

Nothing in his analysis implies that he (or his source) did not know of the reformulation proposed by Zeno. Indeed, the fact that he does not define 'no counterwitnessing' as a form of elimination, but defines it instead as 'consequence', suggests that he may have been familiar with Zeno's views.

As for Epicurus, there is no evidence that he ever reformulated his argument for the void, or any other argument later said to exemplify 'elimination', as an induction. Epicurus' followers are notorious for refusing to depart from the doctrines of their master. But they showed themselves very willing to interpret these doctrines in new ways, especially in response to attacks by other philosophers.⁴⁴ It was suggested earlier that, if his methodology is to be consistent, Epicurus must reduce all calculations about what is unobserved to empirical judgements. He does not explain in his extant writings how this reduction is to be accomplished. With help from their opponents, his followers worked out what they considered to be the implications of his position. All calculations about what is unobserved, they proposed, are inductive judgements. Among these judgements are preconceptions. The Epicureans thereby restructured Epicurus' distinction between what is evident and what is nonevident. In agreement with Epicurus, they demarcated what we observe from what needs to be inferred from observations. But very differently from Epicurus, they built a transition from the one to the other by allowing sufficiently tested empirical judgements to become, in the end, judgements about what is unobserved. The sign conditional, which grounds the inference, is verified in this way entirely by empirical observations. As a result, the conclusion rests entirely on self-evident, empirical premisses.

⁴⁴ Cf. Sedley 1989a.

Stoic epistemology

MICHAEL FREDE

1 The possibility of knowledge

Stoic epistemology¹ is best understood as a response to a twofold challenge. Socrates had assumed that whether one had a good life depended on whether one had managed to acquire a certain kind of knowledge, which he identified with wisdom, in particular the knowledge of what is good and what is bad. For this reason he had devoted his life to philosophical inquiry concerning the good, the bad and related matters. Yet, for all of his efforts, even he himself did not think that he had obtained this knowledge. At the same time Socrates had made it clear that we should not content ourselves with mere belief or opinion concerning these matters, even if this belief happened to be true. One would not want to rely for the success or failure of one's life on mere opinion which at best happened to be true. Moreover, the Socratic elenchus suggested that one was not entitled to any belief which one did not hold as a matter of knowledge. For Socratic refutation seemed to rest on the fact that somebody who holds a belief as a matter of mere opinion can be made to see that he has equal reason to espouse the contradictory belief.

A century of philosophers since Socrates had done no better. Indeed, as if oblivious to Socrates' strictures against mere belief, they had rushed precipitously to produce thesis after thesis, theses often quite extravagant and often contradicting each other, and in any case all a matter of mere opinion, as closer scrutiny would reveal. The first challenge, then, was to find a way to break out of the realm of mere belief in order to arrive at true knowledge. This challenge was first taken up by the Epicureans, and it is important to see that the Stoic response is patterned on the Epicurean response. The Stoics follow the Epicureans in assuming that knowledge is made possible by the facts (i) that some of the impressions we have are by

¹ Main texts: Cicero *Acad.* 1.40-2; 11.17-31, 143-6; Sextus *M.* vii.150-8, 227-60, 401-35. D.L. vii.19-54. Note, in addition, *PHerc.* 1020; Stobaeus *Ecl.* 11.7.5; Aëtius IV.12.1-5. Literature: Watson 1966; Sandbach 1971; Striker 1974; Frede 1983; Annas 1990b.

their very nature infallibly true and thus can serve as a secure foundation for knowledge, and (ii) that one of the ways in which these impressions are foundational is that, by a natural process, they give rise to certain concepts, the so-called anticipations, in terms of which we naturally think about objects and which reliably embody certain general truths about those objects.

But as the first Stoics try to develop their own version of a theory of how, on the basis of certain privileged impressions and concepts, we might arrive at knowledge, another challenge arises in the form of Academic scepticism. The Academic sceptics, too, go back to Socrates and reflect on the moral to be drawn from Socrates' failure to attain knowledge. They, too, are scandalized by the endless proliferation of mere opinion, easily disposed of by the kind of dialectical questioning to which Socrates subjected his interlocutors. But the sceptics also question Zeno's first attempts to show how we might break out of the circle, in which opinion just breeds further opinion rather than knowledge. Zeno assumes that nature provides us with certain infallibly true impressions of things and that she also provides us with a basic set of notions or concepts which are true to things. But why should we not regard these assumptions, too, as just further opinions? Thus, almost from the start, Stoic epistemology also has to respond to the sceptic challenge.

One reason why, in the face of weighty sceptical arguments to the contrary, the Stoics continue to insist that knowledge is attainable and that it must be possible to identify how it is attainable, is this. The Stoics believe that our life depends on whether we are wise or not. They also believe that nature is provident, and hence must have arranged things in such a way that the knowledge which constitutes wisdom is humanly attainable, if it is true that a good life depends on wisdom. Hence it must be possible to identify the way in which nature has made knowledge and wisdom attainable by us. Looked at in this light, Stoic epistemology amounts to a complex hypothesis as to how nature has endowed us with the means to attain knowledge and wisdom. This hypothesis itself should be such that one can come to espouse it as a matter of knowledge precisely in the way the theory tells us that we can attain knowledge.

II Cognition

If we think of Socrates' arguments, or – for that matter – of any kind of philosophical arguments, there is the notorious problem of how, on this basis, we are supposed to arrive at knowledge. However plausible and

incontrovertible the premisses may appear, as long as they represent mere belief, the conclusion, too, will represent no more than mere belief. There is no way to get from mere belief to knowledge, however cogent one's arguments may be. It is fairly clear that Zeno's first cautious move was to claim that, beside mere belief or opinion (*doxa*) and knowledge (*epistēmē*), we have to distinguish a third kind of state, namely cognition (*katalepsis*):

He ascribed reliability not to all impressions, but only to those which manifest, in a certain particular way, those objects which make the impressions; and such an impression, when it is perceived in itself, he called cognizable . . . And when it is already received and accepted, he called it a cognition (*comprehensio*). (Cicero *Acad.* 1.41)²

It will turn out that cognition prominently includes, but is not restricted to, perceptual cognition. What matters here is that Zeno starts out by drawing our attention to the fact that sometimes when we believe that something is the case, for instance because we clearly perceive it to be the case, our belief is not just a matter of mere opinion. When I clearly see that the book in front of me is green, it is not a matter of mere opinion if I think that the book is green. Nor yet, however, is it a matter of knowledge. For to know that the book is green is supposed to be a matter of being in a state such that there is no argument which could persuade one that it is not the case that the book is green. But the mere fact that one clearly sees that the book is green does not suffice to rule out the possibility that one can be argued into not believing that the book is green. Hence the distinction between mere belief, cognition, and knowledge.

Given the importance Zeno attaches to this threefold distinction, it may help to reflect on what Zeno might have in mind when he talks about cognition. Suppose the book in front of me in fact is green. I clearly see that it is green and thus believe it to be green. Somebody else, too, believes it to be green. But he believes it to be green, not because he clearly sees it to be green, but because I tell him that it is green, or because he believes all books to be green (and hence does not bother to look at this book) or because of any number of other reasons. Reflecting on this 'because', one sees that there are any number of possible connections between the fact that the book is green and somebody's belief that it is green. In the case of some of these connections we are willing to say that one would not think that the book was green, unless it actually was green, that, if it were some other colour, one would think that it was of this other colour, and that one believes it to be green, precisely because it is green. We have a connection

² See also Sextus *M VII.150-1*.

of this sort when under normal conditions we clearly see a green book in front of us. In most cases, however, the connection between the fact and the belief is such that one would not be able to say that the person believed something to be the case precisely because it is the case. If, for instance, somebody believes the book to be green because he is told that it is green, the connection is too tenuous to guarantee that the person, given this connection, would not think the book to be green unless it actually was green, and that the person would think otherwise if it were of some other colour. The belief might still be true; but this would be due not to the connection specified, but to the fact that certain further conditions happen to be satisfied.

