

Knowledge of Logic

Is it possible for us to know the fundamental truths of logic a priori? This question presupposes another: is it possible for us to know them at all, a priori or a posteriori? In the case of the fundamental truths of logic, there has always seemed to be a difficulty about this, one that may be vaguely glossed as follows (more below): since logic will inevitably be involved in any account of how we might be justified in believing it, how is it possible for us to be justified in our fundamental logical beliefs?

In this essay, I aim to explain how we might be justified in our fundamental logical beliefs. If the explanation works, it will explain not merely how we might know logic, but how we might know it a priori.

The Problem Stated

To keep matters as simple as possible, let us restrict ourselves to propositional logic and let us suppose that we are working within a system in which modus ponens (MPP) is the only undervived rule of inference. My question is this: is it so much as *possible* for us to be justified in supposing that MPP is a valid rule of inference, necessarily truth-preserving in all its applications?¹ I am not at the moment concerned with how we are *actually* justified, but only with whether it makes sense to suppose that we could be.

We need to begin with certain distinctions. Suppose it is a fact about S that, whenever he believes that p and believes that ‘if p, then q’, he is disposed either to believe q or to reject one of the other propositions. Whenever this is so, and (p.230) putting many subtleties to one side, I shall say that S is disposed to *reason according to the rule modus ponens*. In addition to this disposition to reason in a certain way, it can also be a fact about S that he has the full-blown *belief* that MPP is necessarily truth-preserving: he believes, that is, that if p is true and if ‘if p, then q’ is true, then q has to be true. As a number of considerations reveal, S's disposition to reason in accordance with MPP and his belief that MPP is truth-preserving are distinct kinds of state.²

Just as we need to distinguish between the disposition to reason and the belief, so we need to distinguish between the epistemic status of the disposition and that of the belief. I want to ask initially here about whether it is possible for us to be *justified* in holding the belief that MPP is valid. I will ask later about whether it is possible for us to be *entitled* to the disposition to reason according to MPP and about the relation between that question and the corresponding question about belief. (As my choice of language implies, I shall reserve the term ‘justification’ for the sort of warrant that a belief might have, and the term ‘entitlement’ for the sort of warrant that an employment of a rule might have.)³

Turning, then, to the question of the justifiability of the belief that MPP is truth-preserving, the space of available answers seems relatively clear: it is perspicuously represented by a flowchart (Fig. 10.1). When we look at the available options, it is very tempting to say ‘No’ to the question about justification, that it is not possible for us to be justified in believing something as basic as modus ponens. For in what could such a justification consist? It would have to be either inferential or non-inferential. And there look to be serious problems standing in the way of either option.

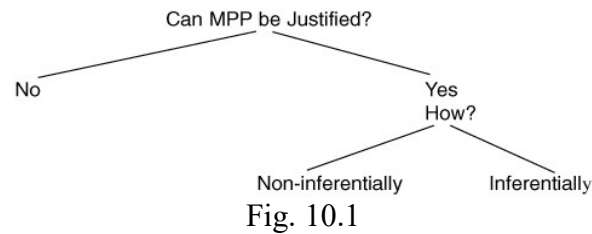


Fig. 10.1

(p.231) How could our justification for MPP be non-inferential? In any ordinary sense of ‘see’, we cannot just *see* that it is valid. To be sure, the idea that we possess a quasi-perceptual faculty—going by the name of ‘rational intuition’—the exercise of which gives us direct insight into the necessary properties of the world, has been historically influential. It would be fair to say, however, that no one has succeeded in saying what this faculty really is nor how it manages to yield the relevant knowledge. ‘Intuition’ seems like a name for the mystery we are addressing, rather than a solution to it.

A related thought that is often mentioned in this connection has it that we can know that MPP is truth-preserving because we cannot *conceive* or *imagine* what a counter-example to it might be.⁴ But the suggestion that ‘conceiving’ or ‘imagining’ is here the name for a non-inferential capacity to detect logical, or other necessary, properties will not withstand any scrutiny. When we say that we cannot conceive a counter-example to some general claim—for example, that all bachelors are unmarried—we do not mean that we have some imagistic, non-propositional ability to assess whether such a case can be coherently described. What we mean is that a more or less elementary piece of *reasoning* shows that there cannot be any such state of affairs: if someone is a bachelor, then he is an unmarried male. If someone is an unmarried male, then he is unmarried. Therefore, any bachelor would have to be unmarried. So, there cannot be any such thing as an unmarried bachelor. Talk of ‘conceiving’ here is just a thin disguise for a certain familiar style of logical reasoning. This is not, of course, to condemn it. But it is to emphasize that its acceptability as an epistemology for *logic* turns on the acceptability of an inferential account more generally.

This brings us, then, to the inferential path. Here there are a number of distinct possibilities, but they would all seem to suffer from the same master difficulty: in being inferential, they would have to be *rule-circular*. If MPP is the only underived rule of inference, then any inferential argument for MPP would either have to use MPP or use some other rule whose justification depends on MPP. And many philosophers have maintained that a rule-circular justification of a rule of inference is no justification at all.

Thus, it is tempting to suppose that we can give an *a priori* justification for modus ponens on the basis of our knowledge of the truth-table for ‘if, then’. Suppose that p is true and that ‘if p, then q’ is also true. By the truth-table for ‘if, then’, if p is true and if ‘if p, then q’ is true, then q is true. So q must be true, too.

As is clear, however, this justification for MPP must itself take at least one step in accord with MPP.

(p.232) The Ban on Rule-Circular Justification

Doubt about the cogency of rule-circular justification was expressed most recently by Gilbert Harman. Harman's specific target was a recent attempt of mine to defend the notion of analyticity from Quine's famous critique and to try to show how it might be used to provide a theory of a priori knowledge, including our knowledge of fundamental logical principles.⁵ In finding the inferential character of the proposed account problematic, Harman follows a substantial tradition in the philosophy of logic and the theory of knowledge of assuming that one's warrant for a principle of logic cannot consist in reasoning that employs that very principle. Since, furthermore, Harman cannot see how there might be

an account of the apriority of our core logical principles that did not have to presuppose that subjects reasoned in accord with those very principles, he concludes that those principles cannot be a priori.

If, however, the core logical principles are not a priori, then neither is anything that is based on them, and so it looks as though we have to concede that nothing of much interest can be a priori after all.

By his own account, Harman's worry here derives from Quine's 'Truth by Convention'. Quine too argues that if there is to be any sort of explanation of logic's apriority, it would have to be based on something like what I have called implicit definition. He too argues that any such account would have to presuppose that subjects reasoned according to the principles of logic. And he too concludes that this renders such accounts useless and, hence, that logic's apriority cannot be vindicated. Quine goes on, in later work, to present an alternative epistemology for logic, one that portrays our warrant for it as consisting in a combination of empirical and pragmatic elements.

On the following point, I am in complete agreement with Quine and Harman. If we accept the ban on the use of a logical principle in reconstructing our a priori warrant for that very principle, we would have to conclude that there can be no such reconstruction. If so, we would have to give up on the idea that our warrant for logic can be a priori.

An Empirical Justification for Logic?

