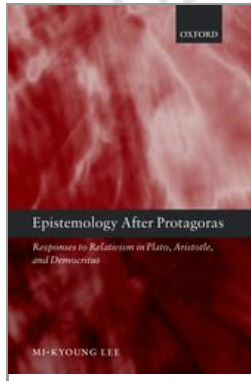


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Epistemology after Protagoras: Responses to Relativism in Plato, Aristotle, and Democritus

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Democritus on knowledge and the senses: the late sources

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[–] Abstract and Keywords

Some of the later sources for Democritus paint a portrait of him as a skeptic about the possibility of knowledge. However, more careful sources emphasize that far from being a skeptic, he endorsed a more balanced view according to which reason and the senses must both be sources of knowledge.

Keywords: skepticism, knowledge, truth, error, senses, mind, affections, relative, subjective, nomos

9.1 Introduction

Three major points can be made about Democritus' epistemology on the basis of Aristotle's and Theophrastus' testimony. First, when Aristotle describes Democritus as 'making appearances true', he means that Democritus' goal in inquiry is to offer explanations of why things appear the way they do; to use Democritus' own language, he seeks *aitiologiai* or explanatory accounts of things which are observed to be the case. We

can see this at work in his theory of the senses, as described by Theophrastus, as well as in his explanation of the perception of sensible qualities. Second, Aristotle and Theophrastus both represent Democritus as having made use of the conflicting appearances argument with respect to sensible qualities: for example, things appear sweet to one person and not sweet to another, but one appearance is no more true than the other. Why this is the case is explained by the third, related point made by Theophrastus, that, according to Democritus, sensible qualities are nothing more than *pathe*, or affections of the senses, and are therefore 'relative to us', not something which objects have in themselves. Given the subjective, relative nature of sensible qualities, we must conclude that the senses do not grasp how things are in themselves, or how things really are.

In this chapter, we shall build on these points with the aim of arriving at a more comprehensive picture of Democritus' epistemology. We will examine the later sources—including Sextus, Diogenes Laertius, Galen, and various Epicureans—examining them one by one, as in the previous chapter. In general, unlike Aristotle and Theophrastus, the later sources explicitly address the question of whether Democritus thinks knowledge is possible. They ask whether Democritus has a theory of the 'criterion' of truth. In this, the later sources, no less than the earlier ones, approach Democritus with concerns and preoccupations that were not Democritus' own. But because of their focus, they preserve for us valuable fragments from Democritus' writings concerning knowledge and the senses, passages not mentioned by Aristotle or Theophrastus; in particular, they collectively preserve a debate about the epistemic value of the **(p.218)** senses as a source for knowledge, a debate in which the senses are attacked and defended. It is probably this attack on the senses Theophrastus is referring to when he describes Democritus as 'denying sensible qualities of their own nature'—as I argue below. That is, Theophrastus conveys to us the reason for Democritus' attack on the senses: it is because they teach us about sensible qualities which 'have no nature'. Through our senses, we only learn about how we are affected by things, how things are 'for us', instead of how things are in themselves. As we have seen, Theophrastus is primarily interested in Democritus' theory as an exemplar of a subjectivist theory of sensible qualities, one which makes sensible qualities 'relative to us'. But in the original it seems to have been part of a criticism of the senses. As we shall see, this did not go unanswered. For, according to Galen and Sextus, Democritus also argued that knowledge is not possible without the senses.

If Democritus argued both that knowledge is not possible without the senses, and that the senses must be rejected, then one can find in these arguments grounds for thinking that knowledge is impossible—and perhaps this is why some sources understand Democritus to be a pessimist about the possibility of knowledge. But our best sources suggest that this was not the case with Democritus. Rather, he thought that both the appearances of the senses and the reasoning of the mind are necessary to attain knowledge; both the senses and the mind are sources of knowledge. Thus, in this chapter, we will see another Protagorean aspect of Democritus' thinking: not only did he endorse a subjectivist account of sensible qualities, he also made the senses a 'measure'

of the truth without which knowledge is impossible.

9.2 Sextus Empiricus

Sextus Empiricus is our primary source for Democritus' epistemology because of his exceptionally careful and detailed discussion of Democritus in a section of *Against the Mathematicians* where he reviews theories on the criterion of truth (*M VII 46–261*).¹ This entire section is of great value and interest in part because of the markedly high number of verbatim quotations—including numerous quotations from Democritus at 135–40 not preserved elsewhere. In this section, Sextus seems to be relying on an earlier treatise by someone whose philosophical orientation was not Pyrrhonist and who was not pushing a 'sceptical' agenda. Sedley (1992*b*) has shown that the section at VII 89–140 on the *physikoi* ('Presocratics' to us), including Democritus, is characterized by creative attribution of the *logos* criterion to the natural philosophers, a particular interest in the theme that like is known by like, establishment of alliances between disparate thinkers, and a readiness to juxtapose alternative interpretations without **(p.219)** insisting on any one of them.² All of these certainly hold true of his discussion of Democritus in this section. For example, on his reading, Democritus endorses *logos* as a criterion of truth. Comparisons are drawn between Democritus and Plato and Anaxagoras. And three different interpretations of Democritus are entertained: Democritus the sceptic, the *logos*-theorist, and even the proto-Epicurean who proposes that *logos*, appearances, and *pathe* ('feelings') are all criteria of truth and action.

Sextus is aware of the reasons why one might argue that Democritus thinks that knowledge is impossible, and quotes numerous passages from Democritus that support this 'sceptical' interpretation. But he insists that Democritus does think that knowledge is possible, and that he held that there is at least one criterion of truth, *logos*, and possibly three. In order to appreciate that this is the overall shape of Sextus' argument, it is useful to set the passage out in full.

(135) Democritus at times ὅτε Usener; ὅτι MSS, Bekk.] does away with sensory appearances (ἀναίρει τὰ φαινόμενα ταῖς αἰσθησεσι), and says that none of them appear in reality but only in opinion (κατὰ δόξαν), and that what is real in the things that are is that there are atoms and void. For he says 'By convention sweet and by convention bitter, by convention hot, by convention cold, by convention colour; but in reality atoms and void' ('νόμω' γάρ φ-ησι 'γλυκύ καὶ νόμω πικρόν, νόμω θερμόν, νόμω ψυχρόν, νόμω χροῖψ ἔτεῆ δέ άτομα καὶ κενόν =391125).. That is, sensible qualities (τά αἰσθητά) are thought and believed to be, but they are not in reality, but only atoms and the void. (136) And in his *Confirmations* (ἐν τοῖς Κρατυνηρίοις), despite having professed to give the senses control over belief (καίπερ ὑπτεσγημένος ταῖς αἰσθήσεσι τὸ κράτος τῆς πίστεως ἀναθεῖναι), he is nonetheless found condemning them. For he says 'We in reality have no reliable understanding, but one which changes in accordance with the state of the body and of the things which penetrate and collide with us' [=B9]. And again he says 'That in reality we do not understand what kind of thing each thing is or is not has been shown in many ways' [=B10]. (137) And in his work on shapes (περὶ ἰδεῶν he says

'By this yardstick man must know that he is cut off from reality' [=B6] and again 'This argument too shows that in reality we know nothing about anything, but each person's opinion is something which flows in [or 'is a reshaping']' [=B7], and then 'Yet it will be clear that to know what kind of thing each thing is in reality is beyond us' [=B8]. Now in these passages he more or less abolishes all cognition, even though it is only the senses that he attacks specifically.

(138) But in his *Canons* he says that there are two kinds of knowledge (γνώσεις), the one through the senses, the other through the mind. Of these, he calls the one through the mind 'genuine', testifying in favour of its trustworthiness for judging the truth, while the one through the senses he names 'dark', denying it inerrant recognition of the truth. (139) His precise words are: 'Of knowing there are two forms, the one genuine, the other dark. And of the dark kind this is the complete list: sight, hearing, smell, taste, and touch. The one which is genuine, but separated from this one...'. Then, by way of judging the genuine one superior to the dark one, he adds these words: '...is when the dark one (p.220) is no longer able either to see in the direction of greater smallness, nor to hear nor to smell nor to taste nor to sense by touch other things in the direction of greater fineness' [=B11]. Therefore according to him too, reason is a criterion, which he calls 'genuine knowing'.

(140) Diotimus used to say that according to him there are three criteria. The criterion for the cognition of things hidden is appearances; for 'Appearances are a glimpse of things hidden' [DK 59 B21 a], as Anaxagoras says, whom Democritus praises for this. [The criterion] for inquiry is the concept (τὴν ἐννοίαν) for 'Concerning every topic, my boy, there is but one starting point, to know what the inquiry is about' [cf. Plato, *Phdr.* 237B]. And that for choice and avoidance is the feelings; for what we have an affinity for is to be chosen, and what we feel alienated from is to be avoided. (*M VII* 135–40 = B8, B9, B10, B11, A111/T179a, trans. after Sedley 1992b: 35–6)

Sextus begins by acknowledging that in certain passages Democritus 'does away with sensory appearances' (ἀναρπεί τα φαινόμενα ταῖς αἰσθήσεσι) he 'more or less abolishes all cognition (πᾶσαν σχεδόν κινεῖ κατάληψιν), even though it is only the senses that he attacks specifically'. He quotes a number of passages that might give this one impression, but warns us that here Democritus specifically singles out the senses for criticism. This obviously leaves open the possibility that he did not intend to argue that knowledge in general is impossible. And indeed, Sextus goes on to argue that Democritus does think that knowledge is possible. First, in the *Canons*, Democritus says that there are two kinds of knowledge (*gnome*), one *gnesie* 'genuine', and the other *skotie* 'dark'. This shows, according to Sextus, that Democritus endorses *logos*, in the form of *gnesie gnome*, as a criterion of truth. Second, a certain Diotimus 'used to say' that there are for Democritus three criteria: *phainomena* 'appearances', *ennoia* 'concepts', and *pathe* 'feelings'. Thus, although Democritus says things that seem to do away with sensory appearances, and knowledge in general, he thinks knowledge is possible and proposes certain 'criteria' or

powers of knowing. According to Sextus, this shows that, despite the fact that he sometimes says things which sound sceptical, Democritus is no sceptic.

9.2.1 An attack on the senses

Let us take a closer look at Sextus' testimony. He tells us that Democritus sometimes gives the impression that he intends to do away with all appearances and even all apprehension in general. Sextus' first example is one of the best known lines from Democritus: 'νόμῳ γάρ φησι γλυκὸν καὶ νόμῳ πικρὸν, νόμῳ θερμὸν, νόμῳ ψυχρὸν, νόμῳ χροὴ ἕτεή δὲ

This fragment was evidently as memorable in antiquity as it is for us, for it is quoted more or less verbatim by four other ancient authors, Diogenes Laertius (**p.221**) (IX.72 = B117, B125/T179b),³ Galen (*On Medical Experience* 15.7 = B125/T179c, *On the Elements according to Hippocrates* I.2 = A49/T179d), Plutarch (*Against Colotes* VIII.1110E–F = T206), and Aëtius (IV.9.8 = DK 67 A32). But we should not let the familiarity of these lines lull us into complacency. First, do we understand what it means to say that something is 'by *nomos*', usually translated in English as 'by convention'? The ancient commentators who quote this line from Democritus paraphrase and translate *nomos* and *eteē* into their own, more familiar terminology. Why they found it necessary to translate *eteē* is obvious, for it was apparently a term coined by Democritus,⁴ but we should note that they did the same for *nomos*. We will want to pay careful attention to how they chose to translate this problematic term. The second question to keep in mind has to do with the intended scope of Democritus' claim: are sensible qualities alone 'by *nomos*', or are all composites, aggregates, and their properties 'by *nomos*' as well?

Sextus introduces fragment B9/125 with the remark that, according to Democritus, 'none of them'—that is, τὰ ἀαινόμενα ταῖς αἰσθήσεσι 'the things which appear to the senses'—'appear in reality but only in opinion, and what is real in the things that are is that there are atoms and void (μηδὲν φαίνεσθαι κατ' ἀλήθειαν ἀλλὰ μόνον κατὰ δόξαν, ἀληθὲς δὲ τοῖς οὖσιν ὑπάρχζιν τὸ ἀτόμονς εἶναι καὶ κενόν).' After quoting the fragment, he paraphrases it again: 'That is, sensible qualities are thought and believed to be, but they are not in reality, only atoms and the void (ὄπερ ἔστι), νομίζεταί μὲν εἶναι καὶ δοξάζεταί τὰ αἰσθητά, οὐκ ἔστι δὲ κατ' ἀλήθειαν ταῦτα, ἀλλὰ τα ἄτομα μόνον καὶ τὸ κενόν) (*M* VII 135). Thus, in Sextus' paraphrase, 'to be by *nomos*' means 'to be in opinion' (κατὰ δόξαν) or 'to be thought and believed' (νομίζεταί καὶ δοξάζεταί), whereas 'to be *eteēi*' means 'to be what is real in things' (ἀληθὲς ἐν τοῖς οὖσιν εἶναι,) or 'to be truly or in reality' (ἐατι κατ' ἀλήθειαν) elsewhere, in *PH* I 214, he explains that 'Democritus uses the phrase ετεή for ἀληθεία ('in truth').⁵ Thus, in answer to our first question, the *nomos-eteē* contrast is a contrast between what seems to be the case or what is thought to be the case and what is true or real. In answer to our second question, the things that are by *nomos* are those things the senses know about, i.e. sensible qualities (τά αἰσθητά) such as the sweet, bitter, hot, and cold, as distinct from what is *eteēi*, 'real'. Aëtius gives a similar gloss for *nomos*:

Οἱ μὲν ἄλλοι φύσει τὰ αἰσθητά, Ἄ. δὲ καὶ Δημόκριτος καὶ Διογένης νόμῳ, τοῦτο

δ' ἐστὶ δάζηι καὶ πάθεσι τοῖς ἡμετέροις.

