

## Three Attempts to Refute Skepticism and Why They Fail

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One of the advantages of classical foundationalism was that it was thought to provide a refutation of skeptical worries, which raise the specter that our beliefs might be extensively mistaken. The most extreme versions of these worries are expressed in familiar thought experiments such as the brain-in-a-vat hypothesis, which imagines a world in which, unbeknownst to you, your brain is in a vat hooked up to equipment programmed to provide it with precisely the same visual, auditory, tactile, and other sensory inputs that you have in this world. As a result, your opinions about your immediate environment are the same as they are in this world. You have the same beliefs about your recent activities, your current physical appearance, your present job, and so on, but in fact you are a brain in a vat tucked away in a corner of a laboratory. Thus, in the brain-in-a-vat world, your beliefs about these everyday matters are mistaken, and mistaken not just in detail, but deeply mistaken.

Classical foundationalists from Descartes to its great twentieth century exemplars (Russell, the early Wittgenstein, Ayer, Carnap, and C.I. Lewis) sought to provide a response to such skeptical worries. Even if Cartesian certainty was not to be obtained, we could at least be assured that if we were careful enough, our beliefs would be justified, and if our beliefs were justified, we could be assured that they were mostly accurate. Classical foundationalists had their disputes with one another, but they gave similar answers to the core questions of epistemology, and the answers they gave were said to be sufficient to banish radical skeptical worries: some beliefs are basic and as such their truth is assured; other beliefs are justified by virtue of being deductively entailed or inductively supported by these basic beliefs; we can determine with careful enough introspection whether our beliefs are justified, and if they are, we can be assured that they are for the most part true.

These positions, which form the core of classical foundationalism, were subjected to devastating criticisms in the last half of the twentieth century, with the result that classical foundationalism is now widely rejected.<sup>1</sup> One unexpected consequence

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<sup>1</sup> Not every philosopher has disavowed classical foundationalism, however. See, for example, Richard Fumerton, *Metaphysical and Epistemological Problems of Perception* (Lincoln: University of Nebraska Press, 1985); and Fumerton, *Metaepistemology and Skepticism* (Lanham,

of the fall of classical foundationalism is that epistemologists have developed schizophrenic attitudes towards skepticism. On the one hand, they tend to regard it as a mistake to take skeptical doubts seriously, and they especially tend to dismiss the most radical skeptical doubts, such as those expressed in the evil demon and the brain-in-the vat hypotheses, as being too far-fetched to be worthy of attention. On the other hand, they are more drawn than ever to proving that skeptical hypotheses cannot possibly be correct. With the fall of classical foundationalism, more and more epistemologists are prone to say that radical skeptical hypotheses are not worthy of serious philosophical attention, but at the same time more and more cannot help but try their hand at refuting them. Since the refutations of classical foundationalists are not available, they have had look elsewhere for refutations.

I will be examining three of these alternative refutations and will be arguing that, like the refutations of classical foundationalists, they too fail. Their failures are instructive, however. They illustrate that the proper response to skeptical worries is not legislation aimed at complete banishment but rather rapprochement, in the form of an acknowledgment that skeptical concerns cannot be utterly eliminated by

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Md: Rowman & Littlefield, 1995).

further inquiry, whether it be philosophical or scientific. To acknowledge this is to acknowledge that a leap of intellectual faith is necessary whenever one engages in inquiry. Significant inquiry always requires an equally significant element of intellectual trust in the reliability of our faculties and the opinions they generate, and it is neither possible nor a condition of rationality that we be able to provide a non-question-begging defense of this trust.

#### 1. Skeptical worries are self-referentially incoherent

One strategy for refuting radical skeptical worries without recourse to the unacceptable tenets of classical foundationalism is to argue that radical skeptical worries are self-referentially incoherent, because in raising their worries, would-be skeptics inevitably make use of the very intellectual faculties and methods about which they are raising doubts. Their arguments presuppose general reliability of these faculties and methods and, hence, it is incoherent for them to entertain the idea that these same faculties and methods might be generally unreliable.

