Is Theism a Simple, and hence Probable, Explanation for the Universe?

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Abstract

Richard Swinburne, in his *The Existence of God* (2004), presents a cosmological argument in defence of theism (Swinburne 1991: 119, 135). God, Swinburne argues, is more likely to bring about an ordered universe than other states (ibid.: 144, 299). To defend this view, Swinburne presents the following arguments: (1) That this ordered universe is a priori improbable (2004: 49, 150, 1991: 304 et seq.), given the stringent requirements for life (cf. also Leslie 2000: 12), and the Second Law of Thermodynamics (Giancoli 1990: 396); (2) That it seems as if this ordered universe can be explained by theism; (3) A theistic explanation for the universe is more probable because it is a simple explanation. To this end, Swinburne makes use of Bayes' Theorem. Symbolically, this claim can be represented as (e) for the evidence of the existence of a complex universe, and (h) for a hypothesis. Swinburne's argument is that theism has a higher prior probability, $P(h_{\text{theism}}) > P(h_{\text{materialism}})$, since theism is simpler than materialism. He concludes that $P(e|h_{\text{theism}}) > P(e|h_{\text{materialism}})$. In this paper I will address only this argument (3) above, and defend the view that it is false: theism is not simpler than materialism, nor it is more probably true. I conclude that theism is less probable than materialism, expressed by $P(h_{\text{theism}}) < P(h_{\text{materialism}}) : 2/N(2n+1) < 1/n$, where N is the number of possible universes and n the number of entities in existence.

Keywords: Richard Swinburne, the Existence of God, theism, Bayes, Bayesianism, Materialism, cosmology, the universe, multiple universes.

Why theism is a simple explanation

Swinburne argues that both theism and materialism can explain, with varying degrees of success, how the universe came to be; both theories fit the evidence. But, he notes, there is more to scientific explanation than merely fitting the evidence. In particular, theories also should have the appropriate scope and level of simplicity (Swinburne 1991: 52, 2004: 53, 2001: 74). What Swinburne means by scope is how broad the theory is (how many phenomena it can account for). Swinburne's view is that the more ambitious a theory is (the broader the scope), the less likely it is true (1991: 52, 2004: 108-9, 2001: 82). Similarly, he argues, the better a theory fits the evidence and our background knowledge, the more likely it is true (2001: 74: 81-82). Lastly, he main-

tains, the simpler a theory is, the more likely it is to be true (1991: 56, 2004: 108-9, 2001: 82).¹

Swinburne acknowledges that materialism can account for the facts of the universe about as well as theism; so both theism and materialism fit the evidence.² Similarly, the scope of theism is the same as that of materialism; they both seek to explain the entire universe, so theism has no advantage there (Swinburne 2004: 72, 108). The key difference, Swinburne argues, is that theism is a simpler explanation (Swinburne 1991: 52 et seq., 2004: 96-7 et seq., 108-9, Holder 2002: 297-8). Since theism is a simple explanation, it is more probable as an explanation; more probable than the mere brute fact of the universe existing (Swinburne 2004: 152, 109).

Occam's Razor, Swinburne reminds us, demands that we favour simpler theories. Swinburne feels that the view that the universe was designed intentionally by a person of the utmost simplicity, is a simpler hypothesis. The Big Bang postulates more entities and processes than theism (Swinburne 2004: 106). Thus, materialism is complex. Of course, Swinburne is not denying that these entities exist or caused our universe to come to be. He is concerned about the lack of antecedent explanations prior to the Big Bang. He also seems to be concerned that there are too many entities in a Big Bang scenario for it to be a satisfactory ultimate explanation.

Polytheism, Swinburne continues, likewise posits that many entities were responsible for making the universe the way that it is. In polytheism, there are a variety of deities, each with a different appearance, behaviour and personality, and each of whom in some way contributed to the creation of the world as it currently stands. Thus, "characteristic marks" of each deity would be manifest (Swinburne 2004: 145-7) — and it seems as if these marks are lacking. Contrarily, monotheism posits just one Creator: God. Thus neither of these hypotheses — materialism or polytheism — are simpler than monotheism.

Divine Simplicity

But what kind of ultimate simple Being are we talking about? What are his properties? Swinburne argues that an omnipotent Creator is the simplest (Swinburne 2004: 55, 96 et seq., 145). A god with zero power would also be equally simple, but would not be able to explain anything. Swinburne's arguments for omniscience, omnipresence, and omni-benevolence, are similar, and we omit them for brevity (qv. *ibid.*).