(p.222)

The others say that sensible qualities are by nature, but Leucippus, Democritus, and Diogenes say that they are by *nomos*, that is, to opinion and to our affections. (IV.9.8 = DK 67 A32)

If, as Sextus and Aëtius suggest, Democritus' *nomos-eteē* contrast should be construed as an appearance/reality distinction, then it is in turn related to the more familiar fifth- and fourth-century *nomos-physis* distinction in the following way. K. Reinhardt (1916) argued that the *nomos-physis* distinction originated with Parmenides, who distinguished sharply between the world of δόξα 'opinion' and that of ἀλήθεια 'truth'. Whether or not Parmenides can be said to be the originator of the distinction,⁶ Reinhardt's basic thesis still stands, that the *nomos-physis* contrast is fundamentally a contrast between appearance and reality, between opinion and truth.⁷ This should not come as a surprise, since the term *nomos* is cognate with the verb νομίζω 'to think, believe, or deem right'. This is why Sextus and Aëtius paraphrase *nomoi einai* by verbs for thinking and believing (*nomizetai, doxazetai*) or by the word *doxa*. Examples of the verb *nomizesthai* can be found in Parmenides: οἷς τὸ πέλειν τε καὶ οὐκ εἶναί ταυτον νενόμισται | κον ταυτόν.

Examples can also be found in Anaxagoras:

τὸ εἶ γίνεσθαι καὶ ἀπόλλυσθαι οὐκ ὀρθῶς νομίζουσιν αἱ Ἕλληνας

The Greeks do not have a correct notion of generation and destruction.... (Simpl. in *Phys.* 163.20 = DK 59 B17, trans. Barnes 1987)

Correspondingly, a *nomos* is a belief, often one widely held by a group of people, which stands in contrast with the true state of affairs.⁸

But the second (peninsula), starts from Persia, and stretches to the Red Sea, being the Persian land, and next the neighbouring country of Assyria, and after Assyria, Arabia; this peninsula ends (not truly, but only according to opinion (λήγει δὲ αὐτή, οὐ λήγονσα εἰ μὴ νόμῳ)) at the Arabian Gulf, which Darius connected by canal with the Nile. (Herodotus, IV 39)

(p.223)

The current belief among men (νομίζεται δὲ ὑπὸ τῶν ἀνθρώπων) is that one thing increases and comes to light from Hades, while another thing diminishes and perishes from the light into Hades.... For in these matters belief is opposed to what is by nature (ὁ νόμος γὰρ τῇ φύσει περὶ τούτων ἐναντίος). (Hippocrates, *On Regimen* I.4.15–35, trans. W. H. S. Jones modified)

The closest parallel with Democritus fragment B9/125 is perhaps in Empedocles' poem:⁹

οἱ δ' ὅτε μὲν κατὰ φῶτα μίγνυτ εἰς αἰθέρ' ἢ κωνται(?)

ἢ κατὰ θηρῶν ἀγροτέρων γένος ἢ κατὰ θάμνων
ἢ κατ' οἰωνῶν, τότε μὲν τὸ πλέγουσι γενέσθαι,
εὔτε δ' ἀποκριθῶσι, το δ' αὖ δυσδαίμονα πότμον
ἢ θέμις (οὐ) καλέουσι, νόμῳ δ' ἐπίφημι καὶ αὐτός.

When they [sc. the roots] are mixed in the form of a man and come to the air or in the form of the race of wild beasts, or of plants or of birds, then they say that this comes into being, but when they are separated, they call this wretched fate: they do not name them as is right, but I myself comply with custom. (Plutarch, *adv. Col.* XI. 1113.AB = DK 31 B9, trans. KRS)

People believe that plants and animals die, but what is really happening is nothing other than the separation of the elements. Here again, *nomos* is what is commonly believed, and stands in contrast with what is true, correct, or really the case.

Galen has a slightly different way of understanding Democritus' *nomos-eteē* contrast. He takes it to be a distinction between what is relative to us and what is true or by nature:

'For by convention colour, by convention sweet, by convention bitter, but in reality atoms and the void', says Democritus, who thinks that all the perceptible qualities are brought into being, relative to us who perceive them (πρὸς ἡμᾶς τοὺς αἰσθανομένους αὐτῶν), by the combination of atoms, but by nature (φύσει) nothing is white or black or yellow or red or bitter or sweet. By the expression 'by convention' he means 'conventionally' (νομιστί) and 'relative to us' (πρὸς ἡμᾶς), not according to the nature of things themselves (οὐ κατ' αὐτῶν τῶν πραγμάτων τὴν φύσιν), which he calls by contrast 'reality' (ἐτεῆι), forming the term from 'real' (τὸ ἐτεόν) which means 'true' (ἀληθές). The whole substance of this theory is as follows. People think of things as being white and black and sweet and bitter and all the other qualities of that kind, but in truth 'thing' and 'nothing' is all there is. (*On the Elements according to Hippocrates* I.2 = A49/T179d)

Here, Galen explains that 'by *eteē*' means 'by nature' or 'according to the nature of things themselves', and 'by *nomos*' means 'conventionally' (νομιστί), 'relative to us who perceive them' (πρὸς ἡμᾶς τοὺς αἰσθανομένους αὐτῶν), or 'not in virtue of the nature of things themselves' (οὐ κατ' αὐτῶν τῶν πραγμάτων τὴν φύσιν). Also, like Sextus and Aëtius, Galen understands Democritus to be talking specifically about sensible qualities: they are 'brought into being, relative to us who perceive them (πρὸς ἡμᾶς τοὺς αἰσθανομένους αὐτῶν), by the combination (p.224) of atoms, but by nature nothing is white or black or yellow or red or bitter or sweet'. On both counts, Galen echoes Theophrastus' remark that, because sensible qualities are for Democritus a kind of affection produced in the senses by an external object, he makes them 'relative' (πρὸς ἄλλο, πρὸς ἡμᾶς, ἐν ἄλλοις, *DS* 69), not 'intrinsic' (καθ' αὐτό) properties. For example, the colour white is relative because an object is white just in so far as it produces a

certain kind of affection in an eye. Along the same lines, Galen construes fragment B9/125 to mean that nothing has sensible qualities in itself, but that sensible qualities exist relative to perceivers.

According to these ancient sources, then, Democritus says that sensible qualities are by *nomos* because they reflect how things appear, not how they really are; or, as Galen puts it, they are relative, not intrinsic, qualities of things. If so, there is no reason to suppose that his reasons for thinking that sensible qualities are by *nomos* can be generalized to all other macroscopic qualities of compounds, such as that of being an elephant, or having teeth. He is not motivated by a general argument according to which the only qualities that exist are the attributes of shape, position, and arrangement belonging to atoms and void themselves. Of course, any atomist could, in principle, argue that macroscopic compound substances such as elephants and stars exist by convention but not in reality because they are really only arbitrary rearrangements of the same changeless fundamental entities.¹⁰ However, Sextus, Galen, and Theophrastus do not attribute such an argument to Democritus in their presentations of fragment B9/125; rather, they represent him as motivated by worries about sensible qualities that do not apply generally to atomic aggregates and properties of aggregates. In fact, only one ancient author implies that they do, Plutarch.

For he [sc. Colotes] says that Democritus' statements that colour and sweetness and the compound and the rest are by convention, but the void and the atoms are in reality, are an attack on the senses (ἀντειρημένον ταῖς αἰσθήσεσι), and that someone who abides by this theory and applies it would not consider that he is a man or that he is alive. (*Against Colotes* 8, 1110e–1111c = T206, trans. Taylor modified)

Other Epicureans, such as Diogenes of Oenoanda, echo Colotes' contention that Democritus denies the external reality of anything but atoms and void:

Democritus made an error unworthy of himself in saying that only the atoms exist in reality, and everything else by convention. According to your theory, Democritus, we shall be unable, not merely to find out the truth, but even to live, avoiding neither fire nor murder. (Diogenes of Oenoanda, fr. 7 Smith, II.2–14 = not in DK/T209c)¹¹

(p.225) Now much depends on whether Plutarch and Diogenes of Oenoanda are right to think that Democritus believes that everything besides atoms and void are by *nomos*. Plutarch's paraphrase includes 'compound' on the list of things which are by *nomos*, which suggests that all macroscopic objects and their properties are, as Sedley (1988: 298) puts it, 'arbitrary constructions placed by experiencing subjects on atomic aggregates which in the last analysis are quite devoid of such properties'. That is, any way of picking out an arrangement of atoms should be regarded as 'conventional', since presumably it could be described in countless other ways. But this is inconsistent with Democritus' view that arrangement is one of the basic properties of atoms and void, along with shape and position.¹² And indeed, references to atomic aggregates as causes,

with genuine causal properties, abound in Democritus.¹³ Moreover, Plutarch is the only ancient source for fragment B9/125 who includes compounds on the list of properties which are by *nomos*.¹⁴ There is thus only weak support for attributing such an extreme metaphysical position to Democritus. It is most likely that Plutarch mistakenly added καὶ νόμῳ σύγ κρισιν ‘and compound by *nomos*’ to the fragment¹⁵—or rather, that Colotes did so, since it is no part of Plutarch's argument to suggest that Democritus thinks that nothing but atoms and void have real existence, whereas it clearly suited Colotes—as it did Diogenes of Oenoanda—to make Democritus out to be an extreme sceptic, since it heightens the contrast with Epicurus.¹⁶ Weighing in favour of a more limited list of things that are by *nomos*, are Galen, Aëtius, Sextus, and Theophrastus, who all affirm that in fragment B9/125 Democritus is referring to the subjective, relational nature of sensible qualities; there is no hint in their reports of a general commitment of Democritus to an extreme form of eliminativism, according to which nothing exists but atoms and void.

One may go further. Translating *nomos* by ‘convention’ may in one respect be misleading: it suggests that Democritus holds that all atomic compounds exist only by agreement, and that it is purely ‘conventional’ and arbitrary whether we choose to say they and their properties exist or not. Now it is presumably conventional and arbitrary that the word ‘death’ is used to refer to death and ‘sweetness’ to refer to what is sweet. But when Democritus says that things are sweet by *nomos*, but are atoms and void in reality, he is not talking about the (p.226) conventionality of the name ‘sweet’; after all, since he thinks that names are conventional, the point would apply to the names for atom and void as well.¹⁷ And once the meanings of words are fixed, there is nothing arbitrary about something's being sweet as opposed to bitter, as far as Democritus is concerned.¹⁸ For, as Theophrastus reports, Democritus goes to great lengths to explain when and why things appear sweet or bitter. ‘By *nomos*’ refers not to the convention of calling things ‘sweet’, or to a ‘truth by convention’ that sweetness exists in the world, but rather to the subjectivity of the fact that things appear sweet. That is, as Theophrastus puts it, things are sweet only in so far as they appear sweet to us; they are not sweet in themselves.

Next, Sextus quotes two more fragments in which Democritus attacks the senses:

ἐν δὲ τοῖς Κρατυνηρίοις, καίπερ ὑπεθῆναι ἑνὸς ταῖς αἰσθήσεσι τὸ κράτος τῆς πίστεως ἀναθεῖναι, οὐδὲν ἦττον εὐρίσκεται τούτων καταδικάζων. φησὶ γὰρ “ἡμεῖς δὲ τῷ μὲν ἔονται οὐδὲν ἀτρεκέες συνίεμενί μεταπιπτον δὲ κατὰ τε σώματος διαθήκη¹⁹ καὶ τῶν ἐπεισιόντων καὶ τῶν ἀντιστηριζόντων. καὶ πάλιν φησὶν: “ἐτεῆ μὲν νυν ὅτι οἴου ἕκαστου ἔστιν ἔ οὐκ ἄβτιν οὐ συνί € μεν, πολλαχῆ δε δτήλωται.”

And in his *Confirmations*, despite having professed to give the senses control over belief,²⁰ he is nonetheless found condemning them. For he says: ‘We in reality have no reliable understanding, but one which changes in accordance with the state of the body and of the things which penetrate and collide with us’ (=B9/TD17). And again he says: ‘That in reality we do not understand what kind of thing each thing is or is not has been shown in many ways’ (=B10/TD18). (*M* VII 136 = T179a)

These fragments evidently came from a book called *Confirmations*. Unfortunately, Sextus does not indicate what the supporting arguments were, or even whether Democritus thinks we must accept the conclusion that 'in reality we do not know what kind of thing each thing is or is not'. But we can be fairly sure that the complaint has to do with the senses, since Sextus tells us as much. The fundamental problem with the senses appears to be that they teach us only about sensible qualities, about how we are affected by things impinging upon us, not about how things are in themselves. Thus, they are of no help in understanding the true nature of things. As Democritus says in fragment B9, the state of our understanding (i.e. with respect to sensible qualities) is not precise or reliable (*atrekes*), for our understanding, or what we think, changes (*metapipton*) depending on the condition of the body or sense-organ and the effluences (p.227) coming from the object. What the senses tell us depends both on the bodily condition and also on the things which enter into it and affect it.

Sextus also quotes three sentences from a work on shapes ('shape' being Democritus' term for the atoms):

ἐν δὲ τῷ παρὶ ἰδεῶν “γινώσκειν τε χρῆ” φησί “ανθρωπον τῷδε τῷ κανόνι ἔτι ἑτεῆς ἀπήλλακται,” καὶ 1F76; πάλιν “δηλοῖ μὲν δὴ καὶ οὗτος ὁ λόγος ὅτι ἑτε-η οὐδὲν ἴσμεν περὶ οὐδενός, ἀλλ’ ἐπιρυσμῆ ἐκάστοισιν ἢ δόξις,” καὶ ἔτι “καίτοι δῆλον ἔσται ὅτι ἑτεγῆι οἶον ἕκαστον γινώσκειν ἐν ἀπόρῳ ἐστί.”

