Can A Priori Justified Belief Be Extended Through Deduction?

Introduction

It is often assumed that if one deduces some proposition p from some premises which one knows a priori, in a series of individually obvious deductively valid steps, one thereby comes to know p a priori. But Chisholm thinks that this assumption is in need of significant qualification. Chisholm says that when one deduces p from some premises one knows a priori in a *lengthy* series of individually obvious deductively valid steps, one has to rely on one's memory, and this means that one does not come to know p a priori (Chisholm 1977 44).

Burge, as he explains in "Content Preservation", disagrees with Chisholm. He shares Chisholm's view that when one deduces p through a lengthy series of steps from premises which one knows a priori, one has to rely on one's memory in some sense—indeed, Burge thinks that anyone reasoning in time has to rely on his memory in some sense—but according to Burge, this does not mean that one does not thereby come to know p a priori (Burge 1993 457).

I will focus on the analogous debate about a priori justified belief, and use some lessons from this debate in order to draw some conclusions about the nature of justified belief itself, and in particular about the debate between internalists and externalists about justification. My discussion will also clearly be relevant to the viability of foundationalism as a general idea.

The debate between internalists and externalists about justification is spelled out in different ways by different philosophers.[1] I will take internalism to be the thesis that one justifiably believes p just in case one is either "directly" justified in believing p or one possesses a justification for one's belief in p, in a sense, to be defined later, which crucially involves *having access* to an argument for p. Internalism, as I understand it, is therefore a version of foundationalism.[2] I take externalism to be the thesis that justifiably believing p *never requires* possessing a justification for one's belief in it, in the internalist's sense.[3]

I argue that if one adopts the internalist's view of justified belief, and the view of a priori justified belief that goes with it, then Chisholm's view turns out to be right: a priori justified belief cannot be extended through lengthy deductions. This result provides some vindication for Chisholm, since he is a proponent of this sort of view about justified belief.[4,5] However, I argue that Chisholm's is a pyrrhic victory: the upshot of our discussion is that internalism about justification, as we will be understanding it, has even more fundamental problems, and leads to an even deeper skepticism, than it may seem to at first.

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[1] See Kornblith (2001a) for a collection of papers about the debate between internalists and externalists.

[2] It is also very closely related to what Hilary Kornblith refers to as the traditional view of justification, "[A]ccording to tradition, what is required for a person to *be* justified in holding a belief is for that person to *have* a certain justification for the belief, where having a justification is typically identified with being in a position, in some relevant sense, to produce an appropriate argument for the belief in question" (Kornblith 2001b 2).

[3] See Goldman (1979) and Dretske (2000).

[4] Chisholm writes, "We presuppose, second, that the things we know are justified for us in the following sense: *we* can know what it is, on any occasion, that constitutes our grounds, or reason, or evidence for thinking that we know. If I think that I know that there is now snow on the top of the mountain, then…I am in a position to say what ground or reason I have for thinking that there is now snow on the top of the mountain" (Chisholm 1977 17).

[5] Burge may well be right from his own externalist perspective. I leave this as an open question.

§1. Internalism About Justification

Our internalist is a foundationalist. So she starts with a distinction between two sorts of propositions. On the one hand, there are propositions which one may be "directly" or "immediately" justified in believing. On traditional views, the propositions which one may be directly justified in believing are limited to those which are in some sense self-evident: simple mathematical and conceptual truths, as well as certain truths about one's present thoughts and experiences. On some views, propositions about the external world which are "directly observable" at the present time are also included.

On the other hand, there are propositions which one has to possess a justification for in order to justifiably believe. These are propositions whose truth is not self-evident, such as that the earth revolves around the sun, and that the Declaration of Independence was signed in 1776. In general then, on the internalist's view, one justifiably believes a proposition p iff either one is directly justified in believing p or one possesses a justification for one's belief in p.

This account of justified belief raises two obvious questions. First, what does it take to be directly justified in believing something? Second, what does possessing a justification for one's belief in p consist in? I am going to assume for the sake of argument that the internalist has an answer to the first question, and focus on the internalist's answer to the second question.

