

## Skepticism and Reasoning to the Best Explanation

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In this paper I want to evaluate the extent to which reasoning to the best explanation provides a source of justification that will defeat traditional skeptical arguments. Unfortunately, however, so much of contemporary epistemology takes place in the shadow of certain metaepistemological debates over the nature of justified belief. The approach one should take to traditional skepticism, for example, depends very much on where one stands on the now famous internalism/externalism controversy. It is also impossible to adequately assess the plausibility of reasoning to the best explanation as a response to the skeptic without a more general discussion of the logic of reasoning to the best explanation. In 1, I shall discuss one version of the internalism/externalism controversy and assess its implications for the place of reasoning to the best explanation as a bulwark in the defense of commonsense against skepticism. In short, I will argue that unless one embraces

the view I call inferential internalism, it is extremely doubtful that one will have any need to employ reasoning to the best explanation in replying to the skeptic. In 2, I shall explore the question of whether there is a legitimate sort of reasoning that we may reasonably call reasoning to the best explanation and that constitutes a genuine alternative to classical enumerative induction. Although I will conclude that the existence of such a mode of reasoning is at least doubtful, I will go on to discuss the question of whether standard models of reasoning to the best explanation, even if they were legitimate, would provide one with ammunition against skepticism.

## 1 Metaepistemology and the Internalism/Externalism Controversy

A metaepistemological question is a question concerning the meaning of epistemic terms or, if you prefer, the nature of epistemic concepts or properties. The dominant metaepistemological controversy today is the internalism/externalism debate. I have discussed the controversy at some length elsewhere,<sup>1</sup> so I will confine myself to just a few observations that are important concerning the presuppositions I will bring to my discussion of reasoning to the best explanation.

Despite occupying center stage in contemporary epistemology, the internalism/externalism controversy is not that easy to characterize. Paradigm externalists seem to want to either *define* epistemic terms using nomological concepts or at least view paradigm epistemic properties as *supervenient* upon such nomological properties. Indeed, I would argue it is precisely this willingness to view epistemic properties as reducible to, or supervenient upon nomological or other natural relations that is the most profitable way of distinguishing paradigm externalists from paradigm internalists. Thus Armstrong defining basic knowledge in terms of causal inter-

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<sup>1</sup>See my "The Internalism/Externalism Controversy", *Philosophical Perspectives*, 2, 1988, 443-59, and "Metaepistemology and Skepticism", in *Doubting*, ed. by Roth and Ross (Dordrecht: Kluwer, 1990), 57-68.

action, Goldman analyzing justification in terms of reliability which in turn is to be understood in terms of propensities or probabilities, Nozick defining knowledge and justified belief in terms of the truth of contingent subjunctive conditionals, all offer paradigmatic externalist analyses of epistemic terms precisely because all are prepared to understand the conditions under which knowledge or justified belief exists without introducing any *sui generis* primitive epistemic concepts.<sup>2</sup>

While the above is one, and I think the best, way of understanding the internalism/externalism controversy, it is also often introduced as a controversy over the implications of having knowledge for knowing that one knows, or having a justified belief for having a justified belief that one has a justified belief. Thus externalists will often distinguish their views from internalist views by claiming that internalists mistakenly assume that if one knows or has a justified belief that *P* one has *access* to, or at least the possibility of *access* to, the conditions sufficient for knowledge or justified belief. Since "access" is itself an epistemic term, such a view would seem to amount to the claim that knowing entails knowing that one knows; having a justified belief entails being justified in believing that one has a justified belief. On the strongest version of this view, one must not only be able to access the conditions for knowledge and justified belief, one must be able to access those conditions by examining nothing other than the contents of one's mind.<sup>3</sup>

Now if one defines internalism this way, it is small wonder that so many externalists charge internalism with simply inviting skepticism. On the face of it the "access" internalist faces an obvious vicious regress. If knowledge that *P* involves knowing that one knows that *P*, and having a justified belief that *P* involves being justified in believing that one has a

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<sup>2</sup>See D.M. Armstrong, *Belief, Truth, and Knowledge* (London: Routledge and Kegan Paul, 1968), Alvin Goldman, "What is Justified Belief?", in Pappas ed. *Justification and Knowledge* (Dordrecht: Reidel, 1979), 1-23, and Robert Nozick, *Philosophical Explanations* (Cambridge: Harvard University Press, 1981).

