

Simplicity, Relevance, and Swinburne's Cosmological Argument

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8609 words

Introduction

In his book *The Existence of God*, Richard Swinburne develops a series of arguments which, viewed together, provide what he takes to be a powerful case in favor of theism. He is clear from the start that his is a *rational* enterprise, motivated by a "deep conviction of the possibility of reaching fairly well justified conclusions by rational argument on this issue, perhaps the most important of all deep issues which stir the human mind."⁽¹⁾ Swinburne views himself as part of the evidentialist tradition that dominated Christian thought through the eighteenth century, and brings the tools of modern confirmation theory to bear on the question of God's existence. He characterizes theism - the belief that God exists - as the claim that "there exists a person without a body (i.e. a spirit) who is eternal, is perfectly free, omnipotent, omniscient, perfectly good, and the creator of all things."⁽²⁾ He treats this claim as a hypothesis on a par with any large-scale scientific theory, such as Newton's theory of motion or the atomic theory of chemistry. Swinburne takes up a number of traditional arguments for God's existence, such as the arguments from design, consciousness, and religious experience, and cashes them out in terms of Bayesian probabilities. Each argument follows the same general pattern, positing the theistic hypothesis as the likely explanation for an otherwise puzzling phenomenon.

The first, and perhaps the most persuasive, such argument is Swinburne's version of the cosmological argument, which takes as its starting point the existence of the complex physical universe. It is also among the most heavily criticized: Keith Parsons devotes nearly one-third of his *God and the Burden of Proof* to refuting this argument.⁽³⁾ Parsons contends that Swinburne, whom he takes to be a representative defender of evidentialism, fails in his attempt to construe theism as an explanatory hypothesis. Theism is not analogous to good scientific hypotheses, he argues, and does not represent a plausible explanation of the physical universe. If Parsons is right, then he has succeeded in undermining a highly sophisticated version of one of the strongest arguments for God's existence. I think his arguments fail, however. The purpose of this essay is to defend Swinburne's cosmological argument against Parsons's most serious objections, showing that the existence of the physical universe does indeed confirm the hypothesis of theism.

Induction, Confirmation, and Explanation

Swinburne's case is *inductive*. He points out that many deductive arguments for theism, while they may be logically valid, are of little worth in that they depend upon controversial premises. "What are clearly of interest to men in an age of religious scepticism are arguments...in which the premisses are known to be true by men of all theistic or atheistic persuasions."⁽⁴⁾ He is interested, therefore, in arguments whose premisses report uncontroversial "features of human experience"⁽⁵⁾ such as the fact that there is a universe, and he concludes that the best such arguments are inductive. Swinburne distinguishes two types of inductive argument, what he calls *P-inductive* and *C-inductive* arguments. A correct P-inductive argument makes its conclusion more probable than not, while a correct C-inductive argument simply raises the probability of the conclusion. Rendered symbolically, what interests us is the probability P of hypothesis h given evidence e and background knowledge k , or $P(h/e.k)$. An argument is a correct C-inductive argument if and only if $P(h/e.k) > P(h/k)$, and is a correct P-inductive argument if and only if $P(h/e.k) > 1/2$.⁽⁶⁾ Swinburne maintains that each of his arguments for God's existence is a good C-inductive argument, and that, taken as a whole, they constitute a good P-inductive argument.⁽⁷⁾

Swinburne, then, is arguing that the existence of the complex physical universe *confirms* theism. In other words, the evidence here renders the hypothesis more probable. He expresses the relationship between

evidence and hypothesis using Bayes's theorem:

$$P(h/e.k) = \frac{P(e/h.k)}{P(e/k)} \times P(h/k)$$

$P(h/k)$ is the prior probability of the hypothesis, i.e., its probability before considering the new evidence.

$P(e/h.k)$ is the likelihood of the evidence given the hypothesis, and $P(e/k)$ is what Swinburne calls the

prior probability of the evidence. The explanatory power of a hypothesis decreases with the evidence's prior probability and increases with its likelihood. $P(h/e.k)$ is the posterior probability of the hypothesis, i.e., its probability relative to the new evidence. Bayes's theorem (which is a provable consequence of the mathematical calculus of probability) thus expresses the posterior probability of a hypothesis as a function of its prior probability, and of its explanatory power with respect to the evidence.⁽⁸⁾ Swinburne points out that a hypothesis "has explanatory power in so far as it entails or makes probable the occurrence of many diverse phenomena which are all observed to occur, and the occurrence of which is not otherwise to be expected."⁽⁹⁾

An immediate consequence of Bayes's theorem is what J.L. Mackie calls the "relevance criterion": $P(h/e.k) > P(h/k)$ iff $P(e/h.k) > P(e/k)$. From this it follows "by a fairly short step of logic" that $P(h/e.k) > P(h/k)$ iff $P(e/h.k) > P(e/\sim h.k)$. In Swinburne's words, "a hypothesis h is confirmed by evidence e if and only if that evidence is more likely to occur if the hypothesis is true than if it is false."⁽¹⁰⁾ This "relevance criterion" is a crucial concept for Swinburne, for it defines C-inductive arguments. If his cosmological argument is to work, the existence of the physical universe must be more likely if God exists than if he does not exist.

