

Challenging Plantinga's Naïve Realism

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In his short book *Science and Religion: Are They Compatible?*, Alvin Plantinga puts forth the argument that - at least as per naturalism and evolution (N&E) - the majority of our beliefs are probably incorrect, since it is very unlikely that our cognitive faculties are reliable in any given case. Therefore, N&E is self-defeating, since it itself is a belief, and is thus, by its own standards, probably false. However, it is unclear what Plantinga means when he says “true” and “false,” and this ambiguity is not resolved in his book. A recent interview with practicing physicist Dr. Brian Martin suggests that Plantinga’s “naïve realist” (NR) approach to truth is insufficient in characterizing the success of scientific theories (such as N&E). As an alternative, Bas van Fraassen’s constructive empiricism (CE) accounts well for the success of certain scientific theories over others without requiring that beliefs be “true” in the sense that Plantinga assumes would be necessary. This perspective can inform Plantinga’s discussion of the reliability of our cognitive faculties, as well as the validity of N&E as a theory. I show here that N&E can, in fact, result in the creation of “true” (empirically adequate) beliefs, and therefore also that N&E is not self-defeating. I will first demonstrate how NR is an inadequate explanation of how scientific theories progress. Then, I will introduce Fraassen’s CE as an alternative, and show how it solves the problems created by NR. Finally, I will plug CE into Plantinga’s argument, which will show how Darwinian selection mechanisms can produce true beliefs.

The first thing we should immediately get clear on is the content of Plantinga’s argument. His central point is that there is an irreconcilable contradiction between naturalism and evolutionary theory, such that they are not compatible with one another. Plantinga first points out that, at least as per naturalism, beliefs have physical correlates in the brain, which he terms “neurophysiological properties” (NP properties). While beliefs are associated with these NP properties, they are not associated in any one specific way; Plantinga does not suggest a mechanism for how certain beliefs arise from NP properties. Instead, he takes this to be tangential to his point, which is that natural selection selects for *adaptive behaviour*, which he assumes is a direct result of NP properties. In his own words, “natural selection doesn’t give a fig for true belief as such” (page 19). Because evolution selects for adaptive behaviour, and since beliefs

are not associated with this adaptive behaviour in any one specific way, that the chances of our brains coming up with “true” beliefs is quite low. Plantinga goes as far as estimating this probability, which he figures to be, at most, around 50%. As a result, our “cognitive faculties” (the ability of our brains to produce “true” beliefs) are unreliable. To this effect, Plantinga states: “If the supervening content is true, excellent; but if it is false, that’s just as good. Its falsehood in no way interferes with the adaptivity of the neurophysiological properties.” It follows, then, that since our cognitive faculties are unreliable it would be irrational to believe N&E, since it itself is a belief, and our beliefs should not be trusted (given N&E). Plantinga’s argument here may seem objectionable on several counts, but the one that I will focus on here is his notion of “truth” in regards to belief content. At no point in *Science and Religion* does Plantinga take the time to define what he means by “truth.” It is, perhaps, clear by a close reading that Plantinga is taking a naïve realist approach to truth, meaning that he believes in an objective reality, and also that the beliefs that we humans have about these objective realities are definitively true or false. The philosopher of science (or anyone astute, for that matter) would be justified in wondering whether or not this particular naïve account of truth is satisfactory.

The second item to address, it would seem, is some sort of critique of naïve realism: why is Plantinga’s naïve realism insufficient? Simply put, NR does not align with how humans interact with the real world. The assumption in NR is that objective things exist in the world, and that we can know facts about them. Additionally, once we have sussed out the true nature of something, our understanding of that thing is, in a sense, complete, and should not be subject to change. However, this is not the case. Interview responses from Dr. Brian Martin - professor emeritus of physics at the King’s University in Edmonton - provide a good example of how the nature of truth is more complex than Plantinga is making it out to be. Specifically, Dr. Martin argues that scientific theories are just different ways of looking at the world, and that their predictive power is not necessarily a direct indicator of their truthfulness. In regards to objective truths, Dr. Martin says:

I don’t think there are pre-existing mathematical laws that are connections between ideas that fit or don’t fit, and I think that is what [competing explanations in] mathematics enables us to see... I’m not a Platonist, I don’t believe that there are forms out there that are needing discovery.

