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Relativism & Our Warrant for Scientific Theories

§I

A belief is justified if and only if it is communally believed to be justified. Call this the *community thesis*. Communities can accept something as knowledge and yet be wrong, so surely a community can accept something as justified and equally be wrong? But if this is the case a belief's being justified cannot be equated with the community taking it to be justified. In short, why is the community thesis even plausible?

One respect in which the community thesis, or something like it, seems right is that it articulates a highly plausible account of our individual justification for belief in scientific theory. This plausibility follows from two considerations. First, scientific theory is not justified in the same way as perceptual belief, nor in the same way as elementary mathematical belief. Rather, if a scientific theory is to be justified then it must be supported by a body of empirical evidence and argument. Second, since most present scientific theory is the product of extensive collaboration, rarely can one individual articulate the full body of evidence and argument that supports a present scientific theory. This is acutely the case where the individual concerned is a non-scientist. Yet we allow that a layman's belief in scientific theory can be justified. A plausible suggestion as to how this is so, is expressed by the community thesis: the proposition that the layman believes is accepted as justified in the community of which the layman is a member.[1]

On a communitarian view of epistemology, the community thesis is more than just part of a plausible account of our justification for scientific belief. It is an expression of the key communitarian idea that possessing knowledge and being justified are *social statuses*.[2] On this view, to be justified in belief, one's belief must be supported by a communally

endorsed justification; that is by a justification that could persuade another in belief, and which could thereby generate a communal subject of belief. One possesses knowledge when one is justified in true belief. Thus, communitarianism in epistemology endorses the community thesis *and* gives it a particular interpretation, namely that this thesis encapsulates *all* that there is to state about justification. There are no facts about justification that transcend a community's judgement thereof. Communitarianism thus expresses what might be called *epistemological anti-realism* (hereafter simply 'anti-realism'). The basic idea of anti-realism is that justification does not exist independently of us as a community. This idea might be clarified as follows. Suppose that

> (1) A belief is justified if and only if it is formed in an epistemically appropriate way

Exactly what 'an epistemically appropriate way' is will be the subject of debate; for instance, according to pure externalism a way of forming belief could be epistemically appropriate — it could yield justified belief — even if the believer had no beliefs about this way of forming belief. Internalism would deny this. However, this debate can be side-stepped since anti-realism starts with the higher order epistemological principle:

> (2) A way of forming belief is epistemically appropriate if and only if a community believes that it yields justified belief.

So, for instance, if the community judges that the agnostic but reliable clairvoyant is not justified in belief, then a way of forming belief absent a further belief about belief formation could not be epistemically appropriate.[3] Nonetheless, the epistemological realist will feel the temptation to raise the further question of whether the community belief is justified. That is, one may feel tempted to add,

> (3) A community belief is justified if and only if …

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Where it is an open question what fills in the dots. Anti-realism, can then be defined as the claim that *any* way of filling in the dots in (3) *does no more than simply express our belief about justification*. That is, there is no genuine further question as to whether *in fact* a way of forming belief is epistemically appropriate over and above whether the community believes that it is. Thus principles (1) and (2) exhaust all that there is to say about justification and this claim is just the community thesis: ultimately a belief is justified when the community believes that it is.

The challenge for realism is to accept the community thesis — since it articulates a plausible view of our individual justification for scientific belief — but to interpret it in such a way that the thesis is not simply an expression of anti-realism. This problem is compounded by anti-realism's relation to epistemological relativism, (hereafter simply 'relativism'). Anti-realism entails relativism when conjoined with the lemma that communities can differ in what they accept as justified. However, the fact of actual or possible community diversity, in this regard, can also be used in its own right to generate an argument for relativism and thereby generate an argument for anti-realism. It is used in this way by 'the strong programme' in the sociology of scientific knowledge.[4]

The strong programme starts from a methodological presumption that is analogous to the community thesis. 'Knowledge' should be conceived as whatever is accepted as such because the investigative aim is to uncover the causes of belief and this aim is non-evaluative: *all* beliefs should be taken on a par.[5] This methodological starting point yields a descriptive investigation that seems entirely compatible with traditional epistemology, but the strong programme is nonetheless avowedly *anti*-epistemological. The reason is that a naturalistic investigation of that class of beliefs which we take to be justified might reveal the causes of these beliefs but it could not reveal any justification-conferring properties given that it is always possible for communities to differ in what they take

these properties to be. Since any claim about which properties are in fact justification-conferring thereby stands as an espousal of mere opinion in the face of this diversity of views. The move from methodological relativism — all beliefs should be investigated equally — to a full epistemological relativism is then completed by noting that any purportedly factual claim can but express opinion.