Swinburne responds to the objection that "the cosmological argument does not show the existence of the God of Abraham, Isaac, and Jacob," i.e., the Judeo-Christian God. He contends that, though the argument may not take us far enough by itself (for instance, the mere existence of the universe says little about God's goodness), "it does its small bit together with some very diverse arguments which do their small bit, to get this conclusion."⁽¹¹⁾ Swinburne repeatedly turns to examples from criminal investigation to illustrate this and related points. The mere fact that Smith is found with bloody hands, he points out, does not necessarily make Smith the likely murderer of Jones, nor do the facts, each taken in isolation, that he was near the crime scene or that he had something to gain from Jones's death. Each fact does, however, raise the probability that Smith is the murderer, and, taken together, they may make this conclusion more probable than not.⁽¹²⁾ Swinburne also maintains that it is no threat to his project to point out that some bits of evidence might, in addition to confirming h , also confirm a contrary hypothesis h^* . If there are three prime suspects, Smith, Brown, and Robinson, and one learns that Robinson was somewhere else at the time of the murder, this raises the probability of both the hypothesis h that Smith committed the murder *and* of the hypothesis h^* that Brown committed it. Swinburne notes that it is unwarranted to dismiss evidence for a hypothesis on the grounds that it supports some rival hypothesis as well.⁽¹³⁾ His cosmological argument is intended to show that the existence of the universe is best explained in terms of divine agency, thus raising the probability of theism; if it does not in itself offer grounds for choosing between competing versions of theism, this in no way undermines the strength of his argument *vis-a-vis* naturalistic explanations.

Before examining the details of Swinburne's cosmological argument, it is necessary to survey his understanding of *explanation*.⁽¹⁴⁾ According to Swinburne, explanation is a kind of inductive reasoning which starts with the occurrence of a phenomenon and posits a cause of which the phenomenon is the effect. To explain something, he says, is to cite the *reason* the cause had the effect that it had under a specified set of conditions. This "wide but natural" conception of the word "reason" leaves room for two types of explanation, what he calls scientific and personal explanation.⁽¹⁵⁾ *Scientific explanation* can in turn be analyzed in two ways, each compatible with his general approach. The Hempelian analysis, followed by

most contemporary philosophers, explains the occurrence of a phenomenon in terms of a set of initial conditions *C* and natural laws *L*, which together bring about the occurrence of event *E*.⁽¹⁶⁾ Thus on such a model one might explain an explosion in terms of the "ignition of a certain mass of gunpowder plus a natural law of chemistry." The other, "more ancient," analysis, dominant before the seventeenth century, explains phenomena simply in terms of the "powers and liabilities" of material bodies themselves without invoking natural laws, so that the explosion would be explained strictly in terms of the gunpowder itself, which possessed a *power* to cause an explosion and a *liability* to exercise this power when ignited.⁽¹⁷⁾

Swinburne prefers the latter approach, arguing that the Hempelian analysis "tends to hypostatize laws of nature, to suggest that there are two sorts of things in the world, events...and laws of nature. But laws of nature are not things which exist independently of material bodies..."⁽¹⁸⁾ He is clear, however, that he does not view his theory as wedded to either model, and in cases where nothing essential rests on the distinction - which, for the purpose of the book, is nearly all the time - he articulates his position in terms of the Hempelian model. Both types of scientific explanation offer material, impersonal reasons to account for the phenomena in question.

The second type of explanation is what Swinburne calls *personal explanation*; it explains the occurrence of a phenomenon or event *E* with reference to the intention of a rational agent *P*.⁽¹⁹⁾ As one might expect, a personal explanation differs from a scientific explanation in that it posits a person, rather than a set of laws and initial conditions, as the *cause* of the phenomenon. The two modes of explanation are analogous, though not identical. In scientific explanation, reasons are given in terms of natural laws, whereas in personal explanation they are given in terms of an agent's intentions. In weighing a hypothesis on these terms, "we see the investigator using the criteria of prior probability and explanatory power to judge the worth of proposed theories of personal explanation, just as with proposed theories of scientific explanation."⁽²⁰⁾ Each of Swinburne's arguments explains an observed phenomenon, such as the existence of the universe, in terms of the intentional action of a person, namely God.

Swinburne points out that any number of factors may have led to a particular event, and that what we designate *the* cause of the event is often rather arbitrary. He is thus careful to distinguish full causes from merely partial causes. A *full cause* is "a set of factors which together were sufficient for the occurrence of an event *E*." Any member of such a set of factors he calls *a* cause of *E*. He goes on to define a *full explanation* as a full cause *C* together with a reason *R* explaining why *C* brought about *E*.⁽²¹⁾ "In this case the 'what' and the 'why' will deductively entail the occurrence of *E*."⁽²²⁾ Of course, as he notes, it is not always the case that men are able to give a full explanation of a particular occurrence, though they may be able to explain some of the causes and reasons for the event.

It follows from these considerations that, if there is a personal explanation to be had for a particular event, then it is a necessary component of a full explanation. The categories of personal and scientific explanation are by no means mutually exclusive. Many, if not most, actions performed by personal agents are what Swinburne calls "mediated," as opposed to "basic," actions. "I signal by moving my hand. I break down the door by giving it a kick. The former are mediated actions; the latter basic actions."⁽²³⁾ Mediated actions are thus not analyzeable solely in personal terms, but also involve physical laws and conditions. Conversely, he argues that events involving the intentions of persons are not fully analyzeable in terms of scientific explanation. If an explanation omits a factor that has caused *E* to occur (namely, an agent's intention), then it is incomplete. For Swinburne, personal and scientific explanation form two distinct modes of explanation, describing the reasons for various events at two different levels. However, there cannot be "two distinct full explanations of some phenomenon *E*, when neither in any way explains the occurrence or operation of the causes and reasons involved in the other."⁽²⁴⁾ (Otherwise, there could be two sets of necessary and sufficient conditions for the same event, which is logically incoherent.) Moreover, though the two modes of explanation appeal to different kinds of entities, they follow the same rational pattern.