The charge is that would-be skeptics face a dilemma. Either their own intellectual faculties, methods, and procedures are reliable, or they are not. The former lemma is inconsistent with the skeptical worries being expressed by the skeptics and thus, if accepted, should be sufficient to banish these worries. On the other hand, the latter lemma asserts that the intellectual faculties, methods, and procedures of the skeptics are unreliable and hence, if accepted, undermines the credibility of any *prima facie* conclusion reached using these faculties, methods, and procedures, including the very skeptical conclusion that the would-be skeptics are advocating. So, on either lemma, skeptical worries are at odds with themselves.

The problem with this kind of anti-skeptical argument, however, is that it fails to appreciate that the strategy of careful skeptics can be wholly negative, following the form of a *reductio ad absurdum* argument. Skeptics can conditionally assume, for the sake of argument, that their faculties, procedures, and methods are reliable and then try to illustrate that if employed rigorously enough, these same faculties, procedures, and methods generate evidence of their own unreliability and in this way undermine their own pretensions of reliability. Skeptics may or may not be right in making this charge, but there is nothing self-referentially incoherent about

their strategy

Consider an analogy with discussions in the philosophy of science following the publication of Thomas Kuhn's *The Structure of Scientific Revolutions*.<sup>2</sup> Much of the discussion focused on the possible skeptical implications of Kuhn's views. If the history of science is best viewed as a history of revolutions, in which previous theories are rejected as largely misguided, it is difficult to keep skeptical worries from arising about current theories, because on this reading of the history there are good empirical reasons to think that future opinion is likely to regard current theories as largely misguided, just as current opinion regards past theories as misguided. The skeptical claim, in other words, is that applying good scientific methodology to the history of science generates evidence for thinking that the methodology is in fact unreliable. To be sure, this argument depends on a controversial interpretation of the history of science. In particular, if, *contra* the would-be skeptics, the history of science is read as one in which former theories are revised but largely incorporated into subsequent theories (rather than simply rejected), the inductive pressures against regarding current theories as true, or at least approximately true, are dissipated. Nevertheless, the relevant point for the

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<sup>2</sup> Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press,

discussion here is that although the would-be skeptics's rendering of the history may be inadequate, there is nothing inherently incoherent in their attempt to mobilize that history to construct an inductive argument against the methods of science.

Similarly, it is not self-referentially incoherent for would-be skeptics to assume conditionally, for the sake of their argument, the reliability of a set of our most basic faculties, methods, and/or procedures in hopes of generating evidence that undermines the pretensions of reliability of these same faculties, methods, and procedures. Moreover, the flip side of this point is also important, namely, not withstanding familiar worries about circular defenses, it is not uninteresting that a faculty, method, or procedure is able to generate evidence in defense of its own reliability.

Recall the problem of the Cartesian circle. Descartes, in his search for a method that would prevent error, recommended that we believe only those propositions whose truth is impossible to doubt. On the other hand, he also worried that we might be psychologically constituted in such a way that there are falsehoods that

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1962).

we would find impossible to doubt. His strategy for dealing with this worry was to use the method of doubt to argue, first, that God exists and, second, that God would not allow us to be deceived about propositions that are impossible for us to doubt. In other words, he appealed to what he regarded as indubitable propositions to argue that indubitability assures us of truth, hence the circle that worries so many commentators.

Descartes's arguments, like those of other classical foundationalism, are not capable of providing the absolute guarantees of truth he sought, and to make matters worse, the arguments do not satisfy even his own requirements. His proof of God's existence is not indubitable, and his proof that a good God would not allow falsehoods to be indubitable is not indubitable either. On the other hand, there was nothing inherently inappropriate about his resorting to the method of doubt in trying to reply to worries about the reliability of the method. He proposed the method of doubt as the fundamental method of inquiry and, thus, if he was going to respond to the worries about its reliability, he had better use the method. Some questions have to be answered circularly if they are to be answered at all. First and foremost among such questions are those about the reliability of our most fundamental intellectual faculties and procedures. In trying to answer such



questions, it is appropriate to rely on these same faculties and procedures.

The usual objection to circular defenses is that if they are permitted, anything at all can be defended, but this objection fails to distinguish various kinds of circularity. The most blatant kind of circularity occurs when P is itself used as a premise in an argument for P. Because any proposition entails itself, this kind of circularity, if permitted, would allow one to defend any proposition whatsoever. However, a decidedly different kind of circularity is involved in making use of one's own faculties and procedures to defend the reliability of these same faculties and procedures, and the surest sign of the difference is that it is not always possible to mount this kind of defense. On the contrary, one's faculties and procedures, if employed consistently and rigorously, may well generate evidence that undermines their own pretensions of reliability.

