

Epicurean Epistemology

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1. Introduction

The Epicureans' foremost claim about knowledge and science is that sensation is the first criterion of truth. In their mind, it means not only that each belief, judgement, or opinion should be assessed from sensation and evaluated in light of common experience, but also that sensation itself is always true. Similarly, affections (*pathē*) of pleasure and pain are criteria in the practical sphere, because they indicate immediately what is pleasant or painful in a given time and, consequently, what is to be pursued or avoided. Falsity and illusions are brought about by our judgements and opinions regarding what is perceived or conceived, and not by sensation itself. An uncontrolled use of reasoning, or the false assumption that reason can govern itself apart from the senses, would necessarily jeopardize one's ability to reach true knowledge. At first sight, then, Epicurean epistemology appears as a mere empiricism. In fact, one of its main features is a deep mistrust of reason as such.

Nevertheless, Epicureans do not give up the idea of elaborating a real and consistent epistemology, based on a complex methodology of judgement. They do not even reject 'ideas', taken as general and common notions or simple thoughts. Such 'ideas' are neither intelligible entities existing in an intelligible realm, like Platonic ideas, nor pure constructions of our mind apart from experience. After all, even an empiricist philosopher may admit, without inconsistency, the validity of this kind of 'idea', since each of us, in everyday life, resorts to general representations, like time, being, human being, and so on. Indeed one may consider that the word 'ideas' can be applied to a wide range of cognitive states, as does John Locke at the beginning of the *Essay Concerning Human Understanding* (1.1, Intro. sec. 8). Moreover, the Epicureans think that

some notions, ‘preconceptions’ (*prolēpseis*) according to them, have a status, which is similar to that of sensations and affections (pleasure and pain), insofar as they reveal, immediately and without ambiguity, what they are related to: the preconception of ‘human being’ is a reliable representation or idea of what this or that particular human being is. Last, they develop a global world view, beyond ordinary experience, a comprehensive explanation of the physical world, which necessarily involves judgements about *adēla*, that is: non-perceptible things and principles, like atoms and void. Now, this is not a secondary task for the Epicureans. This project coincides with the ultimate goal of their philosophy as a whole: the ethical perspective of psychic *ataraxia*, absence of disturbance.

Taken that way, the question is not whether Epicureans are empiricist philosophers – they definitely are empiricists – but which kind of empiricists they are. If they are not radical empiricists, who would not admit any true knowledge but sensation, are they ‘ashamed’ empiricists, who are in contradiction with their own principles because they are led to admit non-empirical beliefs and representations? Ancient critics of Epicureanism, especially Cicero and Plutarch, could lead us down one of these roads, because they point out what they denounce as inconsistencies in Epicureanism and because they aim at its alleged incompetence in logic and epistemology. Actually, Epicureanism is rather a sort of rational empiricism, which fully legitimates the use of reason, in accordance with experience. This reading is probably the most fruitful, if one aims to understand the twofold goal of the Epicurean epistemology: to give a strong basis (at the same time empirical and logical) to our scientific hypothesis and claims, on the one hand, and to reach a reassuring world view which contributes to the pursuit of happiness, on the other.

2. The Epicurean tradition and our sources on Epicurean epistemology

The philosophical tradition founded by Epicurus (341–270 BCE) is one of the most homogeneous of antiquity, although a certain evolution may be observed after the first period of the Garden (Epicurus’ school, founded around 306–305 in the immediate environs of Athens). This evolution is due to successive polemics (especially against sceptics and Stoics), historical conditions, and the literary and philosophical temperament of authors, particularly Lucretius in his Poem *On the Nature of Things* (*De Rerum Natura*; quoted below: DRN). Nonetheless,

the doctrine remains basically the same until Diogenes of Oenoanda, the last Epicurean in Antiquity (second century CE). The Epicureans refer constantly and with great respect to their first teacher. Epicurus wrote a considerable body of work, now largely lost. Fortunately, Book 10 of Diogenes Laertius' *Lives and Opinions* contains a 'life of Epicurus' which gives important information on Epicurus himself and the organization of the Garden. It also presents a valuable overview of Epicurean philosophy, which pays particular attention to epistemology (paragraphs 29–34). As we will see later, this passage contains important indications on the criteria of truth and the epistemic function of sensations and preconceptions. Diogenes adds (paragraphs 35–135) the three philosophical texts that constitute the basis of our documentary evidence: the *Letters* to Herodotus (below: *Hdt.*), Pythocles (below: *Pyth.*), and Menoeceus (below: *Men.*). These are followed by forty Principal Maxims, or Key Doctrines (below: *KD*). They focus mainly on ethics, but contain important information about epistemological issues as well, like *KD* 37–38 on the preconception of what is just, or *KD* 24 on the preeminent role of sensation. All the same, let us keep in mind that Diogenes Laertius cites forty-one titles of works by Epicurus and specifies that he is mentioning only his best works (10.27–28). Among these, *On Nature* (*Peri phuseos*), in thirty-seven books, must have been the most important, not only with respect to its volume, but also because it contained a detailed development of thesis, which are only summarized in the *Letters*. We have a few fragments of it, thanks to the excavations at Herculaneum and the papyrological studies based on them.