What I do not see, however, is how this point can be used to motivate an alternative epistemology for logic, one that is empirical in nature. For if we are barred (p.233) from supposing that reasoning using a given logical principle can reconstruct an a priori warrant for that very principle, are we not equally barred from supposing that it could reconstruct an *empirical* warrant for that principle? Yet would not any empirical account of our warrant for believing the core principles of logic inevitably involve attributing to us reasoning using those very principles?

To see why, let us take a look at the only reasonably worked out empirical account of logic, namely, Quine's.⁶ According to this account, warrant accrues to a logical principle in the same way that it accrues to any other empirical belief, by that principle's playing an appropriate role in an overall explanatory and predictive theory that maximizes simplicity and minimizes the occurrence of recalcitrant experience. We start with a particular theory T with its underlying logic L and from T we derive, using L, a claim p. Next, suppose we undergo a string of experiences that are recalcitrant in that they incline us to assent to not-p. We need to consider how T might best be modified in order to accommodate this recalcitrance, where it is understood that one of our options is to so modify the underlying logic of T that the offending claim p is no longer derivable from it. We need to consider, that is, various ordered pairs of theory and logic— $\langle T, L \rangle$, $\langle T', L \rangle$, $\langle T'', L \rangle \dots$, $\langle T, L'' \rangle$, $\langle T, L' \rangle \dots$ —picking that pair that entails the best set of observation sentences. Whatever logic ends up being so selected is the logic that is maximally justified by experience. In rough schematic outline, that is the Quinean picture.

But there is a problem with this picture if the ban on circular justifications is in place. For it is very difficult to see how the use of core logical principles, such as those of non-contradiction, modus ponens, universal instantiation, and others, is to be avoided in the meta-theory in which this comparative assessment of the various theory-logic pairs is to take place. For instances of the following forms of reasoning are presumably unavoidable in that meta-theory:

- The best set of observation sentences is the set with property F. Set O has property F. Therefore, O is best.
- $\langle T^*, L^* \rangle$ is that theory-logic pair that predicts O. O is the best set of observation sentences. Therefore, $\langle T^*, L^* \rangle$ predicts the best set of observations sentences.

And so forth. A little thought should reveal that a large number of the core principles of logic will have to be used to select the logic that, according to the picture under consideration, is maximally justified by experience. I do not say that it will involve the *whole* of classical logic, so it is not out of the question that such a picture may be used coherently to adjudicate *certain* disagreements about logic—for instance, whether quantum mechanics dictates rejection of the distributive (p.234) principles. But it is clear that it will involve a *sizeable* number of the core principles of ordinary logic. It follows, therefore, that so long as the ban on circular justification is kept in place, there is no question of using the procedure described by the Quinean picture to generate a warrant for the core principles of logic.

Scepticism About Logic

The point here is, I think, perfectly general. It is very hard to see how there could be any sort of compelling *empirical* picture of our warrant for logic that did not rely on a very large number of the core principles of ordinary logic. Contrary to what some philosophers seem to think, then, the ban on circular justifications of logic cannot be used selectively, to knock out only a priori accounts of our warrant for logic. If it is allowed to stand, I do not see how it can be made to stop short of the very severe conclusion that we can have *no* warrant of any kind for our fundamental logical beliefs—whether of an a priori or an a posteriori nature.

If this is correct, we find ourselves on the left-hand path of our flowchart, answering ‘No’ to the question whether our fundamental logical beliefs can be justified.

But is this itself a conclusion we can live with? Can we coherently accept the claim that our fundamental principles of reasoning are completely unjustifiable?

Well, if it is impossible for the *claim* that MPP is truth-preserving to be justified that would seem to imply that our *use* of MPP is also unjustifiable. For how could we be entitled to reason according to a given inference rule if it is impossible for the claim that that rule is truth-preserving to be justified in the slightest?

There is a principle here, linking the epistemic status of reasoning in accord with a rule and that of a belief concerning the rule, that it will be useful to spell out:

(LP): We can be entitled to reason in accordance with a logical rule only if the belief that that rule is truth-preserving can be justified.

Stated contrapositively:

(LP') If it is impossible for us to be justified in believing that a certain logical rule is truth-preserving, we cannot be entitled to reason in accordance with that rule.⁷

The appeal of this linking principle is quite intuitive. If it is—logically or metaphysically—impossible for us ever to be justified in claiming that a particular (p.235) logical truth is truth-preserving, it seems to follow that we could never be entitled to reason in accordance with it. Any plausible epistemology for logic should respect this link between our entitlement to reason according to a certain rule and the corresponding meta-claim. (More on this below.)

Now, however, we are in a position to see that saying that we cannot justify our fundamental rules of inference is extremely problematic. For if a claim to the effect that MPP is truth-preserving is not justifiable, then, the linking principle tells us, neither is our use of MPP. If, however, our use of MPP is unjustifiable, then so is anything that is based on it, and that would appear to include any belief whose justification is deductive.

In particular, since this sceptical conclusion is itself one of those claims that is based on deductive

reasoning, the very thesis that our core logical principles are unjustifiable will itself come out unjustifiable, on such a view. Prima facie, this does not seem to be a stable platform on which to stand.

What are we to do? We cannot simply accept the proffered result unadulterated. If we are to accept it at all, we have to try to embed it in some larger conception that will render it stable.

The dialectical situation here is reminiscent of Kripke's famous reconstruction of Wittgenstein's discussion of rules, albeit concerning a different subject matter.⁸ A powerful argument leads to a sceptical thesis that looks to be self-undermining. Is there a 'straight solution' that, by rejecting one of the assumptions that led to the sceptical conclusion, shows how it is to be avoided? Or is there, at best, a 'sceptical solution', one that can accommodate the sceptical conclusion while removing the taint of paradox that renders it unstable?

Solutions: Sceptical and Straight

As far as I can see, there are four interesting possibilities in this particular case, one sceptical and three straight. The sceptical solution would attempt to argue that it was a mistake to think of logic in a factual way to begin with, that the 'claim' that MPP is truth-preserving is not a genuine claim after all and so does not need to be justified.

As for the straight solutions, there look to be three possibilities, two non-inferential and one inferential.

On the non-inferential path, I see no prospect of developing a theory in terms of the notion of rational intuition or its ilk. But an idea that has been gaining influence recently has it that there are certain beliefs that are 'default-justified', reasonable to believe in the absence of any positive reasons that recommends (p.236) them. If there were such beliefs, and if belief in MPP were among them, this would constitute a straight solution to our sceptical problem about logic.

A further idea derives from recent work on non-factualist conceptions of normative concepts: it suggests a distinct way in which logical belief might be non-inferentially justifiable, namely, if the notion of justification were itself to be treated non-factually.

Finally, on the inferential path, there is the question whether it is irremediably true that rule-circular arguments provide no justification. Given these further options, our flowchart now looks as in Fig. [10.2](#).

I will begin with a discussion of the sceptical solution.

Non-Factualism About Logic

How might it turn out to have been a mistake to think that our belief in MPP requires justification? The only possible answer would appear to be: if it were a mistake to think of it as a belief in the first place. What is in view, in other words, is an *expressivist* conception of the sentences that are used to state what we naïvely suppose are logical beliefs.

