

AN EVOLUTIONARY ARGUMENT AGAINST NATURALISM?

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I Introduction

In his recently published two-volume work in epistemology,¹ Alvin Plantinga rounds out the discussion (in characteristic fashion) with a subtle and ingenious argument for a striking claim: in this case, his conclusion is that belief in evolutionary naturalism is irrational. Now this claim is not of itself so very surprising; the tantalizing feature here lies rather in the nature of the argument itself. Plantinga contends that taking seriously the hypothesis of evolutionary naturalism [hereafter, N&E] ought to undermine one's confidence in the reliability of our basic cognitive faculties. And if one withholds belief in cognitive reliability, it seems that one ought to likewise refrain from believing propositions that are the output of such faculties. And, for evolutionary naturalists, one such output is belief in evolutionary naturalism itself. Hence, quite apart from comparative evidential considerations that might lead one to prefer theism (or one of its competitors) to N&E, but rather owing to a sort of internal inconsistency (in a suitably broad sense), belief in N&E is shown to be epistemically defective. A bold and intriguing suggestion indeed. Let us take a closer look.

II Plantinga's Argument: Preliminaries

The aim of the first stage of the argument is to show that it is unlikely that our basic cognitive faculties are reliable, given the hypothesis of evolutionary naturalism. Put more formally, the claim is that the conditional probability² $P(R/N\&E\&C)$ is fairly low, where

N is metaphysical naturalism. . . E is the proposition that human cognitive faculties arose by way of the mechanisms to which contemporary evolutionary thought directs our attention; and C is a complex proposition. . . which states what cognitive

faculties we have - memory, perception, reason, Reid's sympathy - and what sorts of belief they produce. R, on the other hand, is the claim that our cognitive faculties are [on the whole] reliable. . . , in the sense that they produce mostly true beliefs in the sorts of environments that are normal for them. (p.220)

Plantinga notes that it is a matter of some controversy how to evaluate this conditional probability. Attention to the prominent role of natural selection in current evolutionary theory leads W.V. Quine and Karl Popper to assign it a relatively high value. (So, at any rate, their brief and general remarks suggest, as captured in Quine's famous remark that "creatures inveterately wrong in their inductions have a pathetic but praiseworthy tendency to die before reproducing their kind.") Those lining up on the other end of the spectrum include Patricia Churchland and Stephen Stich. Considerations to which they point include (see pp.218-222): (i) what evolutionary processes seem to promote in the first instance is behavior reasonably adaptive to circumstances, so that the selection of reliable cognitive faculties is at all likely only to the extent that their presence serves this primary function; (ii) in addition to natural selection, there are factors such as random genetic drift which can lead to the fixation of less fit genes; (iii) adaptively positive and adaptively negative traits can be linked to one another via a common gene, so that the negative trait gets perpetuated by being associated with a gene that is selected in virtue of its positive trait; (iv) it is far from clear that a highly reliable cognitive system is optimal for promoting survival and reproduction.

Plantinga argues on behalf of the Churchland-Stich position in the following manner³: He considers five possible outcomes of the naturalistic evolutionary processes that, ex hypothesi, have led to our development (pp.223-225):

(1) Our beliefs neither are among the causes of our behavior nor are caused by that behavior.

(2) While our beliefs do not figure among the causes of our behavior, they are (direct or indirect) effects of that behavior.

(3) Beliefs do have causal influence over behavior, but only in virtue of their syntactical, not semantical, properties.

(4) Beliefs causally influence behavior semantically as well as syntactically, but are maladaptive.

(5) Beliefs causally influence behavior and are adaptive.