<sup>3</sup>See Roderick Chisholm, *Theory of Knowledge*, 3<sup>rd</sup> edition (Englewood Cliffs: Prentice Hall, 1989), p. 76.

justified belief that *P*, how could anyone know or justifiably believe anything? Each justified belief would seem to require the having of an infinite number of increasingly more complex justified metabeliefs. The regress is in some ways worse than the regress pointed to in the traditional argument for foundationalism. After all, it is not clear that one cannot have an infinite number of justified beliefs. Indeed, there is at least an extended sense in which we all do have an infinite number of justified dispositional beliefs (that 2 is greater than 1, that 3 is greater than 1, and so on). The regress we are discussing here seems to require an infinite number of beliefs of increasing complexity. The mind boggles at the idea of even trying to keep track of the iterated intentional states at the level of the one millionth removed metabelief.<sup>4</sup>

There is, however, another principle regarding epistemic access to justification, which has much more plausibility. I call the view *inferential* internalism to distinguish it from the broader thesis discussed above. Inferential internalism maintains that someone *S* justifiably infers one proposition *P* from another *E* only if 1) *S* is justified in believing that *E* confirms or makes probable *P* and 2) *S* is justified in believing *E*. The view is, of course, highly controversial and all well-known versions of externalism deny at least condition 1). (Some externalists, reliabilists for example, will accept a version of condition 2) at least when the input of the reliable process is a *belief*—on Goldman's view only *justified* beliefs received as input can result via reliable processes in justified output beliefs.) I have argued for inferential internalism elsewhere<sup>5</sup> by defending the view that being justified in believing that *E* and that *E* makes probable *P* are, in part, constitutive of what it is to be justified in believing *P* on the basis of *E*, but I am not going to pursue the issue further here. I am interested in exploring the implications of accepting or

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<sup>4</sup>It should also be emphasized that if the stress is only on the possibility of access and the access need not be prospective, it is not at all clear that an externalist couldn't build such a requirement in to an externalist analysis. See again my "The Internalism/Externalism Controversy".

<sup>5</sup>See my *Metaphysical and Epistemological Problems of Perception* (Lincoln: University of Nebraska Press, 1985), Chapter 2.

rejecting inferential internalism for skeptical challenges and in particular for the role reasoning to the best explanation might play in defending commonsense from skeptical attack.

### 1.1 INFERENCEAL EXTERNALISM AND REASONING TO THE BEST EXPLANATION

Having made the distinction between inferential internalism and externalism, I want to suggest that it is extremely doubtful that the inferential externalist trying to answer the skeptic will have any *need* to introduce reasoning to the best explanation as a solution to skepticism. Let us remind ourselves of the traditional structure of skeptical arguments. The classic skeptical argument attempts first to drive a logical wedge between various commonsense beliefs and the evidence available to justify such beliefs. The strategy is to demonstrate that these beliefs, if justified at all, are only inferentially justified. Relying implicitly on the thesis of inferential internalism the skeptic then proceeds to deny that one can satisfy the internalist requirements, particularly condition 1). Thus skeptics with respect to the physical world attempt to establish that there is no way of justifiably believing that there is a connection between sensation and physical objects when all one is ever immediately aware of are sensations and their interconnections. Skeptics with respect to the past argue that there is no way to justifiably believe that memory experiences confirm or make probable propositions describing the past. Skeptics with respect to other minds argue that there is no way to justifiably believe that there is a connection between the behavior of certain bodies and the presence "in" those bodies of mental states.

Reasoning to the best explanation is often introduced as a way of bridging the relevant gaps. Thus Locke and sometimes Russell seemed to argue that we are justified in positing physical objects as the best explanation for the order and connections that we find in experience.<sup>6</sup> Past events can be introduced as the best explanation for the occurrence of

