



Epistemic relativism and the problem of the criterion

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1. Introduction

What is the relationship between scepticism and epistemic relativism?

Though the distinction is not always clearly drawn, scepticism and epistemic relativism reflect opposing philosophical tendencies. The sceptic casts doubt on the existence of knowledge and justified belief. This leads either to outright rejection of knowledge and justified belief or to suspension of judgement with respect to their existence. By comparison with the sceptic, the relativist is a model of tolerance. All cultures and practices have equal status. In the epistemic sphere, the relativist takes knowledge and justified belief to depend upon the epistemic norms employed in a given culture or local context. The norms of epistemic justification and knowledge vary with the context in which beliefs or knowledge-claims are formed. What is rejected as incorrect belief in one context may legitimately constitute knowledge or justified belief in another.

In this paper, I highlight a parallel between a classic argument for scepticism and recent treatments of epistemic relativism in the history and philosophy of science. I seek to show that influential treatments of epistemic relativism by relativist and non-relativist authors alike turn in vital ways on an argumentative strategy inherited from Pyrrhonian scepticism. The strategy is sometimes known as the *diallelus*, though it is more widely known under the name of the *problem of the criterion*. In addition, a more general form of the strategy is also sometimes known as *Agrippa's trilemma*. The strategy presents a fundamental challenge to the justification of beliefs on the basis of epistemic norms. The challenge arises by confronting the proponent of an epistemic norm with the threat of an infinite regress of justification or a circular defence of the norm in which the norm is employed to justify itself.

Despite the distinction between scepticism and relativism, the dependence of epistemic relativism upon a sceptical form of argument has implications for how the threat of relativism is to be met. Philosophers often respond to the threat by appeal to universal epistemic norms or by providing an account of the objective warrant of such norms. But the connection between epistemic relativism and

the problem of the criterion suggests that an alternative route lies open before us. For if there is a way to respond to the sceptical argument, then this response may likewise be employed to address the issue of relativism. At the end of this paper, I will suggest that the epistemological particularist response to the sceptic proposed by Roderick Chisholm offers significant promise as the basis of a response to epistemic relativism.

The outline of the paper is as follows. In Section 2, I present the Pyrrhonian problem of the criterion after noting further relativistic themes in Pyrrhonism. In Section 3, I illustrate the use of patterns of reasoning analogous to the problem of the criterion in the work of significant figures in recent history and philosophy of science. In Section 4, I offer general remarks by way of conclusion, and briefly indicate how appeal to Chisholm-style particularism may defuse the threat of epistemic relativism.

2. Pyrrhonian scepticism and the problem of the criterion

While there is disagreement among scholars on points of detail, it is customary to distinguish between two forms of scepticism found in Greek antiquity, Academic and Pyrrhonian scepticism. Academic scepticism, the form of scepticism that came to be associated with Plato's Academy in the centuries after his death, is typically understood to deny the possibility of knowledge. For this reason, Academic scepticism was sometimes described as "negative dogmatism", since it seemed to be committed to the view that nothing can be known. By contrast, the Pyrrhonian sceptics sought to avoid dogmatic commitment to any belief. They employed sceptical techniques to arrive at suspension of belief. Rather than outright denial of the possibility of knowledge, the Pyrrhonian withholds judgement across the board, even with respect to the possibility of knowledge.

My primary objective in this paper is to establish a connection between the Pyrrhonian problem of the criterion and contemporary epistemic relativism. However, relativistic themes occur elsewhere in Pyrrhonian scepticism. Before turning to the problem of the criterion, I will briefly comment upon these themes. My primary

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source in what follows is the *Outlines of Pyrrhonism* of Sextus Empiricus, which is one of the major sources of information regarding the Pyrrhonian tradition. Following standard practice, I employ the abbreviation *PH* to refer to *Outlines of Pyrrhonism*.

To produce suspension of belief, the Pyrrhonian sceptics employed a range of argumentative techniques known as *Modes*. Modes characteristically proceed by bringing appearances or thoughts into opposition with each other. The result is a situation of equipollence in which the opposed appearances or thoughts seem to be equally well-founded. For example, a tower may appear round from a distance, whereas it appears square from close up (*PH*, I, 32). In reflecting upon a Mode, one comes to realize that opposing judgements are equally appropriate responses with respect to the same state of affairs (*PH*, I, 10). Because it is not possible to determine which of the opposing judgements is correct, the realization gives rise to the suspension of belief. For the Pyrrhonians, the result of such suspension of belief is a state of tranquillity.

Due to the use made of opposing judgements, a number of relativistic themes emerge in the Pyrrhonian Modes. Several Modes emphasize differences in the nature of sense perception, e.g. between animals and humans (*PH*, I, 40), between individual humans (*PH*, I, 79), and between the senses themselves (*PH*, I, 92). In these cases, there is typically a conflict in perception or experience with respect to the same thing or state of affairs. The conflict may relate to sensations of such things as temperature, colour, touch, flavour, motion, etc. Apart from perceptual conflict, there is also a Mode which involves variation in accepted ethical rules of conduct between cultures. For example, behaviour that is considered to be acceptable in one society may be excluded by law in another (*PH*, I, 145). There is even a Mode of relativity, according to which objects are perceived in relation to an observer and surrounding circumstances. Because of this, judgement is to be suspended with respect to the real nature of objects (*PH*, I, 135–140). As these examples illustrate, Pyrrhonian sceptics sometimes drew upon considerations of a relativistic nature to support their sceptical stance.¹

To turn to the problem of the criterion, the problem first emerges in inchoate form in the context of perceptual conflict. How, for example, is a conflict between animal and human perception to be resolved? As humans, we cannot adjudicate the conflict on the basis of our own sensory experience. For we “are involved in the dispute and are, therefore, rather in need of a judge than competent to pass judgement ourselves” (*PH*, I, 59). At this stage in the discussion, Sextus does not express the point in terms of criteria. However, he does frame the issue in terms of criteria when he turns to conflict between human observers.