And in his work on shapes he says 'By this yardstick man must know that he is cut off from reality' (=B6/TD18) and again 'This argument too shows that in reality we know nothing about anything, but each person's opinion is something which flows in [or 'is a reshaping']' (=B7/TD20), and then 'Yet it will be clear that to know what kind of thing each thing is in reality is beyond us' (=B8/TD21). (*M VII 137 = T179a*)

B6 simply states that we human beings must recognize that we cannot know how things really are, presumably because there are limits to our cognitive capacities. B7 adds that we have no knowledge, and that opinion is something which 'flows in'.²¹ Given that, as Sextus suggests, Democritus' concern here is with the senses as a source of knowledge, he appears to be saying that what we think, in so far as *the senses* have anything to contribute, is a matter of what flows into our bodies and minds, of the atoms that impinge upon our receptive faculties. If so, fragment B7 adds detail to Democritus' argument against the senses, namely, that the senses cannot teach us about how things really are in themselves; they only tell us about 'what flows in', that is, about the atoms which arrive from external sources and about the ways they affect and reshape the condition of the body. Because those factors differ from one episode of perception to another, no one ever perceives the same thing twice, and no one's perceptions are any more true than another's.

It is important to keep in mind Sextus' remark that the series of quotations he offers in *M VII 135–7*, and which we have just examined, may appear to be sceptical, but in fact come from Democritus' discussion of the deficiencies (p.228) and shortcomings of the senses as a source of knowledge.²² So understood, the first fragment (B9/125) says that

things only appear to have sensible qualities, but what is real in them are atoms and void. The second and third fragments (B9, B7) tell us that what we learn from the senses has to do with the effects things have on our bodies and senses. All of these ideas should seem familiar from Theophrastus' claim that Democritus deprives sensible qualities of their nature, and regards sensible qualities not as fixed attributes in objects, so to speak, but as affections produced in our sensory faculties (cf. §8.3.2). As Theophrastus explains in *DS* 63, Democritus holds that 'there is no nature belonging to hot or cold, but change in shape [sc. of the thing perceived] brings about alteration in us.' Theophrastus presents this not as an attack on the senses, but as an argument undermining the reality of sensible qualities. But what he presents as a Democritean theory of sensible qualities may very well have come from a discussion and evaluation of the senses, and when he says that Democritus 'deprived sensible qualities of their nature' this could in fact have come from a complaint against the senses as a source of knowledge. Theophrastus nowhere quotes fragment B9/125, even where we might expect him to. But he is almost certainly paraphrasing it when he says that for Democritus sensible qualities are not by nature (φύσις), but are merely affections of the sense (πάθη τῆς αἰσθήσεως, *DS* 60, 61, 69), and the senses only tell us about how things are relative to and dependent on the perceiver, not about the nature of things in themselves (*DS* 69).

Hence, my argument is that Sextus' *M* VII 135–7 and Theophrastus' discussion of Democritus' theory of sensible qualities have to do with the same discussion in Democritus about the nature and limits of the senses. Sextus, on the one hand, is interested in whether the apparently negative remarks about the senses found in these discussions really imply that no knowledge is possible. As we shall see, Sextus stresses that they do not; in their original context, these sentences have to do specifically with the shortcomings of the senses. Theophrastus, on the other hand, is looking for a theory of sensible qualities in Democritus. But, as we noted in §8.3, just because Theophrastus describes something as a theory of sensible qualities does not mean that it was presented as such in the original; what he describes as Democritus' *hypothesis* concerning sensible qualities, namely, that sensible qualities do not have their own nature but are affections of the senses, probably comes not from Democritus' writings on sensible qualities, such as *On Flavours* or *On Colours*, but from his writings on the senses, where Democritus intended these claims as part of an evaluation and adjudication of the senses' epistemic power. Thus, by putting Theophrastus' testimony together with Sextus', we can figure out what the nature of Democritus' criticism of the senses was: the problem with the senses is that they only (p.229) report how we are affected by external things, not how they are in themselves, and hence they only give us 'appearances', not the true reality.

9.2.2 Sextus on why Democritus is no sceptic

Sextus insists, however, that despite the globally sceptical implications that these attacks on the senses seem to have, Democritus does not intend to endorse them, and that he thinks knowledge is possible.

ἐν δὲ τοῖς Κανόσι δύο φησὶν εἶναι γνώσεις, τὴν μὲν διὰ τῶν αἰσθήσεων τὴν δὲ διὰ τῆς διανοίας, ὧν τὴν μὲν διὰ τῆς διανοίας γνησίην καλεῖ, προσμαρτυρῶν

αὐτῇ τὸ πιστὸν εἰς ἀληθείας κρίσιν, τὴν δε διὰ τῶν αἰσθήσεων σκοτίνην ὀνομάζει, αφαιρούμενος αὐτῆς τὸ πρὸς διάγνωσιν τοῦ ἀληθοῦς απλανές. λέγει ἕκαστον λέξιν· “γνώμης δὲ δύο εἶσιν ἰδέαι, ἡ μὲν γνησίη, ἡ δὲ σκοτίη· καὶ σκοτίης μὲν τάδε σύμπαντα, ὅσιν ἀκοὴ ὀσμὴ γευσις ψαυσις ἡ δὲ γνησίη, ἀποκε κριμένη δὲ ταύτης.” εἶτα προκρίνων τῆς σκοτίης τὴν γνησίην ἐπιφέρει λέγων· “ὅταν ἡ σκοτίη μηκέτι δύνηται μήτε ὀρῆν ἐπ’ ἐλαττον μήτε ἀκούειν μήτε οδμάσθαι μήτε γευεσθαι μήτε ἐν τῇ ψαύσει αἰσθάνεσθαι ἀλλ’ ἐπὶ λεπτότερον.”²³ οὐκοῦν καὶ κατὰ τοῦτον ὁ λόγος ἐστὶ κριτήριον, ὃν γνησίην γνώμην καλεῖ.

(138) But in his *Canons* he says that there are two kinds of knowledge, the one through the senses, the other through the mind. Of these, he calls the one through the mind ‘genuine’, testifying in favour of its trustworthiness for judging the truth, while the one through the senses he names ‘dark’, denying it inerrant recognition of the truth. (139) His precise words are: ‘Of knowing there are two forms, the one genuine, the other dark. And of the dark kind this is the complete list: sight, hearing, smell, taste, and touch. The one which is genuine, but separated from this one...’. Then, by way of judging the genuine one superior to the dark one, he adds these words: ‘...is when the dark one is no longer able either to see in the direction of greater smallness, nor to hear nor to smell nor to taste nor to sense by touch other things in the direction of greater fineness’ [=B1 1]. Therefore according to him too, reason is a criterion, which he calls ‘genuine knowing’. (M VII 138–9 = T179a, trans. after Sedley 1992b: 35–6)

Democritus holds that knowledge is possible, at least in the form of *gnesie gnome* ‘genuine knowing’. Of course, when Sextus concludes that Democritus thinks that *logos* ‘reason’ is the criterion of truth, he is making a creative attribution of the *logos* criterion to Democritus, as he has with each of the other *physikoi* he discusses in M VII 89–140.²⁴ Nonetheless, fragment B1 1 is good evidence that Democritus was not a sceptic about knowledge.

Now fragment B1 1 is of particular interest because of what Democritus says about the senses as a source of knowledge. The fragment comes from a book called *Canons*, and is the only known fragment from that book.²⁵ Some hints as to the nature of the book can be gleaned from its title. *Kanon* means ‘straight rod’, (p.230) as in a yardstick or ruler; like Protagoras’ *metron* ‘measure’, it refers to a measuring stick for testing straightness or crookedness, and is used metaphorically in epistemological contexts to refer to some means or power of knowing or deciding an issue.²⁶ The fact that Democritus wrote a book on epistemological standards is important and significant; as Oppel suggests, it may have been the first book of its kind. Epicurus also wrote a book called *Kanon* or *Peri kriteriou e Kanon* in which he listed perceptions, preconceptions, and feelings as criteria (DL X 27, DL X 31 = LS 17A). Now for Epicurus, a criterion is an infallible guide to what is true or false because it is itself true; criteria ‘possess the intrinsic power to convict falsehoods with truths’ (Lucretius 4.469–521, esp. 480–3 = LS 16A4) and are self-evident (cf. ἐνάργεια, DL X 82). Democritus probably used *kanon* not in this specialized sense, but in the less technical sense of an instrument for discovering the truth, which can be

used well or badly.²⁷ Now *kanon* appears in the plural in the title of his book, which suggests that he regarded more than one thing as a *kanon*.²⁸ And the most likely candidates are the two epistemic powers mentioned in B11: the senses and the mind. For Democritus says that there are two kinds of knowing (*gnome*), one which is *gnesie* 'genuine', and another which is *skotie* 'dark'; Sextus renders these as *gnosis dia tes dianoias* 'knowledge through thought' and *gnosis dia ton aistheseon* 'knowledge through the senses', respectively. That Democritus regarded the senses as a kind of *kanon* is also suggested by fragment B6 if, as Sextus suggests, Democritus means to be criticizing the senses when he says that 'By this *kanon*, man must know that he is removed from reality.'

But if Democritus regarded the senses as a *kanon*, why would he call knowledge from the senses *skotie* or 'dark'? His intent must have been to rank knowledge from thought above knowledge from the senses. Why then the lower ranking of the senses? Presumably we are supposed to keep in mind his attacks on the senses in the fragments quoted by Sextus in *M VII* 135–7. But in fragment B11 itself, Democritus simply lists the different kinds of *skotie gnome*—sight, hearing, smell, taste, and touch. About genuine knowing, he says: 'The one which is genuine, but separated from this one [i.e. dark knowing] is when the dark one is no longer able either to see in the direction of greater smallness, nor to hear nor to smell nor to taste nor to sense by touch other things in the direction of greater fineness.' The senses cannot detect differences in samples or make discriminations beyond a certain threshold, at which point *gnesie gnome* takes over.²⁹ The existence of a threshold for sensory perception is also **(p.231)** alluded to by Theophrastus in a passage partially quoted above: 'For there is no nature belonging to hot or cold, but change in shape [sc. of the thing perceived] brings about alteration in us; a concentrated effect dominates each individual, whereas an effect which is spread out over time is not noticed' (*DS* 63). Taylor suggests that the difference between the two kinds of judgements can perhaps be seen as well in Democritus' famous cone problem, as reported by Plutarch.³⁰

See how he [i.e. Chrysippus] answered the following ingenious scientific problem posed by Democritus. If a cone were cut in a plane parallel to the base, what should we think about the surfaces of the segments; are they equal or unequal? If they are unequal they will make the cone uneven, with many step-like indentations and projections; but if they are equal the segments will be equal and the cone will turn out to have acquired the character of the cylinder, being made up of equal and not unequal circles, which is most absurd. (*On Common Notions* 39, 1079e = B155/T164)

Plutarch does not indicate whether Democritus had a solution; perhaps, as Taylor suggests, he thought that the 'dark knowing' of the senses judges the surface of the cone to be smooth, while the 'genuine knowing' of the mind judges it to be a stepped pyramid. Again, this implies that there are limits to the kind of fine-grained discriminations the senses are capable of making.³¹ But if this is Democritus' principal reason for distinguishing between sensory knowledge and 'genuine' knowledge—the senses can

only pick out a certain range of objects, whereas the mind can go beyond this and is capable of grasping and reasoning about finer, imperceptible things, including the existence and nature of atoms and void—then we have no reason to think that he regarded sensory knowledge as false. Rather, it is imperfect and limited. It is imperfect for the reasons given earlier: it apprehends the wrong kinds of objects, our own affections, instead of things out there, as they are in themselves. It also has natural limitations, a threshold of discrimination beyond which the senses cannot go. But the senses are not useless, fallible, or false.

This brings us to the question of what exactly Democritus means by calling sensory knowledge *skotie gnome*. If this means ‘bastard knowledge’, as it is usually translated in English, then ‘knowledge’ is really a misnomer, since illegitimate (p.232) knowledge is presumably not knowledge at all, and the senses have no real claim to being a *kanon* or a source of knowledge.³² One could of course retain the traditional translation ‘bastard’, and downplay the connotations of epistemic illegitimacy. For example one could argue that ‘skotie’ alludes to the fact that the objects of the senses are of impure parentage, since they are not things in themselves but something generated in the interaction between those atoms and the senses. (Think of Plato's description of perception and perceptible property as ἔκγονα ‘offspring’ in the Secret Doctrine.) Or perhaps, as Morel suggests, the senses' way of knowing is called ‘bastard’ because *they* are in the dark with respect to their atomic origins.³³

The basic meaning of *skotios*, however, is ‘dark’, ‘dim’, ‘shadowy’;³⁴ hence, *skotie gnome* can be translated as ‘dark knowing’.³⁵ The theme of being in the dark is consistent with a Democritean fragment preserved in Diogenes Laertius:

ἔτεῃ δὲ οὐδὲν ἴδμεν ἐν βυθῶ γὰρ ἡ ἀλήθεια..

In reality we know nothing, for truth is in an abyss. (DL IX 72 = B117/TD15, trans. Taylor modified)³⁶

and also with Cicero's description of Democritus:

Atque is non hoc dicit quod nos, qui veri esse aliquid non negamus, percipi posse negamus; ille esse verum plane negat; sensusque idem non obscuros dicit sed tenebricosos—sic enim appellat eos.