In each case the connection explains the belief. But in the first case the connection also guarantees the truth of the belief. A belief which is such that one holds the belief that something is the case precisely because it is the case, is guaranteed to be true. Hence we can call it a 'cognition'. In the second kind of case, on the other hand, the connection does not guarantee that the belief is true. Somebody who believes something to be the case just because he is told so may have a true belief; but the way he comes to have this belief, far from guaranteeing its truth, leaves open a number of possibilities that his belief may be false. In this case we talk of 'mere opinion' or 'belief'.

When Cicero turns to Zeno's innovations in logic (of which epistemology is treated as a part), he focuses on Zeno's introduction of the notion of cognition. He also reports that Zeno, to mark this new notion, introduced a new technical term, '*katalēpsis*', literally 'grasp'.³ In having a cognition the mind is in touch with things so as to grasp them. Accordingly, Cicero renders this term and its cognates by '*comprehensio*' or '*perceptio*' and their cognates. If we remember that '*perceptio*' is used as a literal translation of '*katalēpsis*', it will be easier to avoid the rash, and wrong, assumption that all cases of cognition are cases of perception in our sense, even though cases of perceptual cognition are paradigms of cognition. That this would be wrong is clear, for instance, from the Stoic definition of science as a certain kind of body of cognitions. The Stoics surely do not mean to say that we know the theorems of a science, for instance geometry, as a matter of perceptual cognition. Indeed, they explicitly distinguish (D.L. VII.52) between perceptual and rational or intellectual cognitions. So it certainly is not part of the notion of cognition that a cognition is a perception, even if a perception is the paradigm of a cognition.

³ Acad. I.41, II Acad. II.17.

Cicero also renders '*katalēpsis*' by '*cognitio*', and this seems to be a particularly apt term to refer to the kind of grasp which goes beyond mere belief, and which already would amount to knowledge, if the Stoics did not further require of knowledge that one cannot be argued out of what one knows to be the case. Later times which were not particularly interested in this further requirement did in fact treat cognition as the basic form of knowledge, as we can see, for instance, in Augustine's *Contra Academicos*.

How is the introduction of the notion of 'cognition' as a third kind of epistemic state supposed to explain how we might attain knowledge? A clue is offered by the fact that both accounts of Zeno's threefold distinction, in spite of their brevity, insist that, though knowledge is available only to those who are already wise, cognition is available to sage and fool alike. So, the point of the threefold distinction is to establish that we are not in the hopeless situation of trying to arrive at true knowledge on the basis of mere opinion. Even the fool has something better to rely on than mere opinion, namely cognition. In fact, if we follow Sextus, Zeno seems to have made a more precise suggestion. Given that Sextus claims to be reporting Arcesilaus' attack on the Stoic position, the position attacked, for chronological reasons, must be Zeno's position. If this is correct, then Zeno not only introduced the threefold distinction of opinion, cognition and knowledge, as is explicitly attested by Cicero: he also went on to claim that cognition constitutes the criterion of truth (M VII.153). Setting aside the subtleties involved in a precise understanding of the notion of a criterion of truth,⁴ it would seem that Zeno must at least have meant to say the following. We are to treat cognition as the criterion of truth in the sense that we are to believe only those things to be true of which we have cognition and to judge the truth of other things in terms of these. We in fact believe lots of things to be true. But we are not to believe them, even if they happen to be true, unless we have cognition of them. This closely accords with another Stoic view, independently attested for Zeno (Cic. Acad. II.77) that, if one is wise, one will have no mere opinions.

It is easy to see what would happen if we actually managed to follow this criterion of truth. All of our beliefs would be cognitions, and this very fact would turn each of these cognitions into a piece of incontrovertible knowledge. As long as we allow ourselves mere opinions, there is no guarantee that some of these opinions might not be false and that, being false, might serve as premisses in a conclusive argument to the effect that something we believed to be the case was not the case, even if it is true and if we

⁴ Cf. Striker 1974 and 1990.



as a matter of cognition believe it to be the case. This is why isolated cognitions as such are controvertible. But if we no longer entertain any mere opinions, the possibility that our cognitive grasp on a fact may be undermined by an argument to the contrary is eliminated. And with this possibility eliminated, each cognition we have will automatically turn into a piece of knowledge.

So we have the beginnings of an account of how knowledge is possible in terms of 'cognition'. But this account raises a number of questions. To begin with, we want to know whether there really are cognitions, that is to say beliefs which by their very nature, or the way they have come about, are guaranteed to be true. We also want to know how in practice we are supposed to be able to distinguish between mere opinion and cognition in such a way as to believe only those things of which we have cognition. And, finally, we want to know whether the cognitions we have will suffice to attain and to support the knowledge we are after, namely wisdom. For suppose it turned out that we only had cognition of those things which one can perceive to be the case, this would hardly suffice to attain the truly general knowledge which is involved in being wise.

It is reasonably clear that, in order to be able to address these questions, Zeno went beyond the first step of introducing the notion of cognition and of claiming that we should treat cognition as the criterion of truth. For Arcesilaus in his dispute with Zeno raised at least the first two questions. And our sources attribute to Zeno the introduction of a further crucial notion, closely associated with the notion of cognition, namely the notion of a cognitive impression; and they testify to a dispute with Arcesilaus about the appropriate definition of cognitive impressions. What is at issue in this dispute is the existence and the distinctness and distinguishability of cognitive impressions and hence of cognitions. So it is clear that Zeno began to work out a more elaborate theory to answer the questions which his doctrine of cognition raises. It is difficult to say, though, to what extent the more elaborate theory attributed in our sources to the Stoics in general can be traced back to Zeno himself. And I will not make any further attempt to trace the evolution of what came to be the standard Stoic doctrine in this matter, which, in the form it had been given by Chrysippus, was later attacked by Carneades.

III Cognitive impressions

Zeno's suggestion as to how we come to have knowledge is that we discard mere opinions and espouse only those beliefs which are cognitive,

which we have as a matter of cognition. This presupposes that it is up to us what we believe and what we do not believe. And this is, indeed, the view Zeno and the Stoics take and articulate in the following way. They assume that to believe something involves two things. It involves having an impression or thought (*phantasia*), and it involves giving assent to, or accepting, this impression or thought (*sunkatathesis*).⁵ The impressions, as the term indicates, are a matter of passive affection. We do not deliberately form the particular impressions we form. But whether we assent to them or not, is our doing. This is why we are responsible for our beliefs. Cognition, too, is a matter of giving assent to an impression. ×

Now a belief will be true or false, depending on whether the impression it is an assent to is true or false. Hence, if cognitions are true, they are true because the corresponding impressions are true. What is more, if cognitions have a privileged epistemic status due to the way they come about, such that they cannot fail to be true, then the impressions to which they are an assent must similarly have a privileged epistemic status such that they cannot fail to be true, given the way they come about. After all, the way they come about just is the way the corresponding cognition comes about, except that the cognition involves the further step of giving assent to the cognitive impression.

The Stoics call such impressions the assent to which constitutes a cognition '*phantasiai kataleptikai*', that is 'cognitive impressions'. There has been some debate about the precise force of '*kataleptikos*' in this context.⁶ But if we assume that Zeno first introduced the notion of a *katalepsis* and only then the notion of a corresponding impression, the use of the term '*kataleptikos*' for the impression is no more puzzling than the parallel use of 'cognitive' in 'cognitive impression'. It signals that the impression referred to is the distinctive kind of impression involved in cognition. It might also indicate, though, that the impression is such as to enable us to grasp the corresponding fact, if we give assent to it.