Thus any defence of realism faces at least two challenges. First, providing a realist interpretation of the community thesis.[6] That is, an interpretation that does not straightforwardly entail relativism when conjoined with the fact of community diversity. Second, providing some response to the argument for relativism from this fact of community diversity. However, I hope to show how the fact of cognitive diversity puts pressure on the communitarian argument for the community thesis and to thereby show how a realist might meet both these challenges. I shall consider each in the next two sections respectively.

§II

The community thesis is an instance of the more general communitarian claim that "normative phenomena can only exist within communities".[7] This claim, Kusch argues, is supported by Wittgenstein's consideration of rule following: in short, normative phenomena can only exist within communities because the notion of something being the right way to do things requires the distinction between something seeming right and its being right, but this distinction is only possible with the perspective provided by the community.[8]

Turning to the relevant normative phenomenon — epistemic justification — suppose that epistemically appropriate ways of forming belief could be specified in terms of epistemic rules. On this supposition a justified belief would be a belief formed by

correctly following those rules that specified an epistemically appropriate way of forming belief. Applied to this case, the Wittgensteinian thought is that one could be justified only if one could distinguish occasions when the epistemic rules had been correctly followed from occasions when they merely seem to have been correctly followed. More precisely, three conditions need to hold: (a) it must be possible to judge that a rule has been properly followed; (b) it must be possible for this judgement to be true — there must be something that counts as following a rule; and (c) it must be possible for this judgement to be false — there must be occasions when (a) and (b) diverge. Communitarians then argue that if individuals are *considered in isolation*, condition (c) can never be satisfied because on their own an individual cannot discriminate following a rule from merely seeming to follow a rule. That is,

> Only the views of others — views as to how the rule needs to be followed in a given case — can provide a standard by which the individual's aiming for correctness can succeed or fail.[9]

The only standard against which success and failure could be measured is the community judgement; the judgement that in this case, the relevant epistemic rule has been properly followed. So only through a community's acceptance could an individual be said to correctly follow an epistemic rule, that is form a justified belief.

Isolated the individual cannot judge that he is in error, but as a member of a community, others can judge that the individual is in error. However, is the community judgement that an epistemic rule has been correctly followed sufficient for just this? In particular, is the community's judgement sufficient given that following the rule is meant to yield justified belief rather than simply belief judged by the community to be justified? Kusch claims that it is so since "what seems right to almost everyone — that is, the collective 'seems right' — is the most we can get in terms of an 'is right'."[10] However, pressure is put on this claim by the fact of community diversity. This diversity allows for the possibility of taking a third person perspective on another community's judgements; this

possibility is realised is cases of *de re* belief attribution. Consider the community constituted by agreement on some previous scientific theory. We feel entitled to judge, say, that this scientific theory concerned atoms but as a theory about atoms it is unjustified and that so too was the previous community's belief in this theory. Thus, there seems to be a certain parallel between the individual and the community such that if the individual considered in isolation cannot satisfy (c) above — cannot discriminate properly following a rule from merely appearing to do so — then nor can the community considered in isolation satisfy (c). An isolated community cannot discriminate properly following a rule from *merely communally appearing to do so*. The fact of community diversity (actual or possible) then makes it clear that merely communally appearing to get things right is far from actually getting things right. McDowell makes an equivalent point:

> If we regard an individual as aiming to speak a communal language, we take account of the possibility that he may go out of step with his fellows; thus we make room for an application of the notion of error, and so of right and wrong. But it is only going out of step with one's fellows that we make room for … So the notion of right and wrong that we have made room for is at best a thin surrogate for what would be required by the intuitive notion of objectivity. [11]

In short, if following a rule genuinely requires the possibility of satisfying conditions (a) to (c), then it requires the judgement that a rule is followed to be categorically different from the fact of the rule being followed and this difference applies at both the individual and the community levels.