But he does not say what we [i.e. Academic sceptics] do, who do not deny that there is some truth, but deny that it can be perceived. He flatly denies that there is any truth, and calls the senses not obscure but dark, for that is how he describes them. (*Acad.* II.23.73 = B165/T184b)

...Democritum, Anaxagoram, Empedoclem, omnes paene veteres, qui nihil cognosci, nihil percipi, nihil sciri posse dixerunt, angustos sensus [cf. DK 31 B2.1], *imbecillos animos* (p.233) [DK 59 B21], *brevia curricula vitae, et, ut Democritus, in profundo veritatem esse demersam* [DK 68 B117], *opinionibus et institutis omnia teneri, nihil veritati relinquere, deinceps omnia tenebris circumfusa esse dixerunt...*

Democritus, Anaxagoras, Empedocles, and practically all the ancient philosophers, who said that nothing could be recognized, perceived, or known, that the senses are confined, the intellect weak, the space of life short, and, as Democritus says, that truth is sunk in the depths, everything is subject to opinion and convention, with no place left for truth, and in a word that everything is shrouded in darkness. (*Acad. post.* I.12.44 = DK 59 A95/T184a)

Cicero's emphasis on the theme of darkness in Democritus again suggests that *skotie* is better translated as 'dark' than as 'bastard'. The senses offer a dark way of knowing—that is, they are not perfect, but this does not by itself imply that they are illegitimate as a source of knowledge.

9.2.3 Democritus' three 'criteria'

Despite this talk of 'darkness' with respect to the senses, and with respect to our prospects for knowledge in general, our best source, Sextus, argues that Democritus is not a sceptic because he affirms *logos* or 'reason' as a criterion of truth in fragment B11. Indeed, he goes on to say that according to a certain Diotimus there are, for Democritus, three such 'criteria'.

Διότιμας δ τρία κατ' αὐτὸν ἔλεγεν εἶναι κριτήρια, τῆς μὲν τῶν ἀδήλων καταλήψεως τὰ φαινόμενα, ὄψις γὰρ τῶν ἀδήλων τὰ φαινόμενα,³⁷ ὡς φησιν' Αναξαγόρας, ὃν ἐπι τούτῳ Δημόκριτος ἐπαινεῖ, ζητήσεως δὲ τὴν ἔννοιαν (περὶ παντὸς γάρ, ὧ παι, μία ἀρχὴ τὸ εἶδέναι περὶ ὅτου ἔστιν ἡ ζήτησις), αἰρέσεως δὲ καὶ φυγῆς τὰ πάθη· τὸ μὲν γὰρ ὧ προσοικειούμεθα, τοῦτο αἰρετόν ἐστιν, τὸ δὲ ὧ προσαλλοτριούμεθα, τοῦτο φευκτόν ἐστιν.

Diotimus used to say that according to [Democritus] there are three criteria. The criterion for the cognition of things hidden is appearances; for 'Appearances are a glimpse of things hidden' [DK 59 B21a], as Anaxagoras says, whom Democritus praises for this. [The criterion] for inquiry is the concept; for 'Concerning every topic, my boy, there is but one starting point, to know what the inquiry is about' [paraphrasing Plato, *Phaedr.* 237B]. And that for choice and avoidance is the feelings; for what we have an affinity for is to be chosen, and what we feel alienated from is to be avoided. (*M VII* 140 = A111/T179a)

Diotimus' list of Democritean criteria—*phainomena* 'appearances', *ennoia* 'concepts', and *pathe* 'feelings'—is strikingly similar to Epicurus' list of criteria: *aistheseis* 'perceptions', *prolepseis* 'preconceptions', and *pathe* 'feelings' (e.g. DL X 31, 38). That, together with the presence of a quotation from Plato and of Hellenistic terminology, has raised suspicions about whether his testimony is reliable. For example, might Diotimus have anachronistically assimilated (p.234) Democritus to Epicurus?³⁸ One might try to settle this question by determining who Diotimus is. There are two possibilities: Diotimus of Tyre, who was a follower of Democritus (DK 76), and the Stoic Diotimus. Some, doubtful of the reliability of Diotimus' report, think that he may be the Stoic Diotimus.³⁹ Sedley argues that Posidonius is probably the ultimate source of the section on the criterion in

Sextus' *Against the Mathematicians*, and that Posidonius is very likely to have known the Stoic Diotimus. A Stoic with an anti-Epicurean agenda might wish to cast doubt on Epicurus' originality by showing that he derived his three criteria from his atomist predecessors. Such accusations were common; for example, Epicurus is accused of plagiarizing his book *Κανόνων* from the *Tripod* of Nausiphanes (DL X 14 = DK 75 A6). But it is more likely that someone would quote Diotimus of Tyre as an authority on Democritus.⁴⁰ At any rate, I would argue that we cannot reject Diotimus' testimony simply on the basis of his presumed identity, since there is not enough evidence to settle that question independently of the testimony itself.

The facts that Diotimus' testimony is heavily larded with Hellenistic concepts and terminology and that it sounds like a description of Epicurus are not sufficient grounds for dismissing it entirely. Diotimus' testimony may have been contaminated by Sextus' source who, for example, may have supplied the quotation from Plato's *Phaedrus* and even the terminology of the 'criterion'. Framing Democritus' views as theories of the criterion was no doubt anachronistic, since it was probably Epicurus' innovation to develop a foundationalist theory of knowledge based on the notion of a criterion of truth. But it is not wholly without justification since, as we have already seen, Democritus wrote a book entitled *Kanones*, which strongly suggests that he wrote a book about knowledge and the 'standards' we must use to acquire it—and perhaps was the first to do so. If one factors out the anachronistic gloss of Democritus' concept of a *kanon* as a 'criterion' in the technical Hellenistic sense (cf. §3.3), one can take seriously the core of Diotimus' claim, namely, that Democritus makes our senses, our capacity for reasoning, and our feelings 'canons' or guides for knowledge and action. Let us consider these one by one.

As evidence that Democritus regarded appearances as an epistemic standard, Diotimus cites Democritus' praise of Anaxagoras for saying that 'Appearances (p.235) are a glimpse of things hidden.' (We will examine this quotation more closely in §9.4.) Briefly, Anaxagoras means that we must start our inquiry into reality, which at least initially is hidden from us, with appearances on the basis of which we can make further discoveries into the nature of things. Democritus' praise of Anaxagoras is taken by Diotimus to indicate that appearances are supposed to play an essential role in the search for knowledge. Aristotle's praise of Democritus' method in *GC I* (cf. §8.2) also suggests that what was distinctive about Democritus was the importance he placed on explaining appearances, perhaps by the use of inference to the best explanation: one must start with how things appear, and with what people observe to be the case, which constitute facts on the grounds, so to speak, which one then attempts to explain. Democritus may even have thought that the pursuit of knowledge and *aitiologiai* is impossible without appearances. And, as we shall see in §9.4, appearances are supplied by the senses; hence, any attack or defence of the appearances constitutes an attack or defence of the senses.

Another reason for taking seriously the idea that Democritus made the senses a *kanon* comes from Sextus' report that in Democritus' *Confirmations*,

καίπερ ὑπεσχημένος ταῖς αἰσθησεσι τὸ κράτος της πίστεων ἀναθελαι, οὐδὲν

ἥττον εὐρίσκύται τούτων καταδικάζων,

despite having professed to give the senses control over belief, he is nonetheless found condemning them. (M VII 136 = B9/T179a)

We took no note of the first clause, but it is of great interest. Here, Sextus tells us that Democritus professed to 'restore to the senses control over belief'. Now we cannot be sure that τὸ κράτος τῆς πίστεως 'control over *pistis*' are Democritus' own words. But they may be, since *kratos* 'control' is cognate with the word Democritus used as the title for his book *Kratunteria*, 'strengthenings' or 'confirmations'. This word, which is relatively rare,⁴¹ comes from the verb κρατύνω, 'to strengthen' or 'to rule over'. A κρατυντήριον is typically a strengthening of the body through medical treatment (κλυσμὸς κρατυντήριος, Hipp. *Mul.* I. 78 = Littré vol. viii, p. 192). But one's faith or confidence can also be strengthened:

τὰς ἐσφας αὐτοῦς πίστεις οὐ τῷ θεῷ νόμῳ μᾶλλον ἐκρατύνοντο ἢ τῷ κοινῇ τι παρανομῆσαι.

Their good faith was strengthened not by divine law, but by fellowship in crime. (Thucydides III 82.6, trans. Jowett modified)

In epistemological contexts the verb κρατύνω means 'confirm' or 'strengthen', like βεβαιῶ (Sextus, *PH* II 96, II 259; M VIII 364, X 6), and Κρατυντήρια are confirmations or proofs. Thus, when Sextus describes Democritus as claiming to restore control over *pistis* to the senses in a book called *Kratunteria*, we can infer **(p.236)** that the senses were one of the things 'strengthened' or 'confirmed' in that book.⁴² But what is it to restore control or power over *pistis* to the senses?

As used by fifth- and fourth-century authors, *pistis* is trust or reliability which has to be secured or assured,⁴³ or it is the thing offered as proof or guarantee for that trust or reliability.⁴⁴ There is nothing infallible about such proofs; a *pistis* can be given in bad faith.⁴⁵ But at the same time, one should not think exclusively of Plato's pejorative use of *pistis* to refer to the subjective condition of being persuaded without possessing knowledge of the truth.⁴⁶ Any such negative connotation is lacking in Parmenides, where the word refers to trust or conviction:

οὐδὲ ποτ' ἐκ μὴ ἔοντος ἐφήσει πίστιος ἰσχύς γίγνυσθαί τι παρ' αὐτό.

Nor will the force of trust [or 'conviction'] permit anything to come to be from what is not alongside it. (DK 28 B8.12, trans. Curd 1998)

Thus, when Sextus says that Democritus professed in his *Confirmations* to restore to *kratos tes pisteos* to the senses, he evidently means that Democritus was claiming to have strengthened their credibility and to have restored to the senses their power over *pistis*, their ability to give persuasive assurance. This lends support to Diotimus' claim that Democritus made *ta phainomena* an epistemic standard and source of knowledge.

Second, Diotimus claims that Democritus made *ennoia* 'concept' a criterion. Diotimus, or Sextus' source, attempts to clarify what it means to make *ennoia* a criterion with the following paraphrase of Plato's *Phaedrus*: *περὶ παντὸς γάρ, ὦπαί, μία ἀρχὴ τὸ εἰδέναι περὶ ὅτου ἔστιν ἡ ζήτησις* ('for in all things, my boy, the single starting point is to know what the object of investigation is' (*M VII 140*)).⁴⁷ Just as Socrates emphasizes the importance of the what-is-X question in the **(p.237)** *Phaedrus*, so too, we are to understand, Democritus thought it necessary in any investigation to have an understanding of what one is investigating. Diotimus offers no supporting evidence for this claim about Democritus. But, as we saw in Chapter 8, Theophrastus in the *De Sensibus* presents Democritus' accounts of colours and flavours as attempts to give definitions of them. Aristotle says that most of the Presocratics did not concern themselves with definitions, with the possible exception of Empedocles and Democritus:⁴⁸

If we look at the ancients, natural science would seem to be concerned with the matter. (It was only very slightly that Empedocles and Democritus touched on form and essence [τοῦ εἶδους καὶ τοῦ τί ἦν εἶναι ἤψσαντο].) (*Phys. II 2. 194^a20–1* = not in DK/T43cit i, trans. ROT)

Socrates may have been the first to make a methodological point of pursuing definitions:

For when Socrates was occupying himself with the excellences of character, and in connection with them became the first to raise the problem of universal definitions (ὀρίζεσθαι καθόλου ζητούντος πρώτου)—for of the physicists, Democritus only touched on the subject to a small extent, and defined, after a fashion, the hot and the cold (ὠρίσατό πως τὸ θερμὸν καὶ τὸ ψυχρόν)... (*Metaph. M4. 1078^b17–23* = A36/T43b, trans. Ross)

Nonetheless, Democritus came closer to the search for definition than anyone else before him:

The reason our predecessors did not arrive at this method [sc. of explanation in terms of the nature of a kind of thing] was that they did not have the [concept of] essence and the definition of substance (ὅτι τὸ τί ἦν εἶναι καὶ τὸ ὀρίσασθαι τὴν οὐσίαν οὐκ ἦν). Democritus was the first to touch on these, not because he thought it necessary to the examination of nature, but because he was constrained by the facts themselves (ἀλλ' ἦψατο μὲν Δημόκριτος πρώτος, ὡς οὐκ ἀναγκαίου δὲ τῆ φυσικῆ. θεωρία, ἀλλ' ἐκφερόμενος ὑπ' αὐτοῦ τοῦ πράγματος). This method became more common in the time of Socrates, but the investigation of nature declined, and philosophers turned to the study of practical excellence and political philosophy. (*Parts of Animals I 1. 642^a24–31* = A36/T43a)

Aristotle does not represent Democritus as explicitly stating the what-is-X question as a methodological principle, the way that Socrates did, but he nonetheless represents him as giving definitions in the course of his investigations into why things are the way they are. Thus, for example, Democritus can be found attempting to give a definition of what man is:

Do, then, configuration and colour constitute the essence of the various animals and of their several parts? For if so, what Democritus says will be correct. For such appears to have been his notion. At any rate he says that it is evident to everyone what form it is that makes the man, seeing that he is recognizable by his shape and colour. (PA I 1. 640^b30–5 = B165/T139)

Finally, in fragments we examined above, Democritus alludes to the overall goal of understanding what things are: in fragment B8 ‘to know what kind of thing each thing is in reality is beyond us’ (οτι ἐτεῖν οἶον ἕκαστον γινώσκειν ἐν ἀπόρῳ (p.238) ἔστιν), and in B10, ‘we do not understand what each kind of thing each thing is or is not’ (οἶον ἕκαστον ἔστιν ἢ οὐκ ἔστιν οὐ συνίεμεν). We can conclude, then, that there is some justification for describing Democritus as making the concept, i.e. a grasp of what a thing is, a prerequisite for any investigation into the nature of things.

