Epicureans on Preconceptions and Other Concepts

Gábor Betegh and Voula Tsouna*

In this chapter we explore how Epicurus and his followers thought of different types of mental entities that serve to identify, re-identify, and categorise items in the world. They also form the basis of inferences, determine the correct use of linguistic terms and expressions, and thereby ensure linguistic communication. These entities, therefore, can reasonably be characterised as concepts. Our perspective is both historical and philosophical. We look at different generations of Epicureans in order to trace how their thinking on the topic develops in light of newly emerging philosophical concerns. We also examine the surviving evidence from a variety of angles: the formation of concepts and in particular of preconceptions (Section 2); the scope and content of preconceptions (Sections 3 and 4); their relation to beliefs and word use (Sections 5 and 6); the acquisition of concepts other than preconceptions (Section 7); the possibility of securely distinguishing preconceptions from other concepts and the criticism that the Epicureans incurred on that count, as well as the ethical importance of concepts, and especially of preconceptions (Section 8); and, finally, the question of whether the surviving Epicurean material amounts to a substantive theory of concepts or reveals a sustained concern with concepts *per se* (Section 9). A central interest of ours is how the Epicureans' approach to concepts may be indicative of their views and assumptions concerning the mind's interaction with reality. Our study, we hope, contributes to a re-evaluation of Epicurean empiricism and its constraints, and goes some way towards explaining its considerable impact on modern empiricist epistemology and philosophy of mind.

Our sources, written by Epicureans or discussing Epicurean doctrines, use a rich and bewilderingly varied vocabulary to designate mental items and to refer to mental operations related to concept formation and concept use. Some of these terms were probably introduced by the Epicureans themselves, whereas others might have originated in other schools, notably the Stoics. It is, however, not always easy to see clearly what the relationship between these terms is, or whether the Epicureans use them consistently. In the surviving Epicurean texts, *ennoia* appears to mean 'conception' or can be used as a synonym of *ennoēma,* a term that in other schools, typically, refers to concepts. In addition, the related terms encountered in the Greek sources include, notably, *noēsis* (sometimes translated as 'notion') and its cognates *nooumenon* and *epinooumenon*, and also *epinoia* ('thought' or 'conception'), which appears to designate the broadest category of mental items, as well as *huponoia, dianoia, perilēpsis, hupolēpsis*, and *prolēpsis*. This last term is rendered in Latin by 'praenotio' or 'anticipatio', while 'notitia' and 'notities' may refer specifically to preconceptions or, more generally, to concepts or conceptions. In relation to preconceptions, Epicurus and other authors occasionally refer also to *epibolē*, 'focusing' or 'projection' or 'application' of the senses (*epibolē tōn aisthētēriōn*) or of the mind (*epibolē tēs dianoias, iniectus animi*).[1] It is, however, a matter of scholarly debate what sort of mental act *epibolē* is and in what way it bears on the formation of preconceptions and other concepts. In the discussion that follows we shall try to assess how these terms are used by our sources to refer to particular kinds of concepts and particular sorts of mental acts. In fact, we believe that sorting out this terminology goes hand in hand with the exploration of the philosophical questions that we wish to address.

1　Preconceptions and Concepts: Setting the Agenda

We should start by situating the Epicureans' approach to a specific type of mental contents and operations within their overall philosophical project. Epicurus set out his tenets pertaining to epistemology and philosophy of language in a now lost treatise called *Canon* ('ruler', 'yardstick', or 'standard'). As is clear from the brief summary he gives of the principal points of this work in the *Letter to Herodotus*, as well as from independent reports, he considered these topics to be part of the study of nature in a twofold

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[1] Epicurus, *Ep. Hdt.* 35, 36, 38, 50, 51, 69, 70, 83, *RS* 24; Lucretius, *DRN* 2.740: *animi iniectus*; Cic., *Nat. D.* 1.20, 54: *iniciens animus et intendens*; *Nat. D.* 1.19, 49: *mentem intentam infixamque*.

manner (Diog. Laert. 10.30; cf. Cic. *Fin.* 1.63): Canonic establishes the rules that guide scientific inquiry;[2] and if we understand the physical account of the underlying processes in terms of the atomic theory, we also understand why the methodological rules governing the investigation are in fact correct.[3]

Importantly for our purposes, the first rule states that we must have a secure grasp of what 'underlie' expressions and words (*phthongoi*): determining the correct use of words and expressions, getting rid of ambiguity and false connotations, is the starting point and basis of all successful inquiry guiding us in making inferences, assessing beliefs, and adjudicating disputes. As Epicurus immediately adds, this can be done by 'looking at' and relying on the 'primary conception' (*prōton ennoēma*), or 'preconception', corresponding to each term (*Ep. Hdt.* 37–8).[4] We shall return to that topic, but for the moment we should retain that, insofar as 'primary conceptions' or 'preconceptions' are mental contents that somehow determine the correct application of terms and thus render us competent users of these latter, they function as concepts. According to the Canon, these concepts are necessarily veridical, and it is on this account that Epicurus and his followers hold that preconceptions, together with sensations and feelings, are criteria of truth.

Unlike other philosophers, Epicurus and his followers considered 'primary concepts', or preconceptions, rather than definitions, the proper starting points for dialectical debate and fundamental to scientific inquiry (Epic., *Nat.* XXVIII, Fr. 12, col. 3.6–9.; fr. 13 col. 12 sup. (LL. 12–16); Diog. Laert. 10.31; cf. pp. 215f. below).[5] More on this below, but what we can state already at this point is that the Epicureans view preconceptions as trustworthy and reliable guides. Notably, having the preconception of F means not merely that I can successfully use the word 'F' in communicating with others, but that on the basis of having the preconception of F, I am able to clarify possible ambiguities of the word 'F', to have a clear view of what it takes to be F, and to start drawing inferences and building scientific theories involving F. Someone can have an erroneous or blurry

[2] Epicureans applied the method not only for physical inquiry, but also in ethics. Cf. e.g. Cic., *Fin.* 2.1.3–2.6,15.48, with Section 9 below.

[3] Cf. Asmis 2009.

[4] In accordance with the majority of the literature, we take it that 'primary conceptions' are probably identical with 'preconceptions'. For an attractive suggestion as to why Epicurus did not use the term 'preconception' here, see Taylor 2016: 57. For an alternative interpretation of the passage, disputing the identity of 'primary conceptions' and preconceptions, and arguing that it is justified to refer to meaning in this context, see Glidden 1983 and 1985.

[5] Cf. Taylor 2016; Sedley 2019: 108–13.

conception of F, but this can be rectified and sharpened by relying on the preconception of F. In short, having the preconception of F means that I have access to *the* concept of F, which truly captures what it takes to be F, as opposed to merely having *a* concept of F.[6]

As we shall see in some detail, in line with Epicurus' strong empiricism, preconceptions can serve their criterial function because of the way in which they are related to sensations (*aisthēseis*).[7] Epicurus' dictum that all sensations and feelings (*pathē*) are 'true' (*alēthes*) is as famous as it is controversial. On the line of interpretation we favour, sensations and feelings are 'true' in the sense that, for the most part, they reliably preserve and report the relevant properties of their objects. The physical account of the occurrence of sensations provides justification for this claim. Namely, all vision and imagination is produced by the influx of a stream of fine atomic films, *eidōla* (Lat. *simulacra*), emitted by the external objects of sensation, and there is nothing in the sense-organs and in the occurrence of sensation which would modify the properties of the *eidōla*. The properties of the *eidōla* are thus preserved in sense-impressions. Then, going backwards in the causal chain, the *eidōla* themselves preserve, at least for the most part,[8] the relevant properties of the external object which emits them. In this way, through the *eidōla*, the external objects imprint 'their own nature' on the perceiver (Diog. Laert. 10.49). Sensations can be consistently 'true' because there is no intervening mental or other process that would introduce any alteration of the relevant properties in this causal chain.[9] A similar causal story can be told about 'feelings'. It is because of this 'property-preserving' causal chain that sensations and feelings can also preserve the *enargeia* of external objects, their being 'evident', 'manifest' or 'clear'.

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[6] For the distinction between *the* concept of F and *a* concept of F, see McKirahan in this volume.

[7] The term *aisthēsis* is variously translated as 'sensation', 'perception', or 'sense-impression'. As we shall see, *aisthēsis* for Epicurus does not involve any interpretation by the mind, and on this account, we find 'sensation' more fitting.

[8] *Eidōla* can get modified when they travel a long distance before they reach the sense-organ or when they have to traverse some distorting medium. This is why the faraway square tower might appear round or the oar partially submerged in water appear bent. *Eidōla* emitted by different objects can also get accidentally entangled.

[9] Matters are complicated by the fact that Epicurus apparently ascribed the property of 'being true' to external objects themselves: objects are true if they correspond to how they are spoken of (Sext. Emp., *M.* 8.9). Objects of clear perception can in this sense be 'true' insofar as they reliably correspond to our perceptions and perceptual judgments of them. One advantage of this idiosyncratic position is that it allows the Epicureans to maintain that we learn the concepts of true and false also on the basis of our experience of external objects (Lucr., *DRN* 4.473–9; cf. Bown 2016; Sedley 2019: 94–5.).