Since (1)-(5) are mutually exclusive and jointly exhaustive scenarios, the probability for R on N&E&C is the average of the probabilities for R on each of the five possibilities, where that average is weighted by the probabilities of these possibilities themselves. Upon fleshing out what is involved in these different scenarios a bit, Plantinga suggests that the probability for R on each of (1)-(4) is "low" or "fairly low", while its probability on (5) is perhaps "somewhat more than one-half". Without directly hazarding a guess as to the likelihood of each of the possibilities in themselves, he concludes that it would be reasonable to suppose

it very unlikely that the statistical probability of [our] belief-producing mechanisms' being reliable, given that they have been produced in the suggested way, is very high; and rather likely that (on N&E&C) R is less probable than its denial. (p.228)

III "A Preliminary Argument"

Now suppose we accept this verdict as to $P(R/N\&E\&C)$. What, if anything, of interest follows? As Plantinga sees it, a great deal follows. Plantinga begins by suggesting that if, in addition, you are antecedently predisposed to judge the probabilities of traditional theism and naturalism as roughly on a par and are also inclined (as is undoubtedly the case) to believe that our cognitive faculties are basically reliable, then "you have a straightforward probabilistic argument against naturalism - and for traditional theism" (p.228):

According to Bayes' Theorem,

$$P(N\&E\&C/R) = \frac{P(N\&E\&C) \times P(R/N\&E\&C)}{P(R)}$$

where $P(N\&E\&C)$ is your estimate of the probability for $N\&E\&C$ independent of the consideration of R . You believe R , so you assign it a probability near 1 and you take $P(R/N\&E\&C)$ to be no more than one-half. Then $P(N\&E\&C/R)$ will be no greater than one-half times $P(N\&E\&C)$, and will thus be fairly low. You believe C (the proposition specifying the sorts of cognitive faculties we have); so you assign it a very high probability; accordingly $P(N\&E/R)$ will also be low. No doubt you will also assign a very high probability to the conditional if naturalism is true, then our faculties have arisen by way of evolution; then you will judge that $P(N/R)$ is also low. But you do think R is true; you therefore have evidence against N . So your belief that our cognitive faculties are reliable gives you a reason for rejecting naturalism and accepting its denial.

The same argument will not hold, of course, for traditional theism; on that view the probability that our cognitive faculties are reliable will be much higher than one-half; for, according to traditional (Jewish, Christian, Moslem) theism, God created us in his image, a part of which involves our having knowledge over a wide range of topics and areas. So . . . $P(\text{traditional theism}/R)$ will be considerably greater than $P(N/R)$. (pp.228-9)

Plantinga's claim concerning the probability of R on traditional theism (T) seems correct. Having granted that, however, I have one minor quibble and one major objection to offer in response to the argument. First the quibble. Even if we accept the propriety of the overall structure of the argument (which I shall question in a moment), and agree that $P(T/R)$ is greater than $P(N/R)$, it overstates the case to say that we have an argument for

theism, since (if our estimate of the prior probability of theism is relatively low) $P(T/R)$ may be substantially lower than $1/2$, and so insufficient to warrant belief. Thus, at most Plantinga's argument points to a consideration that to some extent raises the likelihood of T relative to R , rather than showing that it is more likely than its denial or, more strongly, that it ought to be believed. But perhaps Plantinga means to claim no more than that it provides one consideration favoring theism over naturalism. And it is clear enough that his primary aim is not so much directly to make a case on behalf of theism as to raise a significant problem for naturalistic belief.

My central objection, though, is this: Plantinga improperly directs us to follow (believed) objective probability in assigning a value to the conditional probability of R on $N\&E\&C$, but to give a wholly subjective value to the prior probability of R . For we do not assign a value near 1 to R because we think this reflects an a priori or a posteriori objective likelihood; R is too fundamental to our cognitive enterprise for us to sensibly go about seeking non-circular evidence for it, and it certainly is not self-evident. As evidence that Plantinga's equivocation between objective and subjective values is improper, consider the following consequence: conditionalizing the values of $N\&E\&C$, on the one hand, and T , on the other, in this way results not only in disconfirmation of $N\&E\&C$, but also of T ! For if $P(R)$ is held to be 1 (or very nearly so), then it effectively drops out of the above equation. And since $P(R/T)$, while high, is certainly less than 1, multiplying it by the prior probability of T lowers the value of the latter. Moreover, the same appears to hold for any competing account of our origins, with the result that the bit of 'evidence' we are using to evaluate such accounts curiously disconfirms all such accounts!

