

## V

Aristotle's theory of perception may then be construed as providing a foundationalist justification of knowledge within the terms of his 'naturalistic' programme (see n. 3). Knowledge is ultimately founded on perception (see p. 137), and perception is guaranteed as veridical because the senses are naturally adapted to register their proper objects. Unfortunately, receptivity to colours, tastes etc., even when those are understood as objective features of the world, is an insufficiently secure foundation either for theoretical or for practical knowledge. Theoretical knowledge is primarily knowledge of the essences of natural kinds, which transcends the sensorily given (see p. 128), while the sort of perception which is relevant to practical knowledge is perception of evaluatively significant features of situations (see pp. 136–7), which does not fit the standard account of sense-perception.<sup>40</sup> It is therefore no accident that when he refers to the foundational role of observation in scientific theories (e.g. *An. Prior.* 46a17–22),<sup>41</sup> the theory of perception described above plays no role, since the relevant observations are not the (necessarily reliable) perceptions of sensible qualities but incidental perceptions of such things as stars or crustacea. Regarding those sorts of perception Aristotle does not claim that they are infallible or even correct for the most part, but takes the more modest position of counting them as *phainomena* along with the beliefs of the many and the wise (see p. 132–4) and of seeking the truth in the theory that best fits all the *phainomena*, 'for the best thing would be if everyone were seen to agree with what is said, or if not, to agree in a way, which will happen if they change their ground. For everyone has something of his own to contribute to the truth' (*EE* 1216a28–31). There Aristotle seems to be suggesting that human beings may be seen as naturally fitted to discover the truth, and that ordinarily recognised methods of observation and of critical thought are the methods of discovery,<sup>42</sup> without claiming that any kind of observation or belief is self-guaranteeing, unassailable or otherwise foundational in the traditional sense. The naturalistic programme, as exemplified by much of Aristotle's practice of enquiry, can then be seen as pointing rather in the direction of modern coherence theories of justification than of foundationalism; but it would be idle to pretend that Aristotle succeeded in reconciling those aspects with the foundationalism inherent in his axiomatic theory.

40 Thus the distinction between proper and incidental objects of perception does not have any clear application to moral perception.

41 For further references see Owen [225].

42 For evidence of Aristotle's adherence to the teleologically based thesis that animals are in general adapted to discover what is for their good, including survival, see Barnes [229]. The paper contains an illuminating comparison with

## 7

## The problem of the criterion\*

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Towards the end of the fourth century B.C., Greek epistemology appears to undergo some dramatic changes. New technical terms are introduced by Epicurus and the Stoic Zeno, indicating a shift of interest from the question 'What is knowledge?' – given that there is such a thing – to 'Is there any knowledge?'. The appearance of novelty may be due to the fact that so much of the philosophical literature of the fourth century is lost. There must have been a sceptical undercurrent from the time of the sophists on, most notably perhaps in the Democritean school. But we have to turn mainly to Plato and Aristotle to recover some of the evidence,<sup>1</sup> and it seems that those two had little patience with doubts about the possibility of knowledge. Seeing impressive disciplines like mathematics, astronomy, medicine and other natural sciences develop, they may have found it unnecessary to worry about their very possibility, and more important to investigate the structure of scientific theories and the characteristics of scientific understanding. They may also have thought that their doctrines, which tied knowledge to the universal,

\* In writing this paper as a contribution to a volume that is to contain separate chapters on the epistemological doctrines of the Hellenistic schools, I have tried to avoid excessive overlap by concentrating exclusively on the claim that there is a criterion (or criteria) of truth, its interpretation and the arguments for and against it. I trust that much of the detail needed to understand the supposed uses of criteria will be found in the other chapters, and I have referred to fuller discussions in the notes.

I am very grateful to Mary Mothersill for criticising and correcting both my exposition and my English. The remaining unclarity and infelicities are all my own fault.

1 For Aristotle, see the helpful survey by A. A. Long, in his [230]. Plato's Socrates, and Plato himself to some extent, were later claimed as predecessors by the sceptical Academy on account of their 'aporetic' method; but it remains the case that problems about the possibility of knowledge do not play a major part in the dialogues – not even in the *Theaetetus*. For the *Theaetetus*, see the two articles by Myles Burnyeat, [19] and 'Protagoras and self-refutation in the *Theaetetus*', reprinted as ch. 7 in this volume.

were not liable to the difficulties arising from conflicting appearances.<sup>2</sup>

But the fourth century also produced Pyrrho, later seen as the founder of scepticism, by whom Epicurus, who belonged to the Democritean tradition anyway, is said to have been much impressed (Diogenes Laertius (D.L.) IX.64). Hence it is not surprising to find the major Hellenistic philosophers preoccupied with the task of justifying their claims to knowledge. The problem of the criterion of truth, which is presented by later doxographers as the centre piece of Hellenistic epistemological theories, is the problem of how we discover or ascertain the truth – the truth that we need to find in order to attain knowledge.

The word 'criterion' seems to have been relatively new to the philosophical language around 300 B.C.<sup>3</sup> We do not know who introduced it as a technical term, which it is not in its rare occurrences in Plato and Aristotle. It may be that Epicurus, whose book 'About the criterion, or Canon (ruler)' (D.L. x.27) was quite well known, is responsible for its currency in later Hellenistic times. The word literally means an instrument or means for judging – which tells us nothing about the character or function of such an instrument. So we should not be surprised to see the term applied to very different sorts of things. In the most widespread and philosophically least interesting usage, criteria are the cognitive faculties, that is, reason and the senses. This is how Plato and Aristotle, and also Epicurus in most places, use the term.<sup>4</sup> But the characteristic doctrines of Epicurus and the Stoics were not about faculties, but about sense-impressions and about general concepts designated as criteria of truth. The role of sense-impressions was seen differently by the two schools, and hence their arguments for the status or the existence of what they called criteria were also different.

