

in action. Instead we get to know what Libavius, Erastus, the Socinians, and others—from a variety of different theological positions—could most agree on: their critique of Paracelsian and hermetic approaches to natural philosophy. Bernd Roling's exposition of works by the professor of medicine Johann Hannemann (1640–1724) and other followers of Paracelsus provides a comprehensive introduction to the Swiss humanist's ideas which remained attractive to seekers of the so-called philosopher's stone even 250 years after his death.

Despite its impact on institutional academic traditions, Aristotelianism finally started to wear thin. Toward the end of the sixteenth century, mathematicians increasingly rebelled against their low status, since the Stagirite had classified their discipline as a composite of allegedly auxiliary subjects, such as geometry, optics, and mechanics, considering it no match to physics or metaphysics. Grenada's presentation of the debate between Barthel Keckermann and the mathematician Christoph Hunichius about the novae of 1572 and 1600, as well as the comet of 1577, shows that the Scientific Revolution eventually elevated mathematicians' role. This complements Stefano Gulizia's focus on the university of Helmstedt and its Baltic connections, including Denmark's Tycho Brahe, whose geo-heliocentric model reflected the compromise between the ancients and the moderns. The last two chapters focus on learned academies, such as the Leopoldina in Schweinfurt, where the “polyphony of voices” (121) evoked less controversy than in universities (Simon Rebohm). Cartesianism in French universities was first championed by physicists, after entering scholarly debate through the academies' prize competitions (Martin Urmann).

With its nuanced case studies, this collection holds great appeal to specialists and general readers curious to learn about the origins of modern science. In the *longue durée*, ideas about the world and the universe did not change upon the intervention of a few lonely geniuses, but thanks to religious and institutional networks, and continuous exchange between the old and the new.

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Tycho Brahe and the Measure of the Heavens. John Robert Christianson.
Renaissance Lives. London: Reaktion Books, 2020. 288 pp. £15.95.

Over the course of his career, John R. Christianson has shaped and sharpened our view of Tycho Brahe as a champion of observational precision who channeled his powers to promote a more collaborative and collective form of science. Among the few to master the many technical achievements of Tycho, Christianson has never lost sight of social context in his close attention to early modern court culture and Tycho's bold decisions to build his island observatory and revolving team of researchers. Given such breadth

and depth, we can now appreciate a more complete picture of Tycho, one that reflects the many roles he played—activist, entrepreneur, innovator—and the resources that fueled his revolutionary enterprise. The present contribution bears witness to decades of work that delivers not only a lasting tribute to Tycho, but also a concise biography that brings to life his ideas and interactions with family and friends. Leaving some better-known events such as his bitter dispute with Nicolaus Reimers “Ursus” to other historians, Christianson turns to topics that affirm his familiar account of Tycho as a fair manager and faithful mentor to many.

Four basic themes tie the book together, beginning with the birth of Tycho and extending to his scientific legacy six chapters later. First, Christianson focuses primarily on the place of Tycho in the broader culture of the period, rounding out his role as a Renaissance figure who practiced courtly exchange at the highest level. Second, Christianson describes in vivid detail how Tycho deployed his rare talent and resources to designing the finest astronomical instruments of the day. Christianson illustrates the form and function of each instrument, including a few failures, and how Tycho arranged them on the island of Hven. In turn, Christianson explains how these instruments required a team of technicians whom Tycho cared for personally at his royal palace. It is clear that “Tycho had many irons in the fire” (197), as he managed the moving pieces of an extraordinary program to map the stars with unprecedented precision and “soar through the spheres of heaven with the Creator” (58). His creativity as a team leader caught the interest of aspiring scholars from across Europe, many of whom later taught at the University of Copenhagen long after Tycho had left Denmark in disgrace to spend his final years at the court of Holy Roman Emperor Rudolph II in Prague.

Christianson covers considerable ground, but his biography is not meant to be exhaustive. It is important to keep the mission of the author in mind when we find few details on certain subjects. Although alchemy was essential to Tycho, we barely hear about his interest in Paracelsian medicine or the virtual arsenal of instruments that filled the ground floor of Uraniborg. Equally sparse are the circumstances surrounding his sudden fall from grace at the court of King Christian IV in 1596–97. When the hopes and dreams of Tycho are “crushed in an instant” (179), there may be more to the story than a young monarch yearning to demonstrate his power over the aristocracy. Finally, there is a sense that Christianson takes his account of Tycho too far when it comes to his influence on Johannes Kepler. As much as it may serve to complement more benevolent portrayals of Kepler, Christianson exaggerates the extent to which Tycho taught Kepler about collaboration, courtesy, and “the advantages of teamwork” (204). The result is a rather harsh view of Kepler as a reclusive theoretician who, despite the patient support of his patron, had to learn to work with others the hard way.

Beautifully illustrated and brilliantly written, *Tycho Brahe and the Measure of the Heavens* crowns a career of research on Tycho and his times. It stands as the single

best introduction to Tycho and will attract a wide audience well beyond the history of early modern science and society.

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Early Modern Écologies: Beyond English Ecocriticism. Pauline Goul and Phillip John Usher, eds.

Environmental Humanities in Pre-Modern Cultures. Amsterdam: Amsterdam University Press, 2020. 310 pp. €99.

This important volume extends the horizons of undertakings like *French Ecocriticism* (2017). Stirred by Louisa Mackenzie's remarks during "Ecocritical Approaches to the French Renaissance" (MLA 2015), Goul and Usher's compendium highlights how early modern French culture can enrich ecocriticism. What if authors like Michel de Montaigne and Pierre de Ronsard—widely referenced here—were keystones for Jane Bennett, Bruno Latour, or Timothy Morton? There is a heartening blend of practices in "the book as a whole [that] speaks, intentionally, with an accent" (11), without neglecting translations into English. Sections on "Dark(ish) Ecologies," "Nature's Cultures," and "Groundings" demonstrate that, in the words of Mackenzie's epilogue, "think[ing] ecologically in early modern France is to think through an ethos of life itself, about how humans inhabit, manage, and relate to . . . their dwelling places: how they live *with* and *in*" (289).

Hassan Melehy's rumination on Montaigne, Gilles Deleuze, and the materialization of philosophy heeds the agentic qualities of sixteenth-century ecological awareness: "allowing Montaigne's writings to communicate with the present involves a . . . disposition that sets aside triumphalist attitudes toward the past, . . . part of learning the humility necessary for respecting the many lives of matter" (44). As opposed to Morton's recourse to John Milton regarding ecological thinking, Stephanie Shiflett proffers Guillaume du Bartas, who considered "the same elements that make up stars and trees and cuttlefish [to] make up the human body. Thus . . . all beings, living and non-living, have a base language in common" (69). A protean ecopoetics meshing human and more-than-human emerges in Jennifer Oliver's exploration of fields of conflict in verse by Ronsard and Agrippa d'Aubigné through dark ecology, with "background scenery", the aesthetic wallpaper that has come to seem 'given' or even banal through familiarity. . . . reward[ing] (re)interrogation from an ecocritical angle" (75).

Kat Addis, exploring Ronsard's unfinished epic poetry, evokes the value of grappling with hyperobjects like the climate crisis through collective experiences situated "elsewhen," as encapsulated in "proverbs . . . forc[ing] reckonings with that which we can