

NATURALISM AND REASON

Joseph B. O. Okello

My intention, in this article, is to examine whether the possibility of reason, and for that matter, thought, can be justified on naturalistic grounds. Philosophers like C. S. Lewis¹ and (more recently) Victor Reppert² have argued quite forcefully that thought is invalid if it can be justified on non-rational grounds. Naturalists like Gilbert Ryle,³ D.M. Armstrong⁴ and Thomas Nagel⁵ seem to hold that mental processes, like the process of thinking, can be explained naturalistically. But what exactly is meant by naturalism? To be sure, there seems to be no agreed upon definition of the term. However, we can locate basic tenets that naturalists accept as being fundamental to naturalism. I outline some of them below.

Naturalism is the view that whatever exists or happens is susceptible to explanation through methods, which, although paradigmatically exemplified in the natural sciences, are continuous from domain to domain of objects and events.⁶ Naturalism repudiates the view that there exists or could exist any events or entities lying, in principle, beyond the scope of scientific explanation.⁷ Consider Sanford Goldberg and Andrew Pessin's definition:

The doctrine of naturalism (N) is a metaphysical doctrine. In broad outline it states that the only properties, states, entities, and events that exist are natural properties, states, entities, and events. The significance of this claim rests on the conception of what is to count as "natural"; in particular, N holds that a property, state, entity, or event is natural when and only when it can be understood in terms of the fundamental theories of natural sciences. So understood, N is a thesis about how to study the furniture of our world. It tells us that if our aim is to come to know of the existence and nature of all there is, then our best guide is natural science.⁸

Immediately following this claim, Pessin and Goldberg add the following statement: "Below we present a defense of N on the grounds that N embodies a sensible repudiation of supernatural forces and entities."⁹

Joseph B.O. Okello has earned an MDiv and an MA both from Asbury Theological Seminary in Texas, USA. He is currently a doctoral candidate at the Department of Philosophy, University of Kentucky, Lexington, USA.

This then is a definition of naturalism. But what are the tenets of naturalism? First, naturalism maintains that the entire knowable universe is composed of natural objects.¹⁰ Now, the universe may contain some non-natural objects. But, according to naturalists, we have no reason for allowing the existence of these unless they have an impact on the observable behavior of natural objects. This is because natural objects are the only things that we know directly.¹¹ Second, a natural cause is a natural object or episode that brings about a change in some other natural object.¹² It is solely with reference to natural causes that we explain changes in the behavior of natural objects. We need never go outside the system of natural objects for explanations of what takes place within it.¹³ Third, a natural process is any change in a natural object or system of natural objects, which is due to a natural cause or system of natural causes. There are no non-natural processes.¹⁴ Fourth, the natural order is not simply a collection of all the natural objects. It is a system of all natural processes. In principle, nature is intelligible in all its parts, but it cannot be explained as a whole. This is because such an explanation would presumably require reference to a natural cause, and outside nature there are no natural causes to be found.¹⁵ Nature is self-contained as a system with reference to the furnishings of natural explanations. This means that there are no intrinsic limits placed on which natural processes can be naturally explained. Therefore, in principle, they are all naturally explainable.¹⁶ Fifth, methodological naturalism involves explaining natural processes through identification of the natural causes responsible for them. It then tests any given explanation with regard to consequences that must hold if it is true. And the natural method is the way in which one set of natural objects, namely, human beings, operate upon the rest of nature.¹⁷ Sixth, nature is intelligible if and only if natural processes are regular, and accordingly, the natural method seeks to establish natural laws. Moreover, the natural processes that make up the mental and social life of human beings are no less subject to natural laws than are other parts of nature.¹⁸ Seventh, reason is the consistent application of the natural method. And natural science is the purest exemplar of reason. The theories of science are held to the degree that they serve to explain natural processes. However, consonant with the commitment to natural method, any theory is perpetually subject to revision or rejection in view of further tests.¹⁹ Finally, knowledge of the world at any given time is what science tells us at that time about the world. Should there be a conflict between common sense and science, it must be decided in favor of science. But it employs the same method that common sense does. Therefore, it cannot be repudiated without repudiating common sense itself.²⁰