My discussion follows the ancient writers in talking about the truth or falsity of sense-impressions although strictly speaking, of course, only sentences or propositions can be said to be true or false. The Stoics explicitly recognised this, saying that impressions are called true or false by reference to the corresponding propositions (Sextus Empiricus (S.E.), *adversus Mathematicos* (M) VII.10). Epicurus is not known to have made a similar statement, but he obviously shared the assumption that sense-impressions have a content that can be expressed in language. Thus in what follows, 'impressions' should be understood to mean impressions *that something is the*

2 This seems fairly evident in the case of Plato, who declared perceptibles to be unknowable precisely because they were liable to be characterised by opposite predicates; for Aristotle see e.g. *Metaphysics* IV, 5.1010b19–30.

3 I have examined the evidence in more detail in my [294].

4 Asmis [310], 91–100 argues that Epicurus used the word only in this sense. But if Diogenes Laertius (x.31) quotes from the *Canon*, as he claims to do, this cannot be correct. See Striker [294], 59–61.

case, and their truth or falsity to depend on whether the sentence *p* that states what is supposed to be the case is true or false. Similarly, when concepts or 'preconceptions' are said to be true, this should be understood to mean that there is a true sentence that expresses their content – we might think of them as rudimentary definitions of the terms associated with the concepts. Obviously, this view about the relation of impressions and concepts to language is not without its difficulties, but I cannot attempt to deal with those in this place.<sup>5</sup>

### Epicurus

According to Diogenes Laertius (x.31), Epicurus said in the *Canon* that the criteria of truth are three: sense-impressions (*aisthēseis*), preconceptions (*prolēpseis*) and feelings (*pathē*). This report is followed in D.L. by a series of arguments designed to show that all sense-impressions are true, and a brief explanation of what is meant by preconceptions and feelings. Instead of trying to derive an account of the function of these criteria from the evidence – a lengthy process – I shall simply state what I think their role was meant to be, and then proceed to the arguments in support of Epicurus' thesis.

Epicurus' criteria were taken to be primitive truths, that is, ones that had to be accepted without proof or further argument. Their role as instruments of judgement consisted in providing standards by reference to which beliefs and conjectures that did not have basic status could be assessed. Such beliefs would be judged true or false depending on whether they agreed (were confirmed by) or disagreed with (were contradicted by) the elementary truths. Thus, for example, the conjecture that the figure seen at a distance is Plato would be shown to be true if, upon approach, one could clearly see that it was Plato, or false if the thing turned out to be a statue. This is a simple case, where the belief to be tested concerns a thing that is observable, so that the supposition that *p* can be checked against the actual sense-impression

5 For discussion of these problems, see Striker [311], and Frede [341], esp. 152–7.

There exists by now a bewildering variety of translations for the technical terms of Hellenistic epistemology, with no clear consensus emerging, so that one is forced to make one's own choice. I have used the term 'sense-impression' in discussing both Epicurean and Stoic doctrines in order to emphasise continuity, but other translations of the Greek words *aisthēsis* and *phantasia* are possible and may in many contexts be preferable. The reader should be aware that the English words 'impression', 'presentation', and 'appearance' may stand for the same Greek term, *phantasia*. Also, *aisthēsis*, which I have rendered as 'sense-impression' in the context of Epicurean epistemology, is often translated as either 'sensation' or 'sense-perception'. The term of art *prolēpsis*, invented by Epicurus (Cicero, *de Natura Deorum* 1.44) and taken over by the Stoics, has also been translated in countless different ways. I use 'preconception'; other possibilities are, e.g., 'anticipation' or 'presumption'.

that *p* or that not-*p*, as the case may be. But the criteria also, and more importantly, served as tests for theories about things not accessible to observation (*adēla*). So, for example, Epicurus thought he could prove the existence of void by arguing that the supposition that there is no void conflicts with the observed fact that there is motion (D.L. x.40).<sup>6</sup>

In order to show that his criteria had the status he claimed for them, Epicurus had to argue (i) that they were true, and (ii) that their truth had to be accepted on account of their intrinsic character or their origin, rather than on the basis of argument from more fundamental premises.

Epicurus' main arguments for the truth and primitiveness of his criteria were, I think, indirect – he tried to show that unless we accept sense-impressions and preconceptions as basic truths, knowledge will be unattainable. But since scepticism about knowledge is absurd – as Epicurus also tried to show, adopting Plato's self-refutation argument – sense-impressions and preconceptions must be taken to be self-evidently true. His argument for the sense-impressions can be reconstructed as follows:

- (1) If there is knowledge, then it must ultimately derive from sense-impressions. (This is a version of empiricism, common to the Hellenistic schools.)
- (2) Knowledge must be based upon impressions or thoughts that are true – a conceptual point that could hardly have been doubted.
- (3) All sense-impressions are equal with respect to their credibility. But
- (4) We can only claim to have knowledge on the basis of sense-impressions if we can take it that those impressions are true; hence
- (5) We must either renounce all claims to knowledge, or assume that all sense-impressions are true.

This may seem either very bold or very naive, but it is implied, for example, by Epicurus' often quoted dictum that if only a single sense-impression were false, nothing could be known (Cicero, *Lucullus* (Luc.) 79; 101; *de Natura Deorum* (ND) I.70, cf. Epicurus, *Principal Doctrines* (RS) 24). The arguments that support the crucial premise (3) are two: first, all the pronouncements of the senses have equal authority or strength – *isostheneia*, as the sceptics, and notably Epicurus himself (D.L. x.32) calls it; second, we have no further source of information (or criterion) to which we could appeal in trying to distinguish true from false impressions (RS 23; cf. (1) above).