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<sup>6</sup>See Locke, *An Essay Concerning Human Understanding*, ed. Fraser (New York: Dover, 1959), Book IV, Chapter IX, esp. pp. 328-29, and

present memory experiences. We are justified in believing that others have minds precisely because positing their mental states would best explain their observed behavior. To assess these proposals we will, of course, need a more detailed conception of reasoning to the best explanation, but I want to stress now that, historically, reasoning to the best explanation seems to be put forth as a solution to skeptical challenges *within* the inferential internalist's framework. Indeed, if one accepts some version of inferential *externalism* it is difficult to see why one would think that one would have need of anything as abstract as reasoning to the best explanation. Consider, for example, the reliabilist's position. Beliefs are justified when they are the results of conditionally or unconditionally reliable processes. Some processes take as their input beliefs; others, take states such as experience. Again, as noted earlier, the belief-dependent processes will generate justified beliefs only when the input beliefs are themselves justified. Now when it comes to fundamental belief-forming processes like perception and memory it seems likely that the processes will be "self-sufficient" when it comes to reliability. That is, there is no particular reason to suppose that these processes can be subsumed under some more general belief-forming process like reasoning to the best explanation. And indeed, I think one of the things externalists like about their view is that it can accommodate both the pre-philosophical intuition that our commonsense beliefs are justified and the phenomenological fact that we do not *seem* to engage in any arguments in reaching conclusions about the world around us. Similarly when it comes to beliefs about the past, it hardly seems right, as a matter of empirical fact, to suggest that we typically engage in anything like a process of *reasoning* from premises to conclusions in believing what we do about the past. Again, the externalist can cheerfully point

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Russell, *The Problems of Philosophy* (London: Oxford, 1959) pp. 22-23. See also Mackie, "What's Really Wrong with Phenomenalism", *The Proceedings of the British Academy* 55, pp. 113-27. Locke doesn't say in so many words that he is employing reasoning to the best explanation, but it seems to me that this is the most reasonable account of what he is doing.

out that we do not, in fact, take the absence of conscious reasoning processes to preclude the possibility that these beliefs are justified and that *his* account of justification explains this datum nicely.

I suggested that one who accepts externalism would probably feel no particular need to try to subsume various fundamental belief-forming processes under some more general pattern of argument like inductive reasoning or reasoning to the best explanation. On the other hand, I should hasten to emphasize that if externalism were true, the philosopher *qua philosopher* should probably have no very strong opinions on what processes do and do not generate justified beliefs. More specifically, if there is something called reasoning to the best explanation, and it is a reliable belief-forming process, it is hard to see how we as philosophers would be in a particularly strong position to assert that it is a reliable belief-forming process. And this is a consequence of a much more general conclusion we can reach about externalist epistemologies. On virtually all externalist analyses of epistemic concepts, it becomes an *empirical* fact as to which beliefs are justified and which processes are those which generate justified beliefs. As noted earlier, it is usually a complex nomological fact of some kind. If reliabilism is true, are beliefs based on perception, or memory, or induction, justified? Why ask a philosopher? The philosophers I know don't do much by way of empirical investigation. It is true that some are turning to cognitive psychology to study the brain and its various functions, but cognitive psychology isn't philosophy. In short, if the externalist's views were true, it is hard to see why a philosopher *qua philosopher* isn't finished with epistemology once that philosopher has provided his metaepistemological analyses of epistemic concepts. And again, in particular, it is hard to see why an externalist would even be concerned with the empirical questions of whether or not a certain belief does result from a process of reasoning to the best explanation and whether such a process would yield justified beliefs. The very discussion of whether we can hold back skepticism with reasoning to the best explanation seems incongruous within the framework of an externalist epistemology. In what follows, then, I will be presupposing at least inferential internalism.

I do so knowing that such a presupposition is highly controversial, but confident, that those who reject it probably shouldn't be interested, qua philosophers, in skepticism or arguments designed to refute it.

## 2 Reasoning to the Best Explanation

Let us then turn to the argument form philosophers call reasoning to the best explanation. When one presents an argument to the best explanation in ordinary discourse it often has the following form:

- 1)  $O$  is the case.
- 2) If  $E$  had been the case  $O$  is what we would expect.

Therefore there is a high probability that

- 3)  $E$  was the case.

This is the argument form that Peirce called hypothesis or abduction. To consider a very simple example we might upon coming across some footprints on a beach, reason to the conclusion that a person walked the beach recently employing the following argument:

- 1) There are footprints on the beach.
- 2) If a person walked the beach recently there would be such footprints.

Therefore there is a high probability that

- 3) A person walked the beach recently.