Kusch's response to this argument is to claim that it rests on treating the community as if it were an individual: "the group is conceptualised as an individual writ large".[12] The problem is that this response is not available to the communitarian, or indeed any theory that makes justification solely depend on community acceptance. For suppose that for some community C_0 and some scientific proposition p there are two divergent sub-

groups C_1 and C_2 where C_1 holds that p is true and C_2 holds that p is false.[13] Now, communitarians would allow that an individual *could* be justified in believing that p. But if the individual were justified, it should have to be by virtue of his membership in community C_1 rather than C_0 for in the latter there is no consensus as to whether or not p. But this is to claim that if we want to see membership in a community as determining justification, then the community must be defined in terms of agreement. Kusch is quite explicit about this stating that it is "b's agreement with a as to whether p [that] constitutes them as a community of knowledge".[14] However, if communities are defined in this manner — such that one happily speak about community belief — then the analogy between communities and individuals, at least in this instance, is perfectly acceptable.

There is a parallel between the individual and the community with respect to distinguishing 'is right' from 'seems right'. There is a further parallel. When the justification of an individual's belief is considered, the community provides the possibility of a third person perspective, but the notion of the community's perspective is not synonymous with the third person perspective because given a possible diversity of communities, it is equally possible to take the third person perspective on a community's judgements. The fact that one can distinguish first and third person perspectives when considering an individual's justification, allows the distinction between a belief's being justi*fied* and its being justi*fiable*. Thus, one could say that a belief is justified for an individual, given what else he believes, but is nonetheless unjustifiable given that what else he believes is false. Equally, one could say that a belief is unjustified for an individual, given his reasons for believing, but is nonetheless justifiable in terms of what else he does or should believe. In both cases, the judgement of justifiability involves a perception of justifying reasons that is either not made or not available to the individual in question. But given that it is possible to take a third person perspective on

community judgment, it is equally possible to separate the question of whether a community belief is justified from whether it is justifiable. Having made this separation, the statement that the given community judges a belief to be justified still allows for the *further* question of whether this belief is nonetheless justifiable.[15] And in allowing for this further question, we make room for a tripartite distinction between an individual's justification, a community's justification and justification simplicitir. To identify a notion of justification independent of individual or community judgement is to be an epistemological realist.

The possibility of this tripartite distinction means that the community thesis can be interpreted in realist terms. On this interpretation, the thesis can be part of an explanation of how an individual's belief in present science can be justified, how belief in previous scientific theorems was previously justified, and it can be part of an explanation of how the apparently irrational beliefs of exotic communities are nonetheless justified. However, given the tripartite distinction, none of these explanations involve a commitment to the claim that there are no further facts about the justification of these beliefs.

§III

The possibility of community diversity, that there could be alternative ways of looking at things, makes possible a third person perspective on community judgement the idea of which is essential to a realist interpretation of the community thesis. This is to respond to the first challenge facing realism. However, the acknowledgement of possible community diversity is also the start of an essentially sceptical argument for relativism. This argument can be found in both Barnes and Bloor, and Stich.[16] It is the second challenge to realism I want to consider and it could be reconstructed as follows.

Suppose one considers the question of what justifies some belief p and on consideration one decides that it is some fact q that makes it epistemically appropriate to believe p. It is then legitimate, indeed it is epistemologically ordinary, to follow up this account with the question of *why q* makes it epistemically appropriate to believe that p. Since any answer to this why-question will clearly be a statement of belief, the possibility of community diversity can be used to sceptical effect to suggest, moreover, that it can only be *at best* a statement of community belief. That is, if other possible answers are available as to what would make it epistemically appropriate to believe that p, then our considered response as to why q does so must eliminate these other candidate accounts, short of appearing as merely the articulation of our prejudices. However, the relativist contests, it is questionable whether we could ever be in a position to accomplish this because community diversity *can cut quite deep*: it is possible for there to be other accounts of what makes it epistemically appropriate to form a belief which question our basic axes of evaluation. For example, we arguably hold that an epistemically appropriate way of forming belief — *viz.* a way of forming justified belief — is a way of forming belief that makes it rational to believe what is probably true.[17] However, it is possible that another community might hold that an epistemically appropriate way of forming belief is one which ensures that we believe what is most conducive to a happy life, or most pleasing to the gods. But then the task of defending our contention that we have the correct account of justification becomes the task of defending our particular understanding of how belief is evaluated. Such a defence is arguably impossible because whilst we are wont to say 'but this is just what "justification" means', this invites the rejoinder 'you mean: this is just what *we* mean by "justification"'! In this way, we reach the base level principle: a way of forming belief is epistemically appropriate simply because the community believes it is so.

