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Richard Dawkins' Darwinian Objection to Unexplained Complexity in God

Richard Dawkins has popularised the argument that Darwinism leaves God looking unnecessary and extremely improbable. God would have to be even more complicated than his creatures and so even more in need of explanation than they are, but no explanation is appropriate. This paper attempts to clarify the argument and examine responses to it. It investigates claims that Darwinism does not explain everything, that no explanation of God's complexity is needed, that God's complexity is explained in terms of factual or logical necessity, and that God is simple, not complex. None of these responses seems completely convincing. Finally it argues that God's knowledge of the actual world can be explained in terms of his irreducible ability to choose among alternatives based on their value, and his unlimited awareness of alternatives needs no complex specification and need not be organised, statistically improbable or composed of parts.

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1. Introduction

Down the ages many people have been struck by the fact that living organisms are not only composed of various parts, but that these parts seem organised, that is, they are arranged in highly specific ways to enable them to live and function. Richard Dawkins, Charles Simonyi Professor of the Public Understanding of Science at Oxford University, makes the point that such highly specific arrangement is statistically extremely improbable, in that *'However many ways there may be of being alive, it is certain that there are vastly more ways of being dead, or rather not alive.'*¹

You may throw cells together at random, over and over for a billion years, and not once would you get a conglomeration that does anything that could remotely be construed as working to keep itself alive. Many have felt that such *'organised complexity'* in nature demands some sort of explanation and, since it resembles products of human design, like watches and Boeing 747s, that it suggests some sort of designing God.

Dawkins, in his various books, articles, lectures and interviews, has popularised the argument that God cannot provide a satisfying explanation of such

1 Dawkins, R. *The Blind Watchmaker*, London: Penguin (1991), p. 9, italics original.

organised complexity, since he would have to be even more complex himself: 'Any Designer capable of constructing the dazzling array of living things would have to be intelligent and complicated beyond all imagining. And complicated is just another word for improbable – and therefore demanding of explanation.'² God would be 'even more in need of an explanation than the object he is alleged to have created.'³ In the quest to explain organised complexity, God leaves us worse off than we were before, stuck with unexplained, statistically improbable complexity in God.

Dawkins often mentions the Scottish Philosopher David Hume (1711-76).⁴ In his *Dialogues concerning Natural Religion*, Hume's character Philo objects to postulating a God who planned the world as an explanation of its order, on the grounds that the order in the mind of God is just as much in need of explanation as the order in the material world. Picturing such an agent as a mind, and a mind as an arrangement of ideas, Hume phrases the objection as follows:

It is not easy, I own, to see what is gained by this supposition... a mental world, or universe of ideas, requires a cause as much as does a material world, or universe of objects; and if similar in its arrangement must require a similar cause.⁵

If highly specific arrangement in the natural world requires a designer, then the highly specific arrangement of ideas comprising God's mind would also require a designer. And then this designer would likewise need a designer, and so on *ad infinitum*. Either the theist is heading for an infinite regress of God-designers and designers of God-designers, or he is contradicting his own belief that highly specific arrangement requires design. How is it reasonable to accept unexplained organised complexity in the mind of God, if we cannot accept it in nature? Hume thus furnishes us with an argument that a designer cannot really explain organised complexity, since there is an implicit vicious regress in the explanation: the mind of the designer will involve organised complexity that requires explaining just as much as the original complexity does.

Daniel Dennett claims that Dawkins' argument is 'an un rebuttable refutation, as devastating today as when Philo used it to trounce Cleanthes in Hume's *Dialogues* two centuries earlier'.⁶

Dawkins thus follows Hume in thinking that God is not a good explanation for organised complexity in nature, but Hume did not offer a satisfying alternative explanation. However, Dawkins argues that the organised complexity of

2 Dawkins, R. *Climbing Mount Improbable*, New York: W. W. Norton (1996), p. 77.

3 Dawkins, R. & Coyne, J. *Guardian*, Thursday 1 September 2005.

4 e.g. Dawkins *op. cit.*, (1), pp. 5-6.

5 Hume, D. *Dialogues Concerning Natural Religion* (first published 1779) Aiken, H.D. (ed.), Hafner (1948), p.33, cited in Swinburne, R, *The Existence of God*, 2nd edn., Oxford: Clarendon (2004), p. 77. The Kemp Smith edition of the *Dialogues* is available at <http://www.anselm.edu/homepage/dbanach/dnr.htm> accessed 14 July 2006.

6 Dawkins, R. *Darwin's Dangerous Idea*, Simon & Schuster (1995) p.155.

the natural world does have a satisfying explanation, an explanation in terms of Darwinian evolution. Evolution by accumulation of naturally selected mutations builds up organised complexity from simple things, and simple things do not involve organised complexity. Indeed, 'the theory of evolution by cumulative natural selection is the only theory we know of that is in principle capable of explaining the existence of organised complexity.'⁷

Dawkins therefore claims that, although atheism might have been logically tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist,⁸ since Darwin equipped atheists with a satisfying explanation of organised complexity. Darwinism offers a naturalistic explanation, not only of the existence of apparent design in the biological world, but also of the existence of human designers, and so, ultimately, of the existence of design itself. As Dawkins explains in an interview, 'Design can never be an ultimate explanation for anything. It can only be a proximate explanation. A plane or a car is explained by a designer but that's because the designer himself, the engineer, is explained by natural selection.'⁹

Thus, Darwinism greatly increases the explanatory power of atheism, but theism seems stuck with a ridiculous amount of unexplained organised complexity in God. Hume argued that God cannot explain organised complexity and Darwin showed that evolution can explain it, but Dawkins goes further, arguing that Darwinism leaves God looking positively improbable.