Preconceptions, just as other mental contents, originate in sense-impressions and feelings (Diog. Laert. 10.32). As we shall argue in the next section, the occurrence of preconceptions, however, must involve some form of processing of sensations and feelings. We can expect, therefore, that preconceptions can fulfil their criterial role because the operations by which they are produced from sensations (whatever these operations turn to be) systematically and reliably preserve the relevant properties of external objects, including their *enargeia* or self-evident character. It is only at the next levels – such as the formation of more complex, higher-level concepts, beliefs, and conceptions based on (possibly false) inferences – that the property-preserving causal chain can be broken and thus error can occur.

This brief and crude outline of Epicurus' explanatory model raises a number of questions, which also set the agenda for our discussion. What are the mental operations that are property-preserving and what are those that are not? If preconceptions are supposed to be directly based on sensations, can we form preconceptions of non-perceptible entities, and if so, how? How can we be sure that something is a preconception and not another type of concept which is not, or not necessarily, veridical? How can preconceptions fulfil their role in assuring successful linguistic communication?

2   The Formation of Preconceptions

How are, then, preconceptions formed? A preconception, we are told, is a sort of memory (*mnēmē*) of something external, which one had immediate perceptual experience of many times in the past (Diog. Laert. 10.33). The physical description of this process is continuous with that of sensation. Preconceptions are formed from the accretion and superimposition of *eidōla* of the same type that entered the sense-organ in sensation. It is probably on this account that preconceptions were also described as *tupoi*, 'imprints', 'patterns' or 'delineations' of the general outline of the object or type of object that 'imprints its nature' on our mind.[10] While the extant remains of earlier Epicureans do not disclose further details, Diogenes of Oinoanda (second century CE) offers more information on that process, highlighting both the representational and the physical and psychological aspects of memory functions. 'What is viewed by the eyesight is inherited

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[10] On previous uses of the term *tupos* in epistemological contexts, and in particular as part of concept formation on the basis of sense-perception, see Laks in this volume, pp. 18–20.

by the soul and, after the impingements of the original images, passages are opened up in us in such a way that, even when the objects that we originally saw are no longer present, our mind admits of likenesses of the original objects' (NF 5.3.3–14).

It is widely assumed that the mind plays no role whatsoever in the formation of preconceptions. It seems to us, however, that the process must include, minimally, the sorting out and stacking of similar *eidōla*, or *eidōla* emitted by the same type of objects. Moreover, 'passages' must be created for further *eidōla* of the same shape, which is probably the physical explanation of why on the basis of preconceptions we can identify and categorise the same (type of) entity when we encounter it again. In addition, the formation of preconceptions needs to include some simultaneous mechanism by which the differences of individual sensations are filtered out so that only the common elements get registered in preconceptions. It is by such an operation that what is retained in the preconception is only those properties that invariably belong to all entities that are covered by that preconception. This is how, for example, the preconception of body will not include the determinate sizes, specific colours, or indeed any colours, or other contingent properties of bodies, but will specify only that bodies, as bodies, are three-dimensionally extended and have resistance. Similarly, the preconception of human does not include individual differences, but only that humans are living ('ensouled') beings of a certain shape: such properties as are constant in all individual humans we experience.[11] The preconception of a human being should also be distinct from the preconception of statue. A statue might have the shape of a human, without however showing life functions – this is why the preconception of human should include not only the characteristic shape of humans, but also that they are 'ensouled', show life functions. In sum, this sorting, stacking, filtering, and ordering operation can be fairly complex. Our sources don't give out any details of this process and don't specify which faculty is responsible for it, *aisthēsis*, or memory or the mind, or exactly what function focusing (*epibolē*) plays in that process. In any case, Epicurus' idea seems to be that humans are naturally constituted in such a way that the operations resulting in the formation of preconceptions occur automatically, without the *active interference* of reason.[12]

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[11] Cf. Phld., *Sign*. XX.31–XXI.15 singling out mortality and vulnerability to disease as common characteristics.

[12] A text of Cicero (*Nat. D.* 1.105) suggests that these operations could be described by the Epicureans as the 'focusing' or 'application of the mind' (*epibolē tēs dianoias*) on the relevant stimuli. Cicero however is speaking about the formation of the preconception of the gods, which, at least in some

The hypothesis of a natural species-specific predisposition to form basic concepts gains plausibility, we believe, in light of Epicurus' claim that preconceptions are 'natural'. The second century BCE Epicurean Demetrius Laco clarifies what the 'naturalness' of preconceptions may entail. Something is natural or exists 'by nature' (*phusei*), he says, if it is spontaneous and instinctive, or if it is compelling and unavoidable, or if it brings some sort of advantage, or if it yields truth and understanding (*PHerc.* 1012, LXVII.1–LXVIII.10). Epicurus' account appears to imply that preconceptions are natural in all these senses. They provide truth and understanding, precisely because they are formed by a spontaneous mechanism on the basis of a natural predisposition; we have no control over their acquisition: it is necessary and unavoidable in just that sense. One cannot avoid acquiring the preconception of elephant if one is repeatedly exposed to elephants in sense-perception. Moreover, preconceptions are crucial for our survival and well-being: for instance, our preconceptions of natural kinds enable us to identify instances of kinds in our surroundings and react accordingly,[13] the preconception of justice promotes social as well as personal benefit, and the preconception of the gods secures our peace of mind.[14]

What sort of necessity is involved in the claim that the formation of preconceptions is 'necessary and unavoidable'? This, we suggest, is not a matter of absolute but of conditional necessity. As we have seen, at the atomic level the formation of preconceptions is explained as a modification of the atomic structure of the mind occasioned by the repeated ingress of similar *eidōla*. The framework of Epicurean physics would in principle allow that we are born already with the results of these modifications in place, and that in this way the passages for similar *eidola* and the corresponding *tupoi* were innate. It is noteworthy that Epicurus and his followers

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respects, is unique (on this see below). It is thus not clear whether the 'application of the mind' is specific to the formation of this specific preconception, or indeed whether Cicero's report is fully reliable at this point. Some interpreters take Epicurus to suggest that 'application of the mind' refers not to the formation but to the use of preconceptions in mental operations such as the identification or categorisation of sense objects. Goldschmidt 2006, Glidden 1985, and Morel 2008 defend versions of the view that *epibolē* is constitutive of a preconception, whereas Konstan 2008, Tsouna 2016: 186–93, and Verde 2016 argue that these are distinct from each other, although closely related. Verde 2016 points out that Diogenes of Oinoanda fr. 79 (NF 33) lends support to the latter view.

[13] These functions are crucial for non-human animals as well. It might be that animals also possess preconceptions or something analogous to them of this type, without having other types of preconceptions, such as that of justice (cf. Epic. *RS* 33).

[14] On the ways in which preconceptions are beneficial and even necessary for human well-being, see also Section 9.

don't countenance such a scenario: *tupoi* can apparently only be produced as an effect of the appropriate sensory stimuli. Presumably, the prehistoric inhabitants of Easter Island lacked the preconception – and the concept – of giraffe in the absence of the relevant perceptual experience. We should probably conclude, therefore, that even though human beings are naturally disposed to form preconceptions, the acquisition of preconceptions depends on contingencies. A given preconception may be formed in the minds of the people in a community exposed to similar experiences, while people outside that community may lack it.

One remarkable exception might be the preconception of god. According to Epicurus, the cognition (*gnōsis*) of gods is evident (*enargēs*) to all mentally sane human beings across all communities (Epic., *Ep. Men.* 123–124; Cic., *Nat. D.* 1.43–44; Phld., *Piet.* 112.5–12, Sext. Emp., *M.* 9.33). The preconception of god, however, is atypical in so far as it is not based on sense experience, but on the nature of the gods being 'viewed by the mind' (Epic., *RS* 1; Lucr., *DRN* 5.148–149; Cic., *Nat. D.* 1.49). Moreover, according to Velleius, the Epicurean spokesman of Cicero's work *On the Nature of Gods*, our preconception of god is both natural and *innata* and therefore present in all human beings (Cic., *Nat. D.* 1.43–45). What does *innata* mean in this context? Arguably, Velleius' claim that this preconception is *innata* should not be taken to mean that humans are born with it, but rather that humans are naturally constituted in such a way that their minds are disposed to form the preconception of god in response to the relevant stimuli, whether these come from physically existing gods or *eidōla* coming from other sources. On our account, therefore, the preconception of god is similar to other preconceptions in the sense that, because of their psycho-physical make-up, human beings have the capacity and disposition to acquire it.

Gods are however not objects of sensation, but are intelligible, 'viewed by the mind'. Hence, unlike all other preconceptions, the formation of the preconception of god is not subject to empirical contingencies, but obtains invariably and universally, because the psycho-physical mechanism by which the mind grasps directly that sort of object is the same for all human beings. The universality of this mechanism also guarantees that the preconception of god can serve the criterial role that all preconceptions are supposed to serve: assessing beliefs and adjudicating disagreements about the nature of gods. Because of the universality of this preconception, it can also fulfil this function within and across all human communities. Most importantly, it can serve to dispel misconceptions about the gods that produce anxiety in us, and furnish a correct conception of god that can

serve as the paradigm of a blessedly happy life for all human beings. The universal availability of the preconception of god is crucial precisely because of the role it plays in achieving happiness, which should be available to all human beings. Whether, and how, a preconception formed in this way can ground the mind-independent existence of gods is a further matter, which will not concern us here.[15]

3   The Scope of Preconceptions

Our discussion so far has skirted an important question: what kind of entities have corresponding preconceptions. The standard account of preconceptions strongly suggests that, once again with the exception of god, we have preconceptions of things of which we have had repeated direct sensory experiences. This, however, doesn't in itself settle the matter.

