

Episode 243 Cicero's OTNOTG 18 - From "All Sensations Are True" to Reasoning By Similarity And Analogy

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Four Points From Sedley Article: "Epicurean Theories Of Knowledge"

(Posting these following excerpts (quotes except for the headings) mainly as a summary of points we may want to include in Episode 243 before proceeding with more text).

Note:

During the 260s BC Arcesilaus succeeded to the headship of the Academy, and under his influence the formerly doctrinal Platonist school veered away from dogma, instead adopting towards rival schools an essentially critical, dialectical stance. It seems to have been during that early phase of the sceptical New Academy that Colotes, who had been an intimate of Epicurus, wrote his treatise entitled *The impossibility of life itself according to other philosophers* (meaning, of course, other than Epicurus), about whose content we learn from Plutarch's polemical counterblast in his own *Against Colotes*. None of Colotes' chosen targets – Democritus, Parmenides, Empedocles, Socrates, Melissus, Plato, Stilpo, the Cyrenaics and Arcesilaus – were criticised for their ethical positions, as one might have predicted, but entirely for the support that their epistemology and metaphysics allegedly lent to scepticism, and specifically, to scepticism about human cognitive access to physical reality. 7 The last target attacked by Colotes, though anonymous, is unerringly recognized by Plutarch as the New Academy of Arcesilaus, presented as advocating universal suspension of judgement (ἐποχή). Yet, intriguingly, there is reason to think that the treatise was composed, not in the vicinity of the Athenian Academy, but in Alexandria. This much is suggested by its opening dedication to Ptolemy II (Plutarch., *Adv. Col.*, 1107E), and by a flattering peroration in which the Alexandrian king was warned against the dangers to law and order posed by the ruinous non-Epicurean philosophies listed (1124C). We should infer that the felt need for Epicureans to counterattack Academic scepticism was not just an Athenian preoccupation but was spreading to the courts of major Hellenized cultural centres, where the patronage of the local dynasty might well be hotly competed for.

Point 1 - Ontological Arguments Are Not Determinative

Text: Or do you think, on the basis of the foregoing argument, that someone would not suffer the troubles which I mention but rather would make it convincing that fair, foul and all other matters of belief are falsely believed in, just because unlike gold and similar things they are not the same everywhere? After all, it must stare everybody in the face that bigger and smaller are also not perceived the same everywhere and in relation to all magnitudes [...] So too with heavier and lighter. And the same applies also to other powers, without exception. For neither are the same things healthy for everybody, nor nourishing or fatal, nor the opposites of these, but the very same things are healthy and nourishing for some yet have the opposite effect on others. Therefore either they must say that these too are false – things whose effects are plain for everyone to see – or else they must refuse to brazen it out and to battle against what is evident, and not abolish fair and foul as falsely believed in either, just because unlike stone and gold they are not the same for everybody [...] Relative predicates do not have the same status as things said not relatively but in accordance with something's own nature. Nor does the one kind truly exist but the other not. So to expect them to have the same attributes, or the one kind to exist but the other not, is naive. And there is no difference between starting from these and eliminating those and starting from those and eliminating these: it would be similarly naive to think that since the bigger and heavier and whiter and sweeter are bigger than one thing but smaller than another, and heavier, and likewise with the other attributes, and since nothing has the same one of these attributes per se as it has in relation to something else, in the same way stone, gold and the like ought also, if they truly existed, likewise to be gold in relation to one person while having the opposite nature in relation to another; and to say that, since that is not the case, these things are falsely believed in and do not really exist (On irrational contempt, XXIII, 26- XXVI, 23). 9

1. The opponents can be seen to draw heavily on Platonic dialectical materials in order to launch their attack on the reality of values, in particular in their contrast between the universally agreed determinate nature exhibited by minerals and the cultural relativity of values. As one might expect of the New Academy, this sceptical argument borrows its materials freely from the text of Plato (Phaedrus, 263a, cf. also Euthyphro, 7b-d, Theaetetus, 172b). More remarkable is how Polystratus, in his reply, appears himself to draw inspiration from Plato – a strategy with all the more ad hominem force when directed against Plato's own self-declared successors. Plato had indeed never intended by this contrast between minerals and values to impugn the reality of the latter, any more than he had meant to infer from the relativity of large(r) and small(er) to their unreality. On the contrary, at Sophist 255c he had presented an exhaustive division of beings (ὄντα) into absolute and relative, a bicategorical scheme which became formal Academic doctrine under his second successor Xenocrates (F15 Isnardi Parente 2). Much the same stance as Plato's own is developed by Polystratus as a rebuttal of the contemporary Academy. He resourcefully points out that the mere existence of an ontological difference between the two categories does not entail that one or other of them will fall short of reality. Anyone who thinks otherwise, he ingeniously adds, could as easily argue that, since such relative predicates as beneficial and harmful manifestly are part of the structure of reality, it must be the non-relative items such as minerals that are unreal!