The lesson is that the least that should be expected of a set of faculties and procedures is that, when used in their own defense, they generate data consistent with the assumption of their own reliability. A corollary of this lesson is that it is far too simplistic to condemn attempts to use our fundamental faculties and procedures to address worries about the reliability of these same faculties and

procedures, on grounds that such attempts are unacceptably circular. But correspondingly, it is also far too simplistic to condemn would-be skeptics who try to use our fundamental faculties and procedures to generate evidence of their unreliability, on grounds that such attempts unacceptably presuppose the reliability of these same faculties and procedures. Whether this skeptical strategy succeeds is a different matter, but it is at least a coherent and even potentially powerful strategy.

## 2. Skeptical hypotheses are metaphysically impossible

A second strategy for dismissing skeptical worries without resorting to the assumptions of classical foundationalism is to argue that the scenarios that skeptics present as conceivable are in fact metaphysically impossible, given the nature of belief, reference, or truth. An adequate metaphysics of belief, reference, or truth precludes the possibility of radical error. So, contrary to first untutored impressions, it is not possible for our belief systems to be extensively mistaken.

Two of the most well known attempts to provide this kind of refutation of skepticism are to be found in the works of Hilary Putnam and Donald Davidson. Putnam argues that in thinking about the world, it is impossible to separate out our conceptual contributions from what is actually there. Accordingly, sophisticated enough theories of reference and truth leave no room for the possibility that the world is dramatically different from what our beliefs represent it to be.<sup>3</sup> Donald Davidson defends an analogous position with respect to belief. He argues that at least in the simplest of cases, the objects of our beliefs must be taken to be the causes of them and that, hence, the nature of belief rules out the possibility of our beliefs being largely in error.<sup>4</sup>

There are two primary problems that foil any attempt to use a metaphysics of belief, truth, or reference to dismiss skeptical worries. First, even on the strongest reading of these metaphysical accounts, there is still plenty of room for error, and if there were not, this would itself be a good reason to reject the accounts. Second, skeptical doubts can be raised about the arguments used to defend these metaphysical accounts, and the metaphysics itself cannot entirely eradicate these

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<sup>3</sup> Hilary Putnam, *The Many Faces of Realism* (LaSalle, IL: Open Court, 1987).

<sup>4</sup> Donald Davidson, "A Coherence Theory of Truth and Knowledge," in E. LePore (ed.) *The Philosophy of Donald Davidson* (London: Basil Blackwell, 1986), 307-319.

doubts.

Consider the first of these problems in relation to the general category of externalist accounts of belief, of which Davidson's account is an example. According to these accounts, the contents of beliefs are shaped not just by the internal states of individual believers but also by features of the external environment in which they find themselves. As a result, what one believes in two situations can be different even if from the skin inward one is identical in the two situations. Because of this feature, these accounts seem to hold out the hope that in brain in a vat situations and the like, the amount of error in one's belief system is far less than what initially seems to be case.

Externalist accounts of belief are themselves controversial, but for my purposes here, it is a narrower point that needs making, namely, scenarios in which one's beliefs are extensively mistaken are compatible with all but the most extreme (and hence least plausible) versions of belief externalism. According to belief externalism, the contents of one's beliefs are determined by external as well as internal factors, but only the most extreme versions allow the former to dominate

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the latter to such an extent that it becomes impossible for one's beliefs to be extensively mistaken.