The third criterion Diotimus attributes to Democritus is the πάθη ‘feelings’. Here again, discounting the anachronism of the framework of the criterion in its technical sense, we can see that there is some truth to Diotimus' claim. For the fragments from Democritus' ethical writings point towards a form of enlightened hedonism, which could lead a later thinker to describe him as making these a criterion for action.⁴⁹ Democritus identified the *telos* or ‘final end’ with *euthumia*, according to Diogenes:

The end is cheerfulness (*euthumia*), which is not the same as pleasure, as some people mistakenly took it, but a state in which the soul exists calmly and stably, not disturbed by any fear or superstition or any other emotion. (DL IX 45 = A1/T6)

Other sources have Democritus identifying the *telos* with *euesto*, *harmonia*, and *ataraxia*, and suggest that achieving the *telos* starts with pleasure and pain, though this is not by itself sufficient. The details here are not important for our purposes: I simply note that there are sufficient grounds for taking seriously Diotimus' remark about the role of *pathe* in Democritus' ethical theory.

I would therefore argue that Diotimus' testimony—according to which Democritus made appearances, concepts, and feelings his ‘criteria’—is entirely plausible, as long as one factors out the anachronistic terminology of the criterion in its technical sense. And that is easy to do; given the widespread use of this terminology, Hellenistic philosophers—whether Diotimus, or someone reporting Diotimus' views—would have found it convenient to describe Democritus' theory in these terms, in order to showcase the importance, for Democritus, of the idea that one can arrive by means of appearances, by reasoning about the nature of things, and by feelings at the truth about how things are and how one should act. If so, Diotimus' testimony counts in favour of the idea that Democritus regarded the senses and appearances as an epistemic standard and source of knowledge, respectively.

9.3 Democritus the sceptic

We now need to reconcile this with the interpretation of Democritus that Sextus considers and rejects—but which is endorsed by other sources such as Cicero and

Colotes—according to which Democritus rejected the senses, and, by implication, all apprehension. This interpretation is prevalent among the Epicurean and sceptical sources. Their testimony tends to focus on Democritus' use of the argument from conflicting appearances, emphasizing that he stated positively that things are neither F nor not-F, and that knowledge of the truth is (p.239) impossible. This allows them to present Democritus as clearly distinct both from Epicurus and from the later sceptics; he differs from Epicurus in being a pessimist about the possibility of knowledge, and he differs from the sceptics in making forthright assertions about the impossibility of knowledge and thus in being a negative dogmatist rather than a true *skeptikos*. Although we have met some sources influenced by this tradition, a thorough examination of this class of testimony, and the philosophical agendas at work behind it, is beyond the scope of this chapter. We will attempt a brief assessment with two questions in mind. First, what in Democritus' writings inspired this type of interpretation? Second, is there evidence that this line of thought was actually endorsed by Democritus, or was it an exaggeration by later sources who had particular reasons for doing so?

We will begin with Sextus. As we have seen, Sextus sets out a sceptical interpretation of Democritus at *M VII* 135–7 but rejects it at *M VII* 138–40, classifying him instead with the other *physikoi* who made *logos* the criterion. But elsewhere, Sextus contrasts Democritus with the Pyrrhonist sceptics, which leads him to affirm the very reading of Democritus that he rejects at *M VII* 138–40. His apparent inconsistency could be explained by the hypothesis that in *M VII* Sextus follows a non-sceptical source, but elsewhere he draws on a source or sources that have absorbed Democritus into the sceptical tradition. But instead of assuming that Sextus slavishly follows inconsistent sources, we would do better to suppose that he does not always make clear when he is discussing Democritus' views about the epistemic power of the senses and when he is discussing Democritus' views about the possibility of knowledge in general. As Sextus himself points out in *M VII* 138–40, the distinction is particularly important in the case of Democritus since he may have given arguments against the senses without intending to reject the possibility of knowledge altogether.

In *Outlines of Pyrrhonism*, Sextus compares Democritus with the Pyrrhonist sceptics.

But the philosophy of Democritus is also said to be akin to scepticism, since he appears to make use of the same material as we do; for from the fact that honey appears sweet to some and bitter to others they say that Democritus concludes that it is neither sweet nor bitter, and therefore pronounces the sceptical formula 'No more' [sc. one thing than another] (τὴν οὐ μᾶλλον φωνὴν σκεπτικὴν οὐσαν).

However, the sceptics and the followers of Democritus use the 'No more' formula differently; they apply it in the sense that the thing is neither [sc. one thing nor another], whereas we apply it in the sense that we are ignorant of whether it is both or neither of the ways it appears. So we differ in that way, and the distinction becomes very clear when Democritus says 'in reality atoms and void' [ἐτε δὲ ἄτομα καὶ κενόν = B9]. He uses the phrase 'in reality' (ἐτεῆ) for 'in truth' (ἀληθεία); and when he says that the atoms and the void exist in truth it is, I think,

superfluous to point out that he differs from us, even if he takes his starting point from the inconsistency of the appearances. (*PH I* 213–14 = not in *DK/T178a*)

(p.240) Sextus begins by acknowledging the similarities between the Pyrrhonists and Democritus that have led some people to classify Democritus as a sceptic. Like the Pyrrhonists, Democritus makes use of the argument from conflicting appearances, as well as of the sceptical formula *ou mallon* ‘no more one thing than another’, but uses it to affirm the idea that things are neither *F* nor not-*F*, whereas the Pyrrhonists use the formula to express the idea that the reasons for thinking a thing is *F* seem to them to be counterbalanced by reasons for thinking a thing is not-*F*, and so they are unable to decide one way or another. Democritus is a dogmatist who makes the kind of assertions avoided by the Pyrrhonists, such as ‘in reality atoms and void’, or:

From the fact that honey appears bitter to some people and sweet to others Democritus said that it is neither sweet nor bitter. (*PH II* 63 = *T178b*)

His position on conflicting appearances also serves to distinguish him from other philosophers as well:

Some of the natural scientists, e.g. Democritus and his followers, have done away with all the appearances [sc. as false], others, e.g. Epicurus and his followers and Protagoras, have established them all [sc. as true], while others, e.g. the Stoics and Peripatetics, have done away with some and established others. (*M VII* 369 = *A110/T180*)

Now Sextus' comparison of Democritus with Epicurus here makes it likely that the appearances in question are narrowly confined to perceptual appearances, for Epicurus did not think that all appearances are true, only perceptions. This is confirmed by Sextus' repeated statements even outside *M VII* 135–40 that Democritus rejected the senses:

Δημόκριτος μὲν πᾶσαν αἰσθητὴν ὑπαρξιν κεκίνηκεν. (*M VIII* 355 = *T182d*)

Democritus overthrew all sensible reality.

Like Theophrastus, Sextus emphasizes that Democritus argues that sensible qualities are not real and that nothing has sensible qualities by nature.

οἱ δὲ περὶ τῶν Πλάτωνα καὶ Δημόκριτον μόνα τὰ νοητὰ ὑπενόησαν ὀληθῆ εἶναι, ἀλλ' ὁ μὲν Δημόκριτος διὰ τὸ μηδὲν ὑποκεσθαι φύσει αἰσθητόν, τῶν τὰ πάντα συγκρινουῶν ἀτόμων πάσης αἰσθητῆς ποιότητος ἔρημον ἔχουσῶν φύσιν, ὁ δὲ Πλάτων διὰ τὸ γίνεσθαι μὲν αἰεὶ τὰ αἰσθητὰ μηδέποτε δὲ εἶναι ποταμοῦ δίκην ῥεούσης τῆς οὐσίας, ὥστε ταῦτ' οὐ μὴ δύο τοὺς ἐλαχίστου χρόνους ὑπομένειν.

Plato, Democritus, and their followers supposed that only intelligible things are true [or ‘real’]; in the case of Democritus this was on the grounds that there is nothing which is by nature perceptible, since the atoms which compose everything have a nature devoid of all perceptible qualities, but for Plato it was on the ground that

perceptible things are always becoming but never in a state of being, since their substance is flowing like a river, so that it does not remain the same for two moments together. (*M VIII 6–7 = A59/T1 82a*)⁵⁰

(p.241) Elsewhere, Sextus explains why sensible qualities do not have their own nature, according to Democritus:

ὁ μὲν Δημόκριτος μηδὲν ὑποκείσθαι φησι τῶν αἰσθητῶν, ἀλλὰ κενοπαθείας τινὰς αἰσθήσεων εἶναι τὰς ἀντιλήψεις αὐτῶν, καὶ οὔτε γλυκύ τι περὶ τοῖς ἐκτὸς ὑπάρχειν, οὐ πικρὸν ἢ θερμὸν ἢ ψυχρὸν ἢ λευκὸν ἢ μέλαν, οὐκ ἄλλο τι τῶν πᾶσι φαινομένων παθῶν γὰρ ἡμετέρων ἦν ὀνόματα ταῦτα.

Democritus says that none of the sensible things exist, but our apprehensions of them are empty states of the senses, and in the external world there is nothing sweet, bitter, hot, cold, white, black, or anything else which appears to everyone, for these are names for our states. (*M VIII 184 = not in DK/T1 82c*)

Sensible qualities like sweet, bitter, hot, cold, etc. are not real because they are simply ‘names for our states’, that is, states of the senses. These qualities are purely a matter of how other things are affected by an object; something is sweet if it produces a sweet sensation in a person. Hence they do not belong to anything—whether a compound or atoms and void—by nature, which is thus taken to imply that perceptual appearances are ‘empty’ or false.

When read carefully, Sextus' remarks about Democritus clearly have to do with the senses and sensible qualities. What, then, should we make of the numerous testimonies according to which Democritus thinks that all knowledge is impossible? As we saw earlier, Cicero says that according to Democritus ‘truth is sunk in the depths, everything is subject to opinion and convention, with no place left for truth, and in a word that everything is shrouded in darkness’ (*Academica I.1 2.44 = DK 59 A95/T1 84a*), or, again, ‘He flatly denies that there is any truth, and calls the senses not obscure but dark, for that is how he describes them’ (*Academica II.23.73 = B1 65/T1 84b*). Cicero may have arrived, on the basis of Democritus' criticisms of the senses, at the conclusion that he thought the prospects for knowledge in general are similarly bleak. Sextus describes this line of interpretation in *M VII 135–7*, and warns against it at *M VII 137*, suggesting that it results from misunderstanding Democritus' attack on the senses and sensible qualities. According to Plutarch, the Epicurean Colotes makes a similar mistake about Democritus:

The first charge Colotes makes against him [Democritus] is that by saying that each thing is no more of one kind than another he has thrown life into confusion. But Democritus was so far from thinking that each thing is no more of one kind than another that he opposed the sophist Protagoras for saying just that and wrote many persuasive arguments against him. (*Against Colotes 4, 1 1 08f = B1 56/T1 78c*)

Colotes wrote a book against Democritus, now lost, in which he evidently maintained that Democritus holds that things are no more F than not-F, and concluded that he ‘has

thrown life into confusion'. Plutarch defends Democritus by noting that he argues against Protagoras, and therefore cannot **(p.242)** have endorsed the thesis that for any property F, nothing is any more F than not-F.⁵¹

Thus, both Sextus and Plutarch describe, and respond to, a sceptical reading of Democritus based on an apparent misreading of his argument from conflicting appearances, and from his attacks on the senses: these are taken to imply that he thinks knowledge is impossible. Some, however, may have arrived by a different route at the conclusion that Democritus meant to deny that knowledge is possible. Consider the following syllogism: (i) knowledge is based on perception and is not possible without it, (ii) what the senses report is false and must be rejected, therefore (iii) knowledge is not possible. If Democritus was committed to (i), ancient readers may have assumed, given his criticism of the senses, that he was committed to (iii) as well.

9.4 Galen and the senses' reply

For evidence of (i), the thesis that knowledge is not possible without the senses, we must turn to Galen. Galen (c. AD 129–200) has preserved some of the most intriguing fragments from Democritus' writings pertaining to the importance of the senses and of experience. In *On Medical Experience*, he refers to Democritus for the idea that experience or perception is a valuable source of knowledge:

We find that of the bulk of mankind each individual by making use of his frequent observations gains knowledge not attained by another; for, as Democritus says, experience and vicissitudes have taught men this, and it is from their wealth of experience that men have learned to perform the things they do. (*On Medical Experience* 9.5, p. 99 Walzer = DK vol. II p. 423/T186, trans. Walzer)

In quoting Democritus, Galen turns to him for help in arguing that the Rationalist doctors, who reject any significant role for experience in the acquisition of medical knowledge, are in danger of refuting themselves instead of the Empiricists. For as the Empiricists argue experience is by itself sufficient for knowledge: 'there are remedies which have been discovered by experience without any *logos*' (*On Medical Experience* 15, p. 111 Walzer), and it is also necessary for knowledge, since it is impossible to tell whether what has been seen deserves belief unless one has seen it often enough to warrant confidence **(p.243)** (*On Medical Experience* 15, pp. 112–13 Walzer). To those who maintain that the very notion of experience is incoherent and that the stipulation that one must see something 'very many times' is indefinite and unclear, Galen argues that they do not refute the Empiricists, only themselves. For in rejecting any role for experience in acquiring technical knowledge, they are committed to saying that it is possible to discover that something is the case by means of a single observation. But seeing something once is obviously never sufficient to confirm the success of a remedy or treatment. Galen thus compares the Rationalist doctors with

those who, just because they do not understand how they see, do not agree that they do see, or who, just because they do not understand in which way what is coming into being comes into being, what passes away passes away and what

moves is in motion, do away with coming into being, passing away, and motion. (*On Medical Experience* 15, p. 114 Walzer)

In other words, to deny that experience can be the source of knowledge because one does not understand how knowledge can come from repeated experiences is like denying that motion exists simply because one is unable to explain how it is possible. The mere fact that one cannot explain it is not sufficient reason to reject what is evident or clear. For, as Galen goes on to argue,

who does not know that the greatest confusion of any reasoning lies in its conflict with what is evident? If someone cannot even make a start except from something evident, how can he be relied on when he attacks his very starting point?