Despite the strong personality of the founder of the Garden and the traditional orthodoxy of his pupils and heirs, Epicureanism cannot be reduced to Epicurus' own thought. His first-generation disciples – Hermarchus, who succeeded to the headship of the Garden, and after him Colotes, Polystratus, and Metrodorus – contributed to deepening the doctrine. Colotes' criticisms against scepticism, in particular, which are known thanks to Plutarch's treatise *Against Colotes*, reveals that the Epicurean theory of knowledge, after Epicurus, is built up, to some extent at least, against the philosophical tradition as a whole, including Presocratic philosophers (like Parmenides and Democritus), Plato, Socrates, and the sceptics. Colotes, indeed, reduces all these doctrines to scepticism itself, because they cast doubt on our most evident knowledge, like everyday experience. How could anyone be certain, if perception is never reliable, that he is a human being, that fire is dangerous for him, and so on? So doing, they spread confusion in our lives and contribute to psychic disturbance.

The influence of the Athenian Garden gradually extended to such an extent that in the first century BCE, Italy became the site of an important Epicurean revival, thanks to the diffusion of Epicurean ideas in the cultivated circles and to the debates between the great philosophical schools, as depicted in several of Cicero's works like *De finibus bonorum et malorum*, *Tusculana*, *De natura deorum*, or *De fato*. Our main Epicurean witnesses to this phenomenon are Philodemus of Gadara and above all Lucretius (first century BCE). Both of them take part in the epistemological debate and tackle the issues of their time, regarding scientific methodology and the criterion of truth.

Philodemus, a Greek philosopher from Syria, is the author of several treatises dealing with ethics, economics, aesthetics, politics, logic, theology, and the positions of the various philosophical schools. The fragments of his books are preserved in the papyri of Herculaneum and constitute a source that is damaged but very valuable for the historical development of Epicureanism and for its new areas of interest, such as poetry and the history of philosophical movements. He is the author of a treatise 'on signs and inference' (usually mentioned under the title of *De signis*), where he echoes the epistemological debates in which Epicureans face the other schools, especially the Stoics, and he is probably the author, as well, of a treatise on sensation. Moreover, with Philodemus, not only in his epistemological writings but also in other treatises, the preconception seems to acquire a greater importance (Tsouna 2016): in the practical sphere (like economics) it indicates what is good in a given activity (for instance, what is the 'idea' of the good manager, i.e. the sage himself); from the epistemological point of view, it seems to be more closely connected to definition.

Regarding Lucretius, the situation is quite different: we know almost nothing about his life, but we have a continuous text of his poem *On the Nature of Things*, which offers a good idea of his philosophical project. Lucretius himself claims to be a mere translator or imitator of Epicurus (*DRN* 3.6). Actually, his fidelity should not conceal a great formal originality and a genuine intention to elaborate the doctrine on several fundamental points. Lucretius has also to face the philosophers of his time who are declared opponents to the first-period Epicureanism, like Stoics and sceptics. The latter are permanently in the background when epistemological issues are dealt with, as can be seen from Lucretius' anti-sceptical arguments in favour of perception, in Book 4 of his poem. Finally, the fragments of Diogenes of Oenanda's mural inscription, in Lycia, attest to the persistence of the Epicurean tradition until the second century CE, even if they are contemporary with the decrease of its influence in the ancient world. Diogenes of Oenoanda seems to be more concerned, at least in the small



part of his inscription we know (which amounts to perhaps a fifth of the total), with ethics and physics than with epistemology, but several clear attestations of faithfulness to the Epicurean empiricism and scientific methodology are still to be found there.

3. Sensation as primary evidence

Sensation is always true, according to Epicurus and his followers. As Lucretius puts it, '[W]hatever impression the senses get at any time is true' (*DRN* 4.499). Nonetheless we are often victims of sensory illusions. To say the least, the imprecision of information coming from the senses is commonly noticed. It is even a sort of topos in the history of philosophy. How could it be that sensation is our first criterion of truth?

