

Kadri Vihvelin

A Defense of a Reliabilist Account of A Priori Knowledge

ABSTRACT:

Kitcher's analysis of a priori knowledge has been widely criticised, by advocates of a so-called "modest" conception of a priori knowledge, for imposing unreasonably high standards for a priori knowledge. More recently, it has been criticised for entailing that it's impossible for us to have empirical knowledge of an a priori knowable proposition. I defend Kitcher's analysis against both charges. In so doing, I note that Kitcher's analysis does not entail the conclusions that Kitcher defends; in particular, it is consistent with our having a priori knowledge of mathematical truth.

Perhaps the best known account of a priori knowledge in the recent literature is the analysis given by Philip Kitcher in his book, *The Nature of Mathematical Knowledge*.¹ Kitcher's account may be regarded as an explication of the traditional idea that a priori knowledge is knowledge that is independent of experience. The account is subtle and modally complex, but the basic idea is not hard to grasp. What distinguishes a priori from empirical knowledge is the fact that neither the acquisition nor the continued possession of a priori knowledge depends, in any significant way, on experience. Someone who possesses a priori knowledge has a belief that she could have acquired regardless of the particular experiences she had; her belief is justified in a way that experience cannot undermine; her belief is true regardless of what experiences she has.

Kitcher's account has several important virtues. It treats a priori knowledge as a species of knowledge, locating it within the framework of a theory of knowledge and providing necessary and sufficient conditions for distinguishing empirical knowledge from a priori knowledge.² It makes no assumptions about either the sources or the content of a priori knowledge. It remains neutral on several controversial questions, including the question of whether there are any synthetic a priori knowable truths and the question of whether we have a priori knowledge of any contingent truths.³ Finally, it remains neutral among a number of different theories of knowledge; the only assumption made by Kitcher is that the correct theory of knowledge is psychologistic rather than apsychological: we attain knowledge by undergoing a psychological process which (given the appropriate background conditions) provides a warrant for our belief.⁴ Given this neutrality within Kitcher's account, it looks like a promising starting point for trying to sort out the debate between a priorists and empiricists. It might turn out, for instance, that the disagreement lies in their different views about what is required for knowledge generally, rather than in a disagreement about what *a priori* knowledge requires.

Despite these virtues, Kitcher's account of a priori knowledge has been widely criticised and, for the most part, rejected on the grounds that the standards that it imposes are unfairly high. In particular, it's been objected that his account

requires that a priori knowledge be incorrigible, indubitable, and not rationally revisable. For suppose that S, a careful mathematician, believes that P on the basis of her proof, which is in fact sound. But anyone can make a mistake, and there are experiences which would provide S with rational grounds for believing that she's made a mistake. In these circumstances, S would not be justified in believing that P. But Kitcher's account says that someone knows a priori that P only if her belief would be justified regardless of what experiences she has. So according to Kitcher's account, S does not know a priori that P⁵ and, more generally, no mathematician has a priori knowledge of any mathematical truth. But this is unfair, according to Kitcher's critics. We should not be deprived of a priori knowledge of mathematics simply because we are fallible creatures.⁶

These criticisms of Kitcher's account have mostly gone unchallenged and the common perception is that Kitcher's account is unsatisfactory because it unfairly stacks the deck against the defender of a priori knowledge.⁷ The general consensus in the literature seems to be that we need a "modest" account of a priori knowledge, one that allows us to have an a priori justified belief even though future experience could reveal that our belief is mistaken, or not justified, or both.⁸

I'm not impressed by these criticisms. I agree that it seems reasonable to want an account of mathematical knowledge to allow for the possibility of error, but it isn't obvious that we have a right to demand that such an account turn out to

be an account of a *priori* knowledge. And in the absence of an analysis of “modest” a priori knowledge, we have, it seems to me, no real alternative to Kitcher’s account.⁹

There is, however, a criticism of Kitcher’s account that looks more serious. The criticism, due to Albert Casullo¹⁰, is that Kitcher’s account fails to meet a criterion of adequacy for any account of a priori knowledge, a criterion acknowledged by Kitcher himself¹¹: that it allow for the possibility that we have empirical knowledge of propositions that are a priori knowable.

This is a potentially devastating objection. It’s controversial whether we have *any* a priori knowledge, so we can’t reject an analysis on the grounds that it makes a priori knowledge difficult to attain. But it’s uncontroversial that we have empirical knowledge of propositions that are (if there is a priori knowledge) also a priori knowable. We know by induction that all bachelors are unmarried, by sense perception that it’s raining or it’s not raining, by the experience of repeated failed attempts that there is no route by which one can cross all seven bridges of Konigsberg without recrossing at least one bridge.¹² And so on. If an account of a priori knowledge entails that we cannot have both empirical and a priori knowledge of any proposition, then that’s sufficient reason for rejecting the account.