Democritus was aware of this; when he was attacking the appearances with the words 'By convention colour, by convention sweet, by convention bitter, but in reality atoms and void' [=B9/125] he made the senses reply to thought as follows: 'Wretched mind, you get your evidence from us, and yet you overthrow us? The overthrow is a fall for you [=B125].'⁵² You should, then, charge reason with being untrustworthy, since it is so devious that when it is most convincing it is in conflict with the phenomena which served as its basis. Instead you do the opposite: things for which you have no account of how they come to be you judge not to be, as reason demands. But to me this very fact seems to be the most important objection to reason. For who in his mind can still trust reason when it comes to matters which are not evident, if it is devious as to postulate the contrary of what is obvious? (*On Medical Experience* 15.7, p. 114 Walzer = B125/T179c, trans. Walzer/Taylor)

Galen quotes from an exchange in Democritus between the senses and the mind in fragment B125. Democritus has evidently just had Mind attack the **(p.244)** *phainomena*; in fragment B125, the senses reply with the argument that the mind gets its *pisteis* 'reliable evidence' or 'proofs' from the senses; hence, if it overthrows the senses, then it will be overthrown as well. Recall that in *M VII* 136, Sextus referred to Democritus' claim to have restored to the senses *to kratos tēs pisteōs* 'control over belief or evidence'. Galen quotes from Democritus in order to make the same point against the Rationalists: maligning the senses and what is evident to the senses is ultimately self-defeating, because one thereby undermines the evidential basis on which the mind or reason rests.

The reply of the senses preserved by Galen implies that any *pisteis* which the mind could adduce ultimately come from the senses—hence, that knowledge is impossible without perception. We have already seen this idea attributed to Democritus. According to Diotimus, Democritus made the appearances a criterion—witness his praise of Anaxagoras:

τῆς μὲν τῶν ἀδήλων καταλήψεως τὰ φαινόμενα, "ὄψις γὰρ τῶν ἀδήλων τὰ φαινόμενα", ὡς φησιν Ἀναξαγόρας [=DK 59 B21a], ὃν ἐπὶ τούτῳ Δημόκριτος ἐπαινεῖ.

The appearances [sc. are the standard] for the apprehension of things hidden, for 'appearances are a sight of what is hidden (non-evident)', as Anaxagoras says, which Democritus praises Anaxagoras for saying. (*M VII 140* = *A1 11/T1 79a*, trans. Taylor modified)⁵³

The fragment from Anaxagoras has a typical proverbial form, with the predicate preceding the subject; accordingly, Sider suggests that we probably cannot give very precise meanings to Anaxagoras' words. φαυόμενα almost certainly does not mean 'things which merely appear to be the case', i.e. narrowly subjective appearances, but more generally 'things seen or observed to be the case', i.e. epistemic appearances and beliefs. This could include astronomical observations, or observations about the action of eddies and facts about nutrition (cf. Sider 1981: 129). ἀδύλων can mean what is hidden, invisible, unclear, or non-evident, including Anaxagoras' seeds; but, as Sider (1981: 129) notes, 'it could refer to anything that is not immediately apparent, such as past events and unseen heavenly bodies whose existence can be inferred from certain eclipse phenomena (Theophr. *Phys. Opin.* fr. 19 = DK 59 A77)'. ὄψις can be construed either subjectively to mean 'seeing' or 'sight', in which case, the sentence would mean '*phainomena* are the sight of the invisible'. Or it can be construed objectively to mean the external appearance or aspect of a thing, that is, what meets the eye, in which case the sentence means '*phainomena* are the manifestation of the hidden.'⁵⁴ Either way, the slogan nicely characterizes Anaxagoras' as **(p.245)** well as Democritus' attitude towards physical theorizing, which begins with empirical observations about the physical world, and then moves by inference and conjecture to a hidden, i.e. not immediately observable, nature, or reality which explains what we see. This is why Diotimus describes Democritus as making *phainomena* a 'criterion': like Anaxagoras, Democritus thinks it is necessary to begin with this in order to arrive at an understanding of the true nature of things, which is hidden and non-evident. Democritus' praise of Anaxagoras is consonant with the way he has the senses reply to the mind: in order to know what is non-evident, hidden, or unclear, one must begin at the right starting point, namely, a grasp of what is evident. Since what is non-evident can only be known by means of what is evident, by attacking the senses one undermines the only means available for discovering what is non-evident.

Galen's testimony indicates that Democritus was concerned with questions about the value and epistemic authority of the senses—as Sedley (1992b: 38) puts it, 'the adjudication of the struggle for "command" between intellect and senses'. According to Galen, the senses are maligned by the mind, but defend themselves with a counterattack. This episode can help us to make sense of testimony from our other sources. Sextus tells us that Democritus professes to give confirmations of the senses, but is found undermining them instead (*M VII 136*). Aristotle attributes to Democritus both the thesis that the truth lies in the appearances (*DA I 2. 404^a27–31* = *A1 01/T1 07a*, *GC I 2. 315^b9* = *DK 67A9/T42a*), and the thesis that 'either there is no truth or to us at least it is not evident' (*Met. Γ5. 1009^b11–12* = *A1 12/T1 77*). The fact that Democritus is described in a number of sources as arguing for *p* and then for not-*p* does not necessarily indicate confusion in the sources or on his part, but may instead derive from a more complex agenda and argumentative strategy. Think of how difficult it would be to make sense of

isolated contradictory fragments from the *Gorgias* or the *Republic*. In Democritus, we find a pattern of dialectical argumentation, of prosecution and defence. His language, and the language the sources use to report his views—prosecution (καταδικάζειν), restoration of command (ἀναθεῖναι τὸ κράτος), trustworthiness or evidence (πίστις), and overthrowing (κατάβλημα)—suggest an agonistic and legalistic context of debate, as well as a parallel with Protagoras' Καταβάλλοντες ('Knockdown Arguments'). Perhaps Democritus described at least one round of 'knockdown argument' (κατάβλημα) between the mind and the senses, as for example in the form of a trial of the senses, or even, as Paul Cartledge (1997) suggests, in the form of a dialogue.

That Democritus wrote in the form of *antilogiai* ('opposing arguments') is strongly suggested by Timon, a follower of Pyrrho:

ὄν γε καὶ Τίμων τοῦτον ἐπαινέσας τὸν τρόπον ἔχει Οἶον Δημόκριτόν τε
περίφρονα, ποιμένα μύθων, ἀμφίνοον λεσχῆνα μετὰ πρώτοισιν ἀνέγνων.

Timon praises him in these words: 'Such is the wise Democritus, shepherd of discourses, double-minded disputant, among the best I ever read.' (DL IX 40 = A1/T6 = Timonis B46 Diels, trans. after Hicks)

(p.246) Some have assumed that ἀμφίνοον λεσχῆνα 'double-minded disputant' has a negative sense.⁵⁵ However, as Bett (2000a) argues, περίφρονα ποιμένα μύθων, 'wise shepherd of discourses', is indisputably meant to praise.⁵⁶ And ἀμφνοος 'double-minded' is probably not critical or disparaging, for Timon calls Zeno of Elea ἀμφοτερόγλωσσος 'double-tongued' (DL IX 25 = DK 29 A1) in order to praise him for thought or speech that tends in two opposite directions.⁵⁷ What is it to be 'double-minded'? In Sophocles *Ant.* 376, it is, literally, to be 'of two minds', to think both ways and hence to be in doubt.⁵⁸ To be double-minded is to have the ability to see both sides of a question, to think both *p* and not-*p*. Such an ability, which arguably led Pyrrho to conclude that things are indeterminate and undecidable,⁵⁹ would presumably have been praiseworthy to a follower of Pyrrho's like Timon. Timon's praise of Democritus as 'double-minded' in turn suggests that Democritus' writings evinced a capacity for arguing both *p* and not-*p*, that they had an antilogical structure in which arguments were presented for opposing sides.

If so, we can explain some of the apparent inconsistencies in the fragments: some of them may have come from different parts of a complex dialectical argument. Democritus put the senses on trial, with arguments for and against. Sextus preserves the content of the mind's brief against the senses: the senses are limited by a threshold beyond which they are not capable of making judgements; they are 'dark' because they tell us only about how we are affected by things, not how things are in themselves. We know from Galen that the prosecution of the senses did not go unchallenged; in fragment B1 25 we find the senses defending the epistemic value of appearances against charges made by the mind. The senses argue that the mind gets its starting points and its proofs from the senses, and that knowledge gained through thinking is not possible without knowledge derived through the senses.

What kind of epistemic prospects does this leave us with? It depends upon how one reads the senses' syllogism: if knowledge is not possible without the senses, and the senses must be rejected, then knowledge is not possible. One option is to suppose that Democritus affirms both premisses; by overthrowing the senses, the mind engineers its own downfall, so that no **(p.247)** knowledge is possible. As we saw earlier, Sextus refers to just such a line of argument:

Democritus, Plato, and their followers, in rejecting the senses, doing away with sensible things and relying exclusively on intelligibles, throw things into confusion, and shake not only the reality of what there is but also their own theories. (M VIII 56 = not in DK/T182b)

Cicero also thinks that the end result, for Democritus, is that knowledge is impossible, as does Aristotle: 'either there is no truth or to us at least it is not evident (ἀδηλον).' But the syllogism can also be understood to be part of the reply of the senses: it is a sort of self-refutation argument against the mind, on the basis of which we are supposed to realize that neither the mind nor the senses can get along without the other. Diotimus (and arguably Sextus himself) endorses this interpretative option at M VII 140: both must be accepted as 'canons' or means of acquiring knowledge. The senses are a source of knowledge whose reports the mind relies on to make its own discoveries and formulate its own *aitiologiai*.

9.5 Looking ahead and back: Democritus, Epicurus, and Protagoras

Let us now take a more synoptic view of what the sources tell us about Democritus. As we have seen, the ancient sources describe Democritus' views about knowledge and the senses in at least three different ways. Some present him as a rationalist who ranks the mind above the senses and maintains that only through reason or the mind can we have access to what is ultimately real, that is, to atoms and void (Sextus M VII 138–9). Others portray him as a dogmatic sceptic or negative dogmatist who thinks that since knowledge is not possible without perception, and perceptual knowledge is impossible (Sextus M VII 135–7, M VIII 6–7), therefore all knowledge is impossible (Cicero, Colotes, Diogenes of Oenoanda). Still others understand him to be a proto-empiricist who makes the senses and the mind epistemic measures or standards of the truth (Diotimus *apud* Sextus M VII 140), and hence an ally of the Empiricist doctors, who think that technical knowledge is impossible without the cumulative experience of repeated observations of different kinds of bodily conditions and the effects medical treatments have on them (Galen on fragment B125).

These three portraits of Democritus may reflect different aspects of a single coherent epistemology. The 'sceptical' portrait of Democritus either derives from his discussion and criticism of the senses and their claim to epistemic authority, which is preserved by Theophrastus in his discussion of Democritus' theory of sensible qualities as merely relative properties of objects. Or it derives from a certain pessimistic reading of the senses' reply to the mind: if knowledge is not possible without the senses, and the senses are overthrown, then no knowledge is possible in general. But Galen and Sextus suggest that Democritus **(p.248)** did not endorse any such conclusion himself. Rather, he

regarded both the senses and the mind as sources of knowledge: the senses supply the appearances from which the mind's *aitiologiai* start.

On this interpretation, Democritus' epistemological outlook anticipates Epicurus', for he makes the senses authoritative about their objects, and argues that one perception is no more true than another, and he also thinks that knowledge is not possible without the senses. At the same time, this outlook resembles Protagoras': like Protagoras, Democritus makes man, in particular, the senses and the mind, the measure of all things, and he makes use of the argument from conflicting perceptual appearances to draw conclusions about the nature of what we see. Let me now make, by way of conclusion, a few speculative remarks about the similarities and differences between Democritus and these two figures.⁶⁰ In the case of Democritus and Epicurus, the differences between them probably lies in Epicurus' greater sophistication in philosophical method. First, Democritus' view implies that all perceptions or perceptual appearances are true, but there is no evidence that he argued for this explicitly, or made it into the foundation of a theory of knowledge. Epicurus did, using a strategy which seems to have been inspired by the senses' reply in Democritus: given that the senses depend on reason, if the senses are not correct, then no knowledge is possible.⁶¹ Second, Democritus used the terminology of the *canonic*. But for him a 'canon' is simply a means for measuring or determining something, and the things which he regarded as 'canons' were, most likely cognitive instruments, such as the senses, the mind, and our feelings of pleasure and pain. It was arguably Epicurus' innovation to develop a theory of the *kritēriōn*, according to which something is a *kritēriōn* if it is itself evident and necessarily true. Third, Epicurus developed a highly original scientific methodology, using the notions of attestation (ἐπιμαρτησις), non-contestation (οὐκ ἀντιμαρτησις), contestation (ἀντιμαρτύρησις), and non-attestation (οὐκ ἐπιμαρτύρησις) to explain how to verify and falsify scientific theories and to test empirical generalizations on the basis of what is evident, perception.⁶² The idea of using observations in order to test scientific theories is hinted at in Democritus' praise of Anaxagoras' slogan 'appearances are the sight of what is hidden'. Aristotle and Galen attest to the importance of observation and experience in Democritus' science: he took observations and experience as his starting point; the aim of scientific theory is to offer the best or likeliest explanations for why this was the case. We have no evidence, however, that Democritus developed this into a sophisticated methodology like Epicurus'. And indeed, given that Epicurus belongs to a much later generation of philosophers, it should not be surprising that Epicurus applied himself much more self-consciously than Democritus to **(p.249)** developing a systematic theory of philosophical method; after all, Epicurus spent much of his career in Athens, was well aware of Plato's and Aristotle's work, and presumably would have realized that it was necessary to counter some of their arguments against Protagoras and Democritus, and to bolster those views with new and original argumentation.