However this may be, having analysed a cognition into a cognitive impression and the assent to it, the Stoics now have to show that there are cognitive impressions, that is to say that cognitive impressions form a class of impressions which in reality are distinct from the impressions involved in mere opinions. It is primarily on this that the debate between Stoics and Academics focused, from Arcesilaus down to the end of the sceptical Academy early in the first century BC. In this sense the doctrine of cognitive impressions formed the nucleus of Stoic epistemology.

⁵ Cf. Gödler 1977 and Arthur 1983.

⁶ Cf. Sandbach 1971; Pohlenz 1959, vol. 1, 62.

Not surprisingly, then, a good deal of the effort of the Stoics, beginning with Zeno, was devoted to the definition of cognitive impressions and to the defence of this definition.⁷ Our sources attribute to the Stoics a number of formulations by means of which they try to define cognitive impressions. Closer inspection shows that all this variety reduces to a shorter and a longer version of one definition, versions which differ in that the longer version adds a further clause to the two clauses of the shorter version. According to the shorter version, an impression is cognitive if:

- (i) it comes about from what is (ἀπὸ τοῦ ὑπάρχοντος), and
- (ii) it is formed in exact accordance with what is.⁸

The longer version adds the further clause

- (iii) (it is) such as it would not come about from what is not.⁹

Let us first consider the shorter version. The first clause raises two questions: what is the precise force of 'it comes about from . . .' and what is meant by 'what is'? A natural understanding of the phrase 'what is' is that it refers to a real object, rather than a figment of the mind, which produces an impression on us. This is how Sextus understands it at times, for instance M VII.249, where he is explaining the Stoic definition of a cognitive impression. And this is how many modern authors translate and understand the clause in the different texts in which it is mentioned.

But the expression 'what is' (*hyparchon*) also has a technical use in Stoicism. Since the Stoics assume that only bodies exist (are *onta*), they will say for instance of the present time, though not of the past or the future, that it is *hyparchon*. And similarly they will say that, whereas a false proposition merely subsists (*huphistanei*), a true proposition or fact also *hyparchei*. Thus the point of the first clause would be, not that a cognitive impression has its origin in a real object, but in a fact. For the impression that A is F to be cognitive it must have its origin in the fact that A is F.

This is how Cicero at least at times understands the phrase (cf. *Acad.* II.112). This is how Sextus himself understands the expression in M VII.402 ff. when he reports Carneades' criticism of the third clause of the definition, thus suggesting that Carneades had already understood the phrase in this way. Here Heracles' impression that his children are those of Eurystheus is treated as an impression from what is not, though Sextus at the same time emphasizes that the impression has its origin in Heracles'

own children which stand in front of him. So there is a real thing which gives rise to the impression, namely Heracles' children; nevertheless the impression is not counted as one from what is. What is more, there is at least one passage in Sextus (*M VIII.85-6*) in which he explicitly tells us that the sense of '*hyparchon*', as it is used in the definition of cognitive impressions, is precisely the sense in which (according to the Stoics) a true proposition is what is the case. Moreover the phrase occurs in all three clauses, and it would be desirable to have a uniform interpretation of it for all three clauses. But in the third clause the sense of 'real object' is much too weak, and ancient authors uniformly take the expression in the third clause to refer to what is, or rather what is not, the case.¹⁰ Hence, on balance, we should take the reference to be to what is the case, rather than to a real object. This conclusion makes good sense in terms of our considerations concerning cognition. In the case of cognition we have the belief or the impression which we have precisely because this is the way things are. This will also explain the sense in which the impression, if it is cognitive, has come about from what is. For we can explain the 'because' in our account of cognition by specifying the connection which is such that it is because A is F that we have the impression or think that A is F. The connection might, for instance, be the one in which we stand to the fact that this object is green, if we perceive this object under normal conditions. We shall not worry that, given the Stoic notion of a cause, a fact, not being a body, cannot cause anything, whereas a real object can. For we should not rashly commit ourselves to the view that the connection to be specified has to be a simple causal connection. And, in any case, Sextus explicitly attributes to the Stoics the view that a true proposition, or what is the case, does move us to have a cognitive impression.

It is still somewhat disconcerting that the definition of cognitive impressions, given that it plays such a crucial rôle, hence surely was carefully formulated and, in any case, retained throughout the history of the school, should involve this kind of ambiguity, referring either to an object or to a fact about an object. But there is a possible explanation for this ambiguity. It is crucial for the Stoic theory that children, from the time of their birth, receive impressions which the Stoics are willing to call 'cognitive', though they differ significantly from the cognitive impressions of mature human beings. Since children on the Stoic view do not have minds, they are not sensitive to facts, nor can they form impressions with propositional content. Their cognitive impressions are brought about by

⁷ Cf. Frede 1983. ⁸ D.L. VII.46; Sextus *M XI.183*; cf. Cicero *Acad.* II.77.

⁹ Cicero *Acad.* II.77; D.L. VII.50; Sextus *M VII.248, PH II.4*.

¹⁰ See Cicero *Acad.* II.77-8, 112; Sextus *M VII.152, 252*.

an object which the impression faithfully represents without having the internal articulation which would allow it to present the object as being something or other: it can represent a green book, but not a book as being green. Hence it is possible that the definition was deliberately formulated so as to cover both kinds of impressions, it being understood that it will refer to objects or the absence of them when we talk about the impressions of mindless children, but to facts or states-of-affairs which do not obtain when we talk about the impressions of rational beings.

Let us turn to the second clause. One thing which the second clause clearly requires is that the impressions be formed in accordance with the fact. It is easy to see why this would be required. If one were temporarily colour-blind in such a way as to see green things as red and red things as green, one might have the impression that the object is red precisely because the object is green. The impression would have its origins in a fact in the sense required by the first clause and thus would satisfy the first condition. But clearly this would not be a cognitive impression. Hence we require that an impression, in order to be cognitive, also be in accord with the fact which gives rise to it, in the sense that it represents A as being F, if A is F, in other words that it be true. Now this by itself trivially guarantees truth, but it does not guarantee cognitiveness. We might, for instance, have an instrument which is supposed to discriminate between things which are F and things which are not F, and to signal things which are F. But the machine does not work properly and hence, instead, signals things which are not F. Moreover, we might mistakenly believe that the machine is supposed to signal things which are not F. Hence, on a certain occasion, given that it does not signal A's being F, we correctly have the impression that A is F, precisely because A is F. But this impression can hardly be said to be cognitive; for it rests on two mistakes which just happen to cancel each other out. So we would expect the further detail of the second clause to refer to a particular feature of the impression which is supposed to guarantee its cognitiveness.

An impression is not completely characterized by its propositional content: there is a lot more detail to it. You may, for instance, have an impression with the propositional content that this book is green. Though the propositional content remains the same, the impression may vary considerably. It will, for instance, vary depending on whether you actually see the book or have the impression for some other reason. And when you actually see the book, the impression may still vary considerably depending on the conditions under which you see it. When, for instance, you clearly see the book from nearby, you have one kind of impression, but as

you move away from the book and come to a point where you can barely make out that it is a book and that it is green, your impression, though still an impression that this book is green, surely is quite different from the one you have when you see the book clearly in front of you. All these impressions represent the same propositional content, but they differ in the way they represent it. The Stoics are evidently seeking in these further details which cognitive impressions offer a further mark of their cognitiveness. To identify this further mark, we need to look at the second clause more closely.