The existence of a legitimate form of non-deductive argument distinct from inductive argument would be a tremendous advantage in the fight against skepticism. Indeed, many of the traditional skeptical arguments presupposed that the only legitimate forms of reasoning were deduction and induction. And if this is true, skepticism will be enormously difficult to avoid. If the skeptic is right and the only evidence available to justify beliefs about the external world



is our knowledge of our own sensations, then how could we deductively or inductively infer the existence of physical objects. Dream and demon arguments seem to establish conclusively that however we understand sensations, the occurrence of sensations does not entail the existence of physical objects. But as Hume pointed out, if all we are ever directly acquainted with are the contents of our mind, how could we ever *inductively* establish a connection between sensation and something other than sensation? Similarly if our beliefs about the past always rest on something we are presently aware of, how could we ever deductively or inductively justify beliefs about the past? Present states of mind will never entail past events, and to generate an inductive argument establishing a connection between present states and past states, we would need an argument whose premise establishes a past correlation between memory states and past events. But as inferential internalists we would need to be justified in believing such a premise before we could inductively reach any conclusions based on it and that will, of course, take us back to the problem with which we began, the problem of justifiably moving from something we know about the present to a justified belief about the past.

Now the pattern of ordinary arguments to the best explanation looks different from the pattern of inductive arguments and it is natural that a philosopher might hope that this alternative to inductive reasoning paves the way to common-sense beliefs about the past and the external world. There are, however, enormous obstacles to such a hope being realized. The first concerns the question of whether we can abstract from the form of argument to the best explanation as it finds expression in ordinary discourse, a form of argument that one might reasonably claim to be legitimate *and* distinct from inductive reasoning.

It goes without saying, I suppose, that if reasoning to the best explanation has the form: *O* and if *E* then *O*; therefore *E*, and is supposed to constitute a legitimate argument form, the conditional would have to be something other than material implication. Arguments of the form *O* and *E* materially implies *O*; therefore *E*, are obviously bad arguments even by non-deductive standards. Since the proposition that *E* ma-

terially implies  $O$  is entailed by  $O$ , there would always be an infinite number of competing arguments to the best explanation and none of them would lend even prima facie support to its conclusion. The conditionals we employ in ordinary discourse, however, are obviously not material conditionals. Is the argument form more plausibly regarded as legitimate when the conditional is subjunctive? Consider an alternative footprints explanation:

- 1) There are footprints on the beach.
- 2) If cows wearing boots had walked the beach recently one would expect to find such footprints.

Therefore there is a high probability that

- 3) Cows wearing boots walked the beach recently.

This argument has precisely the same form as the argument for the conclusion that people walked the beach recently and its premises are just as true, but we would no doubt regard both the conclusion and the argument as simply silly. Why does the person explanation seem reasonable while the cow explanation seems silly? It is difficult to escape the conclusion that we accept the person explanation because we rely on an unstated but crucial premise, namely that footprints are usually produced by people not cows wearing boots. (Ask yourself, for example, which argument would have seemed more plausible if we lived in a cow worshipping culture where the beaches were exclusively reserved for cows that we dress up as people). But if our commonplace example of reasoning to the best explanation was really enthymematic, and we make explicit the crucial unstated premise, it is easy to see that it is really just the disguised inductive argument:

- 1) In most known cases footprints have been produced by people.
- 2) Here are footprints.

Therefore, there is a high probability that

- 3) These were produced by people.

And if it were true in general that plausible reasoning to the best explanation is enthymematic inductive reasoning, it trivially follows that reasoning to the best explanation cannot serve as an alternative to inductive reasoning in bridging gaps between the available evidence and our commonsense beliefs.<sup>7</sup>

One can, of course, reject the suggestion that reasoning to the best explanation typically collapses into inductive reasoning by adding more to the premises of arguments to the best explanation. Thus instead of a conditional simply asserting that our observations would be explained by *E*, we could have a conditional saying that the observations would be explained *best* by *E* where our criteria for comparing explanations do not rely on any inductively supported connections. I'll return to this suggestion shortly. But before I leave the very crude model of reasoning to the best explanation, I want to point out another problem that will arise both on the crude model and most more sophisticated versions of the model, a problem that again arises within the framework of an internalist epistemology.