Individual human observers may differ in the perceptual experience which they undergo in relation to the same objects or states of affairs. When this occurs, the individual observers concerned are unable to serve as judge, since they are themselves “party to the disagreement” (*PH*, I, 113). Thus, Sextus claims, for the observer “to pass judgement on the impressions he must certainly judge them by a criterion” (*PH*, I, 115). Such an appeal to a criterion as the basis on which to judge between conflicting perceptions gives rise to the problem of the criterion.

For suppose that appeal is made to a criterion in order to resolve perceptual conflict between human observers. The question immediately arises of whether the criterion itself is justified. Sextus asks whether the criterion is to be accepted on the basis of a proof

provided in support of the criterion.² But on what basis is such a proof to be accepted?

... the proof always requires a criterion to confirm it, and the criterion also a proof to demonstrate its truth; and neither can a proof be sound without the previous existence of a true criterion nor can the criterion be true without the previous confirmation of the proof. So in this way both the criterion and the proof are involved in the circular process of reasoning, and thereby both are found to be untrustworthy; for since each of them is dependent on the credibility of the other, the one is lacking in credibility just as much as the other. (*PH*, I, 116–118)

In order for appeal to a criterion to resolve perceptual conflict, the criterion must itself be shown to be sound. But how, Sextus asks, is it to be shown that the proof of the criterion is sound? This, too, requires a criterion. To establish the soundness of the proof, a criterion must be employed. To establish the soundness of the criterion, a proof must be given. Thus, Sextus concludes, the attempt to justify the criterion must proceed in a circle because the criterion and the proof of the criterion depend on each other.

The problem arises in a somewhat different form in the context of dispute about criteria. Sextus reports that there is disagreement among philosophers regarding criteria. The Stoics claimed that a criterion of truth exists. Other philosophers denied that a criterion exists. The Pyrrhonians suspend judgement on the matter. To resolve the dispute, Sextus says, appeal must be made to a criterion:

... in order to decide the dispute which has arisen about the criterion, we must possess an accepted criterion by which we shall be able to judge the dispute; and in order to possess an accepted criterion, the dispute about the criterion must first be decided. And when the argument thus reduces itself to a form of circular reasoning the discovery of the criterion becomes impracticable, since we do not allow them to adopt a criterion by assumption, while if they offer to judge the criterion by a criterion we force them to a regress *ad infinitum*. And furthermore, since demonstration requires a demonstrated criterion, while the criterion requires an approved demonstration, they are forced into circular reasoning. (*PH*, II, 20–21)

As with the attempt to resolve perceptual conflict, the problem turns on the circularity that arises in attempting to justify a criterion. To resolve the dispute about the criterion, appeal must be made to a criterion which may resolve the dispute. But this is of no avail. The existence of a criterion is just what is at issue. No appeal may be made to a criterion if no criterion has been shown to exist. Thus, no criterion is available to resolve the dispute about criteria.

Apart from circular justification of the criterion, however, Sextus mentions two further problems which arise in attempting to justify a criterion. One possible way to avoid circular justification might be to adopt the criterion simply as an assumption. But if a criterion is adopted as an assumption, then no justification is provided for the criterion. So the criterion is unjustified. A second option is to appeal to a further criterion in support of the original one. In this way, the original criterion is justified by appeal to some other criterion. But this option leads to an infinite regress. For the further criterion requires justification. If appeal is made to yet another criterion, it will in turn require justification by another criterion, and so on *ad infinitum*.

¹ Two caveats are in order, however. First, it may be asked whether, strictly speaking, the considerations advanced in the Modes support relativism rather than mere variation in belief or practice. It is one thing to point to difference in belief, perception or practice. It is another to claim that such differences reflect equally legitimate responses to the same phenomena or behaviour. In addition, some of the discussion seems to involve relational properties rather than relativism, as such. For the latter point, see Baghramian on the Mode of relativity (2004, p. 43).

² Sextus tends to present the problem of the criterion in terms of proof. But this is not essential. The problem arises even if a weaker notion of justification or warrant is employed.

The problem is presented in a more general form in another passage in *Outlines of Pyrrhonism*. Here Sextus employs a line of argument that is closely analogous to the two we have just considered. Interestingly, no mention of criteria is made in this passage:

The Mode based upon regress *ad infinitum* is that whereby we assert that the thing adduced as a proof of the matter proposed needs a further proof, and this again another, and so on *ad infinitum*, so that the consequence is suspension, as we possess no starting-point for our argument . . . We have the Mode based on hypothesis when the Dogmatists, being forced to recede *ad infinitum*, take as their starting-point something which they do not establish by argument but claim to assume as granted simply and without demonstration. The Mode of circular reasoning is the form used when the proof itself which ought to establish the matter of inquiry requires confirmation derived from that matter; in this case, being unable to assume either in order to establish the other, we suspend judgement about both. (*PH*, I, 166–169)

On this occasion, Sextus does not cast the problem in terms of criteria. Instead, he presents the problem in a more general form than that encountered in the previous quotations. In particular, the attempt to justify a belief leads either to infinite regress, unjustified assumption or circularity. In this form, the problem is sometimes known as Agrippa's trilemma, after the later Pyrrhonian sceptic who developed this way of presenting the problem.

