

THE METHOD OF MULTIPLE EXPLANATIONS IN EPICUREANISM

I intend to examine an original and important feature of Epicurean science, namely the method of multiple explanations. The Epicureans claim that, in certain contexts, several alternative explanatory hypotheses may be advanced which may prove to be equally consistent with the phenomena within the orbit of our direct experience. The Epicureans contend that, in such cases, we should accept all of these hypotheses not merely as possible but also as true. At first glance, the method of multiple explanations seems intriguing or implausible. Moreover, some interpreters declare it to be anti-scientific: allegedly, the Epicureans are ready to accept different competing explanations, simply because they consider it ethically or pragmatically useful to do so. Other interpreters, however, argue that the method of multiple explanations has a physical and metaphysical basis involving possible worlds. My aim is to revisit and reassess the method of multiple explanations in the light of new evidence, notably from Epicurus' multi-volume work *On Nature*, and also taking into consideration recent scholarly studies on Epicurus, Lucretius, and Diogenes of Oinoanda.

Voula Tsouna
Philosophy Department
University of California
Santa Barbara

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T1 Epicurus, *Letter to Pythocles* 94

The wanings of the moon and its subsequent waxings may be explained in all the ways in which phenomena on earth invite us to such explanations of these phases, if only one does not fall in love with the method of a single explanation (μοναχῆ τρόπος) and groundlessly disapproves of others, without having considered what it is possible for a human being to observe and what it is not and, for this reason, desirous of observing things that cannot be observed’.

T2 Epicurus, *On Nature* XI Ia11-19 (text and translation by Sedley, with slight modifications)

The sun, if we walk towards the place from which it appeared to us] to rise, directing ourselves up into the mainland zone, appears to us to set where we previously passed by, sometimes even when we have moved in all only a short distance. And this time we cannot blame it on the latitudinal movements. Why after all should you declare the measurement from here, or the one from here, or the one from here, or this one a more reliable guide of the risings and settings (of the sun)?’

T3 Epicurus, *On Nature* XI IIa1 - 21

They cannot hope] to form a [mental] model ([ὁ]μοίωμα) and to reason out (συλλογίζεσθαι) anything about these matters. For it seems to me that when they spend their time contriving some of them (I means their [ὄρ]γανα, instruments) and fooling around with others, it is no wonder, in view not only of the enslavements brought upon them by their doctrines but also (as far as concerns the appearances of the sun) of the indeterminacies (ἀοριστείας) of risings and settings, that they cannot form an adequate mental model by means of their instruments which produce no regularity. But their instruments are ...

T4 Epicurus, *On Nature* XI IIIa1-21 + III b5-12

All that this] leaves is a pretence and a diehard dogma that the indications on the instrument create an analogy (ἀναλογία) that corresponds with what we see in the heavens (τοῖς κατὰ τὰ μετέωρα φαινομένοις). For our friend must, it seems to me, make the distinction: a) that when he argues about the cosmos and what we see in the cosmos he is arguing about a certain image (περὶ φάσμα[τό]ς τινος) arising from certain accidental properties of things (ἐκ [συμπ]τω[μ]άτων τινῶν) passed through the medium of vision into a thought-process or into a memory-process

permanently preserved by the mind itself ... [But b) that when he argues about the indications on his instrument he is arguing about the intrinsic properties of an object]

T5 Epicurus, *Letter to Pythocles* 85-86

First of all we must not suppose that any other object is to be gained from the knowledge of the phenomena of the sky, whether they are considered independently or in connection with other doctrines, than tranquillity and firm belief, just as it happens in all other branches of study. We must not try to force an impossible explanation, nor must we have with regard to every subject the same theoretical approach (θεωρία), namely the one concerning the modes of life or the solution of the other physical problems - for instance that the universe consists of bodies and the intangible, or that the elements are indivisible, and all such claims that we make where there is only one explanation in accordance with the phenomena. This does not hold in the case of the *meteōra*. Rather, these events have both multiple causes of generation (πλεοναχὴν αἰτίαν) and multiple accounts of their nature that accord with sensation. For we mustn't conduct our physical enquiries on the basis of groundless assumptions and arbitrary principles, but as the phenomena invite us to do.

