

## ÉTUDE CRITIQUE

Francesca Guadalupe MASI and Stefano MASO (eds), *Epicurus on Eidola. Peri phuseos Book II. Update, Proposals, and Discussions*, Amsterdam, Hakkert, 2015.

First, I express my highest regard for Leone's magisterial edition of Epicurus' book 2 of *On Nature* (*Epicuro. Sulla Natura libro II*, Napoli, Bibliopolis, 2012), which prompted this collection of essays. The essays are a fitting tribute to the excellence of Leone's edition. One might well wonder why the edition is so large (711 pages), considering the relatively small amount of text. Leone's introduction and commentary, however, are exceptionally useful; the material is very well researched, as well as pertinent, and Leone's judgment is admirably lucid and judicious. The essays are clearly inspired by Leone's brilliance as both an editor and a commentator.

In this review, I shall give more attention to some of the essays than others, on the basis of my own interests and familiarity with the material. All, however, deserve attention as making a considerable contribution of their own. In addition to the essays, the volume contains an appendix, prepared by Leone, which combines the readings of the two papyri (1149/993 and 1783/1691/1010) for cols. 101-120 in a single « virtual » text.

Both Leone's edition and the collection of essays underscore how important the theory of *eidola* was in Epicurus' physics. It is easy to forget the emphasis that Epicurus placed on them. In the *Letter to Herodotus*, Epicurus turns to the topic of *eidola* immediately after a series of brief deductions on the basic principles of atomism, ending with the infinity of worlds (38-45). Then there are several long sections devoted primarily to *eidola* and their relationship to the truth (46-52). The emphasis on *eidola* is especially striking if one accepts

Leone's argument (p. 45-53 of her edition) that almost the whole of book 2 of Epicurus' *On nature* was devoted to *eidola*. As she argues, the first seven columns of book 2 deal with infinite worlds, and all the topics treated previously in the *Letter to Herodotus* were confined to book 1. One of the most important discoveries made by Leone is that the first columns of Book 2 do indeed concern infinite worlds; no one had deciphered the occurrence of infinite worlds in these columns before. Her discovery lends support to Sedley's proposal that Epicurus followed roughly the same order of exposition in *On Nature* as in the *Letter to Herodotus*.

Part of Epicurus' emphasis on *eidola* has to do with their epistemological function: they convey knowledge of the external world to ourselves. It is also important to recognize their ontological importance: there is a vast intermediate territory of atomic configurations – a huge kind of shadow world – intervening between perceptible aggregates, including entire world systems. This invisible domain is highly structured, containing not just singly moving atoms, but finely textured configurations of all kinds, varying greatly in duration. It is tempting to suppose that there is a place among these configurations for the finely constituted divinities that are said to exist everlastingly in the interspaces of between worlds (although this is a point of contention among scholars).

The collection of essays begins with two keynote (as it were) articles. The eminent papyrologist Tiziano Dorandi takes the lead by offering an expert analysis of the overlapping papyri that belong to books 2, 11 and 25 of *On Nature* (in « Libri dell'opera 'Sulla Natura' di Epicuro in più esemplari »). Giuliana Leone follows with « Nuovi spunti di riflessione sulla dottrina epicurea degli εἶδωλα dalla rilettura del II libro 'Sulla natura' ». Here, Leone offers a succinct review of the main contributions made by her new edition. As she shows, book 2 of *On Nature* adds new information and clarity to a number of innovations made by Epicurus concerning the theory of *eidola*. Three terms are especially important: ἀλληλουχία, τρόπος ἐξωστικός, and συνίξεις. Each occurs repeatedly in book 2, and each occurs only here in connection with *eidola* in Epicurus' extant writings. As stated in col. 102.21-23 (τὴν ἀλληλουχίαν τοῦ

ἐξωπάτου χιτώνος), the « cohesion » applies to the « outermost tunic ». In her edition, Leone argued in detail that this cohesion, together with the « method of pushing out » (construed as a propulsive power), serves to explain why the *eidola* can preserve, for the most part, their correspondence to the solid from which they come, thus supporting a theory of objectivity in place of Democritean subjectivity. Leone also proposes (see esp. p. 150-1 of her edition) that συνίησις, internal collapse or contraction, occurs only after the *eidola* have struck certain kinds of solid, such as a wall.