How should we formulate such a view? Here is a simple version: to say that P follows logically from Q is not to state some sort of fact about the relation between P and Q; rather, it is to express one's acceptance of a system of norms

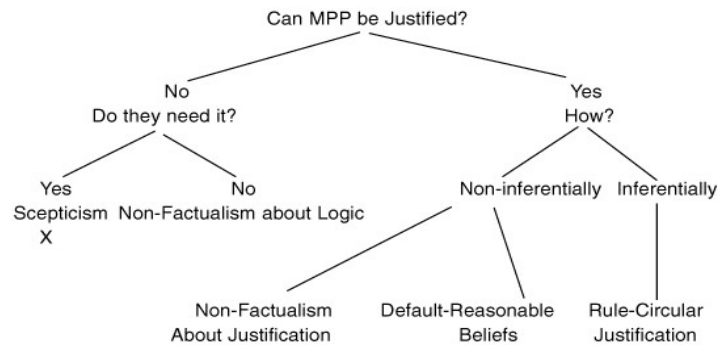


Fig. 10. 2

(p.237) that permits inferring P from Q. Since there are no facts about logical implication on this view, there is no need to justify one's selection of the norms. Furthermore, since in saying that a particular inference is valid, one is not actually saying anything, but only expressing one's acceptance of a system of norms that permits it, there is no question of justifying that either. It is, therefore, perfectly unproblematic that the claims of logic are not justifiable; properly understood, there was nothing to justify in the first place.

Now, naturally, this view would have to be elaborated in much greater detail before it could count as an expressivist or non-factualist *theory* of logical truth. But it seems to me that we can identify a fatal difficulty right at the start, one that obviates the need to consider any further refinements.

To see what it is, consider the sort of *conventionalist* theory of logical truth, famously discussed by Quine in 'Truth by Convention', according to which facts about logical implication are the products of convention. If we had not conventionally stipulated that this follows from that, according to this view, there would not have been any facts about what follows from what.

Against this particular *metaphysical* view of the source of logical truth, it seems to me, one of Quine's objections is decisive. For as he points out, the conventional stipulations that would have to be responsible for generating the infinity of logical truths that there are would have to be general in nature. Thus, they might take the form of saying: For all x, y, and z, if x and y stand in the modus ponens relation to z, then x and y imply z.

Now let us suppose that P, and 'If P, then Q', stand in the modus ponens relation to Q. And consider the question: do these two propositions imply Q? Well, that depends on whether it follows from the stipulated convention and the supposition, that P and 'If P, then Q' imply Q. That is, it is the question whether it follows from:

(a) P and 'If P, then Q', stand in the modus ponens relation to Q

and

(b) If P and 'If P, then Q' stand in the modus ponens relation to Q, then P and 'If P, then Q' imply Q

that

(c) P and 'If P, then Q', imply Q?

But that in turn is just the question whether it is true that if x and y stand in the modus ponens relation to z, that x and y imply z.

The problem is clear. We can not have it both that what logically follows from what is determined by what follows from certain conventions and that what follows from the conventions is determined by what logically follows from what. Facts about logical implication not accounted for by conventionalism are presupposed by the model itself.

(p.238) Now, although a non-factualist expressivism about logical truth is a distinct view from a conventionalism about it, it suffers from an exactly analogous problem. The expressivist has it that to say that P follows from Q is to express one's acceptance of a system of norms that permits inferring P from Q. Once again, though, these norms of permission will have to assume a general form:

- For all x, y and z, if x and y stand in the modus ponens relation to z, then it is permissible to infer z from x and y.

Does this norm allow inferring Q from P and 'If P, then Q'? Well, the norm has it, by universal instantiation, that:

- If P and 'If P, then Q', stand in the modus ponens relation to Q, then it is permissible to infer Q from them.

If, furthermore, P and 'If P, then Q' do stand in the modus ponens relation to Q, then by modus ponens, it would follow that it is permitted to infer Q from the premises in question.

Once again, the problem is clear. We cannot coherently have it both that whether A follows from B depends on what the system of norms permits *and* that what the system of norms permits depends on whether A follows from B. Just as with conventionalism, facts about logical implication not accountable for by the non-factualism are presupposed by the model itself.

A non-factualist construal of logical implication, then, does not seem a promising strategy for blocking the paradoxical consequences of the claim that fundamental logical beliefs are incapable of being justified. If there is to be a solution to our sceptical problem, it looks as though it has to be a straight solution. I will begin with a discussion of default-reasonable beliefs.

Default-Reasonable Beliefs

An increasingly influential thought these days runs along the following lines: It is a mistake to suppose that a belief is unreasonable or unjustified merely because it is not supported by some observation or argument. Some beliefs are simply 'default reasonable,' reasonable in and of themselves, without any supporting justification. In particular, the fundamental logical beliefs have this feature.⁹ It is reasonable to believe them, but *not* because there is some positive *ground* by virtue of which they are reasonable. So although it is true that no inference or observation supports our fundamental logical beliefs, it does not follow that they are unjustified, and so the potentially paradoxical conclusion is blocked.

I am not implacably opposed to the idea that there might be some beliefs that (p.239) are reasonable on the basis of nothing, especially if this is understood to mean simply that they are *presumptively but defeasibly justified*. It is possible that this will prove to be the best description of the epistemology of our first-person knowledge of the contents of our own minds. What I do not see is how this idea could plausibly apply to the case at hand, to the generalization that all inferences of a certain form are necessarily truth-preserving.

If a particular class of beliefs is default reasonable, then, it seems to me, there must be some *explanation* for why it is. This insistence does not contravene the root idea that, in the case of a default-reasonable belief, there is no ground that *makes* it reasonable; for it is consistent with a belief's having that status that there be a criterion by virtue of which it has that status and an explanation for why it has it. All that the insistence amounts to is that there be some principled way of saying which beliefs are default reasonable in the relevant sense and why. What I think we can't obtain, in the case under consideration, is any sort of satisfactory explanation for why belief in the validity of MPP should count as default reasonable.

One popular suggestion has it that a default-reasonable belief is any belief which, by virtue of being

presupposed in any justification that a thinker might have, is neither justifiable nor refutable. But this has two implausible consequences. First, it entails that what is default reasonable has to be relativized to individual thinkers, for different thinkers may build their epistemic systems around different claims. Second, it has the consequence that some very implausible claims would come out as default reasonable for someone if they happened to be presupposed by that person's epistemic system. For example, suppose that someone takes as basic the *negation* of the law of non-contradiction; on this view, we would have to say that the negation of that law is default reasonable for him, because, by assumption, it will be neither justifiable nor refutable for that person.

A second suggestion has it that the beliefs that are default reasonable are those beliefs that a thinker finds 'self-evident'—that is, that he is disposed to find plausible simply on the basis of understanding them and without any further support or warrant. But this proposal, too, would seem to be subject to the previous two objections. Once again, it is entirely possible that two people will find very different propositions 'self-evident', and that some of those will include propositions that are intuitively highly implausible.

Nor would it help to strengthen the requirement so that it concerns those beliefs that actually *are* self-evident, as opposed to those that merely *seem* self-evident. Here the problem is that no one seems to me to have shown how this notion is to be spelled out. In particular, no one has supplied a criterion for distinguishing those propositions that are self-evident from those that—like the parallel postulate in Euclidean geometry or the proposition that life cannot be reduced to anything biological—merely seemed self-evident to many people for a very long time.