As inferential internalists, we can legitimately employ a subjunctive conditional in reaching conclusions only if we are justified in believing that conditional. To justifiably believe anything about the physical world employing the conditional: If such and such physical objects were to exist then such and such experiences would likely occur, or to justifiably believe anything about the past employing the conditional: If such and such experiences were to occur such and such memory traces would likely be found, we would need to justifiably believe these *contingent empirical* conditionals. But surely our justification for believing the conditional will be just as problematic as the original inference that is the object of the skeptic's attack. How, the skeptic wants to know, did

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<sup>7</sup>Gilbert Harman has, of course, argued precisely the opposite of what I am suggesting. Harman argued in "The Inference to the Best Explanation", *Philosophical Review* 74, 1965, 88-95, and "Enumerative Induction as Inference to the Best Explanation", *The Journal of Philosophy* 65, 1968, 529-33, that inductive inference collapses into reasoning to the best explanation. I agree that there may well be a collapse but I think that Harman may have got the direction of the collapse wrong.

you find out what would happen to conscious beings in the presence of physical objects, and how did you find out what would occur in the present consciousness of human beings as a result of past experiences. The instinctive move would be to rely on some kind of inductive justification of the connections but if this were possible we wouldn't need reasoning to the best explanation in the first place.

Faced with this problem one might try to build enough into the antecedent of the conditional to make it, in effect, analytic. To illustrate the point let us assume for the sake of argument that something like the classical D-N model of explanation is correct —one explains a state of affairs by pointing to antecedent conditions and laws of nature that together entail the occurrence of the state of affairs to be explained. Suppose that we are trying to explain the fact that something  $a$  is  $G$ . An argument to the best explanation might take the following form:

- 1)  $a$  is  $G$
- 2) If  $a$  were  $F$  and it is a law of nature that all  $F$ 's are  $G$ 's then that would explain the fact that  $a$  is  $G$ .

Therefore, there is a high probability that

- 3)  $a$  is  $F$

The second premise of our argument to the best explanation can now be known *a priori* because we have made it analytic. But the price we pay is obvious. While 2) is now certain to be true, the argument form has no claim to legitimacy. Indeed it seems trivially true that there will always be an *infinite* number of competing arguments having precisely the same form and true premises. Having observed a piece of metal expand we can reason as follows:

- 1) This piece of metal expanded
- 2) If it were heated and it is a law that metal expands when heated, this would explain the fact that it expanded.

Therefore, there is a high probability that

- 3) It was heated.

But we can equally well reason:

- 1) This piece of metal expanded
- 2) If it had been spit on by a unicorn and it is a law then metal spit on by unicorns expands this would explain the fact that it expanded.

Therefore, there is a high probability that

- 3) It has been spit on by a unicorn.

To have any hope at all of sorting through potential explanations that formally satisfy a D-N model, we must surely distinguish the genuine laws from the spurious laws, but if laws are empirical generalizations it is difficult again to see how we will avoid the problem of having to bridge the gap that generated the skeptical worries to begin with.

## 2.1 MORE SOPHISTICATED MODELS OF REASONING TO THE BEST EXPLANATION

So far we have been operating within very crude conceptions of reasoning to the best explanation. We obviously do need criteria for choosing between alternative explanations and those criteria form a part of the premises from which we infer the correctness of a given explanation. The correct form of reasoning to the best explanation will look more like this:

- 1)  $O$  (a description of some observed phenomenon)
- 2) Of the set of available and competing explanations  $E_1, E_2, \dots, E_n$  capable of explaining  $O$ ,  $E_1$  is the best according to criteria  $C_1, C_2, \dots, C_n$ .

Therefore,

- 3)  $E_1$

To complete the above account of reasoning to the best explanation we will of course need to indicate what these criteria for best explanations are. Before we consider some attempts to do just that, however, let us be certain we understand the presuppositions of the claim that this argument form is legitimate and let us be clear about a crucial ambiguity in the notion of best explanation.

