects the new demands and ideas of bourgeois life. They provide important documentation of postaristocratic culture in the Netherlands at the beginning of the seventeenth century, which deserves attention and further investigation.

Charles van den Heuvel's reconstruction of Stevin's *De Huysbou*, along with the edition of a transcription as well as a translation of the pertinent materials, thus merits the appreciation and gratitude not only of historians of architecture and science but of all seventeenth-century scholars. The edition is satisfactory in terms of both its philological standards and its convenience to potential users. The reconstruction—that is, the arrangement of the extant fragments—certainly the most difficult and demanding task van den Heuvel faced, is convincing and, what is more, absolutely transparent and controllable: the appendixes reproduce the sources on which this reconstruction rests. Finally, van den Heuvel's knowledgeable introduction must be praised for providing instructive context and background to the text.

WOLFGANG LEFÈVRE

■ Early Modern (Seventeenth and Eighteenth Centuries)

Mario Biagioli. *Galileo's Instruments of Credit: Telescopes, Images, Secrecy.* xi + 302 pp., figs., app., index. Chicago: University of Chicago Press. \$35 (cloth).

Mario Biagioli's *Galileo's Instruments of Credit: Telescopes, Images, Secrecy* is an engaging examination of the changing contexts confronted by the Pisan astronomer in the years 1609 through 1616 and of the strategies that ensured his rise in those years from a relatively unknown

professor to Europe's most celebrated private citizen. Because it takes seriously both the many obscurities, impediments, and partial disclosures of information that then characterized Galileo's work and the relative incommensurability of some features of his arguments with those of a theological nature, this study serves as an important corrective to the general scholarly tendency—more typical of some disciplines than others—to treat the outcomes of his several controversies as the product of measurable social, intellectual, cultural, and economic forces, the large cast of supporters and antagonists as fully informed agents equally focused on the same issues, and events as the direct result, rather than the fortuitous by-product, of legible intentions. This is not to say that *Galileo's Instruments of Credit* forsakes a strong storyline about who wrote what to whom and why, but, rather, that it disaggregates the overall narrative into a series of highly specific scenarios whose constants are Galileo, an unorthodox claim, and a short-term reward. In looking both at the visible logic of each situation—always an agonistic affair—and at those moments where scientific knowledge does not steadily pile up, where intellectual and social alignments, however durable, are somewhat askew, where time lags and contingencies figure in the plot, and where the governing metaphor of a dispute is necessarily riddled with inconsistencies, Biagioli has produced a complex and compelling account of the discoveries and debates of these crucial years.

As one might expect, Galileo's trajectory and the tenor of this book are both characterized by a certain upward momentum. Biagioli's analysis moves from an early economism, where his protagonist is distinguished by certain shrewd investments of labor, time, and, eventually, rewards that are as much symbolic as material, to consideration of the delicate equilibrium between prestigious pronouncements and costly disclosures at the Medici court, and, finally, to a contemplation of the fatally flawed metaphor of the Book of the Heavens in the quarrel with the theologians. Biagioli's sketch of Galileo the professorial instrument-maker prior to 1609—taciturn and faintly grasping—makes for a strong contrast with the man who would emerge in 1610, but it explains the dynamics of the quarrel with Baldessar Capra over the latter's piracy of the geometrical and military compass, anticipates the posture of astonished envy of prominent peers like Giovanni Antonio Magini, and establishes the parameters of that first big bid for credit in the *Starry Messenger*.

In his first two chapters Biagioli explains how