The hypothesis of God falls foul of the very argument that was originally put forward in its favour, the argument that organised complexity demands an explanation. God involves even more statistically improbable, organised complexity than we find in the world and therefore demands explanation even more than the world does. Darwinian evolution can explain organised complexity, but no such explanation seems appropriate for God. God is ultimate and independent of anything else, whether evolution or design. Pure chance is utterly implausible when the improbability is so great.

In the days before Darwin God had a certain plausibility; although people had no real explanation for God's organised complexity, they had no explanation for the organised complexity in the natural world, either. Even Hume's Philo admitted that the cause of nature probably bore some remote analogy to human intelligence.¹⁰ However, now we have an explanation for organised complexity, one which is inapplicable to God, who has not evolved nor been designed, God loses all plausibility and is left looking extremely improbable.¹¹

7 Dawkins *op. cit.*, (1), p. 317.

8 e.g. Dawkins, R. *op. cit.* (1), p.6.

9 <http://dir.salon.com/story/news/feature/2005/04/30/dawkins/index.html> accessed 8 August 2006.

10 Hume *op. cit.* (5), Kemp Smith edn. p.227.

11 This seems to be the intended sense of Dawkins, R. 'Reply to Michael Poole', *Science & Christian Belief* (1995) 7 (1), 48-49, though Dawkins spoils his presentation by writing as if God comes into being or springs into existence.

Dawkins often argues against believers invoking God as an *alternative* explanation to thoroughgoing Darwinism, and this may prevent Christians who accept Darwinian evolution from realising that Dawkins' argument attacks their own position as well; God's complexity is improbable *however* he is supposed to have created. To summarise:

1. It is extremely improbable that organised complexity should exist unexplained.
2. Atheistic Darwinism is able to explain how organised complexity arises from simple, physical ultimates.
3. God is useless as an explanation of organised complexity since a) he must have organised complexity, the very same property we want to explain, only more so, and b) God's organised complexity would exist unexplained.
4. So, God is both unnecessary and useless as an explanation of organised complexity and extremely improbable in his own right. There is almost certainly no God.¹²

2. Is the claim that God would have to be complex plausible to open-minded hearers?

Dawkins hardly argues for his key claim that God would have to be complex. However, there are some clues as to the complexity he has in mind, and his claim has some plausibility. He is not alone in thinking that omniscience suggests incredible complexity.¹³

Dawkins alludes to the elaborate complexity of brains and computers.¹⁴ Human and artificial intelligence certainly seems to require colossal complexity. Even if the human machine has a ghost in it, science suggests the ghost relies on underlying physical structures. Let us call this (2.1) *the complex correlates of consciousness problem*.

Dawkins also alludes to God's giant consciousness.¹⁵ The Humean antecedents of his argument suggest a tendency to see God's mind as a complex 'universe of ideas'. There would seem to have to be a complex organisation of ideas in God's mind. God's idea of the creation may seem as complex as the creation itself. God's highly specific set of ideas, perfectly specifying the actual creation, seems statistically improbable compared with the countless ways ideas could be arranged. Let us call this (2.2) *the improbable knowledge of creation problem*.

12 Dawkins, R. *The God Delusion*, London: Bantam (2006), chapter 4.

13 e.g. Davies, P. *The Goldilocks Enigma*, London: Penguin (2006) p. 249.

14 Dawkins *op. cit.*, (12), p. 154.

15 e.g. Dawkins *op. cit.*, (12), p. 149.

There would also seem to be ideas specifying *possible* creatures, including all their constituent parts. For example, God's idea of a man would completely specify his brain, which would involve a complete specification of every neuron and its connections, and so on, down to fundamental particles. It seems God's ideas would need to be organised in extremely complex, improbable ways, since they specify complex creatures in perfect detail. Let us call this (2.3) *the improbable ideas of possible creations problem*.

Finally, if each distinct idea in God's mind is seen as some sort of entity then God would seem to be composed of infinitely many entities and to violate Occam's razor. Let us call this (2.4) *the infinity of Humean ideas problem*.

Dawkins does not detail any of these problems. This might be tactical, since the general claim of divine complexity may seem more plausible than any particular explanation of it.

How might theists respond? I first review Alister McGrath's recent criticisms. I then examine claims that Darwinism does not explain everything, that no explanation of God's complexity is needed, that God's complexity is explained in terms of factual or logical necessity, and that God is simple, not complex. I argue that none of these claims seems completely convincing. Finally I argue that God's knowledge of the actual world can be explained in terms of his irreducible ability to choose among alternatives based on their value, and this unlimited awareness of alternatives need not be highly specified, organised, or statistically improbable.

3. McGrath on Dawkins' God

McGrath offers four main lines of criticism of Dawkins' argument.¹⁶

First, McGrath objects that Dawkins' claim that 'any designer capable of constructing the dazzling array of living things would have to be intelligent and complicated beyond all imagining'¹⁷ is a bold assertion, made without careful argument or fair and thorough evaluation of alternatives.¹⁸

It might well be doubted that God would have to be unimaginably complex¹⁹ but we saw in section 2 that Dawkins' claim has some plausibility. McGrath does not offer, let alone argue for, any alternatives.