T6 Epicurus, *Letter to Pythocles* 87-88

Our mode of life has now no place for irrational thinking and empty belief; rather, we should live peacefully and without disturbance. And indeed everything happens without causing any disturbance in so far as it concerns all these events that are explained in accordance with the method of multiple explanations (κατὰ πλεοναχὸν τρόπον) and in agreement with the phenomena, when one accepts what is plausibly said about them (πιθανολογούμενον) as one ought to do. But when a person retains one explanation but rejects another although it is equally in agreement with the phenomena, it is evident that he abandons completely scientific research and recurs to the realm of myth. We can obtain signs (σημεῖα) of what happens in the *meteōra* from some of the phenomena close to us (τῶν παρ' ἡμῶν) for we can observe how they occur, whereas we cannot observe how the phenomena in the *meteōra* occur; for there are several possible ways in which they may have been generated (ἐνδέχεσθαι πλεοναχῶς γενέσθαι). Nevertheless, we must retain in our mind the appearance (φάντασμα) of each and, moreover, regarding what is associated with it, we must distinguish those things whose coming-into-being in several different ways is not contested (οὐκ ἀντιμαρτυρεῖται) by the phenomena generated close to us.

T7 Epicurus, *Letter to Herodotus* 78-80

We must believe that to discover accurately the cause of the most important things is the function of the science of nature, and that blessedness for us in the knowledge of the *meteōra* lies in this and in the understanding of the nature of certain things that are seen in relation to these *meteōra*, and of everything else relevant to the precise knowledge necessary for our happiness. (Blessedness also lies) in knowing that what occurs in several ways or is capable of being otherwise has no place here (sc. in the realm of what is eternal and divine), and that nothing which incites doubt or disturbance can have any part in what is naturally incorruptible and blessed. We can ascertain by our mind that this is so without qualification. On the other hand,

what falls in the traditional investigation (ἐν τῇ ἱστορίᾳ) of risings and settings, turnings and eclipses and everything akin to these does not contribute any further to the knowledge securing happiness. People who have spent their time observing these things but ignore what are the true natures of these things and what are their principal causes are still in the grip of fear, just as if they did not know these things at all. Indeed, their fear may be even greater, since the wonder (θάμβος) that arises out of the observation of the *meteōra* cannot discover the solution to those questions or acquire and manage (οἰκονομίαν) the most important truths. For this very reason, even if we discover several causes for turnings and setting and risings and eclipses and other such phenomena, as has already happened in our enquiry of particular phenomena (κατὰ μέρος), we must not suppose that our investigation into these things has not reached sufficient accuracy and precision (ἀκρίβεια) to contribute to our tranquillity and happiness.

T8 Epicurus, *Letter to Herodotus* 80

Thus, when we reason about the causes of the *meteōra* and all non-evident things, we must carefully consider in how many ways a similar phenomenon is generated in our direct experience (παρ' ἡμῖν). And we must be contemptuous of those people who do not recognise either what has only one cause and comes about in one way only, *or* what comes to pass in many ways in the case of events whose appearance (φαντασίαν) we see from great distance and, moreover, are ignorant of the conditions in which it is impossible to attain peace of mind. So, if we believe *both* that a phenomenon occurs in some such way *and* circumstances permit that we preserve our tranquillity *while knowing* that the phenomenon can be generated in many ways, we shall be disturbed just as little as we would be if we knew that the phenomenon came to pass *in some particular way* (i.e. if we knew a single cause responsible for the generation of the phenomenon: my emphasis).