It is worth noting at this point that there is a distinction made in Philosophy of Religion and indeed Theology, between what may be called Classical Theism and Theistic Personalism. Swinburne, as we shall see below, defends a variety of Theistic Personalism (TP henceforth). One of the chief distinguishing features of TP is that although it considers God's properties, such as omnipotence, omnipresence, etc., to be infinitely simple, it does not consider God himself to be infinitely simple in quite the same way as Classical Theism (CT henceforth), as espoused by Feser, Wolterstorff, and others, ultimately derived from Aquinas and other scholastics. In CT, God's properties are not just infinite, they are the same. That is to say, God is inherently simple, and his essence is identical with his existence. Consequently, if this is true, it follows

1 Hájek, 2009: 213, cites Lewis as having this view as well (simplicity, strength, and fit to the data). See also Hájek, 1997: 217.

2 Swinburne seems to be of the view that materialism explains what we see, but not how it came about. So his concession that materialism has explanatory value vis à vis how the universe came about, is somewhat confusing.

that God's omniscience just is his omnipotence, which just is his omnibenevolence, which just is his omnipresence. Hard as this concept is to comprehend, it follows from his essence being his existence, that his properties are all aspects of the same property of the same being. None of God's properties are accidental or contingent. All of his properties are necessary.

'The doctrine of divine simplicity holds that God is in no way composed of parts ... Talking or conceiving of God, God's essence, God's existence, God's power, God's goodness, and so forth are really all just different ways of talking or conceiving of one and the very same thing.'³

If God were composed of parts, those parts would be more primal, more basic than God, and hence it follows that God cannot be composed of parts. God is 'pure actuality' (ibid.). To ascribe properties to God that were not just God himself, for example, to separate God's goodness or presence or knowledge from God, would be to split God into parts, and to deny that his essence just is his existence. Thus, God is only one, and cannot have parts, or properties, that are not identical to his whole. CT also holds that God is immutable and impassable; that is, since he is perfect, and wants for nothing, he never changes, and cannot be affected.

To return, then, to Swinburne, it is important for the sake of this paper to emphasise that Swinburne does not rely on CT and is indeed readily identified by CT proponents as a defender of TP. This means that Swinburne does not have recourse to the CT explanation of God's simplicity. As such, this paper strictly addresses Swinburne's conception of divine simplicity. It does not address the CT conception, and I recognise that my critique that follows will not impress a Classical Theist.

Fig. 1. Simple and complex hypotheses

Now, unlike CT, which claims that God necessarily exists, from deduction, Swinburne argues from induction, that an all-powerful all-good God will be expected to exercise his powers in a certain way. Hence Swinburne argues that we can expect God to create a universe just such as ours (Swinburne 2004: 107). So, Swinburne concludes, theism is the simplest explanation (Swinburne 1991: 90 et seq, 2004: 109, 97). Incidentally, this would also be true if CT were true.

There are, of course, an infinite number of other explanations which could be drawn from known data, and other hypotheses which could cover all the points to be ex-

³ Feser, E., May 17, 2010, <http://edwardfeser.blogspot.com/search?q=divine+simplicity>.

plained. This is known as the curve-fitting problem. (Swinburne 2004: 58-9). And, he reminds us, materialism and theism both explain the universe. So the way we will choose the most likely hypothesis is on the basis of its simplicity (Swinburne, 2001: 82, 84-5). Consider these two example graphs below. H_1 and H_2 are competing hypotheses, and X and Y are the data.

The point is that no matter how the data turns out, it will always be possible to draw some curve which can exactly fit that data. But when we are faced with the same data and any number of competing hypotheses, we intuitively prefer the simpler. (Swinburne 2004: 55). So simplicity consists of two factors: the number of entities involved (theoretical or otherwise) (Swinburne, 2001: 85-7), and the simplicity of the curve's fit with the data (ibid.: 83). So of these two hypotheses above, we would choose H_1 rather than H_2 . Only if experimental data strongly confirmed H_2 and disconfirmed H_1 , would we abandon H_1 . Swinburne's claim, then, is that materialism is something like H_2 — it's complicated, even though it explains all the facts (the black dots, the data points or evidence).

Since God is more a priori probable because he's simpler, and since the universe is improbably complex, it is more likely the case that God created the universe (Swinburne 2004: 152) — *ex nihilo* — as a basic action, an unmediated rational act (ibid.: 49-50, 64).

Personal explanations are simpler

Swinburne feels that the hypothesis of theism has a further advantage in its favour over materialism because it posits a 'personal' explanation (at this point Swinburne diverges from CT theorists). We can infer, Swinburne maintains, that based on what we know about a person, what they will likely do (Swinburne 1991: 32 et seq., 2004: 61-4, 2001: 75-6, 79). Therefore, if we know what God is like, we know what he is likely to do: create a universe. Swinburne says that to intend to do something always entails a 'why,' or 'for what purpose.' (Swinburne 2004: 43). We can know someone's intentions without knowing his brain states (Swinburne 2004: 42, 34). Therefore, he argues, intentions — personal explanations — are not reducible to brain states. He cites Davidson's *Actions, Reasons, and Causes* (Swinburne 2004: 34, 38), and argues that the scientific understanding of intention is passive and therefore cannot cause an event of the sort we would call an intentional action (2004: 41). To intend to do something necessarily entails a 'why,' or 'for what purpose.' (Swinburne 2004: 43). We need to posit the existence of person in order to adequately explain the reasons for an action (cf. Searle 2001a: 500). Swinburne therefore argues that theism is more probable, since it is a simpler hypothesis in that it offers a personal explanation. For, from God's personal attributes, we can infer that he would create a universe such as ours.