McGrath notes that God could have created an environment within which incredibly complex entities could develop from simple beginnings by simple

16 McGrath, A.E. *Dawkins' God: genes, memes, and the meaning of life*, Padstow: Blackwell (2005) and McGrath, A.E. & McGrath, J.C. *The Dawkins Delusion? Atheist fundamentalism and the denial of the Divine*, London: SPCK (2007).

17 Dawkins *op. cit.*, (2), p. 77.

18 McGrath *op. cit.*, (16), p. 93.

19 Ruse, M. *Can a Darwinian be a Christian?*, Cambridge: Cambridge University Press (2001) p.114 also queries the assumption that complexity needs greater complexity to explain it.

processes over long periods, as Darwinian evolution suggests. Unfortunately, this is irrelevant to Dawkins' argument. Whatever God is supposed to create, the point is that he was *capable* of designing worlds and doing all other godlike things. This emphasises the question of how he could be so capable without being incredibly complex.

Secondly, McGrath complains that Dawkins identifies complexity with improbability, but they are not identical, nor does complexity imply improbability.²⁰ Though McGrath accuses Dawkins of making a leap of faith from complexity to improbability, this does not seem entirely fair. The context of Dawkins writings suggests his claim that 'complicated is just another word for improbable' depends on his stipulated definition of complexity in terms of improbability. For example, in the first chapter of *The Blind Watchmaker*, Dawkins stipulates that complexity involves improbability, the unlikelihood of getting the specific arrangement of parts necessary for life and function by chance: 'Complicated things have some quality, specifiable in advance, that is highly unlikely to have been acquired by random chance alone.'²¹ Dawkins accepts that he might be defining simplicity and complexity in idiosyncratic ways, but he thinks that he is identifying an important feature of living things that helps us see why they need explanation.²² McGrath claims that 'a "theory of everything" may well be more complex than the lesser theories that it explains'²³ showing that complexity need not imply improbability, but the example is ambiguous. A grand unified theory would still need to be simpler than all the data it explained. Dawkins is complaining that God would be more complex than what he explains. Most philosophers would accept that simplicity is a valuable feature of a theory and that, other things being equal, a more complex theory is an inferior explanation. Many philosophers, such as Richard Swinburne, would argue that, other things being equal, a complex theory is less likely to be true and thus less probable.²⁴

Thirdly, McGrath complains that Dawkins' talk about improbability is vague and imprecise.²⁵ It compares unfavourably with the careful argument of Richard Swinburne in *The Resurrection Of God Incarnate*.²⁶ This hardly seems a serious objection. Swinburne himself emphasises that it is impossible to give anything like exact numerical values to the probabilities relevant to argument about God.²⁷ Swinburne offers numerical values for the purpose of argument, not because we know the values to this precision. Dawkins does not say precisely how improbable God is, but he does say God is extremely improbable. His

20 McGrath *op. cit.*, (16), p. 93.

21 Dawkins *op. cit.*, (1), p. 9.

22 Dawkins *op. cit.*, (1), p. 15.

23 McGrath & McGrath *op. cit.*, (16), p.10.

24 Swinburne, R. *Epistemic Justification*, Oxford: Clarendon Press (2001) and *op. cit.*, (5) ch. 3.

25 McGrath *op. cit.*, (16), p. 90 and p. 94.

26 Swinburne, R. *The Resurrection of God Incarnate*, Oxford: Clarendon (2003).

27 Swinburne, *op. cit.*, (25), p. 211, *op. cit.*, (5), p. 341.

arguments suggest that God is even more improbable than a hurricane assembling a Boeing 747 by blowing through a junkyard.²⁸

McGrath asks, 'on what basis is this improbability determined?' Dawkins suggests that improbability is determined by comparing the vast number of ways things could be arranged with the tiny number that would have a useful function:

The same kind of intuitive calculation lies behind the claim that the vertebrate eye is too improbable to have arisen by chance (in how many ways could the bits of an eye have been arranged, and how many of them would see?) and it lies behind my similar claim about God.²⁹

Frustratingly, Dawkins does not specify what 'bits' he has in mind in God's case, but we saw in section 2 that he might well be thinking of complex correlates of consciousness analogous to brains or computers, or to complex arrangements of ideas.

McGrath then asks 'since when does probability determine whether or not something actually exists?' Dawkins' book *Climbing Mount Improbable* shows that improbable things like biological organisms exist. Unfortunately, this point also does not seem relevant to Dawkins' argument. *Climbing Mount Improbable* explains intelligent organisms in terms of Darwinian processes. Since God, unlike biological organisms, is supposed to exist without *any* further explanation the analogy between God and biological organisms fails. Overwhelming reason to think that God exists could override this improbability, but McGrath does not offer any such reason. Dawkins notes that there are infinitely many hypotheses that we cannot completely disprove but nonetheless do not believe. McGrath admits that there is unquestionably some truth to this³⁰ but he does little to show that God is more credible than these other hypotheses, as Dawkins notes.³¹

Finally, McGrath questions why God needs to be explained.³² McGrath asks, 'which theory of scientific explanation is Dawkins basing his request upon?' This does not seem very relevant, since most Christians would agree with Dawkins that there is no scientific explanation of God at all. McGrath next cites Paul Kitcher, who argues that science 'teaches us how to reduce the number of facts we have to accept as ultimate'.³³ McGrath asks why God should require an explanation rather than just being an ultimate, one of those facts we have to accept as given, without explanation. He notes that it would be odd