Point 2 - "Seeing Double" Does Not Constitute Proof of the Falseness of Sensation

A further attempted innovation likely to have been motivated by the challenge of Academic scepticism is attributable to the Rhodian Epicurean Timasagoras. We have already encountered one of his two recorded innovations to the school's doctrine of vision. The other, noted by Cicero (Lucullus, 80) in his defence of the New Academy's scepticism, concerns the case of seeing double. To judge from the Ciceronian context, the debate ran more or less as follows.

1. Epicurus insists on the truth of all sense-perceptions. If a single case of a false sense-perception were found, trust in the senses would collapse. But in fact the eye simply registers with unflinching accuracy the visual data reaching it. In all alleged cases of optical illusion the error lies in the mind's misinterpretation or over-interpretation of those visual data.
2. Critics from the New Academy respond with the counterexample of an eye squeezed out of shape and as a result falsely seeing the single flame in a lamp as two flames. Here what appear to the eye are the visual data, but not in the form in which they first reached it. How can the Epicureans say that the appearance is 'true', when it is not even true to those visual data?
3. Timasagoras replies on behalf of the Epicureans that never, when he has squeezed his eye while looking at a lamp, have there appeared to him to be two flames. This supports the Epicurean thesis that falsehood is always located in the added opinion, not in the eyes themselves.

In stage (3), does Timasagoras mean (a) that in the situation described the bare visual appearance has never even momentarily looked to him like two flames? Or (b) that he has never been misled into thinking that there actually were two flames? Cicero seems to understand the latter. But on either understanding Timasagoras' reply would be meant to disqualify the Academic example from counting as a genuine optical illusion at all, and thereby to block it from being used as the single counterexample that Epicurus in stage (1) conceded would suffice to destroy his most fundamental epistemological doctrine.

Point 3 - The "Fourth" Criterion Of Truth (the "power of intellectual vision" may be important but does it constitute a criteria of truth?)

The first three criteria listed in this passage – sense-perceptions (aistheseis), preconceptions (prolepseis) and feelings (pathe) – are commonplace both in Epicurus' own writings and in those of subsequent Epicurean generations. Curiously, however, the fourth item listed, phantastikai epibolai tes dianois, is likewise at least twice appealed to by Epicurus (Hrdt., 38, RS, XXIV) as if it were another of his criteria of truth. We may therefore take the school's reported innovation to consist in nothing more than making its criterial status explicit. It is

unknown why Epicurus did not himself formally do so in the Kanon, his now lost work on the criteria of truth. It was a work of (in at least two senses!) canonical status, upon which the school reverentially bestowed the extravagant-sounding epithet 'heaven-sent' (Cic., ND, I, 43, Plutarch., Adv. Col., 1118A). Hence, it seems, even a small departure from it had to be acknowledged and, no doubt, justified.

Be that as it may, it seems that one credible motive for the elevation of phantastikai epibolaites dianoias to official criterial status by Epicurus' followers was that the expression was felt by them to capture, better than any other, the nature of Epicurus' own greatest cognitive gift to mankind. As Cicero's Epicurean spokesman Velleius explains, Epicurus' godlike superiority lay above all in his powers of intellectual vision:

For the same man who taught us everything else taught us also that the world was made by nature without the need for craftsmanship, and that this thing which you call impossible without divine creativity is in fact so easy that nature will make, is making and has made infinitely many worlds. Just because you [the Stoic Balbus] do not see how nature can do this without a mind, unable to develop your plot's dénouement you copy the tragic poets and resort to a god. You would not be demanding this god's handiwork if you saw the measureless magnitude of space, endless in all directions, into which the mind, projecting and concentrating itself (in quam se iniciens animus et intendens), travels far and wide, seeing as a result no boundary of its extremities at which it could call a halt. In this measureless stretch of widths, lengths and heights there flies an infinite mass of countless atoms, which despite the presence of void between them stick together and by taking hold of each other form a continuous whole. And from these are made those shapes and formations of things which you think are impossible without bellows and anvil. With this thought you have placed as a yoke upon our necks a permanent overlord, for us to fear day and night [...] Freed from these terrors by Epicurus, and delivered into freedom, we do not fear those whom we understand neither to bring trouble upon themselves nor to try and make trouble for others, and with holy reverence we worship their supremely fine nature (ND, I, 53-54, 56).