Consider Davidson's account as an illustration of this point. According to Davidson, we could have reasons to think that others have radically mistaken opinions only if we could have reasons to think that their beliefs are radically different from ours. Moreover, if and only if this were possible could we have reasons to think that the tables might be turned, with others being largely right and our own beliefs being largely wrong. However, Davidson argues that in fact we cannot possibly have reasons for thinking that others have radically different beliefs from us. Accordingly, it is not possible for us to have reasons to think that their beliefs are radically mistaken. But then, we cannot have reasons to think that we could ever be radically mistaken either.<sup>5</sup>

Despite initial appearances to the contrary, radical error is not a genuine possibility, according to Davidson, because ascribing beliefs to others is a theoretical enterprise, and the proper way to conduct this enterprise is for us, the

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5 Davidson, "A Coherence Theory of Truth and Knowledge;" and "On the Very Idea of a Conceptual Scheme," *Proceedings and Addresses of the American Philosophical Association* 17 (1973-74), 5-20.

interpreters, to look for systematic correlations between the behavior, including verbal behavior, of those we are interpreting and features of their environment. Our most plausible theory of what others believe is the one that does the best overall job of revealing and explaining these correlations, but this, says Davidson, is always the theory that makes the contents of their utterances and beliefs correspond with what we (the interpreters) take to be the salient features of their environment. In turn, this means that the interpretation must be one that by our lights makes their beliefs mostly true.

The interpretation must be of this sort even in the most extreme cases, for example, cases in which the brains of those we are interpreting are in a vat and are being stimulated in just the ways that our brains are stimulated when we are in the presence of ordinary chairs, tables, etc. In particular, the claim is that our best interpretation of the envatted individuals will not have them believing that there are tables and chairs in their immediate environment. The contents of their beliefs must reflect their environment, not our environment, or more accurately, it must reflect what we take to be their environment. So, instead of ascribing to them perceptual beliefs about ordinary tables and chairs, our interpretation should ascribe to them beliefs about the inner programming of the computer, since it is the

computer's program rather than ordinary tables and chairs that is causally responsible for their brains being stimulated in the ways they are. To be sure, these beliefs about the computer's program may function for them in their vat environment in much the same way that our beliefs about ordinary tables and chairs function for us in our non-vat environment. If we wish, we can emphasize this point by saying that their beliefs are about chairs-in-the-computer and tables-in-the-computer, but given Davidson's approach, the qualification in-the-computer is crucial. If we assume that the envatted individuals have not causally interacted with ordinary tables and chairs, their beliefs cannot be about ordinary tables and chairs. In this way, Davidson's account of belief seems to hold out the hope of providing a refutation of skeptical worries, since the mistakes we have reasons to think it is possible for us to make are only those that we can have reasons to think it is possible for others to make.

It bears repeating that this account of belief is controversial, and it also bears noting that a crucial step in Davidson's argument is the move from the epistemological point that it is altogether impossible for us to have adequate reasons for thinking the belief system of other individuals is massively different from ours to the metaphysical conclusion that it is in fact impossible for there to be

belief systems massively different from one another. This is an inference that many philosophers find implausible.<sup>6</sup> Nevertheless, the point I want to emphasize for purposes of the discussion here is that even if all the essentials of Davidson's account are accepted, it still at best has only very limited implications for skepticism. On Davidson's approach, the best overall interpretation of what others believe is the one that does the best job of assigning content of their beliefs by correlating their verbal (and other) behavior with what we take to be the salient features of their environment. Still, even on our best interpretation, these correlations might not be especially strong. We do have to find some correlations if we are offer an interpretation at all, but by Davidson's own admission, the correlations need be great enough only to ensure that "the plainest and most methodologically basic" of the beliefs we ascribe to others are not false. There can be still be widespread error among their less basic beliefs. This means that only the most radical kind of skeptical hypotheses are ruled out by his view. For example, if our most fundamental beliefs are those that concern the most general features of our environment, the only skeptical hypotheses that are ruled out are those that imply we have mostly mistaken beliefs about these very general features.

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<sup>6</sup> See, for example, Peter Klein, "Radical Interpretation and Global Skepticism," and Colin McGinn, "Radical Interpretation and Epistemology," both in E. LePore (ed.), *Truth and Interpretation* (Oxford: Basil Blackwell, 1986).



We can still be mistaken about almost all of the details of our environment.

Moreover, it is a little misleading even to say that Davidson's account rules out skeptical worries about our most fundamental beliefs, given that nothing in his account guarantees that we are in a position to pick out which of our beliefs are most fundamental. We may think that beliefs of a certain kind are fundamental for us, but we might be wrong, and if we are, it is consistent with Davidson's theory that even these beliefs might be mostly false. Accordingly, there are no particular beliefs or sets of beliefs of whose general reliability we can be assured.