Leone gives new reasons to view Epicurus as an innovative thinker, concerned to defend atomism as an objectively valid theory. What makes it valid is, ultimately, the correspondence of *eidola* and other perceptual streams to the solids from which they come. Her arguments are solidly based; and I agree in large part with them. I would like to mention just one reservation. Leone assigns a propulsive (ἐξωστικός) power to the *eidola*: this power, she proposes, inheres in the *eidola* themselves, just as it does in winds, and was not imparted to them originally by the collision of atoms deep within the solid (p. 153-8 and p. 638-42 of her edition). I grant that the *eidola* do have a propulsive power, which allows them to push air, for example, out of their way; but I do not see how they acquire this power other than by their expulsion from the solids from which they come (as indicated at *Letter to Herodotus* 50). They have this power as a continuous stream, released continuously from the solid. The same kind of explanation applies to winds: they have a propulsive power that is imparted to them by other movements, such as shifts of hot and cold, next to them.

In « I primi Atomisti nel II libro ‘Sulla Natura’ di Epicuro », Pierre-Marie Morel focuses on the implicit presence of the first atomists in the second book of *On Nature*. The precision of his analysis lends support to Leone’s view of Epicurus as a thinker who is much concerned with responding to his predecessors. Likewise, Aurora Corti (in « Ὀμοιοσχίμων ε ὁμοιόμορφος. Alcune riflessioni sulle proprietà degli εἶδωλα nella dottrina di Epicuro ») gathers new evidence in support of Leone’s distinction between ὁμοιοσχίμων, as referring to the inner structure of a body, and ὁμοιόμορφος, as referring to the outer

appearance. Francesco Verde (in « 'Kepos' e 'Peripatos' a partire dal II libro 'Sulla natura' di Epicuro: la testimonianza di Macrobio ») draws attention to Macrobius as a source for Epicurus' theory of the *eidola*, in particular, his claim that they contain much empty space. It occurs to me that Macrobius might also use the term « empty » polemically so as to signify the unsubstantial nature of *eidola* as being « empty » of the reality they seem to show, like dreams or hallucinations.

Stefano Maso (in « Images and Truth ») offers an incisive analysis of the process of perception. He distinguishes between two variables (p. 76-8): the outside transmission of the *eidola*; and an inner movement of the mind, said to be something « attached to the act of attending to the presentation » (συνημμένον... (τῇ φανταστικῇ ἐπιβολῇ) at *Letter to Herodotus* 51). The inner movement is also said to be something we take up « within ourselves ». Maso further divides this inner movement into three stages (p. 79): « possible interference caused by the inner movement in the mind »; a final φαντασία; and belief. One may object, however, that Epicurus clearly identifies the inner movement of the mind with the act of belief, so that it consists of just a single stage (that is, the last stage in Maso's analysis). The physical constitution of the mind may indeed disturb the arrangement of the *eidola* that enter it; but this is not part of the inner movement that Epicurus says we add « within ourselves ». On this view, the *eidola* admit of disturbance both outside and within the sense organ or mind; the result is a φαντασία. Then, after an act of φανταστικῇ ἐπιβολῇ, the mind adds (« attaches ») a belief, which admits of being true or false.

In « Dagli occhi alla mente: il cammino tortuoso degli εἶδωλα », Francesca Guadalupe Masi tackles a thorny problem: how does the mind receive information from a sense organ, in particular the eyes? Relying on Leone's new readings and conclusions concerning ἀλληλουχία and συνίξεις, Guadalupe Masi proposes that, after entering the eyes, the *eidola* undergo a collapse as a result of the larger atoms being blocked from proceeding further; thereupon the *eidola* travel to the mind in a contracted, finer configuration. This is an attractive, well argued suggestion. It is important, as the author recognizes, that the altered *eidola* should « cohere » throughout their journey, so as to

retain their correspondence to the external solid; I wonder, though, how plausible this is.