Epicurean texts offer several arguments to escape this difficulty. Some are based on positive statements, whereas others are inferred from negative arguments. Let us start with the positive arguments in favour of sensation. One of the most elaborated arguments is physical or physiological. The physiological explanation of sensations runs as follows: vision, for example, results from the reception of replicas (*tupoi*) or images (*eidōla*) coming spontaneously from the seen object. Because these transmitted emanations preserve the structure and properties of the object, they produce, in the sensory organs of the perceiver, a representation or appearance (*phantasia*), which remains in 'sympathy' (*sumpatheia*) with the object, that is, with the 'substrate' or 'underlying reality' (*hupokeimenon*), as Epicurus says (*Hdt.* 49–53; see also Lucretius, *DRN* 4.46–268).

One should not believe, however, that sensation is nothing but a physical reception of corpuscular bodies. The sensory impression does not actually become an appearance (*phantasia*) unless we 'grasp [it] by applying ourselves to it through thought or else through the sense organs' (*Hdt.* 50). Sensation, like the mind's perception, entails an *epibolē*, that is, an 'application', or 'focusing' or 'projection' towards the object. The latter is thus not merely received, but also 'aimed at'. Its image is at the same time a projection-of-an-image (*phantastikē epibolē*: *Hdt.* 50–1). Consequently, sensation involves both the physical receptivity that makes it true, and the mental act of attention without which it could not inform us about what we perceive.

Conversely, the appearance is not purely subjective, and even less strictly mental: what we perceive in ourselves, through our sense-organs, is the very result of a physical process. Now, a physical process is something real (i.e.



something true); hence, what happens in sensation is the immediate and reliable attestation of a physical reality. In other words, we perceive something that the object itself brings about, and the process through which we perceive this thing can be described in the same way as any other natural process. Because our sensations are physically similar to their objects, they can be called 'true' prior to any judgement about their truth or falsity. The explanation of the origin of sensations thus leads to an assimilation of truth to reality. In this sense, one may talk about a 'physicalist' and realist conception of truth.

This is not only important for the everyday knowledge and life and for natural experience: the immediate reliability of sensation is also a justification for the appeal to empirical evidence on the epistemological level, for it applies derivatively to representations that are not immediately sensory. Paragraphs 37–8 of Epicurus' *Letter to Herodotus* (Long and Sedley 1987) clearly show that sensations play the role of criteria for scientific investigation, and not only for everyday knowledge:

First, then, Herodotus, we must grasp the things which underlie words, so that we may have them as a reference point against which to judge matters of opinion, inquiry and puzzlement, and not have everything indiscriminated for ourselves as we attempt infinite chains of proofs, or have words which are empty. For the primary concept corresponding to each word must be seen and need no additional proof, if we are going to have a reference point for matters of inquiry, puzzlement and opinion. Second, we should observe everything in the light of our sensations, and in general in the light of our present focusings whether of thought or of any of our discriminatory faculties, and likewise also in the light of the feelings which exist in us, in order to have a basis for sign-inferences about evidence yet awaited and about the non-evident.

I will come back later to the methodological aspects of this passage. For the moment, let us just notice that sensation is said to be true and reliable, not only within the sphere of practical life and common experience, but also in the epistemological and scientific areas, and this for two reasons. First, sensation corresponds to the necessary limit of the demonstration and demonstrative knowledge, since what is evident, by definition, does not need any further demonstration; so sensation prevents from the *regressus ad infinitum*, the infinite research for a primary cause. Second, as a basis for the method of inference, it constitutes a guarantee for inferences on non-evident (i.e. non-empirical) realities; thus, it is a compulsory step for anyone who wants to grasp the principles (atoms and void), which are below the objects of experience.

Still, an objection may be raised: If sensation is true right from the start, how are we to account for perceptual errors, hallucinations, or optical illusions? In fact, under non-standard conditions, the abovementioned sympathy of images will only be partial. Let us take the famous example of the square tower: the air that wears down the simulacra is responsible for the effect that, seen from a distance, a tower that is in fact square seems round to us (*DRN* 4.353–63; Sextus Empiricus, *Against the Mathematicians* 7.208–9). This is objectively an illusion: if we assess this image throughout a methodical comparison with better conditions of observation (if the observer is closer, moves around the tower, etc.), it cannot be taken as a reliable information about what is seen. Nevertheless it remains the case that the impression itself is constituted via an immediate sympathy with the flow of simulacra or images, and thus that it is constituted in sympathy with the objective conditions of their production: it is true that the tower appears to be round.