There are two further details to the second clause which we have not exploited so far. The clause refers to the way the impression is formed by using verbs like 'seal', 'imprint', 'stamp';¹¹ and it insists that the impression be formed in exact or precise accord with the fact. Obviously, without a good deal of explanation not much can be made of these details. And unfortunately our main source of explanations is the passage in Sextus (*M* VII.249-52), which not only goes on the assumption that the clause demands correspondence with a real object rather than a fact, but also is at variance with the other major source of information concerning these further details, namely Cicero *Acad.* I.42. Finally, caution seems indicated, because Sextus' account, at least as it is often read, makes an assumption which seems rather implausible, namely that the impression is in exact accord with the object by representing it with all of its features. This seems to be an incredibly strong assumption, especially given that not all of an object's features are perceptual features, and that we would not expect an auditory impression, for instance, to represent the visual features of an object.

An impression might be in accord with a fact in two ways. It might, for instance, be in accord with the fact that this book is green by being a representation of this green book. After all, the Stoics attribute cognitive impressions to children in their pre-rational state, when their impressions do not yet have propositional structure. But standardly, in the case of mature human beings, a cognitive impression will accord with the fact by representing this book and by representing it as being green. There are different ways of representing the book as being green, depending on whether one uses the common notion of green or some other notion, for instance a notion which is more articulate than the common notion. But, if we keep in mind that we are quite ready to say that we represent the book's being green in terms of the concept 'green', it is obvious that the

¹¹ Cf. D.L. VII.50; *Acad.* I.77.

main differences will depend on the way the object, rather than its being green, is represented. And, given that, we will be able after all to draw on the information supplied by Sextus in *M VII.249-52*, who assumes that a cognitive impression is characterized by its exact representation of the object; what is more, given that this information is relevant to the understanding of the second clause, we can have some confidence that Sextus is drawing on Stoic doctrine, even if he is mistaken or confused about the sense of 'what is'.

The question is: how could an impression be not only in accord with the fact but in precise accord with the fact? Let us take the impression that this (a book which I see) is green. The impression will represent this object, and it will represent it as being green. That is why it is an impression to the effect that this is green. Now the object might be represented in one's impression in more or less detail. It might, for instance, be represented in such detail that its precise colour is represented. But its representation might also involve a set of characteristic features of an object. The Stoics assume that each object has a set of characteristic and distinctive features. And these produce a characteristic look which is constituted by a set of characteristic visual features. So in the case of a visual impression an impression might be in precise accord with the fact that this is green if it represents the object in such a way as to fully and precisely capture its characteristic visual features and its colour.

On this interpretation we see the point of the verbs in the second clause of the definition to emphasize that, with a cognitive impression, the object is faithfully represented in all its characteristic and relevant detail. With a proper seal we do not expect each and every feature of the seal-ring to be captured in the seal-wax, but we do expect the characteristic and identifying features to be fully stamped in. Without this we would still have an imprint of the seal-ring, but not a seal which left no room for doubt as to its identity.

This talk about imprints and stamps should not mislead us into conceiving of an impression in the manner which Chrysippus tried to rectify when he suggested that 'impression' (*tupōsis*) should not be taken literally (D.L. VII.50). We should not assume that, for instance, in the case of perception under normal conditions the object we see will automatically produce an impression in us which, among other things, represents it with its distinctive features in the way a seal-ring will, if properly used, produce the appropriate seal. Though the Stoics do think of impressions as passive affections, this should not obscure the fact that rational impressions are formed in the mind and that the mind is involved in their formation. After

all, rational impressions, impressions with a propositional content, involve the use of notions or concepts in representing something as being a certain way. They thus not only presuppose a mind which can form such impressions: they are also sensitive to the characteristics of the particular mind involved. For different minds have different notions available to them and apply the same notions in different ways, given their further beliefs. The way this is relevant here is this: if we have not learnt to discriminate a certain object, for instance a particular egg (as opposed to having learnt to discriminate a certain kind of object, for instance eggs), so as to be able to distinguish this egg from all other objects and thus also from all other eggs, we will not necessarily have a cognitive impression that this egg is green, however well developed our sensory apparatus is, and however much the other normal conditions for perception may be met. One should also note in this context that the first two clauses of the definition do not say what on certain interpretations we would expect them to say. They refrain from saying that the cognitive impression is impressed on us by the object or the fact. It rather is said to be formed in accordance with the fact. Indeed, it is formed in the mind and in some way by the mind, rather than by the object. This becomes clear even from Sextus' account in *M VII.250*. Here, as elsewhere, we are told that the cognitive impression is formed artfully (*technikōs*). This does not mean that the object has an art which allows it to produce a cognitive impression of itself. It rather means that the soul or the mind has an ability to form impressions of objects which are faithful to these objects in their crucial detail. This competence or ability to discriminate can be enhanced by learning and training. As a result we can come to be able to perceptually discriminate things we originally were unable to distinguish. So rational impressions, the impressions of mature human beings, though a matter of receptivity, involve the mind and reflect the particular mind's disposition, for instance its ability to discriminate.

Sextus, in fact, seems to claim that in a cognitive impression the object is represented with all its features (*M VII.251*), if we assume that '*idiōmata*' here means 'features' or 'characteristics'. But it is difficult to see how, for instance, a visual impression could or should represent an object with all its features, for instance its olfactory characteristics. Hence in Cicero, *Acad.* 1.42, we find the more modest claim that a cognitive impression generated by means of a certain sense will represent all the features which fall within the range of what can be discriminated through this sense. But even this seems too strong. For, surely, even if we see an object under ideal conditions, we do not necessarily see all the minute visual detail we would

see, for instance, if we saw it from so close up that we no longer could see the object as a whole properly, that is to say, if a normal condition on proper vision were violated. So perhaps we should not assume that Sextus means to say that the cognitive impression represents the object with all its features, but should rather understand the term '*idiōma*' which he uses in this context (*M VII.248, 250, 251*) in the sense of 'characteristic' or 'distinctive feature', rather than in the sense of 'feature' taken quite generally.

From Sextus' explanation in *M VII.251* we can add a further requirement, which we might have guessed anyway, namely that these features themselves are to be represented precisely (*akribes*). Thus, if we think that it is part of the characteristic look of this book that it looks like a book and that it looks green, then the impression should be such as we would have if we clearly and unambiguously recognized it to be a book and to be green. With this in mind we can say that the second clause demands that a cognitive visual impression to the effect that this object is green should be such as to represent this object in a way which perfectly and unequivocally matches its characteristic look and its colour, and moreover such as to present it as being green.

When we now turn to the third clause: '(it is) such as it would not come about from what is not', it is important to briefly consider the relation between the longer and the shorter version of the definition. It is clear that the shorter version continued to be used even after the longer version had been introduced. This strongly suggests that, at least from the Stoic point of view, the third clause does not add a further restriction on what is to count as a cognitive impression, but just makes explicit a feature of all impressions which satisfy the first two conditions. In fact, the Greek of the third clause is most naturally understood in such a way that 'such' does not refer to a further feature, introduced but not specified by the third clause, but refers back to the character ascribed to cognitive impressions in the first and the second clauses, presumably more specifically to the character ascribed to cognitive impressions in the second clause. The point would be this: impressions which satisfy the first two clauses have a certain character; the third clause tells us that an impression which has this character cannot possibly have its origin in what is not. I take this to be a way of saying that an impression which has this character cannot possibly be false. This understanding of the relation between the longer and the shorter version seems to be confirmed by Sextus and by Cicero. Sextus explains that the Stoics only added the further clause in response to an Academic objection based on an assumption which the Stoics themselves do not share, namely the assumption that two objects might be exactly

alike and hence indiscernible (*M VII.252*). Cicero tentatively suggests the same, adding that it was Arcesilaus who prompted Zeno to add the third clause (*Acad. II.77*). Thus the third clause is supposed to offer merely a clarification which, on the Stoic view, does not go beyond what is already stated or implied by the first two clauses.