28 Dawkins *op. cit.*, (12), p.114.

29 Dawkins *op. cit.*, (11), p.48.

30 McGrath *op. cit.*, (16), p. 92.

31 Dawkins *op. cit.*, (12), p. 54.

32 McGrath *op. cit.*, (16), p. 94.

33 Kitcher, P. 'Explanatory Unification and the Causal Structure of the World', In Kitcher, P. & Salmon, W. (eds.) *scientific explanation*, 410-505, Minneapolis: University of Minnesota press (1989) Cited in McGrath *op. cit.*, (16), p. 94.

to dismiss the quest for a ‘theory of everything’ with the question ‘What explains the explainer?’³⁴ This neglects the fact that Dawkins is arguing that God is far too complicated to be accepted as an ultimate, unexplained explainer, in comparison with the simplicity of physics without God. God’s mind grasps all the facts in the universe. Why should we accept that this many facts exist unexplained when Darwinian atheism is available, explaining complexity and intelligence in terms of the allegedly simpler ultimates of physics?

We may agree with McGrath that Dawkins has not offered a careful argument for the essential complexity of God, but a plausible claim remains and McGrath has done little to undermine it. We therefore examine claims that Darwinism does not explain everything, that no explanation of God’s complexity is needed, that God’s complexity is explained in terms of factual or logical necessity, and that God is simple, not complex.

4. Does Darwinism Explain Everything?

One response to Dawkins would be to argue that theism explains things that atheistic Darwinism does not, that is, that it has greater explanatory power. Along with simplicity, explanatory power is another key virtue of explanatory hypotheses. I here briefly mention two features that even many Darwinians would agree are not well explained by Darwinism.

First, Darwinism does not explain why there is a lawful, fine-tuned physics allowing evolution to occur. Dawkins thinks that the lawful uniformity of physics is simple³⁵ and defends a ‘multiverse’ because, though a multiplicity of universes is extravagant, their fundamental laws are simple.³⁶ However, this ignores the highly particular properties required to generate lawfulness and a life-generating multiverse³⁷ Even Dawkins admits that physics lacks a theory as satisfying as Darwinism.³⁸

Secondly, Darwinism seems not to solve the so-called ‘hard problem’ of consciousness, to explain in an intelligible, intuitively satisfying way how phenomenal, ‘what it’s like’ consciousness might arise from physical processes in the brain.³⁹ Even Dawkins admits the problem.⁴⁰ Moreover, this may well be a more fundamental problem than he thinks, for objective, third-person properties such as are used in physics seem conceptually quite distinct from subjective

34 McGrath & McGrath *op. cit.*, (16), p.9.

35 Dawkins *op. cit.*, (12), p. 148.

36 *ibid.* p. 147.

37 See Holder, R. *God, the multiverse, and everything: modern cosmology and the argument from design*, Aldershot: Ashgate (2004) and Swinburne, R. *op. cit.*, (5), especially chapter 8, for recent discussions of these issues.

38 Dawkins *op. cit.*, (12), p. 158.

39 Van Gulick, R. ‘Consciousness’, in Zalta, E.N. (ed.) *The Stanford Encyclopedia of Philosophy*, (Fall 2004 edn.), URL = <<http://plato.stanford.edu/archives/fall2004/entries/consciousness/>>.

40 See Dawkins’ comments at <http://www.edge.org/documents/archive/edge53.html>

tive, first-person experience. Science has progressed by distinguishing subjective properties from objective ones and explaining the latter in terms of more fundamental objective properties. There is no similarly successful track record of explaining subjective properties in terms of purely objective ones.⁴¹ Since human design seems to involve consciousness, Dawkins' claim that Darwinism explains design seems premature, to say the least.

Nonetheless, these points do not dispose of Dawkins' allegation that a God capable of creating these features would have to be extremely complex and so raise a bigger problem than he solves. We next consider arguments that do not deny this allegation.

5. Do we need to explain God's complexity?

5.1 Del Ratzsch's analogy

Del Ratzsch suggests that it is legitimate to propose design even when we have no explanation for the designer.⁴²

Ratzsch asks us to consider an analogy. Suppose that we discovered a pure titanium, perfect cube on Mars. Most suggest that previously unknown aliens were responsible for its manufacture. However, suppose that some reject the explanation in terms of aliens and instead claim that the cube simply exists for no reason. When pressed for further explanation they point out that the advocates of the alien-activity theories do not know where the aliens have come from or how they manufactured the cube. In this case, it is clear that the alien theory *is* superior to the unexplained cube theory. The cube has characteristics that strongly suggest activity by intelligent agency.

However, Ratzsch's analogy is unconvincing when applied to God. In the case of the cube on Mars, it seems that, although the cube cannot be explained by Darwinian evolution, the aliens can be. The hypothesis of aliens therefore does not require the extreme improbability of inexplicable organised complexity, but Dawkins is arguing that the existence of God does.

5.2 Faith not explanation

A different strategy might be to downplay the role of explanation in the justification of theism. Alvin Plantinga has responded to Dawkins⁴³ by claiming that believers in God typically 'don't postulate the existence of God, as if this were a scientific hypothesis of some kind'. Instead, they rely on additional

41 See Swinburne's *Existence of God* pp. 205-206 for development of this argument.

42 Del Ratzsch, *Nature, Design and Science: The Status of Design In Natural Science*, Albany: State University of New York Press (2001), p.135.