In addition, the Epicureans use negative and defensive arguments in support to sensation as a criterion. Indeed, to say the least, the point is a matter of controversy in Antiquity. Before Epicurus, Democritus had set out many arguments against sensation, particularly regarding our knowledge of the physical reality (see especially: Sextus Empiricus, *Against the Mathematicians* 7.135–9; *Outlines of Pyrrhonism* 1.213–14; Galen, *Elements According to Hippocrates* 1.2; Diog. Laert. 9.72). Now, Epicurus endorses the main thesis of the Democritean physics, according to which atoms and void make up all things. One may reasonably guess that Epicurus' theory of 'sympathy' in *Letter to Herodotus* is a response to this criticism against empirical knowledge. Then the followers of Epicurus had to give responses to new opponents, especially the Academic Sceptics and the Stoics. Lucretius's Fourth Book of *De Rerum Natura* offers a good example of this polemical context. Against the sceptics' classical arguments, Lucretius defends the infallibility of sensations by showing that no sense, such as sight or smell, can be corrected by a different sense: sight cannot be corrected by hearing, or hearing by touch, or touch by taste, since each sense has a particular and distinct power (*DRN* 4.486–90). As for reason, it comes from sensation and so cannot refute it, since it would refute itself in claiming to refute its own origin (*DRN* 4.483–5; see also Diog. Laert. 10.32). We must therefore admit that error comes from some other mental movement distinct from sensation. If I see a square tower in the distance as round, it is not sensation itself that deceives me, but rather my judgement or opinion – that is, the belief I form when I have the sensation (*DRN* 4.353–63). The distortion of the images (*eidōla*) is an epistemologically neutral physical process. The error really comes

from that which is ‘added by opinion’ (*prodoxazomenon*) and is not subsequently subjected to an attestation capable of confirming it (*Hdt.* 50). This judgement, it is true, depends on sensations, but it is distinct from them.

In fact, beside the physical explanation, sensation itself is defined in a negative way: it does not require *logos* – reason or discourse – or even memory to establish the truth of what it expresses. According to Diogenes Laertius (10.31), ‘[A]ll sensation, he [Epicurus] says, is irrational (*alogos*) and does not involve memory.’ Being deprived from any kind of rational activity, it cannot judge; hence it cannot fail. Indeed error and illusion ever presuppose a propositional content *plus* a belief (or what Stoic philosophers of the same period call an ‘assent’) related to this propositional content. Now, this twofold operation requires the use of a rational faculty.

However sensation is not the only criterion of truth. Diogenes Laertius (10.31) reports that, according to Epicurus’ *Canon*, the criteria of truth are sensations, preconceptions (*prolēpseis*), and feelings or affections (*pathē*): ‘Thus Epicurus, in the *Canōn* (“Yardstick”), says that the sensations, preconceptions, and the feelings are the criteria of truth. The Epicureans add the “focusings of thought into an impression”’ (cf. also Sextus Empiricus, *Against the Mathematicians* 7.203–16). It does not mean that these criteria are opposed to one another. On the contrary, each one plays its part, according to the particular situation. Affections reveals in an evident manner pleasure and pain to the agent (Diog. Laert. 10.34), and for this reason play a central role in ethics and in the Epicurean explanation of conduct. We do not have, in the Epicurean texts, any account expressly dedicated to preconceptions, but Diogenes Laertius’ summary indicates that they have two correlative functions: the retention in memory and generalization of repeated sensations – the notion of man derives from the sensory experience we have had of individual human beings – and the anticipatory apprehension, through general notions, of objects that may correspond to later sensations – what appears to me in the distance may be a horse, an ox, or a man (10.33). Preconceptions intervene, not only in sciences and theoretical knowledge, but also in practical (ethical, political, ordinary) situations. Let us now focus on this very important feature of the Epicurean epistemology.

4. Preconceptions: genesis and methodology

What allows Epicurus to count preconception as a criterion is its immediate evidence. Although it comes from sensation, preconception is, like sensation, a



self-evident knowledge: when I have in my mind the preconception of a horse, a cow, or a human being, I have a clear, unambiguous idea of it. A preconception, indeed, has two features, which can explain this evidence: on the one hand, its proper immediacy and clarity; on the other hand, the continuity that links preconception to sensation.