Perhaps a more illuminating explanation of what has gone wrong here (beyond simply noting an apparent conflation of objective and subjective probabilities) may be had if we recall the much-discussed "problem of old evidence" confronting the Bayesian account of scientific theory confirmation (which holds, very roughly, that a particular bit of empirical evidence confirms a theory just in case its discovery serves to raise the theory's

probability). The difficulty has been illustrated by the following historical example. A short while after formulating the general theory of relativity (GTR), Einstein noted the fact that the perihelion of Mercury's orbit, an anomaly for Newton's theory of gravity, was confirming of his own theory. But since the relevant observations of Mercury's orbit were made some fifty years prior to the formulation of GTR, the prior probability of that fact, as well as its conditional probability on GTR, seem to be 1. But if so, then the conditional value of GTR on that fact is simply identical to its prior probability, in which case the Bayesian account of confirmation wrongly implies that the orbital evidence cannot count as confirming the theory. (To see this, just plug "GTR" and "MO" (for "mercury's orbit") in for "N&E&C" and "R", respectively, in Plantinga's instantiation of Bayes' Theorem above.) Various proposals have been offered to get around this problem, all of which have the consequence that the value one assigns to $P(e)$ (where "e" is our bit of old evidence) in determining the conditional probability of the theory on it comes out as less than 1. For example, we might say that the appropriate value to use is what $P(e)$ was prior to the observations by which we learned e.

Perhaps this brief discussion is enough to make clear that there is a similar problem with Plantinga's formulation of the instances of Bayes' Theorem involving T and N&E&C. In order properly to assess the evidential impact of R on these theories, we would need to know what its likelihood was prior to our having come to know it. And of course we cannot do this, since R is not something one comes to know, but is more like a framework belief that undergirds all of our rational inquiry. Hence, it simply seems inappropriate to try to treat it as evidence against which we may evaluate various hypotheses.

I conclude, therefore, that the argument as presented is seriously flawed. I will not try here to consider whether, appearances to the contrary, it might be revised in a way that overcomes the problem noted, since the question of the status of R in relation to the estimation of conditional probabilities will reappear (in a somewhat different form) in

Plantinga's main argument, which he develops at much greater length. I turn now to that argument.

IV The Main Argument Against Naturalism

Here we continue to reflect on the implications of our attitude towards $P(R/N\&E\&C)$, only now Plantinga generously allows the naturalist to claim agnosticism concerning its value, rather than being committed to supposing it likely to be in an intermediate range (and highly unlikely to have a fairly high value). And we are to momentarily shift our sights here, in that we suppose it reasonable to adopt this estimation of $P(R/N\&E\&C)$ not, initially, for the case of ourselves, but for a hypothetical population much like ourselves on a planet much like earth. Now then, Plantinga asks, assuming we have good reason to accept N&E in application to that hypothetical scenario, what would be the proper attitude for one of us to take towards R itself (also applied to that population)? His answer is that the reasonable course is one of agnosticism, since "the proposition in question is the sort for which one needs evidence if one is to believe it reasonably" (p.229), and the only source of information available is $P(R/N\&E\&C)$, and we have adopted a noncommittal posture towards that.

Suppose that thus far we are willing to agree.⁴ Well then, Plantinga urges, if we return to the case of ourselves and our own condition, and again believe it likely that N&E, while being completely noncommittal with respect to $P(R/N\&E\&C)$, oughtn't we, by parity of reasoning, withhold belief in R as applied to ourselves?

If we do concur, things get real bad, real fast, cognitively speaking. For apparently we (or, rather, those hapless evolutionary naturalists among us) now have come to have reason to withhold belief in the reliability of our cognitive faculties. But so long as that remains the case, the light of reason tells me (as a last bit of illumination, before the power shuts off completely) that I similarly have reason to be agnostic with respect to any of my beliefs.