As is evident from the passages I have quoted, the problem of the criterion takes several different forms in *Outlines of Pyrrhonism*. For certain philosophical purposes it may be crucial to distinguish carefully between the different forms of the problem. However, for the present purpose of detailing a connection between a Pyrrhonian sceptical strategy and contemporary epistemic relativism, there is no need to insist on such niceties. Instead, it will prove fruitful to emphasize the common ground between the alternative presentations of the problem. In particular, I suggest that the alternative forms of the problem may be brought together in the following general formulation of the problem.

The problem of the criterion arises in the first instance as the question of how to recognize cases of knowledge (or justified belief). In order to recognize cases of knowledge, a criterion of knowledge is necessary. But in order to determine that any criterion that might be proposed is indeed a criterion of knowledge, there must be a way to recognize cases of knowledge independently of the criterion. For if we are unable to independently recognize cases of knowledge, we will be unable to determine that what the criterion identifies as knowledge are indeed cases of knowledge. But if we are unable to do one without the other, it appears we can do neither.

How are we to break into this tight little circle? One apparent option is simply to adopt a criterion of knowledge without providing any reason for doing so. But if we do this, then the criterion is adopted without justification, so is unjustified. Alternatively, one might appeal to some further criterion in support of the criterion rather than adopting it without justification. But if one appeals to some further criterion, then the way is open to an infinite regress, since the further criterion must surely be justified, and so on *ad infinitum*.

As we saw with the Agrippan version of the problem, this strategy may be generalized. It is not just a problem with the justification of a criterion, but of any belief (or proposition) whatsoever. How is a belief to be justified? For any reason that is proposed in support of a belief, it is possible to ask for further justification. In response to the request, one may either adopt the belief without justification, or appeal to a further belief, which will lead either to infinite regress or circularity.

With this overview of the problem of the criterion as background, I turn now to consideration of epistemic relativism in

the history and philosophy of science. As we shall see, there are significant parallels between recent treatments of relativism and Pyrrhonian arguments for scepticism.

3. Relativism and the problem of the criterion

In the previous section, we explored the ancient sceptical problem of the criterion. While scepticism and epistemic relativism pull in opposing directions, I wish to show that there is a connection between the sceptical problem of the criterion and recent treatments of epistemic relativism. In this section, I will document this connection in the work of key figures in the recent history and philosophy of science.

3.1. Critical rationalism: Popper and Bartley

In 'The Myth of the Framework', Popper presents a diagnosis of relativism. He suggests that relativism derives from the idea that rational discussion requires a shared framework of assumptions. Because rational discussion can only take place within a shared framework, it is not possible for a rational discussion to challenge the very framework on which the discussion is based (Popper, 1994, p. 55). A framework cannot itself be adopted on a rational basis. Rationality is relative to adopted framework.

Popper argues that the myth of the framework rests on a view of rationality, which, as it happens, he rejects. He characterizes the view as follows:

. . . all rational discussion must start from some *principles* or, as they are often called, *axioms*, which in their turn must be accepted dogmatically if we wish to avoid an infinite regress—a regress due to the alleged fact that when rationally discussing the validity of our principles or axioms we must again appeal to principles or axioms. (1994, p. 59)

On this view, to avoid the regress that arises in the attempt to justify a belief, basic principles must be adopted dogmatically. Principles adopted in this manner are unjustified. Relativism arises, according to Popper, because different principles may be adopted in this dogmatic manner. Given the role played by the justificatory regress in this view of rationality, it should be clear that it owes a great deal to the problem of the criterion.

The connection emerges explicitly in the work of Popper's student, W.W. Bartley. In *The Retreat to Commitment*, Bartley elaborated Popper's critical rationalism within the context of a discussion of religious commitment. Against certain defenders of irrational religious commitment, Bartley sought to show that it is possible to adopt a rationalist position in a rational manner. This required that the position of rationalism be understood in Popperian terms as critical rationalism. According to critical rationalism, rationality consists in an openness to criticism. The critical rationalist rejects the traditional epistemological view that rationally held beliefs are beliefs which are justified. Instead, rationally held beliefs are beliefs which have been subjected to severe criticism, and which have survived such criticism.

Popper took the rationalist position to be subject to an intrinsic limitation. In *The Open Society and its Enemies*, Popper argued that what he termed a "comprehensive rationalism" is impossible. It is not possible for the rationalist position to be comprehensive because it is not possible to adopt the position of rationalism itself on a rational basis. Popper's point was simply that, in order for rational argument to have an effect, one must have already decided to accept the results of rational argument. But this, Popper held, requires that an "irrational *faith in reason*" already be in place before one is prepared to adhere to the outcome of rational argument (Popper, 1966, p. 321).

By contrast with Popper, Bartley held that the rationalist position need not be subject to such a limitation. Seeking to improve upon Popper's account of rationality, Bartley argued that it is in fact possible to rationally adopt a rationalist position. For it is possible to hold the very position of critical rationalism itself open to criticism. But, given that it is possible to maintain the critical rationalist position in a rational manner, Bartley argued, a "comprehensively critical" (or "pancritical") rationalism is possible (Bartley, 1984, pp. 118–119). Thus, it is possible to be rational about one's rationalism.

For present purposes, the important point is the way in which Bartley characterizes the challenge of relativism. He discusses a position which he describes as "ultimate relativism". Ultimate relativism may arise because people are able to adopt 'conflicting "ultimate" standards' (1984, p. 73). They are entitled to do this because there is no ultimate justification for any belief:

No matter what belief is advanced, someone can always challenge it with: "How do you know?", "Give me a reason", or "Prove it!". When such challenges are accepted by citing further reasons which entail those under challenge, these may be questioned in turn. And so on forever. If the burden of proof or rational justification is *perpetually* shifted to a higher-order premise or reason, the contention originally questioned is never effectively defended. One may as well never have begun the defense: an infinite regress is created. (1984, p. 73)

To block the regress, Bartley notes that one might call a halt at standards or criteria which are considered to be ultimate. But such standards or criteria are not themselves able to be rationally adopted.

