age that took him through France, briefly to England and Scotland, and to the Netherlands, Germany, Austria, Poland, and, especially, the Prague of Rudolph II by 1605. The *Gesta Linceorum* recounts the academy's struggle to survive this difficult period as well as recording Heeck's preliminary efforts to establish connections between the academy and leading scholars and centers in Northern and Central Europe. It is the primary document of this volume.

Guardo's essay describes the emergence of the Lincean constitutions (1612) and the *Praescriptiones* (1624) in the wake of Cesi's unrealized ambition to publish the *Lynceographum*, written in 1603. The constitutions epitomized the *Lynceographum* in twenty-three propositions, reaffirming Cesi's authority as prince of the academy and describing the obligations of his academy brothers to their common enterprise. Correspondence, publication, intense fraternal loyalty, the creation of scholarly community, and an understandable desire to avoid political and theological controversy are among the highlights. Guardo compares the constitutions with the thirty-three published propositions of the *Praescriptiones* (1624), using the copy in the Vatican's Barberini collection, which includes a handwritten list of all members through 1625, among them the papal nephew Francesco Barberini. In this final work we see the second Lincean Academy, as its members defined their role under a new and favorable papacy, having ended the *Gesta* by scandalously (and correctly) predicting the untimely death of Leo XI in 1605. The *Praescriptiones* elaborates the Lincean intellectual agenda and editorial practices, describes the establishment of a library, and articulates the academy hierarchy. Barberini's presence in the list of members was in willful disregard of their stated desire to exclude all men in religious orders from the academy. By 1624 Heeck was no longer alive, his mental instability having doomed Cesi's sincere efforts to rehabilitate his friend's role in the academy. It is a pleasure to have, in *Cronache e statuti della Prima Accademia dei Lincei*, a carefully produced modern edition of these documents made widely available for researchers.

Paula Findlen

Francesco Crapanzano. *Koyré, Galileo e il "Vecchio Sogno" di Platone.* (Nuncius, 73.) xiii + 167 pp., bibl., index. Florence: Leo S. Olschki, 2015. €24 (paper).

Alexandre Koyré explored in scholarly detail the various ways that Galileo appealed to Plato, and in *Koyré, Galileo e il "Vecchio Sogno" di Platone* Francesco Crapanzano offers a comprehensive study of Koyré's penetrating and original analysis. Platonism in the seventeenth century was not a school but a movement, and the label "Platonist" was applied to a variety of writers who dissented from the prevalent Aristotelian approach. In the *Dialogue on the Two Chief World Systems*, when Salviati, Galileo's spokesman, asks what is the simplest and most harmonious geometry that can be devised, he meets with a rejoinder that expresses the common viewpoint of his opponents: "If I must tell you frankly how it looks to me," says Simplicio, "these appear to be some of those geometrical subtleties which Aristotle reprinted in Plato when he accused him of departing from sound philosophy by too much study of geometry." But if Galileo was anxious to link his speculation with the name of Plato, he never says that he simply rediscovered the Platonic cosmology. Rather, he wanted his readers to realize that he had gone beyond Plato by walking in the direction he had indicated.

There is another sense in which Galileo's idea of scientific knowledge was close to Plato, who claimed that the soul, before it entered the body, was directly acquainted with the forms upon which the world was designed. When the soul enters the body, all this knowledge is drowned in the flood of new sensations; but although it is forgotten, it is not destroyed. Galileo does not say that the soul existed before the body. But he does say that the human mind is attuned to nature, and he compares his role with that of Socrates, who, in the *Meno*, gets an unlettered slave boy to replace his erroneous opinion about how to construct a square twice the area of a given square with the correct opinion, merely by asking questions—by eliciting what the slave boy, without realizing it, already knows. In the First Day of the *Dialogue*, Salviati points out the shortcomings of Aristotle's proof that a body has three dimensions and draws Simplicio's attention to a better one "already known to you, though perhaps without you realizing it." Later in the same day, Salviati affirms that the speed of a body along the perpendicular of a triangle is equal to that of a body falling along the incline and that yet, in a sense, it is faster. When Sagredo and Simplicio protest that this sounds like a contradiction, Salviati replies, "I think you are poking fun at me, *pretending not to grasp what you understand better than I do*." In the Second Day, Salviati declares that he knows what the outcome of dropping a stone from the mast of a moving ship will be even before the experiment is performed. Turning to Simplicio, he adds: "Furthermore you yourself also know that it cannot happen otherwise; *even though you pretend—or give the impression of pretending—that you do not know*. But I am so handy at picking people's brains that I shall make you confess in spite of yourself. If only you will reply to my questions, I cannot fail."

The epistemological foundation of this technique is brought out by Sagredo: "If one does not know the truth by himself, it is impossible for anyone to make him know it. I can teach you things that are neither true nor false, but as for the true—that which is necessary, that which cannot be otherwise—every man of ordinary intelligence either *knows this by himself or it is impossible for him ever to know*." Intellectual midwifery is what is called for.

Galileo takes an impish delight in pursuing this kind of argument. His greatest triumph comes in the Third Day, when he thrusts a pencil into Simplicio's hand and has him trace out the paths of the planets as he remembers them: "For your satisfaction and enjoyment too, I want you to draw it yourself. *Although you think you do not understand it, you will see that you understand it perfectly*, and just by answering my questions you will describe it accurately." The result is a diagram of the Copernican universe!

There are many such "Platonic occurrences" in Galileo, and, in the light of Koyré's engagement with them, they are outlined in a scholarly fashion by Crapanzano, who shows how important and relevant they remain. In a sense, there exists between human intellect and nature a pre-established harmony that experiments can recall rather than produce. For this reason they can be no substitute for mathematical insight.

Flavia Marcacci

David Marshall Miller. *Representing Space in the Scientific Revolution*. xiii + 235 pp., figs., bibl., index. Cambridge: Cambridge University Press, 2014. £55 (cloth).

David Marshall Miller tackles a classic topic in the history of science, that of space in the period ranging from the sixteenth to the end of the seventeenth century. In his landmark studies, Alexandre Koyré already insisted on the fact that this revolution was due not only to the confutation of a certain set of theories, which were replaced by new ones, but to a change in "the very intellectual framework" (*Galileo Studies* [Harvester, 1978], p. 3). Miller also focuses on cosmology and mechanics, but he displaces the level of analysis from the conceptual to the representational. For him, what made the Scientific Revolution possible lies at a deeper level than that identified by Koyré. He thus intends to provide a new approach by concentrating not so much on the metaphysics as on the epistemology of space. This displacement involves an interpretative approach centered on physical theories and on the implicit representative framework they suppose, rather than on philosophical speculations bearing on the ontology of space. On this account, scientific theories convey descriptive spatial frameworks that coordinate explanations with phenomena. The main goal of the book consists in demonstrating that the period under study is characterized by a crucial shift in the scientific *representations* of space, from a circular, center-oriented, anisotropic space to a rectilinear, self-parallel, isotropic space.

Chapter 2 examines Copernicus's cosmology, which is placed in the lineage of Aristotelianism and its concern for uniform circular motion as the only possible physical cause of celestial bodies' motions. This is what led Copernicus to reject Ptolemy's equant model of planetary motion and to adopt the Sun as a new center of uniform rotation for celestial bodies, with the Earth remaining as another center attracting falling bodies. Within this centered spatial framework, Copernicus had to account for the constant incli-