Symbolically, Swinburne's argument can be represented as (e) for the evidence of the existence of a complex physical universe, and (h) for a hypothesis. Swinburne's argument is that theism has a higher prior probability, $P(h_{\text{theism}}) > P(h_{\text{materialism}})$, since theism is simpler than materialism. Thus, he concludes, $P(e|h_{\text{theism}}) > P(e|h_{\text{materialism}})$.

Mackie counter-argues that the hypothesis of theism is not simple, because a personal theistic explanation, is one which will involve all sorts of complexities, like how the will of the deity is effected, how his will is transmitted via nerves through his

body, etc. Mackie says we only know about embodied beings which are complex and require explanation (Mackie 1982: 100). Hence, Mackie concludes, a personal explanation reduces to a complex materialist explanation, and is therefore not simple. But, Swinburne points out, this counterargument won't work. God is not a physical kind of person; he has no need for nerves, muscles, and so on. Thus, Mackie is missing the point about God; the point is just that God is infinite, disembodied. God's will is not scientifically explicable (Swinburne 2004: 48). God's actions are not mediated; his intentions manifest as basic acts, immediately. The same applies to God's coming to know of something (Swinburne 2004: 108). A stronger reply to Mackie can be made from CT: that if CT is true, then God just is infinitely simple in all respects, and his will is identical with his being. Therefore, if CT is true, Mackie's objection fails, since no mechanism or parts are involved in the execution of God's will.

Whether theism is more probable than materialism

Swinburne claims that since theism is the most simple hypothesis, and since simplicity is a major determinant of probability, theism has high probability (Swinburne 2004: 108, 152, 53).

We have two competing hypotheses: theism and materialism. If the probability of God existing is greater, given an ordered universe, $P(h|e \& k)$, than the probability of God existing apart from that evidence $P(h|k)$, then, the presence of an ordered universe (e) supports or confirms God's existence (h) (Swinburne 2004: 15). Let's consider this in terms of Bayes' Theorem (ibid.: 66-8).

Assuming materialism (h_m) and theism (h_t) are of similar explanatory power, it is the factor $P(h|k)$ — the prior probability (PP) — which will determine whether theism is more probable than materialism, and this factor is determined by how simple the hypothesis is (Swinburne 2004: 108-9, 1991: 102 et seq., Ch. 3).

According to Bayes' Theorem, the likelihood of any hypothesis is calculated by the product of its explanatory power and its prior probability (Swinburne 2004: 56). If we simplify Bayes' Theorem, replacing $[P(e|h \& k)/P(e|k)]$, the explanatory power, with EP, and $P(h|k)$, the prior probability, with PP, we get:

$$P(h|e \& k) = EP \times PP$$

Swinburne recognises that the scope of materialism and theism is the same: to explain the universe (Swinburne 2004: 109). But since theism is simpler, it is higher in the PP factor. Hence the probability of theism is very high. Hence, the calculation as a whole, will yield a higher result for theism than materialism.

Since the universe is a priori improbable, or rather, since the universe has a lower prior probability, and since God is a priori probable, i.e., has a high prior probability, it is more likely that God would exist than this universe would exist (Swinburne 2004: 152). It seems a priori improbable that a complex thing like the universe would have started complex. It is more likely, a priori, that something simple, like God, would have been at the start of the universe. It is also likely that something all-good, like God, would have reason to create a complex universe, capable of supporting life and beings with free-will (Swinburne 2004: 151). Therefore, since this universe exists and it is complex, it is probable that it was created — by an all-good God.

Criticisms

Should we always prefer a simpler theory?

Let's start with the assumption, for the sake of the argument, that theism really is simpler than materialism. Should we prefer this theory on the grounds that it is simpler? Consider the case of the number of fundamental chemical elements. According to the ancient Greeks, there were four: earth, air, fire, and water. According to modern chemists, there are 118. Bohr's atom was less complex than quantum mechanics, but it was inaccurate. There are many other examples: Newton and Einstein, phlogiston and oxygen, spirit possession and the germ theory of disease. All these modern theories are more complex, because the universe just is complex. We don't, therefore, just accept a theory because it is the simplest. Even Swinburne acknowledges this (Swinburne 2001: 101-102). Thus, simpler theories needn't have a higher prior probability. We only accept that a simpler theory is more likely true if both theories that equally well explain the facts, or if both theories' formulae fit the data. Simple explanations often sound right, but are also often wrong (Adams 2001: x-xi). If we look at the examples I have given above, we see that the older theories were discarded because they did not fit the data properly. So really, what counts, is fit. Swinburne recognises this, too (Swinburne 2001: 95).