It will help if we consider Arcesilaus' objection. It seems that Arcesilaus argued that two objects, say two eggs or two grains of sand, might be exactly alike, or at least so much alike as to be indiscernible. And, on the basis of this, he seems to have argued that the shorter definition, or at least its second clause, is guaranteed to be inadequate, since it will be satisfied by certain false impressions, but that the longer definition, though in virtue of its third clause it manages to rule out false impressions, does so only at the price of ruling out all impressions. For, however strong conditions an impression may meet, there always can be an impression exactly like it which is false, or which fails to have its origin in what is. So on the shorter version, according to Arcesilaus, cognitive impressions do not form a distinct class of impressions, and on the longer version they do not exist. This, roughly, is how Cicero presents the matter.

Unfortunately the precise way in which Arcesilaus is supposed to bring the case of possible indiscernibles to bear on the definition of cognitive impressions is far from clear. Their relevance is spelled out by Cicero *Acad. II. 84-5*, in this way. Suppose you see Cotta under ideal conditions and you form the correct impression that this is Cotta. But suppose also that, unknown to you, Cotta has an exact look-alike, Geminus. So it can happen that you actually see Geminus under ideal conditions, but, not surprisingly, you now form the false impression that this is Cotta.

There are two ways to interpret this. One is that Arcesilaus understands the 'what is' in the shorter definition to refer not to the fact, but to the object, and that he argues that, given the indiscernibility of Cotta and Geminus, the false impression that this is Cotta satisfies the first two conditions as well as the true impression that this is Geminus. For it, too, has its origin in a real object (we actually see Geminus), and it does represent this object with as much faithfulness as we wish. It nevertheless is false and hence not cognitive. In fact, the two impressions, taken by themselves, will be exactly alike, and hence each of them, including the one which is true, taken by itself, will be compatible with two mutually exclusive states of affairs. To which Zeno is supposed to answer by denying that Cotta and Geminus are indiscernible, but also by adding the further clause to make explicit that the impression that this is Cotta which we form when we see Cotta under the appropriate conditions will be unlike any

impression we form when we do not see Cotta. We cannot rule out the possibility that Zeno himself originally understood his shorter definition in such a way as to invite this objection, because he still thought of the impression primarily as an imprint which an object leaves on us, such that two indiscernible objects would produce the same impression. But it also may be the case that Arcesilaus referred to pairs of indiscernibles just to challenge the second clause of the definition, because this clause was understood by the Stoics in a certain way. It seems that the Stoics assumed that, given the way a cognitive impression comes about, it represents the object with a faithfulness which an impression which does not come about in this way, and hence *a fortiori* an impression which does not have its origin in a fact, cannot possibly match. The second clause insists on this kind of faithfulness. The possibility that we are presented with a pair of indiscernibles would show that however faithful an impression is to the object, this does not rule out the possibility that it is false. Zeno's answer to this, on this interpretation, would be to deny that there are indiscernibles, but to make explicit in a third clause that the kind of faithfulness to the object attributed to cognitive impressions by the second clause is incompatible with its being false, with its failing to have its origin in a fact.

In any case, the Stoic response to the Academic claim that there are indiscernibles and that hence there might be no difference between the cognitive impression that this is Cotta which we have when we clearly see Cotta and the impression that this is Cotta when we clearly see Geminus is based on two assumptions: (i) there are no indiscernibles, and (ii) the impressions we form are sensitive to our state of mind such that, if we have learnt to discriminate Cotta, the cognitive impression which we have of Cotta cannot possibly be like the impression which we have of Geminus. The first assumption is not *ad hoc*, but supported by Stoic physics and Stoic metaphysics. The Academics will not accept it, but at least the Stoic position remains defensible. The second assumption raises a problem. Suppose one first sees Cotta under normal conditions and forms the cognitive impression that this is Cotta. But then one sees Geminus, and, because one is confused or even temporarily deranged, one forms an impression of Geminus that he is Cotta which presents Geminus precisely with the characteristic features of Cotta. The two impressions will be exactly alike, even if it is the case that Cotta and Geminus are discernible. The Academics consider more dramatic versions of this sort of case.

There is Orestes who in his madness takes Electra, though she is standing in full sight of him, to be a Fury (Sextus *M* vii. 249). There is the case of Heracles who in his madness takes his children, though they are standing

clearly in front of him, to be the children of Eurystheus (*M* vii. 406). What is characteristic of these cases is that the perceiving subject with one exception sees the object under ideal conditions. Barring the exception, the subject should have a cognitive impression. But the subject does not have a cognitive impression, because he is temporarily deranged, and this drastically interferes with the formation of the impression in such a way as to, for instance, give Heracles the impression that these are Eurystheus' children. Now this can only be so if in his impression Heracles represents his own children with features of Eurystheus' children. But, if this is possible, it should also be possible that Heracles, precisely because of his heightened imagination in this deranged state, represents his children with precisely the distinctive features of Eurystheus' children. Hence he will have, it is argued, an impression which is indistinguishable from the impression he would have if he saw Eurystheus' children under normal conditions. But in this case his having the impression is compatible with two possible states of the world, one in which Heracles is sane and these in fact are Eurystheus' children, and one in which he is insane and what is in front of him is something else. The Stoic answer to this is that the impression, taken in itself, under normal conditions has a distinctive character which can never be matched by an impression formed by a subject in an abnormal state.

So the Stoic claim is that nothing but a fact can produce an impression which has precisely the character of a cognitive impression, that an impression of this character cannot possibly be the product of dreaming, hallucination, derangement or any other non-normal or abnormal mental state. Indeed, they claim that not even the gods can (or will) produce such an impression in us in the absence of the corresponding fact (Cic. *Acad.* II. 50). Again, this is not an *ad hoc* claim, though, needless to say, it will not be accepted by the Academics. As we saw, the Stoics insist that great art is involved in the formation of cognitive impressions. They involve the mind's readiness to perform a highly delicate task which involves its complete attention and concentration. A sleeping or even sleepy mind, a deranged or intoxicated mind, will not be able to perform such a delicate task. Moreover, Stoic physics allows for the assumption that impressions bear the mark of how they have come about. We also have to take into account that the Stoics, given their belief in providence, can argue that nature, if it means us to have cognition and knowledge, can most simply arrange for this by supplying us with impressions with a distinctive character which reflects the way they come about, which, in turn, guarantees their truth.