From (1) and (2) we can infer that if there is knowledge, then some sense-impressions must be true. Premise (3) tells us that we have no way of determining which among our sense-impressions are true and which are

<sup>6</sup> This sketch of the use of sense-impressions for confirming or disconfirming beliefs and hypotheses is of course inadequate and incomplete. For a fuller account see Sedley [296], 263–72.

false; hence if our knowledge must be based on sense-impressions, we must either accept them all as true, or renounce the possibility of knowledge.<sup>7</sup> Epicurus, of course, wanted to maintain that knowledge is possible, and so he found himself in the uncomfortable position of having to defend the thesis that all sense-impressions are true. In fact, the other Epicurean arguments for the truth of sense-impressions seem to be more or less successful attempts to explain how it is that the senses cannot but tell the truth. I will come back to objections and defences in a moment, but let me first look at the argument for the criterial status of 'preconceptions'.

I take this to be contained in a passage of the *Letter to Herodotus* (D.L. x. 37–8):

First, then, Herodotus, we must grasp the things which underlie the sounds of language, so that we may have them as a reference point against which to judge matters of opinion, inquiry and puzzlement, and not have everything indiscriminated for ourselves as we attempt infinite chains of proofs, or have words which are empty. For the primary thought corresponding to each word must be seen and need no additional proof, if we are going to have a reference point for matters of inquiry, puzzlement and opinion.

(tr. Long/Sedley, with slight modifications)

Here Epicurus speaks about 'what underlies the sounds of language' (*ta hypotetagma tois phthoggois*), but D.L. x.33 seems to show that this phrase indicates the preconceptions.<sup>8</sup> Epicurus argues that unless we can clearly grasp the 'primary thoughts' that underlie our words, and do so without argument, we will not have anything to which we can appeal in trying to decide questions or to solve puzzles, or to assess the truth or falsity of beliefs, because in each case we will end up either talking nonsense or getting into an infinite regress. The phrase 'what underlies the sounds of language' does not make it clear exactly what it is that we must have grasped, and the words 'primary thought', used a few lines later, do not help much. But while the ontological status of preconceptions remains unclear, the fact that Epicurus says they must be 'seen and need no additional proof' shows that he treats

<sup>7</sup> One might argue that Epicurus' conclusion does not follow, since we might have knowledge (in the sense of true beliefs based on true impressions) without knowing whether we do so or not. Hence if not all sense-impressions were true, but we accepted them all as true, we would have knowledge in some cases, but we would not be able to tell when this was so. I believe, however, that Epicurus, like many philosophers before and after him, thought that knowing that *p* implies knowing that one is justified in claiming that *p*, and hence that we could not know that anything was the case on the basis of a sense-impression unless we knew that the impression was true.

<sup>8</sup> The oddity that the term *prolēpsis* itself is not used in this passage can perhaps be explained, as Sedley [305], 14 suggests, by the fact that Epicurus had not yet coined it.

them as elementary truths about the objects or states of affairs that our words are used to describe or refer to.<sup>9</sup> This is borne out by the use he makes of preconceptions as criteria in two prominent cases – the gods and justice. The view that the gods care about human affairs is rejected on the ground that it conflicts with our preconception of the gods as *blessed and immortal beings* (D.L. x. 123–4; cf. RS 1), and laws are said to be just precisely as long as they fit (*enarmottei*) the preconception of justice as *what is beneficial in communal life* (RS 37, 38).

What Epicurus maintains in the *Letter to Herodotus*, then, is that unless the meanings (as we might say) of our terms are clearly grasped without the need for any argument, we will either talk nonsense or never come to an end in the quest for premises from which to derive a definition that we might be trying to prove. Again he seems to be replying to a sceptical argument – perhaps the one that Aristotle discusses in *Posterior Analytics* A3, although Aristotle does not tell us who put it forward. The argument is to the effect that knowledge is impossible because if knowing that *p* is to have a proof for *p*, then we will end up with either an infinite regress or a circle. Epicurus does not consider the possibility of circular reasoning, but his answer to the regress argument is much the same as Aristotle's: there must be truths known without demonstration, and the preconceptions (or, for Aristotle, definitions) must belong to this class.

(We do not have a separate argument for the truth of feelings. D.L. describes them in x.34 only as criteria for choice and avoidance, but several passages in the *Letter to Herodotus* associate them closely with sense-impressions as criteria of truth. It is most likely that in this role they were supported by the argument for the sense-impressions.<sup>10</sup>)

The status of Epicurus' criteria as basic truths recognised without proof, and the similarity of one of his arguments to Aristotle's, invites the comparison of the criteria with Aristotelian first principles. However, what is notably absent is Aristotle's distinction between things 'better known to us' and things 'better known by nature' – what we must know at the beginning of an enquiry or before we can receive any instruction, and what is to be a first premise in a scientific demonstration. Both, according to Aristotle, must be known without proof. It might seem that the Epicurean criteria were meant to play the role of the pre-existing knowledge that must be there at the outset of learning or instruction. Understanding the terms one uses certainly is of this sort, and moreover, the Epicureans (as well as the Stoics) used the

9 Cf. Cicero's explanation at *ND* 1.43: 'anteceptam animo rei quandam informationem' ('a certain imprint of a thing preconceived in the mind'). D.L. x offers too many different versions to be of help here.