We might, however, argue that God doesn't have to be the simplest thing in the universe; as long as he is the simplest explanation. I am not sure this is what Swinburne argues. Swinburne is at pains to explain that anything other than an infinite property is less simple. Swinburne argues that God is the simplest type of being, as he is infinite in every respect (Swinburne 1991: 32, 90-94, 2004: 55, 93 et seq.). So, for example, consider Swinburne's argument against polytheistic gods (Swinburne 2004: 145-7). He argues that these gods are a more complex explanation because they are not infinite, and that there are many of them. Thus, it seems to me that Swinburne indeed believes that God is the simplest entity in the universe, not merely the simplest explanation.

Even so, the question is whether we should always accept the simplest explanation, all other things held equal. For what really counts, is whether the explanation works, or what its strength is, in terms of its ability to predict (Swinburne 2004: 30). Since it seems that an omnipotent God does not necessarily entail precisely this universe in a law-like way, it seems like theism isn't a particularly strong explanation.

Is God superfluous or a beneficial trade-off?

There are at least two senses of the term "simplicity". The first is numerical simplicity; that God is a simpler explanation because he is one entity (Swinburne 2001: 85-7). The second sense of simplicity is intrinsic simplicity; how simple the hypothesis is internally (ibid. 2001: 83). Lewis draws the same distinction; he calls it qualitative and quantitative parsimony (Lewis 1973: 87). That is, Occam's Razor can have different senses; we could be talking about fewer entities, or, we could be talking about a simpler hypothesis. Depending on which sense of parsimony we mean, the effect on the plausibility of theism is different. I will discuss that further on. Presently, we're discussing God's numerical simplicity.

As the modern theist has to accept the facts of science, theism and materialism are both committed to the proposition:

PU: There exists an observable physical universe bound by physical laws.

We can grant that materialism is offering a brute fact — whether that brute fact is an eternally-existing singularity, or a quantum fluctuation in a quantum vacuum, or whatever. We can also grant that materialism cannot offer anything as a prior explanation, simply because it lacks any such resources. So it cannot make a theory referring to a “time before”, since time begins at the Big Bang. Theism, of course, does offer a prior explanation. But ultimately, that prior explanation is itself a brute fact. If God necessarily exists, then God is the theist’s brute fact. Given that sophisticated theists such as Swinburne accept the scientific picture of the universe (except on the detail of how it all started, and whether God sustains it through *creatio continuans*), it must be the case that theists have accepted the materialist’s picture of the universe, but with one extra entity: God.

Materialism is committed the view that there is nothing more than PU. Theism, however, is claiming that there is at least one entity more: God. Brown⁴ argues that while this may indeed be making our ontology more complex, perhaps Swinburne is instead arguing that God is a trade-off solution. Perhaps by adding one entity, God, we get a better explanation. Thus, although theism may be less simple, it offers greater EP. This is not unheard-of in science, as we know. For example, scientists observed that Uranus has an irregular orbit (Swinburne 2001: 97). They could only explain this by offering a more complex explanation, viz., one which posited the existence of an additional entity: Pluto. Thus, by suggesting that there was one extra entity, the explanatory power of science was increased. So, by analogy, if we just add one entity, God, we can explain PU (Swinburne 2004: 108). Consider the example of Pluto (Swinburne 2001: 97). If Pluto was a complex hypothesis, e.g., a large asteroid made of pure gold and shaped like a unicorn, we’d have reason to doubt it existed. Intuitively, we’d prefer a simpler hypothesis, e.g., that Pluto is merely a chunk of rock, or another planet. The same applies to God. If God is indeed a simple extra posit, we might accept him as a good explanation. If, however, God is not intrinsically simple, he might be an extravagant additional posit.

This strikes me as a good possible interpretation of Swinburne’s position, or of theism in general. It certainly seems that theists argue that materialism cannot explain PU, and therefore theists posit God as the explanation for PU. It is, however, debatable whether this truly represents Swinburne’s position. It seems to me that Swinburne is indeed arguing that theism is simpler than materialism, on the grounds that theism offers a simpler brute fact than just PU: an infinite personal being (Swinburne 2004: 108-9). Theism requires us to just accept one modest proposal: that there is one additional entity, God, which explains everything else (Swinburne 2004: 97). But is this an acceptable trade-off? It seems to depend on whether God is simple intrinsically, and whether indeed God can explain everything.

If God is not intrinsically simple, what then?