As I noted in §8.1, numerous sources make indirect connections between Democritus and Epicurus. For example, Epicurus is said by a number of sources to have been taught by Nausiphanes, a student of Democritus,⁶³ and Diogenes Laertius says that Epicurus was inspired to go into philosophy after reading Democritus' books (DL X 2 = A52/T199).

But Epicurus is of course notorious for having denied that he got anything from Democritus.⁶⁴ The truth is likely to be somewhere in between. The fact that Mill's utilitarianism bears certain historical and doctrinal relationships with Hume's moral and political theories does not lead us to question Mill's originality. Similarly, we can posit an epistemological theory for Democritus which makes him a precursor to Epicurus, without detracting from Epicurus' originality and independence as a philosopher.

The historical relationship between Democritus and Protagoras is more uncertain, but doctrinally there are affinities between the two thinkers, as is apparent when we think of Democritus in the context of Plato's Secret Doctrine and Aristotle's criticisms of Protagoras in *Metaphysics* Γ4–6. First, though Democritus rejected the thesis that all appearances are true, he evidently adopted Protagoras' conflicting appearances argument with respect to sensible qualities, arguing that things appear sweet to some, bitter to others, but are in themselves no more sweet than bitter, no more hot than cold. Democritus thus seems to have endorsed some version of the undecidability argument that Aristotle argues against in the *Metaphysics*, in order to conclude that one perception is no more true than another. Democritus' view implies that all perceptions are strictly speaking true with respect to sensible qualities—that, for example, whatever appears red to one is so for one.

This seems to have led Democritus to a second Protagorean thesis: according to the theory attributed to him by Theophrastus, sensible qualities are nothing other than the affections of the senses. What we perceive is the way in which we, and our sensory organs, are affected and changed by things impinging upon them. Hence, just as in Plato's Secret Doctrine theory of perception, sensible qualities like sweetness or redness are subjective qualities that are relative to us: they depend for their existence on the fact that we are affected in certain ways, and do not belong to anything as intrinsic properties of things.

(p.250) The third and most important Protagorean aspect of Democritus' epistemology is his argument that knowledge is impossible without the senses, and the conclusion that both the senses and the mind are *kanones* or 'standards', like Protagoras' 'measure of all things'. Both the mind's reasoning, and appearances from the senses, are required to discover how things really are. In particular, any attempt to reject or undermine the senses will result in an 'overthrow' of the mind or reason as well; without the senses, knowledge is impossible. On Democritus' view, our prospects for knowledge are necessarily constrained by the nature and limitations of our cognitive capacities, and bound to the senses and what they are able to teach us about the world. In this sense, he endorsed the spirit behind Protagoras' claim that we are all measures of the truth and of reality.

Notes:

(1) On Sextus as a source for Democritus, see Decleva Caizzi 1980. On the concept of the criterion of truth, see Striker 1974, Long 1978, Brunschwig 1988.

(2) Sedley argues that VII 49–88 is largely drawn from the work of Aenesidemus (1992b:

25–6), 89–140 from the Stoic Posidonius (1992*b*: 27–34), and 141–260 from Antiochus (1992*b*: 44–55). By contrast, Tarrant (1985) defends Antiochus as the source of the entire section VII 89–260, while Barnes (1989: 64–5) doubts that he is the source of any of it.

(3) DL IX 72: Δημόκριτος δὲ τὰς ποιότητος ἐκβάλλων, ἦνα φησί “νόμῳ θίρμῶν, νόμῳ ψυχρῶν, ἐπεὶ δὲ ἄτομα καὶ κενόν” (‘Democritus, getting rid of qualities, where he says “By convention hot, by convention cold, but in reality atoms and void”’).

(4) Cf. Galen, *On the Elements according to Hippocrates* I.2 = A49/T179d. The adjective ἡ ἐπεὶ, ‘true’ or ‘real’, can be found in Homer and other authors (*Il.* 2.300, 15.53, 20.255); Democritus seems to have coined from it the otherwise unattested noun ἡ ἐπεὶ ‘reality’. As we shall see, Galen and Theophrastus gloss it with the more common term φύσις..

(5) Cf. Sextus *PH* III 232: οὐδὲ τῶν προτρημένων τι ἐστὶ φύσει τοῖον ἢ τοῖον· νομιστά δὲ πάντα καὶ πρὸς τι..

(6) Heinemann (1945) has doubts, but otherwise endorses Reinhardt's thesis.

(7) Bailey (1928: 178 n. 8) remarks, following Reinhardt, that “νόμῳ ... is almost equivalent in sense to “in appearance””; likewise, Decleva Caizzi (1999: 318) notes that ‘the questioning of *nomos*... through the antithesis with nature (*physis*)...presupposes familiarity with the conceptual categories of philosophy (truth versus appearance).’ Hence ‘νόμῳ can be translated by ‘Opinion says’ (Hicks' 1925 translation of Diogenes Laertius), or by ‘in idea’ or ‘in our belief’ (Guthrie 1965: 440).

(8) A contrast between appearance, that is, what people customarily believe to be the case, and reality is also made in the following passages: ἀρχὰς εἶναι τῶν ὄλων· ἀτόμων καὶ κενού, τὰ δὲ ἄλλα πάντα νενομίαθαι (DL. IX 44 A1/T6); τὸ γοῦν δεξιὸν φύσει μὲν οὐκ ἔστι δεξιόν, κατὰ δὲ τὴν ὥσπερ πρὸς τὸ ἕτερον σχέσιν νοεῖται (DL. IX 87); καὶ ὁμοίως ἐπὶ πάντων μηδὲν εἶναι τῆ ἀληθείας, νόμῳ δὲ καὶ ἔθει πάντα τοὺς ἀνθρώπους; πράτταν (DL IX 61); δόξη δὲ μόνον καὶ νόμῳ αἰσχροῦν [SC. ἢ ἀστικία] (Plato, *Rep.* II. 364a3–4).

(9) Westman 1955, Sedley 1988: 298.

(10) Such an argument is attributed to Democritus by Sedley (1983, 1988, 1992*b*) and Wardy (1988), among others. O'Keefe (1997: 122–3) argues (against Wardy 1988 and Purinton 1991) that there is no reason to think that Democritus denied the reality of all things composite and macroscopic; he argues, against Sedley (1988), that Democritus' reason for denying the reality of sensible qualities does not have to do with the fact that ‘phenomenal states are nothing over and above physical states’, since identity with physical states would show that those states are real.

(11) The Epicureans may have had an incentive to exaggerate the differences between Democritus and Epicurus.

(12) See Simplicius *Commentary on the Physics* 28.4–27 = A38/T45, Aristotle *Metaphysics*

985^b4–22 = DK 67 A6/T46a.

(13) Cf. Taylor 1999a: 152 n. 151; this is also one of the main themes of Morel 1996, a study of Democritus on cause and explanation.

(14) Plutarch alone has καὶ νόμῳ σύγκρισιν. For this reason, some editors of Plutarch have proposed replacing σύγκρισιν in MSS EB with some word designating a secondary quality, such as πικρόν (Sandbach), λευκόν, or ψυχρόν (Reiske).

(15) Cf. Furley 1993: 76–7 n. 7.

(16) Hence Taylor (1999a: 152–3 n. 141) suggests that the gloss may be due to ‘looseness in Colotes’ terminology. Rather than applying the term strictly to the atomic aggregate, he may have intended it to apply to the observed macroscopic object, thought of as a bundle of qualities, and fathered on Democritus the view that that bundle, as well as the properties which compose it, exists only *nomōi*. See also Morel 1998: 342–3.

(17) Proclus reports that Democritus thinks that names belong to things ‘by convention’, but the term used is θέσει, not νόμῳ (*Commentary on Plato's Cratylus* 16, p. 5, 25–7, 6.20–7.6 Pasquali = B26/T167).

(18) Cf. Furley 1993: 75–6.

(19) διαθίγη Steckel 1970: 207.

(20) This is sometimes translated ‘although he promised to attribute’ (e.g. Bury's 1935 translation of Sextus, KRS 1983). But Sedley (1992b: 37) argues that ὑπεσχημένος ἀναθεῖναι, aorist participle of ὑπισχνεῖσθαι plus aorist infinitive, cannot mean ‘promised’, which requires the future infinitive, but must mean ‘professed’. So understood, Democritus did not simply intend to return τὸ κράτος τῆς πίστεως to the senses, but actually thought he did so.

(21) Taylor translates ἐπιρυσμῆ as an adjective, having the sense ‘flowing in’, from the verb *epirreō* (cf. Hesychius). But *rusmos* is an atomistic technical term for ‘shape’, and one of the titles in Thrasyllus' catalogue is *Peri Ameipsirusmiōn* (‘On Changes of Shape’); thus we could take *epirusmiē* to be a variant of the noun *ameipsirusmiē* ‘reshaping’ (cf. Langerbeck 1935: 113–14). De Ley (1969: 496–7) has proposed to emend the text accordingly to read (ἄλλ’) ἀμειψιρυσμῆ instead of ἄλλ’ ἐπιρυσμῆ. As Taylor (1999a: 11 n. 4) notes, the sense is the same either way: what we believe and come to think through the senses is determined by the flow of atoms from objects around us, and in particular by the way those atoms alter or ‘reshape’ our bodies and receptive mechanisms. Barnes (1982: 560) finds in B7 an argument for global scepticism: if every belief is a rearrangement of our constituent atoms and coming to believe that *p* is having certain (cerebral) parts of one's atomic substructure rearranged, then beliefs and opinions are not arrived at by rational considerations; and therefore nothing we think or believe can qualify as knowledge. However, Sextus has already indicated that all of the quotations

from Democritus are specifically about the judgements or opinions of the senses, not about the prospects for knowledge in general, and so it is not clear from this fragment alone that Democritus was motivated by this line of argument.

(22) Taylor (1999a: 218–19; 1999b: 191) also thinks that the key to understanding the ‘sceptical’ fragments of Democritus in Sextus is to interpret them not as referring to cognitive states generally, but specifically to states of sensory cognition: ‘These fragments will then simply reiterate the thesis that we know nothing about the nature of reality *through the senses*.’

(23) Mutschmann's 1914 text, with Sedley's punctuation (1992b: 35–42).

(24) Cf. Sedley 1992b: 27–34, Oppel 1937: 34.

(25) In *M VIII* 327 = B10b/T185, Sextus says that Democritus ‘has spoken strongly against ἀπόδειξις in his *Canons* (διὰ τῶν Κανόνων).’ Περὶ λογικῶν κανῶν ἀβ̄ γ̄ (‘Canon of Logic in 3 Books’) is listed in Thrasyllus’ catalogue at DL IX 47 (=B10b, A33/T40).

(26) See Oppel 1937 for the history of the word κανών and Striker 1974, 1996c on the related term κρήριον.

(27) *Kritērion* is also used in this pre–Hellenistic sense at Plato, *Republic* 582a6, and even at Epicurus *Letter to Herodotus* 38 (=LS 17C), 82 (=LS 17D), and 51 (LS 15A11). In Fragment B6, *kanōn* almost certainly does not mean ‘infallible criterion of truth’.

(28) Diels explains the plural of ‘Canons’ by the fact that the work was in three books, but Oppel (1937: 33–5) argues that it indicates that there was more than one *kanōn*.

(29) For this reason, Langerbeck (1935: 115), followed by Oppel (1937: 34), suggests that in *M VII* 139, there is no opposition of two powers, perceptual vs. rational, but rather ‘eines kontinuierlichen Fortschritts der Erkenntnis vom Groben zum Feinen’.

(30) Cf. Taylor 1999a: 199–200. Taylor connects this with the book title *On Difference of Judgement or On the Contact of Circle and Sphere* (Περὶ διαφορῆς γνώμης ἢ Περὶ ψάυσιος κύκλον καὶ σφαίρης) in Thrasyllus' catalogue (DL IX 47 = A33/T40). For references to the literature on the cone problem, see Taylor 1999a: 136. Another example of ‘genuine knowing’ may perhaps be found in Democritus' argument for indivisible magnitudes, described by Aristotle in *GC A2*. 315^b28–317^a17 = A48b/T49.