These, of course, are not the only tenets of naturalism. Some have been left out intentionally because they have no direct relevance to this paper. Thus, the

nine tenets I have selected will feature throughout the paper. Now, having outlined these tenets of naturalism, what do naturalists have to say in view of these claims? In their book *Gray Matters*²¹ Goldberg and Pessin suggest that we should endorse the view that only those properties and things that science acknowledges as existing actually exist. This is because, they argue, we have firm convictions about the reality of some things and the unreality of others. And when it comes to justifying these convictions, science provides us with the best, and most probably, the only way to justify these convictions.²² They then conclude that a failure to endorse naturalism is tantamount to a failure to be able to justify our firm convictions concerning what is real and what is merely imaginary. For science is the best candidate to play the role of distinguishing between what is merely thought to be real and what is real.²³ Consider that to date, scientific inquiry has been remarkably successful in developing theories capable of predicting occurrence of events in remote times and places, events that human beings would otherwise never expect.²⁴

Goldberg and Pessin then proceed to show that no proposal is likely to be as plausible as naturalism. Here they begin with what they call a "straightforward proposal."²⁵ namely, only those things that we can see are real. Such a proposal, they recognize, immediately runs into problems. First, it does not provide grounds for ruling against bizarre sightings, when these sightings are sincerely reported.²⁶ Second, such a method is far too strong, for it would imply that some things that we intuitively accept as real in fact are not. An example of this is that we do not see other people's minds, the dark side of the moon, or black holes. But we do suppose that these things are real.²⁷

Thus they modify their proposal in the following manner: Only those things we can see, or whose effects we can see, are real.²⁸ The problem with this is that we need to know what counts as an effect of what. This would enable us to see the need of a theory of some causal structure of the world. But this brings us close to endorsing the idea that our best theories of the causal structure of the world tell us what is real. And these they take to be our best scientific theories. But this would mean that we are endorsing naturalism rather than coming up with a way other than naturalism to determine what is real.²⁹ And those who would reject naturalism for some other method must show that their method is as plausible as naturalism when it comes to determining what is real and what is not. It is possible that some such other method may exist. But naturalism appears to be the most reasonable candidate.³⁰

Let me provide an initial objection to naturalism in general. First, that naturalism provides a repudiation of supernatural forces is, in my opinion, too

strong a claim. It is not always the case that naturalists have always found a repudiation of the supernatural in naturalism, assuming rightly or wrongly, that naturalism and science are identical. It is quite possible for a naturalist to examine the evidence presented by science and conclude that a supernatural intelligent designer of the universe exists. Moreover, philosophers like William Dembski and J. P. Moreland have examined the scientific evidence and have concluded that there are numerous scientific signs that seem to point to the existence of this intelligent first cause. And if we assume on the one hand that God is supernatural, and on the other that science deals only with the natural, what do we make of cases where, say, a former atheist like Anthony Flew becomes a theist, (specifically, a deist) upon examining the scientific evidence? One may be led to conclude that on Flew's admission, science may not altogether rule out the existence of a supernatural being. The upshot of this objection is that we have at least one locatable instance of science providing evidence for the existence of the supernatural. This seems to neutralize the force of the first tenet of naturalism. And as noted earlier a number of scientists contend that scientific evidence points to the existence of an Intelligent Designer of the universe. Why should we reject their findings in favor of the "findings" of anti-supernaturalists? If indeed science points to the existence of an intelligent designer, as Flew discovered, then we cannot claim too strongly that naturalism repudiates the possibility of all supernatural causes. Thus here, naturalism's second and third tenets lose their force.