Scholarship on Epicurean preconceptions, drawing on Epicurean and non-Epicurean sources, mentions a wide range of different types of entities: natural kinds such as horse and man and rose; individuals such as Plato; perceptible properties such as green, round and square; states or events, for instance death; moral, epistemic, or prudential values, for instance, justice, utility, or truth, as well as just, good, and beautiful; psychological and moral attitudes, such as responsibility and agency; modalities, notably necessity; physical body; time; cause; art or craft or expertise, and individual professions such as being an orator; works of art such as poem; and complex evaluative notions, such as the good poem or the good property manager. Given the broad range of items on that list, one might be tempted to infer that, in accordance with the key passage in Epicurus' *Letter to Herodotus* considered above, there is a primary notion, or preconception, underlying every linguistic term and expression (*kath' hekaston phthongon, Ep. Hdt.* 38). However, on Epicurus' own account, there are many meaningful terms for which there is no corresponding preconception; rather, as we shall see, they correspond to other sorts of conceptions generated from preconceptions with the addition of further mental operations.[16] Moreover, the evidence about some of the categories mentioned above is inconclusive. For instance, the passage in Sextus (*M.* 7.208–215), sometimes taken to suggest that there are preconceptions

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[15] For an excellent recent survey of the different interpretative options see Veres 2017. On the relationship between preconceptions and existence claims, see more below pp. 224–231.

[16] See below on derivative concepts.

of individuals or properties such as round and square, in fact neither entails nor excludes the existence of such preconceptions. There are also strong reasons to be doubtful about the existence of such complex preconceptions as that of a good poem as opposed to a poem *simpliciter (*see Section 9).[17]

Sifting through the evidence, we are inclined to infer that the scope of preconceptions was considerably narrower than that of concepts. The most secure and well-documented items on the list are natural kinds, and there can be no doubt that there are also preconceptions of value terms and of more abstract entities, such as physical body, and even of truth. Methodologically, all members of the Garden follow Epicurus' example: they debate the nature of good, pleasure, body, motion, and much else by appealing to the preconceptions of the corresponding terms that are central to Epicurean physics and ethics, and many other that became contested in debates with other schools. And they regularly compare and contrast these latter with other, derivative notions whose content is crucially determined by the contributions of the mind, and can therefore involve unwarranted operations, such as incorrect inferences, and thus be susceptible of falsehoods. However, there seems to be no codified inventory of the types of preconceptions to be used in these debates. Different Epicureans might have worked with a narrower or a broader range of preconceptions depending on their own dialectical needs.

4   Preconceptions and Permanent Properties

As mentioned, preconceptions register properties that belong to every entity corresponding to the preconception, and which can thus be used to identify and categorise the relevant entities, and on the basis of which disputed cases can be adjudicated, and to determine the correct use of the terms by which we refer to these entities. This is precisely why having the preconception of F can count as grasping the concept of F. At this point

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[17] Horse, cow, and human being: Diog. Laert. 10.33; human being: Lucr., *DRN* 5.181–3; god: e.g. Epic., *RS* 1, *Ep. Men.* 123–4; Phld., *Piet.* fr. 5.14–28/ll. 130–144; justice: Epic., *RS* 37; utility: Lucr., *DRN* 4.853–4, 5.1046–9; pleasure: Cic., *Fin.* 1.31; death: Plut. *Non posse* 1092C; responsibility and agency: Epic, *Nat.* 34.26–30; truth: Lucr., *DRN* 4.478–80; time: not a preconception in Epicurus (cf. *Ep. Hdt.* 72–3, Sext. Emp., *M.* 10.219), but mentioned as having a preconception in Phld., *Piet.* fr. 66A. 4–6 / ll. 1885–1887; cause: Epic., *Nat.* 28; cosmos: Lucr., *DRN* 5.156–237; 'All' (*pan*): Phld., *Piet.* fr. 66A.3–6 / 1884–1887; *technē*: Phld., *Rhet.* 1 53.3–22 Sudhaus; orator/rhetor: Phld., *Rhet.* 1 244.15. Sudhaus; just, good, beautiful: Phld., *Rhet.* 1 254.255–255.20; poem: Phld., *De poem.* 1 193.20 (explicit mention of 'preconception') Janko 11 N 1074b fr.21 + 1081b fr.8 sup, 6–11.; good poem: Phld., *De poem.* I.194.18–24 Janko v col.30.32–36 Jensen; good property manager: Phld., *De oec.* xx.1–32.

two further questions present themselves: what properties constitute the content of a preconception? And what is the relationship between these properties? Notably, it could be the case that if the preconception of human is made up of the properties 'living being' and 'having such and such a shape' these properties stand in a genus-differentia relation. We should consider whether this is an acceptable model for Epicurus and whether he adopts it on his own account.

Indeed, we contend, he does not. Rather, Epicurus appears to think of the content of conceptions (*ennoiai*) in general and of preconceptions in particular as mere aggregates or lists of properties.[18] Evidence from Epicurus' *Letter to Herodotus* points firmly in this direction:

> Moreover, as regards shapes, colours, magnitudes, weights, and all the other properties that are predicated of body, in so far as they are permanent properties either of all bodies or of bodies that are visible and which we cognise in accordance with the sensation of these properties, we must not suppose these properties either to be natures that exist on their own (for this is inconceivable), nor to be entirely non-existent, nor to be distinct incorporeal entities attached to body, nor to be parts of body. Instead, we must suppose that the whole body altogether derives its own permanent nature from all these properties, but not as if it were composed by the total sum of these properties in the way in which a larger aggregate is composed out of extended parts, whether these be primary parts or magnitudes smaller than this particular whole. Rather, as I say, only in the way that it gets its own permanent nature from all these aforementioned properties. All of them have their own proper ways of being focused on (*epibolas idias*) and distinguished, but always along with the whole aggregate and never separately from it, and it is in accordance with this aggregate conception (*athroan ennoian*) (sc. of body) that the body has received its predication. (*Ep. Hdt.* 68–69)

In this passage, Epicurus offers grounds for analysing body in two parallel or even complementary ways, one physical, the other metaphysical and conceptual. Physically, a body can be analysed into its material parts and constituent atoms. Metaphysically and conceptually, a body *qua* body can be analysed into the ineliminable properties of all bodies: there is no (visible) body that would not have these properties, and it is in this sense that they are called 'permanent accompaniments' of bodies. A body *qua* body is an 'aggregate' (*athroon*) of these properties, or in current-day terminology a 'bundle' of them. These properties can't exist on their own, independently of bodies, but we can distinguish them by the mental

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[18] See, notably, Betegh 2015: 280; Sedley 2019.

act of focusing (*epibolē*). Epicurus leaves open the list of the properties in question, but says that they include size, shape, weight and colour, this last being exclusive to visible bodies. The preconception of body tracks these ineliminable properties, and we call an entity a body in so far as it has the conjunction of these properties. Epicurus adds that without its permanent properties, body cannot be conceived (*Ep. Hdt.* 70). We infer, therefore, that these permanent properties are included in the preconception of body.

In the sequel of the passage quoted above (*Ep. Hdt.* 70–71), Epicurus contrasts a body's permanent properties with the accidental properties that it may acquire or lose over time (*Ep. Hdt.* 71; cf. Lucr., *DRN* 1.445–482, and Sext. Emp., *M.* 10.219–227). Just like permanent properties, accidents are real but can't exist independently. And, just like permanent properties, they are apprehended through the mind's focusing (*epibolē*) on contents delivered by the criteria.[19] Accidental properties may or may not accompany a body, and the corresponding attributes are hence not part of the preconception. Again, when Epicurus speaks about an 'aggregate conception' (*athroa ennoia*), there is no suggestion in this or other related texts that the permanent properties that make up this 'aggregate' are related to each other in any more complex or hierarchical way, as for instance genus and differentia. Rather, he appears to think of them as items that make up the 'bundles'. Indeed, his claim that preconceptions are *tupoi* or outlines based on sensation of the corresponding types of objects is fully compatible with the bundle view, while it is in tension with views presupposing that the conceptual parts of a preconception have a hierarchical structure, as notably in genus-species structures.

A further issue is whether the preconception of a type of entity can be correctly articulated in only one way. It is commonly assumed that this must be the case, but the assumption, we contend, is mistaken. In truth, the Epicureans frequently articulate the preconception of a type of entity in different ways. For instance, Epicurus advanced at least two different formulae to capture body. According to the first, body is a conjunction of magnitude, shape, and *antitupia*, resistance. According to the second, body is that which is extended in three dimensions and has *antitupia* (Sext. Emp., *M.* 1.21; *M.* 10.240). Ostensibly, each of the properties listed in each of these accounts is a permanent property of body, but some of them are interchangeable: in the first account, having magnitude and shape is replaceable with the property of being three-dimensionally extended that figures in the second account. At any rate, both of these accounts are

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[19] See Tsouna 2021.

formulated as inventories of properties without indicating any structure among the properties listed.[20] Accordingly, Sextus says that in conceptions body is 'conceived in terms of a coming together of many specific properties' (*M.* 1.22: *kata sunodon pollōn idiōmatōn noeitai*, trans. Bett).