By contrast, there is one form of explanation that seems to me have some (p.240) promise. There may be beliefs that are such that, having those beliefs is a condition for having one of the concepts ingredient in them. Any such belief, it seems to me could plausibly be claimed to be default reasonable. For if it really were part of the possession condition for a given concept that to possess it one had to believe a certain proposition containing it, then that would explain why belief in that proposition is at least presumptively (though defeasibly) justified. It would certainly not make sense to insist—in the way that it would with the belief that all swans are white—that one justify the proposition *before* one came to believe it.

Unfortunately for the problem that concerns us, it is not remotely plausible that anyone possessing the concept of conditional would have to have the belief that MPP is a valid rule of inference. Surely, one can have and reason with conditional without so much as having the concept of validity or of logical implication. At most what the theory of concept possession would license is that *inferring* according to MPP is part of the possession condition for conditional, not the *belief* that MPP is valid. But what we are after now is the justification for the belief.¹⁰

Non-Factualism About Justification

Another thought that has also been gaining in influence recently is even more radical. It denies not merely that there always has to be a ground in virtue of which a belief has the property of being reasonable; it denies that being reasonable is a property in the first place. How are we to think about this?

We are assuming that logic is factual, so there are facts about what logically follows from what. What we are contemplating is the idea that there is *no fact of the matter* to about what it would be reasonable to believe, given a specification of the available evidence, however exactly the notion of evidence is to be understood.

(p.241) Now, belief, we may all agree, constitutively aims at the truth, so that anyone who was in the

business of inquiry and belief in the first place would have to subscribe to the norm that one ought to believe only what is true. Furthermore, it seems reasonable to suppose that this norm will, by itself, ground various other norms: for example, that one ought to believe that which is likely to be true and not believe that which has no chance of being true; that one ought not to believe *p* if some alternative proposition incompatible with *p* has a higher likelihood of being true; that one ought to believe *p* only if its likelihood of being true is high enough, given the sort of proposition it is.¹¹

Plausibly, then, all of this will be common ground between believers, however their epistemic principles may otherwise differ. So what we are imagining, when we imagine that there is no fact of the matter about what it would be most reasonable to believe on the basis of a given specification of the evidence, is that there is no fact of the matter which *rules of evidence* are correct—no fact of the matter, that is, about which hypothesis a given piece of evidence confirms. To put matters crudely, but starkly: we might have one epistemic system incorporating a rule of simple induction, and another a rule of simple counter-induction, and there would be no saying that one system is more correct than the other.

But this sounds like an impossible view. If every epistemic system can be said to be as correct as any other, does not it follow that every proposition is as justifiable as any other, since every proposition can be justified relative to some evidential system or other? And is not such a gross relativism about justification not only false but self-undermining? For if every proposition is just as justifiable as any other, then that would appear to imply that for any proposition *p*, *p* and its negation are equally justifiable. In particular, it would seem that the claim that not every proposition is as justifiable as any other is just as justifiable as the claim that it is, if the claim that it is is true. And that would appear to leave us lacking a reason for believing anything in particular.

Now, this objection would have been decisive if the view that there are no facts about the correctness of evidential systems had to be accommodated in overtly relational terms. The contemplated objection assumes, in other words, that on the view in question, the predicate ‘*x* is justified’ denotes a relational property that obtains between a belief and an evidential system. That assumption, then, in conjunction with the non-factualism about evidential systems, generates the relativism that we found to be problematic. But, as is well known, and as we have just seen in the case of logic, non-factualism does not have to be elaborated in this way. Instead, it is better to try to understand it along expressivist lines.

Allan Gibbard has developed just such an expressivist theory of judgements of rationality; adapted to the present case it would yield something like the following view: When someone says ‘*x* is a justified belief’ they are not attributing any (p.242) sort of property to it at all, relational or otherwise; rather, they are *expressing* their acceptance of a system of norms that permits that belief in those circumstances.¹²

Does this formulation evade the self-undermining relativism just described? Well, since in saying that ‘*x* is justified’ I am not stating anything at all, but merely expressing my acceptance of a system of norms that permits that belief in those circumstances, and since, naturally, I do not accept an evidential system that permits believing just anything, I do not have to agree that every proposition is just as justifiable as any other, even if I am a non-factualist about justification. So it appears—*prima facie* anyway—that a Gibbard-style expressivism about justification is not subject to the relativistic worries just outlined.

That makes it worth while to ask whether it can help with the problem about logic with which we are concerned. The following thought might seem tempting. On a non-factualist view, nothing is really justified as such, for there is no such property for things either to have or to lack. Rather, talk about a belief's being justified is just a way of expressing one's acceptance of a system of norms that permits believing *L*. Since there is no further question about whether *L* is *really* justified, apart from its figuring in an epistemic system that I accept, our problem with the justifiability of logical beliefs disappears. I

am entitled to say that a given logical principle is justified if I accept an epistemic system that permits it. And, naturally, I do accept an epistemic system that permits the core principles of logic.

So it can seem as if this is the answer we were looking for: a viable reconstrual of the notion of justification that refutes the claim that the core logical beliefs are unjustifiable. Unfortunately, these appearances are deceptive. Ultimately, an expressivism about justification is just as unpalatable as a relativism about it. Or so I will argue.

Let us imagine that I come across someone—call him AR—who holds a view I consider utterly unjustified: for example, that there is a spaceship trailing the comet Hale-Bopp that is going to come down and swoop him away. What can be my attitude towards such a person, given a Gibbard-style expressivism? I can express my acceptance of a system of norms that forbids that belief, all right, but that seems to leave something important out. If I tell AR that his belief that *p* is irrational and unjustified, I am not merely expressing my acceptance of a system of norms that forbids it; I am claiming to see something that he is not, namely that *p* ought not to be believed, given the available evidence. I am saying (roughly): I do not believe *p*; you should not either.

Gibbard tries to account for the normativity of such judgements by invoking a classic expressivist resource: the conversational demand. In saying that *x* is unjustified, he says, I am expressing my acceptance of a system of norms that forbids *x* and adding: Do so as well!

(p.243) In and of itself, however, this does not capture the claim that I appear to be making when I claim that I am justified and he is not, for even someone who is simply browbeating his interlocutor can issue a conversational demand. So the question is: with what *right* do I insist that someone accept my view and abandon his, on non-factualist views of justification? Could not AR insist, with equal right, that I abandon my view in favour of his? Indeed, as a non-factualist, would not I have to recognize that our claims to normative authority here are perfectly symmetrical, thereby undermining any hold I might have had on the thought that I am justified and he is not? And is not this a version of the sort of relativism expressivism was supposed to avoid?

Now, AR's belief about alien spaceships may arise in a number of different ways. He may share all my epistemic norms on the fixation of belief and he may be very good at reasoning from those norms and the available evidence to the relevant conclusions. He may simply not be aware that there is not a scintilla of evidence that there is a spaceship trailing Hale-Bopp. In that case, there is no difficulty accounting for my demand that he give up his view in favour of mine. Knowing that his problem stems simply from an ignorance of the relevant facts, I can coherently ask that he take my reasoning as proxy for his own. And he, for his part, would be entirely reasonable in taking me up on my invitation.