## 2.2 A FUNDAMENTAL OBJECTION

First, it seems clear that for *any* argument of this form to be legitimate there must be a presumption in support of the proposition that the phenomenon to be explained has an explanation. Unless we have an antecedently justified belief that most things have explanations it is difficult to see why we would take the fact that one potential explanation seems better than the others as a reason for supposing that the potential explanation is true. Now such a presupposition is perhaps natural and even appropriate in the context of scientific investigation (although in these days of quantum theory there seems to be much more tolerance for indeterminacy at the microlevel), but in the context of a philosophical refutation of very fundamental sorts of skeptical arguments it is hardly unproblematic. Remember the skeptic we are concerned with here is attacking the possibility of justifiably believing anything about the past based on memory and anything about the external world based on sensation. A Humean skeptic will maintain that it is a contingent empirical fact that any given event has a cause and that it is, of course, contingent that everything or that most things have a cause. If in justifying our beliefs about the past or the external world we must suppose that most events have causes, the skeptic will inquire as to our justification for that supposition. Was it inductively established? If so, how was that inductive justification accomplished without a prior solution to the problem of justifiably believing propositions about the past? Indeed, if we rely on *any* information about the past at all in justifying our belief that most events have causes, we will need an independent solution to the problem of justifying beliefs about the past, and thus if the preceding argument is correct

we will have foreclosed the possibility of using reasoning to the best explanation in an attempt to justify beliefs about the past. If in reaching the conclusion that most events have causes we rely on the fact that our sensations have causes, we will again need a prior solution to skepticism about the physical world and we will be precluded from using reasoning to the best explanation in order to get that solution.

The above arguments presuppose that justification is linear in structure and probably presuppose, therefore, that a coherence theory of justification is inadequate. I can imagine the coherence theorist shrugging off complaints about circularity and talking about the overall coherence of the story we are telling. I think this may be the appropriate response for a coherence theorist, but just as in my introduction I suggested that reasoning to the best explanation as a solution to classical skeptical concerns will be of interest only to inter-nalists, so I think that reasoning to the best explanation *as an independent source of justification* will be of interest only to those who reject a coherence theory. After all explanatory coherence on most models of explanation, certainly the D-N model, is just a species of logical coherence and thus can be subsumed under the coherence theorist's more general criteria for justified belief.

There are, of course, philosophers who are prepared to argue that it is a necessary truth knowable *a priori* that everything has a cause. I haven't the time to address these arguments here. I have always thought that such a position was wildly implausible but for now I am prepared to concede that if successful in defending this position, these philosophers will not have to worry about this fundamental objection to using reasoning to the best explanation in a defense of commonsense against skepticism.

### 2.3 AN AMBIGUITY IN THE NOTION OF BEST EXPLANATION

Since I am a Humean about causation, I frankly think that the above problem is fatal to an attempt to use reasoning to the best explanation in a non-question begging refutation

of skepticism. But let us concede the presupposition that everything has a cause and see how far we can get with such a presupposition. The second point I want to emphasize is that we must be very clear about the concept of best explanation. When we talk about one of a number of competing explanations being the best by certain criteria  $C$ , we may mean one of at least two different things. First we may mean only that the explanation in question is better by criteria  $C$  than each of the competing explanations taken individually.  $E_1$  might be better than  $E_2$ , than  $E_3$ , than  $E_4$ , and so on. This fact by itself does not imply that even if we are justified in believing that one of these explanations is correct, we are justified in believing that  $E_1$  is the correct explanation. It is true that if we are forced to "bet" the rational bet would be  $E_1$ . If we are forced to make plans based on some explanation,  $E_1$  is the rational explanation to choose. But being the rational explanation to act on is not the same as being the rational explanation to believe. In one sense of rational action we can rationally choose  $A$  over its alternatives because we justifiably believe that  $A$  has the best chance of maximizing expected utility, meaning only that  $A$  has a better chance than each of its alternatives considered individually. At the same time, of course, we might cheerfully admit that it is more likely that one of the alternatives will maximize utility than it is that  $A$  will. Put more precisely, the disjunction whose disjuncts identify each alternative as being the maximizer is more likely to be true than the proposition that  $A$  is the maximizer. Similarly, I can cheerfully admit that  $E_1$  is the most attractive explanation while admitting that the disjunction of propositions asserting alternative explanations is more likely to be true. In such a situation I stress again that there may be nothing irrational about acting as if  $E_1$  is the correct explanation, particularly if one must do something and one must make plans based on some particular explanation. But as an epistemic agent one certainly doesn't have to fallaciously infer that  $E_1$  is likely to be the correct explanation.