It is clear, in our view, that Epicurus and his followers treat these formulae listing permanent properties as their preferred alternatives to definitions.[21] By doing so, Epicurus rejects the method advanced by Plato and developed by Aristotle and many others, according to which a term is defined by finding the place of the corresponding entity in a hierarchical taxonomy. Epicurus and his school claimed that such definitions are unhelpful and lack the clarity that the terms themselves possess on the basis of the corresponding preconceptions (Cic., *Fin* 1.22, 2.4; Anon., *in Theaet.* 22.39–47; Erotianus, *Glossarii Hippocr. praef.* p. 34, 10 Klein in Usener 258). To return to our previous example, having resistance distinguishes body from void, which is also three-dimensionally extended; nonetheless 'three-dimensionally extended' does not function as a genus with 'having resistance' as a differentia, even if this property does distinguish body from the similarly three-dimensionally extended void. Likewise, the Epicurean preconception of human is 'having such and such a shape with being ensouled' (Sext. Emp., *PH.* 2.25), and the property of being ensouled (i.e., manifesting life-functions) distinguishes humans from similarly shaped statues and corpses; however, having this particular shape does not constitute a genus that would include humans, corpses, and human-shaped statues, of which being ensouled would be the differentia.

A main reason why the Epicureans are inclined towards a version of 'bundle theory' lies precisely in their intuition that reality is not organised in the way Plato and Aristotle thought, as well as their rejection of the view that every thing has an essence that can be captured by a single correct definition structured in a certain complex way. According to Epicurus and his school, the formulae of preconceptions do not capture essence or fix the place of a type in a hierarchical taxonomy. They merely convey the outline of the concept corresponding to the thing under investigation, and this outline can in principle be conveyed in other ways as well.

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[20] In some of these formulae the properties are linked simply with 'and', whereas in others we get the most conspicuous properties first (e.g., the species-specific shape of human beings, or the three-dimensional extension of bodies) to which a less perspicuous property (e.g., being ensouled in the case of human and having resistance in the case of body) is added with the preposition *meta* ('together with').

[21] Cf. Taylor 2016; Sedley 2019: 108–13.

5   Preconceptions and True Beliefs

As we have mentioned, Epicurus takes preconceptions to be the starting points of scientific inquiry and the reference points in deciding contentious questions. In these contexts, the permanent properties form the basis of inferences about non-evident aspects of an entity. For instance, a hypothesis has to be rejected if it is in conflict with one or more of the permanent properties included in the preconception. Consider again the example of body. Having a definite size and shape are included in the preconception of body, and they imply limitedness. In so far as limitedness is incompatible with having an infinite number of extended parts, we must conclude, says Epicurus, that a body can only have a finite number of extended parts (Epic., *Ep. Hdt.* 57).

All known Epicureans subscribe to the Founder's methodological principles (Sext. Emp., *M.* 8.135–7, *M.* 9.21) regarding inference, and in particular verification and falsification. For instance, Hermarchus, one of Epicurus' immediate disciples, advances the following argument regarding the gods: our preconception represents god as a living being, from which, in so far as all living beings breathe, the gods too must breathe (fr. 32 Longo Auricchio). In a fragmentary papyrus text, Philodemus (first century BCE) appears to adopt a comparable strategy in response to the Academics, who contend that corporeality is incompatible with divinity. Philodemus argues that every conception (*ennoēmata panta*) of the divine assigns to the gods sensation and pleasure,[22] which in turn presuppose corporeality. Thus, corporeality is far from being incompatible with the conception of god as his opponents maintain, it can in fact be safely inferred from the list of permanent properties (Phld., *Piet.* 5.14–20/ 130–144).

As these examples also suggest, although the preconceptions *qua* representational outlines (*tupoi*) and non-structured lists of properties are not propositional in form, they must have propositional content in order to be able to fulfil their epistemological function.[23] If preconceptions serve as indemonstrable bases for inferences about what is non-evident – either about non-evident aspects of the entities corresponding to preconceptions

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[22] According to Philipson's supplement, accepted by Obbink, Philodemus adds 'and perfect disposition'. The supplement ἕξιν is however uncertain.

[23] Atherton 2009: 203, suggests that the application of a word to a thing is tantamount to expressing a belief about that thing (see Diog. Laert. 10.33), and that, generally, the Epicureans appear quite indifferent with regard to the distinction between claiming that X has the property F and subscribing to a concept according to which X has the property F.

or about further non-evident entities – then, in epistemological contexts, preconceptions must be treated as beliefs or propositions expressing those beliefs. These beliefs and propositions are always and evidently true, and can test the truth or falsehood of other propositions without being tested themselves in the same way. It is in this sense, we suggest, that a preconception might be called 'correct belief' (*orthē doxa*, Diog. Laert. 10.33). As for the other conceptions (*ennoiai*), since they too are used in reasoning, they too must be assumed to entail beliefs and corresponding propositions, which however can be true or false. Thus, Epicurus points to a contrast between preconceptions and other conceptions involving such further beliefs (*doxastikai ennoiai, RS* 24): the preconceptions, as well as the other criteria of truth, feelings, and sensation, are present in the mind and self-evidently true, whereas the other 'concepts involving belief' must await confirmation regarding their truth value.

Two further distinctions are relevant here, and both are introduced in connection to the preconception of the gods: 'pure conceptions' are contrasted with 'lying conceptions' and 'common conception' of gods is distinguished from 'false notions' about the divine. In the first place, Philodemus uses the revealing metaphor of purity to differentiate the correct conception of the gods as blessed and immortal beings from false conceptions entailing the belief that the gods are envious and hostile towards humans: the preconception of god belongs to 'pure conceptions' (*katharai ennoiai*: Phld., *Piet.* fr. 9.11–12 / 242–243), whereas false beliefs about the gods are 'lying conceptions' (*pseudomenai ennoiai*, Phld., *Piet.* fr. 65.14–15 / 1865–1866). The purity metaphor conveys the idea that our preconception of god is uncontaminated by falsehood and, more generally, any belief based on false inference.

In the second place, in relation to his claim that, presumably unlike other preconceptions whose acquisition depends on contingent factors, the preconception of god is common to mankind, Epicurus draws a contrast between the conception of divinity commonly shared by mankind (*koinē noēsis*, Epic., *Ep. Men.* 123) and the false beliefs held by many. He warns that these latter are not part of the preconception but are false notions (*hupolēpseis pseudeis*), causing the greatest harm (Epic., *Ep. Men.* 124). The term *hupolēpsis* need not refer only to falsehoods. For instance, Sextus relays that, in Epicurus' view, dream images led men to form a *hupolēpsis* of the gods as having human shape (cf. *M.* 9.25, 43, and 65). While anthropomorphism is not part of the preconception of god, several Epicurean authors treat it as an aspect of the correct conception of the divine. Notably, Philodemus' analysis of the nature of the gods

presupposes anthropomorphism, and the same appears to hold for other Epicureans too. However, most occurrences of *hupolēpsis* in the surviving texts of Epicurus and his adherents indicate that even when hypoleptic notions are true, they are not epistemically reliable in the way in which preconceptions are.

In a polemical context, in which Plutarch confronts the Epicureans with a version of Meno's paradox (fr. 215f), he compares Epicurean preconceptions to the common conceptions (*koinai ennoiai*) of the Stoics[24] and presents the Epicureans with the following dilemma: either preconceptions are articulated (*diērthrōmenai*) or they are unarticulated (*adiarthrōtoi*); if the former, the corresponding investigation is redundant; if the latter, the search is impossible. Admittedly, the Epicureans are not attested to have used that distinction. Nonetheless, the distinction is consistent with the double duty of preconceptions and can be used in order to spell out an important aspect of the Epicurean theory. On the one hand, preconceptions are fundamental for the everyday use of language insofar as they determine the truth conditions of attaching names to things. For this use, preconceptions don't need to be 'unpacked' or 'articulated'. On the other hand, we have seen that the content of preconceptions can be 'articulated' in the formulae listing permanent properties, and that this is crucial in scientific contexts and where disputes arise. It seems then that ordinary discourse can usually proceed on the basis of non-articulated preconceptions that members of a linguistic community share, whereas philosophical and scientific enquiries require a different level of elaboration that can be provided only by unpacking the content of our basic notions into articulated accounts.

These observations bear on the question (rarely asked in the literature) whether all humans have preconceptions or how do the preconceptions of laymen differ from those of the experts. Using the distinction between unarticulated and articulated preconceptions, the Epicureans could suggest that every mentally apt human being has preconceptions, but many of these preconceptions remain 'unarticulated' and are not spelled out in many contexts. Similarly, they are not articulated in some people but become articulated in others. In order to identify something in my visual field as a human being, I don't need to actually spell out the account of the *tupos* by listing the relevant properties. On this approach, the difference between, for instance, the lay person's preconceptions of health and disease and the doctor's preconception of health and disease

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[24] See Ierodiakonou pp. 245–246 in this volume.

have the same causal origins and pick out the same elements of reality. Thus, their *tupoi* corresponding to disease are the same, and this is the condition of successful communication between the layman and the doctor. However, while the layman's preconception may remain unarticulated, the doctor's is 'articulated' – the doctor has the list of the relevant properties of disease spelled out, perhaps by focusing on and identifying its different permanent properties, and it is on this basis that the doctor can integrate the medical knowledge afforded by his art around the preconception.