Velleius thus brings out what Epicureans can achieve for themselves if they follow Epicurus on his odyssey of the mind, and thus come to appreciate the inevitability that mere atomic accident, operating as it must do on an infinite scale, will produce worlds like our own, without the need for divine craftsmanship. That in its turn requires them to see, by mental projection, what the universe's infinity really means.

Point 4 - Sign-Inferences (Whenever Signs Are Indeed Useful, It Is Because Their Truth Is Established By The Senses)

Arguably the most important contribution to the history of philosophy to emerge from the wreckage of Philodemus' library is to be found in his own treatise On sign-inferences. 15 Seemingly intended for school use rather than for publication, it is his record of an otherwise

quite unknown debate about scientific method that is likely to have taken place around the beginning of the 1st century BC, in Athens. In it Philodemus summarizes (down to XXVII, 28), both from his own lecture notes and from those of his fellow-student Bromius, how their teacher Zeno of Sidon, and likewise the eminent contemporary Epicurean Demetrius of Laconia (XXVIII, 13- XXIX, 16), had defended their own shared theory of scientific inference against opponents who denied its validity. This favoured Epicurean method is the 'similarity method' (ὁ καθ' ὁμοιότητα τρόπος), while the opponents advocate instead the deductive 'elimination method' (ὁ κατ' ἀνασκευὴν τρόπος, or just ἀνασκευή, 'elimination', for short). These opponents are almost certainly Stoics. If in the early years of the first century BCE it is the epistemological challenge posed by another doctrinal school, rather than the rapidly weakening scepticism of the New Academy, 16 that now occupies the Epicureans' main attention, that is very much a sign of the times.

The similarity method is itself subdivided into two species. The first is based on direct similarity, as is well exemplified (though not exhausted) by inductive inference, the standard example being inference from the exceptionless mortality of human beings in our experience to the universal mortality of all human beings, including those outside our experience. The second species is based on analogical rather than direct similarity, the analogy normally taking the form of an inference from the macroscopic to the microscopic. For instance, since macroscopic motion depends on empty space, motion at the microscopic level of atoms also does so. Both species of the method constitute Epicurean procedures for the use of 'signs' – that is, for the scientific discovery of unobserved truths by inference from the directly observable evidence.

It should be clear that the analogical use of the method formally encodes what had always been, at least in outline, a primary Epicurean procedure for investigating the unobservable realm of atoms and void. The stock example noted above, the inference from motion to void, corresponds to the very first inference of the physics we meet in Epicurus' epitome the Letter to Herodotus (40). It is less immediately obvious why the inductive use of the method should be equally important to Epicureans, but the following is a likely motive. In Cicero's *De natura deorum* the account of Epicurean theology, probably itself derived from a work by Zeno of Sidon, includes a consensus omnium argument for the existence of gods (I, 43), starting from the premise that all human races have the prolepsis of gods. Whether this argument was already used by Epicurus himself can be disputed, but its use in the school by the time Philodemus studied there should not be in doubt. To defend the soundness of its main premise, that all human races have a prolepsis of gods, would have required arguing, by appeal to the similarity method, from the attested religious conceptions of known races to the unattested religious conceptions attributable to unknown races. This may well be among the contexts in which the inductive version of the 'similarity method' was first fully formulated and defended.

It seems likely, in addition, that its formulation and defence were a response to the Stoic critics. This is because the critics, as reported by Philodemus, deny the formal validity of such 'similarity' inferences – thus incidentally anticipating the Humean problem of induction – and insist instead that the only valid inferences from observed sign to unobserved significate are those that respect the 'elimination' criterion: that if the significate is 'eliminated', i.e. taken to

be false (in the case of a proposition) or non-existent (in the case of a state of affairs), then the sign is, simply thereby, 'co-eliminated'. And this seems to be an adaptation to sign-inferences of the favoured Stoic criterion of conditional entailment known as synartesis: that the negation of the consequent in a conditional should 'conflict' with the antecedent. In the terminology of this debate, signs differ from conditionals only to the extent that their standard formulation, instead of the conditional

'If p, q', is 'Since p, q', the latter being what Stoics would call a 'paraconditional' (παρασυνημμένον), equivalent to 'If p, q; and p'.

Remarkably, the Epicurean side in the debate seems fully prepared to accept this fundamentally a priori 'elimination' criterion as correct, and to retain it alongside the 'similarity' criterion rejected by the Stoics. The Epicurean strategy is not to reject the Stoic inferential criterion but to minimize its role in sign-inference. The Stoic quest for a purely deductive scientific method is doomed to failure, they allege, since even the a priori elimination method cannot avoid relying on premises established by the empirical similarity method.

