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# EVOLUTIONARY NATURALISM AND THE RELIABILITY OF OUR COGNITIVE FACULTIES

David Silver

Alvin Plantinga has argued that the evolutionary naturalist has a self-undermining set of beliefs. The first premise, the Probability Thesis, states that the probability that our cognitive faculties are generally reliable given the truth of evolutionary naturalism is either low or inscrutable. The second premise, the Defeater Thesis, states that the evolutionary naturalist who is apprised of the Probability Thesis thereby obtains a defeater for her belief that her cognitive faculties are reliable. Plantinga's argument for the Defeater Thesis is an argument by analogy. I argue that it is not obviously the case that Plantinga's analogical argument is successful; and, I point out what needs to be done before we can judge whether or not the argument is successful.

## *I. Introduction*

Over the last decade Alvin Plantinga has argued that the naturalist (i.e., the person who rejects the existence of supernatural beings such as God) who accepts evolutionary theory has a self-undermining set of beliefs.<sup>1</sup> My aim in this paper is to examine a key premise in this argument.

Before looking at the argument let me introduce a few abbreviations. Let us refer to naturalism as **N** and to evolutionary theory as **E**. We will refer to the conjunction of **N** and **E** as 'evolutionary naturalism'. In addition we will refer to the proposition that our cognitive faculties are reliable as **R**.

With these abbreviations in hand we can examine the general structure of Plantinga's argument. The argument begins with the **Probability Thesis** which states that the probability that **R** is true given the truth of **N** and **E** is either low or inscrutable. The case for the Probability Thesis, briefly, is this: supposing **N** and **E** to be true, we find that human beings are the product of an undirected evolutionary process. But, so far as we can tell, the probability that a creature with this sort of provenance would have generally reliable cognitive faculties is either low or inscrutable. And thus we must conclude that the probability that our *own* cognitive faculties are reliable given **N** & **E** is either low or inscrutable.<sup>2</sup>

The next step in the argument is the **Defeater Thesis**. It holds that an evolutionary naturalist who is apprised of the Probability Thesis has a defeater for her belief in **R**; that is, without further information, it is irrational for her to continue to believe that her cognitive faculties are reliable.

The rest of the argument is that (a) this defeater for **R** is itself undefeat-



able, and (b) in virtue of having this undefeatable defeater for R the evolutionary naturalist has an undefeatable defeater for *all* of her beliefs, including her beliefs in N & E. Thus, it is irrational for the evolutionary naturalist to believe in evolutionary naturalism once she is apprised of the Probability Thesis, and this shows her position to be self-defeating.

The focus of this paper will be on Plantinga's argument for the Defeater Thesis. In the argument he presents us with a number of cases containing agents who are clearly facing a defeater for some of their beliefs. He then urges us to see the evolutionary naturalist who is apprised of the Probability Thesis as being in a relevantly similar position and thus facing a defeater for her belief in R.

I shall argue that it is unclear whether the evolutionary naturalist really is in a relevantly similar position to the agents in the analogical cases. And, in so doing, I shall outline what we need to know in order to determine whether this argument from analogy is ultimately successful.

We shall proceed as follows: first, we shall look at the analogical cases that Plantinga offers. Next, I will make explicit the general principle which explains why the agents in these analogical cases are clearly facing a defeater for some of their beliefs. With this general principle in hand we can then turn to see whether the evolutionary naturalist who is apprised of the Probability Thesis is in a relevantly similar position.

As we shall see, this issue turns on whether she is in a position where she can rationally believe that her belief in R is formed in a warranted fashion, i.e. in accordance with her epistemic design plan. If she is *not* in a position to rationally believe this then she will be in a relevantly similar position to the agents in the analogical cases and thereby will have a defeater for her belief in R.