Refer back to the argument from the Classical Theists who construe God as a simple, indivisible singularity. Some writers argue (Craig, op. cit.) that this view is unintelligible and is overcommitted to the view that God’s properties are identical. We might also argue that the theist needs to suggest some sort of causal mechanism to explain why and how God created just this universe. This may require that the theist rely, as Swinburne certainly does, on inferring from analogous properties, such as omni-

⁴ 2009: personal communication.

benevolence, to this — a “good” universe. Now, in addition to these considerations, take into account the conventional theistic view that God has wishes, desires, intentions or plans, expressed by the act of creation. That these must be mental states of some sort, or quasi-mental states, seems to follow. From this, it seems that we might conclude that if Swinburne’s personal God exists, then he has parts (of a sort). These mental states would not be mere accidental properties, for they would have to emanate from God’s necessary properties. Indeed, Swinburne’s argument is directly taken from omnibenevolence. But the point remains that unless CT is true, God has non-identical properties or parts of a sort.

Here, then, is an argument against God’s intrinsic simplicity:

- ✦ God is omnipresent; of infinite extent (Swinburne 2004: 94 et seq.)
- ✦ Anything of infinite extent has no boundary
- ✦ Anything without a boundary has no body
- ✦ Therefore God is disembodied.
- ✦ If God lacks a body, he must be a mind or spirit, or not exist.
- ✦ If Classical Theism is unintelligible (as is argued by Craig, 2010, op. cit.), then God’s mental states are his parts.
- ✦ There are n entities in the universe.
- ✦ God is omniscient.
- ✦ Therefore God has a mental- or knowledge-state about every entity.
- ✦ Therefore God has n mental- or intrinsic states.
- ✦ If there are n entities in the universe, and n mental states of God, and there is a God, then theism posits $2n+1$ entities or states of being, to materialism’s n .
- ✦ $(2n+1) > n$
- ✦ Therefore theism is intrinsically less simple than materialism
- ✦ Swinburne says that simplicity is the sign of the true
- ✦ Therefore materialism is more likely true.

It is worth pointing out here again that if an entity, such as God, were infinitely simple, as Classical Theists, and to a lesser extent, Swinburne maintain, then the burden of proof would be on the theist to show that an infinitely simple being could give rise to something putatively more complex, such as a human being, or a universe with laws.

Objections to the claims that God is not intrinsically simple

One might argue that God is only n complex when a universe exists, since he would only then have n thoughts. Thus, it may be argued, God is not always n complex. This argument would, however, only work if God never contemplated anything. As soon as God contemplates a universe of any size or detail, then his thoughts instantly become as complex as that universe, and God ceases to be infinitely simple. Therefore God is the most complex possible being.

A further objection (Walmsely, G. 2012: personal communication), that this argument depends on a kind of philosophy-of-mind assumption that mental states are somehow separate entities, or that the mind is somehow fragmented, much as is proposed in Dennett’s ‘multiple drafts’ model (Dennett 1992). This assumption relies on CT being false. This rebuttal seems compelling, and correct to me. In order to defend this view, then, this argument against Swinburne would have to show two things:

- (a) That CT is false (God is reducible, or is non-identical to his properties, or that CT is unintelligible),

- (b) That the mental is complex (it consists of a non-homogenous series of states, as characterised by Dennett, in multifarious relationships to each other and the physical world). As we know, Descartes⁵ argues that the mental is indivisible, but can stand in different relations to different mental contents. This *prima facie* suggests that the mind is separate to its contents. But I venture to suggest that perhaps the mind is something analogous to how CT theorists describe God: that it just is its contents or states. If this were true, then the mind would not exist independently of its content or states. And if that were true, then the mind of God, like the mind of man, might consist of *n* states, for each of the *n* entities in the universe.

Now, perhaps it is the case that God could know formulae or laws, instead of all *n* states. As is posited in the doctrine of Deism, God could merely have created the laws of the universe, and then “sat back” and let the universe take its course (Pitman, M. 2012: personal communication). Hence, God’s omniscience would not be a case of knowing the dealings of every of the *n* entities, but rather, it would be the case that God simply knows in a predictive sense, or instrumentalist sense, what will happen with any scenario he contemplates, because he knows his own laws. But if this were true, it would seem to strip God of real omniscience. For if some of the laws of the universe are quantum laws, or the laws of chaos mathematics, then even God cannot predict what will happen in any scenario, unless he really is omniscient, and knows all the details about all *n* entities beforehand anyway (and unless quantum mechanics does not extend into the spiritual realm). Thus, unless logical necessity excludes God from knowing some things, then God must know everything about all *n* entities, including their states, in order to be omniscient. In which case, the original problem holds: God has to know about all *n* entities.