Let us begin with immediacy. One could object to the Epicureans that the evidence of preconceptions is secondary or derived, since it comes from another act of knowledge: sensation, which precedes preconception, by definition. Now, if preconception is derived, it constitutes a sort of second-rank knowledge, distinct from what is originally evident; hence, one may guess that there is some intermediate stage, between sensation and preconception, which makes room for false judgements. Nonetheless, the Epicureans seem to respond to this objection that there is no intermediate phase, because preconception (once formed in our mind) is immediately given with the corresponding external stimulus: the sensation of the object or the corresponding linguistic signifier. Consequently, because preconception is a spontaneous manifestation of the main properties of the object, there is no room for judgement. This response appears in the following text, the most complete extant account of Epicurean preconception:

Preconception, they [the Epicureans] say, is as it were a perception, or correct opinion, or conception, or universal 'stored notion' (i.e. memory), of that which has frequently become evident externally: e.g. 'Such and such a kind of thing is a man.' For as soon as the word 'man' is uttered, immediately its delineation also comes to mind by means of preconception, since the senses give the lead. Thus what primarily underlies each name is something self-evident. And what we inquire about we would not have inquired about if we had not had prior knowledge of it. For example: 'Is what's standing over there a horse or a cow?' For one must at some time have come to know the form of a horse and that of a cow by means of preconception. Nor would we have named something if we had not previously learnt its delineation by means of preconception. Thus preconceptions are self-evident. And what we inquire about we would not have inquired about if we had not had prior knowledge of it. For example: 'Is what's standing over there a horse or a cow?' For one must at some time have come to know the form of a horse and that of a cow by means of preconception. Nor would we have named something if we had not previously learnt its delineation by means of preconception. Thus preconceptions are self-evident. And opinion depends on something prior and self-evident, which is our point of reference when we say, e.g., 'How do we know if this is a man?' (Diog. Laert. 10.33; Long and Sedley 1987)



The formula ‘as soon as’ is to be emphasized. ‘As soon as’ I hear the word ‘man,’ I have in mind, through the preconception, like a *déjà vu*, the corresponding delineation (or ‘schema’ or ‘impression’: *tupos*). In other words, I do not ask for any additional data, because the link between the preconception and the word is immediate, as is the link between the preconception and the object of my first sensible experience. So, when I think of ‘man’ generally speaking, I reach the same level of evidence as I do while perceiving a particular man through the senses. Consequently, one may say that ‘preconceptions are self-evident’, as it is claimed in the text.

Moreover, there is a natural continuity between sensation and preconception, which is well expressed by the psychological and physical account (Goldschmidt 1978). Diogenes of Oinoanda (fr. 9.III.6–14: see Smith 1993) describes quite clearly what occurs when a preconception is being formed: ‘and after the impingements of the first images, our nature is rendered porous in such a manner that, even if the objects which it first saw are no longer present, images similar to the first ones are received by the mind.’

The repetition of sensations of the same kind (say: of an indefinite number of human beings) produces continuous modifications in the sense organ, and this phenomenon is the physical basis of the similarity which characterizes the preconception (the common idea of human being). As we have seen, sensation is deprived of reason and memory: it is an instantaneous grasp. Preconception is a sort of memory insofar as it retains the common features of successive and similar experiences. It is also an active remembering of what has been experienced previously (Glidden 1985; *contra* Hammerstaedt 1993). Hence, preconception is truly self-evident because it consists in a sort of immediate, and therefore reliable, actualization, by thought, of the state – the mental image – produced by the preceding sensible experience (Tsouna 2016).

However, one may wonder if preconception is in itself rational or not, and, if it is, how it can be saved from the possibility of false predication (Striker 1996: 41). It is not clear if the Epicureans think that preconception has a propositional content, for example, ‘human being is such and such’ as alleged propositional content of the preconception ‘human being’. At any rate, they seem to think that preconception is already rational insofar as it is a sort of notion or ‘idea’, in the broad sense already mentioned. Diogenes Laertius (10.32) attributes to the Epicureans a typology of general representations according to which each kind of notion is a rational construction: ‘Also, all notions (*epinoiai*) arise from the senses by means of confrontation, analogy, similarity and combination, with some contribution from reasoning too.’ Taken that way, preconception, which

is a kind of *epinoia* – perhaps the sort of notion which arises from the senses by means of ‘similarity’ – is something more elaborated than a mere sensory apprehension of the object. Consequently, it probably depends on the rational part of the soul. Nevertheless, the Epicureans obviously think that there is at least one kind of notion that comes right after the sensation, without intermediary, because it is obtained in the most natural way: preconception.

Besides, preconceptions are not just spontaneous productions of the mind, or natural generalizations: they are also very important tools for scientific inquiry (see, especially, Long 1971; Asmis 1984; Morel 2008; Tsouna 2016). Preconception, in the Epicurean methodology, has at least three functions: it serves (a) as a primary concept for scientific inquiry, (b) as an invariant or a critical point of comparison for other representations or judgements, and (c) as a sort of definition.

