

timate chapter, Crowther opens up the theme of the book of nature more broadly by considering botanical writings and books of secrets, at times enlarging the aperture of her lens a little beyond Germany. She concludes on a high note with a detailed discussion of the role of didactic literature and drama, which deployed the story of Adam and Eve to instantiate Reformed ideas and spread a Protestant view of history and the individual across generations.

Crowther writes clearly, and what she has to say will interest historians of science and medicine as well as students of the Reformation. It is a regret, however, that many of the images that she discusses have not been reproduced. *Adam and Eve in the Protestant Reformation* is illustrated, but not as well illustrated as its argument requires or deserves.

SCOTT MANDELBROTE

Hiro Hirai (Editor). *Cornelius Gemma: Cosmology, Medicine, and Natural Philosophy in Renaissance Louvain*. (Bruniana & Campanelliana: Ricerche Filosofiche e Materiali Storico-Testuali, 24.) 153 pp., illus., index. Pisa: Fabrizio Serra, 2008. €34.

Cornelius Gemma (1535–1578) may very well be one of the great understudied gems of late Renaissance intellectual history. This much becomes clear from the present volume, which brings together a number of mostly new papers that were first presented in 2007 at an international conference devoted to this medical professor, teratologist, and methodologist from the Low Countries.

The eight essays are grouped in three sections, of which the first concerns “Cosmology and Astrology,” the second “Medicine and Prodigy,” and the third “Method and Sapientia.” Reading through the entire book in order, one may stumble on a surprising convergence between the first and second sections. The collection is quite exceptional in bringing to light the hidden connections structuring the unity of Gemma’s discourse, where other books on Renaissance rationality often limit themselves to focusing on disciplinary interactions.

Consider Dario Tessicini’s fine study of Gemma’s ongoing relation with the famous 1572 supernova. Tessicini nicely shows how, faced with this wonder—and not unlike spectators awed by Superman—Gemma runs through a long list of potentially suitable names of regular natural things, finally settling on that which it cannot *not* be: a marvel that surely announces the Second Coming. This merger between a

physical discourse that is slowly closing in upon itself and a manifestation of the ongoing credibility of a divine promise raises serious questions about the ubiquity and identity of a Renaissance “preternatural philosophy”; we find Gemma calling such divine signs “*praeter naturam*” (p. 54). Already, God manifests himself in some sense as the violator of a stable “nature,” and Tessicini admirably expands this into a comparison with Giordano Bruno’s later implosion of the difference between God’s absolute and ordained power (p. 61).

Likewise, Jean Céard (going beyond his treatment of Gemma in the classic *La nature et les prodiges* [Droz, 1996]) alerts the reader to the strangeness of Gemma’s discourses on prodigies and wonder. For Gemma, these experiences somehow both manifest his situation in a post-lapsarian world but also offer a way out—and that through tactics not unlike those uncovered by Tessicini.

An additional surprise is in store as we turn to Concetta Pennuto’s essay on the peculiar understanding of a plague epidemic of 1574 in this divinatory framework. On the one hand, Gemma is revealed as fully conversant with the new ways of naturalizing plague that were recently highlighted in Samuel Cohn’s important *Cultures of Plague: Medical Thinking at the End of the Renaissance* (Oxford, 2010). But the connection with Cohn’s book can be seen to run even deeper when we consider Céard’s message that misfortunes of this kind were taken up by Gemma not only as a sign of the presence of sin but also as a specific challenge to political rulers to remedy the maladies of the social body. There is a resonance here between a theological discourse of misfortune and a politicization of epidemics that would amply repay further exploration.

From within this central trilogy of studies connecting the meaningfulness of events with Catholic theology on the one hand and a medicalized body on the other, a set of further connections expands. Thus we find Gemma’s medical discourse being situated within the humanist fetish of texts as remnants of a *prisca sapientia* (Hiro Hirai). A contribution by Germana Ernst compares Gemma’s teratological discourse on celestial oddities with those of Tycho Brahe and Tomasso Campanella, while the late Fernand Hallyn leaves us with yet another testament to his talent for allowing literary studies to interact convincingly with the history of Copernican cosmology.