Let me now raise an objection to Goldberg and Pessin. Both argue that science is the best guide in helping us discover what is real. To be sure, this seems to be an epistemological statement. It can be reformulated as a question thus: How do we know what is real? The naturalists will quickly argue that science is the best guide here. Now, upon further scrutiny, one discovers that this answer really advocates for empiricism; for science, with all its experiments and observations, is empirical in nature. Of course there is nothing inherently wrong with being an empiricist. What strikes me as contentious is the fact that this epistemological method is getting preference over and above its equally forceful rival, namely, rationalism. One may argue here, consonant with the eighth tenet of rationalism, that natural science is the purest exemplar of reason. I contend, however, that science and reason can quite possibly be construed as different ways of coming to know that something is or is not the case. However, I doubt that science alone can guide us to proper knowledge without the aid of reason. Consider Aristotle's famous syllogism:

1. All men are mortal.
2. Socrates is a man.

3. Therefore, Socrates is mortal.

Here, even without knowing who Socrates is, one can see that premises 1 and 2 provide adequate support for the conclusion. One does not need scientific help to grasp the validity of this claim. I admit, of course, that sometimes we cannot know some things without the help of science (for example, in cases where a doctor wishes to determine the kind of virus infecting a patient). However, I postulate the much stronger claim that at no time will we ever know anything without the help of reason. Even scientists employ reason to make sense of their scientific findings; for reason, and not science, is what enables a person to see that any object of cognition (whether scientific or otherwise) is or is not intelligible.

In my opinion, no one contends for this view more forcefully than Lawrence Bonjour.³¹ According to Bonjour, if the validity of an argument depends on an appeal to experience, the inference is a posteriori. But if the validity of an argument is independent of any such appeal to experience, the inference is justified a priori.³² Bonjour then claims, quite strongly I suppose, that no argument can be justified on empirical grounds. This is because:

Any purely empirical ingredient can, after all, always be formulated as an additional empirical premise. When all such premises have been explicitly formulated, either the intended conclusion will be explicitly included among them or it will not. In the former case, no argument or inference is necessary, while in the latter case, the needed inference clearly goes beyond what can be derived entirely from experience. Thus we see that the repudiation of all a priori justification is apparently tantamount to the repudiation of argument or reasoning generally, thus amounting in effect to intellectual suicide.³³

What is Bonjour saying here? First, he seems to use the terms “rationalism” and “a priori” interchangeably. More specifically, he seems to argue that rationalism, or coming to know a priori that p , involves two things: first, it involves reasoning validly from premises to a conclusion. That is to say, it involves the argumentative transition, in thought or discourse, from the premises to the conclusion in an inference.³⁴ Second, it also involves seeing that a given conditional holds by virtue of examining the antecedent of the conditional in relation to its consequent.³⁵

The second thing that Bonjour is saying in the quote above is that if an intended conclusion is included in an empirical premise, then no argument is

necessary; for one can see the fact in the premise. It would be unnecessary, for instance, to try to prove to myself, when I am thinking, that I am in fact thinking. But if a derivable conclusion is not included in the premise that I am thinking, that conclusion goes beyond what can be derived entirely from experience. In which case I would conclude here, following Descartes, that since I am thinking, it must be the case that I exist. For I must exist in order for me to think. Here, Bonjour would say that the transition from “I think” to “I exist” is an a priori transition and is therefore completely independent of experience. And to repudiate the possibility of such a transition is to commit what he terms “intellectual suicide.”

Being a rationalist, Bonjour maintains that for rationalism, a priori justification occurs when the mind directly or intuitively sees or grasps or apprehends a necessary fact about the nature or structure of reality. In the simplest cases it is allegedly direct and unmediated, incapable of being reduced to or explained by any rational or cognitive processes of a more basic sort.³⁶ But this, observes Bonjour, leaves rationalism open to the charge that there is something mysterious, perhaps even somehow occult, about the a priori way of knowing.³⁷ My initial suspicion is that this mysteriousness is naturalistically inexplicable precisely because it finds its origin in the supernatural. Bonjour, however, thinks he has a natural explanation for the a priori so formulated. He argues that the capacity for rational insight, though fundamental and irreducible, is in no way puzzling or especially in need of further explanation; without such a capacity neither puzzles nor explanations would themselves be rationally intelligible.³⁸ Moreover, much later in the book he contends (correctly, I think) that many of those who claim to reject rationalism are in fact committed to rationalism by their own philosophical practice.³⁹ Bonjour then gives several intuitive examples of statements whose truth-values are knowable a priori:

1. Nothing can be red all over and green all over at the same time.
2. If A is taller than B and B is taller than C, then A is taller than C.
3. There are no round squares.⁴⁰

The idea here is that if one understands the various ingredients of the three propositions above and the way in which they are structurally combined, one will be able to see that the propositions have to be true. And it is perfectly clear to one just why these propositions hold. Moreover, one is able to articulate this insight to some extent, though not in a way that lends itself to discursive reduction.⁴¹ Whether or not he “rescues” rationalism from the accusation that the a priori has occultic tendencies is open to question. The upshot of all this,

however, is that if what Bonjour claims is sensible and true, then scientists must be committed to rationalism in order to arrive at scientific conclusions.

Consider, for instance, Stephen J. Gould's justification of evolution on rational grounds.⁴² He argues that our confidence that evolution occurred centers upon three general arguments. First, we have abundant direct observational evidence of evolution in action, from both field and laboratory. This evidence ranges from countless experiments on change in nearly everything about fruit-flies subjected to artificial selection in the laboratory to the famous populations of British moths that became black when industrial soot darkened the trees upon which the moths rest.⁴³ Second, nature has imperfections. Therefore evolution is true.⁴⁴ Third, transitions are often found in the fossil record. Therefore, evolution occurred.⁴⁵ Prior to providing these three reasons, Gould tells us that the second and third arguments for evolution do not involve direct observation of evolution in action. They rest upon inference.⁴⁶ In other words, by observing imperfections in nature, and by looking at the fossil record, we can infer (recall, Bonjour's a priori transition) that evolution occurred. All this is to show that science is fundamentally dependent on rationalism (as formulated by Bonjour) to even begin advancing the claim that science is the only reliable guide to truth. The question is: why make this claim that science is the only reliable guide to truth when science itself is dependent on reason? Why not have reason, or rationalism, or logical inference and so on as the reliable guide to truth? Bonjour has argued that empiricists depend on reason sometimes "unbeknownst to themselves"⁴⁷ in order to argue for the superiority of empiricism over rationalism. Moreover, we have seen that Gould, a scientist, and therefore an empiricist of sorts, depended on reason to conclude that evolution is true. Does this not show that something apart from science may in fact be an alternative guide to truth? If so, then we have met Goldberg and Pessin's challenge to provide an alternative to naturalism.

But one may argue that reason is part of the natural order of things in the universe, and therefore on that account, a rational guide to truth is just as natural a guide as a scientific guide. We can make several responses to this objection. First, it seems to be a generally accepted premise among epistemologists that knowledge gained by natural science is knowledge acquired empirically. Also, epistemologists seem to hold that knowledge acquired empirically is different from knowledge acquired through rational reflection. Therefore, if this is the case, then knowledge gained by rational reflection cannot be knowledge gained by natural science. Second, to conclude that reason is science simply because both are natural is tantamount to arguing, by counterexample, that cats are dogs simply because both are animals. Third, and most importantly, whereas there

might be a naturalistic-cum-scientific explanation for the origin of the universe, there seems to be no successful naturalistic explanation for the origin of thought.

This is an argument that both C. S. Lewis and Victor Reppert advance. Owing to space limitations, and also because Reppert gives a sort of “updated” version of Lewis’ argument, I will focus more on Reppert than on Lewis. More specifically, I will focus on Reppert’s treatment of the possibility of reason as a refutation of naturalism. According to Reppert, arguments from thought, or more specifically, reason, are arguments for accepting a theistic understanding of the universe as opposed to a naturalistic one. My attempt here will only be to show how, on Reppert’s terms, naturalism cannot provide epistemic justification for the possibility of reason. Thus, I will not endeavor to show how theism provides a more promising justification for the existence of reason (though I believe that this is demonstrable). This, in my opinion, requires a separate treatment altogether. At any rate, Reppert formulates several arguments from reason to show that naturalism fails to provide epistemic justification for the existence and possibility of reason. Here, he proceeds by describing the nature of our reasoning process and then defends the claim that these processes are essential to our epistemic life.⁴⁸ He also observes that Darwin performed rational inferences by supporting the thesis of natural selection with the evidence provided by his observations of the finches on the Galapagos Islands.⁴⁹

