Adam Mosley

Bearing the Heavens: Tycho Brahe and the Astronomical Community of the Late Sixteenth Century

Cambridge: Cambridge University Press, 2006. Pp. xiv, 354

Adam Mosley's new book on Tycho Brahe's astronomical work takes its title from the figure of the mythological Atlas as *coelifer*: bearer of the heavens. This image of Atlas supporting the celestial spheres on his shoulders was a common symbol of astronomy, appearing in the frontispieces of books, in dedicatory prefaces and poems, and as decoration on astronomical instruments—including Brahe's great equatorial armillary at Uraniborg. Brahe and his contemporaries not only used the figure of Atlas to allude to the weighty responsibility of astronomical observation and prediction, but also drew on interpretations that read Atlas as a historical king and astronomer, suggesting the dignity of both those who engaged in the profession and those who provided patronage to them. This relationship between astronomical work and the systems of cultural capital that enabled it is a central aspect of Mosley's important new study.

Like the sixteenth century astronomers who are the subject of his book, Mosley uses the idea of "bearing the heavens" as a figure for his project: "a metaphor for the conveyance of astronomical theories, data, and techniques." Under this rubric, he brings together intellectual, social, and material history by focusing on the processes of astronomical communication, and especially the information and social interaction embodied in letters, books, and instruments. The book "locates [Brahe] within the overlapping technical, courtly, and literary cultures of the period," and considers the transmission of astronomical data in various forms: "the exchange of letters, the production and use of books, the manufacture and transfer of ownership of instruments, and the movement from one site to another of individual practitioners" that were central to the development of an astronomical community in the late sixteenth century.

Mosley centers his account of astronomical communication on a consideration of Brahe's *Epistolae astronomicae* (1596), the published form of his long exchange of letters with the astronomer-prince Landgrave Wilhelm IV of Hesse-Kassel and Wilhelm's court astronomer, Christoph Rothmann. In chapter two, he considers the epistolary exchanges that were part of Brahe's self-appointed task of gathering a reliable set of astronomical observations. As Mosley points out, while previous scholars studying Brahe have examined his letters for information on his astronomical projects, they have not considered the "letters as a form of scholarly production in themselves, or ... the role of epistolary communication ... in his astronomical

enterprise.” Although Brahe “did not consciously make himself into the central figure of an epistolary network,” he was deeply involved in the process of scientific communication amongst astronomers and other professional scholars. Mosley traces Brahe’s network of correspondence with contemporary astronomers, the origins of the Hven-Kassel correspondence, and the complications posed by the ad-hoc postal systems of early modern Europe. Most significantly, he addresses the processes of what he calls “epistolary calibration” between Uraniborg and Kassel. He explores the correspondence between Brahe and Rothmann in which they attempted to coordinate their observations by discussing the calibration of instruments, the effects of refraction on calculations of stellar positions, and the cosmological assumptions which underlay their work.

In chapter three, Mosely uses the publication of the *Epistolae astronomicae*—dedicated by Brahe to Wilhelm’s his son and heir Mortiz in commemoration of his father’s death—as an opportunity to place Brahe’s famous publishing enterprises, both with the presses at Uraniborg and elsewhere, in the context of his use of books more generally. He emphasizes the bookish character of early modern astronomy, which depended as much on the comparison of astronomical texts with each other as on the comparison of texts and observations, connecting the local work of observation and calculation with the public transactions of early modern literate society. In this context, the astronomical letters functioned not only as a record of communication with a noble patron, but also as an opportunity for Brahe to rehearse publicly his critique of the Copernican hypothesis in conversation with Rothmann. Similarly, in this social context, Brahe’s methods of acquiring new books depended upon the work of a variety of social systems, including correspondents who purchased or copied works on his behalf and the libraries of other scholars that he attempted to purchase posthumously.

In chapter four, Mosley turns from book history to the history of scientific instruments, discovering significant continuities between the two fields. Where the previous chapters investigate communication about instruments and observations, here instruments themselves become a means of communication. The chapter investigates the creation of instruments by Brahe’s own artisans and by commercial instrument makers who made use of his data as a parallel form of astronomical *publication*, a process of display by which Brahe communicated knowledge and laid claim to status in court and astronomical circles. Drawing upon a letter to Kassel which lists the instruments at Uraniborg, as a supplement to the description of his instruments in the *Mechanicae*, Mosley provides significant new information about Brahe’s use, acquisition, and transmission of astronomical instruments. He consid-

ers in detail the construction of Brahe's *Globus Magnus Orichalcicus* and its use as a repository of astronomical information and a display of astronomical mastery. The image of the heavens displayed on the great brass globe itself provided the basis for a series of celestial globes covered with printed paper maps, further demonstrating the relationship between instruments and printed books. In both cases, astronomers and instrument makers sought to safeguard their rights to the information and techniques embodied in the instruments by obtaining royal privileges, legitimating their rights to astronomical discoveries.

Bearing the Heavens concludes with a consideration of the travels that these other forms of astronomical communication provoked and enabled: the movement of itinerant astronomers between different sites of astronomical work. These travels were a vital part of the process by which students of astronomy came together as a community, providing opportunities to exchange information, techniques and equipment. In his "Hortatory Ode," Brahe calls upon astronomers, adjuring them to a collective task: "Come with me to ascend Olympus with forces redoubled, / Let us now hasten to close the cracks that have lately been broken, / Firm up the coffered ceiling of heaven with sturdy new crossbeams." This excellent account of the complex negotiations and exchanges that underpinned Brahe's titanic astronomical project similarly brings together materials and approaches from diverse modern scholarly communities, providing a new and more expansive vision of early modern astronomical work.

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John M. Najemy

A History of Florence 1200–1575

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John Najemy's lengthy and scholarly survey of almost four hundred years of Florentine history provides much-needed perspective for scholars of the city on the Arno. Forty years have passed since the publication of Gene Brucker's *Renaissance Florence* (Berkeley & Los Angeles, 1969) and over a quarter century since the appearance of a briefly revised edition. In the interim, the field of Florentine historiography has witnessed a veritable explosion as historians, art historians, and scholars of Italian literature have plundered the seemingly never-ending riches of Florence's archives. Najemy does more, however, than simply synthesize this wealth of research. He places it at the service of a focused and coherent explanation for the longevity and