(a) An interesting testimony by Clement of Alexandria (*Stromates* 2.4) echoes Epicurus’ inferential methodology as it is developed in *Letter to Herodotus* (37–8). Clement’s text defines Epicurean preconception as ‘a focusing on something evident and on the evident notion of the thing’ and adds that ‘it is impossible to look for anything, to have doubts or opinions about anything or even to refute anything without preconception.’ Taken that way, preconception is not only a particular kind of representation among others: it gets a very important epistemological and logical function insofar as it is necessary for any subsequent investigation. Without preconception, indeed, there would be neither issues, nor opinions, nor research. One may suppose that this theory of preconception is the Epicurean response to the famous issue of Plato’s *Meno*. As a self-evident notion and as a criterion, preconception must be referred to, in order to assert any proposition on a given subject.

(b) Besides, the *Letter to Menoeceus*, in paragraph 123, invites us not to add to the ‘common notion’ (*koinē noēsis*) of God (a notion of which we have the outline in ourselves) an opinion that contradicts it, that is to say, an opinion that is contrary to the idea that the gods are happy and incorruptible. Now, we learn next that this common notion is a preconception,¹ as opposed to the false assumptions that the majority of men make:

For there are gods – the knowledge of them is self-evident. But they are not such as the many believe them to be. For by their beliefs as to their nature the many do not preserve them. The impious man is not he who denies the gods of the many, but he who attaches to gods the beliefs of the many about them. For they are not preconceptions but false suppositions, the assertions of the many about gods. (Epicurus, *Letter to Menoeceus* 123–4)

It is clear from this text that we have in ourselves a stable representation of the gods, as happy and incorruptible beings. All passages insisting on the presence of preconceptions *in us* tend to show the same thing. This is particularly true, in Cicero's *On the Nature of Gods* (*De natura deorum*), of the exposition by the Epicurean Velleius, who insists repeatedly on the inherence of a notion of the gods, as nature itself has inscribed them in every mind (1.43: *in omnium animis eorum notionem impressisset ipsa natura*), whence the proposition: 'we have ingrained, or rather innate, knowledge of them' (1.44: *insitas eorum vel potius innatas cognitiones habemus*). However, we may also have acquired false ideas about them: the gods of Olympus are often jealous, envious, and cruel, and many people are terrified at the thought of divine punishments in the Hades. These opinions are not only incompatible with divine happiness; they also bring about psychic disturbance. To save ourselves and other people from psychic troubles arising from these false beliefs, we must use the right preconception of gods as an invariant to which we can refer in order to compare with it the various opinions that we may have concerning the gods.

In that very particular case of the preconception of gods, preconception serves first of all as a negative criterion for characterizing its content: it defines what the gods are not. Conversely, it has, by virtue of its very imprecision, a positive function: a prolepsis is the condition for the validity and legitimacy of our statements concerning its object. Thanks to it, one can accept various representations of the gods, and concede some points to the traditional, imagistic theology, for instance, that the gods have this or that shape and in particular a human shape (Cicero, *De natura deorum* 1.46), or that they live in a community and speak Greek (Philodemus, *On Gods* 3.14; Diels), or even that some things in nature may be called by the names of gods. Lucretius makes this quite clear in Book II of his *Poem*:

If anyone is resolved to call the sea Neptune and corn Ceres, and likes rather to misuse the title of Bacchus than to utter the true name of the vine-juice, let us grant that he may proclaim that the world is the Mother of the gods, if only in very truth he forbear to stain his mind with shameful religious awe. (*DRN* 2.655–60)

The situation is analogous to the case of the prolepsis of justice (Goldschmidt 1977). We have two maxims of Epicurus on the topic, which make explicit reference to the preconception of justice:

What is legally deemed to be just has its existence in the domain of justice whenever it is attested to be useful in the requirements of social relationships,

whether or not it turns out to be the same for all. But if someone makes a law and it does not happen to accord with the utility of social relationships, it no longer has the nature of justice. And even if what is useful in the sphere of justice changes but fits the preconception for some time, it was no less just throughout that time for those who do not confuse themselves with empty utterances but simply look at the facts. (Epicurus, *KD* 37)

Where, without any change in circumstances, the conventional laws – when judged by their consequences – were seen not to correspond with the preconception of justice, such laws were not really just; but wherever the laws have ceased to be useful in consequence of a change in circumstances, in that case the laws were, for the time being, just when they were useful for the social relationships of the citizens, and subsequently ceased to be just when they ceased to be useful. (Epicurus, *KD* 38)

The idea we have of political utility (i.e. of what is useful to a given political community in a given place and time, so that people do not do each other harm) must adapt itself to the preconception of justice. This must be, then, sufficiently stable to serve as an invariant and as a point of comparison. The conception of what is useful can change according to the circumstances, even as it remains consistent with the prolepsis of justice. This does not suffice, in and of itself, to *define* justice in a way that applies, without variations, to all times and all places; but it constitutes a framework for its variation or a rule of evaluation for particular situations in which the question of legal justice may arise.