Swinburne's Cosmological Argument

Swinburne endeavors to show that the existence of the physical universe confirms theism according to Mackie's relevance criterion. To do this, it is critical that he demonstrate both the simplicity and the

explanatory power of theism. According to Swinburne, simplicity is the most important factor in determining the prior probability of a hypothesis, though this also depends on its fit with background knowledge and its scope. A theory's prior probability increases according to how well it fits with our background knowledge of how the world operates (i.e., by positing entities or laws that behave like those which we know to apply in other fields), and decreases according to its scope (since "the more you assert, the more likely you are to make a mistake"⁽²⁵⁾). Of course, as he notes, scope is closely correlated with simplicity, so that, typically, any restriction on a theory's scope will reduce its simplicity as well. Furthermore, background knowledge becomes less important as a theory grows in scope, that is, as it purports to explain many or all fields, "for then there are less and less other fields with whose theories it has to fit." Simplicity, then, becomes the "crucial determinant" of a theory's prior probability.⁽²⁶⁾ The importance of this factor is compounded in the case of the cosmological argument, which takes the whole physical universe as the phenomenon to be explained; here, the background contains no observational evidence at all, but only what Swinburne calls "tautological evidence."

Considerations of simplicity, then, are critical to his cosmological argument. On a Hempelian analysis of scientific explanation, "a theory is simple in so far as it postulates few mathematically simple laws holding between entities of an intelligible kind."⁽²⁷⁾ For example, Newton's theory posited only four basic laws and described the relationships between material bodies with great simplicity. Without the simplicity criterion, we have no means for adjudicating between the infinitely many hypotheses that are compatible with each finite set of phenomena. Swinburne cites the dictum "the simple is the sign of the true," calling it "a dominant theme" of his book.⁽²⁸⁾ He points out the crucial importance of this criterion in the history of science, and contends that the same considerations that apply to scientific explanation must also apply to personal explanation. It is a basic principle of rationality.

Swinburne considers theism a simple hypothesis. He understands God to be an eternally existing, omnipresent spirit who is omnipotent, omniscient, perfectly free, and perfectly good, and who possesses each of these properties essentially and necessarily, so that he could not lose any of them without ceasing to be God. This God is the creator of all things.⁽²⁹⁾ A theistic explanation is a personal explanation of the simplest kind: "Theism postulates God as a being with intentions, beliefs, and capacities, but ones of a very simple kind, so simple that it postulates the simplest kind of person that there could be."⁽³⁰⁾ He argues that, because God is said to possess each capacity to the greatest extent possible, this provides a simpler hypothesis than one which posits a being whose capacities are limited in some way. It is simpler in the same way that it is simpler to suppose that something has infinite velocity rather than a velocity of 301,000 km/sec. In each case, the latter lacks the "neatness" and "naturalness" of the former.⁽³¹⁾ Thus God must be a simple person, on the theistic hypothesis.

Moreover, theism is also very simple in that it offers a personal explanation to which scientific explanation is reducible, and in terms of which it is analyzable. Any phenomenon which has a scientific explanation will have as its complete explanation a personal explanation, that is, an explanation which makes reference to the intentions and capacities of a rational agent.⁽³²⁾ Finally, "for the theist, explanation stops at what, intuitively, is the most natural kind of stopping-place...the choice of an agent."⁽³³⁾ Though it is logically possible that there should exist a further explanation for why an agent makes the choices he does, Swinburne points out that it is not necessary to look for such an explanation; his actions are ultimately intelligible in terms of his intentions. As noted above, intelligibility is a mark of simplicity. He concludes that theism simplifies our account of the world, explaining scientific causation in terms of a simple, personal cause who acted intentionally to bring about the physical universe.⁽³⁴⁾

A further consequence of a theistic explanation is that it does not leave room for further explanation. "If God features at all in explanation of the world, then explanation clearly ends with God."⁽³⁵⁾ However, while it is true that God, if he exists, is a necessary terminus of explanation, Swinburne does not follow the Leibnizian tradition in viewing him as somehow "self-explaining" or "self-causing." He prefers instead to view God as the "supreme brute fact."⁽³⁶⁾ For him, God is not a logically necessary being (since it is not incoherent to deny his existence), so that it is logically possible that the universe itself exists as a "brute fact," with nothing more ultimate to explain it. Again, Swinburne's case is inductive and explanatory rather than deductive; he argues that God is the simplest and most probable terminus of explanation for the

existence of the complex physical universe. Moreover, he holds that his case for theism holds whether the universe is finite or infinite in age. In either case, he argues, the evidence suggests a personal explanation, in the first case to explain the origin of the universe, in the second to explain the laws responsible for its operation.⁽³⁷⁾ A personal explanation is the simplest explanation.

Theism is a simple hypothesis; what of its explanatory power? In other words, to what extent does theism raise the probability of the universe's existence? Swinburne answers this by arguing, first, that the likelihood that the universe would exist if theism were false, i.e., $P(e/\sim h.k)$, is extremely low. This is because a complete explanation of the universe must be a personal explanation, so that, unless the universe is explicable with reference to the intentions of a person (the most likely candidate being God), then it is simply *inexplicable*. The opponent of theism must therefore offer grounds for concluding that the universe itself is the terminus of explanation, an unexplained brute fact. Swinburne contends that the prospects for doing so are undermined by the extreme complexity of the universe as compared to God's relative simplicity. After considering its features, he concludes that "[t]here is a complexity, particularity, and finitude about the universe which cries out for explanation, which God does not have."⁽³⁸⁾ The complex physical universe is an extremely surprising phenomenon; the probability that it should exist unexplained, as a brute fact, is thus extremely low.

He turns to the probability of a theistic explanation, to see if it fares any better. Swinburne is clear that he does not consider the probability of the evidence given theism, i.e., $P(e/h.k)$, to be particularly high. It is "passing strange,"⁽³⁹⁾ he says, and "a source of deep puzzlement,"⁽⁴⁰⁾ that *anything* should exist at all. The likeliest alternative is that nothing should exist.⁽⁴¹⁾ Even if one grants the existence of God, he does not think we can adduce overriding reasons why God should have created a physical universe, though there is, to be sure, "quite a chance" that he should do so.⁽⁴²⁾ However, *given* that there is a universe such as ours, it is more probable that it originated with God than that it should itself be the terminus of explanation. One might say that the complexity of the universe makes it a better *explanandum* than *explanans*.