To refute the skeptic who gives you knowledge that there is an explanation of some phenomenon (memory states or sensations, for example) you must establish that our common-



sense hypotheses are more likely to be the correct explanation of these phenomenon that the disjunction of alternative explanations. And it is crucial to recognize how formidable a task this is, particularly given the relative ease with which we can come up with indefinitely many explanations that will satisfy the formal constraints on explanation.

## 2.4 CRITERIA FOR COMPARING EXPLANATIONS

With all this firmly in mind let us examine a few specific proposals for criteria for choosing between alternative explanations and explore the implications of these criteria for a successful refutation of skepticism.

Perhaps the single most common virtue of explanation cited by philosophers is simplicity. Other things being equal the simpler explanation is to be preferred over the more complex. There are, of course, many different ways of interpreting simplicity. Sometimes simplicity seems to be understood in terms of the number of things or events the explanation commits one to. Sometimes the crucial question concerns the number of kinds of things the theory commits one to. In coming to grips with skepticism about the physical world we can compare our commonsense hypotheses about physical objects to, let us say, a Berkeleyan hypothesis about a very complex mind orchestrating the comings and goings of sensations. Which theory is simpler? Well Berkeley had just minds, mental states, and causation. The commonsense hypothesis has minds, mental states, causation, and physical objects. On any criteria of simplicity, Berkeley seems to win, but despite Berkeley's protestations to the contrary, most of us will conclude that if Berkeley wins, so does skepticism.

Of course, one can introduce other notions of simplicity. In his recent book *Knowledge and Evidence* Paul Moser introduces the notion of gratuitous elements in an explanation.<sup>8</sup> The details of Moser's account are not completely clear to

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<sup>8</sup>Paul Moser, *Knowledge and Evidence* (Cambridge: Cambridge University Press, 1989), 88-105.

me, but he seems to want an explanation of sensation in particular to accommodate what he calls the *contents* of sensory states. Although I am not sure he would like this way of putting it, it seems to me that his view amounts to the claim that sensations are intentional states that have intentional objects. These intentional objects (which may or may not actually exist) are physical objects. Moser believes, I think, that skeptical scenarios typically leave unanswered why questions about the intentional character of sensations. The move is actually reminiscent of Descartes's attempt to refute skepticism with the aid of a non-deceiving God. Armed with that God, Descartes too wondered why we would have this natural inclination to believe in the existence of physical objects if our sensations were caused in some radically different way. The question, of course, is whether any of this should be of any interest to the skeptic. Even if we grant the rather controversial claim that sensations are intentional states (as opposed to being accompanied by intentional states), the skeptic is wondering whether anything like the intentional objects exist. One might as well argue that we do believe that physical objects exist and the most natural explanation of such a belief is that the belief is true. There is the view called epistemic conservatism that maintains that mere belief in a proposition does give that proposition initial epistemic credibility. I think the view has been successfully attacked,<sup>9</sup> but it will suffice for our present purposes to point out that if a refutation of skepticism depends on this move, the key to refuting skepticism is not reasoning to the best explanation, but epistemic conservatism.

It is not clear then that commonsense beliefs will better satisfy criteria of simplicity than alternative explanations even if we accept the claim that other things being equal simpler explanations are more likely to be true than complex explanations. But a skeptic who is prepared to raise difficulty with commonsense beliefs about the physical world and the past is hardly likely to simply grant you the hypothesis that simpler explanations are, *ceteris paribus*, more likely to be true. The

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<sup>9</sup>See Richard Foley's *The Theory of Epistemic Rationality* (Cambridge: Harvard University Press, 1987), Chapter 7.

bottom line of the skeptic's objection will probably be this. It is surely a *contingent* fact, if it is a fact, that simpler explanations are more often correct. If we are to use that hypothesis in reaching conclusions, our internalism requires us to be justified in believing it. But what evidence can we adduce in support of this contingent hypothesis? The problem is similar to the problem we have already discussed with respect to justifying belief in the hypothesis that most events have explanations. Are we inductively justified in believing that simpler explanations are more likely to be true than complex explanations? If we are, is there any hope of justifiably believing the premises of this inductive argument without a prior and independent solution to the problem of justifying beliefs about the past based on memory experience? And if we do have inductive justification for believing both that everything has a cause and that simpler causal explanations are usually true, then once again we will not need reasoning to the best explanation as an independent argument form. It will be subsumed under inductive reasoning.