I shall argue, however, that *for all that Plantinga says* it appears that the evolutionary naturalist is in a position where she *can* rationally hold that her belief in R is produced in a warranted fashion. She can believe this either on the basis that her belief in R is produced in a *basic way* (i.e. not on the basis of any other *beliefs*) or on the basis that her belief in R is produced by an inductive inference from other beliefs. If I am right about this then Plantinga's argument for the Defeater Thesis is at best incomplete. And, unless it can be shown that the evolutionary naturalist is rationally debarred from thinking that her belief in R is produced in a warranted fashion then Plantinga's argument for the Defeater Thesis fails, and thus so does his larger argument against evolutionary naturalism.

## II. *The Argument by Analogy for the Defeater Thesis*

### A. The Analogical Cases

In this section we will examine the analogical cases that Plantinga appeals to in his argument for the Defeater Thesis:

- The Widget Cases
- The Freudian Theist Cases
- The Space Radio Case
- The Brain-in-a-Vat Case

### The Widget Cases

In the first widget case a visitor to a factory sees an assembly line carrying apparently red widgets. She is told by the shop superintendent that these widgets are being irradiated by a variety of red lights which make it possible to detect otherwise undetectable hairline cracks; the red color of the widgets, he says, should thus not be taken as an indication of their true color. In fact, he says, there are relatively few red-colored widgets.<sup>3</sup> (WPF 230)

What should the visitor believe about the color of the widgets in this situation? Relative to all of her evidence, she should take it that the probability that a widget is red given that it looks is red is fairly low. And this fact gives her a defeater for any belief she forms to the effect that a particular widget is red.

Consider now the second widget case. In this case, after her encounter with the superintendent, the visitor is told by a vice-president that the superintendent is not trustworthy on the matter of the color of the widgets. The visitor, however, does not know whom to trust—the superintendent, or his detractor.

What should the visitor believe about the color of the widgets in this situation? For all that she knows the probability that a widget is red given that it looks red could be very low; but also, for all that she knows, it could be high. Plantinga maintains (quite plausibly) that in this situation she should be agnostic about the deliverances of her visual perception so far as color detection is concerned; moreover, he maintains that she thus has a defeater for any color beliefs about *particular* widgets she obtains by observing the assembly line.

### The Freudian Theist Cases

In the second set of cases a devoted theist reads Freud and thereby comes to think that her belief in the existence of God is produced by wish fulfillment. (WPF 229-30) She then considers the probability that wish fulfillment is a reliable belief-forming process. In the first Freudian theist case she estimates the probability as rather low. In this case, Plantinga contends, the theist has a straightforward undercutting defeater for any belief she takes to have been produced by wish fulfillment, including her belief in the existence of God.

In the second version of this example, the theist finds that she simply is unable to make an estimate of the probability that wish fulfillment is a reliable belief-forming process. For all that she knows it might be a very unreliable process; but, for all that she knows it might be a highly reliable process.

What should the Freudian theist believe about the existence of God in this case? Given her agnosticism about the reliability of wish fulfillment Plantinga plausibly maintains that she thus has a defeater for any belief she takes to be produced by that belief-forming mechanism, including for her belief in the existence of God.

### The Space Radio Case

In the third case you are to imagine that on a space mission to an unknown planet you find a radio-like device which periodically emits sentences in English only about topics of which you have no knowledge. "A bit

unduly impressed with your find," Plantinga relates, "you initially form the opinion that this quasi radio speaks the truth." (WCB 224) Suppose, however, that after a bit of cool reflection you realize that you know nothing at all about the purpose of the instrument, or who or what constructed it. In this case, Plantinga says, "the probability that this device is reliable given what you know about it, is low or inscrutable; and this gives you a defeater for your initial belief that the instrument indeed speaks the truth." (WCB 237) Moreover, we might add, there would be a defeater for any belief that you formed solely in virtue of the pronouncements of the space radio.