T9 Lucretius, *DRN* 6.48-67 (translation by Rouse and Smith, slightly modified)

I shall now explain how furious storms of winds arise and how they are calmed so that all is once more what it was, changed and with its fury appeased, and all else that men see happening in earth and sky, when they are often held in suspense with frightened mind - events that abase their spirits through the fear of the gods, keeping them crushed to the earth because their ignorance of causes compels them to attribute events to the power of the gods and yield to them the place of kings ... For if those who have been taught correctly that the gods have a carefree life still wonder all the while how things can go on, especially those phenomena which are perceived above us in the ethereal regions, they revert again to the old superstitions and take to themselves cruel masters whom these miserable men believe to be omnipotent, ignorant as they are of what can be and what cannot, in a word how the power of each thing has been limited and its boundary firmly fixed; so they are all the more driven astray by blind reasoning.

T 10 Lucretius, *DRN* 5.526-533

Which of these causes holds in our world it is difficult to say for certain. But what may be done and is done through the whole universe in the various worlds made in various ways, that is what I teach, proceeding to set forth several causes which may account for the movements of the stars throughout the whole universe; one of which however must be that which gives force to the

movement of the signs in our world also. For which may be the true one is not his to lay down who proceeds step by step.

T 11 Lucretius, *DRN* 6.703-11

There are a number of things for which it is not enough to name one cause but many, one of which is however the true cause - just as, should you yourself see a man's body lying lifeless at a distance, you may perhaps think proper to name all the causes of death in order that the one true cause of the man's death may be named. For you could not prove that steel or cold had been the death of him, or disease, or it may be poison, but we know that what has happened to him is something of this sort. Even so in many cases we have the like to say.

T 12 Diogenes, fr. 4 II.1-9 Smith

...[as is supposed by some of the philosophers and especially the Socratics. They say that pursuing natural science and busying oneself with investigation of the [*meteôra*] is superfluous and unprofitable, and they do [not even] deign to [concern themselves with such matters].

T 13 Diogenes, NF 182 Hammerstaedt and Smith

(fr. 20 II.11) 'If therefore the divine nature shall be deemed to have created things for its own sake, (fr. 20 III + NF 182 I) (there result) all these absurdities; and if for the sake of humans, there are yet other more absurd consequences. Let us divide the discussion into two (the world and humans themselves), and first let us speak about the world (and ask) whether it has all things well arranged for humans and (whether) we have nothing on which to fault them, as they have been prepared by a god. But first let mention be made of the (NF 182 II) occurrences in the *meteôra*. Let anyone say in what ways a thunderbolt benefits life (how does it not even harm?), in what way flashes of lightening do and in what way claps of thunder, in what way fall of hail, in what way blasts and gusts of violent winds, in what way the irregular orbits of the stars and their differing sizes, in what way eclipses of the sun and the moon <and> their spiral-shaped and oblique courses, in what way night, (NF 182 III) when we can [as well rest throughout the] day, in what way the alternating [lengths] of days [and] nights? For of these phenomena some are useless, others even harmful. The *meteôra* do have that character. [But of what kind are matters on earth?] How much of Libya is uninhabitable? How much of the land beyond the Skythians, [how much] of the [region] beyond Asia, how much of India? How many other ... ?'

T 14 Diogenes, fr. 13 I.1 - II.12 Smith

The heavenly bodies, when the whirls of air] cause [such strong motions], are all [violently] tossed about, but some crash into one another while others do not; some pursue a straight course up to a certain point, others, for instance the sun and the moon, an oblique one, and others, like the Bear, revolve in the same place; again, some move in a high orbit, but others in a low one. Also, here is a fact that most people are ignorant about: they suppose the sun to be as low as it appears to be, whereas it is not as low; for if it were so, the earth and everything on it would necessarily be set ablaze. So, it is its image (*apophasin*) which we see low, not the sun itself. But this is a digression.

T 15 Diogenes, fr. 13 II.12 - III.13

Let us now discuss risings and settings and related matters after making this preliminary point: if one is investigating things that are not directly perceptible, and if one sees that several explanations are possible, it is reckless to make a dogmatic pronouncement concerning any single one; such a procedure is characteristic of a seer rather than a wise man. It is correct, however, to say that, while all explanations are possible, this one is more plausible (πιθανώτερον) than that.