Then, again, AR's curious belief may derive not from his ignorance of any item of evidence but from his poor abilities at reasoning: he may be bad at moving from the epistemic norms that we share and the evidence to the appropriate conclusions. Here, again, there is no difficulty accounting for the normative authority that I claim. Given that we share the relevant norms, I can again ask him to take my reasoning as proxy for his own.

But suppose that the difference between AR's beliefs and mine stems not from such mundane sources but rather from a deep-seated difference in the fundamental epistemic norms to which we subscribe, norms for the fixation of belief that are not derived from any others. In calling his view irrational, then, I am in effect demanding that he give up *his* fundamental epistemic norms in favour of the ones that I employ. And the question I am asking is: With what right do I do this, on a non-factualist view?

As a realist, I would have no trouble explaining my attitude here. Since, as a realist, I take there to be a fact of the matter which fundamental norms are correct, and since I take myself to know what those facts are, I can easily explain why I am insisting that my interlocutor give up his norms in favour of

mine. Of course, my interlocutor, convinced of the correctness of his own norms, may make a similar demand on me. If the norms are fundamental, this may well result in an impasse, a disagreement from which neither of us can be budged by argument. But it would at least make sense that there *is* a disagreement here, and it would make sense why we are issuing (potentially ineffective) conversational demands on each other. But what explanation can the non-factualist offer of these matters?

The non-factualist may reply that there is no difficulty here. After all, he will (p.244) say, the rules of evidence that I accept are unconditional: they apply to someone whether or not that person is inclined to accept them.

There seem to me to be two problems with this reply, however, one with the assumption that I accept unconditional norms in the first place, the other with my insistence that someone else also accept them.

First, if a non-factualism about justification is correct, with what right do I accept epistemic norms that are unconditional, so that they apply to someone whether or not they accept them?¹³ If there really are no perspective-independent facts about which epistemic norms are correct, with what right do I accept norms that apply to people whether or not they accept them? Should not an appropriate sensitivity to the fact that there is nothing that makes my norms more correct than anyone else's result in my being hesitant about accepting norms that apply to others regardless of whether they are also inclined to accept them?

Second, and putting this first problem to one side, on what basis do I insist that AR give up his unconditional norms in favour of mine? I accept a particular set of fundamental norms. He accepts another. By assumption, the norms in dispute are fundamental, so there is no neutral territory on which the disagreement can be adjudicated. Furthermore, on the non-factualist view, there are no facts about which fundamental epistemic norms are correct and which ones are not. So, on what basis do I insist that he give up his norms in favour of mine?

The expressivist thinks he can evade the clutches of a self-undermining relativism by claiming that talk about a belief's being justified expresses a state of mind rather than stating anything. But this stratagem does not long conceal the view's inevitable relativist upshot, which can now be restated in terms of the problem of normative authority. If no evidential system is more correct than any other, then I cannot coherently think that a particular belief is unjustified, no matter how crazy it may be, so long as that belief is grounded in a set of fundamental epistemic norms that permit it, no matter how crazy they may be.

To repeat: the point here is not about *suasive effectiveness*. I do not mean that the realist about justification will have an easier time persuading anyone of anything. In fact, it is quite clear that there are numerous extreme positions from which no one can be dislodged by argument, whether confronted by a realist or an expressivist (this is a point to which we will have occasion to return).

The issue is rather about having the resources with which to think certain thoughts coherently. By virtue of believing that there are objective facts about what justifies what, the realist can coherently think that a particular epistemic system is mistaken. The non-factualist, however, cannot.

In a sense, the difficulty should have been evident from the start. For the root problem is with the claim with which the expressivist about justification must begin, that there is nothing that epistemically privileges one set of epistemic principles over another. Once that thought is in place, it becomes impossible to evade (p.245) some sort of relativist upshot. It does not matter whether the basic thought is embedded in an expressivist or a non-expressivist framework

Rule-Circular Justification: Two Problems

If this is correct, then only one possibility remains: that we were too hasty in assuming that a rule-circular justification of a logical belief cannot confer genuine justification upon it. Let us, then, reopen that question. What intuitive constraint on justification does a rule-circular argument violate?

It will be useful to approach this question with another: what intuitive constraint on justification does a *grossly* circular argument violate? For it is plausible that a rule-circular argument will be problematic to the extent to which it approximates a grossly circular argument, an argument that explicitly includes among its premises that which it is attempting to prove.

There are at least two things wrong with a grossly circular argument. First, it assumes that which it is trying to prove and that, quite independently of any further consequences, seems wrong. An argument is being put forward with the intent of justifying—earning the right to believe—a certain claim. But it will only do so if it proceeds from premisses that are justified. If, however, the premiss is also the conclusion, then it is simply helping itself to the claim that the conclusion is justified, instead of earning the right to it. And this manoeuvre offends against the very idea of proving something or arguing for it. As we are prone to say, it begs the question.

A second problem is that, by allowing itself the liberty of assuming that which it is trying to prove, a grossly circular argument is able to prove absolutely anything, however intuitively unjustifiable. Let us call the first problem the problem of ‘begging the question’ and the second that of ‘bad company’. Is a merely rule-circular justification subject to the same or analogous worries?

It is not obvious that a rule-circular argument begs the question, for what we have is an argument that is circular only in the sense that, in purporting to prove the validity of a given logical law, it must take at least one step in accordance with that law. And it is not immediately clear that we should say that an argument relies on its implicated rule of inference in the same way as we say that it relies on its premisses.¹⁴

(p.246) Well, perhaps not in the *same* way, but it is not difficult to motivate a worry on this score. One clear way of doing so is to look at the role that a rule-circular argument might play in a dialectical context in which it is being used to silence a *sceptic's* doubt about its conclusion.

Suppose that you doubt some claim C and I am trying to persuade you that it is true. I offer you an argument A in its support. In general, in such a context, you could question A's cogency either by questioning one of its premisses or by questioning the implicated rule of inference R. If you were to proceed by challenging R, then I would have to defend R and my only option would appear to be to try to defend my *belief* that R is truth-preserving.

Now, suppose that the context in question is the special case where C is the proposition that R is truth-preserving and my argument for C is rule-circular in that it employs R in one of its steps. Here it very much looks as if I have begged the question: I have certainly begged *your* question. You doubt MPP. I give you an argument in support of MPP that uses MPP. Alert enough to notice that fact, you question my argument by reiterating your doubts about MPP. I defend my argument by asserting that MPP is truth-preserving. In this dialectical sense, a rule-circular argument might be said to beg the question.

At a minimum, then, the sceptical context discloses that a rule-circular argument for MPP would beg a sceptic's question about MPP and would, therefore, be powerless to quell his doubts about it. In doing this, however, it reveals yet another sense in which a worry might arise about a rule-circular argument. An argument relies on a rule of inference. As the sceptical scenario highlights, one's reliance on such a rule might be questioned. But, quite apart from whether it is questioned, in what does one's entitlement to rely on that rule consist, if not in one's entitlement to the *belief* that the rule is truth-preserving? And if it does not consist in anything else, how can a rule-circular argument in support of belief in MPP

confer warrant on its conclusion? In relying on a step in accord with MPP, in the course of an argument for MPP, one would be leaning on the very conclusion one is allegedly trying to prove.