Thus simplicity is *the* crucial factor for Swinburne, determining both the prior probability of the hypothesis and its explanatory power. Theism meets Mackie's relevance criterion by raising the probability of the evidence, in this case, the existence of the complex physical universe. Rendered symbolically, since $P(e/h.k) > P(e/k)$, we can conclude that $P(h/e.k) > P(h/k)$. In other words, Swinburne's cosmological argument constitutes a good C-inductive argument for theism. God is a better terminus of explanation than matter. He summarizes his case:

There is quite a chance that if there is a God he will make something of the finitude and complexity of a universe. It is very unlikely that a universe would exist uncaused, but rather more likely that God would exist uncaused. The existence of the universe is strange and puzzling. It can be made comprehensible if we suppose that it is brought about by God.⁽⁴³⁾

Poor Science?

Throughout the book, Swinburne points out parallels in the history of science to show that his line of argument is in keeping with the canons of scientific rationality. However, Parsons contends that his comparisons to Newton and others are really disanalogies. He writes that "if theistic belief is to be made credible to atheists, theists must agree to cooperate in hammering out shared conceptions of rationality."⁽⁴⁴⁾ Though Swinburne attempts to elaborate such a shared conception, Parsons claims that Swinburne's theistic hypothesis nevertheless "strays from accepted standards of scientific argument."⁽⁴⁵⁾ He discusses a number

of ways in which Swinburne's approach allegedly departs from the justification for Newton's theory of motion.⁽⁴⁶⁾ The most important of these is his claim that, though Newton's theory was not tested immediately, it was at least testable in principle, whereas Swinburne's theory is not. Parsons notes that Newton's laws "received spectacular confirmation when Edmund Halley correctly deduced from them that the comet, consequently named for him, would reappear in 1758."⁽⁴⁷⁾ Theism, on the other hand, appears to lack such predictive test implications.

The first thing to point out is that, as Newton died in 1727, he did not live to see the experimental confirmation afforded by Halley's comet. Therefore, if the justification of his theory of motion rested crucially on this piece of evidence, one must conclude that Newton's belief in his theory was irrational. If the theory *was* justifiable prior to 1758, however, which Parsons concedes it was, then his comment here is a red herring. This does not, of course, preclude the possibility that Halley's successful prediction confirmed, and therefore strengthened, the case for Newtonian mechanics. Insofar as it did so, it constituted a good C-inductive argument. Rather, this observation points up what really interests us, namely, the question of whether there was, in Newton's own time, a good P-inductive argument to be made for his theory.

According to Swinburne, the justification of an explanatory theory such as Newton's, i.e., its

credibility as a P-inductive argument, would have been due to three factors: the theory's simplicity, its scope, and its fit with the evidence. Parsons rejects the simplicity criterion (as discussed at length below). Since scope is generally correlated with simplicity, this leaves Parsons with the evidential criterion - which he makes clear is all-important for him. However, he wants to qualify this criterion, distinguishing theories with predictive test implications from those without them. "Being able to 'predict' only what is already known," he writes, "is a hallmark of pseudoscience."⁽⁴⁸⁾

Parsons's attempt to justify this distinction is highly problematic. For starters, his comments concerning Newton reveals that he is willing to acknowledge that a hypothesis can be justified to some extent even before receiving experimental confirmation.⁽⁴⁹⁾ Again, what is crucial for him is not so much that a theory be tested in fact, but that it be testable in principle; he leaves room, then, for at least tentative justification on non-experimental grounds. Without such room, the acceptance of Newton's theory of motion before it was tested would have been unjustifiable for, as Swinburne notes, though the theory was testable in the long run, its laws did not predict anything that was not already predicted by other known laws, such as Kepler's laws of planetary motion. Parsons agrees that this was in keeping with the canons of scientific rationality.

The cosmological argument, however, parallels the case for Newtonian mechanics at just this point. Newton's theory subsumes Kepler's as a limiting case, making sense of it in terms of broader yet simpler laws. In the same way, theism postulates a simple, personal explanation which subsumes and makes sense of our partial scientific explanations for the existence of the universe. While Kepler's and Galileo's laws were deducible from Newton's, Parsons writes that Swinburne "freely admits that no facts about the world can be deduced from his theistic hypothesis."⁽⁵⁰⁾ His comment, however, is misleading. To be sure, one cannot deduce any particular physical laws from the mere existence of the God of classical theism. However, such laws can be *explained* in terms of such a God, and Swinburne's point is that they are best explained in such terms. Parsons appears to have missed the point about personal explanation; though the distinction between personal and scientific explanation forms an essential component of Swinburne's case, Parsons makes no attempt to engage with it. Swinburne argues that, *all else being equal*, the best explanation for a particular phenomenon is the one which accounts for it in the simplest terms. When faced with two explanations, each of which explains the phenomenon equally well, the principle of parsimony dictates that we choose the simplest one. If Swinburne is right that scientific explanation is reducible to personal explanation, but not vice versa (and Parsons raises no objection to this), then theism provides the most reasonable explanation for the complex physical universe.