43 in Plantinga, A. 'Darwin, Mind and Meaning' A review essay of Dennett's *Darwin's Dangerous Idea* that first appeared in the May/June 1996 issue of *Books and Culture*. The version cited here was downloaded from URL:<http://www.veritas-ucsb.org/library/plantinga/Dennett.html>

sources of belief, such as a general sense of divinity and faith in the internal testimony of the Holy Spirit.⁴⁴ This paper cannot discuss such non-explanatory defences of belief, but it is important to grasp that Dawkins is not only saying that God is a counter-productive, unnecessary explanation, but also that God is extremely improbable.⁴⁵ Even if God is not meant to explain organised complexity, it remains very plausible that organised complexity requires explanation. If believing in God commits one to inexplicable organised complexity then faith is left in *tension* with reason. This does not seem to fit well with the theological tradition that faith seeks understanding or with our desire for intellectual coherence.⁴⁶ The tension is increased if atheistic Darwinism does not share this problem. Of course, one may judge that it is better overall to live with this tension, but we do not remove it by denying that God is an explanatory hypothesis or by appealing to faith. Such responses alone may even lend credibility to Dawkins' accusation that faith is an excuse not to think and to believe in spite of evidence and reason.⁴⁷ A satisfying response should show what is wrong with Dawkins' argument.

5.3 God has no beginning

Michael Poole alleges that 'Dawkins' constant assumption, echoing the popular demand, "Who made God?" is that since our common experience indicates that material objects have beginnings, God would also have had to have had an originator.⁴⁸ Admittedly, Dawkins sometimes talks as if God could have come into being⁴⁹ but he is aware of the claim that God always existed and implies that this is facile.⁵⁰ God is not a created material object and does not have a beginning, but this does not explain his complexity. One might suggest that only things that begin need an explanation, but this is unconvincing. Famous cosmological arguments, like those of Aquinas⁵¹ and Leibniz,⁵² show that Christ-

44 See also Plantinga, A. *Warranted Christian Belief*, Oxford: Clarendon (2000).

45 Plantinga appears to grasp this in his review of *The God Delusion*: 'The Dawkins Confusion – Naturalism ad absurdum, Books & Culture, a Christian Review', <http://www.christianitytoday.com/bc/2007/002/1.21.html> Retrieved on 2007-03-02.

46 Plantinga notes the doctrine of divine simplicity, discussed below, and also appeals to his argument that evolutionary naturalism is self-defeating because it undermines confidence that our minds are adapted to discover truth, including the truth of Darwinism. Evolutionary naturalists are aware of such arguments and not greatly worried (e.g. Ruse, M. *op. cit.*, (19), pp. 106-110). Swinburne criticises Plantinga's argument in so far as it goes beyond the point that physics does not explain our mental experience (Swinburne *op. cit.*, (5) pp. 350-354).

47 e.g. Dawkins, R. *The Selfish Gene*, 2nd edn., Oxford: Oxford University Press (1989), p. 198.

48 Poole, M. 'A Critique of Aspects of the Philosophy and Theology of Richard Dawkins', *Science & Christian Belief* (1994) 6 (1), 41-59, 43.

49 e.g. Dawkins *op. cit.*, (1), p. 141; *op. cit.*, (11), p.48.

50 Dawkins *op. cit.*, (1), p. 141.

51 ST 1a.2.3, available online at <http://www.ccel.org/a/aquinas/summa/FP/FP002.html#FPQ2OUTP1>

52 Leibniz, G.W. *On the Ultimate Origination of Things*, In Morris, M. (trans.) *The Philosophical Writings of Leibniz*, Everyman edn., J.M. Dent and Sons (1934), pp. 31-32.

ian philosophers have usually thought that the universe would need explanation, even if it has always existed. William Paley also suggested it would be unsatisfactory to claim that something as complex as a watch had always existed without explanation.⁵³ If God does not have a beginning then we need not explain how he began, but this does not explain why there is a complex God nor remove the problem of unexplained complexity.

6. There is an explanation: God's complexity is necessary

Michael Ruse notes that, traditionally, God is thought to exist necessarily (that is, God in some sense cannot fail to exist), so the question of why God exists is answered in terms of the impossibility of its being otherwise.⁵⁴ Dawkins suggests three ways in which improbable things may happen: evolution, design or chance,⁵⁵ but we might add another, necessity, that is, the impossibility of its being otherwise. Clearly Dawkins is neglecting an important tradition of theistic thought by not discussing the alleged necessity of God's existence. However, as we shall see, the idea of necessary existence is problematic.

Philosophers have sometimes suggested that some natural entity might be necessary, at least in the sense of being the ultimate, uncaused ground of everything else. However, such necessary existence seems an ad hoc addition to the concept of a natural thing, while the very concept of God may well imply that God exists with as much necessity as is possible. George Schlesinger notes that the fact that several illustrious philosophers have offered an ontological argument suggests that there is a human tendency to think that God exists based on the concept of God alone. In contrast, 'it is not the case that a considerable number of philosophers have ever contemplated the possibility of establishing the existence of an external world through a reasoning process analogous to the ontological argument'.⁵⁶

We investigate the suggestions that God's complexity is factually or logically necessary.