The volume ends with two complementary studies on Gemma’s intimidating methodologi-

cal treatise *De arte cyclognomica* (1569). Stephen Clucas's contribution offers a useful exploration of the way in which this treatise is situated in the existing literature on the "history of method," while Thomas Leinkauf offers an in-depth exploration of its content, substantially furthering the analyses that have already been made by Martin Mülsow.

Cornelius Gemma: Cosmology, Medicine, and Natural Philosophy in Renaissance Louvain is a thoroughly enjoyable and thought-provoking collection of essays on one of the innumerable Renaissance voices that, all too often, still reach us only through the intermediary of Volumes 5 and 6 of Lynn Thorndike's *History of Magic and Experimental Science*. Hiro Hirai and his fellow contributors are to be congratulated and thanked for producing this wonderful exception.

STEVEN VANDEN BROECKE

Anna de Pace. *Niccolò Copernico e la fondazione del cosmo eliocentrico: Con testo, traduzione e commentario del Libro I de Le rivoluzioni celesti*. 450 pp., illus., bibl., index. Milan: Bruno Mondadori, 2009. €32 (paper).

Anna de Pace challenges every standard commentary on Copernicus's major works because they render his cosmology incoherent. The author claims that Copernicus mastered several Platonic and Neoplatonic texts thoroughly and relied on them to construct the foundations of a heliocentric cosmology. She cites many passages from *Timaeus*, *Republic*, and *Phaedo* and also some Neoplatonic texts to show how Copernicus must have relied on them for his physical theories. The second part of her study consists of a redaction of Copernicus's autograph copy of Book 1 of *De revolutionibus*, an Italian translation, and a commentary, produced with the collaboration of Maria Pizzigoni, that comprises roughly a hundred pages of footnotes.

The author frames her account of the Copernican revolution in terms of two opposing conceptions—Osiander's instrumentalist view of astronomical models supposedly consistent with Aristotelian strictures on mathematics and Copernicus's realist Platonic view. The dialectical structure of the analysis leads her to reject the views of commentators who have concluded that Copernicus adapted Aristotelian physics dialectically to the heliocentric theory.

In *Commentariolus* there is hardly a word devoted to explaining the motions of Earth

physically. Copernicus gave some attention to such issues in book 1 of *De revolutionibus*. His assertions, however suggestive, are sketchy and almost entirely concerned with Earth's axial rotation (1.8); from that argument he merely proposes that Earth's orbital motion would account for the observations better than a geocentric arrangement (1.9), but there is no physical explanation of planetary orbital motion. De Pace concedes (p. 205) that Copernicus did not work out Galileo's inertial conception. Galileo's version of inertia, however, also does not account for planetary orbits.

According to de Pace, Osiander's notorious letter misled not only early readers but also the major translators and commentators of subsequent centuries. One suspects early on that de Pace's rejection of any Aristotelian residues in Copernicus's theory will lead her to deny Copernicus's commitment to celestial spheres as the bearers and movers of the planets. And, indeed, that is the conclusion she draws. Spheres do not carry and move the planets, and the planets move in circular orbits around the Sun. Experts have disagreed about the *nature* and *properties* of the Copernican spheres, but they have all agreed that Copernicus retained them. I cannot rehearse all of the evidence here, so some examples will have to suffice.

De Pace tries to explain Copernicus's attribution and kinematic description of a third motion to Earth without resorting to celestial spheres, but without a physical mechanism or explanation such a suggestion makes no sense. She also ignores some important mathematical details. For example, Copernicus uses epicycles to account for the nonuniform motions of the superior planets in longitude and motions in latitude. If the planets really move in this way, then what moves them on epicycles if not spheres? Or are the models nothing more than instrumentalist mathematical devices? If the planets move in simple orbits, then why did Copernicus construct a separate latitude theory? These regrettable lapses in her account raise doubts about her grasp of the mathematical details, Tycho Brahe's rejection of spheres, Kepler's determination of the planetary orbits, and the relation between Newton's laws of motion and the inverse-square law.

While I agree with the standard judgment that Copernicus adapted Aristotelianism to heliocentrism, it is clear that he relied on non-Aristotelian and anti-Aristotelian sources to accomplish his adaptation. Subjecting his efforts to a judgment of coherence or incoher-