reform in the early years of the Reformation. Although he felt that Luther and the magisterial Reformers had made an important start in breaking with the institutional Catholic Church, Paracelsus, like many radical reformers, felt that they offered little improvement over the old order once they were in power. Although Webster emphasizes Paracelsus's independent stance on religious matters, he also demonstrates that Paracelsus was deeply conversant with contemporary debates among the radicals and tended towards a congregationalist and spiritualist form of piety. Indeed, Webster suggests, Paracelsus's views on the Lord's Supper and baptism aligned him closely (although not entirely) with the Anabaptists. Some may not be convinced that Anabaptism is the key to Paracelsus's theology, but Webster wisely stops short of trying to slot Paracelsus into a particular faction while nonetheless exploring possible lines of influence. Moreover, Webster underlines the sense of eschatological and apocalyptic urgency that Paracelsus shared with many of his contemporaries in the early sixteenth century, heightening his commitment to reform.

In exploring the religious, ethical, and medical dimensions of Paracelsus's mission and so carefully situating it in its social, intellectual, and religious context, Webster has skillfully integrated the multiple facets of this complicated figure. Moreover, he has normalized Paracelsus, dispelling his sensationalist image as a bizarre and unpleasant controversialist and giving purpose and context to his polemics, style of argument, and even manners. This learned, engaging, and comprehensive study will certainly remain the standard study of Paracelsus for some time, and deservedly so.

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Girolamo Fracastoro. *De Sympathia et Antipathia Rerum, Liber I.*
Studi e testi del Rinascimento Europeo 31. Istituto nazionale de studi sul rinascimento. Ed. and trans. Concetta Pennuto. Rome: Edizioni di Storia e Letteratura, 2008. cii + 362 pp. index. bibl. €58. ISBN: 978–88–8498–383–1.

Concetta Pennuto. *Simpatia, fantasia e contagio: Il pensiero medico e il pensiero filosofico de Girolamo Fracastoro.*
Centuria 5. Rome: Edizioni di Storia e Letteratura, 2008. xx + 526 pp. index. bibl. €55. ISBN: 978–88–8498–384–8.

Girolamo Fracastoro's *De sympathia et antipathia rerum* was first published in 1546 together with his *De contagione, contagiosis morbis et eorum curatione.* While the latter work develops what was taken by some of his contemporaries to be one of the first early modern atomist accounts of contagion, the former work outlines Fracastoro's account of a broad variety of seemingly miraculous interactions between natural bodies, such as the rising of water in lime, magnetic attraction, allergic reactions, and the hostility among animals of certain species. *De sympathia* is rightly famous as an important step toward a corpuscularian matter theory, since

it rejects explanations that invoke occult qualities, celestial influences, or spiritual magic, and in many cases offers explanations that invoke the motions of subtle particles moving within minute pores permeating natural bodies.

The 1546 edition of the text — the only one in whose production Fracastoro was actively involved — is hampered by a large number of printer's errors (some of which seriously affect meaning) and by a considerable number of grammatical errors on Fracastoro's part (some of which lead to quite nonsensical sentences). When the humanist Paolo Ramusio prepared the text for inclusion into the 1555 edition of Fracastoro's *Opera omnia*, he did what a good copyeditor should do: he corrected all of the obvious misprints and most of Fracastoro's own grammatical blunders. However, in copyediting the text he also frequently tried to improve Fracastoro's style. Since Fracastoro did not have occasion to authorize the revised version, one can never be sure that it exactly expresses what he had in mind.

In her critical edition, Concetta Pennuto follows a strategy that brings her as close as possible to what Fracastoro would have written in the 1546 version if he had been more attentive to typos and other mistakes. She adopts corrections of obvious printer's errors from the 1555 edition (and other later editions), and she accepts Ramusio's other changes to the text that concern genuine grammatical errors. By contrast, where the 1546 version has a grammatically possible, if inelegant, reading, she usually prefers that reading. In addition, she spotted and corrected a few more grammatical mistakes that eluded Ramusio's critical eye. All her editorial decisions seem highly plausible to me. I also found her translation very helpful since it is terminologically accurate and nicely conveys to the reader a sense of Fracastoro's crisp, if also at times quite opaque, style. In fact, at times her translation is considerably clearer than what Fracastoro had originally written.