### The Brain-in-a-Vat Case

In the final case you begin to consider the possibility that you are a brain in a vat being subjected to various experiments by Alpha Centaurian cognitive scientists in such a way that your cognitive faculties are not reliable. You think that this is a genuine possibility; however, you cannot make any estimate of the probability that your faculties are reliable: "as far as you can tell, the probability could be anywhere between 0 and 1." Plantinga concludes: "Then too you have a defeater for your natural belief that your cognitive faculties are reliable. (WCB 238)

#### *B. The Unsubstantiated Source Principle*

In each of these cases Plantinga contends (quite rightly, I think) that the agent in question has a defeater for some of her beliefs. Plantinga then urges us to see the case of the evolutionary naturalist who is apprised of the Probability Hypothesis as being in a relevantly similar position—she too has a defeater for one of her beliefs, and in particular, for her belief that her cognitive faculties are reliable.

Although it might be true that the evolutionary naturalist is in a relevantly similar position I submit that this is not obviously the case. In order to tell whether it really is the case we need, at the very least, to uncover the general principle which explains why the agents in the analogical cases are clearly facing defeat, and then see how the general principle applies to the case of the evolutionary naturalist.

Let us then examine the analogical cases in order to find this general principle. We shall start with the first Freudian theist case. There the theist realizes that, given all of her evidence, the probability that the cognitive faculty which produced her belief in God is reliable is rather low. And it is this belief that provides the defeater for her belief in God. With this in mind we might propose a general principle called the **Low Reliability (LR)** principle of defeat:

- (LR) S has a defeater for the belief p if, relative to all of her evidence, S takes as low the probability that the source of p is reliable.

Principle LR straightforwardly explains why there is a defeater in the first Freudian theist case. But, a quick inspection will verify that it does not explain why there is a defeater in any of the other cases. Consider especially the first widget case.

In that case the visitor is told by the superintendent that the probability that a widget is red given that it looks red is rather low. What the example does not stipulate (nor does the example depend on) is that the visitor actually forms the belief that her perceptual faculties concerning widgets are unreliable in the circumstances at hand. Thus, principle LR as it currently stands cannot explain why there is a defeater in this case.

But what does explain why there is a such a defeater? One natural suggestion is that the existence of the defeater has something to do with what the visitor might *rationaly* believe in this case. To flesh this suggestion out, though, we need to (a) explain *which* of the requirements of rationality are relevant in this matter, and (b) explain exactly *what kind* of rationality is being invoked here.

In regards to *which* rational requirements are relevant to explaining the presence of a defeater, one might be tempted to say that the visitor is rationally required to form the belief that her perceptual faculties concerning widgets are unreliable; but, this seems to be too demanding a requirement of rationality: she might with perfect rationality fail to form the belief that her perceptual faculties are unreliable. However, she may not with perfect rationality *deny* that that her color-detecting faculties are unreliable in the circumstances at hand. And, let me suggest, it is this fact about rationality that explains why she has a defeater for color beliefs concerning widgets.

In regards to *what kind* of rationality is being invoked here let us turn to Plantinga's distinction between *internal* and *external* rationality. Roughly speaking, internal rationality deals with matters "downstream" from experience, and external rationality deals with matters "upstream" from experience. (See pp. 110-112) In the case at hand the relevant irrationality is downstream from experience and is thus a matter of internal rationality. In particular, the internal irrationality stems from the fact that in order to be internally rational an agent's beliefs must have a requisite degree of *coherence*. (112) As Plantinga notes there is much work to be done concerning *how much* coherence is required for internal rationality; however, I take it that what drives our thought that there is a defeater in the first widget case is the sense that the visitor would not meet the minimal degree of coherence required for internal rationality if she were to deny that the probability that her color-detecting faculties are reliable in the circumstances at hand is rather low.

With this discussion in mind let me propose that the following revision of the Low Reliability principle explains why there is a defeater in the first widget case:

(LR') S has a defeater for the belief p if, relative to all of her evidence, S takes as low, or it would be *internally irrational* for S to deny as low, the probability that the source of p is reliable.<sup>4</sup>

Principle LR', besides being intuitively plausible, successfully explains why there is a defeater in the first widget case *and* the first Freudian theist case. But, it does not help us with the other cases. Consider, for example, the second Freudian theist case.