6   Preconceptions and Word Use

As we have discussed earlier, preconceptions are the preconditions of successful linguistic communication and identification of external objects. A passage from Diogenes Laertius, although very condensed, complements what we have already said on the basis of Epicurus' *Letter to Herodotus.*

> They (sc. the Epicureans) say that preconception is as it were a cognition (*katalēpsis*) or correct belief (*orthē doxa*) or conception (*ennoia*) or universal notion (*katholikē noēsis*) stored inside, that is a memory of something presented on many occasions from outside, for instance that 'Such and such a thing is a man'; for as soon as the word 'man' is uttered, in accordance with the preconception, the outline (*tupos*) of it also comes immediately to the mind, senses (*aisthēseis*) leading the way. Thus, what primarily underlies every name is something evident. And we would not inquire about the object of inquiry, if we did not know it first. For instance, 'What stands over there, is it a horse or a cow'? For one must at some time come to know, in accordance with the preconception, the form of a horse or of a cow. Nor would we have named anything, if we had not first learnt its outline (*tupos*) in accordance with the preconception. Thus, preconceptions are evident. And what is believed is derived from something prior and evident, by reference to which we say, for instance, 'How do we know if this is a man?' (Diog. Laert. 10.33)

When an object is presented in sensation, we can decide whether it is a horse or a cow by assessing whether its form corresponds to the outline (*tupos*), formed in accordance with the preconception (*prolēpsis*), of horse or that of cow. But note that the passage does not only speak about identification, but also about the use of words and naming; it also highlights the process by which possessing the preconceptual outline ensures understanding and communication. When I hear you utter the word 'man', I don't need concurrently to see a man in order to understand what you are saying. This is so because the preconceptual outline of man,

based on previous perceptions of human beings, is stored in my mind, and gets activated upon hearing the word 'man'. Because of the causal history of the outline – as we have discussed earlier – it is also 'evident', just as an occurrent perception is, and thereby guarantees that I don't think of something completely different than you when I hear you utter the word 'man'.

On the reading just sketched, we submit, the Epicurean account does not involve any reference to the meaning of the word 'man', and does not treat the preconception as the meaning of that word. In this model, the preconception can fulfil its function because, first, there is a fit between the preconceptual outline and the external object and, second, the vocal utterance 'man' is associated with the preconceptual outline. Many other interpreters, on the contrary, have assumed or argued that preconceptions play the role of meanings or significations, functionally analogous to Fregean senses or Stoic sayables (*lekta*).[25] On that view, Epicurus has a three-tier semantic theory in which the preconception mediates between the use of the word and the corresponding item in the world *as meanings*. We shall now present some considerations that support, we believe, our own account against this interpretation, while also suggesting that the Epicureans' semantic remarks are primarily motivated by epistemological concerns.[26]

First, there is no doubt that the evidence provided by Sextus (*M.* 8.11–13, 258) and Plutarch (*Adv. Col.* 1119F–1120A) clearly supports a reconstruction according to which there are only two relevant entities in a signifying relation: the external objects and the phonetic utterances or words that directly refer to the external objects. Both authors report that the Epicureans rejected the existence of Stoic-type 'sayables', and both apparently claim that the Epicureans had a two-tier theory on the basis of that rejection. However, we must be careful in considering how to assess this evidence. For, in our view, neither Sextus nor Plutarch need imply that Epicurus and his followers denied the existence of 'sayables' for reasons having to do primarily with semantics. In fact, the rejection of Stoic 'sayables' makes perfect sense from an Epicurean perspective in so far as 'sayables', according to the Stoics, are incorporeal entities, whereas Epicurean ontology does not allow for the existence of incorporeals other

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[25] For the distinction, see esp. Atherton 2009: 198–99. Defenders of the three-tier reading specify in different ways the semantic role of preconceptions. See e.g., Long 1971; LS 1987 vol. 1 *ad loc.*, Goldschmidt 2006.

[26] For a similar overall interpretation, see Atherton 2009. We, however, hope to offer some further considerations in support.

than the void.[27] So the Epicureans could conceivably reject the existence of the incorporeal Stoic 'sayables' for metaphysical considerations, while accepting the existence of something that plays roughly the same semantic role as 'sayables' but is compatible with Epicurean ontology. It might, in theory, still be the case that preconceptions play the semantic role of 'sayables'.

The question remains: what might be the role of preconceptions in the use of language? Sextus and Plutarch say nothing about this matter, but, as we have already intimated, preconceptions probably serve to fix the conditions of satisfaction for the application of a term or expression first by a fit between the form of the external object and second by an association between the preconceptual outline and a phonetic utterance. Through repeated perceptual encounters with human beings, and the concomitant influx of human-shaped *eidola*, the appropriate channels and the preconceptual outline get created in me. If the stream of *eidola* coming from an external object currently in my visual field fits with this outline, I identify it as a man.[28] Moreover, the phonetic utterance 'man' becomes associated with this particular preconceptual outline, so that it is also activated when I hear the word 'man' uttered. Due to the activation of the preconceptual outline of 'man', I think of a being of a certain shape that shows life functions. Consider again the example in the passage from Diogenes Laertius, namely that the relevant preconception is necessary to correctly answer the question 'What stands over there, is it a horse or a cow?'. The point is that the possession of the relevant preconceptions is psychologically and epistemologically *prior* to being able to reply to that question. In this context too, the preconceptions do not seem to be identical to the senses or the meanings of the words 'horse' and 'cow', although they determine the correct use of these terms.

This model also allows that the same preconceptual outline becomes associated with different phonetic utterances in different communities. In members of different linguistic communities, the same type of preconceptual outline develops due to repeated encounters with the same type of external object. Yet in different communities, this same outline is associated with different phonetic utterances.

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[27] We should also take into account the remark by Atherton 2009: 199, that the Epicurean theory was unlikely to have been developed as a response to the Stoic theory for chronological reasons.
[28] Compare Plat., *Tht.* 191b–195b, and the way in which 'imprints' that are formed on the wax tablet of the mind function in identifying objects currently perceived.

Moreover, the evidence from surviving Epicurean texts about the origin of language also seems to corroborate the two-tier reading. According to Lucretius as well as Epicurus, 'primitive' men were compelled by their own impressions and feelings to emit vocal sounds to designate things, much as a very small child uses gestures to point to things (*DRN* 5.1028–1032). In this picture, the basic semantic items are two, not three: the vocal utterance and what it refers to. The signalling of the child also involves two items, the pointing finger and what it points to. For his part, Epicurus explains how names originally came into being as exhalations of breath peculiarly emitted in natural response to external stimuli, and how, in a later phase, terms were clarified and disambiguated by consensus (*Ep. Hdt.* 75–76). He says nothing about preconceptions or meanings in that context. We encounter the same pattern in the second stage of linguistic development: experts introduce newly coined terms to refer to newly discovered entities (Epic., *Ep. Hdt.* 76). Again, in this account we hear about words referring to things, and there is no separate mention of preconceptions or other entities having the role of meanings. Similar observations may apply to Diogenes of Oinoanda too (10.2.11–5.15).[29] Furthermore, according to Diogenes Laertius 10.34, the Epicureans held that, of enquiries, some are about things, others merely about words or utterances, and that they favoured the former sort of enquiry over the latter. They rejected dialectic as redundant, contending that 'it is sufficient that natural philosophers should proceed under the guidance of words designating things'. Once again, the focus is on words and things, and their role in successful communication and inquiry: language is worth studying not primarily for its own sake as for the sake of understanding the nature of things and of communicating, clearly and unambiguously, our thoughts to others.

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[29] On the occasions when Epicurus mentions preconceptions in connection to language, it is to remark, first, that all error arises over preconceptions and appearances because of the many possible uses of words, some of them proper, others improper (*Nat.* XXVIII.31.10.2–12); and, second, that linguistic aberrations are due to the fact that people attend to concepts other than the primary concept corresponding to the relevant words (*to nooumenon kata tas lexeis*: *Nat.* XXVIII.31.13.23–14.12). The former of these passages points to the criterial function of preconceptions, whereas the latter highlights their importance for correct naming and speaking. But neither of these excerpts from Epicurus dwells on the semantic implications of his views. Likewise, Lucretius refers to concepts in connection to language to make points that are not directly related to semantic issues. For instance, he suggests that the origins of language cannot have been conventional, because no name-giver could have possessed the preconception of the advantages of language prior to its actual use (*DRN* 5.1046–1049). This remark has to do with the Epicurean genealogy of language and serves a dialectical purpose. It is not about semantics.

Finally, this stance might also explain why the Epicureans' extant remains contain neither a semantic vocabulary, nor any detailed explicit reflection on the signifying relation obtaining between words and things or on the exact way in which preconceptions enable linguistic communication, apart from the slim evidence from Epicurus' *Letter to Herodotus* and the passage in Diogenes Laertius we have discussed.

On balance, the conclusion that we find most plausible is this: although the Epicurean model does indeed involve three items – entities in the world, words, and preconceptions – preconceptions do not play the role of meaning, and function differently compared to Stoic 'sayables'. To clarify our position: we do not deny that the Epicureans show interest in semantics and in particular in the signifying relation between language and the world, nor that preconceptions bear a role in that relation. We suggest, however, that their interest in preconceptions is primarily motivated by epistemological considerations rather than the study of semantics for its own sake. Ultimately, what they focus on is the criterial function of the 'first concepts' in scientific contexts and in debates, and the contribution of these concepts to the effective use of language.