His first argument is the argument from intentionality. This is an argument Reppert adapts from Lewis, who argued as follows: Suppose naturalism is true. It implies that between the thoughts of a terrestrial astronomer and the behavior of matter several light years away, we must admit *that* particular relation we call truth. However, if we try to make this truth-relation exist between the matter of the star and the astronomer’s brain (considered as a lump of matter), then this relation has no meaning at all. Now, of course the brain may be in all sorts of relations to the star: for example, it is in a spatial relation, a time relation, and a qualitative relation. However, to talk of one bit of matter being true of another bit of matter, according to Lewis, is nonsense.⁵⁰ [Emphasis mine] This leads Reppert to argue for Lewis as follows:

1. If naturalism is true, then there is no fact of the matter as to what someone’s thought or statement is about.

But there are facts about what someone’s thought is about – implied by the existence of rational inference.

2. Therefore, naturalism is false.⁵¹

Let me revisit Lewis' conclusion above. According to Lewis, to talk of one bit of matter being true of another bit of matter is nonsense. Now, perhaps this would not appear nonsensical to the naturalist who must essentially hold that matter can be true of another bit of matter, assuming that mental processes are material. Perhaps this is an objection the naturalist might make against Reppert or Lewis. But here, Lewis or Reppert would argue that only statements, and not things, are capable of being true or false. The thing-world possesses no propositional content except as they find articulation in non-material and intelligible entities like mental processes or thoughts. These then find expression in language, verbalized or otherwise. This is the only way we can make sense of truth relations. To think otherwise is nonsense, as Lewis concludes. Thus we seem to have prima facie reasons for suspecting that naturalism may not provide adequate justification for the possibility of rational processes.

Reppert's second argument is an argument from Truth. Here, he cites Paul Churchland who says that we must be prepared to find nothing in the brain that can be true or false. If such an alarming occurrence takes place, the reasonable thing to do would be to deny the existence of truth.⁵² Consider Paul Churchland's claim that Reppert cites:

If we are ever to understand the dynamics of cognitive activity, therefore, we may have to re-conceive our basic unit of cognition as something other than the sentence or proposition, and re-conceive its virtue as something other than truth. The notion of truth, after all, is but the central element in a clutch of descriptive and normative theories ... and we can expect conceptual progress here as elsewhere.⁵³

Thus, for Reppert, thinkers like Paul Churchland and Patricia Churchland are willing to "pursue a naturalistic methodology in the philosophy of mind" and they are "now prepared to abandon the ideal of truth."⁵⁴ This permits Reppert to formulate his argument for truth in the following manner:

1. If naturalism is true, then no states of the person can be true or false.
2. Some states of the person can be true or false – implied by the existence of rational inference.
3. Therefore, naturalism is false.⁵⁵

Now, if it is true that Paul Churchland is willing to abandon the ideal of truth, then clearly he is in error. A closer examination of the passage Reppert quotes reveals that Paul Churchland and Patricia Churchland are both trying to

make the question of truth insignificant as far as the mind-body problem is concerned. Consider, for instance, Patricia Churchland's claim:

Boiled down to essentials, a nervous system enables the organism to succeed in ... feeding, fleeing, fighting, and reproducing. The principle [sic] chore of nervous systems is to get the body parts where they should be in order that the organism may survive. Improvements in sensorimotor control confer an evolutionary advantage: a fancier style of representing is advantageous so long as it is geared to the organism's way of life and enhances the organism's chances for survival. *Truth, whatever that is, takes the hindmost.*⁵⁶ [Emphasis mine]

But the question of truth is a fundamental framework within human rationality such that the more we try to avoid or abandon it, the more real it becomes. For to claim, as Reppert thinks Paul and Patricia are claiming, that no states of the person can be true or false is in itself questionable. And here, we might ask: is it true that no states of the person can be true or false? If we say it is true, we already presuppose that "a state of the person" is not bereft of truth or falsity. If we say it is not true, once again we still presuppose that "a state of the person" is not bereft of truth or falsity.