A final objection is raised by Allsobrook, C. (2012: personal communication). It is a similar objection to Pitman’s. Suppose God knows facts about the universe, but knows them as something akin to Platonic Forms rather than as discreta. Suppose, for example, that God doesn’t know where every electron is, but does know that electrons all have a certain spin, charge, momentum, etc. If this is true, then God would not have to have *n* mental states or “ideas”. But again, this seems to strip God of omniscience. Suppose God knows what people are like, generally. It seems to follow, then, that he wouldn’t have to know what each of us are doing, thinking or planning every day, as long as he just knows what we’re like. That would be the logical implication of the argument. But that would also seem to fly in the face of traditional theological claims that God knows everything about us. If God knows everything about us, it seems reasonable that he should know everything about every particle that makes us up, too. Otherwise God’s omniscience is no better than our level of knowledge; we know what people are like, too; we don’t know everything about them, however. If God’s omniscience is like that, then he knows not much more than we do.

Thus, it must be concluded, if God is omniscient, he knows about all *n* entities in the universe, including all their states and interactions (past, present and future). This includes not just particles, but the bodies that particles make up: molecules, DNA, cells, bodily organs, creatures, herds, species, asteroids, buildings, etc.

5 Meditation 6, cf. “Synopsis of the Six Following Meditations”, para. 3, *The Meditations*.

Creatio Continuans

But it's worse than that. Swinburne argues that we cannot explain, within the materialist paradigm, why we have the laws of the universe that we do and why they continue to operate. Our continued existence could be due to the continuous action of a Person who brings it about, by a basic action, moment by moment (Swinburne 2004: 142-3). If the causal series of our universe was begun by the actions of a Person, it could be the case that the objects of the universe continue to operate under the laws of the universe, because of repeated actions by such a Person (Swinburne 2004: 144). This is the doctrine of creatio continuans. (Craig 1990: 476). If this were the case, then God's thoughts would have to be constantly dwelling on the activities, positions, energies, functions, and structural roles, of every single subatomic particle in the universe, as well as the objects that those particles comprise. On top of this, Swinburne claims that it is amazing that all subatomic particles of a particular type are so similar, and that it is God that keeps them the same. Classical Theism, incidentally, also makes use of the doctrine of creatio continuans (Feser 8 Jan. 2010: para. 8). Now, the situation is made even more complex if there are multiple universes; for if God exists across all possible and actual multiverses, then his mind contains mental states corresponding to all of their entities, too. A God of such complexity could not be a simple singularity, and as such, is not a simple explanation. God must therefore be the most complex possible being, in dire need of explanation (Dawkins in Huberman: 84). Therefore, even if theism offered a superior explanation, it would be at too high a cost.

Which model of materialism are we comparing theism to?

If our cosmological model is Pulsating Universe Theory or multiple parallel universes, then theism seems *prima facie* simpler, since these models of the universe invoke a large number of universes as an explanation for how our universe could have the properties and order that it does. But if we are relying on a model of materialism which has a definite starting time, $t=0$, then theism is less simple, for such a model involves only a single universe. Hawking's model, for example, does not have $t<0$, hence it does not have to explain what happened "before" creation, unlike theism, which makes claims about God's pre-creative intentions.

Whether personal explanations are simpler

As we saw earlier, Swinburne maintains that the simplest explanation for any action by a person is a personal explanation (Swinburne 2004: 49-50). Mackie raised an objection against this, but used the wrong tack. But his idea was right. Persons are complicated because they have desires, needs, wants, mental states, etc., all of which require prior explanations. Why did God choose this universe? We'd need an explanation for God's will and the contents of his mind, and that's not simple.

Swinburne, as we saw, denies the reducibility of personal explanations to materialist explanations (Swinburne 2004: 43-4). But whether or not a person's intention is his particular brain state is merely a limit on our knowledge, not evidence of irreducibility. For example, we could know that a person is eating without knowing how his stomach and liver works — but that doesn't mean that eating is not reducible to chemical processes. Furthermore, Libet (1985), has provided some evidence that our actions are caused by non-conscious brain events. If such work does indeed show that some form of materialism (e.g. eliminativism or epiphenomenalism) are true, then seems that actions would be reducible to brain events, which are in themselves mate-

rial or physical events. So Swinburne's argument (Swinburne 2004: 38 et seq.), that personal explanations are not reducible to material explanations, may require further defence.

Swinburne (2004: 41) argues that a mechanistic understanding of intention is passive and thus mechanisms cannot cause an event of the sort we would call an intentional action. This doesn't seem right. Think again of eating. You can't argue that because digestion is passive and controlled from the autonomous nervous system that eating is not deliberate. If we are to explain deliberate actions at all, we may have to take recourse to explaining it in terms of non-deliberate systems, automata, unless we wish to settle for "deliberate" or "intentional action" being a conceptually basic or primitive feature of the universe — something theism may require. Of course, this matter requires some results from philosophy of mind and neuroscience, but the point remains that the scientific evidence thus far seems to point towards at least the strong correlation of the mental with the neurological — which implies a mechanistic explanation may be forthcoming. If these points stand, and it is shown at some point in the future that the mental is in some way reducible to the physical, then Swinburne would not have demonstrated the irreducibility of personal actions to materialist explanations.