I’m going to defend Kitcher’s account against this objection. I will do this by spelling out the details of Kitcher’s analysis, and pointing out what it does and

does not entail. It will turn out that Kitcher's account is more modest and less demanding, in some ways, than is commonly supposed. In doing this, I want to make it clear that I'm looking *only* at Kitcher's analysis, as opposed to the use to which Kitcher puts it. I suspect that Casullo has been led astray by the way in which Kitcher *uses* his analysis as part of his argument against a priori knowledge. In doing so, Kitcher relies on certain assumptions about knowledge and justification, assumptions which are not forced on us by the analysis itself. In what follows, I will ignore these additional assumptions.

The first part of Kitcher's account says that S has a priori knowledge that P just in case she knows that P (by our ordinary standards of what counts as knowledge) and her belief that P was produced by a special kind of process -- a process that is an a priori warrant for the belief. The rest of the account provides necessary and sufficient conditions for its being the case that a process N is an a priori warrant for S's belief that P in a situation in which S *in fact* knows that P.

Here is the rest of the account as given by Kitcher:

N is an a priori warrant for X's belief that p if and only if N is a process such that, given any life e, sufficient for x for p,

- a) some process of the same type could produce in X a belief that p

- b) if a process of the same type were to produce in X a belief that p, then it would warrant X in believing that p
- c) if a process of the same type were to produce in X a belief that p, then p.¹³

Simplifying slightly (I'm ignoring the first clause), the basic idea is that N is an a priori warrant for someone's belief that P just in case the *knowledge* produced by N depends *only* on the person's actual cognitive capacities and understanding of the proposition, and not at all on her sensory experience. If I know that P by way of an empirical process E, then my knowledge is *fragile* insofar as there are counterfactual situations in which my experience is slightly or greatly different and at which I believe P but do not know it, either because my belief is false or because E does not, in this situation, provide a warrant for my belief. But if I know that P by way of an a priori process N then my knowledge is robust in this respect: there are *no* counterfactual situations in which I've got my actual cognitive capacities and in which I believe P by way of N but do not know that P. (At every relevant counterfactual situation, my belief is true and N is a warrant for it.) The standard of justification required for a belief-producing process to count as an a priori warrant is more demanding than what's required for empirical knowledge, but not in the sense that the standard in any particular situation is *higher*; it's more demanding in the sense that a priori knowledge

requires what Kitcher calls an “ultra-reliable” warrant¹⁴ and what we might call a *metaphysically reliable* warrant -- a warrant that obtains, not just at the actual world but at all (relevant) possible worlds.

Before we consider the criticism that Kitcher’s account doesn’t allow for the possibility that someone has empirical knowledge of a proposition that can be known a priori, let’s note what his account *doesn’t* say.

First, note that the account does not say or entail that someone who knows a priori that P is *certain* that P or even *confident* that P. Nor does it entail that she has *no reason to doubt P*. This seems right. Consider a brilliant but insecure mathematician who believes that P on the basis of a complicated but flawless proof. She doesn’t feel certain, isn’t confident, and has reasons for doubting the conclusion. (Anyone can make a mistake.) But as a matter of fact (even though the mathematician doesn’t know this for certain) her belief *was* produced by a process N that satisfies Kitcher’s conditions for being an ultra-reliable process.¹⁵ Kitcher himself doesn’t think the mathematician has a priori knowledge.¹⁶ But so far as his *analysis* is concerned, it’s not ruled out simply because the mathematician lacks certainty, confidence, and has rational grounds for doubt.

Second, note that the account does not say or entail that S knows a priori that P only if she has second order beliefs or knowledge concerning her first order knowledge. On Kitcher’s account, S may know that P without knowing that she

knows it, she may know it without believing that she knows it; she may know it without believing that process N provides her with a warrant for believing it. She may even know it without believing that she is, *all things considered*, justified in believing it. Again, this seems right. Consider again our mathematician with the complicated but in fact flawless proof. Add the following facts to the story. The proof is, so far as the mathematician can tell, flawless; she has checked it carefully many times. So have many other mathematicians, and no one has been able to point to a mistake, but there is widespread skepticism in the mathematical community about her result. The skepticism is well-founded insofar as our mathematician's result contradicts a body of generally accepted mathematical "knowledge". Nevertheless, her proof stands, so far unchallenged. In this situation, the mathematician might believe the conclusion of her proof while suspending belief, at the second order level, concerning the justification of her first order belief. If so, then Kitcher's account allows us to say what seems to me intuitively right: the mathematician knows that P even though she does not believe that she is justified in believing that P.