True, the Epicureans say, the sign-inference "Since there is motion there is void" goes through trivially by the elimination method, because according to them if void is eliminated, motion is thereby co-eliminated. But that natural and universal generalization about motion is one that we have learnt in the first place by empirical generalization over a vast range of experiences, where without exception motion is observed to take place only where there is room for it to do so.

This Epicurean strategy exhibits the empiricism that had always been the school's epistemological hallmark, and which is here taken to underwrite all necessary truths: even apparently a priori truths are in reality generalizations from experience. Thus the same inductive methodology is pushed even into the realm of mathematics: from the fact that every 4x4 square in our world has an area numerically equal to its perimeter, we may correctly infer that the same is true of 4x4 squares in all other worlds too (Philodemus, On sign-inferences, XV, 28-XVI, 1).

If induction sounds like a bizarre way to establish the facts of mathematics, it should seem less so when we note that its key criterion is that of inconceivability. The basic format of a similarity inference is "Since x is F, y is F", the justification being that y is so similar to x in nature as to make it inconceivable that y should lack an essential predicate of x. Thus it is 'inconceivable' (XV, 37-38) that, while all 4x4 squares in our world have a certain property, 4x4 squares in other worlds should lack that property. To generalize, if two or more things are sufficiently similar in their nature, it is inconceivable that they should differ in some essential property. And this applies without distinction to mathematical and to (for instance) biological generalizations:

[...] for instance, "If Plato is a man, Socrates is a man too." For given that this is true, "If Socrates is not a man, Plato is not a man either" comes out true as well, not because by the elimination of Socrates Plato is co-eliminated, but because it is impossible to conceive of Socrates not being a man but Plato being a man. And that belongs to the similarity method (On

sign-inferences, XII, 19-31).

The ultimate justification for this approach seems to lie in an Epicurean brand of essentialism, expressed by what we may call the 'qua operator', which is captured in Philodemus' Greek by a range of subtly different terms translatable as 'in so far as', 'in that', etc.:

Those who attack sign-inference by similarity do not notice the difference between the aforementioned [senses of 'in so far as' etc.], and how we establish the 'in so far as' premise, such as, for instance, that man in so far as he is man is mortal. [...] For we establish the necessary connection of one thing with another thing from the very fact that it has been an observed concomitant of all the instances which we have encountered, especially as we have met a variety of animals belonging to the same type which while differing from each other in all other respects all share such-and-such common characteristics. Thus we say that man, in so far as and in that he is man, is mortal, because we have encountered a wide variety of men without ever finding any variation in this respect, or anything that draws us towards the opposite view. So this is the method on which the establishment of the premise rests, both for this issue and for the others in which we apply the 'in so far as' and 'in that' construction - the peculiar connection being indicated by the fact that the one thing is the inseparable and necessary concomitant of the other.

The same is not true in the case of what is established merely by the elimination of a sign. But even in these cases, it is the fact that all the instances which we have encountered have this as their concomitant that does the job of confirmation. For it is from the fact that all familiar moving objects, while having other differences, have it in common that their motion is through empty spaces, that we conclude the same to be without exception true also at the microscopic level. And our reason for contending that if there is not, or has not been, fire, smoke should be eliminated, is that smoke has been seen in all cases without exception to be a secretion from fire (On sign-inferences, XXXIV, 29-XXXVI, 7).

In case it should be suspected that Epicurus' own favoured inferential principle, appeal to the 'lack of counterevidence' (οὐκ ἀντιμαρτύρησις), has simply been replaced by this newly evolved methodology, we should note that it retains a significant role, not only in the above passage, but also in its immediate sequel:

Another error which they make is in not noticing our procedure of establishing that no obstacle arises through things evident. For the existence of chance and of that atoms: it is necessary to show in addition that nothing else self-evident conflicts with the thesis 17 (On sign-inferences, XXXVI, 7-17).

Here, two centuries after his formulation of it, Epicurus' own scientific methodology is visibly being honoured and maintained by his successors in the school he founded. True, the pressure to compete in current far more sophisticated debates about the justification of scientific inference has unmistakably relegated that original methodology to a subordinate role. But it is important to recognize that the ultimate aim of the updated competitive strategy is nevertheless that of committed loyalists. It is the goal of vindicating - and by no means of

modifying – Epicurus’ proprietary doctrinal positions. The most striking case of this, well attested in *On sign- inferences* and elsewhere, is Epicurus’ much-derided thesis that the sun, far from being larger than the earth as the astronomers maintain, is actually just as small as it appears. 18 As we learn from Philodemus (*On sign- inferences*, IX, 18-XI, 9), Zeno of Sidon faithfully defended this thesis against Stoic attacks. 19 And in doing so he brought to bear the full Epicurean armory developed in the debate we have been witnessing.