10 This has now been argued in detail by Asmis [310], 96–9.

preconceptions to solve the paradox of enquiry set out in Plato's *Meno*, according to which one cannot enquire about anything unless one already knows it (cf. Plutarch, fr. 215f. and the testimonia at Usener, *Epicurea*, fr. 255). On the other hand, the first principles of Epicurean physics, such as the thesis that the universe consists of bodies and void and nothing else, were derived from evident facts of observation, such as the existence of bodies and motion (cf. D.L. x. 39–40). It is not clear to me what role, if any, the preconceptions had to play in the development of scientific theories,<sup>11</sup> but the preconception of the gods does seem to provide an important premise for Epicurean theology. However, Epicurus' criteria clearly did not have to play the explanatory role of Aristotle's first premises of demonstration. In fact, as the example of Epicurean physics shows, the explanatory premises of natural science were themselves proved by means of the elementary truths that serve as criteria. Thus Epicurus, who was a more thoroughgoing empiricist than Aristotle, did not think that the first principles of a scientific theory must themselves be known without proof. His criteria provide foundations for knowledge, not for theory, and indeed after Aristotle the concepts of proof and of explanation, combined in his notion of scientific demonstration, are seen as independent of one another.

The arguments for the basic status of sense-impressions and preconceptions we have considered so far are heavily indebted to sceptical arguments against the possibility of knowledge. Epicurus turns those around, as it were, by treating their conclusion as absurd and rejecting a crucial premise – in the first case, 'not all sense-impressions can be true', in the second, 'whatever is known must be demonstrated'. Now these arguments might perhaps be accepted as showing that sense-impressions and preconceptions must be accepted as true without proof, given their role as foundations of knowledge, but Epicurus still had to argue that they were in fact true. This was particularly difficult in the case of the sense-impressions, since it seemed perfectly plain that not all sense-impressions could be true, given that they notoriously conflict with one another. Aristotle had thought that the belief that 'thought is perception' (*phronēsin men tēn aisthēsin*, *Metaphysics* iv, 5.1009b13) leads to the denial of the law of non-contradiction, as well as to Democritus' pessimistic conclusion that 'either nothing is true, or at least the truth is hidden from us' (1009b12). But Epicurus did not want to deny the law of non-contradiction, and so he faced the formidable task of showing that the alleged contradictions between sense-impressions were merely

11 Asmis' suggestion of a very far-ranging use of the preconceptions in the development of scientific theories ([310], 48–60) seems to me to go considerably beyond the evidence, and also to paint too uniform a picture of Epicurean methodology.

apparent. Some of his arguments were subtle and ingenious; but since my topic is the criterion of truth, not Epicurean epistemology, I will leave the matter here, noting only that as a result of trying to vindicate the truth of all sense-impressions, it turned out that only the 'wise man' would always be able to distinguish between mere opinion and clear perception (Cicero, *Luc.* 45).

While we have a fairly detailed account of Epicurus' defence of the senses as sources of true information, his grounds for claiming the truth of preconceptions are less clear. Many commentators have thought that their truth was simply guaranteed by the fact that they derive from sense-impressions – thus D.L. (x.33) calls them 'a memory of what has often appeared from outside' – but this can hardly be the whole story. Epicurus must have been acutely aware that speakers of the same language do not always agree about what they mean by their words,<sup>12</sup> and his injunction to 'have a grasp of what underlies the sounds of language' is probably not to be read as simply postulating that every speaker will in fact have a clear idea of what is associated with each term, but rather as an exhortation to philosophers or their students to make sure that *they* have a firm grasp of what their words mean. The examples of the gods and of justice seem to show that Epicurus believed that the 'first thoughts' could be recovered by looking at the situation in which a word would have been introduced. Epicurus thought that our preconception of the gods arises from images we all see in dreams – images of the gods as blessed and immortal anthropomorphic beings. We do not see them worrying about human affairs, and in fact reflection will show that such a concern would be inconsistent with their blessedness and eternity. The preconception of the gods thus seems to contain what we can immediately read off from the images that supposedly reach our minds, and theology must be guided by these first thoughts.

The case of justice is more complicated. Here Epicurus tried to trace the concept back to its origins in the development of civilised society. According to his theory, it arose when people first entered a compact for mutual benefit neither to do nor suffer mutual harm – and this, not a Platonic independent object, provides the preconception that we can use to assess the justice or injustice of laws or institutions (RS 33, 37, 38). Contrary to what one might at first suppose, then, there seems to be no general explanation that accounts for the truth of all the preconceptions we have, and uncovering the evident first thought associated with a word may be a difficult matter. Nonetheless, Epicurus seems to have been convinced that we must be able to discover something evident or immediately graspable behind each term we

12 As shown by the fragmentary remains of book xxviii of his *On Nature*, for which see the Introduction and commentary by Sedley [305].

propose to use in a philosophical investigation – and presumably where this cannot be done, we should give up the term as being devoid of meaning (cf. the alternative of 'words which are empty').

As in the case of sense-impressions, so for preconceptions, the decisive argument for their indubitable truth seems to be derived from the role they must play in the assessment of beliefs and theories about things beyond the reach of observation. The subsequent account then attempts to explain how it is that we can expect to find truth in sense-impressions or preconceptions.

Thus although the basic truths are contrasted with conjectural or derivative ones as being clear or evident (*enargē, dēla*) as opposed to obscure or non-evident (*adēla*), it is not the case that they are easily recognisable. Epicurus does hold that the truths that serve as criteria must be grasped without the intermediary of proof or argument, but membership in the class of basic truths may not always be easy to establish. The thesis that there are criteria of truth is meant to secure the possibility of knowledge; it does not promise a simple way of distinguishing between truth and falsity.

#### The Stoics

According to the majority of our sources, the Stoics held that the criterion of truth is what they called a cognitive impression, and defined as follows: an impression that comes from what is, is imprinted and impressed in exact accordance with what is, and is such that an impression of this kind could not come about from what is not (e.g. D.L. vii.50; S.E., *M* vii.248; Cicero, *Luc.* 77).