On the internalist's view, possessing a justification for one's belief in p is supposed to be sufficient for justifiably believing p. In this section, we will consider various proposals regarding what it might mean to possess a justification for one's belief

in p, rejecting those proposals which do not meet this constraint, until we reach the internalist's proposal.

We might say that one possesses a justification for one's belief in p iff one believes p and there is a (non-circular) argument for p whose premises one justifiably believes.[6] But it is clear that one might possess a justification for one's belief in p in this sense without justifiably believing p. For imagine that one believes p, and that there is an argument for p with premises one justifiably believes, but that those premises have nothing to do with the truth of p. Clearly one might fail to justifiably believe p in that case.

So we might propose that one possesses a justification for one's belief in p iff one believes p and there is a *valid* argument for p, each of whose premises one justifiably believes. But it seems that one might possess a justification for one's belief in p in this sense without justifiably believing p. For suppose that one justifiably believes some propositions A_1 and A_2, and suppose further that p in fact follows from A_1 and A_2, but it is not obvious that this is so; it is complicated to prove. However, for some reason, one just assumes that p follows directly from A_1 and A_2, and so one infers p directly from A_1 and A_2. Intuitively, one does not thereby come to justifiably believe p. But one believes p, and there is a valid argument for it, each of whose premises one justifiably believes. Namely: A_1; A_2; therefore p.

So now we might propose that one possesses a justification for one's belief in p iff one believes p and there is an *obviously valid* argument for p whose premises one justifiably believes. This gets us the correct result that one does not possess a justification

[6] Let us assume throughout that when we talk about arguments we are talking about non-circular arguments.

for one's belief in p in the case described above. For in that case, although there is a valid argument for p whose premises one justifiably believes—namely: A_1; A_2; therefore p—it is not an obviously valid argument.

I think that there are some very important issues regarding what it means for an argument to be obviously valid; it is, I think, a difficult idea to spell out correctly. But I will put these problems aside and focus on a different problem for this proposal. Philip Kitcher expresses this problem when he writes:

> By the mid 1970s a powerful argument for psychologistic epistemology had emerged. Take any set of favored logical relations among propositions that a subject believes. It is nonetheless possible that the subject lacks knowledge and lacks justification because the *psychological* connections among her states of belief have nothing to do with the logical relations. Thus, to take an extreme example, assume that a subject justifiably believes that p, justifiably believes that p → q, and believes that q. It might seem that the belief that q must be justified because there is an elementary logical inference to q from propositions that are justifiably believed. Nonetheless, it is easy to understand that the causes of the subject's belief may have nothing to do with this elementary inference, that she fails to make the inference, and believes that *q* because of some thoroughly disreputable generative process (Kitcher 1992 60).[7]

Kitcher's objection exploits what appears to be a genuine phenomenon about belief: one may fail to believe a logical consequence, even an "elementary" logical consequence, of what one believes.[8] Indeed, that one may fail to believe even an elementary or obvious logical consequence of what one believes follows from the supposition that one may fail to believe at least some logical consequence of what one believes. For let q be a logical consequence of what one believes. Then there is a series of elementary steps from what one believes to q. Thus, if one believes every elementary logical consequence of what one believes, belief will transmit over those steps, and it will turn out that one believes q.

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[7] As Kitcher mentions, Goldman (1979) and Harman (1970) offer what is in effect the same argument as Kitcher offers here.

[8] See Stalnaker (1987) for an alternative view.

So let q be an elementary logical consequence of some things which one justifiably believes—for instance, suppose one justifiably believes p and if p, then q. Suppose further that one fails to believe q. One might, says Kitcher, come to believe q "because of some thoroughly disreputable generative process," say the testimony of someone unreliable. If so, then it seems that one does not justifiably believe q. However, one believes q and there is an obviously valid argument for q whose premises one justifiably believes. Namely: p; if p, then q; therefore q.