This argument for relativism, and equally anti-realism, is essentially sceptical because the role community diversity plays is analogous to the role played by sceptical possibilities. Alternative community evaluations, like sceptical possibilities, imply different and competing accounts of the justification of our beliefs. Given the possibility of such divergent accounts, the demand is instituted that we show that our account of justification is right, where this is the demand that we show our account to be right, rather than merely believed right, in the face of these alternatives. However, rather than conclude with the sceptic that our beliefs, or a certain class of them, are unjustified, the relativist concludes that justification should be reconstrued: our belief in rightness is enough since all facts about justification are 'local', or relative to a community. "There are no context-free or super-cultural norms of rationality", claim Barnes and Bloor.[18]

Sceptical arguments are powerful but they rarely carry any conviction. This is because, for any sceptical possibility, we believe ourselves to possess knowledge that entails the falsity of scepticism. For instance, the knowledge provided by our present perceptions entails the falsity of the possibility that we are dreaming or merely a brain-in-a-vat. And to assert that our present perceptions could be dreams or vat illusions simply begs the question against the knowledge these perceptions provide. Nonetheless, scepticism of the external world can still seem pressing because the knowledge provided by present perceptions cannot ground a non-question-begging response to this sceptical argument. Something similar, I think, can be said about this relativist sceptical argument.

The starting supposition is that communities could be fundamentally at odds in their accounts of when it is epistemically appropriate to form belief such that 'justified belief' could mark sensitivity to one feature of the world for one community and sensitivity to another feature of the world for another community. That is, different communities could define justification in terms of sensitivity to *what is X*, where 'X' is some world-

dependent property. So it is claimed that another community could hold that an epistemically appropriate way of forming belief is one that ensures we believe what is most conducive to our happiness, or pleasing to the gods. Though acceptable, this supposition is non-threatening since these other accounts simply do not seem to be accounts of *epistemic* justification, which should ensure that we believe, at least, what is probably true. Rather, if another account of 'justification' requires that belief be sensitive to, say, what is conducive to one's happiness, then awareness that this criterion is satisfied for the belief that *p* makes it rational to believe that *p* is conducive to one's happiness, but this is not to believe that *p* it is to believe that *p is conducive to one's happiness*. In general, where justification marks sensitivity to *what is X*, awareness that the criteria of justification are satisfied for some belief that *p*, makes it rational to believe that *p is X*. But, on any account, the justification of the belief that *p* should be simply the justification of *this belief*, it is not the justification of the belief that *p is X*; unless, that is, believing that *p* and believing that *p is X* are equivalent. This is only the case for the truth predicate. So to be justified in believing that *p* is to be justified in believing that *p is true*; it is not to be justified in believing that *p is conducive to one's happiness* anymore than it is to be justified in believing that the community believes *p* to be true.

So an initial response to the relativist sceptical argument is to allow that there could be other ways of evaluating belief but claim that these ways of evaluating belief are not in competition because they are not accounts of *epistemic* justification. Consequently, that another community understands 'justification' differently is no bar to our applying our account of justification to their beliefs and drawing conclusions about their justification or not, understood in our terms. In short, there is no bar to our reserving the term 'justification' for our understanding thereof.

Of course, the sceptical relativist reply will be that this is *to presume* that 'believing that *p*' is intersubstitutable only with 'believing that *p* is true'. However, any difference in community evaluation of belief will equally result in a difference as to what is intersubstitutable with 'believing that *p*'. So a community that defined justification in terms of happiness might regard 'believing that *p*' and 'believing that *p* is conducive to one's happiness' as equivalent. The parallel with ordinary scepticism then follows when it is noted that *any* assertion of equivalence will beg the question for or against the relativist sceptical argument. So it might seem that an impasse threatens, similar to that found in ordinary scepticism.