Under the general heading of a worry about begging the question, then, I want to distinguish two problems: first, to say in what the entitlement to use a rule of inference consists, if not in one's justified belief that that rule is truth-preserving; (p.247) second, to say how a rule-circular argument can confer warrant on its conclusion even if it is powerless to move the relevant sceptic.

What about the problem of bad company? Prima facie, anyway, there looks to be a big difference between a grossly circular argument, on the one hand, and a rule-circular argument on the other, so far as their potential to positively rationalize belief is concerned. A grossly circular argument is guaranteed to succeed, no matter what proposition it is attempting to rationalize. A similar charge could not be made against a merely rule-circular argument: the mere licence to use an inferential step in accord with modus ponens, for example, does not *in and of itself guarantee* that a given argument will succeed in demonstrating the validity of modus ponens. Appropriate permisses from which, by (as it might be) a single application of MPP, we can get the general conclusion that MPP is truth-preserving, may simply not exist. In general, it is a non-trivial fact that a given rule of inference is self-supporting in this way.

While this point is strictly correct, however, the fact is that unless constraints are placed on the acceptability of rule-circular arguments, it will nevertheless be true that we will be able to justify all manner of absurd rules of inference. We must confront the charge that unconstrained rule-circular justifications keep bad company.

Consider someone who has somehow come to adopt the unreflective practice of inferring according to Prior's introduction and elimination rules for the 'tonk' connective:

1. (I) A/A tonk B; (E) A tonk B/ B.

If we suppose that we are allowed to *use* inferences in accord with these rules in mounting a justification for them, then it would seem that we could justify them as follows:¹⁵

- | | |
|--------------------------------------------------------|---------------------------------|
| 1. 'P tonk Q' is true iff 'P' is true tonk 'Q' is true | Meaning Postulate |
| 2. P | Assumption |
| 3. 'P' is true | 2, T-scheme |
| 4. 'P' is true tonk 'Q' is true | 2, tonk-introduction |
| 5. 'P tonk Q' is true | 4, 1, biconditional-elimination |
| 6. P tonk Q | 5, T-scheme |
| 7. If P, then P tonk Q | 6, logic |

Here line 7 expresses a canonical statement of tonk-introduction dependent just on the meaning postulate in line 1. So this template is available to explain how someone for whom inference in accordance with tonk introduction was already part of their unreflective practice could arrive at an explicit justification for it. (p.248) And an exactly corresponding example could be constructed to yield

a 'justification' for the principle of tonk elimination.

Or consider the following example (due to Marcus Guaquinto). Let R be the rule that, for any P, P, *therefore* All snow is white. Now, we seem to be in a position to mount a justification for it along the following lines. Pick any proposition P:

- | | |
|---------------------------------|-----------------------|
| 1. P | Assumption |
| 2. All snow is white | 1, R |
| 3. If P, then All snow is white | Conditional Weakening |

Therefore, the inference from P to all snow is white is truth-preserving. Since this is independent of the particular proposition P that is chosen, then, for any proposition P, the inference from P to 'All snow is white' is truthpreserving.

Clearly, we cannot simply assert that rule-circular justifications are acceptable and leave it at that. The question is whether there is some intuitively plausible constraint that they should be made to satisfy that will repel the bad company they would otherwise keep while leaving in place the justificatory arguments that interest us.

I will begin by discussing the second half of the problem about begging the question.

Begging the Question: Reasonable Employment of a Rule

Could we be entitled to use a rule of inference without first being justified in the corresponding general claim that that rule is valid?

It seems to me that we can if a plausible—perhaps even inescapable—account of what determines the meanings of our logical constraints is true. Let me explain.

By virtue of what does 'and' mean *conjunction* and refer to a certain truth function, and 'if, then' mean *conditional* and refer to a distinct truth function? That these expressions mean what they do cannot be a primitive fact about them; there must be facts by virtue of which these semantic facts obtain.

As I see it, the most plausible—perhaps the only plausible—account has it that our constants mean what they do by virtue of their conceptual role: 'if, then' means what it does by virtue of participating in some inferences and not in others. How, exactly, is this to be understood?

The thought is that there is a particular set of inferences involving 'if, then' that are meaning-constituting for a thinker: of all the inferences that 'if, then' can and does participate in, a specific subset is responsible for fixing its meaning. Given (p.249) that subset, 'if, then' means that unique logical concept, *if any*, whose semantic value makes the inferences in that subset truth-preserving. The qualification is necessary because for all that a conceptual role theory can guarantee, a specified conceptual role may fail to determine a unique, or indeed, any meaning for the constant in question.¹⁶

Any such approach to the meanings of the constants faces, it must be conceded, a formidable number of obstacles. First, there is the impression, much encouraged by Carnap and the middle Wittgenstein, that doctrines of implicit definition lead inexorably to irrealist conclusions, that to view a fundamental logical principle as an implicit definer is to subscribe to some sort of conventionalism or non-factualism about its truth. Second, there is the charge, levelled by Quine, that an implicit definition

view of logic leads to a vicious regress, because the very logical vocabulary allegedly being defined has to be used to formulate the stipulations. Third, there is the difficulty, also urged by Quine, of saying which of the many sentences a thinker may be disposed to assert serve as implicit definers of its ingredient terms. Fourth, there is the problem, most often discussed in connection with Arthur Prior's 'tonk' example, of saying what conditions a set of implicit definers must meet if it is to define a genuinely meaningful term. Finally, there is the difficulty of showing how any such account would succeed in determining a unique logical concept.

Some of these questions have satisfactory answers.¹⁷ Others await one. It is hard to believe, however, that they do not all have satisfactory answers because it is very hard to see what *other* type of theory could explain the meanings of our logical constants. In any event, the present essay should be seen as issuing a large IOU on the outstanding problems for a conceptual-role semantics. I am interested in what we should say about the epistemology of logic, if, as seems likely, a conceptual-role semantics provides the correct account of the meaning of the logical constants.

With that in mind, I want to propose the following principle:

(L) If M is a genuinely meaning-constituting rule for S, then S is entitled to infer according to M, independently of having supplied an explicit justification for M.

Notice that (L) does not require that S *know* that M is meaning-constituting for S (p.250) if S to be entitled to infer according to M but only that M *be* meaning-constituting for S.

Is there anything that speaks in favour of (L) independently of the fact that it helps with the problem about rule-circularity? It seems to me that there is, that (L) is intuitively plausible. If it is true that certain of our inferential dispositions fix what we mean by our logical words (in the language of thought), then it is very plausible that we should be entitled to act on those inferential dispositions prior to, and independently of, having supplied an explicit justification for the general claim that they are truth-preserving, for *without* those dispositions there is nothing about whose justification we can intelligibly raise a question about: without those dispositions we could not even *have* the general belief whose justification is supposed to be in question.

The only items that are candidates for being justified are either contentful items or certain kinds of transition between contentful items (inferences). But if it is true that there could be no contentful items unless certain dispositions are already in place, there cannot be a serious question whether those dispositions are ones to which we are entitled.¹⁸

Our difficulty was to find a source for our entitlement to rely on a given rule of inference, independently of having supplied a justification for the general claim that that rule is truth-preserving, so that we are able to use that reliance to supply that justification. What I am urging is that that entitlement is precisely what flows naturally from a conceptual-role account of the meanings of our logical words.