Obviously, one cannot, without arguing in a circle, justify the rationality of a standard of rationality by appealing to that standard. Yet, if certain beliefs—for example, the standard itself—are held to be immune from the demand for rational justification and from the question "How do you know?", they can be said to be held irrationally or dogmatically. And, so it is claimed, argument about the radically different beliefs held in this way is pointless. (1984, p. 73)

According to ultimate relativism, we are free to adopt whatever ultimate standard we choose because the adoption of such standards is not a decision that may be made on a rational basis. All such decisions are fundamentally unjustified. But this just means that it is not possible to criticize anyone for their choice of standards. Since the choice of ultimate standards is unjustified, no choice of standards is better than any other. Relativism ensues because all such choices are on an equal footing.

According to Bartley, ultimate relativism may be avoided by defending a comprehensive form of critical rationalism, on which one's most basic commitments need not be made on an irrational basis. What is crucial here, however, is not Bartley's response to ultimate relativism, but his analysis of its source. Ultimate relativism arises due to what Bartley terms the "problem of the limits of rationality" or "the dilemma of ultimate commitment" (1984, p. 72). This problem or dilemma is precisely the problem of the justificatory regress, which requires one to adopt one's most basic commitments on a non-rational basis (see the passages quoted in the previous paragraph).

Bartley himself explicitly notes that the problem of the limits of rationality derives from Sextus Empiricus (1984, xx, p. 221). He describes the response of the rationalist to the purported impossibility of a comprehensive rationalism as a *crise pyrhone* (1984, p. 96). He presents an argument for ultimate relativism which turns

on the choice between infinite regress, circular justification of standards or dogmatic acceptance of belief. Thus, for Bartley, relativism arises as a result of reflection upon the limits of rationality, which are brought into focus by an argument that, as we have seen, was originally developed by Pyrrhonian sceptics. In short, for Bartley, the sceptical problem of the criterion lies at the heart of relativism.

3.2. *The historical school: Kuhn and Feyerabend*

Perhaps no authors have done more to put relativism on the agenda of the history and philosophy of science than Thomas Kuhn and Paul Feyerabend. Their views about methodological variation in the history of science are but a short step from the epistemic relativist view that there may be a multitude of legitimate epistemic norms.

As it happens, I do not unequivocally support the epistemic relativist reading of the methodological views of Kuhn and Feyerabend. Epistemic relativist tendencies are apparent in *The Structure of Scientific Revolutions*. But, in my view, Kuhn sought primarily to defend a non-algorithmic conception of rationality on which scientific theory-choice is made in light of a number of potentially conflicting cognitive values. Similarly, Feyerabend's attack on a fixed scientific method is not primarily meant as a defence of a relativist view of method. Rather, Feyerabend is best read as arguing for the limited applicability of the rules of scientific method. It is not, however, my aim to argue for this interpretation of Kuhn and Feyerabend here, but to consider their views of method in light of the Pyrrhonian problem of the criterion.³

3.2.1. *T.S. Kuhn*

Kuhn's account of partial communication failure between incommensurable paradigms is one of Popper's chief targets in 'The Myth of the Framework' (Popper, 1994, p. 54). But, rather than ask whether Kuhnian incommensurability actually exemplifies the myth of the framework, as Popper suggests, I will focus on Kuhn's remarks about the circularity of paradigm debate. There is an intriguing parallel between these remarks and the problem of the criterion.

In a well-known passage in *The Structure of Scientific Revolutions*, Kuhn draws an analogy between scientific and political revolutions. Neither the choice between paradigm nor the choice between political institution may be made on the basis of procedures or standards internal to a particular paradigm or political institution.

Like the choice between competing political institutions, that between competing paradigms proves to be a choice between incompatible modes of community life. Because it has that character, the choice is not and cannot be determined merely by the evaluative procedures characteristic of normal science, for these depend in part upon a particular paradigm, and that paradigm is at issue. When paradigms enter, as they must, into a debate about paradigm choice, their role is necessarily circular. Each group uses its own paradigm to argue in that paradigm's defense. (1996, p. 94)

Thus, according to Kuhn, the choice between paradigms is unable to be made on the basis of the norms operative within normal science. Because those norms depend on paradigm, they are themselves in question in the choice between paradigms. Moreover, because proponents of competing paradigms appeal to their paradigm in the course of defending it, defence of the paradigms proceeds in a circular manner.

Despite the circular nature of the debate between paradigms, the debate may nonetheless be productive. A powerful case may

³ For my suggested reading of Kuhn and Feyerabend, see my (1997) and (2011). See also Nola & Sankey (2007).

be made on behalf of a paradigm by exhibiting “what scientific practice will be like” under that paradigm (1996, p. 94). But while such a case may be “persuasive”, it will fail to be “compelling”.

... the status of the circular argument is only that of persuasion. It cannot be made logically or even probabilistically compelling for those who refuse to step into the circle. The premises and values shared by the two parties to a debate over paradigms are not sufficiently extensive for that. As in political revolutions, so in paradigm choice—there is no standard higher than the assent of the relevant community. (1996, p. 94)

While it may be possible to make a persuasive case on behalf of a paradigm, it will not be possible to demonstrate the superiority of the paradigm to adherents of a rival paradigm. According to Kuhn, this is because there is insufficient common ground shared between competing paradigms. No argument provided on behalf of a paradigm may compel assent from adherents of an alternative paradigm because basic assumptions are not shared by competing paradigms.