Thus, even if the theory is accepted in its entirety, it still has only very limited implications for skepticism. One way to highlight just how narrow these implications are is to imagine that the immediate causes of someone's beliefs change radically over a very short span of time. For example, suppose we remove the brains of Smith and Jones and then place their brains in a vat, being careful to stimulate them through our computer in such a way that Smith and Jones notice nothing unusual. We leave them in the vat for a couple of days, taking care again to provide them with just the kind of sensory input they would have had were they not envatted. We then return the brains to their bodies and once again allow them

to function as normal.

Given Davidson's theory of belief, what are we to say about the perceptual beliefs of Smith and Jones during the time they are envatted? Are we forced to say that at the onslaught of their envatment, the contents of their perceptual beliefs suddenly change? In particular, is there anything in Davidson's account that forces us to offer an interpretation of these beliefs that makes them mostly true, for example, an interpretation according to which during the time of their envatment they had mostly true beliefs about the inner workings of the computer (about tables-in-the-vat, chairs-in-the-vat, etc.) rather than mostly false beliefs about ordinary tables and chairs in their immediate environment?

Fortunately, Davidson's theory does not require anything so implausible. The causal influences that determine the contents of Smith's and Jones's beliefs are not just those immediately operative in their current environment but also those which have been operative over an extended period of time. But then, the best Davidsonian interpretation can be one implying that their perceptual beliefs about their immediate environment, during the time of their envatment, are extensively and radically mistaken. To be sure, the best Davidsonian interpretation will also

ascribe to them a large number of true beliefs, for example, true general beliefs that there being chairs, tables, trees, etc. somewhere in the universe, extensive true beliefs about their past, and so on. However, the best interpretation will also be one that ascribes to them radically mistaken beliefs about their immediate environment when unbeknownst to them they are in a vat. The lesson is that even Davidson's account of belief is compatible with a strong theory of error. It leaves room for the possibility of extensive error even among the kinds of beliefs that we tend to regard as most firmly established and fundamental. Thus, it also leaves plenty of room for skeptical worries about these same beliefs.

A second reason that metaphysical accounts of belief, truth, or reference are not capable of utterly banishing skeptical worries is that they themselves are suitable subjects for scrutiny. Intricate philosophical arguments are used to defend these metaphysical accounts, and doubts can be raised about the reliability of these arguments. Moreover, any attempt to use the metaphysics itself to eliminate these doubts is bound to fail, given that the plausibility of metaphysics is purportedly established by means of these arguments. In this respect at least, the efforts of contemporary metaphysicians to use accounts of belief, truth or reference to refute skepticism are no different than Descartes's effort to use a theistic metaphysics to

refute skeptical worries.

Descartes recommends his method of doubt as a way of avoiding error. He says that we can be assured of not falling into error if we believe only those propositions whose truth we cannot doubt. However, he also understands that his method can provide ironclad guarantees of truth only if we are not psychologically constituted in such a way that falsehoods are not impossible for us to doubt. To address this worry, Descartes argues that God's existence is indubitable, and in addition he argues that it is indubitable that God would not permit the indubitable to be false. Not many readers of Descartes have thought that these two claims really are indubitable, but even if they were, this still would not be enough to dispel all skeptical worries, since precisely what is at issue in the skeptical worries Descartes is addressing is the connection between indubitability and truth. As I observed earlier, there is nothing inherently improper about Descartes using what he regards as a fundamental method of inquiry to defend the reliability of that very method, but on the other hand, neither can such a strategy provide the absolute guarantees of truth that Descartes seeks, a point which is widely noted in discussions of the Cartesian circle.

It is less widely noted but no less true that contemporary attempts to use a theory of belief, truth, or reference to rule out the possibility of widespread error are in exactly the same predicament. We have no guarantee of the general reliability of the methods and arguments used to defend these metaphysical theories, and any attempt to use the theories themselves to provide the guarantees presupposes the reliability of those methods and arguments. The lesson, as with Descartes, is that these metaphysical systems cannot altogether extinguish skeptical worries. Regardless of how we marshal our intellectual resources, there can be no non-question-begging assurances that the resulting inquiry is reliable, and this constraint applies to metaphysical inquiries into the nature of truth, belief, and reference as much it does to any other kind of inquiry. No amount of metaphysical inquiry can eliminate skeptical worries.