Therefore if persons are complex (consisting of multiple states, mental or otherwise), and if God is a person, he is not simple. If he has any mental states, he is complex. God needs mental states in order to plan the creation of a universe. How his mental states are instantiated physically, is irrelevant to this argument. Just having *n* mental states is enough.

Whether God has the highest prior probability

Swinburne says that the simpler a theory is, the more probable it is (Swinburne 2004: 53). Swinburne also argues that the factor of 'prior probability,' $P(h|k)$, is higher for theism than other hypotheses that purport to explain the universe (Swinburne 2004: 109), since God is the simplest possible being (Swinburne 1991: 15 et seq., 129 et seq., 102 et seq., 106, 2004: 108-9).

If prior probability is to be assessed on the complexity of an explanation, God may also be the most complex possible explanation because he doubles the complexity of existence; he has a mental state for each particle in the universe and each object in the universe. If this were true, God would have at most half the prior probability of a materialist explanation. Hence God would not have the highest prior probability.

Let's return to Bayes' Theorem. For ease of understanding, I will reduce the theorem to EP for explanatory power, which is $[P(e|h\&k)/P(e|k)]$, and PP for prior probability, which is $[P(h|k)]$, such that $P(h|e\&k) = EP \times PP$. Let's remind ourselves of Swinburne's argument: materialism (h_m) and theism (h_t) are equal in respect to EP, and theism is simpler — i.e., PP is greater for h_t (Swinburne 2004: 109). If this is so, then this yields $P(h|e\&k)$ greater for h_t than h_m . This is even more obviously true if $EP_m < EP_t$. So, if we suppose that theism explains the universe better than materialism, and it is simpler, then theism is more likely the correct explanation for the universe.

But if theism has a lower PP because it is more complex than materialism, as I have argued above, we have to demonstrate that the EP of theism is so superior to that of materialism that it counteracts the negative effects of its lower PP. This will only happen if Swinburne can convincingly demonstrate that theism explains the universe better, because more evidence comes in, e.g., from the arguments for the fine tuning of the universe, or that EP is significantly raised by postulating that God caused the Big

Bang. But such probability estimates of what God would do are subjective. Bayes' Theorem is only as good as the data you give it (Dawkins 2006: p105-7). Bayes' Theorem tells you how to update probabilities, not what to start with (Brown 2009: personal communication); it doesn't tell you what the prior probability $[P(h|k)]$, should be. So we're likely to always guess it in a biased manner.

Indeed, it might be the case that EP is much greater for h_m , because materialism explains the universe more coherently, and so we might infer that its explanation at $t=0$ is more likely true. If this is the case, then EP for materialism may be almost 1. Assuming half of the possible universes would be evil, and that there could be N universes, the EP of theism should be approximately $1/(N/2)$, since God has the freedom to choose only reasonably good universes. Now, I have argued in this paper that PP is low for h_t because God is not simple. Where n are the number of entities in the universe, h_t theism, posits $(2n+1)$ entities, since God is a mind only, and therefore, his thoughts are individual states contributing to his complexity. Materialism, h_m , however, posits n entities. If this is the case, then materialism has both a higher EP and a higher PP than theism, and hence is more probable:

$$P(h_m) = EP \times PP = 1 \times (1/n) = 1/n$$

$$P(h_t) = EP \times PP = 1/(N/2) \times (1/(2n+1)) = 1/(N(2n+1))/2 = 2/N(2n+1)$$

Since $2/N(2n+1) < 1/n$, by the factor $2n/N(2n+1)$, materialism is more probable than theism. However, $2n/(2n+1)$ tends to 1 for large n , so $2n/N(2n+1)$ tends to $1/N$ as n goes to infinity.⁶ So, the more possible universes there are, the more theism and materialism are equally probable (Holder 2002: 296).⁷

As we saw earlier, Swinburne argues that the prior probability of theism is high (Swinburne 2004: 150-152), because theism is an extremely simple hypothesis. Swinburne uses prior probability and an estimate of the explanatory power of theism, and from that, comes to the conclusion that the probability of God having created the universe, is higher than not. Brown (and Resnik 1987: 55), argue, however, that if we keep performing an experiment and getting enough evidence, eventually our background knowledge will build up so that we get to the true probability. If this is true, then the prior probability doesn't matter. Over time, the PP will turn out to be irrelevant, because the weight of evidence will come up to its correct level statistically. Let's take an example. If you and I are about to flip a coin and you guess that the probability of heads is 0.8, and I guess it's 0.2, those would be our prior probabilities. But, over time, repeating the flip, the evidence and the background knowledge will start to turn out closer and closer to 0.5, the true value. Our prior probabilities in this case would become ever more irrelevant as more evidence came in (Brown 2009, cf. Swinburne, 2001: 58). Therefore it is not prior probability that matters in determining the likelihood of an event occurring. Prior probability may carry less weight than Swinburne assumes.