Before making explicit the (by now apparent) denouement, Plantinga tries to explode any remaining pockets of resistance via the following consideration: reliable belief-forming

mechanisms no doubt vary in terms of their capacity to contribute to survival and reproduction; therefore, the likelihood that a particular sort of mechanism will be reliable, given that it has been selected by (naturalistic) evolutionary processes, no doubt varies as well. So even if you are inclined to hold optimistically that it is likely, on balance, that evolution would select for, say, reliable perceptual and memory faculties, it is surely implausible to say the same with respect to mechanisms responsible for highly theoretical forms of belief, such as mathematics, philosophy, and advanced science.

To return to the argument, let us focus our attention on just one of those beliefs of yours - N&E. Clearly it is a product of a mechanism or set of mechanisms about which it is reasonable to be no more than agnostic concerning the value of $P(R/N\&E\&C)$ (where R is relativized to just those mechanisms). So then, if the foregoing is correct, you should likewise be agnostic about R, too, (again, relative to those mechanisms), and if R, then all of the beliefs that issue from those mechanisms - and in particular, N&E.

What seems to be called for, then, is some further bit of evidence or argument that will tip the scales back in favor of the reliability of R. But how might we achieve this, now that we have been brought to withhold belief in R? For this will amount to pointing to some other belief or set of beliefs we have; and, again, since we are at this point withholding belief in R, we must do the same with respect to our beliefs whose acceptance is grounded in a prior acceptance of R.

So it looks as if the reason we have for rejecting belief in R (and, consequently, N&E) cannot subsequently be overcome:

If you accept N&E, you have an ultimately undefeated reason for rejecting N&E:
 But then the rational thing to do is to reject N&E. If, furthermore, one also accepts the conditional if N is true, then so is E, one has an ultimately undefeated defeater for N. (p.235)

As Plantinga emphasizes, this argument (unlike that discussed in the previous section) does not purport to show the falsehood of naturalistic belief; rather, it claims that naturalism is subject to a peculiar sort of self-induced irrationality:

The conclusion to be drawn, therefore, is that the conjunction of naturalism with evolutionary theory is self-defeating: it provides for itself an undefeated defeater. Evolution, therefore, presents naturalism with an undefeated defeater. But if naturalism is true, then, surely, so is evolution. Naturalism, therefore, is unacceptable. (pp.235-6)

V On Behalf of the Naturalist

But are things really so bleak as all that for the evolutionary naturalist? The critical turn in the argument, as it seems to me, occurs when Plantinga invites us to conclude that our evaluation of P(R), given acceptance of N&E and agnosticism towards P(R/N&E&C), ought to be the same in relation to our own case (i.e., concerning actual human beings) as we allowed it should be in relation to a hypothetical population of creatures. When it comes to our forming beliefs about such creatures, Plantinga asserts that R

is the sort for which one needs evidence if one is to believe it reasonably; since there is no evidence the reasonable course is to withhold belief. (p.229)

But even if this is so, things stand differently concerning the reasonability of believing R in relation to ourselves. We cannot sensibly seek to uncover evidence for the reliability of our cognitive faculties without employing (and thus tacitly accepting the reliability of) those very faculties. Partly for just this reason, Plantinga, as a non-classical foundationalist, allows that we may reasonably accept a number of propositions concerning ourselves (including R) and the immediate objects of our experience in the absence of independent evidence, and rightly

so. (And this, despite the fact that the sensible stance towards the (absolutely) a priori probability of R undoubtedly is also one of agnosticism.) So in what way, precisely, is the prima facie innocence of accepting R sullied by agnosticism concerning $P(R/N\&E\&C)$ (given N&E)?