However, the doctrine of the cognitive impression as criterion of truth may actually be an official view that gained currency only after Zeno. For at least two reports of his epistemology (Cicero, *Academica* (*Ac.*) 42 and S.E., *M* vii.152) tell us that he said the criterion was cognition or apprehension (*katalēpsis*), as distinct from the cognitive impression. In one of these passages cognition is described as the basis of preconceptions that are said to provide not only the starting-points, but 'broader roads to the discovery of reasoned truth' (Cicero, *Luc.* 77, tr. Rackham). Furthermore, we are told (D.L. vii. 54) that Chrysippus said in one place that the criteria were sense-perception (*aisthēsis*) and preconception, and several other sources confirm that preconceptions were held to be criteria.

The simplest explanation of these apparent differences probably is that the Stoics initially used the term 'criterion', as had Epicurus, for the basic or elementary truths that need to be accepted without proof, but later came to apply the word also to the cognitive impression. For cognition was defined as assent to a cognitive impression, and since Academic objections to Zeno's theory focused on this notion from the beginning, it came to be seen as being

itself the criterion. Now this introduced a shift in the use of the term, since the cognitive impression, unlike cognition and preconception, was not seen as a means of establishing or assessing the truth or falsity of further beliefs or propositions. Rather, its definition seems to state the conditions that must obtain if an impression that *p* is to lead to the cognition that *p* – what must be the case for an impression to reveal the truth. Thus a cognitive impression is an instrument for discovering the elementary truths that will provide foundations for knowledge. In other words, while criteria in the Epicurean sense serve to assess beliefs about non-evident things, the Stoic criterion is a means of discovering what is evident.<sup>13</sup>

It is important to realise, however, that the definition does not purport to tell us how we can find out whether a given impression is cognitive or not – it tells us only what sort of impressions can lead to cognition in the first place. The Stoic assumption that there must be such impressions relies on the premise that knowledge is indeed possible, and that it must ultimately come from the senses. But unlike Epicurus, the Stoics took the commonsensical view that some sense-impressions must be false, and so their definition of cognitive impressions is meant to indicate the cases in which sense-impressions may lead to knowledge. How we can tell whether a given impression is cognitive is a different question – and, as it turns out, quite a difficult one.

However, the Stoics did maintain that cognitive impressions could in principle ('by the wise man') be distinguished from all others, and this claim must have been important to them, since they held that the wise man will assent only to cognitive impressions and hence avoid all error. Cognitive impressions were said to differ from others in the way horned snakes are different from other snakes (S.E., M VII. 252 – the comparison is nowhere explained), and furthermore, unlike all other impressions, the cognitive ones are described as irresistible, such that they force our assent.<sup>14</sup> But it is

13 Here I am borrowing a formulation from Brunschwig [375], who has shown in detail how both these conceptions of criteria are present side by side in Sextus Empiricus' treatment of the criterion of truth in M VII, without being explicitly distinguished. Brunschwig rightly points out that Sextus' counter-arguments do not suffer through the resulting ambiguity, since by refuting the claim that there is a way of coming to know what is evident, one has *a fortiori* refuted the claim that there are evident truths that can serve as guides for theories about non-evident things.

14 I take this from Cicero, *Luc.* 38 together with 88–90, and S.E., M VII.403–8. One might think that this could not be Stoic doctrine because Sextus (M VII.253–7) reports that some later Stoics, obviously impressed by Carneades' arguments, held that the cognitive impression was a criterion only when it 'has no obstacle'. They were responding to examples of the following sort: when Menelaus encountered the real Helen on the island of Pharos, he received a cognitive impression of her, but did not assent to it because he believed that he had let her on his ship. It seems to me that this move was a grievous mistake –

clear that the Stoics did not think that the role they wanted to assign to cognitive impressions in the development of our rational faculties depended upon our ability to recognise them. Since cognitive impressions and no others are automatically accepted by the human mind, they will lead to the formation of preconceptions or common notions by a causal process, not by induction or generalisation (cf. Cicero, *Luc.* 30–1). Thus cognitive impressions are what explain and guarantee the truth of elementary cognitions and common notions alike – we will be justified in accepting those on account of their origin and status, not on the basis of argument. But since we are commonly prone to assenting also to unclear or false impressions, it will be difficult for us to determine which among our perceptual impressions do in fact have this privileged status. Infallibility in this respect was therefore claimed only for the wise. Nature herself, as it were, provides the elementary truths, and also the possibility of distinguishing cognitive from non-cognitive impressions; but while she sees to it that the basic truths do get accepted, she has left it up to us to guard against deception.

Given this sort of a theory, objections could hardly take the form of disputing that cognitive impressions were true – that must hold by definition. The Stoic theory could be attacked either by denying the existence of cognitive impressions or by disputing the thesis that the definition sets out necessary and sufficient conditions for acquiring knowledge. Historically, the first line of attack prevailed in the debate between Stoics and Academic sceptics in the third and second centuries B.C. The second line was apparently tried by Philo of Larissa in the first century.