This proposal does, of course, bring to the fore the question: what makes a rule meaning-constituting? This is one of the questions that still awaits a definitive answer. My present concern, however, is just to emphasize that our problem about our entitlement to employ a rule of inference *reduces* to that problem, a problem that any conceptual-role semantics faces.

Dealing With Bad Company

With (L) in place, we are now poised to resolve the problem of bad company. For (L) suggests the following restriction on rule-circular justifications:

(RC) S's rule-circular argument for a rule of inference M will confer warrant on S's belief that M is

truth-preserving, provided that M is a genuinely meaning-constituting rule for S.

(p.251) Two questions arise. First, does (RC) yield the right results as far as rule-circular justifications are concerned? Does it exclude the justification of unwanted rules? Second, can anything of an intuitive nature be said to support it?

If we apply to (RC) to our problematic examples above, it is easy to see that they are immediately ruled out. R is not meaning-constituting: it is obviously not part of the meaning of 'all' that 'All snow is white' can be inferred from any proposition. Indeed, it is because we have an independent purchase on what 'All snow is white' means that we know that R is not truth-preserving and, hence, that it would be embarrassing to endorse a theory that said otherwise.

Similarly in the case of 'tonk.' It is readily shown, by attempting to construct a truth-table for 'tonk', that its introduction and elimination rules do not determine a meaning for it; there is no proposition expressed by sentences of the form 'A tonk B.'

In fact, it should be clear that (L) will not allow any invalid rules to be circularly justified. For if M is genuinely meaning-constituting, as (L) insists it has to be, then it has a semantic value that makes M truth-preserving.

As far as the question of the intuitive support for (RC) is concerned, that question recapitulates the case for (L). If (L) is correct, then the source of our entitlement to the use of a rule of inference is distinct from our entitlement to the corresponding belief that it is valid if the rule is meaning-constituting. Thus, it may be used to confer warrant on its conclusion.

Begging the Sceptic's Question

It is time now to turn to the final problem I outlined for a rule-circular justification, its capacity to move the appropriate sceptic. The point at issue is prefigured in Dummett's discussion when he says that rule-circularity will be damaging only to a justificatory argument that

is addressed to someone who genuinely doubts whether the law is valid, and is intended to persuade him that it is. . . . If, on the other hand, it is intended to satisfy the philosopher's perplexity about our entitlement to reason in accordance with such a law, it may well do so. The philosopher does not seriously doubt the validity of the law and is therefore prepared to accept an argument in accordance with it. He does not seek to be persuaded of the conclusion; what he is seeking is an *explanation* of its being true.¹⁹

Before inquiring into the significance of this, let us make sure that we do not underestimate all that a rule-circular justification is capable of accomplishing. First, it is not at all similar to a grossly circular argument in that it is not trivially guaranteed to succeed. For one thing, the relevant premises from which, by a (p.252) single application of the rule the desired conclusion is to follow, may not be available. For another, not all rules are self-supporting. Second, the rule-circular argument for MPP asks in effect that it be granted that *one* application of MPP and from that it promises to deliver the conclusion that MPP is *necessarily* truth-preserving, truth-preserving in *any possible* application. Finally, this one application will itself be one to which we are entitled if, as seems plausible, MPP is meaning-constituting.

For all that, it is nevertheless true that if we were confronted by a sceptic who *doubted* the validity of MPP in *any* of its applications, we could not use this argument to rationally persuade him. Doubting the rule, he would rightly reject this particular argument in its favour. Since, by assumption, we have no other sort of argument to offer him, it seems that we are powerless to persuade him of the rightness of our position. The question is: what is the epistemic significance of this fact?

But could not we say to him: 'Look, MPP is meaning-constituting. If you reject it, then you simply mean something different by "if, then" and therefore there is no real disagreement after all.' But if our sceptic were playing his cards right, he would deny that MPP is meaning-constituting. To persuade him otherwise we would have to offer him an argument and that argument would in turn have to use MPP. And then we would be right back where we started, faced with the question: what is the epistemological significance of the fact that we are unable to persuade the sceptic about MPP?

In the passage cited above, Dummett seems to think that its significance lies in the way in which it highlights a distinction between two distinct projects: quelling the sceptic's doubts versus *explaining* to a non-sceptic why MPP is valid.

But I do not really understand what it would be to explain *why* a given logical law is true. What could it mean except something along the lines of a conventionalism about logical truth, an account which really does aspire to explain *where* logical truth comes from? As we have seen, however, there are decisive objections to conventionalism, objections that probably generalize to any explanatory project of that form.

The question that we need to be asking, I think, is rather this: Can we say that something is a real warrant for believing that p if it cannot be used to answer a sceptic about p? Is it criterial for my having a genuine warrant for believing that p that I be able to use it to persuade someone who doubts whether p?

Well, in fact, we *are* very drawn to the idea that if I am genuinely justified in believing that p, then, in principle, I ought to be able to bring you round as well—or, at the very least, I ought to be able to take you some distance towards rational belief in p. Of course, you may not understand the warrant that I have; or, being more cautious than I, you may not assign it the same weight that I do. But, prescinding from these and similar considerations, how could I be genuinely justified in believing something and yet be totally unable to have any sway with you? As Thomas Nagel puts it in his recent book *The Last Word*: 'To reason is to think (p.253) systematically in ways that anyone looking over my shoulder ought to be able to recognize as correct. It is this generality that relativists and subjectivists deny.'²⁰

Notice how naturally it comes to Nagel to equate the claim that *there are* objectively valid reasons, reasons that would apply to anyone anywhere, with the *epistemic* claim that anyone exposed to them ought to be able to *recognize* them as reasons.

There is a principle behind this thought, one that we may call the 'principle of the universal accessibility of reasons'. If something is a genuine reason for believing that p, then, subject to the provisos just made, its rationalizing force ought to be accessible from any epistemic standpoint.

I think that this principle has played a very large role in our thinking about justification. It is what explains, it seems to me, why the theory of knowledge is so often centred on a refutation of *scepticism*. We take it to be criterial of our having a genuine warrant for a given proposition that we be in a position to refute a sceptic about p.

If my discussion of logic has been on the right track, however, then one of its main lessons is that this principle is false. For consider: we cannot accept the claim that we have no warrant whatsoever for the core logical principles. We cannot conceive what such a warrant could consist in (whether this be a priori or a posteriori) if not in some sort of inference using those very core logical principles. So, there must be genuine warrants that will not carry any sway with a sceptic. Answering the sceptic about modus ponens cannot be criterial for whether we are warranted in believing modus ponens.

To put this point another way: we must recognize a distinction between two different sorts of reason—suasive and *non-suasive reasons*. And we have to reconcile ourselves to the fact that in certain areas of knowledge, logic featuring prominently among them, our warrant can be at most non-suasive,

powerless to quell sceptical doubts.

It seems to me that this is a conclusion that we have reason to accept entirely independently of our present concern with knowledge of logic, that there are many other compartments of knowledge in which our warrant can be at most non-suasive. One such area concerns our knowledge of the existence of other minds; another concerns our knowledge of the external world. I think that in both of these areas it is very unlikely that we will be able to provide warrants for our belief that would be usable against a determined and level-headed sceptic.