6.1 God's complexity is factually necessary

God's factual necessity might be understood in terms of his being necessarily ultimate and inexplicable. Such an understanding seems to make sense, but it leaves God's existence as an unexplained fact. If God is so complex that he seems to require explanation then it seems unlikely that he would be factually necessary in this sense. Even if the idea of a factually necessary physical ulti-

53 Quoted in Dawkins *op. cit.*, (1), p. 4.

54 Ruse *op. cit.*, (19), p. 115.

55 Dawkins *op. cit.*, (11), p.48.

56 Schlesinger, G. *New Perspectives on Old-time Religion*, Oxford: Oxford University Press (1988), pp. 141-143.

mate seems rather *ad hoc*, it may still seem simpler than the idea of an unexplained complex God. Alternatively, appeal to explanation by some additional necessity would invite further explanation of that specific necessity itself. We therefore investigate the claim of logical necessity.

6.2 God is logically necessary

If God is a logically necessary being then there is an explanation of why God's complexity exists; it is logically impossible for it not to. Logically, God must exist. Unfortunately, the concept of God's logically necessary existence is highly disputed.

The idea that a concrete being like God could exist of logical necessity certainly seems odd. The things normally thought to exist of logical necessity are abstract entities, like numbers and laws of logic. Since God is a concrete being rather than an abstract entity many suspect that the idea of a logically necessary God involves a category confusion. Though this has not been conclusively established⁵⁷ the idea of a logically necessary God seems a dubious basis for a rebuttal to Dawkins.

Even if it makes sense to talk of a logically necessary God, to many it seems possible that there is in fact no God. Swinburne notes that it seems possible that the universe exists with no God.⁵⁸ Various other states of affairs implying the non-existence of God also seem possible to many, such as there being evil that God would not allow. (Indeed, not only does such evil seem possible, but many also fear it is actual).⁵⁹ This suggests that the non-existence of God is logically possible and therefore that God's existence is *not* logically necessary.

The theist might argue that it is reasonable to believe in God's necessary existence nonetheless, because it offers the only way we know of explaining why everything actually exists. Unfortunately, the principle that there is such an explanation is likewise highly contentious.⁶⁰ It would be good to have a more straightforward response to Dawkins' argument.

7. God is simple, not complex

7.1 The doctrine of divine simplicity

Traditional Christian creeds and theologians have held that God is simple and

⁵⁷ See e.g. Rowe, W.L. *The Cosmological Argument*, Princeton: Princeton University Press (1975), chapter 4.

⁵⁸ e.g. Swinburne *op. cit.*, (5), pp. 137, 148.

⁵⁹ Gale, R. *The Existence and Nature of God*, Cambridge: Cambridge University Press (1991), p. 229f.

⁶⁰ See Pruss, A.R. *The Principle of Sufficient Reason: A Reassessment*, Cambridge: Cambridge University Press (2006) for discussion and defence of this principle.

not complex at all. The doctrine of divine simplicity finds expression in several important credal statements. The Fourth Lateran Council (1215) declared that God is a '*substantia seu natura simplex omnino*' – an 'altogether simple substance or nature'⁶¹ – and the First Vatican Council reiterated the doctrine. The Westminster Confession⁶² and the 39 Articles of the Church of England⁶³ affirm that God has no body or parts.

Denying that God is composed of parts seems a promising response to Dawkins. If God has no parts then it seems impossible to rearrange them or to say that the functional arrangement is improbable. An argument in terms of statistically improbable arrangement of parts cannot get off the ground.

Unfortunately, the traditional doctrine of divine simplicity is problematic. Classic statements, such as can be found in Augustine, Anselm and Aquinas, claim not only that God lacks any real composition of parts but also that he lacks any real distinction from his attributes or nature.⁶⁴ Recent discussion suggests that it is necessary to revise the usual philosophical understanding of properties and attributes in order to make much sense of this claim, let alone render it plausible.⁶⁵ We therefore turn to an influential contemporary understanding of divine simplicity.

7.2 Swinburne on divine simplicity

Swinburne argues from scientific practice that, other things being equal, simpler theories are more likely to be true. Simple theories postulate few (logically independent) entities of few kinds, few properties of few kinds, and few laws with few terms relating few variables. Properties that are more readily experienced are simpler than ones that are less so and infinite values of properties are simpler than large finite ones. We can understand the notion of an infinite value, exceeding any finite value, without needing to know, for example, that the googolplex is $(10^{10})^{10}$. There is an elegance about an infinite value since it involves zero limits and avoids the question 'Why this particular limit rather than some other?' However, an infinity of independent entities is less simple than a finite number.⁶⁶

From this, Swinburne argues that the God hypothesis is very simple and requires few complicating assumptions that seem *ad hoc*, arbitrary, or invite further explanation.

61 See <http://www.fordham.edu/halsall/source/lat4-select.html> accessed 8 November 2006

62 chapter 2.1 <http://www.wscal.edu/about/doctrine/westminsterconfession.php> accessed 8 November 2006

63 <http://www.fordham.edu/halsall/mod/1571-39articles.html> accessed 8 November 2006

64 e.g. Aquinas *Summa Contra Gentiles*, I 38): 'As we have shown, however, God is absolutely simple. Hence, in God, being good is not anything distinct from him; he is his goodness.'