Arcesilaus and Carneades used two main arguments to show that the alleged differences between cognitive and other impressions were illusory. First, they collected examples – identical twins, coins from the same mint, eggs laid by the same chicken – to show, not just that we often cannot tell whether an impression comes from one or the other of two different objects – a fact that the Stoics were ready to admit – but that two different objects may produce impressions that are exactly alike in every respect, so that it is not

the 'younger Stoics' should never have said that Menelaus had a cognitive impression. Carneades had used the example to show that true impressions will occasionally not be trusted because they conflict with a firmly held belief (M VII.180). But one could easily deny that Menelaus even had the true impression that he was seeing the real Helen – his thought was much more likely to have been something like 'this must be a ghost' or 'that can't be Helen', both of which happened to be false. So the example would only show that false beliefs may sometimes prevent us from having cognitive impressions, not that we may not assent when we have one. That their admission was embarrassing for the 'younger Stoics' is shown, I think, by the haste with which they added that in the absence of obstacles cognitive impressions 'virtually grab us by the hair and drag us to assent', thus reasserting their 'virtually grab us by the hair and drag us to assent'.

the case that a true and clear impression from A is such that it could not have arisen from B. They further argued that we can never tell whether such a situation obtains, and hence no impression is such that it could not have come about from 'what is not'. The prominence of this argument in our sources may have led to the misconception that the criterion was meant to be a means of distinguishing true from false impressions. The Stoics defended their theory by appealing to the metaphysical principle of the discernibility of non-identicals – which may indicate that the suggestion of a peculiar characteristic (*idiōma*) proper to cognitive impressions was actually an afterthought. It certainly does not follow from the principle that a clear and true impression from A is necessarily distinct from all others that cognitive impressions should also be characterized by a peculiar mark that sets them off as a kind from all other sorts of impressions, for the differences might be due entirely to the underlying objects, not to anything distinctive about cognitive impressions. If so, the Academics were probably right in insisting that distinctness does not guarantee distinguishability (cf. Cicero, *Luc.* 58 and 85) – and note that the Stoics needed to claim *perceptual* distinguishability of non-identicals, a rather stronger principle than the identity of indiscernibles, even if we grant that the Stoics counted far more as perceptible than modern theorists would.

Second,<sup>15</sup> the Academics argued that cognitive impressions were not the only ones that forced assent. Here they used the examples of dreamers and madmen who acted upon their erroneous impressions, thus apparently being unable to resist them. Again, the idea that cognitive impressions and no others are automatically accepted may not have been introduced to explain how one recognises them, but rather to account for the unreflective yet correct behaviour of young children. If so, the point of the Academic argument would not have been that forced assent will not provide a distinguishing mark, but rather that there is no privileged class of clear and true impressions that will get accepted automatically while no others force assent, so that it is always possible to avoid error.

15 The distinction between the two arguments is clearly marked at S.E. *M* vii.408: this one establishes the indistinguishability (*aparallaxia*) of impressions in respect of the characteristic of 'clarity and tension' (*kata to enarges kai entonon idiōma*), and the other one regards 'stamp and imprint' (*kata charaktēra kai kata tupon*). The feature called 'tension' here is elsewhere indicated by the word 'striking' (*plektikē*; cf. *M* vii.257, 258, 403). Cicero says (*Luc.* 89–90) that the argument from dreamers and madmen shows that people are 'equally moved' (cf. *M* vii.407; *ep'isēs kinouson*) by true and false impressions, so that there is no difference with respect to assent ('ad animi adsensum'). So this argument shows the equal strength of cognitive and non-cognitive impressions, while the other establishes their indistinguishability 'in appearance' (Cicero, *Luc.* 58 and 84; cf. S.E., *M* vii.409). For a different view of the controversy, see Frede [341], 170–5, and Julia Annas' chapter in this book.

Here the main debate was over the existence of the alleged criterion, whereas in Epicurus' case it concerned alleged truth. Neither Epicurus nor the Stoics pretended to offer an easy test for truth. Epicureans must watch out for distortions of sense-impressions; the Stoics actually denied that anyone except the sage could achieve knowledge – fools, that is, ordinary people, would indeed have cognitions, but those would at best be only true beliefs that might be shaken by argument, never knowledge. As noted before, then, the problem of the criterion concerned primarily the question whether knowledge is possible, and only secondarily the question how we find out that we have it.

### The Sceptics

One might have thought that the Sceptics' role in the debate would have been merely negative – disputing the truth of the Epicurean criteria, or the existence of cognitive impressions. However, while they certainly pursued both those lines of argument, their own position seemed to force them to offer at least a second-best – a substitute that would serve to guide one's actions in a situation where knowledge was not attainable. The argument that led them to make this move was the following: according to the sceptic, there are no criteria of truth. It follows that we have no way of establishing what is the case, either directly by criteria or indirectly by reasoning based on evident truths. But this leaves the sceptic with no method of distinguishing between impressions or beliefs that offer themselves in any given situation. For the sceptic, everything is as obscure as whether the number of stars is odd or even (Cicero, *Luc.* 32). Yet this would seem to be contradicted by the sceptic's own way of acting – if he were really as disoriented as he claimed to be, one would expect him to proceed towards the mountain instead of the bath, or towards the wall instead of the door (Plutarch, *adversus Colotem* (*adv. Col.*) 1122e). But the sceptic does not act in this way, and does not this show that he has, after all, a way of distinguishing truth from falsity?

The sceptics replied that the argument is invalid. The fact that the sceptic cannot establish the truth or falsity of any impression does not imply that his own impressions are different from those of other people. Thus he will proceed towards what appears to him to be the door, not the wall – without, however, asserting or trying to prove that any of the impressions or appearances on which he acts is true. Contrary to what the objector tried to show, life is not made impossible by the absence of a criterion of truth. This reply, first given by Arcesilaus (cf. Plutarch, *adv. Col.* 1122d–e), was later picked up by the Pyrrhonists. However, it obviously leaves no room for beliefs or actions justified by reasons. And while the sceptics might of course have

been content to say that it was not their fault that everything was as obscure as the number of stars (Cicero, *Luc.* 32), it seems that the Academics, at least, attempted to argue that even reasonable decisions could be explained without resorting to the assumption that there must be criteria of truth, and hence knowledge.