Finally, note that the account says nothing about defeasibility. Granted, it says that beliefs produced by a nonempirical process N are such that the warrant conferred *by N* on the belief obtains at all relevant counterfactual situations. This might be expressed by saying that the warrant conferred by N is indefeasible, but

we have to be careful here. For note that Kitcher's account doesn't entail any consequences concerning the counterfactuals true of someone who believes that P as the result of some *other* process. For instance, it does not entail that if perceptual process R were to produce in S the belief that P, then *it* would warrant S in believing that P, regardless of experience. Nor does it say that if S believed P by way of R, then the justification conferred *by R* on S's belief that P would be indefeasible.

On Kitcher's view, it's a mistake to think of the a priori/empirical distinction as one that applies primarily to propositions or to beliefs. The a priori/empirical distinction is a distinction between *ways of knowing*, and Kitcher's account provides us with the necessary and sufficient conditions in virtue of which it's true that a belief-producing *process* counts as an a priori way of knowing. Given this, we may speak of propositions as a priori and of beliefs as a priori justified or justifiable. But this should always be understood as relative to ways of knowing. An a priori proposition is one which we *can* know by way of some a priori way of knowing (and which may also be knowable some other way). A belief that P is a priori justified or justifiable if there is some a priori way of knowing by which we *do* believe P or *can* believe P (and which we may also be able to believe in some other way).

Now that we've clarified what Kitcher's account says and doesn't say, let's take a look at Casullo's criticism. Even though Kitcher explicitly says that he designed his account to allow for the possibility that someone knows empirically an a priori knowable proposition, Casullo thinks that the analysis Kitcher gives forces him to say that this is impossible for the following reason: Suppose, for the sake of reductio, that S knows empirically that P, where P is any a priori knowable proposition. An empirical justification is, on anyone's view, defeasible by experience. But an a priori justification is, according to Kitcher, *not* defeasible by experience. So if S's belief that P is empirically justified, then it both is and is not empirically defeasible. To avoid contradiction, Kitcher must deny that the same proposition may be known both empirically and a priori.¹⁷

But while this might be a reductio argument against *someone's* account of a priori knowledge, it's not a reductio argument against Kitcher's account. Kitcher's account is able to do just what he designed it to do -- to allow for the possibility that someone has empirical knowledge of an a priori knowable proposition. It also allows for the possibility that someone first knows something empirically and then later comes to know it a priori.

Let's use an example to make the case more vivid. Let P be the Four Color Theorem, which says that four colors suffice to color any map. There is now a proof of the Four Color Theorem, a long and complicated computer-generated

proof. But let's set aside worries about a priori knowledge of computer-generated proofs, and assume, for the sake of argument, that the Four Color Theorem is an a priori knowable proposition.¹⁸ What's uncontroversial is that we have empirical knowledge of the Four Color Theorem. Mapmakers have this knowledge by way of the inductive experience of drawing many different kinds of maps and discovering that four colors are always enough. The rest of us have this knowledge by way of the testimony of mapmakers. Let's pick someone, S, and suppose that she begins with empirical knowledge of P by way of the testimony of mapmakers and later learns the proof and thus acquires a priori knowledge of it.

Kitcher's account allows us to say this. Here's how. On his theory of knowledge, a necessary condition of knowing anything - empirically or a priori -- is that we undergo a certain kind of psychological process in coming to know it. We may know a proposition in more than one way. For instance, S may know that it's raining outside by way of testimony (R, who is standing by the window, tells her) and by way of perception (S looks out the window herself). Where this is so, what defeats the warrant conferred on the belief by one process does not thereby defeat the warrant conferred by the other. If S discovers that R is a pathological liar, then this discovery defeats the warrant conferred by *testimony* on her belief that it's raining. But it doesn't defeat the warrant conferred by *perception*, and S remains justified in her belief that it's raining.

The same thing is true in cases where one of the two ways in which someone knows something is a priori. After S learns the proof for the Four Color Theorem, S knows that P in two independent ways -- by way of the empirical process of testimony (E) and by way of the a priori process of mathematical proof (N). The warrant conferred on her belief by E is, like other empirical warrants, defeasible in the sense that there are experiences that suffice to make it the case that S is *not* justified in believing P *on the basis of E*. If S discovers that the mapmaker she consulted is incompetent or untrustworthy, this discovery defeats the warrant conferred by E on her belief that P, and S will no longer be warranted in believing that P *on the basis of E*. But this unhappy empirical discovery doesn't defeat the warrant conferred on S's belief that P *by way of the Four Color Theorem*, and it does not undermine S's a priori knowledge that P.

So Kitcher's account does not rule out the possibility of empirical knowledge of a priori knowable propositions. If we want to reject his account, we must find some other reason to do so. But it seems to me that his account of a priori knowledge is more fully developed than most accounts and as plausible as any.¹⁹

NOTES

¹ Oxford: Oxford University Press, 1983. The basic account is also presented in "A Priori Knowledge", The Philosophical Review 84 (1980), 3-101; "A Priority and Necessity", Australasian Journal of Philosophy (58) 1980, 89-101; and in "How Kant Almost Wrote 'Two Dogmas of Empiricism'", Philosophical Topics 12 (1981), 217-249.