There the theist realizes that the probability that the cognitive faculty

which produced her belief in God is reliable is, for her, inscrutable. And it is this belief that provides the defeater for her belief in God. This case suggests the need for a cognate to the original LR principle. Let us call this the **Inscrutable Source (IS)** principle of defeat:

- (IS) S has a defeater for the belief p if, relative to all of her evidence, S takes as inscrutable the probability that the source of p is reliable.

The IS principle plausibly explains why there is a defeater in the second theist case. It also works with the brain-in-a-vat case. There you realize that, given everything you know, the probability that your belief-forming faculties are reliable is, for you, inscrutable; and, it is this belief that (according to the IS principle) provides the defeater for any belief, including R, which you take to have been generated by your cognitive faculties.

The IS principle explains why there is a defeater in the second theist case and in the brain-in-a-vat case; however, it does not explain why there is a defeater in the two remaining cases (the second widget case and the space radio case). To see why this is so let us look at the second widget case. There the visitor to the factory does not know whom to trust—the superintendent or the vice-president—and this gives her a defeater for her color beliefs about the widgets. What the example does not stipulate, nor does it depend on, is that the visitor has *any* beliefs about the reliability of her perceptual faculties; thus, principle IS does not explain why she has a defeater for her color beliefs concerning the widgets. To explain why there is a such a defeater we need to revise the IS principle in a way similar to the way we revised the LR principle. This suggests the following principle:

- (IS') S has a defeater for the belief p if, relative to all of her evidence, S takes as inscrutable, or it would be *internally irrational* for S to deny as inscrutable, the probability that the source of p is reliable.

Let us see how IS' deals with the remaining space radio case. There you realize that you know nothing at all about the purpose of the space radio; but, the example does not stipulate that you come to any beliefs about the reliability of the space radio; thus, the original IS principle cannot explain why you have a defeater for its pronouncements; but, IS' can explain why there is a defeater. This is because given your cognitive situation—including the fact that you have just come to reflect upon the reliability of the space radio as well as upon the fact that you know nothing about its origins, purpose or provenance—it is internally irrational for you to deny that the probability that the space radio is reliable is, for you, inscrutable.

Principle IS' appears then to both be intuitively plausible, and combined with principle LR' can explain why there is a defeater in each of the analogical cases. Indeed, we may combine IS' and LR' into a single principle which I call the **Unsubstantiated Source (US)** principle of defeat:

- (US) S has a defeater for the belief p if, relative to all of her evidence, S takes as low or inscrutable, or it would be *internally irrational*

for S to deny as low or inscrutable, the probability that the source of p is reliable.

It is this US principle, I contend, which explains why the agents in the analogical cases are clearly facing defeat for some of their beliefs.

### III. *The US principle and the Defeater Thesis*

#### A. What will decide the matter?

In the last section I argued that it is the US principle which explains why the agents in the analogical cases are clearly facing a defeater for some of their beliefs. With this principle in hand we can now see how it applies to the case of the evolutionary naturalist who is apprised of the Probability Thesis. This issue turns on certain facts about what she might believe about the cognitive faculty which has produced her belief in R, or what we might call her **R-faculty**. In particular it depends on whether she believes, or it would be internally irrational for her to deny that, *relative to all of her evidence*, the probability that her R-faculty is reliable is either low or inscrutable.

If any of these disjuncts hold then the US principle shows that she has a defeater for her belief in R. Note, however, that the Probability Thesis states merely that *relative to her belief in evolutionary naturalism* the probability that her cognitive faculties (which certainly include the R-faculty) are reliable is either low or inscrutable. This is not one of the relevant disjuncts. But, someone might claim, one of the relevant disjuncts follows as a direct consequence of the evolutionary naturalist's being made aware of the Probability Thesis. In particular someone might claim that it is *internally irrational* for the evolutionary naturalist who is apprised of the Probability Thesis to deny that relative to all of her evidence the probability that her cognitive faculties are reliable is either low or inscrutable.