(31) Compare Anaxagoras DK 59 B21 ὑπ’ ἀφαιρότητος αὐτῶν, φησίν, οὐ δυνατοὶ ἔσμεν κρίνειν τάληθές (‘Owing to their [sc. the senses'] weakness, we are not able to determine the truth’). According to Sextus, ‘he proposes as assurance of their untrustworthiness the gradual change of colors. For should we take two colors, black and white, and slowly pour one into the other drop by drop, sight would not be able to determine (οὐ δυνήσεται ἡ ὄψις διακρίνειν) the slight changes, although in nature they are real’ (*M VII* 90, trans. Curd). Curd argues that Anaxagoras thinks the senses are feeble, but not worthless; they are not sufficient by themselves for knowledge but the

senses and their evidence are necessary for knowledge nonetheless. I am grateful to her for allowing me to read part of her forthcoming Phoenix Presocratics commentary on Anaxagoras.

(32) Cf. von Fritz 1945/6; reprinted in Mourelatos 1974: 74–5. Von Fritz, who favours the translation ‘dunkel’, so as to allow the possibility that sensory knowledge is imperfect but not false, argues that the true opposite of *gnēsiē* would be *nothos* (‘spurious’), such as we find in, for example, Plato, *Republic* IX 587b14–c2.

(33) Morel 1998: 152. Another possibility is that ‘bastard’ refers to the lack of legitimacy in the eyes of others and a need for protection from the father; compare *Phaedrus* 275e3–5, where the written word is said to be the ‘bastard offspring of thought’ and incapable of defending itself on its own without its father’s help.

(34) The adjective is applied by extension to illegitimate children born out of wedlock who are hidden away ‘in the dark’.

(35) ‘Dim knowing’ or ‘dark cognition’ (Weiss 1938: 48–9), ‘dark’ (Barnes 1987 trans., Asmis 1984: 337), ‘shadow-knowledge’ (McKim 1984), ‘dunkel’ (von Fritz 1945/6, Mansfeld’s translation of DK, 1986: 329), ‘die dunkle Erkenntnisweise’ (Hirzel 1877: i. 116). Perceptual knowledge is dark because its *objects* are inferior to those of legitimate knowledge; as Weiss (1938: 49) puts it, ‘The point is here deliberately emphasized that the rank of the different kinds of knowledge is based on the rank of different kinds of being.’

(36) Cf. Cicero, *Acad.* II.10.32 = B117/T184cit i: *Naturam accusa, quae in profundo veritatem, ut ait Democritus, penitus abstruserit* (‘Blame nature for having completely hidden truth away in an abyss, as Democritus says’).

(37) ὄψις... φαινόμενα only in MS N.

(38) Cf. Striker 1996c: 28–9. Cicero tells us that Epicurus cited with approval the same passage from the *Phaedrus* (*De fin.* II, 2, 4), and we also know from Diogenes that Epicurus esteemed Anaxagoras most highly among all earlier philosophers (DL X 12). However, it may be that Sextus’ source is responsible for the quotations, not Diotimus; as Sedley (1992b) notes, Sextus’ source for *M* VII 89–140 has a propensity for invoking the support of disparate thinkers for each other and establishing alliances between them; thus, in the section on Empedocles, Democritus and Plato are invoked in support of Empedocles. Thus it is probably not Diotimus but Sextus’ source for the entire section (whom Sedley (1992b: 29) argues was Posidonius) who supplied the quotation from Plato. Numerous sources testify that Democritus praised other ancient authors, and it is not implausible that Democritus was an admirer of Anaxagoras’, all the more so since, as Stephen Menn shows in an unpublished paper, ‘Anaxagoras, Empedocles, Leucippus’, lines of influence can be drawn from Anaxagoras to Lencippus.

(39) Cf. Natorp 1884: 190, Zeller 1920: I.ii. 1193, Tarrant 1985: 106, Sedley 1992b: 43–4.

(40) Cf. Hirzel 1882, von Arnim 1905, Langerbeck 1935: 119–20, Taylor 1999a: 143 n. 132.

(41) A computer search of the *Thesaurus Linguae Graecae* yielded eight instances of the nominal form, only one of which (Hipp. *Mul.*) was not in testimony concerning Democritus; the others are in Diogenes Laertius, Sextus, the Suda, and Hesychius.

(42) Along the same lines, Kirk, Raven, and Schofield (1983: 412–13) suggest that Democritus thought that the senses are ‘confirmed’ by the fact that they accurately predict how the world will appear, given what the mind’s reasoning tells us about the nature of the world.

(43) Thucydides III 12: ὁ τε τοῖς ἄλλοις μάλιστα εὖνοια πίατιν βεβαιοῖ (‘The good faith usually assured by mutual good will’).

(44) For *pistis* in the sense of ‘persuasive assurance’, cf. Antiphon V.84 (πίστιν τῆς αἰτίας ταύτην σαφεστάτην ἀπέφαινον τὰ σημεῖα τὰ ἀπὸ τῶν θεῶν, ‘they claimed that the signs from the gods were the clearest proof of the cause’), VI.28, Sextus *M* VII 90. On ‘proofs’ (*pisteis*) in Antiphon’s forensic speeches, see Gagarin 2002: 115–18, 138–9, 166. One can distinguish between three senses of *pistis* in Aristotle, and in contemporary usage, following Grimaldi (1980: 19–20): (1) ‘the state of mind called conviction or belief which is produced by a reasoned statement’ (*Rhet.* 1356b6–8, 1367b30, *DA* III 3. 428a20, *Top.* 103b3, 7; cf. *Laws* 966cd), (2) methods of inference producing such conviction, in particular, the enthymeme or example (*Rhet.* 1355a5–6, 1358a1, 1393a23–5, *AnPr* 68b9–14, cf. *Phaedo* 70b), and (3) ‘evidentiary material of a specifically probative character with respect to the subject matter’, in particular, *entechnic* and *atechnic pisteis* (*Rhet.* I.2.2, cf. Euripides, *Hipp.* 1037, 1055, 1309). With senses (ii) and (iii), Aristotle’s use of *pistis* straddles the senses of ‘argument’, ‘evidence’, and ‘proof’. See also Bonitz 1870: 595 on *pistis* in Aristotle.

(45) Thucydides VI 53, 2: διὰ πονηρῶν ἀνθρώπων πίστιν (‘on the evidence of rogues’).

(46) *Pistis* is contrasted with *epistēmē* at *Gorgias* 454b8–455a7; it is equivalent to δόξα at *Republic* VI. 505e2 and is the third division of the Line (*Republic* V. 511e1; see also *Ti.* 29c3).

(47) Cf. *Phdr.* 237b7–c5: περὶ παντός, ὧ παῖ, μία ἀρχὴ τοῖς μέλλονσι καλῶς βουλευσεσθαι εἰδέναι δεῖ περὶ οὗ ἂν ἢ ἡ βουλή, ἢ παντὸς ἀμαρτάνειν ἀνάγκη. ὡς οὐκ εἰδότες οὐ διομολογῶνται ἐν ἀρχῇ τῆς σκέψεως, προελθόντες δὲ τὸ εἰκὸς ἀπαδιδόασιν οὔτε γὰρ ἑαυταῖς οὔτε ἀλλήλοις ἀμολογοῦσιν.

(48) My attention was drawn to the potential significance of these passages by Mourelatos 2003.

(49) Cf. Taylor 1999a: 227–32. On Democritus’ ethical theory, see Kahn 1985, Taylor 1967, Taylor 1999a, Annas 2002.

(50) Cf. Stobaeus I.50.17 = Aëtius IV.9.1 = T182f: 'Democritus [and others, including the Eleatics and Protagoras] say that the senses are false.'

(51) Plutarch adds a second argument against Colotes to clinch the point: 'Colotes did not come across these, even in a dream, and was misled by Democritus' phraseology, when he said that thing is no more than nothing [μη μᾶλλον τὸ δὲν ἢ τὸ μηδὲν εἶναι], calling "thing" [δέν] body and "nothing" [μηδέν] the void, since that too has a nature and substance of its own.' According to Plutarch, Colotes has misunderstood Democritus' claim that 'thing is no more than nothing', which does not imply eliminativism or anti-realism about everything besides atoms and void, but only means that void exists no less than atoms. But here Plutarch is probably not correct; Sextus at *PH* I 213–14 (not in DK/T178a) and others indicate that Democritus did make use of the *ou mallon* formula with reference to conflicting perceptual appearances, which suggests that Plutarch may have missed Colotes' point. On Democritus' use of the *ou mallon* argument, see Graeser 1970.

(52) ἀλλ' ὅτι ἡ μεγίστη παντὸς λόγου διαβολὴ ἢ πρὸς τὸ ἐναργές ἐστι μάχη, τίς οὐκ οἶδεν; ὃς γὰρ οὐδ' ἄρξασθαι δύραται τῆς ἐναργείας χωρίς, πῶς ἂν οὗτος πιστὸς εἴη, παρ' ἧς ἔλαβε τὰς ἀρχάς, κατὰ ταύτης θρασυνόμενος; τοῦτο καὶ Δημόκριτος εἰδώς, ὅποτε τὰ φαινόμενα διέλαβε, "νόμωι χροιή, νόμωι γλυκύ, νόμωι πικρόν", ριπών, "ἔτεῃ δ' ἄτομα καὶ κενόν", ἐποίησε τὰς αἰσθήσεις λεγούσας πρὸς τὴν διάνοιαν οὕτως τάλαινα φρήν, παρ' ἡμέων λαβοῦσα τὰς πίστεις ἡμέας καταβάλλει; πτώμα τοι τὸ κατάβλημα". δέον οὖν καταγνῶναι τοῦ λόγον τῆς ἀπιστίας, ὃς οὕτως ἐστὶν μοχθηρός, ὥστ' ὁ πιθανώτατος αὐτοῦ μάχεται τοῖς φαινομένοις, ἀφ' ὧν ἤρξατο, τὸ ἐναντίον ἐργάζεσθε τῶν ὡς γίνεταί οὐκ ἐχόντων λόγον, ὡς ὁ λόγος δὲ βούλεται μὴ γιγνομένων κατεγνωκότες ἐμοὶ δ' αὐτὸ τοῦτο ἔλεγχος εἶναι δοκεῖ μέγιστος τοῦ λόγον τίς γὰρ ἂν ἔτι νοῦν ἔχων πιστεύσειεν αὐτῷ περὶ τῶν ἀδήλων, ὃς οὕτως ἐστὶ μοχθηρὸς ὥστε τοῖς ἐναργέσιν ἐναντία. τίθεσθαι;

(53) DK 59 B21a is only preserved here, and only in MS N, having apparently been lost through homoeoteleuton in the other manuscripts. Taylor omits the fragment in T179a, but most scholars of Anaxagoras accept it as a genuine fragment (e.g. DK, KRS, Sider 1981: 127–8, Curd forthcoming). On the significance of this fragment in Anaxagoras and in ancient Greek thinking, see Regenbogen 1931, Diller 1932, Gomperz 1933, Lloyd 1966: Part II.

(54) Gomperz (1933) argues that the subjective sense of ὄψις would more naturally occur to an ancient reader (cf. Thuc. 1.10.2 εἰκάζεσθαι ἀπὸ τῆς φανεράς ὄψεως), whereas Diller (1932) and Jöhrens (1939: 63 f.) argue that the objective sense makes better sense, since it seems odd to equate *phainomena* with the sense of sight.

(55) This negative sense is highlighted in some translations, e.g. 'many-sided chatterbox' (Taylor), 'le bivalent causeur' (Dumont et al. 1988). However, λεσχίη, from which λεσχίην (only found here) derives, has, in addition to the negative sense of 'gossip' or 'chatter', the more positive sense of 'conversation' or 'discussion'. Even if λεσχίην here does mean 'chatterbox', Timon may be engaging in an ironic form of praise: Democritus may talk too

much, but he is brilliant.

(56) Cf. Bett 2000a: 142, 142 n. 55, 156–7.

(57) Thus, Bett suggests that Democritus may be ‘double-minded’ because he says that the senses may not be true, while also maintaining that they are necessary guides to the search for truth; alternatively, ‘double-minded’ may refer to Democritus’ arguing that no appearance is any more true than another.

(58) εἰ δαιμόνιον τέρας ἀμφινοῶ τόδε· πῶς [δ’] εἰδῶς ἀντιλογήσω..

(59) Aristocles *apud* Eusebius *Praep. Evang.* 14.18.1–5 [=Pyrrho test. 53 Decleva Caizzi = LS 1F]. For references to the literature cf. Ch. 6 n. 18.

(60) For a recent discussion of this issue, see O’Keefe 1997. Asmis (1984: 337–50) is sympathetic to the idea that Democritus had a considerable influence on Epicurus.

(61) Cf. Lucretius 4.469–521 = LS 16A, DL 10.31–2 = LS 16B, Epicurus, *Key Doctrines* 23 = LS 16D.

(62) Sextus, *M* VII 211–16 = LS 18A. The relevant passages are collected in LS ch. 18; for discussion, see Asmis 1984 and Asmis 1999.

(63) Cicero, *De natura deorum* I.26.73 (DK 75 A5/T203a); DL I 15 (DK 75 A1/T198a), IX 64 (DK 75 A2), IX 69 (DK 75 A3), X 13 (DK 75 A8), X 14 (DK 75 A6), Sextus Empiricus *M* I 2 (DK 75 A7), Clement of Alexandria *Strom.* I 64 (=DK 70 A1/T198b), Suda (DK 75 A4).

(64) Epicurus wrote a book against Democritus Πρὸς Δημόκριτον (schol. Zenon. de lib. dic. VH¹ v 2 fr. 20 = Usener *Epic.* p. 97, 10 = DK ii. 92–3). Epicurus is said to have called him ‘Lerocritus’, i.e. ‘judge of rubbish’ (DL X 8 = T201); for discussion see Huby 1978, Sedley 1976: 134–5. The evidence is collected in Taylor 1999a: 150–6.



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