Kuhn makes no mention of the problem of the criterion in his discussion of circular debate between paradigms. However, there are two points of significant overlap where a parallel may be drawn. The first relates to the circularity that arises in the defence of a paradigm. The second relates to the claim that there is no higher standard than the assent of a scientific community.

Starting with the first point, there is a close analogy between the circularity of paradigm debate and the role of circularity in the problem of the criterion. As Sextus points out, the attempt to justify a criterion proceeds in circular fashion if appeal is made to the criterion itself. The circle is most apparent where appeal must be made to a criterion in order to resolve dispute about whether a criterion exists in the first place. In similar vein, Kuhn argues that debate between paradigms is circular because defenders of alternative paradigms appeal to their own paradigm in defence of the paradigm. In neither the case of the criterion nor the case of the paradigm does the attempted justification succeed. For the justification is undermined by the circularity that arises in the course of the justification. Rather than justify the criterion or paradigm, such justification begs the question on behalf of that which was meant to be justified. Thus, in view of the circularity that arises, neither the criterion nor the paradigm is able to be provided with a satisfactory justification.

The second point of parallel relates to Kuhn's claim that in scientific revolution there is no higher standard than “the assent of the relevant community”. The situation here is closely analogous to that which arises in relation to the problem of the criterion. Apart from circularity, the sceptical demand for justification gives rise to an infinite regress. One way to respond to the regress of justification is to terminate the regress at a dogmatic halting-point. This may be done by simply adopting the criterion as an assumption. Something similar applies in the case of the adoption of a paradigm. For to say that there is no higher standard than the assent of the scientists who adopt a paradigm is to say that there is no further justification that may be provided. In effect, the scientists who adopt the paradigm without further argument do so as a matter of assumption. In the same way that the sceptical regress of justification terminates at a dogmatic halting-point, the attempt to justify a paradigm reaches an end-point with the assent of the scientists involved. Because the criterion is adopted by assumption, it fails to be justified. In the same way, the adoption of a paradigm is ultimately unjustified.

3.2.2. P.K. Feyerabend

Unlike Kuhn, Feyerabend does explicitly address the issue of scepticism. In *Farewell to Reason*, Feyerabend considers Pyrrhonian scepticism in the context of a discussion of epistemic relativism. In

fact, he draws on the sceptical idea of opposing judgements in order to express the relativist claim that:

For every statement, theory, point of view believed (to be true) with good reasons *there exist* arguments showing a conflicting alternative to be at least as good, or even better. (1987, p. 76)

As Feyerabend here characterizes the position, epistemic relativism is the view that equally good arguments exist for and against any position. This does, however, seem to involve a slight exaggeration of the Pyrrhonian position. As noted by J.R. Maia Neto, the Pyrrhonian sceptic refrains from outright commitment to the existence of equally strong arguments for or against a position (1991, p. 553). Thus, Feyerabend's formulation introduces an element of dogmatism that the Pyrrhonian eschews. However, as we shall note below, Feyerabend seems to reject the Pyrrhonian stance as inconsistent.

Feyerabend is, of course, well known for his attack on the idea of a universal or invariant scientific method. His usual strategy is to consider a proposed rule of scientific method, and to argue that there are historical circumstances in which the rule was violated (e.g. 1975, chap. 1). But Feyerabend's point is not simply descriptive. He seeks to establish that violation of the rule was necessary for progress to occur. Given this, there are circumstances in which the rule should be broken. Thus, Feyerabend's point carries normative force as well as describing actual scientific practice.

In arguing that rules of method may be violated legitimately, Feyerabend's strategy differs from the strategy employed by the Pyrrhonian sceptic against criteria. Rather than argue by means of regress or circularity that criteria are unjustified, Feyerabend seeks to establish the defeasible character of rules of method. He does so by arguing that there are circumstances in which it is justifiable to violate a rule of method.

It has, however, been suggested that Feyerabend's treatment of method does draw upon the problem of the criterion. The suggestion is due to Matteo Motterlini, the editor of the Lakatos–Feyerabend correspondence, published under the title *For and Against Method* (1999). Motterlini illustrates the problem of the criterion with the example of Luther's appeal to a rule of faith. In addition, he quotes from Sextus's discussion of dispute about criteria which we considered above (*PH*, II, 20–21). He then writes as follows:

Many of Feyerabend's criticisms of Lakatos's views in this volume [i.e. *For and Against Method*] are clearly a revival of this classical Pyrrhonian challenge. The problem of justifying the standards of theory appraisal does not arise as long as there is an unchallenged criterion, but once scientific revolutions are brought into the picture, epistemological scepticism may be back again ... (1999, p. 395)

In this passage, Motterlini appears to identify Feyerabend's criticism of Lakatos with the problem of the criterion. The problem arises in this context because of the way in which standards of theory appraisal are brought into question in scientific revolution.

Feyerabend and Lakatos do discuss scepticism in their correspondence. At one point, Lakatos suggests that epistemological anarchism can only be consistently understood as a form of scepticism (1999, p. 323). In his reply, Feyerabend distinguishes his position from scepticism and argues that sceptical suspension of belief fails to go far enough:

... the classical sceptic is inconsistent, going on as he does *as if he had* some reasons for doing so, while as a matter of fact he can now do anything he likes, including defend the status quo. (1999, p. 324)

As hinted above, this may explain why Feyerabend exaggerates the force of the Pyrrhonian position in his formulation of epistemic

relativism. He took Pyrrhonian suspension of judgement to be inconsistent, and so strengthened the position in his formulation of it.