Reppert's third argument is the argument from mental causation. He argues as follows: Suppose the thought "all men are mortal" is brain state A, "Socrates is a man" is brain state B, and "Socrates is mortal" is brain state C. It might still be the case (from the naturalistic perspective, I presume) that the propositional contents of these brain states is irrelevant to the way they succeed one another in the brain.⁵⁷ For example: whether a computer's activity is interpreted as a chess-game or as a word processing program, such an interpretation will not affect the actual output of the computer. Therefore, even if there are intentional states, even if those states can be true or false, it might still be the case that one mental event cannot cause another in virtue of its content. Now here is the absurdity: if all causation is physical causation, it might be asked how the content of a mental state could possibly be relevant to what causes what in the world.⁵⁸

Here, Reppert draws our attention to David Donaldson's anomalous monism, which claims that mental items can be defined by a special quality – intentionality. Mental states can have contents that do not correspond to anything in the material world. Thus, here, while the mind may not be a separate substance from the physical body, it nonetheless has properties that cannot be explained at the level of the physical. And mental states may be physically caused by other mental states, but they are not caused by the propositional

content of other mental states.⁵⁹ This, Reppert observes, results in interesting conclusions; for on Davidson's view, it cannot be true of a naturalist that he accepts atheism because of the argument from evil. For though the brain event of "thinking that there is gratuitous evil in the world" can cause the belief "there is no God," it cannot do so in virtue of the propositional content of those beliefs. Hence, if Davidson is right about mental events, one cannot believe this for the reason provided by Davidson himself, or for any other reason.⁶⁰ Thus Reppert summarizes his argument as follows:

1. If naturalism is true, then no event can cause another event in virtue of its propositional content.
2. But some events do cause other events in virtue of their propositional content.
3. Therefore, naturalism is false.⁶⁰

The upshot of this third argument is simple: From the naturalist's perspective, when we reason from a set of premises to a conclusion, we do so not because we see that the premises provide adequate support for the conclusion. Rather, it is because we are in a certain brain state at the premises, which in turn cause another brain state, namely, the conclusion. This, of course, eliminates the possibility of a priori inferences that Bonjour alluded to above. But to eliminate such rational inferences is an intellectual blunder. Moreover, it advocates a form of determinism that seems to give little or no reason or standard by which we see that a given argument is valid or invalid. It seems to suggest that our current brain state is what it is at present as a mechanical result of a previous mechanical chain of brain states irrespective of their propositional contents. But on such a formulation, no rational inferences based on truths of proposition are possible. In fact, such inferences are irrelevant. And this is something the naturalist must come to accept. If he rejects it, it only serves to show that it is an event caused by another event in virtue of its propositional content.

Reppert's fourth argument is the argument from psychological relevance of logical laws. He begins by stating that the only acceptable physicalist analysis of knowledge would have to be some kind of causal interaction between the brain and the objects of knowledge.⁶¹ But if we know or have insight into the laws of logic, we must be in some kind of physical relationship to the laws of logic. But this is quite impossible if the laws of logic are metaphysical, non-spatial and non-temporal. We cannot be causally connected to the laws of logic if they are not real. Therefore, we should not be realists about logic. But if we do not suppose that the laws of logic really exist, then we cannot coherently assert that

they do not exist; for if we were to do so, we would have to presuppose the legitimacy of those very logical laws. Thus, philosophical naturalism undermines the laws that are presupposed in the very assertion of philosophical naturalism.⁶² The fact of the matter is, it is quite difficult to reject the reality of the laws of logic, like say, the law of non-contradiction; for to reject such a law is to use the law in the very process of its rejection. But to use the law in rejecting the law is to affirm the reality of the law in the process of denying it, which is absurd.

Reppert summarizes his last argument as follows:

1. If naturalism is true, then we should expect our faculties not to be reliable indicators of the non-apparent character of the world.
2. But our faculties do reliably reveal non-apparent character of the world.
3. Therefore, naturalism is false.