I should add that there is at least one plausible *a priori* appeal to simplicity. Suppose that I start out with two hypotheses,  $H_1$  and  $H_2$  and that relative to my evidence  $E$ ,  $H_1$  and  $H_2$  are equally likely. Suppose further that I acquire some additional evidence which requires me to either abandon  $H_2$  or *add* to it an additional hypothesis  $T_1$  while  $H_1$  remains fine as it is. Clearly the conjunction ( $H_2$  and  $T_1$ ) has a probability lower than the probability of the conjunct  $H_2$ , and if the probability of  $H_2$  is the same as the probability of  $H_1$ , it follows that the probability of the more complex hypothesis ( $H_2$  and  $T_1$ ) is lower than the probability of  $H_1$ . But all this presupposes that we started out with  $H_1$  and  $H_2$  having equal probability relative to the original evidence base. There is nothing in any of this which suggests that other things being equal simpler hypotheses are more likely to be true than complex hypotheses.

Simplicity is, of course, just one of many criteria that philosophers have advanced for evaluating explanations. We should also be concerned, the argument goes, with how much a given hypothesis can explain, and how well we can assimilate the explanation with other already familiar kinds of

explanation.<sup>10</sup> Explanations involving minds as the causes of our sensations seem to explain just as much as explanations involving physical objects, however, and as Berkeley himself pointed out if we are relying on analogy, we at least have experience of our own minds producing mental states to rely on in understanding how some other mind might be able to produce our sensory images. Of course, just as some philosophers praise explanations that explain a great deal, other philosophers complain that skeptical scenarios explain too much. *Everything* that happens can be explained in terms of some alteration in the complex mind of a very powerful being. Of what use is such an explanation in making predictions? The answer is simply that it is of as much use as any alternative explanation. The fact of the matter is that for any theoretical posit to be of predictive value, we need rules which take us from observations to the existence of theoretical entities and back down to observations. As Ramsey pointed out some time ago we can substitute for the theoretical terms dummy placeholders for unknown causes and we will be none the worse off as far as predictive power. Since in the final analysis all we ever have to go on is what we find in the world we observe directly, any useful correlations that we find in that world can be mapped on to the unknown world of unknown causes and effects.

There is obviously a great deal more that could be said by way of assessing the implications of other possible criteria for evaluating arguments to the best explanation with respect to the comparative plausibility of commonsense and skeptical hypotheses, but for all any such proposed criteria *C* remember that we can ask whether it is a contingent truth that explanations with characteristic *C* are more usually correct. And if it is, and we are internalists, we will need to satisfy the skeptic that we have a justification for believing the proposition that *C* explanations are more usually correct. If we don't have such a justification we are doomed. If we do have

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<sup>10</sup>In "The Best Explanation: Criteria for Theory Choice", *Journal of Philosophy*, 75, pp. 76-92, Paul Thagard calls these criteria consilience and analogy.

such a justification, it is not clear that we have any need for reasoning to the best explanation.

### 3 Conclusion

I have argued much the same way as the lawyer who in defending his client on a charge of murder argues first that his client was out of the country on the day of the crime, second, that his client fired the gun accidentally, and third, that his client was legally insane at the time of the murder. I don't think there is a legitimate form of reasoning to the best explanation that is distinct from inductive reasoning and thus I don't think reasoning to the best explanation can circumvent the traditional problems involved with finding an inductive bridge between available evidence and commonsense beliefs. Secondly, if inferential internalism is true, any reasoning to the best explanation will require us to have some independent reason for supposing that the contingent proposition that most events have causes is true. It is difficult to see how we could get such a justification without relying on memory, and thus without some independent solution to one of the classic targets of skeptical attack. Third, I have argued that even if we suppose that most events have causes, we will need criteria enabling us not only to find the most plausible explanation but evidence indicating that this explanation is more likely to be correct than the disjunction of all possible explanations. Fourth, I have argued that whatever criteria we select for evaluating explanations, it will be a contingent fact that explanations with those characteristics are more likely to be true and as internalists we will need some independent reason for accepting this contingent proposition. If an inductive justification is available it seems likely that reasoning to the best explanation will again collapse into inductive reasoning. Finally, I have argued that given the most common criteria for evaluating explanations it seems relatively easy to find alternatives to our commonsense beliefs that satisfy those criteria.