iv Clearness, distinctness, evidence

Cicero tells us (*Acad.* I.41) that a cognitive impression is supposed to have a distinctive way of making those things clear (*declarare*) which it presents as being the case. The question is what this distinctive character may be. As already noted, the 'such' in the third clause may refer to a further, though unspecified, feature which all cognitive impressions have and which distinguishes them from all non-cognitive impressions; or it may refer to a feature which all impressions satisfying the first two clauses have, and which the third clause claims an impression would not have unless it had its origin in a fact in such a way as to be itself guaranteed to be true. Given that the third clause is treated as merely clarificatory and redundant, and given the Greek of the third clause, we should assume that this distinctive character is not a further feature, but one already implied by the first two clauses. And since, given the Academic counter-examples, it should be an internal feature of the impression which no non-cognitive impression can match, it should be a feature implied by the second clause. If we consider D.L. VII.46 it seems fairly clear that the feature we are looking for is the clarity and distinctness of cognitive impressions, and that this feature is supposed to be crucially involved in their representing something in precise accordance with the fact. In D.L. VII.46 we first get the two clause definition of cognitive impressions. We then get a corresponding definition of a non-cognitive impression as one which does not satisfy the first clause or which, even if it satisfies the first clause, does not satisfy the second clause. And this is glossed by saying 'the one which is not clear (*tranēs*) nor distinct (*ektupos*)'. This strongly suggests that impressions are clear and distinct by being in precise accordance with the fact, and that this is the feature to which the third clause refers. This is not the place to discuss whether clarity and distinctness are two separate features, as the 'nor' might suggest. What seems to be demanded is this: the relevant features of the object which a cognitive impression represents are represented in such a way that this representation could not be the representation of some other features, and that they jointly constitute a distinctive representation of the object, that is, a representation which captures a set of jointly distinctive features of the object, for instance its distinctive look. This corresponds to the fact that a seal may be deficient in two ways: it may lack some of the features which would make it identifiable as this rather than that seal, or it may have all the features, but some not with sufficient clarity to make it identifiable as this rather than that seal. Cognitive impressions are unambiguously identifiable as impressions of

the object they are an impression of, and as representations of the fact which gives rise to them. And the claim is that an impression will be clear and distinct in this way only, if it has its origin in a fact in such a way that the manner in which it comes about guarantees its truth.

Cognitive impressions are also characterized in other ways, for instance as striking or vivid (*plēktikos*, Sextus *M* VII.403). I shall comment on one of these characterizations, namely the claim that they are *enargēs* (cf. *ibid.*), a term rendered by Cicero as 'evidens' or 'perspicuum' (*Acad.* II I.17). To understand this, we have to take into account that in Greek one can call something which clearly and exactly looks like an ox an 'obvious' or 'evident' ox. This does not commit one to the view that an evident ox actually is an ox. It might be a god taking on the appearance of an ox. But as a matter of Stoic physics the Stoics believe that nothing but Socrates can have the distinctive look of Socrates, and that nothing but an ox can have the distinctive look of an ox, that is to say the characteristic and jointly distinctive visual features of an ox. Now a visual cognitive impression of an object, being clear and distinct, will represent the object clearly with its characteristic and distinctive look. Hence such impressions themselves also are called 'evident'. For a Stoic, then, their evidence will guarantee their truth. But for an Academic evidence will not guarantee truth for the simple reason that, even if there is something which looks exactly like Socrates, it might be something else. If nothing else, for the Academics the possible indiscernibility will guarantee this.

v Assent to cognitive impressions

Now, even if we grant that we do have cognitive impressions, this will be of little help, unless we can also come to acquire a disposition in which we unfailingly give assent only to cognitive impressions. The fact that the Stoics talk of cognitive impressions as having a distinctive character and as being the criterion of truth might mislead us into thinking that on the Stoic view this, at least in principle, is rather an easy matter. Since cognitive impressions have a distinctive character, we just have to determine which of our impressions are cognitive and then give assent to them. But it is obvious that in practice this is such a difficult task that even the Stoics themselves do not claim to have achieved it. And it is clear why in principle it would be a more difficult task than at first might appear. The very fact that cognitive impressions are supposed to be criteria raises a problem. In trying to find out whether an impression is cognitive, one can check the conditions under which one has formed it. And, having satisfied

oneself that it came about under normal conditions, one can conclude that it must be cognitive and hence accept it. But, though one can do this, this cannot be how the Stoics think that cognitive impressions play the role intended for them in their theory. For in this case our acceptance of them is based on the assumption that we have sufficient evidence for their cognitivity. This assumption can be questioned. And any evidence we produce in support of it can in turn be questioned. So we seem to fall into an infinite regress precisely of the kind which we tried to avoid by introducing cognitions and cognitive impressions in the first place. We also can check our impressions against our beliefs, and accept them if they seem true in the light of our beliefs. But, again, to do this is to appeal to further evidence to determine the cognitivity of our impressions. And this evidence in principle will be as questionable as the cognitivity of the impressions, and hence questioning the evidence will again lead to a regress.

Now we might assume that the Stoics think that we do not look for evidence outside the impression in question, but rather for the distinguishing mark of cognitive impressions, for something like evidence or clearness and distinctness, and that, having spotted it, we infer that the impression must be cognitive and hence true. But one may object that one can also question whether an impression in fact has this distinctive mark. In response one might be tempted to assume that the Stoics must think that we can infallibly recognize the distinguishing mark. But there is no evidence that the Stoics do believe this. And, given that there is a great deal of evidence for the Stoic doctrine concerning cognitive impressions, it would be surprising if such a crucial assumption were never referred to. It also would be, philosophically, a desperate assumption to make. And, if it had been made, it would be very difficult to explain why knowledge and wisdom are supposed to be so difficult to attain. Finally, though cognitive impressions do have a distinctive character, this should not be understood to mean that cognitive impressions bear on their face, as it were, an easily recognizable mark of their cognitivity. The distinctive character of cognitive impressions is not a feature an impression has over and above its representing a particular fact in a certain way, and thus its presence cannot be determined independently of determining whether it exhibits this manner of representation.

So the Stoics must assume that cognitive impressions, having a distinct character, are such that we can immediately recognize them as such and do not have to depend on further evidence to determine their cognitivity. In any case, the Stoic view does not seem to be that we have some mysterious ability to infallibly recognize cognitive impressions as such, and

Stoic theory does not require the postulation of such an ability. All that it requires is that we can learn to get so good at recognizing cognitive impressions that we always get it right. In each case there is the possibility that we could get it wrong, but it is not by good luck that we do not, but because our ability has been so developed that we are able to successfully deal with each case we encounter. To make this assumption is not to assume some infallible cognitive faculty.

Now, to say that we are able to recognize cognitive impressions as such can be understood in two ways. It can be understood to mean that we are able to make a correct judgement concerning the cognitivity of an impression and, on the basis of this judgement, give assent to the impression. But it also can be understood to mean that we are sensitive to the cognitivity of an impression, that there is an internal mechanism which registers and scans impressions and which is able to discriminate between cognitive and non-cognitive impressions so that, if it discriminates an impression as cognitive, we give assent without forming the judgement that the impression is cognitive. ~~We might have a sense for cognitivity in this latter way. Nevertheless, we could assume that this sense can be developed and perfected, if we assume that it is also sensitive to our beliefs.~~

There is some reason to think that the Stoics at least sometimes thought along the lines of such a mechanism. They certainly must have assumed that children possess such a mechanism to sort cognitive from non-cognitive impressions. For they claim that children are endowed by nature with an impulse towards cognitions (Cic. Fin. III.17). It is easy to see why. According to the Stoics, it is these cognitions which give rise to the so-called natural notions or anticipations, concepts which are faithful to the distinctive character of the things which fall under them. The acquisition of a sufficient set of notions of this kind is supposed to amount to the acquisition of reason. Now the privileged epistemic status of these concepts depends on the fact that they are based on cognitive impressions or cognitions. Hence children, to acquire reason, must be able to sort cognitive from non-cognitive impressions. And to do this, they obviously cannot resort to judgement and inference, since ex hypothesi they do not yet have reason. And it also is clear that children accept those impressions which they sort as cognitive. Otherwise they would not have cognitions. So there is not just a primitive non-rational version of cognitive impressions in children, but also a primitive non-rational version of assent, which is supposed to follow if an impression is recognized as cognitive.

Now, as to mature rational human beings the Stoics observe that when we get a perceptual impression of something which is of interest to us, but

the impression does not seem satisfactory, we, as it were, instinctively rub our eyes, move closer or further away, try to provide more light etc., that is to say try to establish normal conditions to see properly (Sextus *M* vii.259). This would suggest that there is a mechanism which not only is sensitive to the cognitivity of an impression, but also can tell on the basis of the character of the impression, in which way the impression is deficient, and which can set us in motion in the appropriate way to obtain further impressions till it receives an impression which it deems satisfactory. And assent may be no more than this acceptance as satisfactory. In any case, we here have the idea of a highly sophisticated sensitivity to the cognitivity of impressions.