65 See Vallicella, W.F. 'Divine Simplicity', in Zalta, E.N. (ed.) *The Stanford Encyclopedia of Philosophy* (Spring 2006 Edition), URL = <<http://plato.stanford.edu/archives/spr2006/entries/divine-simplicity/>>

66 Swinburne *op. cit.*, (5), p. 53.

God needs no body or physical parts at all and can be characterised as pure, limitless intentional power.⁶⁷ Intentional power is readily experienced and, being limitless, no explanation is needed for its limits. Furthermore, for his power to be unlimited his knowledge must be unlimited, so God's omniscience is not some logically independent, *ad hoc* addition to the hypothesis, but a logical corollary of it. Given God's unlimited knowledge he will know what possible actions are good, and, given his pure, unlimited power, nothing will stop him from choosing what is good, so his moral perfection also fits with his unlimited power and is not an independent property. Furthermore, God involves no limits in time or space and no quantities of matter or energy that invite further explanation. Since his power is unlimited he will not depend on anything else and everything else will depend on him. It thus follows that he is ultimate, inexplicable and factually necessary.

God is thus simple in the sense that he is just one entity with one, readily experienced property that logically specifies all the others. He has no finite limits or quantities inviting further explanation.

Dawkins' response to Swinburne makes no mention of his claim that God can be simply specified in terms of a familiar property with no finite limits. Rather, he objects:

A God capable of continuously monitoring and controlling the individual status of every particle in the universe is not going to be simple. His existence is therefore going to need a modicum of explaining in its own right... Worse (from the point of view of simplicity) other corners of God's giant consciousness are simultaneously preoccupied with the doings and emotions and prayers of every single human being.⁶⁸

This objection asserts rather than argues that God cannot be simple, but appeals to God's vast consciousness. We argued in section 2 that consciousness might seem to require complex underlying mechanisms like a brain, the complex correlates of consciousness problem (2.1), and that it might seem to involve a complex organisation of Humean ideas (problems 2.1-2.4 above). Swinburne spends relatively little time discussing such apparent problems and so his claim of divine simplicity seems somewhat unconvincing.

We will therefore investigate how God's consciousness of both created actualities and unlimited possibilities might avoid Dawkins' charge of unexplained organised complexity.

67 Swinburne, R. *The Christian God*, Oxford: Clarendon (1994), p. 151.

68 Review of Richard Swinburne's *Is There a God?* From *The Sunday Times*, 4 February 1996 available at <http://www.royalinstitutephilosophy.org/think/article.php?num=17>.

8. Avoiding the complex correlates of consciousness problem (2.1 above)

Dawkins might object that God's mind would need something like a brain or CPU,⁶⁹ by analogy with creatures. However, why must the non-physical creator resemble his physical creatures in this way? Traditionally, God's unlimited capability is supposed to be basic and irreducible, not the result of underlying structures or interacting parts. It is not a *conceptual* truth that conscious power must depend on the interaction of organised parts, even if it is true of physical organisms. We do not need to think about brains or mechanisms to *understand* an explanation in terms of choosing a desirable option. Indeed, as noted above, conscious intentionality resists reduction to the interaction of unconscious parts. The idea of consciousness without complex correlates might be unparalleled in all creation, but it seems comprehensible.

9. Explaining God's knowledge of creation (problem 2.2 above)

God's knowledge of creation would indeed seem extremely specific and unlikely to arise by chance, but explanation of this specific knowledge would seem possible in terms of God's choosing to actualise specific possibilities because he is conscious of their value. Given unlimited intentional power, God could actualise things at will and know what is actual simply by being aware of what he wills to be actual. If he wanted things to cause knowledge in his consciousness, he could choose to make this the case. God's intention to actualise a specific possible creation would be explained in terms of his unlimited awareness of valuable possibilities and his unlimited power to choose them. This choosing is modelled on our own choosing among desirable alternatives of which we are conscious, a model that Swinburne claims provides a familiar, intuitively satisfying form of explanation.⁷⁰

10. Avoiding the improbable ideas of possible creations problem (2.3 above)

God's knowledge of what is actual might be explained in terms of his choices to actualise valuable possibilities, but what about God's awareness of these possibilities? These cannot result from God's choices since they are necessary for God to make choices. Traditionally, God's mind has ideas of the things he could create simply through his unlimited awareness of his unlimited power to create, just as a builder who is fully aware of his power to make a house has the idea of a house.⁷¹ These ideas perfectly specify possible creatures, including all their constituent parts. It seems some complex ideas would need to be organ-

69 Dawkins *op. cit.*, (12), p.154.

70 Swinburne *op. cit.*, (5), p.106.

71 e.g. Aquinas St 1a.152.2-3.

ised in extremely improbable ways, since they specify complex creations in perfect detail. Does this mean that God's awareness of infinite possibilities exhibits organised complexity, and therefore needs an explanation in terms of design or Darwinism, even though it cannot have one?

