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Gatti, Hilary (I-ROME)

★Giordano Bruno and Renaissance science. (English summary)

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Over the last three centuries, the many enigmatic facets of Giordano Bruno's writings together with the cruel fate of their author have called forth a number of divergent interpretations of his thought. John Toland took him as an exponent of his own radical pantheism; Leibniz was more interested in his discussions of the infinite, early 19th-century Romanticist Naturphilosophen in his vitalist cosmology; to late 19th-century anticlericalists his life and destiny exemplified free thought and ecclesiastical intolerance; Frances Yates, presenting him in 1964 as the prototype of a Renaissance magus, spurred widespread interest in the reading of Renaissance thought in a Hermetic and Neoplatonist key and influenced everything written on Bruno for decades. During the last twenty years, concomitantly with profounder and more open-minded readings of late Renaissance Aristotelianism(s) and of the various strands of the early scientific revolution, a gradual movement towards seeing Bruno in the context of a picture with more shades has made itself felt.

Hilary Gatti's book belongs in this latter context, but links the discussion to the whole tradition since Toland and Leibniz (anti-clericalism apart, which appears only sotto voce). She presents the mature Bruno as a philosopher whose main interest was that new science which was emerging, and that creation of a new (infinitist, atomist) cosmology which he saw as mandatory after Copernicus' abolition of geocentrism. With due respect for Yates' work, strong textual arguments are given that Bruno was interested in the actual world and rejected all Neoplatonic hierarchies of being; noteworthy is an analysis of *The explusion of the triumphant beast* and *The cabala of the Pegasean horse*, which shows these presumed Hermetic and Cabalist creeds to be satirical.

Gatti observes that Bruno's major works on the art of memory falls into two groups—an early cluster, and a very late text (*De imaginum . . . compositione*)—separated by works where mathematics comes to the fore; as others before her (she cites Rita Sturlese and Hegel), she sees this art not as a mnemonics but as a tool for grasping the universe. As she observes, mathematics becomes central for Bruno at the same time as Copernicanism, which thus seems to have asked for this new tool. However, Bruno's philosophical view of mathematics prevented it from becoming an adequate instrument, for which reason the late works return to the earlier "picture logic" of the ars memoriae in an attempt "to formulate an account of the processes of thought which is different from an abstract logic" in which "the primal chaos of impressions is reduced to order by principles innate to the mind" (p. 200).

As a reason for this failure of mathematics, Gatti points to Bruno's ontologically motivated rejection of trigonometry and of all attempts to square the circle—branches which, together with related infinitesimal endeavours, turned out to be pivotal when the new cosmology was mathematicized in the 17th century. The reviewer would suggest beyond this that Bruno, even when exploring the mathematical properties of his mathematical symbols (e.g., the continuous

circumscription of hexagonal stars around hexagonal stars in the "hall of Venus" of the *De triplici minimo*), tended to treat mathematical objects as emblems whose external symbolic functions are explored, and not as participants of mathematical structures that, as wholes, map similar structures in the real world. In this respect, Bruno's use of geometry is similar to what Kepler did in *Harmonices mundi* but not to that of his *Nova astronomia*, however much Bruno's cosmology shared with Kepler the rejection of the distinction between the sub- and the supra-lunar (that rejection which made Kepler characterize his astronomy as "new").

Gatti also explores other facets of Bruno's philosophical development—his reliance on Telesius, his critical adoption and transformation of Copernicanism, his particular use of the Pythagoras figure, his critical borrowings from Cusanus, etc.—as well as his interaction with and possibly important influence not only on Gilbert but on the whole Gilbert circle.

Repeatedly, Gatti links Bruno's epistemology to themes from 20th-century philosophy of science; in many cases, the reviewer had difficulty in following her on this account, seeing Bruno's philosophy rather as so open-ended that it may equally well be correlated with baroque theories of poetry as a way to describe the proteic function of the mind, with Leibniz' monadology, with Romanticist vitalism, and with Eddingtonian contemplations over the problems of quantum mechanics. But Gatti's suggested links never disturb the thread of the argument as concerned with Bruno himself. The book can be recommended to anybody interested in the preparatory phase of the scientific revolution, in particular to those who want to get beyond the simple dichotomy between generic "Hermeticism" and undifferentiated "experimental philosophy".

Reviewed by *Jens Høyrup*