Now this sensitivity is in many ways affected by beliefs. It is adequate for the rather simple impressions children have. But, as soon as we have concepts, we can form extremely complex impressions and acquire highly complex beliefs. To the extent that we learn to discriminate between different particular objects, different kinds of objects, and different features of objects, and acquire true beliefs about them, it also will be easier to learn to discriminate between the corresponding impressions; but to the extent that we also acquire false beliefs, it will be more difficult. We may fail to recognize an impression as cognitive, because it is incompatible with what we wrongly think we know for certain. Since it is the mind which forms even perceptual impressions, and since the mind in forming impressions is influenced by its state, including its beliefs, its false beliefs may make it difficult for it to form cognitive impressions. In any case, its impressions will reflect its false beliefs. So it is obvious how we can improve and perfect our sensitivity to cognitive impressions. We have to attend to our impressions, we have to eliminate our false beliefs, and we have to learn what the things we are concerned with are like and how they differ from other things, and look at our impressions carefully in the light of this. In the end we will have a reliable sense for whether an impression is cognitive and give assent to precisely those impressions which are cognitive. This is what Boethus had in mind, when he said that right reason is the criterion (D.L. vii.54). If we have a perfected reason we will have a reliable sense for which impressions are cognitive.¹²

vi The criteria

If we follow the Stoics up to this point, we have cognitive impressions and we can learn to discriminate between cognitive and non-cognitive

¹² Cf. Kidd 1989.

impressions in such a way as to give assent to cognitive impressions. So, having cognitions, we will be on safe ground. And having only cognitions, we will have knowledge. The question is whether and how with just this knowledge we will be able to attain wisdom. To answer this question we have to look more closely at the kinds of cognition which we have available to us.

It is clear that, if there are any cognitions at all, then perceptual cognitions will be among them. It is because we are prepared to accept that it is not a matter of mere opinion if we think that the book is green when we see it clearly in front of us, that the notion of cognition seems promising in the first place. So one class of cognitions we have available to us are perceptual cognitions. Indeed, Cicero, having reported that Zeno introduced the notion of cognition and discussed our assent to cognitive impressions, goes on to tell us that he then singled out perceptual cognitions as a class of cognitions we can rely on (*Acad.* 1.42). What is more, Zeno is supposed to have identified perceptual cognitions as a criterion.

This fits the testimony in D.L. vii.54, according to which Chrysippus claimed that perception constitutes a criterion. But it creates a problem, because it seems to conflict with other evidence. In many places we are told that according to the Stoics cognitive impressions constitute the criterion. This view is attributed to Chrysippus (D.L. vii.54). And hence Chrysippus is accused of inconsistency in sometimes claiming that cognitive impressions are the criterion and sometimes saying that perception is a criterion. What is more, Zeno also must have said that cognitions quite generally are the criterion (Sextus *M* vii.153). Now to make sense of this apparent conflict we have to assume two things, (i) that there is a shift in the use of the term 'criterion', and (ii) that in discussing knowledge and its attainability in general the Stoics talk about cognitions and cognitive impressions quite generally, whereas when they go into the details of how we attain knowledge they distinguish between perceptual cognition and anticipations, that is to say the intellectual cognitions involved in the possession of anticipatory concepts.

As to the shift in use, when Zeno introduces cognition as the criterion it is in the context of an argument to the effect that no argument based on premisses which we hold to be true as a matter of mere belief will lead to knowledge. Here cognition is a criterion in the sense that it is a belief which is not held as a matter of mere opinion, and hence can be used to judge the truth of further beliefs. But when we turn to the question of how any beliefs, including cognitive beliefs, can be judged to be true or false, the answer will be 'in virtue of cognitive impressions'. This shift in

the use of 'criterion' is not surprising, given that philosophers were using the term in a number of related ways. Once we take this into account, it is easy to make sense of the variety of things different Stoics according to D.L. VII.54 are prepared to call a criterion. If, for instance, we make cognition the criterion in one sense, we can also make right reason the criterion in a different use of the term.

Now, in saying that cognitive impressions or cognition or perfected or right reason are the criterion, we do not yet address the question how we attain the complex knowledge which is wisdom. In order to do this, we now distinguish different kinds of cognition. And we first single out perceptual cognition as one criterion. We do so for at least three reasons. (i) If one is willing to admit any kind of cognition, one will admit perceptual cognition. (ii) Perceptual cognition, or perceptual cognitive impressions, are supposed to be the basis on which we develop the so-called natural or common notions or anticipations which constitute a further criterion. (iii) There is an obvious parallel with Epicureanism which similarly postulates perceptions as a criterion.

We can now discuss a crucial difference between the Stoic and the Epicurean position, which might be overlooked given their striking superficial similarity. Epicureans take perceptions in the sense of sense-impressions to be criterial. This commits them to the view that all sense-impressions are true. This position the Epicureans try to defend by saying that often what we take to be a sense-impression actually is a combination of sense-impression and mere belief. So we have to learn to distinguish in our impressions what is the product of sense and what is the result of an activity of the mind, a task analogous to the task of distinguishing cognitive from non-cognitive impressions. The Stoics, by contrast, assume that there are false sense-impressions and hence distinguish sense-impressions and perceptual impressions, restricting perceptual impressions not just to true impressions, but to cognitive impressions, that is to say to impressions which are guaranteed to be true. And they also assume that, at least in the case of mature human beings, even perceptual impressions are thoughts formed in and by the mind. So, if the Stoics like the Epicureans claim that perceptions are criterial, their view, nevertheless, differs quite substantially. But perceptual cognitions obviously do not suffice for the kind of general knowledge which constitutes wisdom. And so the Stoics, again like the Epicureans, introduce a further criterion, anticipations (*prolēpseis*).

Perception will give us knowledge of particular observable facts. To gain the truly general knowledge which constitutes wisdom we will have to rely on more than perception. To this purpose the Stoics, following the Epicureans, introduce the notion of anticipations.¹³ Perhaps they are called anticipations because they are concepts which provide us with an antecedent general understanding or grasp of the things which as rational beings we perceive and think about, and which even in perceiving them we represent in terms of these notions. Already Zeno, having singled out perception as a criterion, went on to explain how these privileged notions provide the principles on the basis of which reason can derive further truths (Cic. *Acad.* 1.42). We are not told that Zeno called them a criterion, but this is what Chrysippus (D.L. VII.54) and later Stoics did.

It is easy to see how this is supposed to work. The mastery of a concept involves certain assumptions about the items to which one applies the concept. Traditionally one will think of these as being captured in a definition of the kind of item falling under the concept. To say that anticipations (or common or natural notions, as they are also called) are criterial is to say that these definitions and the assumptions involved in them have the status of cognitions. They can thus serve as a criterion to judge the truth of further beliefs. Since they are truly general, we can deduce further general truths from them as principles. These theorems, having been deduced from cognitive assumptions, will themselves have the status of cognitions. In this way we arrive at whole bodies of such cognitions and thus at sciences, and in this way, ultimately, we will also arrive at that particular body of cognitions which constitutes wisdom.