Why think this is so? Someone might think so on the basis of the following principle concerning the degree of coherence among one's beliefs that is necessary in order for one to be internally rational:

**The Attended No-Reason (ANR) condition:** if agent S's attention is brought to bear on whether her belief B is formed in a warranted way, and it is internally irrational for her to accept any reason for thinking that B is warranted, then it is internally irrational for her to continue to believe B.<sup>5</sup>

Let us reflect for a moment on the role that attention is playing in this principle. The suggestion here is that the internal rationality of an agent's acceptance of B may be affected simply by her coming to reflect on whether B is formed in a warranted way. Before reflecting on this matter it might be internally rational for her to accept B even though it is not internally rational for her to accept any reason for thinking that B is warranted. Once her attention is brought to bear on the question of whether B is warranted, though, the ANR principle declares that it is internally irrational for her to continue to believe B.

The ANR principle has a certain degree of intuitive plausibility. In addi-

tion, it neatly explains how an evolutionary naturalist is supposed to go from an awareness of the Probability Thesis to the possession of a defeater for R: reflection on the Probability Thesis brings the evolutionary naturalist's attention to bear on whether her belief in R is formed in a warranted way. And, *supposing* that there simply is no internally rational reason for the evolutionary naturalist to think that R is formed in a warranted way, then it turns out that reflection on the Probability Thesis leads the evolutionary naturalist to have a defeater for her belief in R.

It is this appeal to the ANR principle along with the supposition that there is no internally rational reason for the evolutionary naturalist to believe that R is formed in a warranted way that I believe drives Plantinga's case against evolutionary naturalism. I shall accept the ANR principle. But is the supposition that there is no internally rational reason for the evolutionary naturalist to believe that R is formed in a warranted way well-founded? In order to demonstrate *this* there is some hard work to do. At the very least it is necessary to examine all likely accounts that the evolutionary naturalist might offer for thinking that her belief in R was formed in a warranted way—i.e. that her R-faculty is part of her epistemic design plan. If all such accounts are found to be internally irrational for the evolutionary naturalist to accept then we can conclude that Plantinga's analogical argument for the Defeater Thesis is successful; however, if we find that it is internally rational for the evolutionary naturalist to believe that her R-faculty is indeed part of her epistemic design plan then the US principle will *not* ground the Defeater Thesis.

In the rest of the paper I will discuss two reasons that the evolutionary naturalist might offer to support the view that her belief in R is produced in a warranted fashion. One of these reasons takes it that R is accepted in a *basic way*, i.e. it doesn't get its warrant by way of being accepted on the evidential basis of other propositions. The other account takes it that R is accepted on the basis of inductive inference, and thus not in the basic way.

My aim is to show that *for all that Plantinga says* these reasons are internally rationally acceptable for the evolutionary naturalist. If this is right then Plantinga's case for the Defeater Thesis is at best incomplete until it is shown how in they are in fact not internally rationally acceptable.

## B. The Maximal Warrant Approach

In this section we will discuss the "Maximal Warrant Approach" that an evolutionary naturalist might employ in order to show that her belief in R is warranted. The Maximal Warrant Objection takes it that it can be internally rational for an evolutionary naturalist to think that R gets its warrant in a *basic way*, i.e. it doesn't get its warrant by way of being accepted on the evidential basis of other propositions. Given this fact, it can be internally rational for the evolutionary naturalist to think that R has so much intrinsic warrant "that it can't be defeated—or at any rate can't be defeated by the fact that  $P(R/N\&E)$  is low or inscrutable." (ND, p. 16)