### 3. Skeptical worries are at odds with the theory of natural selection

A third anti-skeptical strategy involves using the theory of natural selection to provide assurances of the general reliability of our intellectual faculties and

methods, but this kind of strategy also fails. It founders on considerations analogous in interesting ways to those on which earlier efforts to use theological claims to answer the skeptic foundered.

I have already mentioned how Descartes attempted to use theological assertions to answer the skeptic. He claims that the existence of God is indubitable and that it is also indubitable that God would not permit the indubitable to be false. He concludes that if we follow the method of doubt and believe only that which is indubitable for us, we can be assured of not falling into error. Locke's reliance on theology is less bold than Descartes's, but it is no less essential to his epistemology. At the core of Locke's epistemology are the tenets that God has commanded us to have accurate opinions and that we have an obligation to do our best to obey this command. The resulting obligation, according to Locke, applies to all of our intellectual endeavors, but it is especially important to have accurate beliefs about matters of morality and religion, because with respect to these matters, the salvation of our souls is at stake. Moreover, Locke assumes that even ordinary people can have reliable beliefs about these matters. They need only to make proper use of their faculty of reason. He does not presume that one can be altogether assured of having only true beliefs if one regulates one's opinions

properly. On the contrary, he thinks that it is not possible to be utterly certain about matters of religion and morality. However, he does seem to think that one can be assured that one's beliefs about these matters are not wildly mistaken. I say 'seems' because he does not explicitly address this possibility. On the other hand, there is no hint in his discussions that one who follows one's evidence might possibly fall into massive error. A basic intellectual optimism is simply taken for granted.

The source of his optimism is the theological claim that God has provided us with intellectual faculties, most importantly the faculty of reason, that are well designed to generate accurate opinions. Indeed, appeals to theology have a double purpose in Locke's epistemology. As in Descartes's epistemology, they provide assurances of reliability. God has provided us with the proper cognitive equipment for our intellectual tasks. But in addition, theology provides an explanation of why it is important for us to have accurate beliefs. We need accurate beliefs, especially in matters of religion and morality, because the salvation of our souls is at stake.

The question of why it is important to have reliable beliefs is not extensively discussed in contemporary epistemology, but when the question is raised, the

answer is often placed in an evolutionary framework rather than the moral and theological framework in which Locke placed his answer. An especially common line of thought begins with the familiar observation that it is important for one to have accurate beliefs if one is to make one's way about the world successfully. Without accurate opinions, one is unable to fashion effective strategies for pursuing one's various needs and goals. Moreover, this seems to be as true of humans collectively as it is of individual human beings. If our faculties regularly misled us about our surroundings, we would not have survived as a species, but our species has not just survived; it has prospered. Natural selection provides an explanation of our success as a species, and, according to this line of argument, in so doing also provides us with assurances that our beliefs are for the most part accurate.

Locke's view was that God has provided us with the cognitive faculties needed for reliable inquiry into matters essential for our eternal salvation. The contemporary view, by contrast, is that the processes of natural selection have provided us with cognitive systems that are well designed for matters essential to our survival, and these systems would not be well designed for survival unless they were generally reliable. In other words, the contemporary view has evolution



playing a role in epistemology analogous to the role played by God in Locke's epistemology. It is important for us to have accurate beliefs not so much because of salvation but because of survival, and we can be assured that our beliefs are in fact generally accurate not so much because of natural theology but because of natural selection. Locke argued that God has provided us with faculties suitable for our most pressing intellectual inquiries (matters of salvation according to his theological outlook) whereas the contemporary view is that natural selection has provided us with faculties suitable for our most pressing intellectual inquiries (matters of survival according to an evolutionary outlook).

Unfortunately, arguments from natural selection are no more capable than arguments from natural theology of providing guarantees that our opinions are accurate. The most obvious problem is a familiar one, namely, a variety of intellectual faculties and methods are employed in generating and defending the theory of natural selection and skeptical worries can be raised about the reliability of these faculties and methods. The theory itself cannot be used to eliminate these worries altogether, given that the theory is trustworthy only if these faculties and procedures are trustworthy. The problem here is thus structurally the same as the problem that foils both Descartes, when he tries to show that God's existence is

indubitable in order to defend the idea that we can be assured that what is indubitable for us is true, and Locke, when he presupposes the reasonability of belief in God in order to defend the idea that God has provided us with cognitive faculties sufficiently reliable for our intellectual purposes.