However, this is where the analogy with ordinary scepticism ends. In this case there is no genuine impasse since what is at odds is a shift in values rather than the presence or absence of an agreed justification. Thus, I think Stich would argue, this apparent impasse rather forces the question of why we should *are* about epistemic justification. And he contends

> That when they view the matter clearly, most people will not find it intrinsically valuable to have [beliefs] … that are sanctioned by the evaluative notions that are embedded in ordinary language. [19]

My opinion is that exactly the opposite is the case! That is, when they view the matter clearly, most people will find that they do value epistemic justification. This valuation is demonstrated in our long history of worrying over and arguing about the evidence for our scientific theories, and other representation of the world. The issue of whether or not a claim is supported by the evidence is an issue that can and does concern us. It may well be that our acquisition of these values is an accident of our upbringing in a particular social community, but noting this accident in no way undercuts *our seeing value where we do*. However, insofar as these values are accepted, the possibility of other axes of evaluation is non-threatening. We can happily proceed to worry about issues of

epistemic justification and allow that our most justified theories may yet make us unhappy and displease the gods.

§IV

Few people can understand Einstein's general theory of relativity. Fewer still could articulate the combined body of confirming empirical evidence and mathematical theorising that provide our justification for taking the theory to be true. The same could be said for pretty much any present scientific theory. Nonetheless, many people would rightly claim that their belief in general relativity is justified and so too their belief in present scientific theory. The grounds for this claim seems to be that even though most cannot articulate the justification needed for scientific theory, there is the hope that such justification is available to the community as a whole. For this reason something like the community thesis can be at the centre of a plausible account of the justification for our individual belief in scientific theory.

When we consider our (individual) justification for belief in present scientific theory, we are led to the community thesis, or something like it. But when we consider the theories of other possible communities we are led to a certain interpretation of this thesis. For instance, consider the failings of past scientific theory where these could be taken as the failings of past communities. The certain interpretation starts from the recognition that we can be justified *now* through believing in accord with our communities and, therefore, others must have equally been justified *then* through believing in accord with their communities. But since our present theories can be incompatible with their past theories, so the thought continues, justification must signify no more than community approval. In this paper, I've tried to show how this temptation to anti-realism and relativism can be resisted. One can recognise the dependence of individual justification on community

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justification without abandoning the idea that community justification can itself be scrutinised and found wanting.

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[1] This rough account needs to be finessed in respect of how the layman came to acquire belief in this theory. And it needs to be finessed to allow for the expert to effect changes in theory. See Faulkner, 2000.

[2] As applied to epistemology, the term 'communitarianism' comes from Kusch, 2002. See in particular chapter 11.

[3] Of course, these illustrations concern the debate started with BonJour, 1980

[4] See Barnes, 1977, and Bloor, 1976.

[5] 'Knowledge' refers to "any collectively accepted system of belief", Barnes and Bloor, 1982: p.22, n.5. It is understood this way because of the strong programme's 'equivalence postulate': "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 credibility." *Ibid*, p.23.

[6] Alternatively, a realist could simply deny the community thesis, or reinterpret it as claiming that 'a belief is blameless if the community believes that it is justified'. The problem with this response is 'blamelessness' seems too weak a term of epistemic appraisal; a layman can be justified in scientific belief not merely blameless, and the community thesis offers a plausible explanation of why this is so.

[7] Kusch, 2002: p.175.

[8] "One would like to say: whatever is going to seem right to me is right. And that only means that here we can't talk about 'right'." Wittgenstein, 1958: §258.

[9] Kusch, 2002: p.186.

[10] Kusch, 2002: p.98.

[11] McDowell, 1998: p.225. McDowell makes this point by paraphrasing the quote from Wittgenstein (footnote 8), "One would like to say: whatever is going to seem right to *us* is right. And that only means that here we can't talk about 'right'." *Ibid*. p.225, n.12.

[12] Kusch, 2002: p.190.

[13] For instance, C_0 could France in 1860, p could be the proposition that there is no such thing as spontaneous generation C_1 could be official French science led by Pasteur and C_2 could be the Darwinians led by Pouchet.

[14] Kusch, 2002: p.73.

[15] Such questions become pressing when it is claimed, for instance, that new scientific evidence renders a previously justified theorem no longer justifiable.

[16] Barnes and Bloor, 1982. And Stich, 1988.

[17] If this suggestion strikes you as implausible, substitute your favoured account of justification.

[18] Barnes and Bloor, 1982: p.27.

[19] Stich, 1990: p.93.

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