Might an internally rational evolutionary naturalist think that her belief in R has a great deal of warrant because it is produced in a basic way? Plantinga argues that this is not the case. His argument depends on his understanding of *how* it is that an evolutionary naturalist might come to

think that R is produced in a basic way. The idea is that a belief in R is part of the human design plan because if an agent doubts R she is thereby headed for epistemic disaster. (ND, p. 53) On this reading R is produced in a basic way as part of the human design plan; however, since it is not produced by that part of the human design plan that is *directly* aimed at truth (but rather at that part of the human design plan which is directly aimed at the avoidance of epistemic disaster) it has no warrant. (cf. WPF, p. 40)

What Plantinga's response shows here is that the Maximal Warrant Objection is acceptable only if it can be internally rational for an evolutionary naturalist to think that her R-faculty is contained in that part of her design plan which is aimed *directly* at the truth. I am not sure if an internally rational evolutionary naturalist could think this after fully thinking through the issues involved here; indeed, I am rather skeptical.<sup>6</sup> But, for all that I say here, and more importantly *for all that Plantinga says*, it could be internally rational for an evolutionary naturalist to believe this; and, so long as we have no conclusive reason to think to the contrary, Plantinga's case against the evolutionary naturalist is at best incomplete.

### C. The Inductive Inference Approach

Let us suppose, however, that we could conclusively show that it was not internally rational for the evolutionary naturalist to think that her belief in R was warranted because it was produced in a basic way. Even then I would claim that Plantinga's case against the evolutionary naturalist would be incomplete. This is because the evolutionary naturalist might think that her belief in R was formed in a warranted way insofar as it is the product of an inductive inference.

If an evolutionary naturalist could believe *this* in an internally rational fashion then it too would undermine Plantinga's case against evolutionary naturalism. But can she? She could if she could believe the following in an internally rational fashion:

- (a) That her belief in R is produced by a faculty of inductive inference, and
- (b) That her faculty of inductive inference is a highly reliable belief-forming mechanism.

Let us see how she might make good on these claims. Consider the following chain of reasoning that she might go through: "I have many beliefs and while some are undoubtedly false the vast majority are true. Moreover, all and only these beliefs are the product of my cognitive faculties. So, most of the beliefs generated by my cognitive faculties are true. And, the best explanation of why most of the beliefs generated by my cognitive faculties are true is that my cognitive faculties are in fact highly reliable. And, making an inference to the best explanation, I am entitled to believe that my cognitive faculties are highly reliable." According to this chain of reasoning the evolutionary naturalist believes that the relevant R-faculty is the faculty of inductive inference.

She continues by demonstrating that this faculty of inductive inference is itself highly reliable. She also demonstrates this via an inductive inference:

"I have had many beliefs generated by inductive inference. And, it turns out that the vast majority of *these* beliefs are true. The best explanation of why this is so is that I have a reliable faculty of inductive inference. And, making an inference to the best explanation, I am entitled to believe that my faculty of inductive inference is highly reliable." Using this form of reasoning the evolutionary naturalist comes to the belief that she has a highly reliable faculty of inductive inference, and thus that she has a highly reliable R-faculty.

#### **D. Plantinga's Reply: a second argument by analogy**

One might object to this appeal to inductive inference on the part of the evolutionary naturalist. Indeed, Plantinga anticipates this line of argument and states that:

This argument ought to meet with less than universal acclaim. The friend of N & E does no better, arguing in this way, than the theist who argues that wish fulfillment must be a reliable belief-producing mechanism by running a similar argument with respect to the beliefs he holds that he thinks are produced by wish fulfillment. He does no better than the widget observer who, by virtue of a similar argument, continues to believe that those widgets are red, even after having been told by the building superintendent that they are irradiated by red light. Clearly this is not the method of true philosophy. (WPF 233)

As we see here, Plantinga's argument against the evolutionary naturalist's use of inductive inference is also by analogy. He first points out that it is illegitimate for the Freudian theist to make use of inductive inference in defense of the reliability of her wish-fulfillment faculty, and that it is illegitimate for the widget factory visitor to make use of inductive inference in defense of the reliability of her color-detecting faculties.