I touched on a version of this last argument at the very beginning of this paper. Consider, for instance, the claim that science deals only with what is real. Supernatural entities are not real. Therefore science cannot point to the supernatural. There might be some truth to this claim. But then again, this leaves us to wonder what to make of various scientific claims to the effect that many aspects of nature point to the existence of a supernatural being. The best that the naturalist could do at this point is to try to find an explanation that would do away with these findings.

My aim in this article has been to determine whether naturalism, if true, provides proper epistemic justification for the possibility of reason. It appears that it does not. And on this count alone, naturalism seems to fail. This is not to say that I have determined that naturalism is a complete failure overall. Indeed we must acknowledge that naturalism, in the form of science, has been quite successful in helping us discover important facts about the world. However, even if science this is the case, truths about the world are ultimately accessible only by the correct employment of our rational faculties; for without reason, science cannot take off the ground.

End Notes

¹ C. S. Lewis, *Miracles: A Preliminary Study* (New York: McMillan Paperbacks Edition, 1978).

² Victor Reppert, *C. S. Lewis' Dangerous Idea: In Defense of the Argument from Reason* (Downer's Grove: Inter-Varsity Press, 2003) p. 72 - 85

³ Gilbert Ryle, "Descartes' Myth," printed in *Fifty Readings in Philosophy, 2nd Edition*, Donald C. Abel, ed. (New York: McGraw-Hill, 2004) p. 202 - 211

⁴ D. M. Armstrong, "The Nature of Mind," *Fifty Readings in Philosophy*, p. 212-221

⁵ Thomas Nagel, "What Is It Like to Be a Bat?" *Fifty Readings in Philosophy*, p. 222-231

⁶ Arthur C. Danto, "Naturalism," in *Encyclopedia of Philosophy Vol. V*, Paul Edwards, ed. (New York: The Macmillan Company & the Free Press, 1967), p. 448

⁷ Ibid.

⁸ Sanford Goldberg and Andrew Pessin, *Gray Matters: An Introduction to the Philosophy of Mind* (Armonk, New York: M. E. Sharpe, 1997) p. 3

⁹ Ibid.

¹⁰ Danto, p. 448

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Goldberg, p. 17

²² Ibid.

²³ Goldberg, p. 18

²⁴ Ibid.

²⁵ Goldberg, p. 19

²⁶ Ibid.

²⁷ Ibid.

²⁸ Goldberg, p. 20

²⁹ Ibid.

³⁰ Ibid.

³¹ Lawrence Bonjour, *In Defense of Pure Reason: A Rationalist's Account of A Priori Justification* (Cambridge: Cambridge University Press, 1999) p. 5

³² Ibid.

³³ Ibid.

³⁴ Ibid.

³⁵ Bonjour, p. 6

³⁶ Bonjour, p. 15-16

³⁷ Bonjour, p. 16

³⁸ Ibid.

³⁹ Bonjour, p. 100

⁴⁰ Bonjour, p. 100- 106

⁴¹ Ibid.

⁴² Stephen J. Gould, *Hen's Teeth and Horse's Toes* (New York: W. W. Norton and Company, 1983) p. 257

⁴³ Ibid.

⁴⁴ Gould, p. 258

⁴⁵ Ibid.

⁴⁶ Gould, p. 257

⁴⁷ Bonjour, p. 100

⁴⁸ Reppert, p. 72

⁴⁹ Reppert, p. 72-3

⁵⁰ Reppert, p. 74

⁵¹ Ibid.

⁵² Reppert, p. 77

⁵³ As quoted by Reppert, p. 76

⁵⁴ Ibid.

⁵⁵ Reppert, p. 77

⁵⁶ As quoted by Reppert, p. 76

⁵⁷ Reppert, p. 78

⁵⁸ Reppert, p. 79.

⁵⁹ Ibid.

⁶⁰ Reppert, p. 80

⁶⁰ Ibid.

⁶¹ Reppert, p. 81

⁶² Ibid