Carneades pointed out that while there was no way of determining whether any given impression was actually true, let alone cognitive, one could still admit that impressions differed considerably in plausibility or convincingness. Moreover, impressions are not usually isolated; they come in groups that will tend to agree or disagree with one or the other possible view of a given situation. Thus in trying to decide which impressions to accept, one might, first, attend to the plausible or convincing ones, second, check whether they do or do not conflict with other impressions pertaining to the same object, and third, try to make sure that there is no reason to think one's perceptual apparatus is impaired, or the circumstances are abnormal. None of this guarantees, of course, that the impression one ends up accepting will be true, yet it is at least tempting to say – as Carneades probably would not – that a plausible, unimpeded, tested impression is more likely to be true than, say, the proposition that contradicts it.

Sextus describes this theory as Carneades' account of the criteria for the conduct of life (*M.* vii. 166–89). Depending on the amount of time we have, or the seriousness of the decision, one may use one or the other type of impression – merely plausible ones in matters of no great importance or when there's no time, plausible, unimpeded and tested ones if the decision concerns one's happiness (and there is sufficient time). These criteria obviously cannot count as criteria of truth, since it is emphasised from the start that not only the plausible impression, but even one that has all three features could be false. Carneades' criteria are neither evident truths nor means of discovering that something is really the case. At most they could be said to be means of establishing credibility, but it is unlikely that Carneades himself would have asserted even that much. The passage which reports his theory of criteria begins with an argument to the effect that if there is a criterion of truth, it must be the Stoic cognitive impression. The criteria 'for the conduct of life' were offered only as an argument to refute the Stoics' claim that reasonable decisions could not be made in the absence of a criterion of truth.

Still, these arguments might also invite a different sort of consideration. Accepting the conclusion of the first part of Carneades' argument – the non-existence of cognitive impressions, and hence the impossibility of knowledge – one might think that plausible, unimpeded and tested impressions were more likely to be true than others, and hence might justify at least provi-

this. He would not assent in the full Stoic sense of taking to be true, given that any act of assent could result in error.<sup>16</sup> But after Carneades, the avoidance of error appeared less important to some of his students than the hope of getting somewhere near the truth, albeit by means of fallible opinions. Some of the Academics (Metrodorus, and Philo for some time: cf. Cicero, *Luc.* 78 and 148) took the view that although they had to renounce the possibility of knowledge, they were free to use Carneades' criteria not only 'for the conduct of life', but also in philosophical inquiries (Cicero, *Luc.* 32; 110; 128), putting forth plausible opinions rather than confining themselves to complete suspension of judgement.

Now there is yet another way of looking at the debate between Carneades and the Stoics. Suppose one thinks that although no impression, however plausible, consistent and tested, can be guaranteed to be true, it is still quite likely that most of those impressions will in fact be true. In assenting to such an impression, one would then have grasped the truth, though of course one could not be certain that one had done so. Might one not wonder whether this should not count as knowledge or cognition after all, even if not by the exacting standards of the Stoics? Since there appeared to be no way of ascertaining that a clear and seemingly evident impression was actually true – that is to say, the last clause of the Stoic definition of cognitive impressions could never be satisfied – even a wise man would not be in a position to make sure that he accepted only true impressions. Hence his grasp of the truth would presumably never be so firm as to be totally unshakeable by argument, as the Stoics required. But then there seemed to be many things one would quite naturally claim to know in everyday life, without wishing to insist that one could not possibly be wrong. Why not say, then, that some things can indeed be known, though not in the strict sense demanded by Stoic theory? This seems to have been the line of argument developed by Philo of Larissa in a set of books he wrote in Rome towards the end of his life.<sup>17</sup> Philo said that while things were inapprehensible (*akatalēpta*) as far as Stoic theory was concerned, they were still apprehensible in their own nature (S.E., *Outlines of Pyrrhonism* (PH) I.235). If one assumes that it is sufficient for knowledge that one accept a clear and true impression, without postulating that it must be such that it could not possibly be false, then one can grant that he who assents to a clear and unimpeded and tested impression may reach apprehension or knowledge, even though he cannot in principle exclude the possibility of error.

It looks as though Philo had transformed Carneades' criteria for the

16 The importance of the Socratic motives of avoiding error and rashness of opinion has been rightly emphasised by Ioppolo ([351], 40–56).

17 On these books, and the ensuing controversy with Antiochus of Ascalon, see



conduct of life into a criterion of truth after all – though not in the full Stoic sense. The difference is well brought out by the counter-arguments of Antiochus, who defended the Stoic position. Antiochus claimed that a criterion of truth had to be a ‘sign’ of truth, not falsity – by which he seems to have meant that an impression that serves as a criterion must be such that from its occurrence we can infer the existence of the corresponding fact. He then complained that the alleged criterion of the Philonians was common to truth and falsehood, since they admitted that even an unimpeded and tested plausible impression might be false. ‘But a peculiar feature (*proprium*) cannot be indicated by a common sign’ (Cicero, *Luc.* 34).<sup>18</sup> This is correct as far as it goes – if *p* is compatible with both *q* and not-*q*, one cannot use *p* to infer that *q*. But Antiochus was wrong, I think, in describing the Stoic criterion as a ‘sign’, since this suggests, contrary to what the Stoics intended, that one might be aware of a cognitive impression but not of the external object revealed by it. The Stoics saw the cognitive impression as a medium of discovery (as shown by the comparison of it with the light that reveals both itself and the things we see in it, Aetius, *Placita* iv. 12.2; S.E., *M* vii. 163), not as a piece of evidence, however conclusive. Philo’s criteria, on the other hand, do seem to be just that – pieces of evidence. Once this move is accepted, it becomes arbitrary to insist that evidence must amount to logically conclusive proof. Philo did not have to admit that his criterion was a sign in the postulated sense. All he claimed was that *p* could provide evidence, albeit logically inconclusive, for *q* and not for not-*q*, so that in the absence of any evidence for not-*q*, one would be justified in accepting *q* on the basis of *p*.