Apparently, these latter considerations are taken to amount to some sort of countervailing evidence, in such a way as to legitimately overturn the initial presumption in R's favor. But is this a plausible view of the matter? The evolutionary naturalist, like the rest of us, starts with an initial acceptance (without evidence) of the basic reliability of her cognitive faculties, and, in the course of deploying these faculties over the years, comes to what she takes to be a well-founded belief in N&E. Owing to the fragmentary nature of her knowledge of the range of evolutionary processes that have actually occurred and the precise nature of 'initial' conditions (relatively speaking) that obtained at the onset of the development of biological life, and knowing that there are quite conceivable scenarios in which known evolutionary processes could sustain creatures with radically unreliable cognitive mechanisms, she is not in a position to so much as estimate $P(R/N\&E\&C)$. Why is this limitation of her knowledge with respect to the relevant issues thought to constitute countervailing evidence, removing the presumption in favor of accepting R? Plantinga counsels traditional theistic belief (T) as an alternative to the epistemic quandary he sees here, where T is taken to imply belief that God has created us in his own image, capable of acquiring a broad range of knowledge. As he notes, $P(R/T)$ is rather high. True enough, but is it, from an epistemic point of view, so critical for continued acceptance of R that one embrace some metaphysical account of our cognitive development with consequences sufficiently rich as to imply that the probability of R on that account is high?

This is not evident. But if the naturalist must have one, why can't she say that her beliefs on these matters are not limited to N&E alone, but include O as well, where O is simply a general proposition to the effect that the initial conditions of the development of organic life and the sum total of evolutionary processes (including ones as yet unknown or

only dimly understood) were and are such as to render $P(R/N\&E\&C\&O)$ rather high? Is it that while she might have legitimately done so in days gone by, now that she's been apprised of Plantinga's argument before embracing any such proposition as O, it's too late to save her from cognitive shipwreck, with nothing left for her to do but join Hume and other victims of skeptical philosophy in a game of backgammon? Or is it rather that there is something ad hoc, arbitrary, or otherwise epistemically disreputable about embracing such a belief?

Consider the fact that Plantinga himself allows that the bare theist may well be in the same fragile boat with the evolutionary naturalist in the precarious rapids of Plantinga's argument, where bare theism (BT) is the proposition that there is an omnipotent, omniscient, and wholly good creator, but does not include the further claim that God has created humankind in his own image (cf. f.n.25). It is, perhaps, not so clear that $P(R/BT)$ is sufficiently high. Plantinga, I gather, would suppose that to provide a good reason for the bare theist to upgrade to traditional theism (as it has more resources to ward off the attacks of troublesome epistemologists). But, really, wouldn't it be far less rash for the evolutionary naturalist to adopt O? It doesn't seem at all objectionable to reason thus: I believe R without having any ultimately non-circular reasons for doing so and know that I am nonetheless rational in so believing. Therefore, it is reasonable for me to believe (in the absence of evidence directly to the contrary) that the sum total of factors responsible for me and other human beings having the cognitive equipment that we do is such as to render R fairly probable. I take myself to have sufficient reasons for believing E very strongly, and N fairly strongly, and I note that I'm not in a position to give much of an estimate of the value of $P(R/N\&E\&C)$. Therefore, I seem to be entitled at this point to suppose that other factors obtained that together with N&E&C render R probable.

While I think this is a perfectly sensible posture to adopt, one might have the following worry about the propriety of this general line of response. Granted that one is within one's epistemic rights in making the initial working assumption that one's fundamental cognitive faculties are reliable, it seems, nonetheless, that there are conceivable scenarios in which this

presumption would have to be rejected. And if this is so, one wants to know how such cases are different from the one to which Plantinga points, involving the evolutionary naturalist.

Plantinga himself proposes two candidate scenarios in which the presumption of reliability for a sharply limited range of cognitive activity would have to be withdrawn (pp.229-231). In the first, a theist comes to believe that theistic belief is almost always the product of wish fulfillment. She considers the probability that this belief-producing mechanism is reliable, and, we may suppose, either judges it to be fairly low or takes herself not to be in a position to make a reasonable estimate of its probability. (And we may further suppose that she forms the corresponding belief about the probability that a belief is true, given that it is produced by wish fulfillment.) As Plantinga suggests, in the absence of further relevant considerations or evidence (bearing positively on the likelihood that wish fulfillment is reliable or that theism is true), the appropriate response to these reflections for her would be to reject belief in God.