(c) What characterizes prolepsis, apart from its function as a criterion which it shares with other modes of knowledge, is that its content is always something general – a god is always incorruptible and happy; body is not conceivable without a determinate number of constant properties, such as shape or size – and that this content consists in the essential determinate idea that corresponds to the word, thanks to which the prolepsis is apprehended (Manuwald 1972: 103–105). This point is confirmed by Philodemus (*De signis* 52; xxxiv–xxxv De Lacy's trans.), who specifies that preconception takes the place of definition: 'There is also the meaning that this is the particular definition of that, and this is the preconception, as when we say that body as body has bulk and resistance, and man as man is a rational animal.'

Epicurus and his followers are deemed to have vigorously criticized the definition as such (*Anonymous Commentary to Plato's Theaetetus*, 22, 39–47). Actually their target is a sort of abstract and purely logical definition, independent of any empirical attestation of its content. They know that we do need definitions, for the everyday life and, above all, in philosophy and sciences. Preconception,

insofar as it is closely connected to empirical data, is well equipped to play this role. To understand this third function of preconception, let us consider now the Epicurean attitude towards demonstration.

5. Criticism and use of demonstrations

The Epicureans not only reject abstract definitions: they also criticize dialectic (Cicero, *Academics II (Lucullus)* 30.97; Diog. Laert. 10.31) and have strong reservations on demonstration (*apodeixis*) (Asmis 1984: 35–9; 2009). Actually, Epicurus and his followers, in criticizing demonstrations, have three kinds of targets: purely formal demonstrations (when one does not take empirical data into account); non-relevant demonstrations (when one uses demonstrations, although this should not be done, e.g., about the meaning of words); *regressus ad infinitum* (when one intends to demonstrate the indemonstrable principles). A good example of this is the methodological introduction of Epicurus' *Letter to Herodotus* (37–8), already quoted.

In this passage, Epicurus does not argue against demonstration as such, but against certain uses of *apodeixis*. He criticizes, on the one hand, *ad infinitum* demonstrations and, on the other hand, additions of demonstrative arguments ('additional proof') when one should keep to the evidence of verbal expressions ('the things which underlie words'), of sensations, of affections, and of first notions ('primary concepts') of things (i.e. probably: preconceptions).² It is noteworthy that Epicurus does not confine himself to mentioning the criteria of truth (sensations, affections, and preconceptions) for their proper value, but sets out the necessary conditions for sign-inference (*semeiōsis*). If one takes all these conditions into account, one can rely on stable and manifest data in order to lead the inquiry about non-evident matters (like atoms and void). In other words, one has to start from indemonstrable data.

Now, this requires a clear distinction between what can be demonstrated and what is not demonstrable – that is, between what can be an object of demonstration and what is self-evident. It is the case of sensations, as well as of preconceptions: the latter are primary concepts, beyond which we must not go (since it is self-evident) at the risk of finding ourselves in an infinite regress towards some supposed prior self-evident thing. The Epicureans have an implicit doctrine of the 'indemonstrable' principles, taken as necessary conditions for scientific reasoning. Indeed, they do not reject all demonstration, and they think that some mental states – sensations, preconceptions, and affections – are by

themselves evident, so that they play the role of indemonstrable principles of reasoning.

Consequently, one may reasonably suppose that the Epicurean criticism against demonstrations does not aim at logic as such (as attested also by Sextus Empiricus: *Against the Mathematicians* 7.15), but rather at misuses and false conceptions of deductive reasoning.

6. Judgement and science

Moreover, the Epicurean theory of criteria of truth, the ‘canonic’, does not content itself with a mere typology of self-evident knowledge or mental states: it is also the framework for a complex methodology of judgement and attestation, in connection with empirical data. From Epicurus himself (*KD* 24; first sentence), we have a short but enlightening text, which calls for the use of this methodology: ‘If you are going to reject any sensation absolutely, and not distinguish opinions reliant on evidence yet awaited from what is already present through sensation, through feelings, and through every focusing of thought into an impression, you will confound all your other sensations with empty opinion and consequently reject the criterion in its entirety.’