Moreover, there is a further analogy. In order to get the assurances of reliability that they seek, it is not enough for Descartes and Locke to establish that God exists. They must also establish that God has a variety of specific properties relevant for providing assurances of our reliability. They require, in other words, a specific theology. For example, for Descartes's argument to succeed, not only must he establish that God exists, he must also establish that God has sufficient knowledge to know when we are likely to be deceived, that He has sufficient power to prevent our being deceived if He so chooses, and that He in fact does so choose. In particular, Descartes must establish that there are no divine purposes, perhaps unknowable to us, which might be served in God's sometimes allowing that which is indubitable for us to be false. Similarly, for God to play the role in epistemology that Locke requires, Locke needs to establish not only that God exists, but also that God desires our eternal salvation. In addition, he must establish that God has chosen to implement this desire for our salvation by

installing in us intellectual equipment that allows us to discern what we need to believe and do in order to win salvation.

Just as it is not a simple matter for a theology to have all the specific implications its needs to have in order to serve Descartes's and Locke's anti-skeptical purposes, so too it is not a simple matter for the theory of natural selection to serve as the basis for an anti-skeptical argument. In fact, the theory lacks a number of the implications it would need to have for such an argument to succeed. First, nothing in the theory implies that evolution is only caused by natural selection. Other factors, for example, random genetic drift, can also lead to changes in gene frequency, and these other factors need not exert pressure in the direction of systems that are well designed to promote survival of the species. Second, nothing in the theory implies that the set of genetic options available for natural selection to choose among will be large and varied enough to include ones that are sufficiently well designed to promote survival of the species. The fact that humans have survived, and even prospered, for a relatively brief period of time is not in itself an adequate argument. Third, nothing in the theory implies that all, or even the majority, of our intellectual procedures, methods, and dispositions are products of biological evolution at all. They may instead be social and cultural

products. Fourth, even if it is assumed that our most characteristic intellectual procedures, methods, and dispositions are the products of evolution, nothing in the theory implies that these procedures are well designed to generate accurate opinions in our current environment. At best the theory implies that they were well designed to enhance prospects for survival in the late Pleistocene, which is when humans evolved, but what constitutes a good design for survival need not also be a good design for having accurate opinions.<sup>7</sup> *A fortiori* what constitutes a good design for survival in the Pleistocene need not be a good design for having accurate opinions in the twenty-first century.<sup>8</sup>

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7 “... the selection pressures felt by organisms are dependent on the costs and benefits of various consequences. We think of hominids on the savannah as requiring an accurate way to discriminate leopards and conclude that parts of ancestral schemes of representation, having evolved under strong selection, must accurately depict the environment. Yet, where selection is intense the way it is here, the penalties are only severe for failures to recognize present predators. The hominid representation can be quite at odds with natural regularities, lumping together all kinds of harmless things with potential dangers, provided that the false positives are evolutionarily inconsequential and provided that the representation always cues the dangers.” Philip Kitcher, *The Advancement of Science* (Oxford: Oxford University Press, 1993), 300.

8 For a discussion of these and related issues, see Stephen Stich, *The Fragmentation of Reason*

The moral is that despite the undeniable power of the theory of natural selection, appeals to it cannot provide ironclad assurances that our beliefs are for the most part accurate any more than could appeals to natural theology.

#### 4. The lesson to be drawn from these failed attempts: A leap of intellectual faith

Had classical foundationalists been able to accomplish what they set out to do, which is the discovery of methods and rules that would provide guarantees that our beliefs are generally accurate, it would have been an extraordinary achievement. They were not able to do so, however, and not from a lack of cleverness, but rather because their project cannot be done.