In Plantinga's second scenario, a person in a factory sees a series of apparently red widgets being carried along a conveyor belt, and forms the belief that they are red. However, we may suppose that she either receives trustworthy information to the effect that these objects are being irradiated by a red light or receives conflicting information concerning this. In the first of these cases, she will form the belief that the probability that a widget is red, given that it looks red, is low; in the second, she will suppose that the rational course is to refrain from any belief whatever concerning the value of that probability. In either case, Plantinga (rightly) concludes, the person has a reason to refrain from believing of any apparently-red widget on the conveyor belt that it is red.

While I thus do concur with Plantinga that refraining from the relevant sort of belief is called for in both of his two scenarios, I want to deny his contention (p.231) that these scenarios are sufficiently analogous to the case of the evolutionary naturalist. Consider first the example of the theist who comes to believe that theistic belief is generally the product of wish fulfillment. Now why is it that she judges the reliability of this manner of belief

production to be low or unknown? Presumably, she is drawing upon such things as the truism (which enjoys nearly universal consensus) that the world often fails to conform to the way we want it to be, together with our general knowledge of the fundamental causal pathways by which most empirical information comes. More specifically, it seems reasonable to suppose that she will be drawing upon (a) a belief that wish fulfillment is not one of the basic ways of knowing for human cognizers, perhaps (b) a belief that nonstandard ways of forming beliefs tend not to pan out, for the most part, and certainly (c) a belief that others around her who are in a position to know tend to deny the rationality of beliefs formed by wish fulfillment in particular. In rejecting the reliability of wish fulfillment, then, she is recognizing that since it is not as universally grounded as other doxastic practices and appears offhand to cohere rather poorly with those other practices, it requires special justification, justification that doesn't seem to be forthcoming. And even if some epistemologists might reject the claim that special justification is required, one may rightly reject it on the grounds that it can be shown to be unreliable through the use of other, more fundamental practices (assuming these to be reliable). (The theist in our example may not be in a position to produce this demonstration, but she no doubt has good reason to think that such evidence is there to be had.)

Clearly there is no plausible analogy to be made here to the evolutionary naturalist who accepts the premises of Plantinga's argument. In this latter case, the belief-producing mechanisms in question (including sense perception, memory, testimony, statistical reasoning, and recognition of self-evident truths) aren't shown to have an unreliable track record by more fundamentally established mechanisms. They themselves are (or are among) the most fundamental such mechanisms. (And neither is it the case that they are shown to be unreliable by other, equally fundamental mechanisms.)

Plantinga's second case (involving perception of apparently-red widgets) is not one in which the general reliability of a belief-producing mechanism is called into question, but is instead one where there is reason to doubt whether an important necessary (external)

condition on its functioning reliably obtains. It is important to recognize here that this specific limitation on the reliable use of the belief-producing mechanism (visual perception) has come to be recognized internally, through the observation of conflicting output among several basic mechanisms (including visual perception itself). And, again, there is no corresponding feature in the situation involving Plantinga's evolutionary naturalist: in coming to believe that $P(R/N\&E\&C)$ is low or unknown, while continuing to accept R and believe that $P(N\&E)$ is fairly high, she has not uncovered evidence of inconsistency of output, requiring her to weaken the proposition concerning reliability, R , through additional provisos. And neither need she be reasoning inconsistently, since, as we have noted, she may believe that $P(R/N\&E\&C\&O)$ is high.

Therefore, as fundamental and (for the most part) internally-consistent aspects of the human cognitive system, the doxastic mechanisms in question are rightfully assumed to be reliable. The naturalist who employs such mechanisms and comes to believe that the probability of their reliability on a certain well-confirmed (as she sees it) if partial theoretical structure is low or uncertain has not landed upon evidence of an unreliable track record or internal inconsistency. So she may in all propriety respond to Plantinga's argument in the way I've suggested above.