Conclusion

It is not open to us to regard our fundamental logical beliefs as unjustifiable. And yet it is hard to see how they might be justified without the benefit of deductive (p.254) reasoning. What sort of case have we been able to make for the claim that rule-circular arguments can provide genuine justifications for their conclusions? It seems to me that the case is substantial.

First, a rule-circular argument, unlike a grossly circular one, is not trivially guaranteed to succeed. Second, by relying on a small number of applications of a particular rule, a successful rule-circular argument delivers the conclusion that that rule is necessarily truth-preserving, truth-preserving in any possible application.²¹ Finally, these applications of the rule will be applications to which the thinker is entitled, provided that the rule in question is meaning-constituting.

This case is constructed on the basis of several independently plausible elements. First, that the meanings of the logical constants are determined by their conceptual roles, and that not every conceptual role determines a possible meaning. Second, that if an inferential disposition is meaning-constituting, then it is a fortiori reasonable, justifiably used without supporting argument. Third, that something can be a warrant for something even if it is powerless to bring about a determined sceptic.

Putting these elements together allows us to say that we are justified in our fundamental logical beliefs in spite of the fact that we can produce only rule-circular arguments for them. The price is that we have to admit that we cannot use this form of justification to silence sceptical doubts. It is arguable, however, that, with respect to something as basic as logic, that was never in prospect anyway.

Notes:

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(1) Some philosophers distinguish between the *activity* of giving a justification and the *property* of being justified. My question involves the latter, more basic, notion: Is it possible for our logical beliefs to have the property of being justified?

(2) This is at least part of the moral both of Lewis Carroll's 'What the Tortoise Said to Achilles', in *Mind* 1898 and of Wittgenstein's discussion of rule-following in *Philosophical Investigations* (Oxford: Blackwell, 1958)[Find it in your Library](#).

(3) This distinction between 'justification' and 'entitlement' is distinct from Tyler Burge's well-known distinction, but bears some resemblance to it. See his 'Content Preservation', *Philosophical Review* 102 (1993): 457-88[Find it in your Library](#).

(4) See e.g. Henry Kyburg, 'Comments on Salmon's 'Inductive Evidence'', *American Philosophical Quarterly* 2 (1965): 274-6[Find it in your Library](#).

(5) See my 'Analyticity Reconsidered', in *Nous* 1996; Harman's reply, 'Analyticity Regained?' is in the same issue. Quine's classic discussions are 'Truth by Convention' and 'Carnap and Logical Truth', both repr. in W. Quine, *The Ways of Paradox and Other Essays*, 2nd edn. (Cambridge, Mass.: Harvard University Press, 1976)[Find it in your Library](#).

(6) I base my account of Quine on Crispin Wright's treatment in 'Inventing Logical Necessity', in J. Butterfield (ed.), *Language, Mind and Logic* (Cambridge: Cambridge University Press, 1984)[Find it in your Library](#).

(7) Notice that LP states that it is necessary that our belief in MPP be justified if we are to be entitled to reason in accordance with it. It says nothing about which of these notions will be prior to the other in the order of explanation. This will become important later on.

(8) Saul Kripke, *Wittgenstein on Rules and Private Language* (Cambridge, Mass.: Harvard University Press, 1980)[Find it in your Library](#).

(9) See Hartry Field's 'Apriority as an Evaluative Notion,' this volume.

(10) At various point in his writings, Christopher Peacocke seems to come close to suggesting that we can explain the apriority of our knowledge that, say, MPP is valid by supposing that acceptance of its validity is built into the possession conditions for conditional (his preferred example is conjunction). Thus he writes in 'Explaining the A Priori' (this volume), of a special case 'in which it is written into, or is a consequence of, the possession conditions for one or more concepts in [a] given principle that to possess those concepts, the thinker must be willing to accept the principle, by reaching it in a [given] way. This seems to be the case for acceptance of the a priori principle that from A and B, it can be inferred that A, where the way in question is accepting inferences one finds non-inferentially compelling.' This seems to imply that believing the principle 'A and B imply A' is a precondition for having the concept conjunction. If so, then it is subject to the objection specified in the text. If it does not imply that, if it is taken merely to be the claim that *inferring* accord to this rule is a precondition for having conjunction, then it falls short of explaining our entitlement to the belief itself.

(11) These and other norms are discussed in Robert Nozick, *The Nature of Rationality*, (Princeton: Princeton University Press, 1993)[Find it in your Library](#).

(12) Allan Gibbard, *Wise Choices, Apt Feelings* (Cambridge, Mass.: Harvard University Press, 1990)[Find it in your Library](#).

(13) David Velleman has emphasized this point to me.

(14) Now, it is true that there exist accounts of how an argument confers justification on a conclusion that would effectively transform a rule-circular justification into a grossly circular one. Here is one such (discussed but not endorsed by William Alston in 'Epistemic Circularity', in *Philosophy and Phenomenological Research* 47 (1986))[Find it in your Library](#):

((A)) S is justified in believing the premisses, q.

((B)) q and p are logically related in such a way that if q is true, that is a good reason for supposing that p is at least likely to be true.

((C)) S knows, or is justified in believing that the logical relation between q and p is as specified in (B).

((D)) By virtue of S's inferring p from q, justification is conferred on S's belief that p.

If these were the correct requirements on an argument's conferring a justification on the belief that p, there would be an obvious conflict between them and rule-circular justifications. For (C) requires that, if S is to use an argument using modus ponens to support modus ponens, S has to know that being

related by way of modus ponens is truth-preserving. But that would make the inference otiose: the knowledge arrived at is already presupposed. It is clear, however, that (C) is far too strong a requirement on inferential justification in general, and so I reject this way of accusing rule-circularity of begging the question.

(15) The example is Crispin Wright's, drawn from his commentary on this paper at the Stirling Conference on Naturalism.

(16) This represents one particular way of formulating a conceptual role semantics. There are other, less truth-theoretic more purely 'use-theoretic' formulations. In this paper I cannot discuss the reasons for preferring this formulation over the others. Effectively, they have to do with the requirement that connectives like 'tonk' should turn out not to express a meaning and this seems to me to demand a truth-theoretic formulation. However, the epistemic purposes to which I wish to put a conceptual-role semantics in this paper would be unaffected by this particular issue. For an important defence of a distinct, though related, truth-theoretic version of a conceptual-role semantics, see Christopher Peacocke, *A Study of Concepts* (Cambridge, MA.: MIT Press, 1992)[Find it in your Library](#).

(17) I have tried to give some of them in 'Analyticity Reconsidered'.

(18) This line of thought provides one way of understanding Wittgenstein's remark: 'To use a word without justification does not mean to use it without right' (para. 289 of *Philosophical Investigations*). For further discussion see my 'How Are Objective Epistemic Reasons Possible?', forthcoming [Find it in your Library](#).

(19) Dummett, *Logical Basis of Metaphysics* (London: Duckworth, 1991): 202 [Find it in your Library](#).

(20) T. Nagel, *The Last Word* (Oxford: Oxford University Press 1997): 5 [Find it in your Library](#).

(21) Can we make sense of the idea that we are relying on only *one* application of a rule of inference? We do routinely discuss whether the application of a rule should be restricted—as when we debate whether MPP should be restricted in sorites cases—and that is enough to show that we *understand* what it would mean for a rule to apply in one context but not in another.