Parsons is in a predicament. He has left no room for strictly explanatory hypotheses, as opposed to predictive ones. Without the simplicity criterion it appears that, in cases where no experimental evidence is

available, his principle of testability is his only grounds for distinguishing legitimate from illegitimate theories. Can he justify such a principle? His only attempt to do so is on the basis of what he calls "pseudoscience." Parsons charges Swinburne with being engaged in pseudoscience, and warns against the supernaturalist tendency to offer untestable hypotheses which are to be accepted "purely on the basis of their simplicity and ability to provide *post factum* explanations of known data." ⁽⁵¹⁾ Later he claims that these traits point up "alarming parallels" between Swinburne's approach and that of so-called "scientific creationists." ⁽⁵²⁾ However, as we have seen, he concedes the validity of "*post factum*" explanations in certain cases, and, as we will see, his assault on simplicity is unwarranted. This leaves him with little more than an *ad hominem* argument: Swinburne is akin to a "scientific creationist," and everyone *knows* that they are not real scientists.

What Parsons fails to notice is that the distinguishing mark of pseudoscience is not its appeal *post factum* explanations, but its *ad hoc* character. In other words, the pseudoscientist will posit any number of auxiliary hypotheses in order to rescue the core hypothesis he seeks to protect. For instance, some creationists have notoriously claimed that, in spite of what appears to be geological evidence for a very old earth, God simply created the earth 6,000 years ago *with the appearance of age*. This is a poor hypothesis, not because it fails to predict anything new, but because it sacrifices simplicity for the sake of the core hypothesis. It is simply a bad explanation of the phenomena in question. On the other hand, if it could somehow be shown that the young earth hypothesis were the simplest way, all else being equal, to account for the data we have, then it would become a respectable, indeed a good, hypothesis. One of the great virtues of Swinburne's theory is that it avoids just the kind of adhocness that besets "scientific creationism."

Parsons is exploiting a perfectly valid intuition, namely, that a hypothesis is strengthened enormously if it makes surprising predictions which are nevertheless true. Swinburne agrees with this insight, and he even agrees that, the fewer predictions a theory makes, the weaker it becomes. Indeed, this is the point of his scope criterion: if a theory predicts *everything*, then, all else being equal, the theory is weaker for it. The crucial difference here is that Parsons regards testability as a *necessary* condition for justification, whereas Swinburne does not. Unfortunately, Parsons fails to explain just why testability should be necessary. Indeed, it is difficult to see how the testability criterion could be applied at all to the sheer existence of the physical universe. In this case, what predictions could the theistic hypothesis - or any other hypothesis - possibly make? One gets the impression that Parsons has designed his criterion with the cosmological argument in mind: He simply defines as unscientific any attempt to explain the existence of the universe. Given that such a stipulation serves no discernable purpose other than to exclude theistic explanations, it appears that Parsons himself cannot escape the charge of adhocness. Though Swinburne's theory is intended to explain a broader set of phenomena than Newton's, it is clear that both follow the same rational pattern.

Simplicity and Relevance

More serious is Parsons's assertion that Swinburne does not satisfy Mackie's relevance criterion, i.e., that he fails to show how his theistic hypothesis raises the probability that the universe would exist. Parsons begins by arguing at some length against Swinburne's claim that an infinitely old universe requires explanation. However, since there are, I think, good philosophical reasons for holding that the universe actually began to exist ⁽⁵³⁾, and since this is also the consensus of the scientific community ⁽⁵⁴⁾, I lay this issue to the side for the time being. A more pressing issue is whether a universe of *finite* age requires an explanation, specifically a personal explanation. Parsons offers a number of reasons for concluding that, even on such a view, atheism leaves nothing unexplained. He first disputes Swinburne's claim that theism is a simple hypothesis, asking, "why should the possession of unlimited attributes *ipso facto* make a being simpler than one having limited properties?" He goes on to argue that, Swinburne's arguments notwithstanding, "omnipotence seems to be a highly specific and determinate degree of power, viz., the highest logically possible degree of power." He concludes that, since omnipotence still represents a *determinate* degree of power, it "demand[s] explanation just as much as any other degree of power." ⁽⁵⁵⁾

Commenting on Swinburne's analysis of God's unlimited power, Parsons writes that "Swinburne's claim seems to be that it lacks a particularity or definiteness possessed by finite degrees of power." ⁽⁵⁶⁾ This

comment, however, is a misinterpretation. Swinburne never intimates that the degree of God's power (or any other capacity) might somehow be indeterminate, but simply that he possesses it to the greatest extent logically possible.⁽⁵⁷⁾ Swinburne's point is not that a God of infinite power is simpler because his power is indeterminate, but because it is *unrestricted*. In the absence of a reason to view God's capacities as limited in one way or another, it is more natural to suppose that they are unlimited; a God with infinite capacities is simpler than one with very great, but finite, capacities. Moreover, even if a "God" with some restrictions were equally probable as one with no restrictions, it would still be the case that *neither* of them is as complex as the physical universe. Thus, a "God" with immense but finite power and knowledge makes a better terminus for explanation than an enormously complex universe such as ours. In either case, theism is simpler than materialism. Swinburne is careful to acknowledge that our terminus of explanation will itself go unexplained, that it will remain a "brute fact." His point is that some things make better, i.e., likelier, brute facts than others.

Parsons goes on to argue that, even granting theism's simplicity, we have no reason to conclude that "the ultimate, uncaused entity will be a simple rather than complex entity."⁽⁵⁸⁾ He does not even consider it meaningful, let alone fruitful, to ask whether a simple entity is more *likely* to exist than a complex one. He gives three reasons for rejecting the simplicity criterion.

First, he argues that, contrary to what Swinburne might claim, appeals to the history of science do not bear out the conclusion that scientific progress has relied on simplicity. While science has *often* shown "how baffling complexity has been made explicable in terms of underlying simplicity," its history has not reflected "uniform progress toward greater and greater simplicity."⁽⁵⁹⁾ Instead, he points out that simple theories are typically subjected to great modification and complexification over time, and it is usually only when a theory becomes overly cumbersome that it is rejected in favor of something simpler. This is not a weighty objection, however, because, as Swinburne is aware, simplicity does not do a theory any good if it does not even fit the evidence. As I noted above, simplicity is invoked *all other things being equal*. For instance, Einstein's theory is more complex than Newton's, but it explains a much wider array of phenomena, such as the behavior of light and subatomic particles. (Swinburne points out as much, though in another connection.⁽⁶⁰⁾) Although there are an infinite number of possible theories to account for these phenomena, Einstein's is the simplest and therefore the best. The historical development of physical theory is compatible with both the simplicity criterion and Parsons' observation

regarding increasing complexification.