In response to Kitcher's problem, one may formulate a new proposal. One might say that the reason one does not justifiably believe q in Kitcher's case is that one's belief in q is not *based on* one's belief in p and one's belief in if p, then q. But what is it for one's belief in p to be based on one's belief in the premises of some argument? The internalist's idea is that one's belief in p is based on one's belief in the premises of an argument just in case that argument is available or accessible to one for use in defending one's belief in p; in other words, just in case one is in a position to call up that argument to one's mind and offer it in defense of one's belief in p. So the internalist's proposal is that one possesses a justification for one's belief in p iff one believes p and one has access to an obviously valid argument for p whose premises one justifiably believes.

Note that, given the internalist's overall view, if one possesses a justification for one's belief in p then: one has access to an obviously valid argument for p; and for any premise of that argument which one is not directly justified in believing, one has access to an obviously valid argument for it; and for any premise of that argument which one is not directly justified in believing, one has access to an obviously valid argument for it; and so on and so forth. So if one possesses a justification for one's belief in p, then one

has access to a series of arguments which together constitute a proof of p, where a proof of p is an argument for p which has only obviously valid inferences as inferences and which has as premises only propositions which one is directly justified in believing.

The internalist's conception of *a priori* justified belief fits the same basic framework as her conception of justified belief itself: one justifiably believes p a priori iff one is either directly a priori justified in believing p, or one possesses an a priori justification for one's belief in p. Where one possesses an a priori justification for one's belief in p iff one believes p and one has access to an obviously valid argument for p whose premises one justifiably believes a priori. Note that, on this view, if one possesses an a priori justification for one's belief in p then one has access to a series of arguments which together constitute an a priori proof of p, where an a priori proof of p is an argument for p which has as inferences only obviously valid inferences and which has as premises only propositions which one is directly a priori justified in believing.

§2. Extending A Priori Justified Belief Through Lengthy Deductions

In this section, I show that if one uses the internalist's conception of a priori justified belief, then a priori justified belief cannot be extended through lengthy deductions. Furthermore, even in cases where one does come to justifiably believe one's conclusion a priori, because the reasoning one went through was sufficiently short, one will tend to lose a priori justified belief in that conclusion over time.

Suppose that one comes to believe p by making the following series of inferences, where each inference is, let us suppose, an instance of modus ponens, and where A_1 and A_2 are propositions which one is directly a priori justified in believing (at every time):

$$\frac{A_1}{A_2}\quad\frac{A_1}{C_1}\quad\frac{C_1}{C_2}\quad\frac{C_2}{C_3}\quad\ldots\quad\frac{C_{n-1}}{C_n}\quad\frac{C_n}{p}$$

p is not itself something which one is directly a priori justified in believing. Thus one justifiably believes p a priori, on the internalist's conception, only if one possesses an a priori justification for one's belief in p, and so only if one has access to an a priori proof of p.

One might say that one has access to an a priori proof of p because one has access to the argument: C_{n-1}; C_n; therefore p; and to the argument: C_{n-2}; C_{n-1}; therefore C_n; and to the argument: C_{n-3}; C_{n-2}; therefore C_{n-1}; and so on and so forth, all the way back to A_1; A_2; therefore C_1. In short, because one has access to every step of the proof of p that one just reasoned through. But human beings have limited cognitive capacities. In particular, our ability to access arguments after reasoning through them is limited: if an argument is relatively short, then it may be that every step of it is still available to one after one has finished reasoning through it, but not if it is sufficiently long. So if the proof one reasoned through was sufficiently long, one will not have access to every step of it when one finishes one's reasoning.

One might say that one has access to an a priori proof of p because one has access to the argument: A_1; A_2; if A_1 and A_2, then p; therefore p. But although one is directly a priori justified in believing the first two premises of this argument, one is not directly a priori justified in believing that A_1 and A_2 entail p. So only if one has access to an a priori proof of that proposition will it follow that one has access to an a priori proof of p.