Now if an impression used as a criterion merely counted as evidence in support of perceptual beliefs, it could no longer be said to provide immediate access to the truth, as the cognitive impression was supposed to do. And one could reasonably doubt whether such instruments of judgement would be sufficient for us to arrive at the basic truths that seem to be needed for the development of systematic knowledge – general concepts or common notions. Antiochus complained, indeed, that unless we could rely upon infallible cognitive impressions, there was no way of guaranteeing the truth of the common notions that are needed as first premises for the crafts and sciences (Cicero, *Luc.* 22). But again, it seems, Philo could reply that it was not necessary to postulate an infallible causal mechanism. By this time, the sceptics had presumably<sup>19</sup> discredited this theory anyway, by pointing out

18 For the terminology of ‘peculiar’ and ‘common’ signs see Sedley [296], 242–4.

19 See S.E. *M* viii.332a–334a, and *PH* ii.22–8 for the concept of man. I say ‘presumably’ because it is not clear to me at what time the arguments used by Sextus at *M* viii.332–336a and *PH* ii.1–11 were introduced. They do not play a major part in Cicero’s *Lucullus* (though see perhaps *Luc.* 43 and 22 with the

that, far from there being clear preconceptions or common notions associated with the words of ordinary language, philosophers had come up with so many conflicting definitions of even the simplest terms that one had little reason to put any trust in these allegedly evident truths. Hence Philo suggested that in order to see whether something really is a common notion, we should try to ascertain that people actually agree on it, in a way analogous to the procedure we adopt in the perceptual case. As we check to see whether all relevant clear impressions are consistent with the one we are considering in a given situation, so we should see whether there is agreement between the notions of human beings before we accept an alleged preconception as a basic truth.<sup>20</sup> Once again, this would not be infallible, but it would presumably suffice to establish the crafts and theories that build on general concepts.

There was, then, no reason to claim that by rejecting the Stoic criterion the Academics had abolished not only the possibility of apprehending particular facts, but also the foundations of the sciences and crafts. The Academics could reasonably claim to have rejected only what is never to be found, but to have left what is sufficient for knowledge in the ordinary sense (Cicero, *Luc.* 146).

### Epilogue

It appears that after the time of Philo and Antiochus, with the disintegration of the philosophical schools at Athens and the rise of the new movements of Platonism and Aristotelianism, the problem of the criterion of truth ceased to be at the centre of philosophical debates. It is true that radical scepticism was also revived at the same time, but for the most part, the arguments of the Pyrrhonists about the criterion took up the earlier issues, though casting them, perhaps, in a more rigorous form.<sup>21</sup> Infallibility was no longer required to provide a foundation for knowledge, and while it was generally agreed that some truths need to be recognised without proof, philosophers no longer thought that there must be a unique and privileged way of establishing what is evident either to the mind or to the senses. There

reply at 106), and if the common notions began to become more important in Philo’s time, as Tarrant [358] suggests, one might think they originated only with Aenesidemus. On the other hand, Sextus’ opponents are the Epicureans (in *M* viii) and the Stoics, which suggests that the debate came up earlier.

Perhaps the argument that understanding a word does not require cognition in the full Stoic sense came first, and Aenesidemus added attacks on general agreement as a sign of what can count as evident? (For Aenesidemus, see Tarrant [358], 77–8.)

20 For the role of agreement in Philo’s theory see Tarrant [358], 74–8 and 92–7.

21 See the chapter by Jonathan Barnes in this volume.

might in fact be different criteria (in the weak, Philonian sense) for different sorts of truths,<sup>22</sup> so that the demand for *the* general criterion of truth might be misguided. The term 'criterion' thus remained a part of the philosophical vocabulary, but the problems connected with it faded into the background.

22 Thus the empirical doctors gave several criteria for the truth of a medical report (Galen, *Subfiguratio empirica*, pp. 67 ff. Deichgräber), and Sextus discusses the criteria for the truth of conditionals (*M* vii.112, 118–20).

## 8

## Epicurus on the truth of the senses

STEPHEN EVERSON

Let us quit this gullible man who believes that the senses never lie.  
Cicero, *Lucullus* 26.82

Epicurus' epistemology is apt to seem brave to the point of being simple-minded. His central, and most notorious, epistemological claim – that all perceptions are true – certainly struck Cicero, whose interest in the Hellenistic schools was both genuine and extensive, as unworthy of serious consideration. It is true that Cicero was hardly a sympathetic critic of Epicureanism,<sup>1</sup> but here at least he would seem to be right. A moment's reflection on the commonplaces of perceptual failure and disagreement should be sufficient to convince anyone that our perceptions cannot be universally true.

Epicurus, however, was apparently firm on the point: 'he feared that if one perception were false, then none would be true; he therefore said that all the senses give a true report' (Cicero, *de Natura Deorum* 1.25, 70); 'What is Epicurus' principle? If any sense-perception is false, it is not possible to perceive anything' (Cicero, *Lucullus* (*Luc.*) 32.101). If Cicero is to be believed, then it seems that for some reason Epicurus thought that unless *all* perceptions are true then none will be. This is a strange and strong claim, and one far removed from our ordinary beliefs about perception. For, ordinarily, we are quite happy to accept that our senses do sometimes deceive us without thinking that this should make us lose confidence in their ability to report the world at all. Most perceptions are true, but some are false: this is not a fact which, pre-reflectively at least, unduly worries us.

One person who tries to turn the possibility of false perception into a problem is the sceptic. Once it is acknowledged that our senses can on occasion report the world untruthfully, he will press us on how we can be

1 Although Cicero was, as John Glucker describes him, 'one of the most thorough critics of Epicurean philosophy in the whole of extant literature' (Glucker [360], 69), it is clear enough that he did not think Epicurus' claims about the senses serious enough to warrant thorough criticism.