VI Conclusion

Plantinga's argument against evolutionary naturalistic belief is, I have argued, unconvincing. Given the propriety of our assigning R a high value, and (as we see it) a well-confirmed, incomplete theoretical structure such that we are very uncertain as to R 's probability with respect to it, we are proceeding perfectly rationally if we suppose that other factors have obtained that together with our original theory render R probable. But now the astute reader will not have missed the fact that my argument has depended on the assumption that a significant part of the picture of our ancestry (at least in its details) is

missing from the more well-confirmed chunk of current evolutionary theory. What if (improbably) we were to come to the stage of knowing the biologically initial conditions and finer details of all the relevant processes to such an extent that we could confidently assert that the probability of R on all the relevant factors (when combined with N) was somewhat low? Would Plantinga be able to argue successfully in much the same way?

Not quite. The only reasonable epistemological stance concerning R, on my view, is to assume its truth unless doing so leads one to unavoidable inconsistency (as would be the case if our fundamental faculties persistently gave mutually inconsistent outputs). The evolutionary naturalist who assigns $P(R/N\&E\&C)$ (where E has been strengthened in the way suggested in the previous paragraph) a low value and $P(R)$ a very high value is being inconsistent, but not unavoidably so, and so ought not to embrace the cognitive despair into which Plantinga attempts (if only momentarily) to push her. For the obvious way out is to modify the relevant theoretical beliefs. Assuming her evidence for the strengthened version of E is quite good, the thing to do would be to reject N, the evidence for which, surely, is at most indirect and tenuous.

At this stage of the game, however, the evolutionary naturalist would not appear to face such a dilemma.⁵ Of course, there are compelling reasons to reject naturalism. It's just that the consideration raised by Plantinga isn't among them.⁶

¹ Warrant: The Current Debate and Warrant and Proper Function (Oxford: Oxford University Press, 1993). The argument I discuss is given in Ch.12 ("Is Naturalism Irrational?") of the second volume. Citations in the text will refer to this chapter.

² Where this may be construed as either an epistemic or objective probability. As Plantinga suggests (f.n.7), epistemic probability in this context will follow the conjectured objective probability.

³ Actually, he puts the argument in terms of $P(R/N\&E\&C)$ for a hypothetical population of creatures much like ourselves, so as "to avoid irrelevant distractions" (p.222) and then goes on to apply the argument's conclusion in a straightforward manner to the case of actual human beings. For the moment I will ignore this complication in order to simplify the exposition. I will consider its bearing on Plantinga's main argument in §IV.

⁴ Actually, there may be reason to hesitate here. As I claim below, it is reasonable to suppose that our own cognitive faculties are basically reliable, even though, arguably, there is no non-circular evidence available to support that claim. It's not so clear to me that it is improper to make a similar presumption in relation to other creatures we observe who appear to us to be acting upon true beliefs. But it seems that Plantinga can sidestep this doubt by adding that we are not to suppose that this hypothetical scenario takes place in a world much like our own. Clearly there are ever so many (at least epistemically) possible worlds where agents capable of belief are radically deceived about themselves and their environments, even if we may reasonably assume that this is not true of our own. If we are not given that the world in question is similar to our own in the relevant respects, then clearly enough no assumption of reliability on our part is warranted.

⁵ Unless, of course, she is unduly optimistic about how much is already known about the finer details of the course of our evolutionary development. Patricia Churchland, in some of her remarks quoted by Plantinga, is easily interpreted to have such optimism, as well as to hold that $P(R/N\&E\&C)$ is fairly low, and, accordingly, that $P(R)$, all things considered, should be considered to be low! She seems to be unaware of the fateful next step to which this forces her.

⁶ An earlier version of this paper was subjected to careful, critical discussion over three sessions of the Philosophy of Religion Discussion Group at the University of Notre Dame in the Fall of 1992. I am grateful to various participants, including Al Plantinga,

for the advice and criticisms I received on those occasions, especially for their helping me to see that an argument I originally used in § III was irremediably flawed. I also presented the paper at a meeting of the Society of Christian Philosophers at Wheaton College in January, 1994, and I thank my audience on that occasion for their comments. Finally, I wish to express appreciation to Carl Ginet for his helpful suggestions when I first drafted this material.