7   Preconceptions and Other Concepts

Compared to preconceptions, the available evidence is scarce about other, non-proleptic concepts and their formation. We would like to suggest that the reason for this is not historical accident, but that it might well reflect a corresponding relative lack of interest on the part of the Epicureans. In brief, our position is this: Epicurus provided an account of the methods by which we can validly infer true claims about non-evident things on the basis of sensations and preconceptions. These truths about non-evident things involve positing entities that are not available to sensation, and of which we consequently don't have a preconception formed from repeated sensations. The list of these non-evident items includes such fundamental entities as the atoms and the void. However, Epicurus' focus is not on how we form the concepts of such entities, but how we come to know that they exist and have certain properties.

It is, however, commonly assumed by commentators that the Epicureans and the Stoics described the acquisition of derivative concepts that are distinct from preconceptions by reference to broadly the same mental processes – such as analogical thinking and composition. A closer look at the evidence, we suggest, should make us reconsider and qualify that interpretation. We wish to suggest that the original Epicurean

material on scientific methodology might have been construed by later non-Epicurean authors with a different focus – presumably under Stoic influence – as pertaining to the formation of derivative concepts.

We should once again start with Epicurus' *Letter to Herodotus*. In summarising the functions of sensations and preconceptions in *Letter to Herodotus* 38, Epicurus does not say that we form non-proleptic concepts on their basis; rather, he maintains that we can use sensations and preconceptions as starting points for forming and testing further claims. In the rest of the *Letter*, we in fact find multiple applications of this methodology. For instance, the senses provide immediate evidence for the existence of bodies, and we have seen above how the preconception of body is formed on that basis. Epicurus continues by arguing that the sensory evidence showing that bodies exist, and move is sufficient to establish the existence of something distinct from bodies, which provides place for bodies and in which bodies can move. In accordance with these fundamental characteristics of this entity, inferred by this reasoning, it can be called 'empty' (*kenon*), insofar as it leaves room for moving bodies, 'place' (*topos*), insofar as it is where bodies are, and 'intangible thing' (*anaphēs phusis*), insofar as, in contrast to bodies, it is not resistant to touch (*Ep. Hdt.* 40). By this reasoning, we must then affirm the existence of void.

Epicurus continues by arguing, somewhat elliptically, that if bodies were not constituted of ultimate constituents that are indivisible, unalterable, and 'full', then, when composite bodies dissolve, bodies would dissolve into nothing. Yet, as he argued a little earlier, if bodies could dissolve into not-being, in the infinity of past time all bodies would have already turned into nothing, which is obviously not the case (*Ep. Hdt.* 41).[30] On the basis of this reasoning, we can thus see that these ultimate indivisible and unalterable constituents of bodies – that is, atoms – must exist. Epicurus adds that we cannot conceive of (*epinoēthēnai*) any fundamental *per se* existent entities beyond bodies and the void, either by comprehensive grasp (*perilēptikōs*), as we do with bodies, or on the basis of 'analogy' with what is comprehensively grasped (*analogōs tois perilēptois*),[31] as we do with

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[30] For an attempt to reconstruct this argument, see Betegh 2006.
[31] Usually, the verb *perilambanein* indicates gathering things together in some way. Standard renderings of the verb include 'encompass', 'surround', 'include', 'grasp together', and also 'comprehend several things together and all of them at once'. Here, the adverb *perilēptikōs* and the dative plural participle *perilēptois* appear to convey, precisely, the idea of a comprehensive mental act by which it might have been possible to conceive *per se* entities other than atoms and void. Epicurus contends that no such act can yield that result.

the void. This is not the place to assess these arguments; however, it seems clear that Epicurus' interest lies in how to infer to the existence of entities that are not available to the senses, such as the void and the atoms, and not in giving an account of the mental process of forming a concept of them.

In a later part of the *Letter*, Epicurus argues that we cannot distinguish infinitely many parts in atoms even in thought (*Ep. Hdt.* 57–9). Again, this argument for sub-atomic minima, distinguishable only in thought, is compressed and its interpretation vexed. What seems clear is that Epicurus' inference is based on an analogy with the way in which we visually distinguish tiny, but still visible parts in visible bodies: we have a grasp of these minimal perceptible parts by visually focusing on the tiniest still perceptible part at the edge of the visible body. Epicurus claims that this perceptual experience is 'not in every way completely dissimilar' (*oute pantē pantos anomoion*) but has a certain 'commonality' (*koinotēs*) with the way in which we can focus in thought on the edge of the invisibly small atoms, and this is the smallest part we can even think of. Then, taking that smallest thinkable part of the atom as the unit, we can in thought move on to, or make a transition (*metabasis*) to, the next similarly sized part. Epicurus claims that we can reach this conclusion about the smallest parts of atoms on the basis of the analogy (*analogia*) between the smallest visible part in a visible body and the smallest conceivable part in an invisibly small atomic body. Again, there is no reason to think that Epicurus' focus is on concept-formation as such, but rather on how to make an inference to the existence of atomic minima on the basis of analogy with what is perceptible.

This is also what we see in later Epicurean authors. There is some evidence that Epicurus also used the term *metabasis* for inference ([24]. 30.1, 6–7 Arrighetti / *Nat.* 1A Pap. 154 8 iv.1–7.).[32] The theory was then further discussed and developed by later Epicureans, who used the term *metabasis* for scientific inference in a quasi-technical way, and who ascribed special importance to inference by similarity (*kath' homoiotēta*). We see for instance how Philodemus argues that we can establish the existence of void on the basis of inference by similarity (Phld., *Sign.* viii–ix, De Lacy and De Lacy). In this context as well,

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[32] We can even speculate how this more general use of the term is related to what we have seen in the passage on atomic minima: we focus on the first smallest part at the edge of the body, and then by a mental operation we move on to the next one which we have reason to believe is similar to the first one in the row.

metabasis on the basis of similarity is a method to make existence claims and not a mental process of concept formation.

These examples make clear, we think, that Epicurus' interest was not in the formation of the concepts of void, atoms, or atomic minima, but rather in their existence and properties. We want to propose that later authors also attributed to Epicurus and his followers a theory of the acquisition of derivative concepts by a conflation with Stoic material and on the basis of a shared terminology.

It is striking that similarity (*homoiotēs*) as well as analogy and other such processes occur in several later sources that have commonly been taken to convey the gist of the Epicurean theory of concept formation. This is, for instance, how the following passage from Diogenes Laertius has commonly been understood:

> Hence it is from appearances that we must draw inferences (*sēmeiousthai*) about non-evident things. For all our conceptions (*epinoiai*), derive from sensation either as a result of encounters [with the object] (*periptōsis*) or by analogy (*analogia*) or similarity (*homoiotēs*) or composition (*sunthesis*) and with some contribution from reasoning (*logismos*) as well. (Diog. Laert. 10.32)

Although some translators and interpreters take *epinoiai* in Diogenes' text to refer to concepts, the close parallel with the passages from the *Letter to Herodotus* we have just considered strongly suggests that the term is to be understood more broadly.[33] *Epinoia* appears to encompass a wide range of mental contents, which include (a) the results of direct 'encounters' (*periptōsis*), that is, either occurrent sensations or repeated sensations as in the case of preconceptions and also (b) those that are arrived at by some additional mental operation based on analogy, similarity, and composition, as well as reasoning. This distinction among the sources of *epinoiai* closely corresponds to the distinction made by Epicurus in *Ep. Hdt.* 40 and discussed above, namely the distinction between forming conceptions (*epinoēthēnai*) of things either by comprehensively grasping them (*perilēptikōs*), as we do with bodies, or on the basis of 'analogy' of what is comprehensively grasped (*analogōs tois perilēptois*).[34] Yet, as our discussion has shown, Epicurus' interest in this description was not in concept formation. If so, we can understand Diogenes' text as not being a report specifically on concept acquisition.

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[33] Cf. e.g., Mueller 1982: 78.
[34] For the use of *periptōsis*, 'encounter', in an Epicurean text, cf. Phld. *Sign.* xx.37.

Another factor that has caused confusion are passages by Diogenes Laertius and Sextus Empiricus that use a very similar terminology. One such passage is Diogenes' account of the Stoic theory of concept formation.

> Of concepts (*nooumena*) some are conceived (*enoēthē*) by encounters (*periptōsis*), some by similarity (*homoiotēs*), some by analogy (*analogia*), some by transposition (*metathesis*), some by composition (*sunthesis*). (Diog. Laert. 7.52–3)

Admittedly, there is a clear overlap between this excerpt on the Stoics and Diogenes' report on Epicurus at 10.32 we have just considered: *periptōsis*, *homoiotēs*, *analogia,* and *sunthesis* are key terms in both passages. There are also crucial differences. First and foremost, the account in 7.52–3 relays an account of the formation of Stoic *nooumena*, concepts, and not of Epicurean *epinoiai*. As the examples listed by Diogenes in the continuation of the Stoic account show, the list of *nooumena* thus formed according to the Stoics include not only those of non-perceptible but real entities, such as the centre of the earth, but very prominently also of fictional entities, such as the giant Cyclops whom we conceive on the basis of augmenting humans in thought, or beings with their eyes on their chest conceived on the basis of transposition, or centaurs conceived on the basis of combining in thought a human and a horse. These seem to be acts of imagination with no ontological implications: the fact that on the basis of things we encounter we can form in our imagination the concepts of all kinds of weird creatures, does not in any way imply that such creatures exist. By contrast, as we have argued, the Epicurean account is part of a scientific methodology about how to make valid inferences to the existence and properties of non-evident entities.