Of more immediate interest, however, is an exchange from early 1974 to which Motterlini calls attention. Feyerabend and Lakatos discuss changes of scientific standards that took place in the scientific revolution (1999, pp. 349, 355). Both Feyerabend and Lakatos agree that such change of standards did occur. But Feyerabend objects that Lakatos fails to provide a rational account of change of standards:

... you explained how research programmes change rationally *given some standards*. Nowhere do I see an explanation as to how standards change rationally (*given what?*). (1999, p. 358)

Feyerabend's own solution to the problem of justification involves what he describes as the "cosmological criticism of methodological rules" (1999, p. 358). This, as he explains elsewhere, involves placing the rules within the context of beliefs about the nature of the world in which the rules are to be applied (cf. Feyerabend, 1978, p. 34).

As previously noted, Feyerabend's argument for the defeasible character of methodological rules does not proceed by way of circularity or regress. However, in the above comment on Lakatos, Feyerabend's objection closely resembles the point made by Sextus with respect to dispute about criteria. According to Lakatos, it is rational for scientists to adopt a progressive over a degenerating research programme. The rationality of such change of programme is explained on the basis of the standard of progressiveness. Thus, change of programme is justified by appeal to a standard of theory appraisal. But what if standards of theory appraisal are also subject to change? How is the choice between standards to be justified? The question that Feyerabend raises by asking this question gives rise immediately to a regress of justification of just the sort that is highlighted by Sextus. For if appeal is made to some higher order standard to justify the choice between alternative standards of theory appraisal, then the question must surely arise of how the higher order standard is in turn to be justified, and so on into an infinite regress.

3.3. *Science and values: Laudan vs Worrall*

One influential member of the historical school who explicitly opposes relativism is Larry Laudan. In numerous works, Laudan has attempted to diagnose and to undermine a variety of relativistic tendencies in the historical approach to the philosophy of science. Of most relevance to our current topic is an exchange between Laudan and John Worrall that followed publication of Laudan's *Science and Values* (1984).

In *Science and Values*, Laudan proposed a model of scientific rationality designed to resolve the problem of rational scientific theory-choice, which arises from reflection on historical cases of scientific theory-change. According to Laudan, the problem stems from the lack of a workable account of consensus-formation in science. Empiricist philosophers of science (e.g. logical empiricism, falsificationism) were able to explain consensus on the basis of shared methodological rules, which function as algorithms that determine theory-choice (1984, pp. 5–6). But, given the emphasis on shared algorithmic rules of theory-choice, scientific disagreement was hardly countenanced by empiricist models of scientific rationality. By contrast, post-empiricist philosophers of the historical school have considerable difficulty accounting for the formation of consensus in science, since their models contain elements (e.g. variation of methodological rules, incommensurability of theories, underdetermination of theory by data) which suggest that disagreement is likely to be widespread throughout the sciences (1984, pp. 16–17).

Laudan's primary aim in *Science and Values* is to promote reflection on the role of epistemic values in the resolution of scientific dispute. At bottom, Laudan argues, the problem of rational theory-choice stems from the adoption by empiricists and post-empiricists alike of a common model of epistemic justification. On this model, which Laudan calls the *hierarchical model of justification*, the methodological rules of science are justified by appeal to the shared epistemic aims of science (1984, pp. 23–26), which are not themselves open to rational adjudication (1984, pp. 47–49). The problem arises from the fact, highlighted by the historical philosophy of science, that, not only do methodological rules undergo change, but the epistemic aims of science are themselves subject to variation. For if appeal may not be made to shared epistemic aims, scientists are unable to resolve disagreement at the level of the methodological rules of science. Nor, indeed, may they resolve disputes of a factual nature which may be associated with methodological dispute, if no agreement exists at the level of the aims of science.

In an attempt to address the problem that arises for the hierarchical model due to variation of aims, Laudan proposes an alternative model of scientific rationality, which he refers to as the *reticulated model of rationality* (1984, pp. 62–66). According to this model, epistemic aims, methodological rules and factual beliefs about the world form an interconnected network. Within such a network, justification does not flow simply in downward direction from the aims of science to the rules of method and factual claims lower in the hierarchy. On the reticulated model, the epistemic aims of science are themselves open to rational evaluation. The justification of aims turns on methodological considerations, as well as empirical and theoretical constraints on the appropriateness of aims. In this way, Laudan seeks to resolve the problem of rational theory-choice by bringing epistemic aims within the scope of rational justification.

In a review of *Science and Values*, John Worrall subjects Laudan's reticulated model to searching critique. After challenging Laudan's treatment of the hierarchical model, Worrall objects that the reticulated model proposed by Laudan "collapses into relativism" (1988, p. 275). It does so because it allows variation to take place in the methodological rules employed in science. As Worrall claims:

If no principles of evaluation stay fixed, then there is no 'objective viewpoint' from which we can show that progress has occurred and we can say only that progress has occurred *relative to the standards that we happen to accept now*. However this may be dressed up, it is relativism. Without fixed standards, no amount of "mutual adjustment . . . among all three levels of scientific commitment" can avoid it. (Worrall, 1988, p. 274).

In Worrall's view, once it is allowed that methodological rules undergo variation relativism is unavoidable. Without fixed rules, a judgement of scientific progress may only be made on the basis of local standards. But such judgement does not have universal validity. Without a neutral standpoint provided by fixed standards, the relativistic view that progress may only be judged on the basis of variable local standards is the inevitable result.

Worrall's claim that fixed standards are required to avoid relativism specifically raises the question of the source of relativism. In an exchange which appeared the year after Worrall's review, Laudan and Worrall explore this question in further detail. In the course of this exchange, the relationship between relativism and scepticism emerges explicitly as an issue.