Although Plantinga does not make clear which of the two Freudian theist cases, or which of the two widget cases he has in mind, let us agree that it would be illegitimate in each of these cases for the theist or the factory visitor to use inductive inference in the way that I suggested on behalf of the evolutionary naturalist. Consider, for example, the first widget case. In that case the factory visitor forms color beliefs about widgets on the basis of her color-detecting faculties; but, given what the shop superintendent has told her it is internally irrational for her to deny that the probability these faculties are reliable in the circumstances at hand is rather low. In this case it is illegitimate for the visitor to reason as follows: "I have many color beliefs about widgets, and while some are undoubtedly false the vast majority are true. The best explanation of why my color beliefs about widgets are true is that my color-detecting faculties are reliable in the circumstances at hand. Thus, making an inference to the best explanation, I am entitled to believe that my color-detecting faculties are reliable in the circumstances at hand."

I agree with Plantinga that it is illegitimate for the widget factory visitor to reason in this fashion. I also agree that it is similarly illegitimate for the agents in the second widget case, as well as in both of the Freudian theist cases to argue for the reliability of their respective faculties in this fashion.

But is the evolutionary naturalist in a relevantly similar position? If she is, then she is debarred from making use of inductive inference in defense of her belief in R, as well as in defense of her belief that her faculty of inductive inference is highly reliable.

But, I contend, it is far from obvious that the evolutionary naturalist is in a relevantly similar position to the Freudian theists and the widget factory visitors. And, I submit, in order to tell whether this is the case we need first to articulate the general principle which explains why it is illegitimate for the Freudian theists and the widget factory visitors to make use of inductive inference arguments in order to argue that their respective faculties are reliable. Once we extract this general principle we can then see whether it applies to the evolutionary naturalist.

So, what is this general principle? One might think that they are debarred from making use of such arguments simply because such arguments are *epistemically circular*. Following Alston, we take an epistemically circular argument to be one that "involves a commitment to the conclusion as a presupposition of our supposing ourselves to be *justified* in holding the premises." (15)

Let's consider an example. In the first widget case the factory visitor uses inductive inference to conclude that her color-detecting faculties are reliable in the circumstances at hand; however, the premises of the inductive inference argument that she gives can only be seen as true if she presupposes that these color-detecting faculties are in fact reliable in the circumstances at hand; thus, the argument clearly counts as epistemically circular.

The evolutionary naturalist's use of inductive inference in favor of the reliability of her various cognitive faculties is similarly epistemically circular. (see p. 119) Her argument is epistemically circular in that she must commit to R as a presupposition of taking herself to be justified in holding the beliefs which serve as the basis of the inductive inference for R. And, her argument that inductive inference is a reliable means of forming beliefs is similarly epistemically circular.

Given this discussion one might be tempted to say that the evolutionary naturalist is in a relevantly similar position to the Freudian theist and the widget factory visitor since they all engage in epistemically circular arguments for their respective faculties.<sup>7</sup> However, someone might object that there is a relevant difference between the epistemically circular arguments that the Freudian theist and the widget factory visitor engage in and the circular argument that the evolutionary naturalist engages in. And, the objector continues, the epistemically circular arguments of the Freudian theist and the widget factory visitor are epistemically objectionable in a way that the epistemically circular argument of the evolutionary naturalist is not.