² This might seem an obvious point, but despite the recent revival of interest in a priori knowledge, attempts to provide an analysis (in the old-fashioned sense of providing necessary and sufficient conditions) are few and far between. But see Donna Summerfield, "Modest A Priori Knowledge" Philosophy and Phenomenological Research 51 (1991) 39-66) for a criticism of Kitcher's account and an articulation of a "minimal" or "modest" conception of a priori justification.

³ Kitcher argues that it's a virtue of his account that it allows us to have a priori knowledge of some contingent truths about ourselves. (pp.29-30, The Nature of Mathematical Knowledge, *ibid.*)

⁴ p. 17, *ibid.*

⁵ At least, this is what both Kitcher's critics and Kitcher think that his account says. I'm not so sure. For more on this, see below.

⁶ For some criticisms to this effect, see Albert Casullo, "Revisability, Reliabilism, and A Priori Knowledge", Philosophical and Phenomenological Research 49 (1988), 187-213 and "Necessity, Certainty, and the A Priori", Canadian Journal of Philosophy 18 (1988) 43-66.

⁷ In a more recent article ("The Naturalists Return", The Philosophical Review 101 (1992) 53-115), Kitcher seems to acknowledge the legitimacy of these complaints: "It may be held that this is defensible only in a strained and idiosyncratic sense of 'a priori'... I sympathize with those who think that my analysis of a priority somehow stacks the deck, and invite them to articulate a notion of apriority that will both cleave to the venerable idea of independence from experience and also avoid the negative conclusions which I reach." (p.77)

⁸ See the articles by Casullo (note 6) and Summerfield (note 2). For two older defenses of a modest conception of a priori knowledge, see Roderick Chisolm, "The Truths of Reason", from Theory of Knowledge, (Prentice-Hall, 1977) and John Pollock, "Truths of Reason", in Knowledge and Justification, (Princeton: Princeton University Press, 1974).

⁹ Could a modest a priori account be based on the idea that a priori knowledge can be acquired independently of experience? It's far from clear how such an account would go. The difficulty lies in the nested modality of the 'can' claim. At the actual world, S knows that P. We are trying to determine whether S's knowledge is empirical or a priori. The answer, according to the modest view, is that it's a priori if S could have known that P even if her experiences had been very different. The first problem is to say how different S and her experiences are allowed to be. (Presumably we must preserve S's cognitive capacities, and enough experience so that S has the concepts required to understand P). The second problem, which is more serious, is to say what facts we hold constant when we evaluate, from the standpoint of the nonactual worlds where S has different experiences, whether S could have known

that P. Just the facts about S's cognitive capacities? All the facts about S, including the epistemic situation she is in? It's not clear that there is any answer that gives the intuitively right results in all the noncontroversial cases while providing us with guidance about the controversial and unclear cases.

¹⁰ "A Priori Justification", presented at the Pacific APA meetings, April, 1997.

¹¹ p.22, *ibid.*

¹² I owe this example to Ray Bradley and Norman Swartz, who use it as an example of a proposition which was first learned empirically by the townspeople of Konigsberg and later relearned a priori when the mathematician Leonard Euler provided a proof. The example is found on pp.151-152 of the Bradley/Swartz book, Possible Worlds: An Introduction to Logic and its Philosophy, (Indianapolis: Hackett, 1979).

¹³ p.24, The Nature of Mathematical Knowledge, *ibid.*

¹⁴ P.24, *ibid.*

¹⁵ See p. 39, *ibid.*, for Kitcher's account of these conditions.

¹⁶ See p. 65 of The Nature of Mathematical Knowledge, where he argues, contra Kripke, that a priori knowledge requires certainty: "The reasonable doubt which arises when we follow complicated proofs can be exploited by circumstances in which we receive criticism rather than applause from the learned world. Reasonable uncertainty is typically compatible with knowledge because of the kindly nature of background experience. Transform the quality of our lives, and that knowledge could no longer coexist with the uncertainty."

¹⁷ This is a summary of the argument that Casullo gives on pp. 13-14 of "A Priori Justification", *ibid.*

¹⁸ See Paul Teller's "Computer Proof" (The Journal of Philosophy 1980, 797-803) for argument against the claim that a computer-generated proof which is "unsurveyable" in the sense that it is too long to be checked by a single human being is *for that reason* an empirical rather than an a priori method of attaining knowledge.

¹⁹ For helpful comments on an earlier version of this paper, I am grateful to Albert Casullo, Robin Jeshion, Philip Kitcher, Janet Levin, Terrance Tomkow, and audience members at the symposium on a priori knowledge at the 1997 Pacific APA meetings.

School of Philosophy
University of Southern California
Los Angeles, CA 90089-0451
USA