One might suggest, taking inspiration from Descartes[9] (and Chisholm)[10], that one has access to something like the following argument in support of one's belief that A_1 and A_2 entail p: I seem to remember deducing p from A_1 and A_2 in a series of valid steps; I would not seem to remember this unless it was true; therefore A_1 and A_2 entail p. We may grant for the sake of argument that one justifiably believes the premises of this argument. In which case, it follows, at least on the internalist's own view, that one justifiably believes that A_1 and A_2 entail p, and hence that one justifiably believes p. But I take it that one is not directly a priori justified in believing either of the premises of this argument. Thus this suggestion does not work as an attempt to show that one has access to an a priori proof of the claim that A_1 and A_2 entail p, and hence to an a priori proof of p.

So if one deduces p in a sufficiently lengthy series of steps from some premises one is directly a priori justified in believing, one will not have access to an a priori proof of p when one finishes one's reasoning, and hence one will not be a priori justified in believing p. Furthermore, even when the proof that one reasoned through is short enough that one is able to access every step of it when one's finishes reasoning through it, one's

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[9] In a passage from *Rules for the Direction of the Mind*, which both Burge and Chisholm mention, Descartes compares learning something through a lengthy deduction to learning "that the last link in a long chain is connected with the first," in the sense that in such a case, "we do not take in by means of one and the same act of vision all the intermediate links on which that connection depends, but only remember that we have taken them successively under review" (Descartes 1969 8).

[10] Chisholm writes, "[Descartes] remarks in *Rules for the Direction of the Mind* that, if we can *remember* having deduced a certain conclusion step by step from a set of premises that are 'known by intuition,' then, even though we may not now recall each of the particular steps, we are justified in saying that the conclusion is 'known by deduction.' But if, in the course of a demonstration, we must rely upon memory at various stages, *thus using as premises contingent propositions about what we happen to remember*, then, although we might be said to have 'demonstrative knowledge' of our conclusion, in a somewhat broad sense of the expression 'demonstrative knowledge,' we cannot be said to have an *a priori* demonstration of the conclusion" (Chisholm 1977 44, my emphasis).

access to that proof will tend to fade over time. When it does fade, one will no longer have access to an a priori proof of one's conclusion, and hence one will no longer be a priori justified in believing it. So even when one comes to be a priori justified in believing something through a deduction, one's status as being priori justified in believing it is fragile and temporary, on the internalist's view.

§3. A Problem For Internalism About Justification

Internalism about justification clearly faces some problems. It seems clear that children and animals may have knowledge and therefore justified beliefs, but, on the face of it, children, and especially animals, do not possess justifications for their beliefs in the sense we have defined. Even saying that adult human beings possess justifications for their beliefs, in the required sense, seems quite unrealistic, especially once one gets more clear on exactly what that would involve. In this section, I will argue, using our results from the previous section, that internalism has more fundamental problems, and leads to an even deeper skepticism, than philosophers often realize.

I will suppose that the internalist takes a Cartesian view about what is given or foundational. I will suppose, that is, that the propositions which one is directly justified in believing are limited to certain propositions about one's present experiences and thoughts, as well as simple mathematical and conceptual truths. Once we see what the problems are for the Cartesian version of internalism, I think it will be relatively clear that moving to a more inclusive view—where, for instance, one is also directly justified in believing those things which one is "directly observing" to be the case at the present

time—will not help the internalist escape radical skepticism. But I will not demonstrate that here.

Consider some proposition about the external world. According to the Cartesian internalist, one justifiably believes this proposition only if one possesses a justification for it, and so only if one has access to a proof of it. That is, only if one has access to an argument for it which has as inferences only obviously valid inferences and which has as premises only propositions which one is directly justified in believing. So on the Cartesian internalist's view, that one justifiably believes a proposition about the external world requires that there *be* a proof of it.