To show what he means by this, Dr. Martin provides the example of Newtonian mechanics versus Einstein's general relativity:

Newton can explain almost everything that Einstein can explain. . . Does that mean that somehow Newton was just completely wrong, and it was just an accident that his theory worked? [No,] but [Newton and Einstein] talk in entirely different languages. For Newton, gravity is some mysterious force. But for Einstein, gravity isn't a force at all. They're entirely different explanations of the same thing.

In this example, two seemingly contradictory accounts of the universe are both "true," in the sense that they both account for real world phenomena quite well. Newton's laws perfectly describe all macro-level objects, including falling apples and the movement of the stars. On the other hand, general relativity allows us to describe the bending of light and time dilation. NR cannot account for this, namely the simultaneous success of multiple (different) theories. If objective reality exists in a stable sense, then how is it possible that these two, completely different theories of the same phenomena (ie. gravity) are both able to make accurate, useful predictions? This question would seem impossible to answer, unless we accept some other account of the nature of truth.

If it is to be agreed that naïve realism fails to provide an accurate account of the nature of truth, then what other options are available? In his book *The Scientific Image*, eminent anti-realist Dutch philosopher Bas van Fraassen details such an option, which he calls "constructive empiricism." On page 12, Fraassen states:

For now, I shall leave that with the preliminary explication that a theory is empirically adequate exactly if what it says about the observable things and events in this world, is true—exactly if it 'saves the phenomena'.

In other words, a belief/theory is "true," as per CE, if it can *account for the available data*. (Note that throughout the rest of this paper, I will be extending the meaning of "data" to encompass all observable objects and events. Fraassen would object to this, since he is an anti-realist in respect to unobservable scientific theories only, and not to observable objects. However, performing this extension does not alter what is considered "true" in regards to these observable objects, since they may be true in a literal sense without affecting their simultaneous empirical adequacy. Therefore, Fraassen's conviction towards realism in regards to everyday observable objects is - at least here - besides the point.) Therefore, "better" beliefs/theories are those that

are more empirically adequate; in other words, they provide a better explanation of regularities in nature. In regards to how empirically adequate beliefs come about, Fraassen states (pages 39-40):

But the Darwinist says: Do not ask why the mouse runs from its enemy. Species which did not cope with their natural enemies no longer exist. That is why there are only ones who do. In just the same way, I claim that the success of current scientific theories is no miracle. It is not even surprising to the scientific (Darwinist) mind. For any scientific theory is born into a life of fierce competition, a jungle red in tooth and claw. Only the successful theories survive—the ones which in fact latched on to actual regularities in nature.

Under CE, “objective reality” is no longer of any concern. Theories are good if they account for regularities in nature, and nothing more; no actual correspondence to reality is required. Finally, we are equipped to solve the dilemma previously posed: how can multiple different theories be simultaneously successful? The CE answer to this question is simple: both theories accurately describe regularities in nature, albeit in different ways, and thus are both empirically adequate. Again, no correspondence to objective reality is required. With this in mind, we can now return to Plantinga’s discussion of N&E. Owing to the fact that Fraassen’s CE is able to clean up after the failures of Plantinga’s NR, it would be reasonable to move forward in this discussion using CE instead of NR.

Considering the shortcomings of NR, it is not surprising that Plantinga’s account of N&E misses the mark in some respects. To recap, Plantinga thinks that N&E cannot produce true beliefs, since “natural selection doesn’t give a fig for true belief,” it only cares about adaptive behaviour. However, Plantinga is taking “true” in the NR sense here; he is assuming that beliefs can be definitively true or false. Above, I have shown that Plantinga should instead be using a CE conception of truth. However, this is all very ambiguous; what would a “true” belief look like in the context of CE as per evolution by natural selection? Thinking in terms of prehistoric man and his environment, several examples come to mind: “bear attack me, it dangerous” and “that berry good, it very tasty.” It must be understood that prehistoric people faced very different problems than we do today, and also had a very different way of thinking about the world. For prehistoric people, fending off hungry predators and finding nutritious food represent two of the realest challenges of their entire lives. The “data” that must be explained in this

case is either getting eaten or not getting eaten by a predator, and getting sick to your stomach versus getting a good meal. Therefore, the beliefs that bears are dangerous predators and that a particular species of berry is safe and tasty are *empirically adequate* beliefs for the prehistoric man to have. This is true because these beliefs account for what is observed and experienced by prehistoric people and their communities. Natural selection can be inserted here quite nicely. Since those prehistoric individuals that hold beliefs which are not empirically adequate die off (or, at least, are less successful in reproducing), then, over time, increasingly adequate beliefs will tend to spread throughout the population. For example, someone who believes that bears are not dangerous will likely get killed by a bear, and thus will not pass on the NP properties (ie. genes) that code for that erroneous (insufficiently adequate) belief. It is clear, then, that natural selection is very good at producing beliefs that are true, at least to the extent that they are “empirically adequate” to the needs and the data of pre-historic man and his community.