Another reason why Swinburne's appeal to the history of science fails, according to Parsons, is that "science has never yet come across a single instance of a disembodied mind." For this reason, the prior probability of theism, which posits just such a mind, is extremely low. This is related to an earlier comment he made, where he said that, unlike Newton, Swinburne's theory attempts to achieve explanatory power by positing an unobserved and previously unknown entity, namely, God. "Until the entities postulated by [such hypotheses] are confirmed by hard experimental evidence," he writes, "scientists tend...to regard them as useful fictions."⁽⁶¹⁾

I leave aside the question of whether physical laws are best construed as entities (though it seems safe to say that the answer to the question is not nearly so clear as Parsons seems to think). More fundamental is Parsons's assumptions about the nature of experimental confirmation. His view of "hard" evidence seems, well, naive. The above comments suggest that he thinks one ought to suspend judgment on the existence of anything that is not somehow observable. It is difficult to know what to make of such a view. On the one hand, he could mean that we should not believe in the existence of any entity that we (or that science generally) have not observed with our five senses. Such an approach would consign us to a radical skepticism whereby we cannot make meaningful statements about anything except our immediate sense experience. However, Parsons's high view of the achievements of "science" (by which he apparently means the scientific community employing accepted standards of scientific practice and judgment) is inconsistent with such a view. The scientific community holds to the existence of many entities that are not directly observable even in principle, such as quarks and black holes.

On the other hand, we might take Parsons to mean that anything not directly observable must be established by rigorous scientific methods. In this case, it seems clear that for science to "come across" an entity, it would mean that the entity was somehow well-confirmed by indirect evidence. This view is more sophisticated than the first alternative; perhaps this what Parsons intends. However, it is difficult to imagine how confirmation could be contrived without reference to explanatory principles. And as soon as *an explanation* is admitted, Swinburne has a case - which is precisely what Parsons hopes to avoid. Either reading of Parsons, therefore, elicits an incoherence in his account. If scientific rationality permits belief in any unobserved entity, then it is unproblematic to posit a disembodied mind. The only requirement is that the hypothesis be the simplest way to account for our direct observations.

Parsons offers a second reason for rejecting the simplicity criterion. He contends that, even if the history of science had progressed uniformly toward ever greater simplicity, "it does not follow that simplicity per se can be used as a guide to ultimate reality."⁽⁶²⁾ In support of this claim, he reminds the reader of Huxley's observation that a beautiful theory can be destroyed by an "ugly little fact." For this reason, Parsons says, "the laborious process of testing, observing, and experimenting cannot be circumvented by appeals to beauty, simplicity, or any other such nonempirical criterion."⁽⁶³⁾ If anything, he says later, simplicity is merely a virtue of scientific hypothesis, not a clue to the nature of the world.

It should be said at the outset that there are no grounds for supposing that Swinburne proposes simplicity as a way to avoid the hard work of sifting evidence. Perhaps Parsons is worried about pseudoscience again. It would of course be unthinkable to ignore empirical data, but, as we have seen, Swinburne's theory is as empirical as Newton's in that it accounts for many things we know about the natural world. It is worth mentioning at this point that the theistic hypothesis does not fit all possible evidence. In fact, the argument from evil is based on precisely this assumption, that is, it intends to demonstrate that the presence of suffering in the world, especially given its quantity, is incompatible with the omnibenevolent God of classical theism. If such an incompatibility does in fact exist, then no amount of simplicity will rescue the theistic hypothesis. Swinburne argues, however, that the reality of suffering does not render God's existence any less probable. He articulates a version of the free will defense, as well as a number of other arguments of his own, to show that the existence of evil does not provide a good C-inductive argument against theism, that is, that (with *e* as the presence of evil in the world) $P(h/e.k) = P(h/k)$.⁽⁶⁴⁾

I think it is fair to conclude that, insofar as the argument from evil is a serious argument (as Parsons thinks it is, devoting a full chapter of his book to it), it presupposes that theism is related to evidence in a meaningful way. In other words, theism is *falsifiable*, which should put to rest Parsons's charge that Swinburne is defending a kind of pseudotheory.

While it is unthinkable that a decent theory should ignore empirical evidence, it is equally unthinkable to suggest that a theory could do without a *nonempirical* component, for the simple reason that we need some means for adjudicating between the many, many hypotheses compatible with any given set of phenomena. To be sure, it does not follow *deductively* that the simpler something is, the likelier it is to be true (if that were the case, then nothing would exist!). What is not so clear, however, is that there is no inductive case to be made. Parsons cites Karl Popper, who dismisses the simplicity criterion altogether, and he asserts that those who accept the criterion "thereby implicitly endorse grandiose metaphysical theses about the nature of Ultimate Existence!"⁽⁶⁵⁾ What he fails to mention is that a central tenet of Popper's thought is that there are no grounds whatsoever for choosing between rival hypotheses, so long as they are not falsified by the evidence. In addition, Popper's entire philosophy of science is built around his rejection of the validity of induction.⁽⁶⁶⁾ Parsons, by contrast, still maintains that theoretical simplification is a legitimate aim of science, though one whose success is not guaranteed, and he never once questions the validity of inductive reasoning. Indeed, induction is integral to his own account of explanation. He thus raises no substantive objection to the notion that probabilities can be ascertained *a priori*. His assault on simplicity has brought him to the very heart of Swinburne's theory, namely the justification of explanation, but he has left himself with nothing significant to say about it.