This theory of the criteria of knowledge may seem at first sight to amount to a naive form of empiricism. Its application, however, shows that it does not, for the Epicureans in no way claim to reduce knowledge of hidden entities to a direct extension of the perception of phenomena. The very subtlety of Epicurean methodology lies in the different modes of transition from notions (*epinoia*) and opinions to sensations and conversely. These modes, and analogy in particular, relate propositions about hidden things to sensory evidence through a complex method for verifying beliefs. It might be the case that this theory of inference was fixed after Epicurus. Yet the testimonies of Diogenes Laertius and Sextus Empiricus (Diog. Laert. 10.34; Sextus Empiricus, *Against the Mathematicians* 7.211–16), Philodemus’ treatise *On Signs*, as well as the argumentative procedures used by Epicurus himself and Lucretius, allow us to see in this theory the continuation of the doctrine of the criteria.

When beliefs relate to what can be the object of a direct sensory experience, their truth is established by attestation (*epimarturēsis*) and their falsity by non-attestation (*ouk epimarturēsis*). Thus, when I believe that Plato is coming towards me, I still need attestation or confirmation or its opposite, non-attestation, which sensory experience will provide when the man I see has come near. This

is the same kind of situation Epicurus is alluding to, when he distinguishes, in the *KD* 24, between what is already evident and opinions which are still to be confirmed. When beliefs relate to hidden things, they can be the subject of a non-infirmation (*ouk antimarturēsis*) or an infirmation (*antimarturēsis*). In this case I must establish a relation of consequence (*akolouthia*) between the invisible and sensory evidence. The latter cannot be directly confirmed, but it can be established by non-infirmation. Take, for example, the existence of the void. We assume the existence of motion. Now this implies the existence of the void (*Hdt.* 40). Hence, we posit the existence of the void. Thus the contrary hypothesis is infirmed and the conclusion is warranted.

In the case of remote phenomena, like celestial or underground events and bodies, if the inference does not infirm the contrary hypothesis, it justifies a resort to multiple explanations. Epicurus' *Letter to Pythocles* is devoted to this kind of phenomena (see *Pyth.* 86–7, 93–6; *Hdt.* 79). Eclipses of the sun and moon, for example, can be explained either by their being extinguished, or by their being hidden by other bodies. Furthermore, the different explanations of a single phenomenon may not only be logically compatible – insofar as they are equally acceptable – but may even be conjoined (*Pyth.* 96). The most important, actually, is the very fact that a rational explanation can be given: it preserves our *ataraxia* by showing that it is pointless to invoke gods and, for example, their alleged anger, in order to explain natural events, such as thunders or earthquakes.

In sum, the Epicurean conception of knowledge is complex and subtle: it is not a radical empiricism, but rather a rational empiricism, equipped with efficient and clearly defined methodological tools (Morel 2009). Reason is not to be ruled out: it gets its own function and, in certain circumstances, produces its own results. This is the case with hidden properties and realities, which escape sensation. Our eyes see shade and light, Lucretius says, but they do not teach about the difference between them: 'reason (*ratio animi*) alone must discern them, and the eyes are unable to know the nature of things (*natura rerum*)' (*DRN* 4.384–5).

7. Conclusion: epistemology and ethics

Epicurean science does not aim at encyclopaedic knowledge and it is perfectly aware of its own limits. We can possess some certainties, since sensation, preconceptions, and affections are evident, and what is evident requires no



proof. Nevertheless, the infinity of the All (or the Universe, which contains an infinite number of worlds) and the complexity and remoteness of some particular physical processes entail that a comprehensive (and not extensive) conception of the science of nature should be favoured. For instance, after comparing atomic combinations to those of the letters that make up the verses he is writing, Lucretius says that atoms, which create the diversity of things, have power to work much more combinations (*DRN* 1.827–9). In other words, human discourse is unable to cover the totality of that for which it nonetheless gives a comprehensive explanation. Knowledge of nature is sufficient, however, to free us from terror in the face of death or psychic and bodily sufferings, and to provide a secure base for happiness (Morel 2006).³

Notes

- 1 See the use of the vocabulary of preconception about the notion of gods in Philodemus, *On Piety*, 1. 441–3; 1300; 1887 (Obbink 1996).
- 2 Several arguments can be invoked in favour of the identification of these primary concepts to preconceptions. For more details, see Morel (2008). On the positive use of the vocabulary and the procedure of demonstration in Epicurean methodology, see Morel (2016).
- 3 I wish to thank Dimitri El Murr for his valuable reading of this text.

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