The commentary included in the critical edition provides, in addition to a tight net of cross-references to other relevant passages in Fracastoro's writings and explanations of difficult terms, an extended collection of related passages from ancient, medieval, and early modern works to which Fracastoro refers explicitly or (most often) implicitly. Many of these passages are highly complex and in need of interpretation on their own. Interpretations of these passages and comments on how they are related to Fracastoro's text are given in *Simpatia, fantasia e contagio*. In this way, the commentary and the monograph complement each other. Pennuto's overall interpretive strategy can well be described as an attempt to contextualize every doctrine expressed in Fracastoro's text. Some of the relevant material is drawn from well-known sources in the Aristotelian and Galenic traditions. Much of the material, however, derives from little-known and hard-to-come-by sources. There are many striking textual connections brought to light by Pennuto that greatly contribute to understanding the often puzzling details of Fracastoro's text, either by way of parallels or by way of contrast.

Nevertheless, I have some objections in matters of interpretation. When Fracastoro does not invoke the action of particles moving within pores, he invokes the action of so-called "spiritual species," as in the case of magnetism. Pennuto suggests that his conception of "spiritual species" can best be understood as being

influenced by Ficino's account of sensible and intelligible species. This suggestion underlies her claim that there is a strand in Fracastoro's thought that is strongly neoplatonic — a strand, moreover, that she regards as being incompatible with the atomist tradition. Ficino holds that species are immaterial qualities caused by the objects that they represent by means of emanative causation. Pennuto has at least one strong argument for ascribing the same view to Fracastoro: According to Fracastoro, spiritual species are produced "in a moment." Since any mechanical interaction involves temporal extension, Pennuto argues, only emanative causation could account for the momentary production of species.

I find this argument interesting, but I am not yet convinced. With respect to the question of whether spiritual species are qualities and immaterial, Fracastoro answers that they are substantial and bound to matter, since "nothing can by itself confer motion which is not either a body or at least a nature and substance in a body" (34, lines 113–16). Thus, spiritual species are not qualities, but rather a different kind of dependent entities. In particular, they are "thin and superficial parts or degrees" produced by the forms of material objects (34, lines 132–33). Thus, they are surface-like entities. This is why they depend on matter: if they are surface-like entities, they must be surfaces of something that can have a surface, such as a material medium. Moreover, such surface-like entities can be propagated momentarily since, unlike three-dimensional objects, they do not meet resistance by three-dimensional objects. In fact, this is exactly the explanation that Fracastoro gives for the momentary production of spiritual species (34, lines 134–36).

No need, then, to assume that Fracastoro is committed to the existence of fully immaterial qualities produced by means of emanative causation. To be sure, he also rejects the existence of interstitial or separate voids and thus cannot accept the classical conception of perfectly hard, indivisible atoms floating in a vacuum. But research in past decades has made it clear that the prevailing conceptions of atoms in late medieval and early modern matter theories regarded atoms as internally complex entities not presupposing a vacuum. Obviously, surface-like entities are not corpuscles or, a fortiori, atoms themselves. Nevertheless, a less dominantly neoplatonic reading of Fracastoro's conception of spiritual species would render this conception compatible with a (modified) version of atomism.

Obviously, however, these objections single out some issues for further scholarly debate and do not detract anything from the interest of Pennuto's work. It is great to have, at last, an edition of Fracastoro's important text in which every sentence makes sense and, moreover, the sense that Fracastoro most plausibly had intended. Both Pennuto's commentary and her monograph will prove to be useful and stimulating resources for further research on Fracastoro's medical and philosophical thought.

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