As for Parsons's comment that simplicity is merely a desired feature of hypotheses, it is hard to see how such a view could lead to anything but global skepticism. He follows Anthony O'Hear in advocating a kind

of pragmatism, where the "preference for simple hypotheses...appears to arise from the fundamental aims of science."⁽⁶⁷⁾ Two questions arise at this point: First, if we have no assurance that simplicity is a feature of reality, then what good reason do we have for pursuing simple hypotheses? A chief purpose of a hypothesis is to describe the world as it is; it would be groundless at best, and misleading at worst, to impose a condition on our hypotheses that we do not think applies in the real world we are trying to describe. Second, if one of the fundamental aims of science, namely, theoretical simplicity, is not correlated with what is true about the world, then what accounts for the spectacular success of modern science? If a theory is not true, then it would be odd indeed if it "worked." Parsons apparently wants to posit a kind of benign instrumentalism, but it is not clear how he can avoid having this undercut his positive claims.

Parsons's third criticism of simplicity relates to possible universes. He points out that there is no principled way for concluding that there are more simple possible universes than complex ones, or for adducing the chances of any particular possible universe becoming actual. By appealing to such talk, Parsons intends to show the absurdity of applying simplicity to possible universes: That is, he is trying to show that one has no reason to deem a complex possible universe any less likely than a simple one. Thus, simplicity does not work for Swinburne; an explanation that terminates with a simple person is no more probable than one that terminates with a complex universe.

This objection can be answered in a straightforward manner: Parsons's talk of possible universes is irrelevant to Swinburne's argument. This is for two reasons. First, Swinburne does not attempt to compare the probability of the actual universe's existing with that of any number of possible universes. Rather, he compares it to the probability that *nothing* should exist. He finds it deeply puzzling that anything should exist at all, God included. Universes with other entities, laws, and degrees of complexity do not even enter the equation. Second, and more important, Swinburne's case takes *this universe* as its starting point, as the *explanandum*. In an important sense, it does not matter how likely it is that something should exist rather than nothing. The prior probability of the evidence, as evidence, is immaterial. According to Mackie's relevance criterion, what matters is the degree to which the hypothesis raises the probability of the evidence. Swinburne's case has nothing to do with other possible, but non-actual, bits of evidence. He argues, rather, that the existence of this universe would be *more* a matter of course if theism were true than if it were false.

Parsons concludes his critique by saying that Swinburne's theory does not meet the relevance criterion, for the simple reason that, without simplicity considerations, it offers no grounds for assigning a value to either $P(h/k)$ or $P(e/k)$, that is, the prior probability of either the evidence or the hypothesis. Consequently, he says, we are left with no way to tell if $P(e/h.k) > P(e/-h.k)$. Parsons writes earlier that "practically the entire support for Swinburne's hypothesis derives from its claimed simplicity."⁽⁶⁸⁾ It could as easily be said that Parsons stakes practically his whole case on his critique of simplicity. Since this critique fails, we may conclude that Swinburne's theistic hypothesis does in fact raise the posterior probability of the universes's existence. The universe confirms God's existence, satisfying the relevance criterion.

Conclusion

Swinburne's cosmological argument is good science, providing a good C-inductive argument for theism in keeping with the canons of scientific rationality. His theory, like Newton's, has great explanatory power in that it renders the evidence, i.e., the existence of the physical universe, less surprising than it would otherwise be. It also has great simplicity, postulating a simple person, rather than a complex set of entities and laws, as the terminus of explanation. For this reason, theism is able to offer something that is ruled out on an atheistic scheme: a full explanation of the universe, one which comprises the cause of the universe together with the reason why this cause brought the universe about. The universe thus confirms God's existence and, viewed together with Swinburne's arguments from phenomena such as design and consciousness, it provides a good P-inductive argument, making God's existence more likely than not.

Several factors undercut Parsons's critique. Most importantly, his objections to the simplicity criterion, which form the centerpiece of his critique, fail completely. In addition, he never directly articulates an

alternative account of explanation, nor does he address the explanatory power of theism. That is, he does not acknowledge the point that theism raises the likelihood of the evidence in question. (He apparently did not see the need to do so, since he considers his objections to simplicity so conclusive.) Finally, insofar as one might assemble his de facto theory of explanation, as revealed in his various criticisms, it seems to be wedded to a number of assumptions that need defending before they can be taken seriously. These include his quasi-verificationism ("science has never yet come across a...disembodied mind"), instrumentalism ("useful fictions"), and pragmatism ("the preference for simplicity...arise[s] from the fundamental aims of science"). Each of these would put him at odds with Swinburne's theory of explanation, even in areas where he has raised no specific objections.

1. ¹ Richard Swinburne, *The Existence of God*, revised ed. (Oxford: Clarendon Press, 1991), p. 1.

2. ² *Ibid.*, p. 8.

3. ³ Keith M. Parsons, *God and the Burden of Proof: Plantinga, Swinburne, and the Analytic Defense of Theism* (Buffalo: Prometheus Books, 1989).

4. ⁴ Swinburne, p. 7.

5. ⁵ *Ibid.*, p. 9.

6. ⁶ *Ibid.*, p. 16.

7. ⁷ I follow Swinburne is using "good" to designate an inductive argument that is correct in form and whose premises are true. It is the inductive analogue of "sound."

8. ⁸ *Ibid.*, pp. 64, 86-87.

9. ⁹ *Ibid.*, p. 53.

10. ¹⁰ *Ibid.*, p. 67.

11. ¹¹ *Ibid.*, pp. 18-19.

12. ¹² *Ibid.*, p. 13.

13. ¹³ *Ibid.*, p. 19.