Epistemologists have found it difficult to internalize within their epistemologies the full implications of the demise of classical foundationalism. There are deep, uncomfortable lessons to be learned from the failures of classical foundationalism, and among the most important of these lessons is that it is not unnatural to worry

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(Cambridge: MIT Press, 1990), 55-74.

that our most fundamental faculties and methods might not be well suited to discover truths and that try as we may, we cannot entirely discredit this worry. In everyday contexts, entertaining general skeptical doubts is peculiar, because doing so requires distancing oneself from ordinary concerns. If your car will not start for the third time in a week, you will not be disposed, even if you are a philosopher, to wonder whether your memories of its repeated breakdowns might be completely mistaken. *A fortiori* you will not discuss with the mechanic, except perhaps as a joke, whether there are convincing reasons for thinking that the car really exists. On the other hand, in the context of an inquiry into our roles as inquirers, especially if the inquiry is a philosophical one that takes as little for granted as possible, skeptical worries arise naturally. We worry whether our cognitive equipment and our ways of employing this equipment are well suited to produce accurate beliefs about our environment.

The proper reaction to such worries is not to try legislate against them but rather to admit that they are unavoidable. The ability that makes epistemology possible also makes skeptical concerns and questions inevitable, namely, the ability to turn our methods of inquiry and the opinions they generate into objects of inquiry and to do so while taking as little for granted as possible. Within the

context of such an inquiry, the worry that our beliefs might be widely mistaken is as natural as it is ineradicable. We want to defend our faculties and methods, but the only way to do so is by making use of these same faculties and methods, which means that we will never succeed in altogether ruling out the possibility that our beliefs are broadly and deeply mistaken.

Moreover, it does not help to retreat to the claim that what is being sought are not so much assurances that our opinions are generally accurate but rather assurances that it is probable that our opinions are generally accurate, where ‘probable’ is given an objective interpretation as a frequency or propensity of some sort. The retreat to probabilities leaves us in exactly the same predicament. The only way to argue that our most fundamental faculties, methods and opinions are probably reliable is to make use of these same faculties, methods, and opinions. Thus, just as there can be no non-question-begging guarantees that our opinions are true, and no non-question begging-guarantees that they are largely reliable, so too there can be no non-question-begging guarantees of its being probable that they are largely reliable. This predicament is an extension of the familiar Cartesian circle, and it is a circle from which we can no more escape than could Descartes or Locke. Appeals to contemporary theories of belief, truth, or reference and appeals to the

workings of natural selection are no more capable of helping us to break out of this circle than were the theologies of Descartes and Locke.

Skeptical worries are inescapable, and the appropriate reaction to this fact about our intellectual lives is acceptance, not denial. Our lack of non-question-begging guarantees of our reliability is not a failing that needs to be corrected but rather a reality that needs to be acknowledged. We must acknowledge our vulnerability to error and acknowledge also that inquiry always involves a substantial element of trust in our own intellectual faculties and in the opinions they generate, the need for which cannot be eliminated by further inquiry. Significant inquiry requires an equally significant leap of intellectual faith. The faith need not, and should not, be unlimited, since this is the path to dogmatism and irrationalism, but there does need to be such faith. The pressing questions for epistemologists are ones about its limits. How much trust is it appropriate for us to have in our faculties, especially our most fundamental faculties? Are there conditions under which this trust in the general reliability of our most basic faculties can be legitimately undermined? If so, what are they?

These questions have been under discussed in epistemology, initially because



of the influence of classical foundationalists, in whom's epistemology there is no need for, and indeed no room for, intellectual trust. Nothing whatsoever need be taken on trust or should be taken on trust. The project of classical foundationalism, however, has collapsed, thus opening up possibilities for a greater appreciation of the role of intellectual trust, but for the most part this greater appreciation has not been forthcoming, in large part because epistemologists have found it difficult to come to grips with the conclusion that there are no non-question-begging assurances of our overall reliability. The tendency instead has been to assume that there must be strategy by which skeptical worries can be banished. I have been arguing, by contrast, that once we give up on a classical foundationalist epistemology, we have no choice but to acknowledge that skeptical worries cannot be utterly eradicated. Accordingly, significant intellectual projects always require correspondingly significant leaps of intellectual faith. The relevant question for epistemology thus becomes one of the proper limits of such faith.<sup>9</sup>

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<sup>9</sup> For a discussion of these limits, see Richard Foley, *Intellectual Trust in Oneself and Others* (Cambridge: Cambridge University Press, 2001).