In his response to Worrall, Laudan claims that Worrall "has wholly misconstrued the threat of relativism" (1989, p. 369). The epistemic relativist's "central claim" is not that "standards change but that—whether changing or unchanging—those standards have

no independent, non-question begging rationale or foundation” (1989, p. 369). To think that relativism arises from variation of standards is to misunderstand the issue:

... the challenge of relativism is exactly the same whether the methods of science are one or many, constant or evolving. If we can answer that challenge, *i.e.*, if we can show why certain methods are better than others, then we can offer a justification for the current methods of science, even if they are different from the methods of science of three centuries ago. If, on the other hand, we cannot resolve the relativist’s meta-philosophical conundrum, then it will be wholly beside the point whether methods are constant or changing. Worrall’s insistence that an acknowledgment that the methods of science might change is what greases the slope to relativism is a symptom of a deeper failure to realize that we are facing a significant meta-epistemological problem—one that is equally acute whether the methods of science have changed or have remained always the same. (1989, p. 370)

Laudan’s point is that the challenge of relativism is not simply a matter of the variation of methodological standards. It is a question of the justification of standards. The relativist asks how standards are justified. To be told that standards do not change fails to address that question. For, even if standards do not change, the question remains of how such unchanging standards are justified.

The effect of Laudan’s reply is to shift focus from the invariance of standards to their justification. But the question of justification opens the way to problems of a sceptical nature. The sceptical dimension emerges in Worrall’s response:

... relativism as *Laudan* defines it, is inevitable. There is a potential infinite regress of justification and this means that *ultimately* the only way to avoid sceptical relativism is to dig in one’s heels. How else can the sceptical relativist be prevented from forcing us down the regress by always asking for a justification of any justification he is given? (1989, p. 381)

In Worrall’s view, consideration of how standards may be justified does little to address the threat of relativism. For the demand for justification leads inevitably to a justificatory regress, as each proposed justification must in turn be justified. Interestingly, Worrall refers to the position that results as “sceptical relativism”. I will return to this point below.

Sometimes disagreement over factual matters may be resolved by appeal to shared standards of evidence. Such disagreement may be perpetuated, however, by an interlocutor who resists appeal to shared standards. In such a case, Worrall argues, the potential justificatory regress must simply be brought to a halt:

In the end you must stop the slide down the regress by exerting some force of your own. Somewhere along the line you just have to say that here we reach axioms and if the sceptic seriously questions them then you can help him no further and must simply (and ‘dogmatically’) brand him ‘irrational’. (1989, p. 382)

Worrall notes that his analysis accords with Popper’s view about the irrational basis of rationalism which we considered earlier (3.1). This may, Worrall says, be an “uncomfortable position” for a philosopher, but “logic forces it” upon us (1989, p. 382). There are logical limits on justification which require that it come to an end at some point.

Worrall takes dogmatic adoption of basic axioms to be the only appropriate response to the regress of justifications. It is either this or accept relativism:

... if the sceptic really presses, then the only option is, I believe, the honest admission that *ultimately* we must stop arguing and

‘dogmatically’ assert certain basic principles of rationality. If Laudan is right that this honest admission entails relativism, then relativism wins. (1989, p. 383)

In other words, relativism is the inevitable outcome if one understands the challenge of relativism, as Laudan does, in terms of the demand for justification. But Worrall simply denies that this is the correct way to understand relativism. Instead, he continues to maintain that the genuine problem posed by relativism derives from the claim that there are no fixed standards of method.

Issues related to the problem of the criterion come to the fore in this exchange between Laudan and Worrall. This may be seen in the way in which Laudan frames discussion of relativism. As we noted, Laudan takes the relativist to claim that standards “have no independent, non-question begging rationale or foundation” (1989, p. 369). No doubt, the consistent Pyrrhonian sceptic would refrain from the dogmatic assertion that standards fail to have a rationale or foundation. However, the challenge to standards that arises from engagement with the Pyrrhonian regress raises clear doubts about the justification of such standards. Indeed, from the point of view of the non-sceptic, the challenge posed by the regress might be thought to be precisely to the effect that there is “no independent, non-question begging rationale or foundation” for any standards.

More importantly, Worrall locates Laudan’s handling of relativism in a plainly sceptical setting. For Worrall, the insistence on justification which lies at the heart of Laudan’s version of relativism gives rise to a regress of justification of just the kind that emerges from the Pyrrhonian problem of the criterion. Moreover, Worrall takes dogmatic adoption of basic axioms as the only acceptable response to the sceptical regress. Though he does not consider circularity as an option, he clearly understands dogmatism as the only plausible alternative to embarking upon the impossible task of an infinite regress of justificatory reasons. Finally, Worrall even employs the expression “sceptical relativism” to characterize the form of relativism that arises from the Laudan-style relativist’s demand for justification. In so doing, Worrall evidently recognizes the sceptical provenance of the form of relativism that emerges in the exchange with Laudan. Though he does not explain his choice of words, the clear force of the expression is to acknowledge that the form of relativism at issue is one that is based on the sceptical regress of justification.

3.4. *The strong programme: Barnes and Bloor*

I turn now to the two main advocates of the strong programme in the sociology of science, Barry Barnes and David Bloor. Despite the fact that the strong programme is well-known for its explicit endorsement of relativism, it is not entirely clear whether the form of relativism advocated by Barnes and Bloor constitutes a form of epistemic relativism in the sense that is relevant here. For this reason, I will deal with this final case in rather less detail than the previous cases.