If N&E is capable of producing “true” beliefs, then should it still be considered as self-defeating? The answer is no. However, it does not make sense to continue our discussion of modern beliefs such as N&E itself in the context of prehistoric man. As previously mentioned, the data that the prehistoric person is called to explain is that of survival and reproduction, not scientific theories. Therefore, we have to make a jump between prehistoric and modern man. The main difference is that the needs and the “data” that these two groups are called to explain has changed. As a result, what beliefs are considered empirically adequate have also changed. It would seem that in modern man’s new, complex, urbanized environment, the criterion for “empirical adequacy” (or “truth”) has shifted from survival to something along the lines of “alignment with the scientific literature.” It is, perhaps, obvious that while natural selection acted very prominently on the beliefs of prehistoric man, it is no longer working (at least to the same extent) on the level of theoretical scientific theories. Who, for instance, is being killed for not believing in evolution? It would seem, then, that a new mechanism is needed for selecting for and against these modern scientific beliefs. An analogous mechanism to natural selection would be that of “cultural selection”, which is the idea that “better” or “more fit” ideas replace inferior ones in the mind of the public. Plantinga makes this transition from natural to cultural selection relatively easy. On page 19 of *Science and Religion*, he outlines logical nonreductive materialism, which is essentially the idea that mental properties (ie. belief content) supervene on top of physical properties, “where the necessity involved is broadly logical.” Thus, while apparently distinct from NP properties, mental properties

are only a direct result of NP properties, meaning that this new notion of cultural selection does not violate the requirements of naturalism. As a result, the true beliefs produced by cultural selection should be in parallel to those produced by natural selection. Indeed, this is seemingly the case. Given enough time, beliefs that adhere to the conclusions of the scientific literature should spread at an increasing rate through the population. Examples in support of this notion are numerous. Consider the field of astronomy: older ideas of geocentrism have been completely replaced by heliocentric ones, as these heliocentric theories account for the scientific observations/data much more readily, and are thus more empirically adequate. It would seem that this general scheme holds for the rest of science also.

It follows that naturalism and evolution, being scientific theories, should not be evaluated for truthfulness under the paradigm of natural selection, which applies primarily to prehistoric peoples. Instead, they should be considered within the context of post-Enlightenment, post-Scientific Revolution contemporary society. Recall that, as per cultural selection, over a sufficient time period, beliefs that adhere to the conclusions of the scientific literature should spread at an increasing rate through the population. Although it could be argued that an insufficient amount of time has passed since the advent of modern science for cultural selection to have ran its course, we must work with what we have. In the case of N&E, Darwin is widely considered the champion of evolutionary theory. He published his famous text *On the Origin of Species* in 1859, meaning that the idea of evolution has been around for at least 150+ years. In comparison with other scientific ideas that most scientists nowadays hold to be true (ex. cell theory, 1890), this is a respectable period of time. Additionally, a recent poll of US scientists found that 97% of them believed that living organisms (humans included) have undergone evolution. Clearly, Darwin's theory of evolution is empirically adequate for modern society. Naturalism, perhaps, has a bit less support behind it than evolution. However, there is certainly a subset of people who believe in it (ie. Richard Dawkins). Regardless, it is hopefully clear that N&E is, in fact, capable of creating "true" beliefs, and as a result, is not self-defeating as Plantinga suggests.

To summarize, Plantinga tries to argue that N&E cannot produce true beliefs, and is thus self-defeating. However, this conclusion is predicated on the assumption that truth possesses NR qualities. By looking at competing scientific theories (Newtonian mechanics and general relativity), it is clear than NR cannot sufficiently account for the simultaneous success of multiple different theories. Fraassen's CE, on the other hand, is a veritable alternative as it is capable

of making up for the shortcomings present in NR. CE dictates that beliefs are “true” insofar as they are empirically adequate, meaning that they are able to account for the available data. Accepting Fraassen’s CE understanding of truth, it follows that N&E can produce true beliefs, both for prehistoric and modern man. As a result, N&E must no longer be seen as self-defeating.

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