Note also that the Epicureans had a markedly different account of how we acquire the notion of centaurs and other monsters: *eidola* of a horse and of a human accidentally meet and get combined, and then such accidentally combined, or otherwise distorted, *eidola* reach our mind (cf. Lucr., *DRN* 4.739–48). In contrast to the Stoic account, such notions for the Epicureans are not the results of mental operations, and are thus not explained by reference to reasoning on the basis of analogy, similarity, or composition.

Passages in Sextus Empiricus have further complicated the picture. Sextus repeatedly states, without ascribing the view to a specific school, that we conceive things either by direct encounter (*periptōsis*) or by inference (*metabasis*) from encounters or from what is evident (*enargēs*),

sometimes adding that *metabasis* can be based on similarity, combination, or analogy (*M.* 1.23–25; *M.* 3.40; *M.* 8.56; *M.* 9.393–396; *M.* 11.250–6). As we have seen, the terminology has good Epicurean pedigree (or at the very least was shared by the Epicureans), and on this basis scholars have sometimes considered Sextus' scheme to be Epicurean. However, when Sextus elaborates on the different forms of these mechanisms and provides examples, his explanation and specific examples, including the Cyclops and centaurs, correspond exactly to the ones in Diogenes' account of the Stoic doctrine of the formation of *nooumena*. If so, whether or not Sextus in these passages is speaking about the formation of concepts or of conceptions, we don't need to ascribe this scheme to the Epicureans. To sum up, Epicurus' primary interest was in scientific methodology and how to make valid inferences to the existence of non-evident entities, whereas the Stoics apparently used a very similar terminology to give an account of the mental operations that result in the formation of derivative concepts of existing and fictional entities, no doubt motivated also by their keen interest in semantics. These Stoic accounts were sometimes mistakenly transferred back to the Epicureans.[35]

This conclusion might have further ramifications for a much-disputed passage. Sextus at *M.* 9.45–7 reports an account according to which god's being eternal and imperishable and perfect in happiness came in by way of a transition (*metabasis*) from human beings:

> For just as by increasing the size of a normal human being in the appearance we get a concept (*noēsis*) of a Cyclops [. . .] so, having conceived a human being who is happy and blessed and replete with all good things, by then augmenting these things we conceived god, the pinnacle in those very respects. Again, having formed an appearance of a long-lived human, the ancients increased the time to infinity by connecting the past and the future with the present; and then, having thus come to a conception of the eternal, they said that god is actually eternal. (trans. Bett)

The text appears to attribute this account to the Epicureans and has been treated by scholars as such. The trouble is of course that this is in contrast with the standard Epicurean descriptions of how the preconception of god is formed. The text poses the further problem that while the notion of the fictional Cyclops thus formed is not veridical, so the process is not truth-preserving, the Epicureans want to state that we can know that god exists and has these properties. However, the account in Sextus is clearly

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parallel – repeating also the example of the Cyclops – with the process of the formation of *nooumena* that Diogenes attributes to the Stoics in (Diog. Laert. 7.52–3), and which, as we have argued, we have good reasons to distinguish from the Epicurean theory of forming *epinoiai* by direct encounter or on the basis of inference. If so, we have good reasons not to ascribe Sextus' account about the formation of the concept of god to the Epicureans either.

8   Can We Identify Preconceptions? Queries and a Puzzle

Can we safely distinguish between preconceptions and other concepts? And if so, how? Epicurus' claim that we cannot escape error if we do not carefully discriminate the concepts that have criterial power from those that do not, puts this problem into sharp relief. This crucial issue is not addressed explicitly in the surviving Epicurean texts. Nonetheless, there is some evidence pointing to partial answers. One line of response can be found in Epicurus. His contention that preconceptions are self-evident (*enargeis*) suggests that he makes a psychological and epistemic assumption similar to the assumption underlying the Stoic cognitive impression (*phantasia katalēptikē*): differently from all other notions, the preconceptions present themselves to the mind in a distinct and unmistakable manner.

Of course, this assumption incurs for Epicurus the sort of criticism that the Academics levelled against the Stoics in respect of the claim that cognitive impressions have a special sort of *enargeia,* represent the object exactly as it is, cannot be confused with non-cognitive impressions, and invariably result in a cognitive grasp of the object. Notably, one could retort that there is no independent way of confirming that a notion is a preconception and hence Epicurus' contention that preconceptions are evident begs the question. Perhaps because they were aware of this sort of objection, later Epicurean authors opt for other possible answers to the aforementioned problem. Demetrius Laco appears to maintain that a way of identifying preconceptions and of distinguishing them from other concepts may involve paying close attention to the relevant linguistic context. According to Demetrius, taking into consideration the specific framework in which a term occurs is crucial to spot the preconception and use it correctly in argument (*PHerc.* 1012 LXIII.1–9; see also Phld., *Sign.* XXXIV.5–11).

Because they believe that preconceptions can be securely distinguished from other concepts, Epicureans invest preconceptions with extremely

strong existential and epistemic implications. In particular, they assume that having a preconception of X implies the existence of X as well as a firm cognitive grasp of what X is. It was only to be expected that these assumptions would attract vigorous criticism. Having a preconception of X, critics argue, does not in the least imply that X is or that I apprehend it. Such criticisms, as we shall see, frequently blur the Epicurean distinction between preconceptions and other concepts either because the objectors are genuinely confused about it or for polemical reasons.

For example, in addressing the question whether the possession of an *epinoia* (here 'conception') or a preconception (*prolēpsis*) of X implies the existence (*huparxis*) of X, Sextus relays that, according to the Epicureans, if one has an *epinoia* or *prolēpsis* of proof, one has a mental grasp of what proof is and this establishes that proof exists (cf. *M.* 8.337). Sextus considers this argument 'rather rustic' (*agroikoteron*) because he objects to the idea that one's mental grasp (*noein*) of X constitutes sufficient grounds for inferring that X exists. In this argument Sextus appears to use the Epicurean notion of *epinoia* that, as we discussed in the previous section, has existential implications because it is formed either on the basis of direct encounter with external objects or on the basis of a valid inference going back to sense perception. Sextus seems to object that in neither case can the possession of an *epinoia* ground existence claims. Moreover, according to an argument rehearsed by Sextus, the 'rustic' reasoning of the Epicureans regarding preconceptions makes them vulnerable to a version of Meno's paradox. If *prolēpseis* are *katalēpseis*, pieces of knowledge, Epicurus would find it difficult to account for an enquiry into, for instance, the four elements. Either he would have a *prolēpsis* or an *epinoia* of the four elements and hence would apprehend them, in which case the enquiry would be redundant, or he would not have an *epinoia* of them, in which case the enquiry would be impossible (Sext. Emp., *M.* 8.335a–336a).

Do the Epicureans have the resources to deal with that puzzle? Sextus suggests that their answer could run along the following lines. Although Epicurus had a conception (*epinoei*) of the four elements, he did not apprehend them in every way, that is, he did not have a thorough articulation of them (see pp. 218–219). And therefore he had both the capacity and the motivation to conduct a theoretical enquiry about what each of the four elements really is. As Sextus points out, here *epinoia*, conception, would indicate a mere movement of the mind stripped of ontological and epistemic implications. For, in that case, one could have an *epinoia* of the four elements, even if they do not exist or even if one has not yet fully apprehended their nature.

Evidently, this type of argument is better suited to concepts intended to serve as the starting points of philosophical or scientific enquiries. In the context of Epicurean methodology and science, it is important to take for granted that, if we have a preconception of X, there is such a thing as X and we can investigate it. But what might be the ontological implications of cases where the mind goes wrong and, notably, cases where the mind forms concepts entailing falsehoods? The Epicureans could take either of the following alternative routes: they could argue that the possession of the conception of X entails that X exists, even though we may be ascribing to X attributes that it does not have; or, alternatively, they could contend that our conception of X is incoherent and does not establish in any way the existence of a corresponding object.

9   Preconceptions and Human Flourishing

Let us finally turn to the ethical use of preconceptions. Just as the entire philosophy of the Garden is geared towards the attainment of happiness, so also is the part that concerns preconceptions and concepts more generally. In the first place, preconceptions are crucial to the defense of the central thesis of Epicurean hedonism and of other cardinal tenets including, notably, the articles of the *Tetrapharmakos* or Fourfold Medicine: god is not to be feared, death is nothing to us, the good is easy to get, the bad is easy to endure (Phld., *Ad* [. . .] iv.9–14). In the second place, Epicureans of all periods stress the importance of preconceptions for human survival, the development of civilisation, and the identification and proper practice of the arts and sciences. Let us take these matters in turn.

To begin with the first item of the *Tetrapharmakos*, following Epicurus (*Ep. Men.* 123–124), all known relevant Epicurean texts contrast the preconception of god, which represents divinities as imperishable and blessed beings, with false *hupolēpseis* about the gods, that is, false beliefs ascribing to the gods attributes incompatible with the content of the preconception. While our conception of god can be developed and enriched in a reliable manner through experience-based mental processes so as to remain compatible with the preconception, it can also be distorted by prejudice and falsehood and move away from the preconception altogether.