One of the central tenets of the strong programme is the so-called symmetry or equivalence postulate. According to the symmetry postulate, all beliefs are to be explained in the same way, whether they are true or false, justified or unjustified. The idea that the same kind of causal factors underlie the acceptance of beliefs, regardless of truth-value or justificatory status, is a crucial part of the relativist position that Barnes and Bloor adopt. As they at one stage express the point,

... all beliefs are on a par with one another with respect to the causes of their credibility ... the incidence of all beliefs without exception calls for empirical investigation and must be accounted for by finding the specific, local causes of this

credibility. This means that regardless of whether the sociologist evaluates a belief as true or rational, or as false and irrational, he must search for the causes of its credibility. (1982, p. 23)

Thus, for Barnes and Bloor, the key claim of the relativist is not that rational acceptance varies with respect to the epistemic norms employed in a given culture or other setting. Instead, the variety of relativism they favour is characterized by treating all beliefs in the same way for explanatory purposes, regardless of truth-value or justification. While such an egalitarian approach to the explanation of belief is relativistic in spirit, it is not evidently relativistic in the sense at issue here.

Nevertheless, Barnes and Bloor do explicitly address a topic of direct relevance to the themes of the present paper when they consider the question whether the rules of deductive logic constitute universal norms of reason. It is not possible, Barnes and Bloor argue, for deductive inference to be justified in “an absolute and context-free sense” (1982, p. 40). The reason is that the attempt to justify a rule of logic invites a regress of justification, which is ultimately broken by circular appeal to deduction itself. Justifications of deduction, they say, “are circular because they appeal to the very principles of inference that are in question” (1982, p. 41).

Thus, Barnes and Bloor point to the circularity of deductive justification of deduction as part of their defence of relativism. They raise the issue in the course of criticizing the idea that rules of deductive inference constitute “universals of reason” (1982, p. 40). So, while it remains open to question whether the strong programme is a form of epistemic relativism in the sense at issue here, we do find a now familiar pattern of argument in their approach to relativism. In particular, Barnes and Bloor argue that the attempt to justify the rules of logic results in regress or circularity. In this way, they employ the Pyrrhonian strategy in defence of the relativist position they defend.

4. Conclusion

In this paper, I have explored the connection between an ancient sceptical argumentative strategy and treatments of epistemic relativism in recent history and philosophy of science. In this final section, I will offer some general remarks by way of conclusion. I will also briefly situate the issue within the context of the approach to epistemic relativism that I favour, and for which I have argued elsewhere.

I have sought to show that some significant treatments of epistemic relativism in the history and philosophy of science draw on the problem of the criterion in the formulation of epistemic relativism. It is important not to overstate the claim that I seek to establish. The claim is not that all forms of epistemic relativism depend upon the problem of the criterion. No doubt, there are other arguments that may be presented on behalf of epistemic relativism. Rather, my claim is that the problem of the criterion plays an important role in some significant discussions of relativism in recent history and philosophy of science. I strongly suspect that the problem of the criterion plays a crucial role in many of the most important arguments for epistemic relativism. But I have not sought to establish this more far-reaching claim in this paper.

It might be objected that, with the exception of Barnes and Bloor, and possibly Feyerabend, the authors considered in this paper do not regard themselves as relativists. But self-identification as a relativist is not always a good guide to relativism. What is important is the implication of a philosopher's position, not whether the philosopher characterizes themselves or their position as relativist. The views of some philosophers have relativistic consequences, even though they deny the charge of relativism. Relativistic themes pervade *The Structure of Scientific Revolutions*, even though Kuhn was subsequently at pains to distance himself from relativism. Even

Popper, for all his pronounced anti-relativism, maintained views about the conventionality of scientific methods which contain the seeds of a relativistic conception of methodology.

If, as I have sought to show, some key treatments of relativism draw upon the problem of the criterion, there is an important moral to be drawn about how relativism is to be handled. Even though the sceptic and the relativist adopt opposing views of knowledge, it is possible to approach relativism on the basis of a response to scepticism. Hence, if there is a satisfactory non-sceptical response to the problem of the criterion, then such a response is of clear relevance to a form of relativism based on the problem of the criterion.

I wish, in particular, to suggest that the solution to the problem of the criterion proposed by Roderick Chisholm may be put to use in response to the challenge of epistemic relativism. In ‘The Problem of the Criterion’ (1973), Chisholm presented a particularist approach to the sceptical problem raised by the problem of the criterion. According to the particularist, the epistemological project should commence with concrete instances of knowledge, rather than seek criteria for the identification of knowledge. The latter approach, which Chisholm calls methodism, runs straight into the problem of the criterion because it is always possible to demand justification for any epistemic criterion that is proposed. Instead, Chisholm argues, one should start with specific instances of knowledge. With specific cases of knowledge to hand, it is then possible to propose criteria which conform to the instances of knowledge with which one begins. If one proceeds in this manner, the sceptical regress is avoided, since items of knowledge are identified prior to the proposal of criteria of knowledge. Chisholm acknowledges that the particularist approach begs the question against scepticism. But, as he notes, scepticism is “only one of the three possibilities and in itself has no more to recommend it than the others do” (1973, p. 38).

In an earlier paper, I have sought to show how Chisholm's approach to the problem of the criterion may be put to good use against the epistemic relativist. More specifically, if Chisholm's particularism is combined with a reliabilist conception of epistemic warrant, then appeal may be made to particular instances of factual knowledge as part of the empirical appraisal of alternative epistemic norms. In this way, it is possible to show empirically that an epistemic norm has greater reliability than another. But if one norm may be shown to be more reliable than another, there is no need to grant the relativist claim that all norms are epistemically on the same footing. Thus, particularism combined with reliabilism enables the challenge of epistemic relativism to be defeated.

However, that is another story. I have developed the Chisholm-style response to epistemic relativism elsewhere (Sankey, 2010). The purpose of the present paper is to bring the target of my anti-relativist approach into sharper focus. As I hope to have shown here, the problem of the criterion plays a significant role in contemporary thinking about relativism. Given this, it is entirely appropriate to deploy the particularist response to scepticism as part of the response to epistemic relativism.

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