No. Dawkins notes that some things, such as the mountain Mont Blanc, may have many different parts and thus be complex, but not have *organised* complexity. Unlike the parts of an organism or a Boeing 747, the parts of Mont Blanc are not specifically and precisely arranged for life or function.⁷² God's consciousness likewise seems to lack the sort of specificity that characterises organised complexity. God is conscious of *limitless* possibilities, not just a select, useful few. Even if these ideas are likened to re-arrangeable parts (which they are not: see 11 below), there is no need to specify any arrangement in God's consciousness in order for him to function. Taken as a whole, God's knowledge of possibilities has only logical limits, that is, limits that are not improbable, but necessary and certain. Ideas of the highly specific, functional arrangements of parts we find in biology are present, but only in the context of infinitely more possibilities that are not so special. God's unlimited awareness does not require an improbable arrangement of all possible ideas. It is therefore not analogous to the selective, statistically improbable arrangement of parts that characterises organised complexity and does not demand explanation in the same way.

Granted God's consciousness of unlimited possibilities, do we need a special explanation for God's consciousness of highly specific ideas of living, functional things? Dawkins notes that chance is not a plausible explanation of a specific arrangement when the probability of that arrangement is extremely low.⁷³ However, increasing the number of different arrangements present increases the probability of there being a specific arrangement somewhere amongst them. God's consciousness contains an unlimited variety of ideas, so the overall probability of its containing a specific arrangement is not low and Dawkins' argument is inapplicable. Indeed, if all possible arrangements occur then any specific arrangement will be certain to occur somewhere. For example, the chance of getting a Royal Flush in poker is extremely low if you are only dealt one hand, but if you were dealt unlimited hands then it would be certain that one would be a Royal Flush. When we apply this model to God's consciousness, we see that the low probability of a given arrangement of ideas specifying something valuable and functional is outweighed by the unlimited variety of ideas present in the mind of God. If all possible arrangements are present in God's consciousness then it is certain it will contain any given arrangement, no

⁷² Dawkins *op. cit.*, (1), pp. 7-9. Some versions of his sort of argument available on the Internet do not use the technical term 'organised complexity'. This may be significant, since the claim that God is improbable and in special need of explanation turns on his having highly specified, *organised* complexity, not just complexity in some broader sense. Arguments mixing different senses of complexity may commit the fallacy of equivocation.

⁷³ e.g. Dawkins *op. cit.*, (11), p.48.

matter how improbable it is relative to others. Unlimited intentional power implies an unlimited variety of ideas so there is no need for design or natural selection to explain why God has ideas of living, functional, well-adapted things. Dawkins is usually thinking in terms of the arrangement of a finite number of physical parts in the universe.⁷⁴ Something as complex as an organism or a 747 would be incredibly unlikely to arise by random chance given finite opportunities, but such limitations do not apply in God's infinite consciousness. Conscious of this infinite range of possibilities, God is able to choose to create the actual world without the need for further imagination, calculation or reasoning.

11. Must God's mind include an infinity of entities (problem 2.4 above)?

It might be objected that, even if God lacks organised complexity and his ideas do not need to be arranged or selected in a highly specific way, nevertheless he is composed of an infinite number of divine ideas and is therefore not simple. However, we cannot make much sense of a conscious idea existing independently of a mind; ideas are not independent, separable entities like physical parts, but are logically inseparable from a mind. God's consciousness therefore need not be composed from independent entities or be really complex in the way that universes, let alone Dawkins' multiverses, are. Divine ideas are not really separable or rearrangeable, unlike physical parts. They are all essential aspects of the single act of God's comprehension of his power, not independent entities. God's consciousness can be a non-composite, irreducible mental state. Thus Hume's comparison of God's mind to a universe of material objects⁷⁵ is misleading and the accusation of an infinity of entities is avoided.

Must we still explain such a God?

If God can be logically necessary then we might explain his existence in terms of the logical impossibility of his non-existence, as above (6.2). Otherwise, given that God is the simplest explanation of the cosmos we can find, it seems reasonable to postulate such a God without further explanation. Dawkins' atheism would leave matter/energy and its relation to mind unexplained (4). It leaves unexplained properties remote from experience and highly specific and arbitrary limits. God explains these in the familiar terms of a conscious choice (9). He lacks arbitrary limits. Dawkins should not object to an unexplained ultimate, since he is prepared to countenance unexplained physics.⁷⁶

⁷⁴ e.g. Dawkins *op. cit.*, (1), pp. 15, 315.

⁷⁵ Hume *op. cit.*, (5), Kemp Smith edn. p. 64.

⁷⁶ e.g. Dawkins, R. *op. cit.*, (1), pp. 14-15.

Conclusions

It seems that Dawkins is right to object to unexplained organised complexity in God, especially given the Darwinian atheist alternative. Darwinism does not explain everything, but neither does suggesting that God is eternal. To claim that God exists of logical necessity has attractions but is problematic. The believer's best response seems to be to argue that God is completely unlike an organism or a Boeing 747. He is simply specified and lacks the sort of real composition and limitations found in creatures, even if there is some sort of infinite variety in his awareness of options. This awareness is not composed of parts, organised or narrowly specific, but unlimited and comprehensive, so no design or selection seems necessary to explain it. The probability of a mind containing highly specific ideas of complex creations would indeed be extremely low given a limited number of variations, but divine awareness of variations is unlimited and comprehensive. God's knowledge of the actual world can be explained in terms of his essential ability to choose alternatives based on their value. This ability to choose can be understood without appeal to underlying complexity or multiple entities, so, contra Dawkins, it seems the theist can explain why nature exists without granting unexplained organised complexity or the extreme improbability of God.⁷⁷

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⁷⁷ I am grateful to an anonymous referee for the journal and to Richard Swinburne, Tim Mawson and Rodney Holder for their helpful comments on earlier versions of this article.



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