Now all this depends on the premiss that the assumptions involved in the use of one of these privileged criterial concepts are cognitions. Cognitions are beliefs which come about in a way which guarantees their truth. The further theorems will be cognitions, inasmuch as they have been deduced from principles which are cognitions, (deduction) counting as a canonical way of coming about. These principles are cognitions because they are just the assumptions one makes if one has these privileged concepts. So what remains to be shown is that these concepts, and thus the assumptions involved in them, come about in such a way that their truth is guaranteed. And the Stoics set out to show this by trying to argue that by nature we are constructed in such a way as to form these notions on the basis of cognitive impressions. (This is why they are also called natural

notions.) And because human beings are so constructed, anyone who grows up in a natural environment which provides him with the normal cognitive impressions, and who is not in some other way radically deprived, will form the same notions. (Hence they are also called common notions.)

These notions, then, are supposed to owe their special epistemic status to the way they come about. What distinguishes them from other concepts, for instance technical concepts, is that natural concepts are not concepts we set out to form, shaping them to accord with our beliefs and our presumed needs. They rather come to us naturally. If one grows up in an environment with trees and camels, one will naturally end up with a notion of a tree and a notion of a camel, without having set out to form them. The reason why this seems important is that, if we set out to form a concept, this formation is sensitive to our beliefs and to our presumed interests. But we may make mistakes in the way we form a concept, our beliefs may be wrong, and we may be mistaken about our needs and interests. The formation of natural notions does not suffer from this sort of interference. Also, natural notions, at least to begin with, just capture the common content of cognitive impressions. Given the guaranteed truth of these, the corresponding natural notions are guaranteed to be faithful to the objects of which the cognitive impressions are impressions. When natural notions go beyond what we perceive, we note that their formation follows a certain simple natural pattern. If, on the basis of perception, we have the notion of a certain kind of perceptual feature, it is natural for us to form the notion of the opposite feature, even if we have never perceived it (cf. D.L. VII.53). That these patterns of formation are natural, i.e. that our mind is by nature constructed in such a way as to naturally form notions in this way, we can see from the fact that all human beings seem to form these notions.

Needless to say, Academic sceptics were not impressed by this view. But we have to keep in mind that Aristotle at the beginning of the *De interpretatione* takes a much stronger view when he claims that the affection of the soul (that is, the notion in the mind) which corresponds to a meaningful word is the same for all human beings across different languages. Similarly Plato seems to think that the way we conceive of things is at least guided by some awareness of the Platonic ideas which define the right way to think about things. So the Stoics in this regard can at least appeal to a distinguished tradition of privileging certain concepts as the ones one naturally would have.

However that may be, these notions are supposed to provide the starting-points or principles from which we can proceed to deduce the rest of our knowledge. And so the Stoics in their logic also set out to formulate canons for deduction, which will guarantee that the beliefs we arrive at by inference come about in the right way.

VII Conclusion

In this way the Stoics account for the possibility of knowledge and wisdom. We have only been able to consider what seem to be the crucial points of the standard Stoic doctrine. I have not, for example; discussed the Stoic theory of signs and sign-inference, or the Stoic conception of proof.¹⁴ In conclusion I want to make some general remarks about the character of this account. Stoic epistemology standardly is characterized as 'empiricist'. This seems to be misleading. It is true that the Stoics in their reaction to wildly speculative theories about the world, involving the postulation of a host of immaterial entities, insist that the world is a world of bodies, and that our primary epistemic contact with it is through perception. It is also true that our perceptions are supposed to constitute the basis on which we form concepts. But on the Stoic theory the content of our criterial natural concepts is not at all fully determined by our perceptions. It is also determined by the natural mechanism which leads us to form, on the basis of perception, concepts like the concept of a god or the concept of the good, which go far beyond the content of our perceptions. And it is natural concepts, including these concepts, which are supposed to underwrite our general knowledge. In this sense the Stoics are rationalists, and they were regarded as such in antiquity. We have to remember here that the Stoics in the first instance try to explain how we might attain the knowledge Socrates was after. Once we keep this in mind, an empiricist approach to this kind of knowledge seems highly implausible.

One might also, given the Stoic doctrine of the criteria of truth, at first think that the Stoic account was a simple foundationalist and even infallibilist account. But it does not seem to be an infallibilist account. It claims that the wise man can manage to correctly discriminate cognitive and non-cognitive impressions. But this does not involve the postulation of some infallible cognitive ability. It is rather like Aristotle's claim that the practically wise man will always know the right thing to do. Similarly,

¹⁴ Cf. Brunschwig 1980.

though the Stoic theory is foundationalist, being an account of knowledge, it is an account of the wise man's knowledge, since only he according to the Stoics has any knowledge. And this knowledge is a rather elevated kind of knowledge which involves an understanding of what is known. It certainly meets much more stringent demands than what we ordinarily call knowledge.

Finally, though the Stoics give an account of how knowledge and thus wisdom is attainable, it is an account which is very much focused on this abstract theoretical possibility. If we expect a consideration of the details of actual scientific knowledge of the kind we get in Aristotle's *Analytica posteriora*, we will be disappointed. But we have to remember, however paradoxical this may sound, that the Stoics did not think that they themselves had any knowledge of the kind whose possibility they tried to assure us of. And they seem to have taken a very dim view of our ability to understand the actual workings of nature. Even the wise man is far from omniscient.¹⁵ Being wise for the Stoics, after all, is just a matter of knowing those things one needs to know to live well. In this too they were following Socrates, though perhaps, unlike Socrates, they assumed that this involved a basic understanding of the world, for instance of the fact that the world, down to the smallest detail, is governed by divine reason and providence.

¹⁵ Cf. Kerferd 1978a.

Academic epistemology

MALCOLM SCHOFIELD

I Introduction

Early in the Hellenistic period the Academy went sceptic.¹ Sceptic it remained until the two leading figures in the school at the beginning of the first century BC, Philo of Larissa and Antiochus of Ascalon, adopted more sanguine positions on the possibility of cognition – albeit mutually incompatible positions.² The philosopher who effected this change of outlook in the Academy was Arcesilaus, scholarch from c.265 BC until his death around twenty-five years later, and reputed as a dialectician whose employment of the Socratic method led him to suspend judgement about everything. He impressed the contemporary polymath Eratosthenes as one of the two leading philosophers of his time.³ And in his assaults on the Stoic theory of cognition he established the principal focus of argument between the Stoa and the Academy for the best part of the next two hundred years.

The most notable of Arcesilaus' sceptical successors⁴ was Carneades, the greatest philosopher of the second century BC. Although like Arcesilaus – and in similar emulation of Socrates – Carneades wrote nothing, his pupil Clitomachus published voluminous accounts of his arguments on issues across the whole range of philosophical inquiry; and it is principally to this source that – albeit indirectly – we owe our knowledge of a subtle system of thought.⁵ In the course of his engagement with both

¹ The principal ancient sources for Academic epistemology are Cicero, *Academica* and Sextus Empiricus, *Adversus Mathematicos* VII. There are useful collections of the Greek and Latin texts which constitute the basic evidence for Academic views in Mette 1984 (Arcesilaus) and Mette 1985 (Carneades). General surveys: Brochard 1923, Stough 1969, dal Pra 1975.

² Study of the views of these philosophers lies outside the scope of the present volume. For discussion see Glucker 1978, Sedley 1981, Tarrant 1985, Barnes 1989c, Görler 1994b.

³ Str. I.15; the other he named was the Stoic Aristo of Chios.

⁴ Laetides, his immediate successor as scholarch, maintained the Academy in scepticism. The evidence about him (conveniently assembled in Mette 1985) is biographical and anecdotal. For an attempt to extract some philosophy from it see Hankinson 1995, 92–4.

⁵ Like Socrates neither put any philosophy in writing; *Plu. Alex. Fort.* 328a, cf. D.L. I.16, IV.32. Although Philodemus' *Academicorum historia* (*PHerc.* 1021) claims that a pupil of Arcesilaus