14. ¹⁴ Swinburne develops an elaborate analysis and taxonomy of both explanation and causation on pp. 22-45 and 51-64. I will attend only to those features of his analysis which bear directly on his cosmological argument or directly intersect with Parsons's criticisms.

15. ¹⁵ *Ibid.*, p. 24.

16. ¹⁶ *Ibid.*, pp. 42-43. See also pp. 30-31. Actually, this is Swinburne's "amended" version of Hempel's model. He takes issue with Hempel at several points, such as the failure of his account to specify the

direction of cause and effect (p. 29). For a concise description of Hempel's approach, see Carl G. Hempel, *Philosophy of Natural Science* (Englewood Cliffs, NJ: Prentice Hall, 1966), chapter 5.

17. ¹⁷ Swinburne., p. 43.

18. ¹⁸ Ibid.

19. ¹⁹ Again, Swinburne's analysis is enormously complex, and, though it is both intrinsically interesting and helpful to his general project, many of its details need not detain us here.

20. ²⁰ Ibid., pp. 62-63.

21. ²¹ When speaking in Hempelian terms, Swinburne seems to use the concept of *cause* interchangeably with the *initial conditions* necessary to produce some effect. In this sense, it is the cause, together with the reason why the cause produces the effect, which constitutes an explanation of the effect.

22. ²² Ibid., p. 24.

23. ²³ Ibid., p. 32.

24. ²⁴ Ibid., p. 46.

25. ²⁵ Ibid., p. 52.

26. ²⁶ Ibid., p. 53.

27. ²⁷ Ibid., p. 52.

28. ²⁸ Ibid., p. 56.

29. ²⁹ Ibid., pp. 90-92.

30. ³⁰ Ibid., pp. 93-94.

31. ³¹ Ibid., p. 94. His account is actually a little more subtle. He argues that it is simplest to suppose that God is omnipotent, omniscient, and perfectly free (i.e., that these capacities are unrestricted) and that his other characteristics, i.e., his omnipresence, his perfect goodness, and his being the creator of all things, follow from the first three. See p. 97.

32. ³² Swinburne adds that, insofar as man acts independently of God, there will be personal explanations that are not made exclusively in terms of God's actions. See pp. 102-103.

33. ³³ Ibid., p. 103.

34. ³⁴ The question arises: How does the intrinsic probability of theism compare with that of materialism, the view that everything can be explained in terms of physical causes, and explanatory dualism, the view that neither personal nor scientific explanation is reducible to the other? Swinburne dismisses explanatory dualism as "messy." He considers materialism to have some initial plausibility, but thinks it suffers from its attempt to account for human consciousness. See pp. 104-105 and Chapter 9, "Arguments from Consciousness and Morality." I will consider the comparative probability of materialism and theism more below.

35. ³⁵ Ibid., p. 106.

36. ³⁶ Ibid., p. 128.

37. ³⁷ As with his discussion of the two types of scientific explanation, it seems likely to me that here Swinburne is trying to cover his bases, showing that his appeal to explanation applies regardless of the universe's age. However, in my discussion of Parsons, I will focus (briefly) on his arguments given a universe of finite age.

38. ³⁸ Ibid., p. 130.

39. ³⁹ Ibid., p. 288.

40. ⁴⁰ Ibid., p. 283.

41. ⁴¹ Swinburne does not explicitly say just how he thinks the prior probabilities of the various hypotheses should be partitioned. One can gather from his exposition, though, that the lion's share of probability goes to the possibility that nothing should exist (this is the ultimate in conceptual simplicity, after all), with theism and materialism the next contenders. He does not accord any significance to hypotheses such as there being multiple gods or a God of great but limited power, for these are far less simple than classical theism.

42. ⁴² Ibid., p. 131.

43. ⁴³ Ibid., pp. 131-132.

44. ⁴⁴ Parsons, p. 63.

45. ⁴⁵ Ibid., p. 83.

46. ⁴⁶ He also discusses how he thinks Swinburne's theory departs from quark theory, but the same objections are found again in his discussion of Newtonian mechanics.

47. ⁴⁷ Ibid.

48. ⁴⁸ Ibid., p. 84.

49. ⁴⁹ For ease of exposition, when I uses "experimental confirmation," I mean, not just the type of results on might produce by experiments in a lab, but also predictions of phenomena over which we have no control, such as the course of a comet. The same principles apply in either case.

50. ⁵⁰ Ibid., p. 86.

51. ⁵¹ Ibid., p. 84-85.

52. ⁵² Ibid., p. 87.

53. ⁵³ See William Lane Craig, "Philosophical and Scientific Pointers to *Creation Ex Nihilo*," in R. Douglas Geivett and Brendan Sweetman, eds., *Contemporary Perspectives in Religious Epistemology* (New York: Oxford University Press, 1992), pp. 185-200.

54. ⁵⁴ Parsons himself writes that "most atheists would now likely be willing to accept that the universe had a first state" (Parsons, p. 93).

55. ⁵⁵ Ibid.

56. ⁵⁶ Ibid.

57. ⁵⁷ See Swinburne, pp. 94-95.

58. ⁵⁸ Parsons, p. 96.

59. ⁵⁹ Ibid., pp. 96-97.

60. ⁶⁰ Swinburne, p. 80.

61. ⁶¹ Ibid., p. 86.

62. ⁶² Ibid., p. 98.

63. ⁶³ Ibid.

64. ⁶⁴ See Swinburne, Chapter 11, "The Problem of Evil." See also pp. 158-160, 267.

65. ⁶⁵ Parsons, p. 99.

66. ⁶⁶ See Karl Popper, *Conjectures and Refutations* (London: Routledge, 1963), Chapter 1.

67. ⁶⁷ Parsons, p. 100.

68. ⁶⁸ Ibid., p. 87.