For example, someone might think that the epistemically circular arguments of the Freudian theist and the widget factory visitor are unacceptable not merely because they are epistemically circular but rather because the US principle unambiguously shows that there is a defeater in these cases. It is the presence of these defeaters which explains why the Freudian theists' and the widget factory visitors' use of epistemically circular arguments is unacceptable. Indeed, one might put the general point in this way:

An epistemically circular argument for belief B is epistemically unacceptable if B already faces a defeater; however, the epistemic circularity of an argument for B is not necessarily a problem if B does not already face a defeater.<sup>8</sup>

Although I think that this principle is true, it is beyond the scope of this paper to argue for it. What is important for our purposes here is that if someone can believe in an internally rational fashion that it is valid, then she might rationally believe that her belief in R is warranted due to its being produced by a highly reliable faculty of inductive inference. This is because while an inductive argument for R might necessarily be epistemically circular, it is far from obvious that this kind of epistemic circularity is illegitimate.

The point here is that it is unclear whether Plantinga's second argument by analogy successfully rules out the evolutionary naturalist's appeal to inductive inference. And, since this is true it is also unclear whether his first argument by analogy in favor of the Defeater Thesis is successful since it depends on the success of the second analogy. Finally, this leaves it unclear whether the Defeater Thesis can play its intended role in Plantinga's main argument against evolutionary naturalism.

Let me conclude, then, by emphasizing what must be shown before we can conclude that Plantinga's analogical argument for the Defeater Thesis is successful. First, we must show that the evolutionary naturalist cannot believe in an internally rational fashion that her belief in R is warranted due to its being produced in a basic way. Second, we must show that the evolutionary naturalist cannot believe in an internally rational fashion that her belief in R is warranted due to its being produced via a highly reliable faculty of inductive inference. But, again, we have yet to do either of these; and, until we have, Plantinga's argument against evolutionary naturalism will remain, at best, incomplete.<sup>9</sup>

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#### NOTES

1. See Plantinga's *Warrant and Proper Function*, Oxford 1993. (WPF), *Warranted Christian Belief*, Oxford 2000. (WCB), "Naturalism Defeated", unpublished manuscript. (ND).

2. The Probability Thesis has received a fair bit of attention in the literature. See, for example Evan Fales' "Plantinga's Case Against Naturalistic Epistemology", *Philosophy of Science*, 63 (3), September 1996, pp. 432-51; and, Fitelson and Sober's "Plantinga's Probability Arguments Against Evolutionary Naturalism", *Pacific Philosophical Quarterly* 79 (1998), pp. 115-29.

3. This example is due to John Pollock in his *Contemporary Theories of Knowledge*, Rowman Littlefield: 1986.

4. Principle LR identifies that *there is* a defeater, but does not identify what it is. According to Plantinga's definition of a defeater, a defeater must always be a belief (or perhaps some other epistemic state?). (WCB 363) In the case at hand it would be consistent with Plantinga's definition to say that the defeater was the belief that the superintendent had said that her color detecting faculties were unreliable and that she did not know whether or not to trust him on this matter.

5. This is a more general statement of a principle that Plantinga offers (although not in this exact form): If agent S believes that one of her beliefs B requires reasons if it is to be accepted rationally, and believes that she has no reasons to accept B, then she has a defeater for her belief B. (see ND 28)

6. For a defense of this view, however, see Michael Bergmann's "Commonsense Naturalism", in Beilby & Peressini's *Naturalism Defeated? Essays On Plantinga's Evolutionary Argument Against Naturalism*, Cornell University Press, forthcoming.

7. Alston rejects epistemically circular arguments (see pp. 15-16 in his *The Reliability of Sense Perception*, Cornell 1993) and acknowledges the skeptical implications this rejection carries. We can at best, he says, find *practical* reasons for believing our basic faculties to be justified; we cannot, however, find *epistemic* reasons for believing that this is so. See p. 133.

8. A better way of putting this point would be this: "An epistemically circular argument for belief B is epistemically unacceptable if B already faces a *potential* or *actual* defeater; however, the epistemic circularity of an argument for B is not a problem if B does not already face a potential or actual defeater." To understand the distinction between potential and actual defeaters see WCB, p. 360. Up to this point whenever I have spoken of a 'defeater' I meant to refer to an *actual* defeater.

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