The Complexity Quotient

Gwiazda calls the quotient $P(h|k)/P(e|k)$ 'the complexity quotient': how complex a hypothesis h is, in comparison to the evidence e that it is meant to explain. In the case

6 Prof. A. Knopfmacher 2009: personal communication.

7 Cf. Holder 2002: 296 — "any individual universe would be of measure zero".

where h is less complex than e , $P(h|k)/P(e|k)$ will be greater than 1, since, as Swinburne argues, a more complex hypothesis is less probable. Hence, Bayes' Theorem must be re-formulated as follows (omitting k) (Gwiazda 2009: 4):

$$\begin{aligned} P(h|e) &= P(e|h)P(h) / P(e) \\ 1 &\geq (0.5)P(h) / P(e) && (\text{Swinburne 2004: 338-9: } P(e|h_t) = 0.5) \\ 2 \times 1 &\geq 2 \times (0.5)P(h) / P(e) \\ 2 &\geq P(h) / P(e) \end{aligned}$$

If this is true, it means that theism is at most twice as simple as the universe, yet Swinburne claims that theism is the most simple hypothesis ever. If e really was as complex as Swinburne makes out, and h really as simple as he insists, then the complexity quotient should be much higher. Therefore either Swinburne's claim that theism is the simplest hypothesis is false, or, $P(e|h)$ cannot be a half (which Swinburne claims on pp338-9). Swinburne should therefore abandon his claim that God is simple qua infinite (Gwiazda 2009: 5). As Hume argues: Since the universe need not be, or is not, infinite, there is no reason to suppose that God has to be.⁸ Or Swinburne should abandon his guess that $P(e|h_t) = 0.5$.

The Sum of Probabilities

Gwiazda (2009: 5-7) argues that because Swinburne offers a range of possible explanations for the universe, it follows that the probabilities of those other possible explanations must add up to 1.0, since the universe exists. So, where h_p is polytheism, h_m is materialism, h_n is 'no explanation,' and h_t is monotheism, then

$$P(h_t) + P(h_p) + P(h_m) + P(h_n) = 1.0$$

Gwiazda then points out that Swinburne admits that $P(h_t)$ may be very small (Swinburne 2004: 112), say, 0.001. If that is the case, then the other factors, $P(h_p)$, $P(h_m)$ and $P(h_n)$ must add up to 0.999. However, if $P(h_m)$ is much lower than $P(h_t)$, since $P(h_t)$ is simpler, it means that $P(h_n)$ and $P(h_p)$ must make up the bulk of that remaining 0.999. However, Swinburne argues that $P(h_p)$ is much lower than $P(h_t)$, so that leaves us with $P(h_n)$ as the most likely answer: there is no explanation. Clearly that won't do, so perhaps materialism is what really makes up the bulk of the certain existence of the universe. Moreover, if one of these values $P(h_t)$, say — is actually closer to half (Swinburne 2004: 338-9) — then at least one of the other values, $P(h_m)$, perhaps, must also be close to half, if the others are really small. Which means, in a worst-case scenario, that Swinburne has to admit that $P(h_m)$ is close to or possibly greater than $P(h_t)$. Which means that materialism is not as implausible as he makes out.

Conclusion

Theistic Personalism, or Swinburne's theism, is not intrinsically simpler than materialism because we have to take God's mind and the complex ideas that he has into account. If there are multiple universes, God still has to know all their contents too, to be omniscient. Therefore even if there are multiple universes, theism is more complex than materialism. If God is a person, persons are complex.

As for the question of numeric simplicity: if we take God's mental states as entities (because God is a disembodied mind), then theism posits $2n+1$ entities, against materialism's n entities. If we take God as just one entity, theism still posits $n+1$ entities to

⁸ Hume, Dialogues of Natural Religion, Part 5.

materialism's n , and God still has to have a complex mind. Therefore theism is always more complex and, if Swinburne is right that a more complex theory is less probable, then theism is always less probable than materialism.

Swinburne would have to show that the EP of theism is such that $1/(N/2)$ is approximately 1, or at least greater than the EP of materialism, in order to show that theism is the more probable hypothesis because it explains better. The only way this would be possible would be if there were only two or three possible universes, out of N possible universes, which God would have reason to create. Yet it seems that God would have reason to create any of an almost infinite $N/2$ good universes.

Furthermore, even if Swinburne's personalistic theism were simpler, we needn't accept it for that reason; many theories in science which currently find favour are more complex than their predecessors and yet are more successful. It seems that if Swinburne wants to really defend the view that God is simple, he needs to adopt the Classical Theistic view of divine simplicity. But even if he does that, he needs to answer why we should always prefer such a theory, and how it could explain the universe (in detail).

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