In « Minima and the speed of the images in Epicurus », David Konstan offers another intriguing proposal. It goes to the heart of atomic physics. The term ἀπερίληπτον has generally been taken to designate an incomprehensibly large, though finite, quantity; that is, it designates a quantity between a determinate finite quantity, with fixed boundaries, and infinity. Konstan proposes to supplement this type of quantity with what he says is loosely its « inverse »: the « incomprehensibly large... corresponds on the macro-level to the minimum on the micro-level ». That is, « just as there is a progression upward from the finite to the incomprehensibly large to the infinite, so too there is a progression downward from the finite to the minimum (or, as we might express it, incomprehensibly small) to zero » (p. 138).

Konstan's boldly innovative analysis offers new illumination, as well as raises questions. Difficulties are inevitable, considering that Epicurus offered a highly idiosyncratic response (as far as we can tell from our sources) to highly perplexing problems of infinity. One question I have is this: how well does the minimum correspond to the incomprehensibly large in Konstan's two progressions? What one would expect as the correlate (or « inverse ») of the incomprehensibly large is the incomprehensibly small, both of them understood as a range that has extension but whose boundaries cannot be determined. The minimum does not fit this description: it is itself a boundary, having no extension in itself, but contributing extension to the whole of which it is a part. There is, moreover, a perfectly good candidate for the incomprehensibly small: the time that it takes an individual atom to move over any determinate (περίληπτόν) length of empty space. This time is said to « incomprehensible in thought » (ἀπερινόητον, *Letter to Herodotus* 46). It has extension as something very, very tiny, whose boundaries cannot be determined.

I suggest, therefore, a revision of Konstan's proposal. The « inverse » of the incomprehensibly large is the incomprehensibly small, not the minimum. Both have extension, and what makes them « incomprehensible », ἀπερίληπτα, is that they are respectively too large and too small to have definite boundaries assigned to them. One

might call their boundaries « fuzzy » in the sense they make up a range (a kind of borderland) of indefinite size. They are bounded in either direction by a minimum, but the place of this minimum, or edge, cannot be determined. In other words, there is indeed, as Konstan suggests, a progression to infinity or zero, but one cannot determine where the progression stops. In contrast to Konstan's proposal, the minimum has a place in both progressions. This, I suggest, is a response to Aristotle's analysis of the infinite as that of which there is always more (*Physics* III 6). Epicurus replies: there is a stop, but where it occurs cannot be determined.

If this is right, there are two progressions: upward to the incomprehensibly large and downward to the incomprehensibly small; and the minimum puts a stop to both progressions. Consequently, there is no reason why an atom cannot have 10, or 100, or even a billion minimal parts, so long as it does not have an infinite number (since this would make it infinitely large). What cannot be done is to fix boundaries either within or around this range; nor can we know just how far to place the range from zero or from infinity. What we can infer from the theory of *eidola* is that there must be a huge range of atomic sizes. How else could the mind, which is a network of very fine atoms, have available to it, at any moment, an immense number of very different *eidola*, to fix on at will?

The final article in the collection is Dino De Sanctis' « Strategie della comunicazione di Epicuro nell'epilogo delle sue opera ». De Sanctis draws attention to the way in which Epicurus summarizes the contents of his books of *On Nature*. This study throws light, as I see it, on the way Lucretius so carefully plots out the content of his poem by both introductory tables of content and concluding summaries.

In sum, this an excellent collection of essays, all carefully researched and all making new contributions to Epicurus' theory of *eidola*. Giuliana Leone deserves extra congratulations for providing the impetus for such a fine collection.

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