If there are a priori proofs of the reliability of one's perceptual and cognitive faculties, then there are proofs (but not a priori proofs) of propositions about the external world. For one may combine those a priori proofs with claims about one's present thoughts and experiences to form proofs of propositions about the external world. But it seems clear that there are no a priori proofs of the reliability of one's perceptual and cognitive faculties, and thus that there are no proofs of propositions about the external world. This is often seen as the fundamental problem for Cartesian views.

But the problems for the Cartesian internalist are even worse than this. *Even if there were a priori proofs* of the reliability of one's perceptual and cognitive faculties, that still would not be enough to enable the Cartesian internalist to show that it is possible for us to justifiably believe things about the external world. For suppose for the sake of argument that there are such proofs. Then the Cartesian internalist might propose that, in that case, one may come to justifiably believe some proposition p about the external world as follows.

First, one reasons through an a priori proof of, say, the reliability of one's vision, thereby coming to believe that one's vision is reliable. Then, upon seeming to see that p, one concludes that p. One justifiably believes p, says the internalist, because one believes p and one has access to an obviously valid argument for p whose premises one justifiably believes. Namely: I seem to see that p; my vision is reliable, i.e., I would not seem to see that p unless p; therefore p.

But one justifiably believes that one's vision is reliable only if one has access to a proof of that proposition. If the a priori proof that one reasoned through was sufficiently long, then one will not have access to that proof. So if the proof that one reasoned through was sufficiently long, one will not justifiably believe p. Thus only *sufficiently short* a priori proofs of the reliability of our perceptual and cognitive faculties are enough to enable the Cartesian internalist to show that we may justifiably believe things about the external world. So the problems for the Cartesian internalist are even worse than they might seem.

If we assume that there are no such a priori proofs, then the Cartesian version of internalism leads to an even deeper skepticism than one might think. It is clear that, on this view, it will be impossible for us to justifiably believe things about the external world. But it will also be impossible for us to justifiably believe complex logical and mathematical truths. For let p be some mathematical or logical truth. There will then be an a priori proof, and thus a proof, of p. Imagine that it is like the proof of p given in §2.

The Cartesian internalist might say that one may come to justifiably believe p by reasoning through that a priori proof. But one thereby comes to justifiably believe p only if, by the time one finishes one's reasoning, one has access to a proof of p. If the proof

that one reasoned through was sufficiently long, as it will be if p is complex, then one will not have access to every step of it when one finishes reasoning through it. So one will not have access to that proof of p. Furthermore, even if the proof that one reasoned through was short enough that one is able to access it immediately after one finishes one's reasoning, one will tend to lose access to that proof over time.

One might say that in those cases—where either the proof is too long or one has lost access to it over time—one still justifiably believes p because one has access to the argument: A_1; A_2; if A_1 and A_2, then p; therefore p. But this suggestion will work only if one justifiably believes that A_1 and A_2 entail p, and hence only if one has access to a proof of that proposition, since one is not directly justified in believing it. One may have access to this argument: I seem to remember deducing p from A_1 and A_2 in a series of valid steps; my memory is reliable, i.e., I would not seem to remember this unless it was true; therefore A_1 and A_2 entail p. But that one has access to that argument only helps if one has access to a proof of the reliability of one's memory, since one is not directly justified in believing that one's memory is reliable. On the assumption that there is no such proof of the reliability of one's memory, this suggestion fails as well.

So on the Cartesian internalist's view, besides self-evident truths, all that one may be justified in believing are relatively simple consequences of those self-evident truths. Furthermore, even when one comes to justifiably believing those things, one's status as justifiably believing them will be fragile and temporary. For one will no longer justifiably believe them as soon as one loses access to the proof of them that one reasoned through.

Conclusion

Our arguments show that Chisholm turns out to be right from his own perspective: if one adopts his kind of internalism about justification, then a priori justified belief cannot be extended through lengthy deductions. This provides some vindication for Chisholm, but really it is a pyrrhic victory. It reveals that internalism about justification, at least of this sort, faces more fundamental problems, and leads to an even deeper skepticism, then it might seem to. Whether Burge is right from his own externalist perspective, and why that might matter to proponents of that perspective, we leave as an open question.

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