Moving on to the second principle of the *Fourfold Medicine*, namely that 'death is nothing to us', Epicurus' extant texts offer a brief analysis of death, but it is conspicuous that they make no mention of a *preconception* of death. Neither do we find any mention of a

preconception of death in the surviving extensive discussions of death and the arguments against the fear of death in later Epicurean texts, for instance, Lucretius or Philodemus. Plutarch however, in an anti-Epicurean dialectical context, construes an Epicurean argument for the claim that 'death is nothing to us' on the analogy of the argument to the effect that we should not fear the gods. According to Plutarch just as the latter is based on the preconception of god, so the former is based on the preconception of death (*thanatou prolēpsis*, *Non posse* 1092C). Philosophically, it seems that the Epicureans should have posited a preconception of death rather than some other type of concept, because, arguably, we acquire this concept through repeated impressions of dead people, animals, and plants. One could then well imagine that they could have tried to derive the premise that there is no continuing subject after the death of the individual from the assumed preconception of death. One might speculate this is perhaps what they did, but all the relevant texts linking that crucial premise of the arguments about death to the preconception of death have been lost – yet, in view of the centrality of the topic this would be a very curious historical accident. Or perhaps they assumed that there is a preconception of death but, nonetheless, did not choose to base the fundamental tenet that 'death is nothing to us' or their arguments against the fear of death on the preconception. At any rate, the lack of evidence about a preconception of death is remarkable.

As for the third and fourth principles of the *Tetrapharmakos*, that 'the good (pleasure) is easy to get' and 'the bad (pain) is easy to avoid', while pleasure and pain are 'evident' (*enarges*) and have criterial power in virtue of being feelings (e.g., Epic., *Ep. Men.* 129), they are also standardly treated as corresponding to conceptions (*ennoiai*) and not, specifically, to preconceptions. For instance, Epicurus' summary presentation of pleasure as the first congenital good entertains pleasure as a mental item as well as a psychological and ethical state. Moreover, the debate between the characters of Torquatus and of Cicero about the nature of pleasure in *De finibus* 2 concerns the coherence of Epicurus' *conception* of pleasure at least as much as the psychological and ethical plausibility of his twofold moral end. There is however some evidence provided by Torquatus (*Fin.* 1.31) to the effect that, unlike Epicurus who relied on the self-evident character of pleasure in order to establish that pleasure is the moral end, some other Epicureans, probably belonging to a later period of the school, maintained that there is also a preconception of pleasure and pain and argued for hedonism on that ground.

Going beyond the *Tetrapharmakos*, Epicureans maintain that preconceptions are crucial in the passage from primitivism to civilisation as well as for the technological achievements of civilised societies. If preconceptions are attended to, they lead to prosperity and happiness, whereas if they are ignored many pains and evils follow. Lucretius' social anthropology in *DRN* 5 is an impressive illustration and defense of that thesis.

Insofar as different branches of expert knowledge (*technē*) are supposed to contribute to the comfort and prosperity of humans, and hence also to the attainment of pleasure, it is not surprising that some of Epicurus' followers explored the role of preconceptions in the context of debates concerning *technē* or the *technai*. In such contexts we encounter a new form of expression referring to preconceptions that some scholars have taken to indicate a distinct category of preconceptions, namely complex preconceptions with evaluative content, such as the preconception of 'good poem', or of 'good rhetor', or of 'good property manager'. However, if we look more closely at the contexts in which these expressions occur, it seems more likely that we do not need to introduce a new class of preconceptions, but rather they reflect the particular dialectical contexts in which they are used. When they are engaged in a debate about what characterises the good property manager, good money-maker or good poem, Epicureans, apply the rules set out by Epicurus in the *Letter to Herodotus*, and adjudicate those questions with reference to the relevant preconceptions. But, we contend, it is not the case that there would be a distinct preconception of the good money-maker or the good poem, distinct from the preconceptions of money-maker and poem *tout court*. Rather, we can decide who the good money maker or what a good poem is by assessing whether they correspond to the preconception of money-maker or poem.

Property management as a *technē* is problematic for an Epicurean, mainly because, at least according to the traditional conception, its overarching goal is material rather than moral, and consists in the maximally effective increase, preservation, and administration of property and wealth. Consistently with the views of Epicurus (e.g. Diog. Laert. 10.120), and Metrodorus (Phld., *De oec. PHerc.* 1424 XII.17–25, XIV.19), Philodemus contends that, for the Epicurean property manager, 'more' is never identical with the open-ended goal of amassing as many riches as possible by lawful means. On Philodemus' account, there are two approaches to the art of *oikonomia*, one suitable for the philosopher, the other unsuitable.[36]

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[36] Similar distinctions about other arts are attributed to Epicurus by Sextus in *M.* 1–6.

To clarify the relation between them and to delimit the boundaries of the sage's engagement in the art of property management, he opposes the preconceptual or proleptic use of *agathos oikonomos*, the 'good property manager' and 'the good moneymaker' *agathos chrēmatistēs*), with the non-proleptic use of that expression and, correspondingly, he systematically compares and contrasts the Epicurean conception of property management and money-making with the traditional conception of that art:

> We must not [violate] this (sc. the meaning of the expression 'the good moneymaker' *agathos chrēmatistēs*) through linguistic expressions, as sophists do, for we would be showing nothing about the acquisition and use (of wealth) pertaining to the wise man. Rather, we must refer to the preconception that we possess about the good money-maker, ask in whom the content of that preconception is substantiated and in what manner that person makes money, and ascribe the predicate 'good moneymaker' [to whoever it may be in whom] those features are attested'. (*De oec. PHerc.* 1424)

While for the traditional mindset the goodness of a property manager consists in his capacity to amass and administer wealth in the most efficient manner possible and through legal means, according to the Epicurean way of thinking the goodness of the property manager must have to do with his capacity to bring pleasure through the exercise of his art.

We see something closely similar in the debate between the Stoics and the Epicureans concerning the goodness of a poem. On the Stoic view, the goodness of a poem depends on its content and is judged by the aptitude of the latter to promote virtue, whereas, on the Epicurean view as defended by Philodemus, the goodness of a poem depends significantly on its form (*De poem.* 11 N 1074b fr. 21 + 1081b fr. 8 sup., 6–11 Janko) and is judged by the pleasure that it causes due to its form. In this case as well, we would maintain that there is no separate preconception of poem *tout court* distinct from a preconception of good poem. Rather, it is already part of the preconception of a poem that it should cause pleasure, and a good poem delivers exactly that.

Sometimes the Epicureans appeal to preconceptions related to the arts not to assess the value of a practice or a product, but to settle the formal question whether or not a certain practice truly possesses the credentials of a genuine *technē*. On other occasions, they rely on the preconception of a *technē* so as to decide whether or to what degree people who adhere to the philosophy of Epicurus would profit from engaging in some particular *technē*. Philodemus' discussion of the art of rhetoric pursues both these goals. Accordingly, Philodemus follows the strategy of looking, first of all,

at the conception of *technē* or the conception of a given *technē* inherent in ordinary language in order to determine, for instance, whether rhetoric is an art. Here we cannot analyse his argument, but we wish to register that he eventually achieves his goal in part because he engages in the necessary conceptual work of removing certain ambiguities surrounding the concept of *technē* and of retrieving the preconception that underlies it. As he contends, his conclusion conforms to that preconception: technicity has everything to do with method and only sophistic rhetoric is methodical, whereas political rhetoric and forensic rhetoric are not; hence only sophistic rhetoric deserves to be called an art (cf. *Nat.* XLIII.20–21 / Longo 133).

The issue of the technicity of rhetoric is a theoretical dispute, but it has practical and ethical aspects as well. Insofar as forensic and political rhetoric are demoted from the elevated status of a *technē*, they lose in prestige and attraction, while sophistic rhetoric retains both. Thus, the choiceworthiness of the former becomes questionable, whereas the value of the latter is not diminished. From an Epicurean perspective this is a good result, since the rhetoric practised in courthouses and political assemblies aims at money and power, whereas sophistic rhetoric mainly aims at pleasure. This example shows how the Epicurean methodology of relying on preconceptions in assessing disputed questions can be applied also outside the realm of the study of nature, and how the application of the method, even in specialised domains, is ultimately put at the service of the attainment of happiness.

10   Conclusion

Does the surviving Epicurean material about concepts amount to something like a substantive theory of concepts and concept formation? The evidence we have reviewed doesn't encourage an unqualifiedly positive answer to this question. As we have suggested, if we don't find such a theory, this is probably not because of the fragmentary state of the evidence, but because, ultimately, the Epicureans are interested in preconceptions and other concepts mainly in so far as they are relevant to their epistemology, scientific methodology, and ethics. They are not principally motivated by a genuine interest in semantics, the philosophy of language, or questions pertaining to the psychology of concepts as such. Even so, however, we hope to have shown that Epicurus and his associates as well as his later successors developed a distinct, original, and philosophically valuable approach to concepts in the light of their own version of atomism and of empiricism. They coined a quasi-technical vocabulary to draw

pertinent and defensible distinctions, advanced compelling arguments for
their theses, and offered valuable insights regarding the mind's contribu-
tion to the formation of concepts and their use. Importantly, they high-
lighted aspects of the ontology of concepts, traced their relation to reality
and language, and underscored their crucial role in science, the acquisition
of knowledge, and the attainment of the good life.